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(Pages 1–1534)

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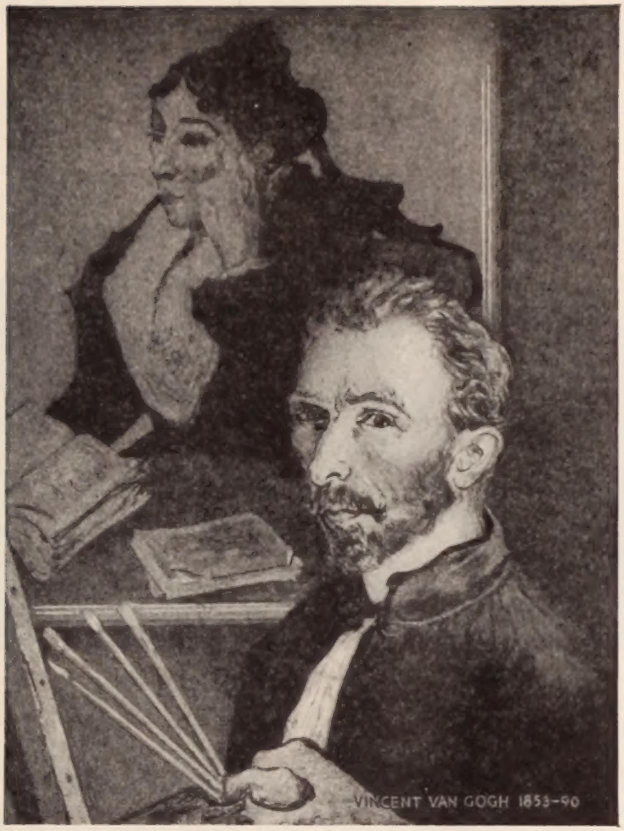

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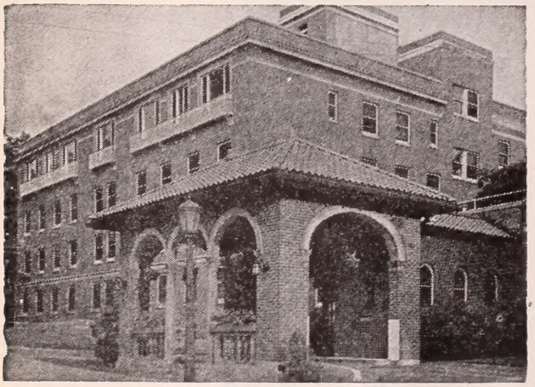

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1. Brewster, J. M.: U. S. Nav. M. Bull. *49*:1, 1949.
2. Murray, H. G.: Indust. Med. *18*:215, 1949.

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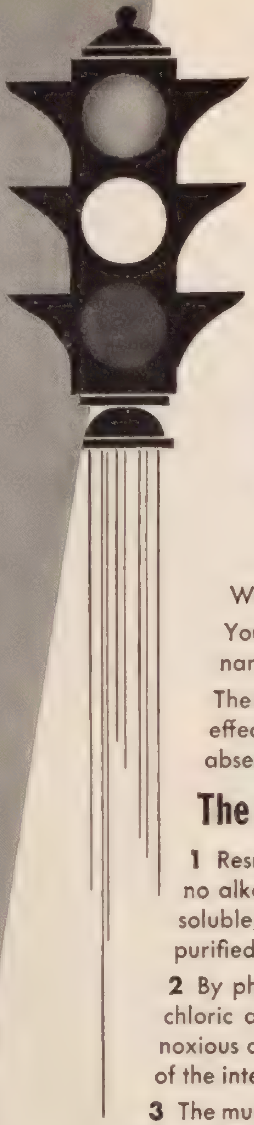

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We suggest that you treat your peptic ulcer patients with Resmicon.

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Resmicon is available in bottles of 84 tablets, each tablet containing 500 mg. anion-exchange polyamine resin and 170 mg. gastric mucin.

If you would like to know more about Resmicon, please write us for our comprehensive booklet.

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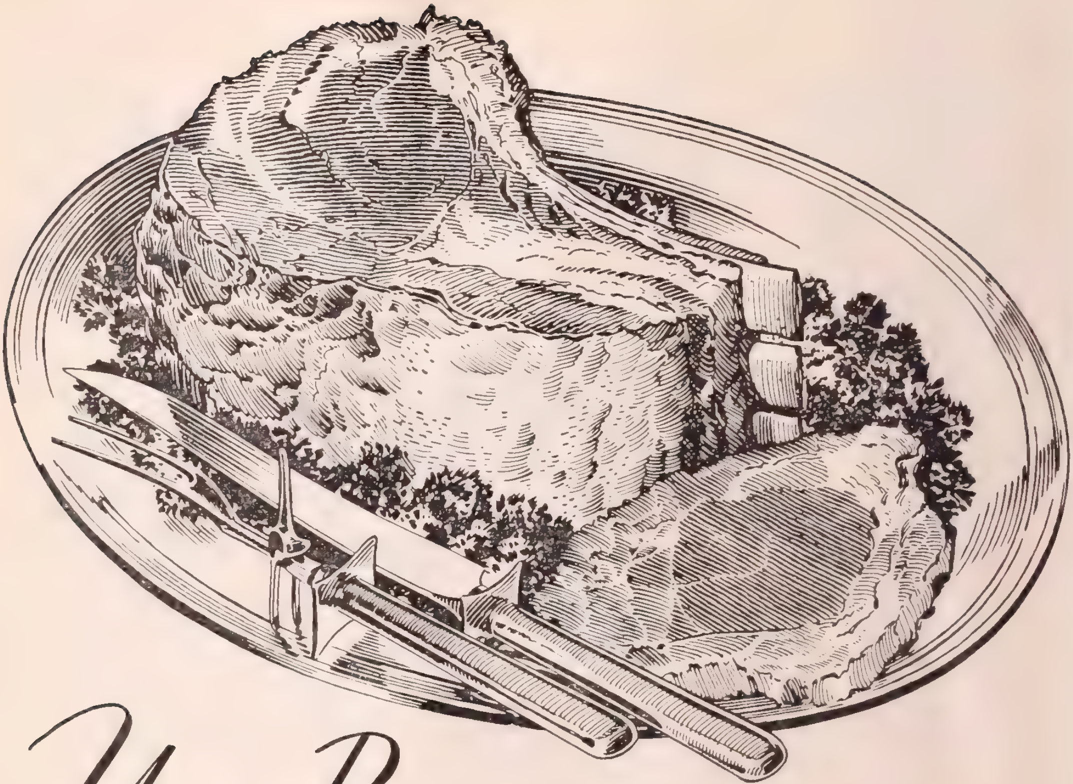
Division Nutrition Research Laboratories • Chicago 30, Illinois



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The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

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*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. *139*:897 (April 2) 1949.

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AUREOMYCIN

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PROGRESS REPORT ON NEW ANTIANEMIC AGENT

IN 1946, observers[2,3] noted that striking results could be expected from the treatment of hypochromic anemia with molybdenized ferrous sulfate (Mol-Iron).

Subsequently a two-year investigation[4] of Mol-Iron was initiated in anemia of pregnancy—a relatively resistant type of anemia.

The investigators, Chesley and Annitto, working at the Margaret Hague Maternity Hospital, reported:

> "... molybdenized ferrous sulfate produced a substantially more rapid therapeutic response than ferrous sulfate, the difference in response being statistically significant. Addition to ferrous sulfate of either liver-stomach extract or folic acid did not potentiate the action of the iron salt."

REFERENCES:

1. Dieckmann, W. J., and Priddle, H. D.: Anemia of Pregnancy Treated with Molybdenum-Iron Complex, American J. Obst. & Gynec. 57:541-546 (March) 1949.
2. Healy, J. C.: Hypochromic Anemia: Treatment with Molybdenum-Iron Complex, Journal-Lancet 66:218-221 (July) 1946.
3. Neary, E. R.: Use of Molybdenized Ferrous Sulfate in Treatment of True Iron Deficiency Anemia of Pregnancy, Am. J. M. Sc. *212*:76-82 (July) 1946.
4. Chesley, R. F., and Annitto, J. E.: Evaluation of Molybdenized Ferrous Sulfate in the Treatment of Hypochromic Anemia of Pregnancy, Bulletin of the Margaret Hague Maternity Hospital *1*:68-75 (Sept.) 1948.
5. Kelly, H. T.: Gastro-Intestinal Intolerance to Orally Administered Iron, Pennsylvania M. J. *51*:999 (June) 1948.

"Results with . . . molybdenum-iron complex . . .
striking . . . increases in hemoglobin . . .
dramatic . . . rapid . . ."[1]

Now Dieckmann and associates[1], following extensive controlled studies in pregnant patients, state:

> "We have never had other iron salts so efficacious in pregnant patients. . . Our results with the molybdenum-iron complex have been . . . striking . . . increases in hemoglobin were . . . dramatic and . . . rapid . . ."

—And Mol-Iron is remarkably well tolerated. Typical of the findings of other investigators, Kelly[5] reports that 90% of his test patients who had previously been unable to tolerate other iron preparations were satisfactorily maintained on molybdenized ferrous sulfate.

White's **Mol-iron** **Tablets, Liquid**

MOLYBDENIZED FERROUS SULFATE

a specially processed, co-precipitated, stable complex of molybdenum oxide 3 mg. (1/20 gr.) and ferrous sulfate 195 mg. (3 gr). Recommended adult dosage: 2 Tablets, t.i.d. Available in bottles of 100 and 1000 Tablets and in a highly palatable Liquid, in bottles of 12 fluid ounces (each teaspoonful equivalent to one Tablet).

WHITE LABORATORIES, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

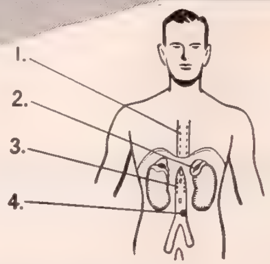

Fig. 1. Typical locations of epinephrine-producing tumors.
1. Thoracic Paraganglia.
2. Adrenal Medulla (10 per cent of tumors bilateral).
3. Abdominal Paraganglia.
4. Organ of Zuckerkandl.

Fig. 2.

Pathologic specimen of a pheochromocytoma. (*Courtesy of Becker, Bass, and Robbins, Beth Israel Hospital, Newark, N. J.*)

For the detection of Hypertension-producing

PHEOCHROMOCYTOMAS

Intravenous tests with Saline Solution of Benodaine* Hydrochloride indicate whether or not elevated blood pressure is caused by an epinephrine-producing pheochromocytoma.

This new Merck diagnostic aid, when administered intravenously in suitable doses, is adrenolytic but not sympatholytic.

In patients with hypertension caused by a pheochromocytoma, Benodaine produces a brief but significant decrease in blood pressure. In hypertensive patients who do not have this tumor, it produces either no significant change in blood pressure or a moderate elevation of short duration.

Complete literature is available upon request.

*Benodaine is the trade-mark of Merck & Co., Inc. for its brand of piperoxane.

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Manufacturing Chemists
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Trade **Benodaine** Mark

HYDROCHLORIDE

(Brand of Piperoxane Hydrochloride)

(2-(1-Piperidylmethyl)-1,4-Benzodioxan Hydrochloride Merck)

The most "persuasive" oral germicide you can prescribe

1. Cēpacol persuades a wide range of oral bacteria to surrender within 15 seconds after contact[1]

2. Cēpacol's pleasant taste persuades your patients to use it

The rapid antisepsis[2] and soothing relief which Cēpacol brings to inflamed, sore throats are important. Along with the fact that Cēpacol is non-irritating, non-toxic, and does not interfere with tissue healing. Too, patients are extremely grateful to you for prescribing something so effective that also is so *pleasant* to use—as either gargle or spray.

CĒPACOL®

The alkaline germicidal solution that works in partnership with saliva

NOW AVAILABLE—Cēpacol Throat Lozenges! These convenient, pleasant-tasting lozenges, dissolved slowly in the mouth, provide a soothing, analgesic solution to relieve the dryness and irritation of sore throat.

Merrell
1828
CINCINNATI • U. S. A.

[1] As shown in laboratory studies.

[2] Cēpacol contains an effective germicidal detergent, the quaternary ammonium salt Ceepryn® Chloride, 1:4000.

they scrap about most things

but on one thing they agree—

This liquid penicillin tastes good!

Your young patients will take Eskacillin willingly because it is so deliciously flavored, so easy to swallow. Furthermore, parents much prefer Eskacillin to the chore of crushing penicillin tablets and coaxing a sick child to swallow an unappealing mixture.

One teaspoonful (5 cc.) of Eskacillin contains 50,000 units of crystalline penicillin G—and produces a blood level equivalent to that obtained with a 50,000 unit penicillin tablet. Eskacillin is supplied in 2 fl. oz. bottles, providing 600,000 units of penicillin.

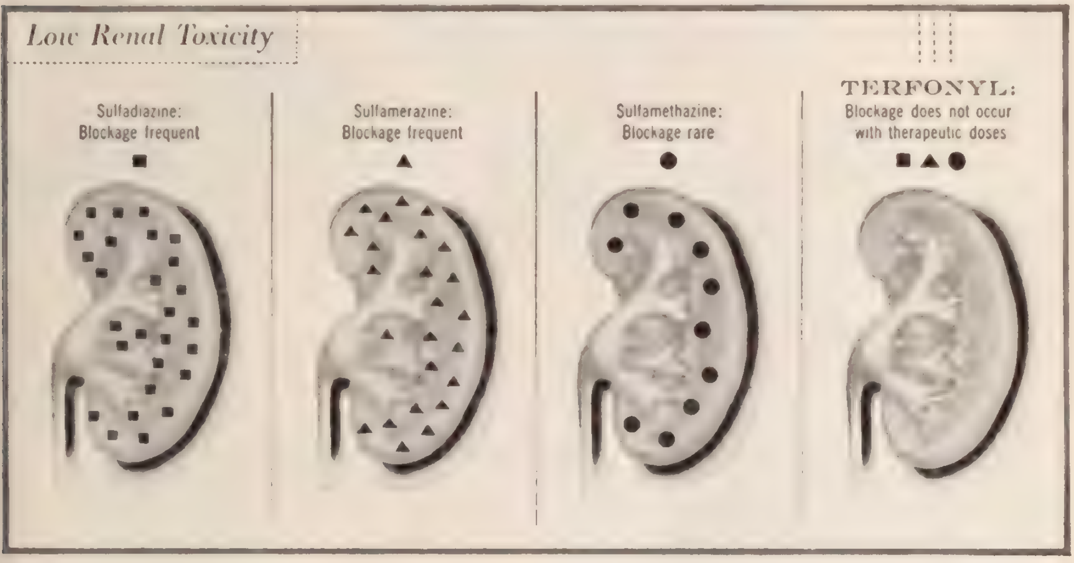
Eskacillin *the unusually palatable liquid penicillin for oral use*

Smith, Kline & French Laboratories, Philadelphia

TERFONYL

Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFE SULFONAMIDE THERAPY


Low Renal Toxicity
Sulfadiazine: Blockage frequent ■
Sulfamerazine: Blockage frequent ▲
Sulfamethazine: Blockage rare ●
TERFONYL: Blockage does not occur with therapeutic doses ■ ▲ ●

With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated. Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

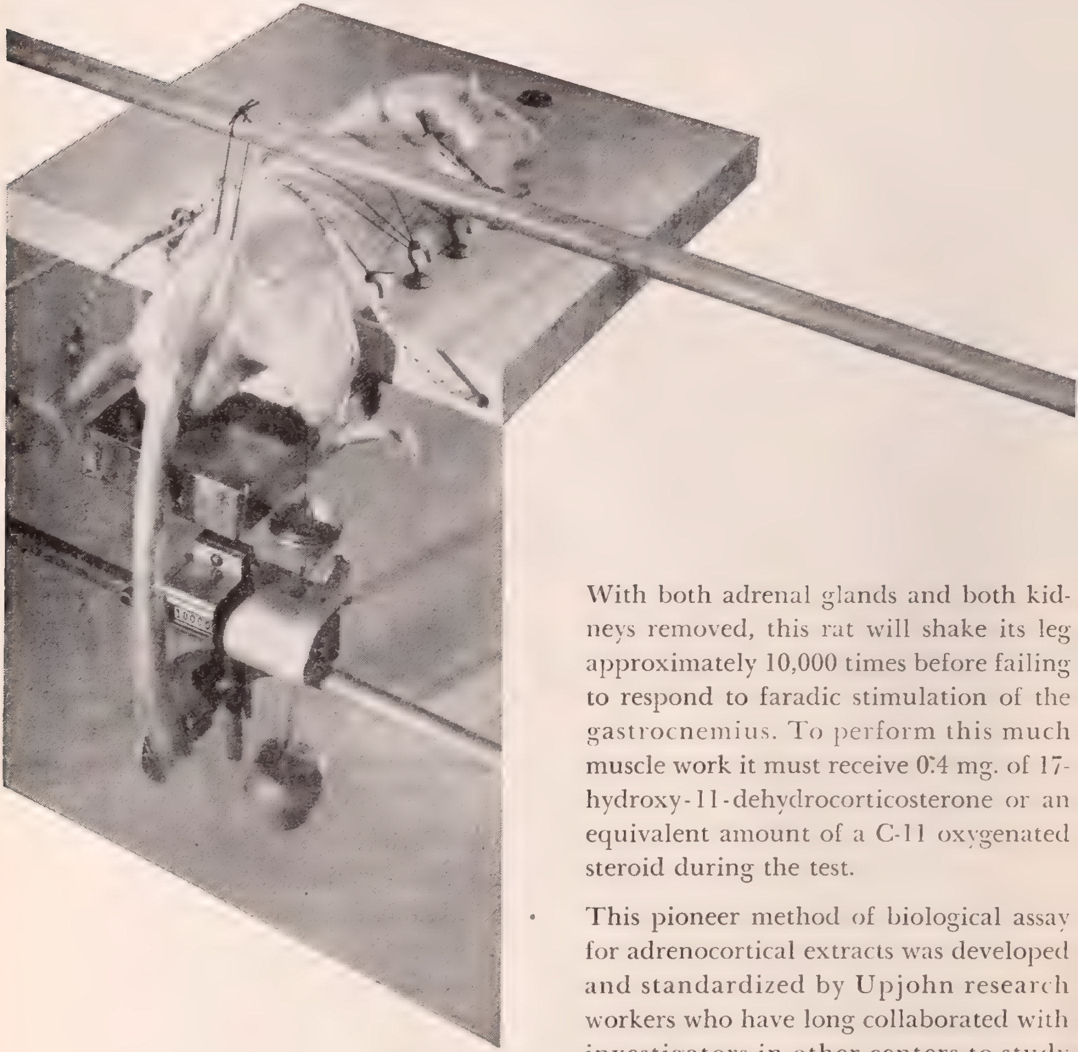
Terfonyl Tablets, 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint and gallon bottles

SQUIBB MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

'TERFONYL' IS A TRADEMARK OF E. R. SQUIBB & SONS

10,000 shakes of a rat's leg . . .



With both adrenal glands and both kidneys removed, this rat will shake its leg approximately 10,000 times before failing to respond to faradic stimulation of the gastrocnemius. To perform this much muscle work it must receive 0·4 mg. of 17-hydroxy-11-dehydrocorticosterone or an equivalent amount of a C-11 oxygenated steroid during the test.

This pioneer method of biological assay for adrenocortical extracts was developed and standardized by Upjohn research workers who have long collaborated with investigators in other centers to study adrenal function.

This and other achievements are reflected in products such as Lipo-Adrenal Cortex, Upjohn, which biologically assays at ten to sixteen times the potency of earlier adrenocortical extracts.

Upjohn

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In Eradication and Control of TRICHOMONIASIS

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*Reich, Button and Nechtow in *Surgery, Gynecology and Obstetrics*. Reprint on request.

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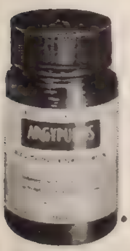
··in two convenient forms·



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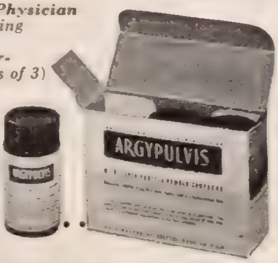

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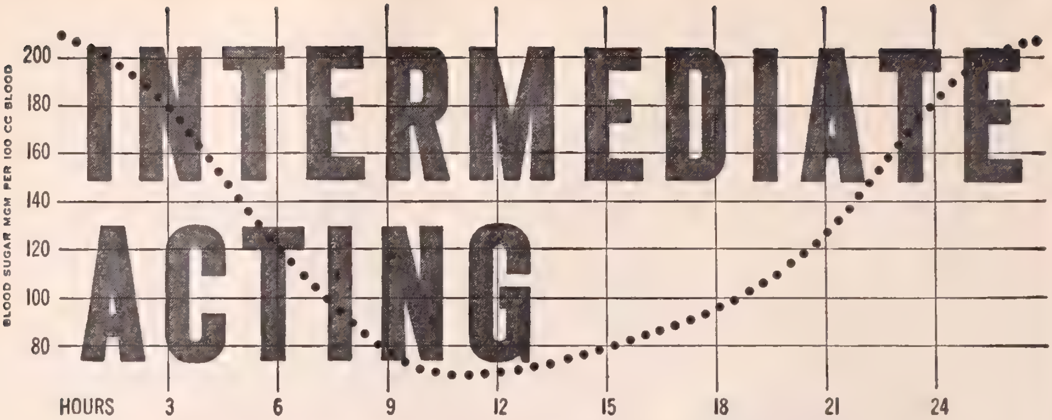

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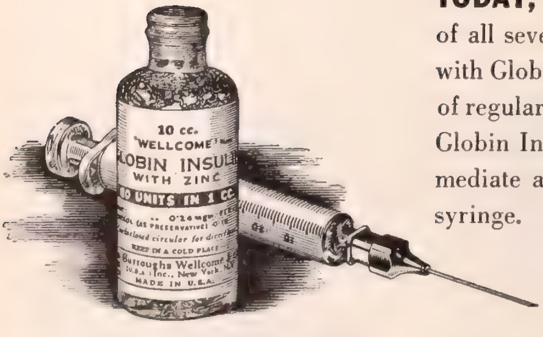
1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.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MADE IN U.S.A.

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NEW TRIPLE SULFONAMIDE

reduces Renal Crystalluria!

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Sulfamerazine	0.1 Gm.
Sulfadiazine	0.2 Gm.
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Renal crystalluria and toxic reactions, hazards of sulfonamide therapy, are reduced to a minimum by Neotresamide Tablets, Sharp & Dohme's new triple sulfonamide. Moreover, the necessity for alkalization is eliminated in most instances.

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Tablets, Triple Sulfonamide

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The Fiftieth Year

Happy New Year!

The Editors of the JOURNAL and the Publication Committee take pardonable pride in the fact that on January 1 commences the fiftieth year of continuous publication of the NEW YORK STATE JOURNAL OF MEDICINE.

Originally it was published monthly under the present name and style with Dr. L. H. Wiggin as Managing Editor and Dr. James Hawley Burtenshaw as Literary Editor.[1] At a meeting of the Committee on Publications of the New York State Medical Association on November 2, 1900, it was moved and carried that "a medical journal be issued monthly by the committee, beginning with January 1, 1901, in accordance with the resolution passed by the State Medical Association at its last annual meeting," and that "the title of the journal be THE NEW YORK STATE JOURNAL OF MEDICINE."

Thus the JOURNAL was the joint creature of the New York State Medical Association (the dissident group) and the official Medical Society of the State of New York. It supplanted the annual volume of Transactions of the Society, and, to quote page 1 of vol. 1, No. 1, "will include scientific papers, county and district branch association proceedings, news items, correspondence, personal notices, and an occasional editorial."

The *Journal of the American Medical Association* commented, on January 2, 1901, "This makes the third State body to publish a monthly journal in place of an annual volume, the other two being the Medical Society of the State of Pennsylvania and the Illinois State Medical Society. We note that the new journal opens its pages to advertisers; this is sensible . . . . . Legitimate advertising is a benefit to the physician, as well as to those who supply him with the many things he needs in his work."[2]

A particularly large edition of the May, 1901, number was issued. Twelve thousand copies were printed and one was sent to every practicing physician in the State. Attention was directed to an article by Dr. A. A. Hubbell called, "The Reason for the Existence of the New York State Medical Association."[3] Because of interest aroused by the May issue of the JOURNAL several county associations were formed.[4] From the JOURNAL, Vol. 26, p. 426 in the Report of the Publication Committee for the year 1925—"After careful consideration it was decided to publish the JOURNAL twice a month throughout the year and to add a department of Medical Progress."

Thus we trace the origins of the JOURNAL back to the period which marked the end of the split of the medical profession in the State and the re-establishment of our Society. Its publication under the same name has continued ever since.

The present Publication Committee, desiring to make known to the membership that we are now in our fiftieth year of publication, has caused the cover of this first issue of Volume 50 to carry the legend "Golden Anniversary Year" as a tribute to the many who, with heart, hand, voice and pen, typewriter and pastepot, have labored faithfully these long years through, meeting deadlines, soliciting advertising, arguing with printers for faster press work, better "make ready," with suppliers for better paper stock, with authors for better copy—all the tremendous activity and turmoil that brings to your desk or office table the twice monthly copies of the NEW YORK STATE JOURNAL OF MEDICINE.

Read it more carefully this fiftieth year. It is yours. It doesn't just happen. Yet all the thought, planning, editing, writing, and just plain hard work and sweat is worth while if it can contribute to your pride in your Society, to your own edification and education during the

Happy New Year, 1950.

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[1] At a meeting of the Council of the New York State Medical Association on October 18, 1900, it was moved and carried that the Journal of the New York State Medical Association be established. It was also moved and carried that Dr. L. H. Wiggin be made the Managing Editor, that Dr. James Hawley Burtenshaw be made the Literary Editor, and that neither editor's name appear in the Journal.

[2] Quoted from Vol. 1, No. 2, page 32.

[3] NEW YORK STATE J. MED. 1: 85 (May) 1901, and Minutes of the Publication Committee March 20, 1901, and March 28, 1901.

[4] *Idem:* 1: 114 (June) 1901.

Disability Benefits Law

The Disability Benefits Law recently passed by the New York State Legislature becomes operative January 1, 1950. Presumably, the Society comes under its provisions. Decision as to this point has not yet been made by the responsible authorities administering the law.

The Disability Benefits Law has as its purpose "...insurance against the hazards of sickness and disability not incurred in.... employment" (Governor Thomas E. Dewey). In principle, it is a counterpart of workmen's compensation insurance; sickness and disability not covered by workmen's compensation insurance are covered by the Disability Benefits Law. The Law will be administered by the Workmen's Compensation Board.

The law provides that "disability benefits shall be payable to an eligible employe for disabilities beginning with the eighth consecutive day of disability, and thereafter during the continuance of disability." Benefits continue for not more than thirteen weeks during a fifty-two-week period.

The cost is borne as follows:

Permanent Contributions

By the Employe: One half of 1 per cent on wages paid on and after July 1, 1950, with a maximum of $0.30 per week.

By the Employer: The entire excess of cost over the contributions of the employes.

Temporary Contributions

Two-tenths of 1 per cent on wages paid from January 1, 1950, to June 30, 1950, not exceeding $0.12 per week per employe. Of this figure, employer and employe are liable for half each.

Under Section 201, the Law lists exempt employers.

Further comments on the matter will be reserved for a subsequent issue.

Opportunity for Public Service

The present water shortage affecting large portions of the Eastern section of the Empire State affords the membership of the Medical Society of the State of New York the opportunity to perform a notable public service. Doctors, in making house calls, speaking to their patients in the office or hospital can, if they will, remind citizens of the affected areas to conserve water.

The New York deficiency of rainfall at the time of this writing is almost 7 inches. Wide publicity has been given to the low water levels in the various reservoirs. It may yet be necessary to pump water from the Hudson River near Poughkeepsie to prevent catastrophe. Many localities in Westchester County, Long Island, and further north have exhausted their local wells, municipal and town reservoirs and have been compelled to tie in with New York City's systems.

This condition, if continued, and if rainfall or snow does not occur, can constitute a serious menace to the public health. We urge our membership to assist the authorities by themselves conserving water in every possible way; leaking faucets, inefficient use of washing machines, unnecessary tub baths, and overlong use of shower baths waste water at a frightful rate. Flushing a toilet uses 7 gallons; a tub bath takes about 25 gallons; a leaking faucet needing perhaps nothing more than a new washer can waste about 15,000 gallons a year.

If each doctor would speak of these facts to his patients and solicit their cooperation in cutting down all possible waste, an incalculable saving could result.

We hope that all who see this editorial will see also the opportunity for a necessary and helpful public service which, in our opinion, it is their duty as well as their privilege as citizen taxpayers and physicians to perform. Help stop waste!

The New Pilgrims

From Great Britain and the continent of Europe again come pilgrims. They flee the recurrent tyranny of dictators and state-controlled economies used as bludgeons to coerce citizen-taxpayers through "regulation" by "welfare" states!

Precisely as in 1620 individuals of courage, having no stomach for the heavy-handed, tyrannical, and cynical "regulation" of minorities, of which medicine is one, seek sanctuary here with us.

These modern pilgrims find a land not quite so bleak, a native population not quite so savage as in 1620. They may now travel in airplanes, drive automobiles on well-paved streets, think their own thoughts, reflect on the tyrannies they have left behind them, and observe at leisure what they find here.

The medical pilgrims, looking about them, and still licking their professional wounds of the mind, body, and spirit, find us here engaged in a controversy. This controversy, curiously enough, centers about the question whether we should by law in the United States institute the very system of national compulsory health insurance, from the intolerable controls, red tape, and tyranny of which they have just fled!

Briefly these discouraged pilgrims can enjoy with us the comparative medical freedom which we here take as a matter of course, perhaps too much so, but for how long?

Should those in and out of the government who advocate national compulsory health insurance prevail in writing it into the statutes, how long would it be before the same bureaucratic tyranny, red tape, controls, and regulations would make the practice of medicine here a stench in the nostrils of free men?

Then what of the pilgrims? Could they stand better here that thing which drove them from their former homes? And if neither they nor many of us could long endure it, where, to what place, could we make our pilgrimage? New Zealand?

Current Editorial Comment

Scholarships. As a tribute to 34 members who lost their lives while serving as medical officers in World War II, the Medical Society of the State of New York on November 17 announced through its War Memorial Committee the award of the first of a series of scholarships to provide for the education of the surviving children.

Ten young men and women, most of them now enrolled in schools and colleges, were the first to benefit under the provisions of a War Memorial Fund, created by the State Society by a $12 special assessment on each of its 23,000 members. There are 65 children of deceased medical officers from New York State eligible to benefit under the Fund. More than 5,100 members of the State Society were in service during the last war.

Dr. James F. Rooney, of Albany, chairman of the War Memorial Committee, estimated that the Fund will continue in operation until 1972, and will entail a total up to $328,000. He said scholarships will be awarded annually to each eligible survivor upon completion of his or her high school education, if he or she pursues a collegiate or postgraduate professional course, up to the age of twenty-five.

The Society has every right to be proud of the war records of its members, and not only of those who served with the armed forces but also of the many who labored unceasingly in the service of the civilian population.

The War Memorial Committee has done a magnificent task in carrying out the wishes of the membership that the surviving children of those doctors who gave to the country in World War II the "last full measure of devotion" should have assistance in completing their education. The enthusiastic support of the membership in the contribution of money for this purpose has been an enjoyable spiritual experience.

The annual award of the Society scholarships to the eligible surviving children will serve as a continuing reminder to the membership that they have kept faith with those immortals, who asked the living, to

Take up our quarrel with the foe
To you with failing hands we throw
The torch; be yours to hold it high!
If ye break faith with us who die,
We shall not sleep, though poppies grow
In Flanders fields.

People of fine feelings and delicate sentiments take more pains to be miserable than it would cost any rational man to be happy.—Anonymous

Scoring Our Slums. Our attention was attracted to an address made by the Surgeon General of the United States Public Health Service at the annual convention of the National Association of Housing Officials held in Boston recently. Dr. Scheele listed six cities as having slum conditions that "should cause real concern."[1] The incidence of illness, communicable diseases, juvenile delinquency, and infant mortality was found by careful surveys to be appreciably higher than in areas provided with adequate housing. He hailed the National Housing Act of 1949 as "one of the most significant pieces of health legislation passed in this decade," and stated that "united effort by housing and health authorities in the next ten years could speed the conquest of some of the nation's most stubborn cases of death and disability."

There can be little doubt of the truth of these statements. Will not the carrying out of this reform mean more for the welfare of the people of this country than the imposition of a system of compulsory health insurance? We believe it will, and so do many others who feel that improvement in living conditions will do more for health than any artificially developed method of treating such conditions as enumerated in Dr. Scheele's address, after they have occurred. Food, shelter, and clean living would obviate much illness; therefore, medical care as now provided would be less. Dr. Scheele has made a good argument, perhaps unintentionally, although we hope not, for we can use a real method for reducing illness by means which are sensible and, in the end, less costly than the vaporous theories of some of our medical reformers.

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[1] New York Times, November 15, 1949.

Whether these heralded improvements will be accomplished by the construction of these palatial skyscrapers erected during recent years in our large cities or whether we can arrive at a solution through simpler methods as exemplified in the Baltimore plan is a matter for others to decide. But as physicians we must recognize the fact that cleanliness, adequate light and air, and proper sanitation are essential, more essential than self-service elevators, electric refrigerators, and television sets.

If you owe money, be regular in discharging the interest.—Anonymous

We Spend as We Please. We recall a story current in the early days of the New Deal. One of the bright young men then invading Washington was asked by his superior for a set of figures.

"Yes, sir," he said briskly, "I'll have them for you directly."

Half an hour later he stuck his harassed head through the office door.

"Awfully sorry, sir. I don't know which set of figures I should bring you. You forgot to tell me what you were trying to prove."

Now read this:

> Our per capita expenditure (on medical care) is about $60. This is two and a half times the British (*sic*) per capita. Yet the British are spending only a little over two per cent of their gross national income for medical care, while we are spending more than three per cent.[1]

The above lines are taken from a letter to the New York *Times* from Mr. Michael M. Davis. Mr. Davis has spent his entire life, according to his autobiography in *Who's Who in America*, in the service of organizations in various fields which offer salaries to disinterested philanthropists like himself. His degree of Ph.D. allows him to assume the title of "Doctor" when it suits him to do so. Naturally this is when he is addressing himself to lay audiences. To medical audiences he is carefully Mr. Davis. To an audience such as the readers of the New York *Times*, presumed to be of some general culture, to have a decent amount of general information, and possibly of more than general recourse to reference books, he signs his name with no tag attached to it at all.

So what Mr. Davis is trying to prove by the above quotation we don't know. Perhaps that we are spendthrifts in regard to medical care? Perhaps that the rich spend too much, and the poor go uncared for? That if we adopted the British system by which everyone is insured and we buttered the bread of our philanthropy a little thinner the general lot of the people of the United States would be improved?

Well, we don't greatly care what he is trying to prove.

We are delighted to hear that we are spending more than our British brothers on medical care. It makes us out, doesn't it, more humane, more generous, more solicitous for the unfortunate? No matter what the relative sizes of our incomes may be, no matter what horrifying statistics are spewed up in our faces by the do-gooders who reproach us with the tremendous sums that we spend annually on cosmetics, tobacco, and booze, to say nothing of food, amusements, and motoring—we, a free people, spend more for medical care than do the people of the British socialized and regimented state. In spite of this enormous self-indulgence, we have for a large country the best health record in the world.

We don't supply free wigs for those balding citizens whose hair has rotted off, perhaps in the vitiating air of night clubs, or been torn out by furious females, competing for their favors. We don't offer free operations to suffering Canadians whose surgical emergencies can wait while they amass the money for a round trip ticket to the Motherland. We thought, by the way, that the Colonies had cut themselves loose from her. Where will they get their operation free in that case? Our exhausted cabinet ministers so far do not have to seek extraterritorial therapy in Switzerland.

We repeat that we don't care what Mr. Davis is trying to prove. We are delighted that we are spending more per capita than Great Britain does on the cost of medical care. We who are anxious for the health of our greatest public servants are pleased that they have to go no further for its care than Bethesda Naval Hospital. We are proud that no matter what we spend we spend it because we want to, not because we are taxed into it by a system in which the costs fall alike upon the well and the unwell. We are proud to belong to a nation whose people are so intelligent as to insure themselves voluntarily and so charitable as to care for the minority that cannot do so.

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[1] New York Times, October 18, 1949.

Idleness travels very leisurely, and poverty soon overtakes her.—Anonymous

Rheumatic Fever Program. The attention which is being accorded to this very serious disease in childhood almost demands an authoritative guide for the organization of adequate programs for the detection and handling of cases. Such a needed booklet of directions has been published recently by the New York State Department of Health, prepared under the able direction of Dr. Edward R. Schlesinger, head of the Bureau of Maternal and Child Health. Those who participated in the preparation of this valuable booklet are deserving of commendation for their labors. It should be in the hands of all interested physicians, and copies may be obtained by addressing the Division of Medical Services of the State Department of Health in Albany.

Never write a letter when in a passion.—Anonymous

Reporting of Cases of Cerebral Palsy. Attention of physicians practicing in this State is called to the requirement that, by virtue of an act passed by the Legislature at its 1949 session, all cases of cerebral palsy must be reported to the local health offices beginning January 1, 1950. This is part of an important campaign to determine the extent of this scourge of childhood and to provide for its early treatment. Support should be accorded to the Health Department program for the control and handling of this apparently widespread disease which can be best handled by cooperative efforts. A budget of almost a million dollars has been allotted by the State for the various purposes of the program.

IN MEMORIAM

Stephen Rumble Monteith, M.D.

Dr. Stephen Rumble Monteith, chairman of the Subcommittee on Public Medical Care of the Council Committee on Economics of the Medical Society of the State of New York, died suddenly on December 8, 1949, while returning from the Clinical Session of the American Medical Association at Washington, D. C., to which he was a Delegate from the Medical Society of the State of New York.

Graduated from the University of Alabama in 1919 with the degree of M.D., Dr. Monteith practiced at Nyack, New York, in Rockland County, was director of surgery at the Nyack Hospital, a past president of the Medical Society of the County of Rockland, and a past president of the Second District Branch. He had been an ardent advocate of the reorganization of the District branches.

Dr. Monteith was respected by his professional associates, was an enthusiastic, imaginative, and energetic worker for progress in the Medical Society of his County and the State, and his passing will be regretted by all who knew him.

DEVELOPMENTS IN PUBLIC HEALTH

From the New York State Department of Health

William A. Brumfield, Jr., M.D., Editor

The Reporting of Cerebral Palsy

Pursuant to Section 25-d of the Public Health Law, established during the 1949 session of the State Legislature and effective January 1, 1950, physicians in New York State (exclusive of New York City) are required to report cases of cerebral palsy to the full-time health officer having jurisdiction over the areas of residence of such patients. Such health officer may be the city or county health commissioner, or the district State health officer. According to the new law, physicians must immediately report all cases of cerebral palsy under their care who are under eighteen years of age. Subsequently, all new patients with cerebral palsy, regardless of age, must be reported.

This mandatory reporting has several objectives. First, it will provide information regarding the general scope of the cerebral palsy problem, including the incidence and prevalence of the condition in the various areas of the State, the age distribution of the patients, the relative degree of the physical handicap, and the potentialities for schooling or employment. Second, this reporting is expected to provide information regarding the diagnostic and therapeutic facilities which have been made available to the patient, and, as a very important corollary, the requirements of the patient whose needs have not yet been met by the community resources. Third, it will provide data which, when analyzed in conjunction with the histories of prenatal and labor complications previously submitted upon the birth certificates for the patients, may provide certain leads for investigation of the causative factors of cerebral palsy. Fourth, by studying the trend of the incidence of newly developed cases from year to year, certain epidemiologic factors may be determined, such as association with new obstetric technics, relation to epidemics of disease, and association with various social and economic factors. Information in regard to the above items is of the utmost importance in developing a program for cerebral palsy patients directed at providing optimal facilities for the rehabilitation of the existing cases and at an eventual reduction in the incidence of new cases.

An initial approach to the procurement of some of these data was made during the last six months in 1948, when an intensive study was conducted in Schenectady County. The study included a careful scrutiny of all existing records of cerebral palsy cases, plus a direct house-to-house survey of a representative sample of the population with all newly discovered and many known cases being checked for confirmation of the diagnosis and evaluation of their needs. This survey yielded the first reasonable estimate of the general nature of the cerebral palsy problem. The reporting of all cerebral palsy patients by physicians in the upstate area of this State will add considerably to this information, as well as determine whether the findings in Schenectady County are generally applicable to the State as a whole.

Inasmuch as many patients with cerebral palsy are under the care of more than one physician or clinic, the first step in the reporting of each case will be as simple as possible. For this purpose the Form CD 103, usually used for the reporting of reportable communicable disease, will be utilized for cerebral palsy cases as well. It will be necessary for the physician to enter on this report card only the usual identifying data, such as name, address, date of birth, sex, age of patient, and race, and the diagnosis "Cerebral Palsy" in the space assigned for "Disease." As indicated above, such a card should be prepared for every cerebral palsy patient under eighteen years of age under the care of the physician or clinic on January 1, 1950, and for each new patient with cerebral palsy seen by the physician or clinic after that time, regardless of age. These report cards should be forwarded to the city or county health officer or to the district State health officer having jurisdiction over the area of residence of the patient. The local health office will then check its files to determine whether it already has full information regarding the named patient as a result of a previous report. If no previous information is available, the local health office will request the physician to fill out a supplementary report giving more specific information regarding the status of the patient, such as the type and degree of handicap, the services being received, and the educational and vocational status. When requested by the reporting physician, the local health office will make every attempt to render assistance in making available to the patient the necessary diagnostic, therapeutic, and rehabilitative services.

SCIENTIFIC EXHIBITS
1950
ANNUAL MEETING

Applications for space for the scientific exhibits should be made directly to the Chairman of the Subcommittee on Scientific Exhibits of the Convention Committee:

Dr. J. G. Fred Hiss
505 State Tower Building
Syracuse 2, New York

The Annual Meeting will be held May 8 to 12, 1950, at the Hotel Statler in New York City.

No applications can be considered after January 15, 1950

There will be two groups of awards:

Awards in Group I are made for exhibits of individual investigation, which are judged on the basis of originality and excellence of presentation.

Awards in Group II are made for exhibits which do not exemplify purely experimental studies and which are judged on the basis of excellence of presentation and correlation of facts.

W. P. Anderton, M.D., *Secretary*

IN THE MEDICAL MANAGEMENT OF GALLBLADDER DISEASE

WHEN THE SYMPTOMS ARE:	Pain, indigestion and flatulence and
WHEN THE DIAGNOSIS IS:	Chronic cholecystitis, biliary dyskinesia, or the postcholecystectomy syndrome
A RATIONAL REGIMEN OF THERAPY INCLUDES:	Adjusted diet to include fats which induce emptying of the gallbladder, ketocholanic acids which stimulate the flow of bile and antispasmodic medication to relax the sphincter of Oddi and allay the irritability of the gastrointestinal tract.

KETOCHOL®

combines all four bile acids
(cholic, desoxycholic, chenodesoxycholic and lithocholic)
in their "keto" or oxidized form.

DOSAGE:

One to two tablets three times a day,
with or immediately following meals.

PAVATRINE® WITH PHENOBARBITAL

combines the smooth muscle relaxant,
Pavatrine, with phenobarbital,
the central nervous system sedative.

DOSAGE:

One or two tablets three or
four times a day as indicated.

SEARLE

RESEARCH IN THE SERVICE OF MEDICINE

Evidence that Pyribenzamine aborts the Common Cold

Of three antihistaminics tested in the common cold, Gordon[1] found Pyribenzamine "equally or superiorly effective in controlling symptoms and producing fewer and less severe side reactions."

★ **Results of Treatment of the Common Cold with Pyribenzamine**

Investigator	Number Treated	Benefited	%
Gordon[1]	252	224	89
Murray[2]	494	397	80
Brewster[3]	466*	348	75

*Includes patients treated with other antihistaminics

1. Gordon, J. S.: Laryngoscope, 58:1265, Dec. 1948 2. Murray, H. C.: Indus. Med. 18:215, May 1949
3. Brewster, J. M.: U.S. Nav. M. Bull. 49:1, Jan.-Feb. 1949

THREE THERAPEUTIC CHOICES

1. Pyribenzamine-Ephedrine for systemic treatment

Each tablet contains 25 mg. of Pyribenzamine hydrochloride and 12 mg. of ephedrine sulfate. This combination synergistically promotes decongestion of the entire respiratory tract including the nasopharyngeal mucosa.

2. Pyribenzamine Nebulizer to control nasal symptoms

Immediate relief with no systemic side effects. Pocket-size nebulizer distributes a mist of minute droplets of Pyribenzamine hydrochloride Nasal Solution 0.5% throughout nasal passages.

3. Pyribenzamine Expectorant to control cough

Each teaspoonful contains 30 mg. of Pyribenzamine citrate, 10 mg. of ephedrine sulfate and 80 mg. of ammonium chloride. Highly effective for relief of cough. Blocks congestive and spasmogenic effects of histamine, shrinks respiratory mucosa and liquefies bronchial secretions.

Ciba PHARMACEUTICAL PRODUCTS, INC., SUMMIT, NEW JERSEY

PYRIBENZAMINE (brand of tripelennamine) Trade Mark Reg. U.S. Pat. Off. 2/1556M

Scientific Articles

Symposium

REHABILITATION

THE REHABILITATION OF THE PARAPLEGIC

Harry Kessler, M.D., and Arthur S. Abramson, M.D., Bronx, New York

(*From the Physical Medicine Rehabilitation Service, Veterans Hospital, Bronx*)

THE presently accepted definition of rehabilitation is the maximal degree of physical, mental, social, vocational, and economic recovery which is attainable in the case of a given disability. While the factors involved in each individual patient will vary to the extent that greater or lesser stress must be placed on one or the other of the attainable goals we have just mentioned, it becomes obvious that a thorough survey of the patient and his environment, from every conceivable standpoint, is a necessary prerequisite to the establishment of a program which will serve the ultimate purpose. Furthermore, while the patient's disability must always be considered from a purely medical standpoint—else we shall have no rehabilitation program by virtue of the fact that we shall have no patient—as convalescence progresses, the emphasis is placed more and more upon his innate and residual ability, with the disability considered as a limiting border within which we may work and within which we may discover the solution to our problem.

The completely rehabilitated paraplegic, therefore, is one who is able to care for his daily needs without assistance, who is able to ambulate with braces and crutches, and who is reintegrated into society to the extent that he is able to make a living at a job for which he is fitted both mentally and physically. From the time that the patient is brought to the hospital until he has reached this point, many months of hard work, as well as infinite patience, are required of a staff well-trained in the care of the existing pathology and fully versed in the concepts of medical rehabilitation.

Broadly speaking, the treatment of a paraplegic may be divided into two phases: definitive medicine and rehabilitative medicine. However, it should be emphasized that the division between definitive and rehabilitative medicine is purely artificial; actually, both phases must proceed simultaneously, and they must be carefully integrated so that they become part of one over-all program directed toward a common goal.

Since the internist, neurosurgeon, orthopedist, urologist, and plastic surgeon, as well as the physiatrist, are all concerned with the treatment of the paraplegic, it becomes evident that a closely knit team of specialists in these fields who have more than a superficial interest in paraplegics must be developed. Early in the plan of treatment the internist has a very important role in solving the problems of nutrition. The neurosurgeon treats compression of the spinal cord, pain, and spasticity by surgical methods. The orthopedist is interested in fixed contractures, spinal fractures, and proper bracing. The plastic surgeon must close bed sores; the urologist must make certain that there is an adequately functioning bladder. While interested in all of these phases of therapy, the physiatrist utilizes the facilities of physical medicine to attack the basic problems of nonfixed contractures and spasticity and to train the patient in self care and in ambulation. Hand in hand with these procedures is the very important role of the vocational advisor who, through his special methods of testing, is able to determine the patient's interests and aptitudes and by frequent interviews to lead the patient toward the proper voca-

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Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, Session on Physical Medicine, May 4, 1949.

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tional goal. Here again the physiatrist is concerned, for by observing the patient's reaction to and progress in practical application to educational and manual arts fields valuable information will become available in the ultimate consideration of a definite vocational objective. As long as the process of rehabilitation proceeds smoothly, psychiatry plays but a minor role; however, when this is not the case, the psychiatrist will find his place in the treatment of those difficulties which have become manifest. Such difficulties are peculiar to the paraplegic, arising as they do in the psychosexual sphere, and are closely related to the paralysis of the sexual apparatus.

It would be well, at this time, to outline the progress of the paraplegic from one stage to another in order that the roles of the various specialties may be properly evaluated and viewed in their proper perspective. The clinical course of the traumatic paraplegic, whether the disability is caused by spinal fracture, missiles, or acute infection or hemorrhage, is classic. In such instances the paralysis is of sudden onset. Where the paralysis is of slower onset in the course of its association with other etiologic factors such as expanding tumors, tuberculosis of the spine, etc., variations in the stages will obviously occur. For the purpose of this discussion, only the course of the traumatic paraplegic will be considered.

When injury first occurs, the paralysis is complete, or almost complete, and flaccid below the level of damage. The bladder is atonic, and unless catheterized there will be urinary retention and overflow. The appetite is lost with consequent negative nitrogen balance. Such a patient, whose tissues are already more susceptible to trauma because of excessive loss of protein and who is not turned frequently enough to minimize pressure on bony prominences, will develop decubiti which will tend to increase in size rather than to heal.

The decision whether or not to do a laminectomy must be made at this time. With marked displacement of the fractured vertebra or in the presence of multiple bone fragments following fracture of the laminae, an early laminectomy is usually elected. Because of the edema and hemorrhage within the cord an immediate laminectomy is fraught with some danger, since sudden decompression may cause even greater damage to the cord than that which might result from compression within the rigid spinal canal. Routine immediate laminectomy is gradually losing favor, since there is very little evidence that the end result is influenced to any great extent. Consequently, consideration is given to an early rather than immediate laminectomy for the reasons stated. It is usually performed about a week after the injury, thereby permitting the edema of the spinal cord to subside. At no time should the dura be incised in the course of an immediate or even early laminectomy, since during the period of swelling the cord tissue may be extruded, very much like tooth paste under pressure. The delayed laminectomy, which may be performed at any time, is usually accomplished because of the evidence of block or the presence of foreign bodies within the cord; it is also, at times, performed in the presence of pain and spasticity, with occasional partial relief of these manifestations. The very late laminectomy has rarely been known to afford a patient any renewed hope for recovery beyond that which might have been expected without such surgery.

Plaster casts are rarely applied by the orthopedist because of the almost unavoidable development of decubiti. Immobilization can be accomplished to a fairly satisfactory degree by the use of a Stryker bed in which the patient may be turned from prone to supine position or vice versa without exposing him to excessive strain.

During this stage, also called the stage of spinal shock because of the flaccidity, atonic bladder, and negative nitrogen balance, nutrition becomes extremely important. There may be an enormous loss of weight associated with and influenced by the following factors:

1. Anorexia with consequent decrease of caloric intake.
2. General deconditioning which comes with bed rest and with lack of activity.
3. The paralysis per se with the inability, therefore, of a large portion of the body to develop the protein-building stimulus of muscular contraction.
4. Inability to bear weight with the consequent absence of the influence which the stimulus of longitudinal pressure on bones exerts on the formation of bony osteoid; with the loss of such protein osteoid, calcium is also lost and osteoporosis results.
5. Decubiti which allow the loss of enormous quantities of nitrogenous materials through copious drainage.
6. Genitourinary infections associated with hyperpyrexia.

From a study of these factors it becomes readily apparent that diet alone will not replace this great protein loss. However, soon after the injury the institution of general body exercises for the uninvolved musculature may be of considerable therapeutic value in preventing general deconditioning. The loss of muscular contraction in the area of the body involved in the paralysis, with its concomitant deleterious effect upon protein building, cannot be altered at this stage and must be accepted. Similarly, weight bearing is not feasible during this period, and, it may be added, unless proper nutrition can be established surgical closure of the bed sores may be unsuccessful. Thus, at this stage, diet, exercise, and antibiotics, as indicated, are invaluable. It should be noted that the normal high protein diet which would ordinarily supply less than 150 Gm. of protein per day is wholly inadequate; consequently, added forced administration of protein hydrolysates and blood plasma must be resorted to in order to raise the intake of protein up to at least 200 Gm. per day.

There are two choices of bladder care at this time: the patient may either be placed on tidal drainage, or he may have a suprapubic cystostomy. Within recent years the suprapubic cystostomies have been condemned because they were accused of producing small, contracted bladders; however, we have more and more frequently observed adequately functioning bladders following such procedures, even in cases where suprapubic drainage had existed for long periods of time and was later discontinued.

Following a period of from several weeks to several months, the stage of spinal shock gradually subsides. In lesions of the cord above the conus, spasticity usually results; in lesions of the conus and cauda equina, flaccidity becomes a permanent feature. Spasticity may become extremely vigorous, and muscles which had become markedly atrophied during the period of spinal shock may recover their bulk almost fully. The appetite improves; ulcers which were necrotic and bluish in appearance, with a tendency toward growing in size, now appear cleaner and healthier and manifest tendencies toward epithelialization and cicatrization. In lower motor neuron lesions the bladder changes from the atonic type to the autonomous type with mild bladder contractions resulting from impulses originating in the intrinsic plexus of nerves within the bladder wall itself. In upper motor neuron lesions the atonicity disappears and is replaced by bladders of different types, all more or less hypertonic in nature.

By this time, nutrition is spontaneously improving, and forced feedings are more readily accepted. The quality of the skin has improved, and the plastic surgeon may now consider plastic closure of the bed sores. Spontaneous closure of the decubiti by cicatrization frequently results in a structure which is very poorly resistant to recurring ulceration; split thickness grafts may also fall into this same category. Far more preferable, therefore, is the surgical closure made up of wide rotating flaps which are full thickness and which close the bed sore completely, thus preventing further protein loss from drainage.

Occasionally, pain of a sharp, crushing, or burning character may develop in the lower extremities. Neither pain nor spasticity should, at this stage, be treated surgically, since not infrequently the character of these manifestations may become altered with the passage of time. This conservative attitude should also be applied in dealing with the paralysis itself, since the apparent existence of complete paralysis during the stage of spinal shock may, in many instances, give way to spontaneous recovery of power. As a result of severe spasticity, flexion contractures may begin to appear, but these, again, are not yet to be treated surgically by the orthopedist. The urologist, in the presence of a bladder which remains dilated because of failure to recover its contractility and which contains a considerable residual of urine, is faced with the alternative of either permitting the suprapubic cystostomy to remain in situ permanently or of resecting the bladder neck in order to remove the existing obstruction to the free flow of urine.

While the patient was in the stage of spinal shock, the physiatrist was concerned only with general body exercises, proper bed posture, and passive motion to prevent contractures. At this time, however, the physiatrist becomes responsible for a greatly augmented and commensurately more important regime of therapy. The general body exercises must be continued, but they are now directed toward the objective of training the patient to get in and out of bed, into and out of his wheel chair, and to attain the necessary strength required to accomplish those activities which are inherent in daily living. He must develop those muscles maximally which will aid the patient in ambulation. Ultraviolet irradiation of the bed sores must be applied in order to prepare these ulcers for surgery and to heal the smaller ones. Contractures must be treated by passive motion and by stretching of the spastic muscles. Spasticity itself must be treated early by stretching, massage, vigorous exercise to the upper extremities which, in itself, produces relaxation of spasticity, and by the use of tetanization of the spastic limbs; this type of therapy, however, will produce relief of spasticity for only short periods of time and should, therefore, be limited in application. The so-called spasm-relieving drugs such as curare, myanesin, prostigmine, etc., have produced disappointing results. However, persistent activity and adjustment to society have been observed to exert an extremely favorable influence upon spasticity. Since this principle of activity may be identified with the working principle of rehabilitation, it becomes an important factor in motivation.

When the existing decubiti have become well healed, the patient is measured for braces preparatory to ambulation. Also, at this time, bowel habits must be trained, and since this is a reflex action just as much as voiding, the patient must develop a daily schedule while sitting in the toilet, facilitating the process by increasing the intra-abdominal pressure to as great an extent as possible. Sphincter spasticity may be relieved to some degree by the use of glycerin suppositories. With relaxation of the rectal sphincter, the bladder sphincter may also become relaxed and so at least once a day the bladder may be completely, or almost completely, emptied. However, it should be emphasized that, to be successful, this regime must be followed religiously. The bladder may be trained either by the intake of periodic fixed quantities of fluids and by stimulation for emptying at fixed periods, depending on the bladder capacity, or by the one daily emptying during defecation and the use of a rubber urinal at all other times without regard to the time of emptying. The former method will not be feasible in those patients with the type of spastic bladder in which emptying is facilitated by spasticity; this type would do well to wear a rubber urinal.

As soon as is medically feasible, the patient should be set up on his braces and crutches and trained to ambulate. When his ability to ambulate has increased, it becomes no longer necessary to continue with mat exercises; ambulation is, of itself, maximal functional exercise, and it is also of great influence in the reduction of spasticity.

During the period of spinal shock the patient must never be allowed to pass the time merely looking at four walls. The occupational therapist is, therefore, called upon to administer some purposeful and stimulating activity in accordance with the patient's interests. When he graduates to a wheel chair, he should continue with this activity in the occupational therapy clinic where he will have the opportunity to develop more ambitious projects, some of which may be of only avocational interest while others may actually become of ultimate vocational interest to him.

As early in the course of hospitalization as may be considered feasible from a medical standpoint, the vocational advisor should interview the patient and institute such surveys and tests as may be required to establish a vocational objective. In this regard and when indicated by specific problems, the psychologist may often be of invaluable assistance in the final evaluation of the patient's mental capabilities. It should be emphasized that it may not be possible, at this time, to arrive at a definite conclusion and we may have to accept a tentative objective or, perhaps, no objective at all; in any case, it is of equal importance to recognize the absence of any specific plans or interests as it is to know that they exist.

It is at this point that educational therapy and manual arts therapy enter upon the important roles they are to play in the program of medical rehabilitation. Not only do these two sections serve to initiate and carry on, as long as the patient remains hospitalized, the preliminary phases of a planned and definite vocational objective, but they also, within the limits of their available diversified projects, serve to test the patient's interests and aptitudes from a practical standpoint. Thus, when the patient is able to come to the clinic, a few days or a week at a watch repair bench, radio repair unit, typewriter, or at any other project may be quite sufficient to reveal to himself and to his observers whether or not he has a real interest in this type of work and whether or not he has the required aptitude and ability to apply himself. Furthermore, by duplicating in the clinic actual working conditions as would be found in the shop, office, or classroom and by observing the patient's reaction thereto, it is often possible to answer the questions, "Can this patient meet the working conditions required of this position in outside industry, school, or profession?" "Can he tolerate this type of work for the required number of hours each day?" Experience has already revealed that, as a general rule, the paraplegic must plan for a shorter work day than is ordinarily encountered. It is, furthermore, obvious that careful attention must always be directed toward avoiding such working conditions as may be deleterious in any way to the individual patient under consideration.

We should like to point out here that what has been said does not, by any means, represent an intention to turn the hospital into a workshop or classroom but rather to apply the available facilities in a manner which will be truly therapeutic in nature. No one can deny that the patient who has set a definite goal for himself in life and who, with proper assistance and encouragement, observes a steady progress toward that goal, will undoubtedly manifest a far greater determination to recover, and at a more rapid pace, than the patient who lies in bed, devoid of all interest in his environment and discouraged by the outlook occasioned by his disability.

By this time, therefore, we have a patient who is well nourished, whose musculature is well developed, who has full control of his spasticity, who has learned to live with such pain that was not amenable to surgical intervention, whose bed sores are closed, who has no contractures, who is able to care for his daily needs, and who is able to ambulate long distances, climb stairs, and either drive his own car or use such public conveyance as he may find necessary. He is self-reliant and self-confident, and his mental outlook must essentially have changed from that of dependency to that of independence. Finally, he has a vocational objective toward which he is striving with every hope for successful accomplishment.

It should be understood that the patient will not always remain hospitalized long enough actually to attain this objective; further training may be necessary, whether it be in college, trade school, or apprenticeship. The training officer, another important member of our team, works with the vocational advisor to facilitate the necessary details required to enroll the patient for such further training as is required and thereby to obviate any untoward delay following his discharge from the hospital. One other essential function of this training specialist is that of keeping his fingers on the pulse of outside industry, so to speak, and thereby remaining constantly aware of the personnel requirements in various phases of activity. It would be most unfortunate for a patient to spend months or years of training for a type of vocation in which the field is known to be already overcrowded or where it is known that the competition will become so great that it may well preclude the possibility of employment for this paraplegic in the particular locality where he intends to reside.

During the period of hospitalization the social service worker should be in constant contact with the patient, his family, and community. No matter how careful our planning may have been, the existence of any domestic difficulties or misunderstandings may well wreck the entire program. The family of the paraplegic should be trained to accept him for what he is and to make a home for him which will be suitable for his physical needs and in which there will be no oversolicitous attitude or stimulation to self-pity.

Throughout this entire program and in all the activities and contacts which go to make it up, it cannot be too often repeated or overemphasized that each and every person who is involved in the rehabilitation of the paraplegic, whether he be a physician or a therapist, must have more than merely a professional interest in the patient; he must have a profound and intimate knowledge of the patient's problems, and the patient must be made aware of the fact that this knowledge and understanding is on an individual basis and is not the result of impersonal generalizations. In this way, the approach of the doctor and therapist can be truly psychotherapeutic in nature, and the patient will be encouraged and stimulated to expend the vast amount of energy to be required in the months and, perhaps, years of training which lie ahead. It must always be remembered that it is the patient who does most of the work—it is his program—and without his full understanding and cooperation it will be doomed to failure. Thus, with the full knowledge on the part of the physician, the therapist, and everyone else concerned, of the role each has to play, with the ability to do their parts well, and with the realization by the patient that he, too, must take an active interest in the program, then will rehabilitation for the paraplegic be successful, and he will return to his family and community with respect, with dignity, and, perhaps most important of all, with such self-respect and satisfaction in his accomplishment as he could not otherwise have attained.

Summary

1. It has been pointed out that the rehabilitation of the paraplegic actually commences at the moment of injury and is completed only when the patient can care for himself, ambulate with braces and crutches, is back home as an integral member of his family and society, and is gainfully employed.

2. The respective roles of the internist, neurosurgeon, plastic surgeon, urologist, psychiatrist, orthopedist, physiatrist, and associated technical personnel in the program of rehabilitation are described, and the importance of working together as a team is emphasized. Thus, there is a gradual change from dependency to self-reliance, both physically and psychologically, coincident with the development of rehabilitation toward its utimate goal.

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REHABILITATION OF THE HEMIPLEGIC PATIENT

Donald A. Covalt, M.D., New York City

(*From the Department of Rehabilitation and Physical Medicine, New York University College of Medicine, and the Institute of Rehabilitation and Physical Medicine*)

PATIENTS with hemiplegia constitute one of the largest groups of individuals suffering from chronic neurologic disease. It is estimated that there are approximately 1,250,000 hemiplegic patients in the United States. As physicians we have been interested in the hemiplegia during the acute phase of his illness and have then forgotten him if he survived. Some of these patients have learned to care for themselves and to walk again, but it has usually been a hit-or-miss proposition and almost entirely left to the patient or his family.

It is the purpose of this paper to demonstrate that something can be done for the hemiplegic patient. The majority can be trained in their own homes up to the point where they are capable of self-care, able to walk again, and even, in many cases, able to return to some kind of work. We believe that it is the duty of the physician to supervise and direct this training, utilizing the services of a physical therapist, a nurse, or even a member of the family to carry out the simple procedures necessary to return this man to useful living again.

First, I should like to review the neurologic pathology that is found in patients with apoplexy.[1] Apoplexy may be caused by thrombosis, hemorrhage, or embolism. These are in the order of frequency of occurrence. There may be a fourth cause, spasm of the cerebral vessels, which seems to be the only way to explain the transitory hemiplegia we occasionally see in patients.

There are two clinical manifestations of apoplexy, the first being the acute or general, the most common general symptom of which is the disturbance of consciousness resulting in stupor or coma. This is due to the suddenness, intensity, and extent of the cerebral vascular accident. The second manifestations are those local or focal signs of apoplexy which immediately reflect the loss of function of the particular part of the brain affected. This is, of course, the hemiplegia or paralysis.

I should like first to discuss the causes of cerebral hemorrhage. These may be listed as follows: (1) arteriosclerotic vascular changes of the cerebral vessels; (2) syphilis of the cerebral vessels; (3) intoxications, such as of lead and alcohol, and (4) infectious diseases.

Hypertension in itself is not sufficient to cause hemorrhage into the brain without nephritic changes and cerebral arteriosclerosis. As we all know, continued hypertension eventually leads to an enlarged heart and cerebral vascular disease.

The second cause of apoplexy is embolism in which the embolus is usually derived from vegetations on the valves of the heart following rheumatic heart disease. Emboli may also be dislodged from the wall of the pulmonary vein or aorta.

The third cause of apoplexy, cerebral thrombosis, is generally due to pathologic alterations in the walls of the cerebral vessels or to changes in the rate and flow of the blood. Thrombosis is more common in cerebral arteriosclerosis or in any other condition in which the interior of the artery undergoes atheromatous conditions. Thrombotic occlusion is most common past middle life and in advanced age. Changes in a vessel wall to form a favorable site of thrombosis may also occur in infectious diseases such as typhoid fever and diphtheria.

There is no part of the brain which is exempt from damage from embolism, thrombosis, or hemorrhage. However, the favorite sites of hemorrhage in the brain are in the lenticulo-striate and lenticulo-optic arteries. When these vessels rupture, we have involvement in the central or basal ganglia with predominant involvement of the internal and external capsules and of the thalamus and striate bodies.

Emboli are found in the terminal arteries and also in the bifurcations of the larger arteries, such as the carotid and vertebral, and these in turn may serve as the starting point for thrombosis.

I would like to discuss now the active rehabilitation of patients with hemiplegia. As is the case with all patients who seek rehabilitation, it is necessary to select only those cases which are feasible. For instance, it is necessary to exclude those in which rehabilitation can not keep up with the pathologic processes, such as the patient with malignant hypertension, encephalomalacia, or advanced senility. We do not exclude patients with hypertension if, in our clinical judgment, we believe they can stand a trial period of activity. These patients must be supervised closely and given adequate rest so that they will not tire. Some patients are allowed work in the functional training room for five minutes and then rest five

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minutes and then back to training again. Some of these patients have had a drop in pressure under such a regime. All patients with hemiplegia are carefully checked at least twice weekly for blood pressure, pulse rate, and general clinical condition. In addition to these factors, the patient himself must have the will power and motivation to go through the rehabilitation program which, of necessity in many cases, is fairly strenuous and extends over a long period of time.

A careful evaluation must be made of the mental and physical residue of the patient with hemiplegia. The psychologist, and even the psychiatrist in some cases, will see the patient before any rehabilitation is started in order to determine whether he is capable of being taught the ordinary activities of daily life, such as dressing himself and tying his tie and shoelaces. Some patients have been instructed and shown how to walk but on returning the next day to the center had forgotten all of our instructions. These cases are not feasible for rehabilitation.

After a careful physical examination the patient is tested for range of motion of the joints. He is also given a muscle test and an evaluation of the activities of daily living. There are 102 of these activities on our test chart, beginning with the simplest, such as moving from place to place in bed. This may be quite a chore for a patient who has been in bed for months and perhaps years. He is also tested for other bed activities, such as sitting up in bed, turning over, getting from the bed to a chair, and from the chair back to the bed. He is checked for wheelchair activities and ability to care for himself, such as dressing and toilet care. Those activities that the patient can do at the time of the first examination are marked in black. The unfilled blanks indicate the activities in which the patient must be trained if he is to return to an independent life again.

In examining the patient, there are two simple tests the physician should remember. First, if the patient can move his arm freely on the affected side, there is every reason to believe that he can be taught to walk again. The hemiplegic patient ordinarily has more paralysis of the arm, and, if he is moving the arm on the affected side freely, he should have sufficient power in the leg to learn to walk again. The second simple test is to ask the patient to raise the leg on the affected side. If he is able to raise the leg from 1 to 2 inches off the sheet while in a prone position, he has enough muscle power to learn to walk again.

The question of when to start activity and when to start rehabilitation procedures has been asked many times. We believe that hemiplegic patients do better, and we have had no untoward results, by starting on the procedures early when rehabilitation is believed feasible. The following rules are used at the Institute of Rehabilitation and Physical Medicine: Where the cause of apoplexy has been thrombosis or embolism, the patient may start on bed activities twenty-four hours after regaining consciousness. Where hemorrhage has been the cause, the patient is kept on bed activities alone for the first three weeks and then is allowed to sit up in bed and start other active training activities.

There are four simple procedures which should be used to prevent the deformities which are so common in patients with hemiplegia: First, a foot board or a posterior leg splint should be placed on the lower extremity of the affected side. This will help to prevent toe drop and heel cord shortening which occurs. Second, sand bags should be placed along the outside of the affected leg in order to prevent outward rotation of the paralyzed leg. Third, a pillow should be placed in the axilla on the affected side to prevent adduction of the arm on the shoulder, and, fourth, quadriceps setting should be started early in order to maintain and improve the muscle strength of the quadriceps.

After the acute phase is over and we are ready to start active rehabilitation procedures, the patient is instructed on how to use a "U" rope. This is a braided bandage rope tied at each end to the posts at the foot of the bed. The rope should come approximately three fourths of the way up the bed in order that the patient may grasp the rope and pull himself to a sitting position. He must be instructed to place the affected hand on the rope and if necessary to hold it with the good hand while pulling himself up to a sitting position. Holding the affected hand in such a position increases the nerve stimulation to the affected side. Sitting up in bed maintains and increases the patient's sense of balance and will save him many hours and days of practice when he stands again.

Speech therapy should be started early and may be given under the direction of a speech therapist or speech pathologist, or, if such trained personnel is not available, there are many teachers of speech in high schools who have had sufficient training to assist the patient in learning to talk again. The physician should also inform the family that the patient has not necessarily lost his intelligence merely because he has lost the tools of language.

Pulley therapy should be started early while the patient is still in bed. A pulley can be arranged over the head of the bed in order that, with a rope and fabric strap around the affected hand, the patient may start movement of the arm on the affected side. The same procedure may be carried out with the lower extremities. This is important in starting to train the patient in reciprocal motion which is necessary for proper walking. In other words, the patient should be trained that when the right foot is advanced, the left hand comes forward, and when the left foot is advanced, the right arm comes forward. Pulley exercises given in bed stimulate the return of the spinal reflexes necessary for proper reciprocal walking. Pulley therapy to the arm will also prevent the frozen shoulder that is so common with the hemiplegic patient. A frozen shoulder is always sore and painful on movement, and one of the simplest methods of relieving this pain is to let the patient work with the rope and pulley in order to extend the range of motion of the arm on the shoulder. The patient knows how much movement he can stand without too much pain even better than the therapist or the physician. As the arm becomes more freely movable, the pain decreases. This exercise may be done for fifteen minutes three times a day and does not take the services of a therapist or physician.

The patient is now ready to be taught to sit on the edge of the bed and next to stand by the side of the bed. Two ordinary kitchen chairs can be placed in position by the bed, back to back, with sufficient room for the patient to stand between. He is taught to grasp the back of one chair with the good hand and the other chair with the affected hand. It may be necessary to lace the affected hand to the back of the chair with bandage. After a few days of standing, when the patient has recovered his balance, he may be taught to walk using the chairs in a reciprocal motion. As the right hand pushes the chair forward, the left foot is advanced, and when the left hand pushes the chair forward, the right foot is advanced. It may be necessary for the nurse or member of the family to help the patient push the chair forward on the affected side. Utilizing a smooth surface such as linoleum on the kitchen floor, the patient can be taught to become ambulatory again.

We have found it necessary to use short leg braces in a greater percentage of cases than has been reported elsewhere. Approximately 50 per cent of our patients with hemiplegia are fitted with short leg braces to correct the toe drop so common with this disability. The double-bar, short leg brace with a 90-degree stop is used in the majority of the patients. For some women, or if the toe drop is not complete, the patient may be fitted with the spring type of brace which extends from the heel of the shoe up the posterior of the leg to the calf. For cosmetic reasons this brace is preferred by many patients.

The patient is then taught to climb stairs and curbs and how to get in and out of an automobile and bus.

Last, the patient must be taught personal care activities such as to dress himself and, if necessary, how to tie a tie or shoelaces with one hand.

In our experience, the arm and hand are the last to return in function, and, in some cases, the function never returns. The family should be told that the prognosis for a completely paralyzed arm and hand is not good.

Following these rather simple procedures, the majority of patients with hemiplegia may be taught complete self-care, and many are capable of part-time and even full-time work again.

327 East 38th Street

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PATHOLOGY OF POSITION (WITH AN ADDED NOTE OF UNMITIGATED SYMPATHY)

I

A uterus may be anteflexed
Or slightly retroposed
A nose, perhaps, sit retrouseé
Or eyelid fully ptosed.

II

A heart may lay just right of center
An appendix though vermicular
May wander off quite aquiline
To no place in particular.

III

Fallot discovered things amiss
And gave us his tetralogy
Where artery and vein persist
With messed up physiology.

IV

While organs mainly have their place
Designed by He who made us
Invariably they decide to traipse
Through this or that hiatus.

V

But God be good to one unblessed
Who has no real receptacles
With anus that's imperforate
Plus undescended testicles.

J. H. Werk, M.D.,
Port Jefferson

—*Bulletin of the Suffolk County Medical Society, June, 1949*

RETURNING THE PATIENT TO NORMAL ACTIVITY FOLLOWING INJURY

Louis A. Goldstein, M.D., and R. Plato Schwartz, M.D., Rochester, New York

(From the Department of Surgery, Division of Orthopedics, University of Rochester School of Medicine and Dentistry)

THE goal in the treatment of the injured is the return of the individual to normal activity in the shortest possible time. If the severity or character of the injury does not prevent complete return of function, this goal is best accomplished by a comprehensive program including competent emergency and definitive treatment of the injury followed by a rehabilitation program which is initiated at the time of the injury.

The two factors that frequently prolong disability are swelling and joint stiffness. These are both, to a certain extent, preventable complications. Their prevention depends upon simple measures instituted early in the course of treatment. Swelling uniformly occurs with trauma. The degree of swelling depends primarily upon the location and severity of the injury, but it is also secondarily effected by treatment, particularly position of the limb. This secondary effect is definitely preventable by the simple measure of adequate, continuous, early elevation of the extremity. The proper application of casts and splints is essential. But, it is taken for granted that the cast or splint is not embarrassing to the circulation and is not a cause for progressive swelling.

Joint stiffness is likewise preventable in those joints which are not necessarily immobilized for the treatment of the injured part. Such free joints must be mobilized by prescribed active exercises. Here again splints and casts must allow for the necessary joint motion. Splinting is improper when it partially immobilizes joints that need not be immobilized and prevents the restoration of normal range of motion.

These initial errors and omissions in the early treatment of the injured contribute largely to the prolonging of disability unnecessarily. It is these factors which should be emphasized and illustrated with specific examples of common injuries.

Let us give a moment's reflection to experiences commonly associated with injuries of the upper extremities. Chronic edema and stiffness of the fingers too frequently provoke a long-persisting delay in the return to work. Adequate elevation of the extremity immediately following definitive treatment should be continued until local circulation has recovered from the damage inflicted by the injury. Gradual change from the elevated to the dependent position is necessary to prevent swelling after the healing of soft tissue structures. Voluntary movement of the fingers must be regarded as a part of initial treatment. This should be practiced every hour with effort and range of motion increasing as the progress of recovery will permit in the particular instance.

Every surgeon who treats such injuries has these simple measures at his disposal. Through their thoughtful application patients save weeks and sometimes months of time at rehabilitating efforts with the help of expensive and not always available resources of physical therapy.

The details of elevation, both as to method and duration, are important. Placing the splinted extremity on one or two pillows is not adequate elevation. Elevation of an arm is effectively accomplished by suspension from an overhead frame (Fig. 1). The leg may be elevated either by suspension from an overhead frame or by elevation of the foot portion of a Gatch frame bed (Fig. 2). The extremity should be elevated immediately upon the return of the patient to bed. If elevation is not accomplished for several hours after the injury is treated because the routine of carrying out postoperative orders prevents the hospital orderly from tending to this for several hours, then the surgeon or his assistant must see to it when the patient leaves the operating room. With patients who are admitted to the hospital this is best accomplished by making arrangements for the proper equipment to be placed on the bed when it reaches the operating room and everything is set to elevate the leg or arm when the patient is transferred from the operating room table or emergency cot to the hospital bed. The period of elevation depends upon the degree of edema and the time interval between injury treatment and the elevation, the longer the interval, the longer the time required to get rid of the edema. Specifically, elevation is necessary until edema is gone.

Elevation is, or it should be, easily accomplished in the hospital. It is a more difficult problem in the case of the patient who is treated

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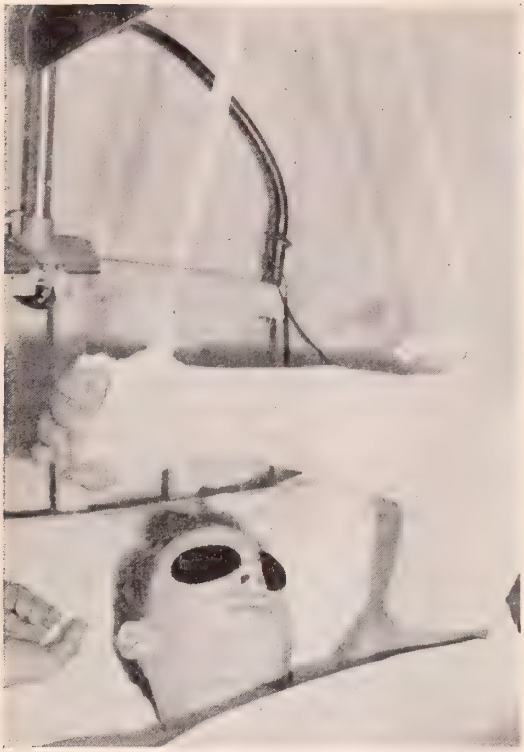

FIG. 1. Elevation of arm by suspension from overhead frame.

at the office or in an emergency department of a hospital and sent home shortly after treatment and recovery from anesthesia. Although a more difficult problem, it is not insurmountable and should be considered as seriously as for the hospitalized patient who usually has a more severe type of injury. It is necessary to discuss with the patient or other responsible individual the reason for prompt, continuous, and adequate elevation and how to accomplish it without a Gatch bed and an overhead frame.

Just how a leg will be elevated will depend upon how much the knee is flexed. If it is flexed at 35 to 40 degrees, a box with a height the same distance as that from bed to knee when the leg is parallel to the bed is a very simple and effective means. If the knee is only slightly flexed, an inverted chair, the back of the chair forming an incline with pillows placed on it will serve adequately. It is merely important to point out to the patient that adequate elevation means that the toes are well above the level of the heart. It is, therefore, not adequate to simply have one or two pillows under a flexed knee with the result that the foot is actually resting on the bed and is really dependent rather than elevated. It is, nevertheless, common practice to say to the patient, "Elevate your leg on a pillow or two."

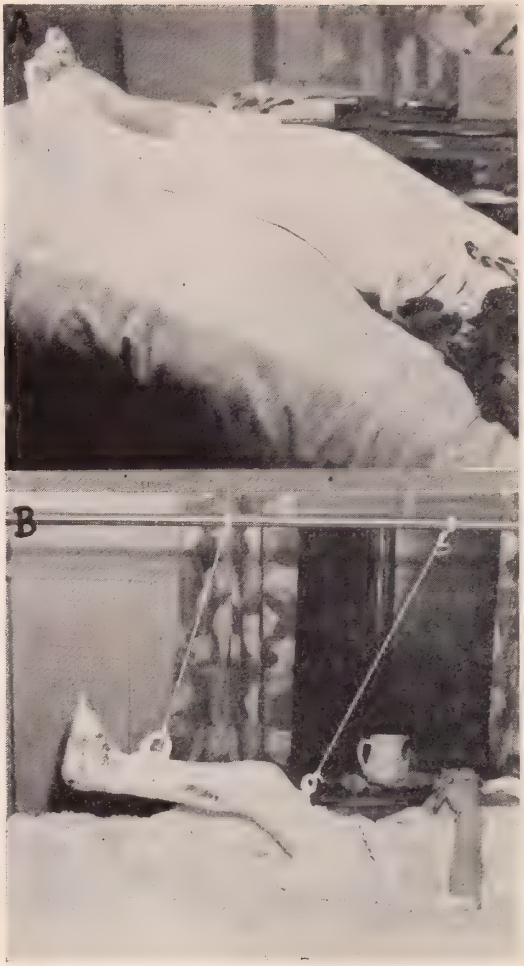

FIG. 2. (A) Leg elevation in Gatch frame bed. (B) Leg elevation by overhead suspension.

The one effective means of elevating the arm immobilized above the elbow is by suspension from an overhead bar so that the shoulder is flexed 90 degrees and the forearm parallel to the chest (Fig. 1). If the bed has a head and foot piece, a bar taped across the top of the bed is a very effective means. This is not often possible. The problem then is to figure out how elevation can best be maintained in this position by other means.

Instruction in active exercise of free joints is similarly a responsibility of the surgeon that should be satisfactorily discharged immediately after the definitive treatment of the injury. The best example is, of course, the importance of immediate active exercise for the interphalangeal and metacarpal phalangeal joints of the fingers. It is not sufficient to tell the patient to exercise or wiggle his fingers. Such instruction leads the patient to believe that all he needs to do is wave his fingers in the air getting about 15 or 20 degrees of motion in the metacarpal phalangeal joints and less in the interphalangeal joints. After the splints are removed fingers are stiff, not because the patient was not cooperative but because the surgeon failed to instruct the patient properly in the specific exercises to be done. It is essential to demonstrate to the patient how to accomplish a full range of motion in the interphalangeal joints and the metacarpal phalangeal joints of the fingers and to be sure that the splints will allow a complete range of motion. He must be shown how to exercise his shoulder in abduction and external and internal rotation with his arm immobilized in a cast. He requires specific instruction in how he can set his quadriceps muscle and exercise his hip and toes with the leg encased in plaster from toes to the groin. These exercises must be reviewed during the period of immobilization to be certain the patient is doing them correctly and that serious joint restrictions are not occurring.

In the treatment of a fracture of the forearm it is true that the immediate problem is satisfactory reduction of the fracture, adequate immobilization of the extremity to maintain the reduction, and evidence of normal circulation to the fingers. The surgeon cannot be satisfied by the fulfillment of these requirements that his job for the moment is complete.[1] His next thought should be what is now necessary to insure the earliest possible return of the patient to normal activity, to the normal use of his arm at work. Thus the rehabilitation program starts the day of the injury. In order to use the arm in normal fashion he must have good motion in the joints of the extremity and good muscle function to motivate the joints. The elbow and wrist are immobilized in the splints; therefore, nothing can be done about these joints. The shoulder is free; this joint can be actively mobilized by regular exercises rather than allowing it to hang in a sling virtually immobilized for the several weeks and sometimes months that are required for healing of the fracture. The fingers can likewise be actively mobilized provided that the immobilizing cast or splints allow a full range of motion in the finger joints. The freedom of motion in the joints of the fingers depends upon the extension of the plaster in the palm of the hand and the plaster bar in the web space between the index finger and thumb. With a properly applied plaster cast, 90-degree motion will be possible in the metacarpal phalangeal joints. Proper instruction in exercises will demonstrate to the patient how he can get 90-degree motion in the proximal and distal interphalangeal joints with one exercise and how he can get the same range of motion in the metacarpal phalangeal joints with another exercise. It should be pointed out why it is necessary to divide the exercises into two groups to be done individually rather than to combine the exercises and get an incomplete range of motion in all joints (Fig. 3). Elevation of the arm will accomplish dispersion of the existing swelling and prevent further swelling which is necessary to allow effective mobilization. Such a regime will result in normally functioning fingers and shoulder joint when the cast is removed instead of stiff swollen fingers and a limited painful shoulder. The difference in duration of disability and expense of treatment is a very great one.

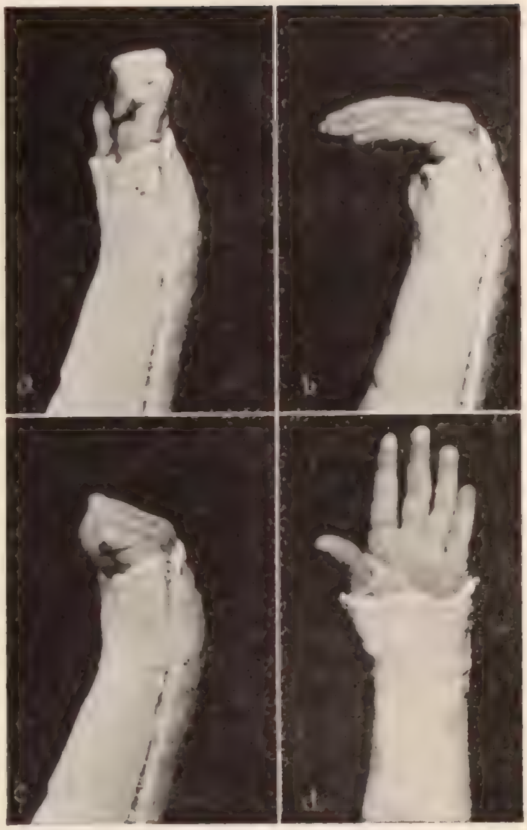

Fig. 3. Cast in Colles' fracture showing finger flexion exercises: (a) exercises for interphalangeal joints, (b) exercises for metacarpal phalangeal joints, (c) a single exercise results in incomplete motion of all joints, and (d) volar view showing extension of plaster into the palm, no plaster in the thumb-index web space.

The end result of a Colles' fracture and the prompt return of the patient to normal activity

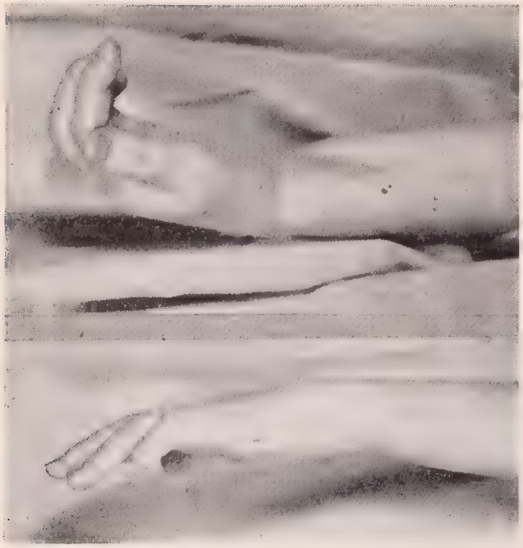

FIG. 4. Undisplaced fracture, distal radius, treated in cast extending to proximal interphalangeal joints. Figures show range of motion four months after injury.

depend upon several factors.[2] Satisfactory reduction of the fracture and maintenance of the reduction are, of course, essential in preventing deformity. This is only the first step in arriving at a satisfactory end result. It is not necessarily the most important factor. It is far more important to have normally functioning fingers than it is to have an anatomic restoration of bone fragments as demonstrated in the roentgenograms (Fig. 4). The patient will return to normal activity much sooner if finger motion is normal rather than restricted when the cast is removed. It follows, therefore, that the type of immobilization used and the immediate postreduction treatment and instructions to the patient are just as important as, if not more than, the postreduction roentgenograms.

The plaster cast or splints must allow free motion of the fingers, including 90-degree flexion at the metacarpal phalangeal joints. This is possible only if the plaster in the palm does not extend too far distally, usually not beyond the distal flexion crease of the palm. An anatomic landmark need not be taken as the level beyond which plaster should not extend—as a matter of fact, it is not the same in all individuals, and depends upon the type of hand to a certain extent. A reliable method of determining this important point is for the surgeon to ascertain before the patient leaves the operating room that the metacarpal phalangeal joints can be flexed 90 degrees. If plaster in the palm obstructs motion, it should be trimmed at that time and not delegated to some one else the next day or a week later. The postimmobilization test of flexing the metacarpal phalangeal joints to 90 degrees should be routine before considering the job of reduction and immobilization complete. If the arm is then adequately elevated as previously mentioned and the patient instructed in active finger exercises, one set of exercises for the interphalangeal joints and a second set of flexion exercises for the metacarpal phalangeal joints, normal finger function will prevail during the period of immobilization (Fig. 3). When the cast is removed, there is no problem of re-establishing finger function; there is normal or near normal range of motion.

A stiff painful shoulder is not an uncommon sequel in Colles' fracture. Often the shoulder joint is traumatized when the patient falls on the extended arm sustaining a fracture of the wrist. The combination of the shoulder trauma and the immobility in a sling for several weeks results in limited motion and pain. This, of course, prolongs disability because it may not be realized until after the cast is removed and the patient finally makes an attempt to use the arm that the shoulder joint is restricted and painful. This complication is usually easily avoided by instructing the patient in two simple shoulder exercises, placing hand over head and behind back which results in a full range of motion in abduction and internal and external rotation.[3] Finger and shoulder exercises properly accomplished during the period of immobilization will mean normal finger and shoulder joint motion when the cast is removed and a prompt return of this patient to normal activity with a minimum of postimmobilization treatment required.

The elbow joint deserves a word of caution in considering any rehabilitation effort. The elbow joint after trauma is often quite resistant to efforts at restoring motion. It must be appreciated that it is a joint that will not react favorably to forceful attempts at passive stretching or manipulation. Forcing an elbow does no good, and it may do harm. Mobilizing efforts should be restricted to heat and active exercises. We do not use passive stretching of the elbow joint and massage directly over the joint on the basis that at best it will do no good and at worst it may favor the development of myositis ossificans and cause increased joint stiffness.[3]

A fundamental difference in the rehabilitation of the upper and lower extremities is that the most important function in the upper extremity, the active use of the fingers, can be exercised in all injuries except to the hand itself from the very beginning of treatment, whereas in the lower extremity the most important function, that of weight bearing, must often wait for complete bone healing before it may be allowed or enjoyed. It is indeed a common error to allow weight bearing too early in an effort to hasten rehabilitation, with the result that return to normal activity is not hastened but delayed.

In knee injuries there is a difference of opinion regarding the proper or optimum time to allow weight bearing.[4,5] The treatment of the postoperative menisectomy in the Army is an example of the extreme in practice. At an Army post in 1943 the following postoperative routine was carried out: Patients were not allowed to use crutches; on the first postoperative day they were urged to get out of bed and walk to the lavatory without crutches regardless of the degree of swelling or pain in the knee; increasing weight-bearing activity on swollen, tender, painful, often incompletely extended knees was encouraged.[6] The other extreme is represented by the routine of three weeks immobilization on a posterior splint followed by gradual increase in weight-bearing activity along with active joint motion and muscle redevelopment; quadriceps setting exercises were, of course, regularly practiced during the period of immobilization.[7]

The recognized advantages of rest in the early stages of healing of traumatized tissue are sufficient argument against the practice of immediate weight-bearing activity. Rather than arbitrarily deciding that one or two or three weeks is the time to start weight-bearing activity, it seems more reasonable to require that certain conditions relative to the knee joint prevail before weight bearing is allowed. Ideally, there should be complete, painless extension of the knee joint, little or no demonstrable excess free fluid, and good power in the quadriceps muscle. Although one may compromise and allow weight bearing in the presence of moderate, excess fluid in the joint, it is not in the best interests of the knee joint and early return to normal activity to allow unrestricted weight bearing before painless complete extension of the joint is possible and the quadriceps muscle is reasonably redeveloped. The earlier efforts in the rehabilitation of the injured knee joint, therefore, are active nonweight-bearing exercises, directed at both increasing the range of motion and redeveloping muscle power, particularly the quadriceps. Active, quadriceps-setting exercises are followed by exercises in extension against gravity and finally against increasing resistance after complete extension against gravity is possible. The DeLorme method of progressive resistance exercises for redevelopment of the quadriceps muscle is simple and effective.[8]

Limited ankle motion, particularly in dorsiflexion, limits certain types of activities and prolongs disability. Walking stairs is difficult with limitation in dorsiflexion. In order to walk down steps in normal fashion dorsiflexion of the ankle well beyond 90 degrees is necessary. Edema is a definite factor in the formation of adhesions and the loss of the normal elasticity of capsular and ligament structures. Edema has been called "physiologic glue," and so it is. Persistence of swelling of the leg and foot during the period of immobilization is an important factor in ankle, tarsal, and toe joint stiffness. The elimination of as much edema as possible by early adequate elevation is an important factor in avoiding excessive stiffness in these joints.

Summary

The importance and advantages of the application of the two simple principles of adequate early elevation of an injured extremity and proper active exercises during the early treatment of the injured is discussed.

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FARM-MEDICAL STUDENT LOAN PROGRAM

Two more young men were added to the roster of medical students whose education in medicine is to be financed from the joint $100,000 loan fund maintained by the Illinois State Medical Society and the Illinois Agricultural Association. The loans are granted on condition that the students agree to return to a rural county to practice medicine on completion of their training. Several other candidates are still under consideration.

Under the program young men from rural areas who have completed premedical courses and are approved by local farm bureaus and medical societies may borrow up to $5,000 at $1,000 a year to complete their four-year medical training and one year internships, on condition that they will practice in rural areas. The plan was set up as part of a 10-point program to improve the level and distribution of available medical care in the rural areas of Illinois. Many other states have followed Illinois' example since it was announced last year.

THE DIAGNOSTIC VALUE OF URINARY SEDIMENT: A REVIEW BASED ON THE PAPANICOLAOU METHOD

Carl J. Schmidlapp, II, M.D.,* Oyster Bay, New York, and Victor F. Marshall, M.D., New York City

(From the Department of Surgery [Urology] of the New York Hospital-Cornell Medical Center and the Memorial Hospital)

EXAMINATION of the urinary sediment in Papanicolaou's laboratory was begun in September, 1944, and the first positive report was given on September 26. Recalling that vaginal cytologic study began some twenty years ago, it is evident that study of urinary cytology is only beginning.

Up to the present time approximately 1,900 cases have been so examined. In this review a small group is presented to compare the accuracy of the method as applied in cases of vesical, prostatic, and kidney disease. The early cases have been selected so that a follow-up would be available. However, the unfamiliarity with urinary cytology at that time makes these results less reliable than those now being obtained.

In the majority of cases only one sediment was examined, but a few had as many as five or six. In classifying cases in which more than one specimen was examined, the report which most indicated cancer to be present has been used. The study of more than one specimen obviously improved reliability. Papanicolaou's reports are classified as follows: Class I—no atypical cells; Class II—atypical cells with no suspicion of malignancy; Class III—atypical cells with suspicion of malignancy; Class IV—probable malignancy; Class V—conclusive for malignancy.

A Class V report should approximate 100 per cent accuracy with no false positives (a positive report in the absence of cancer). This accuracy is gradually being obtained, but at present 99 per cent is more probable. A Class IV report seems 95 per cent correct, a Class III 50 per cent, and in Classes I and II we may expect about 20 per cent of false negatives (a negative report in the presence of cancer). In a previous paper 333 cases were reviewed, false negative reports occurring in 7.1 per cent and false positive reports in 3.6 per cent. The method was most accurate in cases of vesical carcinoma.

Two hundred sixty-two cases are here reviewed: 124 of suspected vesical disease, 75 of suspected prostatic disease, and 63 of possible renal disease.

In the 124 patients whose vesical sediment was examined, 4 per cent were falsely reported negative, and there were no false positive reports. In Class III (the questionable group), 60 per cent had cancer, and 40 per cent did not. In each of the false negative cases only one urine sediment was examined, and the pathologic report based on tissue sections was low-grade papillary carcinoma. The dividing line between benign papilloma and low-grade papillary carcinoma is not always sharp, even on histologic examination. By far the greater number of papilloma are reported in Class II. This is well demonstrated in a group of 40 histologically proved benign papillomas, where six were reported in Class I, 25 in Class II, eight in Class III, and one in Class IV. Not included in this series were three cases of rectal carcinoma and two of cervical carcinoma invading the bladder, in which positive reports were given. At the present time the location of the neoplasm can only occasionally be predicted by the cells of the sediment. In three instances a positive report of cancer was the first indication that tumor existed, and this fact led to an extended search which revealed the lesions. When the cytologic findings indicative of cancer remain after therapy, clinical re-evaluation is imperative.

In 75 cases of prostatic disease, 15 per cent of the reports were false negative, and 2 per cent were false positives. In Class III, 46 per cent of the patients had cancer, and 54 per cent did not. In all these cases only urinary sediment was examined, not prostatic fluid alone. Considering this, the results are surprisingly reliable. Although most cases of cancer were clinically obvious, the diagnosis was made correctly by the laboratory and incorrectly by the surgeon in one instance. The early diagnosis of prostatic cancer, before it becomes clinically obvious, is now more frequently made by including the products of prostatic massage in the sediment. The one false positive is still clinically doubtful, especially as the pathologist's report on tissue obtained at formal biopsy is likewise uncertain. When seen two years later, the patient had developed hourly frequency.

In the 63 renal cases a false negative report was given in 6 per cent and false positives in 6.5 per cent. This is most distressing, since false positive reports are particularly undesirable, and all three cases are alive and well over two years after

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the initial urinary sediment examination. In none is there any present evidence of cancer. However, these cases were among the first examined, and it soon became evident that the transitional epithelium of the renal pelvis was particularly active in exfoliation and often produced suspiciously metaplastic cells, which now are known to be benign. These cells are very numerous in irritative processes, and occasionally Papanicolaou suggests that the diagnosis may be a stone because of the large number of these cells being present.

The cytologic method seems particularly well suited for the early diagnosis of renal cancer. An early diagnostic aid is certainly needed as the need for surgery is now based largely on pyelographic evidence which usually indicates a well-established neoplasm. The tumors originating in the transitional epithelium of the renal pelvis are well suited for early diagnosis, since exfoliation into the urine is early. In the parenchymal cancers, early exfoliation is not the rule so that these lesions are generally extensive before a positive urinary sediment appears. Of three clear cell carcinomas, only one was reported as having a positive sediment, although two were classed as suspicious. In two instances, Wilm's tumors provided cancer cells in the sediment, but both were advanced lesions. In another case a bronchiogenic carcinoma was suspected, and the first urines were reported negative. Later the smears of sediment became suspicious and finally were positive. Postmortem examination found renal metastases.

The value of the cytology method in the early diagnosis of renal neoplasms is best demonstrated in a case from outside the present series. A female who was being treated for a chronic urethrotrigonitis developed hematuria, and a bloody efflux from the right ureteral orifice was seen. Repeated pyelograms were normal, but the urine from the right ureter was persistently reported as positive, while that from the left was always negative. On the basis of right renal hematuria and persistently positive Papanicolaou reports on the urine specimens from this side, nephrectomy was performed. The kidney was grossly normal, even on section. Numerous microscopic sections were made, and finally an unmistakable carcinoma was found. This was reported by the pathologist to be originating in the transitional epithelium of the renal pelvis, and the entire lesion was not more than 3 mm. in diameter. Without the Papanicolaou technic, the diagnosis, for some months at least, would have been idiopathic hematuria.

Malignant cells can be carried from the bladder by a ureteral catheter, so that precautions such as plugging or irrigating of the catheter must be employed. Thorough search of the bladder must also be made. An early case demonstrated this point: original cystoscopy found no lesion, but vesical urine and right ureteral urine were reported positive on repeated examinations. A normal kidney was removed after which the urines from the bladder were still positive, and on very careful cystoscopic examination of the bladder a small papillary carcinoma was found.

The average for the three groups shows false negatives of 8 per cent and false positives of 3 per cent. If the three cases of false positive renal urines in which pelvic cells caused an error in interpretation are excluded, the average is less than 1 per cent, which approaches the anticipated percentage. If the case of prostatic false positive eventually shows malignancy, a not impossible occurrence, then false positives would be entirely eliminated. In Class III the average shows 56 per cent of patients with cancer and 44 per cent without the disease.

The cytologic technic is an aid in the early detection of cancer and is a relatively simple technic. It may be particularly useful in detecting renal and prostatic cancer before they are clinically obvious. False positive reports are a rarity, and when a Class V report is made, it is nearly 100 per cent correct. In obscure disease, surgery should never be carried out only on the basis of one report. Class III reports have indicated cancer in over half of the cases. A negative report is generally evidence that cancer does not exist, but in instances of vesical neoplasm, false negative reports do occur; therefore, such reports do not exclude cancer. Benign bladder papillomas exfoliate atypical cells which usually are not sufficiently deviated from the normal to permit that diagnosis. Cytologically, the type and location of the neoplasm cannot at present be made. Cells from the normal renal pelvis have unusual characteristics and so have caused difficulty in interpretation. Exfoliation, fortunately, is much more active from carcinoma than from normal epithelium. Clearing of the infected urine before examination will help the cytologic pathologist, as well as catheterized and concentrated specimens. Estrogens cause increase in exfoliation and a significant change in the cellular makeup of the urine sediment, corresponding to that caused in the vaginal secretion, so that cancer cells, when present, stand out and make a striking contrast to the normal cells. A short course of estrogen therapy in doubtful cases might increase the accuracy of the reports.

The Papanicolaou cytologic technic is becoming one of the foremost aids in the early diagnosis of cancer. The clinical application of exfoliative

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All smears of the urinary sediment were studied in Dr. Papanicolaou's laboratory at the Department of Anatomy, Cornell University Medical College.

cytology may help, one day, to approach the diagnostic accuracy now enjoyed by the histologic examination of tissue.

Discussion

J. Edwin Drew, M.D., *New York City.*—Dr. Schmidlapp is certainly to be commended for a very clear, concise, and well-presented paper on a very timely subject. It is of some interest that although the cytologic method for the diagnosis of cancer has been practical for some twenty years, it is only recently that we see the fruition of the efforts of its founding father, George Papanicolaou. While Dr. Schmidlapp's report is but one of very many on this same topic, his has the inestimable advantage of having been done in conjunction with and by Dr. Papanicolaou. That the method has not been more rapidly developed has been possibly due first to the reluctance of pathologists to make an unequivocal diagnosis of such an important disease as cancer based on examination of individual cells. The proper emphasis laid by pathologists on demonstration of invasive characteristics before such diagnosis is made has been probably one of the principal reasons for this delay.

Another reason of some importance has been the late appearance of corroboratory reports on the method. The present report which has an over-all accuracy of 88 per cent in the diagnosis of kidney cancer, of 96 per cent for bladder, and of 83 per cent for prostate, must be compared with the results of other clinics interested in the method. This not only helps to evaluate the present report but also indicates that pathologists and clinicians interested in the method can acquire a high degree of accuracy and that the method is not limited to the gynecologic or genitourinary tracts. Any organ or system from which secretions can be obtained may be considered a suitable field in which an interested worker may hope to obtain gratifying results.

One of the first clinics to take up the problem was the Massachusetts General Hospital's gynecologic service under the direction of Meigs and Freemont-Smith.[a] After eight years of work, they reported in 1948 that, using this method, they found a 10 per cent inaccuracy in the diagnosis of uterine cancer which was just about the same degree of inaccuracy as biopsy. In 30 cases of cervical cancer in situ, that is, cancer before it has become invasive, studied by the smear and biopsy technics, 23 of those 30 cases were diagnosed by the cytologic method and 13 by biopsy. They felt that the method was more accurate than biopsy for the diagnosis of early lesions. However, they have not in any sense abandoned biopsy to support their diagnosis, nor will they resort to surgery on an otherwise unsupported cytologic diagnosis of cancer.

Bronchogenic carcinoma has been investigated by various workers, and an over-all 65 to 92 per cent degree of accuracy is reported. Herbut *et al.* in a series of 800 cases of proved carcinoma of the bronchus found 89 per cent positive reports by the cytologic method and 39 per cent by the biopsy method.[b] They are quick to point out the difficulties of obtaining biopsies in bronchi inaccessible to the bronchoscope.

In gastric cancer where the problem of an accurate diagnosis by roentgenology, gastroscopy, and even by open operation, is at times extremely difficult, reports showing a 35 to 55 per cent degree of accuracy are now current. The method has also been applied to the diagnosis of gastric cancer.

Freemont-Smith's report on urinary tract diagnosis shows a 50 per cent accuracy for the kidney, 71 per cent for the urinary bladder, and 42 per cent for the prostate.[c] Albers, MacDonald, and Thompson from the Mayo Clinic report that by using the prostatic secretion, rather than the urinary sediment, they have reached an accuracy of diagnosis of prostatic cancer of about 80 per cent.[d]

It is apparent that the foregoing reports have all been based on cases with established diagnoses of cancer, and considerable criticism has been directed toward the method because of its relative inaccuracy when used as a screening technic for the diagnosis of unsuspected cancer. To evaluate this factor, 1,931 females over 30 were examined by a single cervical smear, and carcinoma was found in 54 cases. In 4,000 normal females with cervices apparently normal on gynecologic examination, 12 carcinomas were found by the cytologic method alone. Another series discovered five carcinomas out of 358 apparently normal females. In a percentage way, this is a low score. However, if the method is used in the same way as is the chest plate in screening a population for tuberculosis, and if the selected segment of the population is followed at half-yearly or yearly intervals, it becomes a valid method. Further criticism has been that pathologists would have to devote so much of their time to the method that they would have little opportunity to do any other work. In the early days of the microscopic examination for the tubercle bacillus, the same problem was overcome by training adequate numbers of technicians. Similar methods are now being followed, and in institutions where large numbers of cytologic smear examinations are done, technicians first review the slides and only pass them on to the pathologist in the doubtful or positive cases.

Specifically, from the urologic clinicians' point of view, probably we will find our greatest help in the differential diagnosis in cases of hematuria where the lesion may be too small to be delineated pyelographically or where it may be obscured by an accompanying inflammatory process. In the case cited by Dr. Schmidlapp, you recall, several cystoscopies were done, and the bladder lesion was of such small size that it had been missed. That the method will not identify the source of these abnormal cancer cells is, of course, one of its potential dangers, but actually it entails no more investigation by the clinician than heretofore.

While any new method runs the risk of exploitation by overenthusiasts, the cytologic method has established itself on a footing sufficiently firm to warrant incorporation in its laboratory armamentarium by any moderate-sized hospital.

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[b] Herbut *et al.*: Personal communication.
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INTERSTITIAL CYSTITIS IN THE MALE

J. E. Heslin, M.D., and C. Mamonas, M.D.,* Albany, New York

(From the Department of Urology, Albany Medical College and Albany Hospital)

Interstitial cystitis has been a well-recognized urologic entity since Nitze described it in Germany in 1907 and Hunner first introduced it to this country in 1914.[1,2] Pool and Rives have pointed out that interstitial cystitis is still a major problem in urology, is one of the least understood lesions, and is probably undiagnosed more often than any other lesion affecting the urinary tract.[3]

Invariably the disease has been associated with the female and only infrequently has it been identified with the male. In his original paper Hunner described it in females.[2] In 1921, Bumpus described "Submucous Ulcer of the Bladder in the Male."[4] Since then few male cases have been mentioned in the literature, even when large series of cases were discussed, with one exception, however.[5] It is easily understood that its existence in the male might be unknown to the general practitioner. However, this study was prompted when a recent case in the male passed through the hands of several recognized urologists before a belated diagnosis was established.

It is the aim of this paper to call attention once again to the occurrence of interstitial cystitis in males and to discuss the etiology, pathogenesis, diagnosis, and treatment.

Definition

It is difficult to give a precise definition of this disease because of its different manifestations both clinically and pathologically. This difficulty has given rise to many terms and synonyms based on various features of the disease, demonstrating how little understood the disease really is. It has been called "cystitis parenchymatosa" (Nitze), "elusive ulcer" (Cullen), "paracystitis" (Geraghty), "circumscribed panmural cystitis" (Keen), "Hunner's ulcer" after Hunner, "panmural fibrosis" (Braasch).[1,6] It has also been called "cystic neuralgia" and "neurotic bladder" when the ulcer was overlooked.[6]

No one term fully describes the disease. Pathologically, the term, "interstitial cystitis," of Bumpus describes it best, in that the disease is based on infiltration with resulting fibrosis in the layers of the bladder wall. Clinically, the term, "bladder fissure," suggested by Baumrucker best describes the clinical features in that it closely resembles rectal fissure in its symptomatology. They both cause severe pain and bleed on dilatation and are both relieved by silver nitrate, phenol, fulguration, stretching, and resection.[1] Microscopically, they both show changes of chronic infection with proliferation of connective tissue.

In general, the disease is characterized by progressive changes in the bladder proceeding from mild cystitis and ulceration to eventual fibrosis and reduced capacity. The lesions are located only in the distensible portion of the bladder, and clinically the patient exhibits day and night frequency with severe pain on voiding. This pain is local or referred, lancinating in character, and may be associated with hematuria.

Incidence

Hager and Peterson, reporting on the general incidence of the disease, described eight cases, all females, in a series of 1,707 urologic patients consisting of 1,292 men and 415 women.[5] The overall incidence is described as 4:1 in females, but urologic experience does not substantiate this. In 1922, Kretschmer reported 14 cases with one male; in 1929, Hinman 110 cases with six males; in 1930, Bumpus 15 cases with two males; in 1932, Folsom 20 cases with three males; in 1935, Young 45 cases with four males; in 1941, Higgins 100 cases with six males; in 1944, Howard two males; in 1949, Hand reported 19 males.[5-8] In 1944, Cristol, Greene, and Thompson reported 78 men, a unique situation.[5] With the exception of the Mayo group, using these series as criteria, the incidence in the male is about 7 per cent.

We have seen seven cases in the male in the past ten years in about 9,000 urologic admissions.

Etiology

The cause is still unknown. The most popular cause has been ascribed to focal infection, mentioned by Hunner in his original work and, in general, accepted by most writers.[2] Bumpus and Meisser attributed it to selective bacterial affinity for the bladder and reproduced the lesions in rabbit bladders by injecting the rabbits with cultures from the teeth and tonsils of patients with interstitial cystitis.[9] This was substantiated by Moensch and Counseller.[10]

The preponderance of the disease in females was ascribed to cervical infections, a logical anatomic answer for the female. Winsbury-White

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showed clearly the lymphatic connection between the bladder and the cervix.[1] India ink injected into the cervix of a guinea pig appeared in the lymph spaces of the bladder wall; tubercle bacilli injected into the cervix produced an inflammatory reaction in the bladder wall.

In 1937, Herbst, Baumrucker, and German felt the selective affinity of bacteria was due to the lack of blood supply in cicatrized tissue, and, realizing the high incidence of the disease in females and the proximity of the vaginal tract, they experimented as follows: By ligating the blood vessels of the posterior bladder wall and vertex of the bladder in female dogs, then suturing the vagina and uterine horns to the posterior wall and vertex of the bladder and introducing bone spicules infected with Streptococcus viridans between the uterus and the bladder, they were able to reproduce the characteristic lesions which resembled elusive ulcers both cystoscopically and histologically.[1]

Engel states the bladder lesion is due to impaired circulation caused by vascular disease or nutritional deficiency.[10] He felt the bladder pathology was only the local manifestation of a generalized disease and cited changes such as fibrosis and contraction in the sartorius muscles and a diminution of the capillary bed in the conjunctival capillaries. Hinman had 80 per cent of his cases associated with abortions, ectopic pregnancy, pelvic inflammatory disease, or menstrual irregularity.[11] In his six male patients, three had a history of gonorrhea, and one had syphilis with a primary chancre.

Higgins reported associated pathology in a high percentage of his cases.[6] Three out of six male cases had prostatitis; one had syphilis. Meads considered neglected cystitis as ranking with foci of infection as a causative agent.[1] Howard reported a case in the female following amebic dysentery and responding to emetin hydrochloride.[7]

Endocrine deficiency has been strongly considered because of its high incidence in females at the menopausal period.[7,8] This does not explain it in the male, however.

Prolonged vitamin deficiency has been mentioned.[7] In 1945, Powell was impressed by the similarity of progressive chronic lymphatic edema and the microscopic picture of Hunner's ulcer.[12] His anatomic studies on 24 infant female cadavers revealed a remarkable deficiency in lymphatic drainage in the anterior bladder wall. He postulated that this anatomic disparity, influenced by repeated obstructions of the lymphatic vessels from chronic repeated infections, carcinoma, pressure, pregnancy, etc., would produce a lymphatic edema in the anterior bladder wall which condition when prolonged would result in fibrosis and then produce interstitial cystitis. He was able to reproduce this in female dogs by injecting the bladder lymphatics with heavy thorotrast and also by ligating some lymph collectors. He concluded that, clinically, these changes occur in longstanding or repeated infection and that other associated or developing pathology, such as pelvic inflammatory disease or tumor, increases the likelihood. In the female bladder there is only one large single lymph collector on each side of the anterior wall. The lymphatic anastomoses on the anterior wall are much fewer than on the posterior wall. In the female the anterior bladder wall is often pushed strongly against the symphysis by the uterus. The lymphatics in the supravesical area adjacent to the anterior wall are connected with those of the uterine cervix. Powell believes it to be due to a combination of predisposing causes, and frequently a history is obtained of a chronic process existing over a long period of time averaging five to ten years. Urethral stricture is very common. However, only the rare case with several mechanisms proceeds to the end result of Hunner ulcer. In the male similar anatomic and infectious mechanisms may exist. Two of our cases seem to illustrate this point. Hand ascribes it to neurogenic factors.[8]

Whether the recently described acute interstitial cystitis of Tahara, Lechner, and Hess is the precursor of this disease remains to be seen.[13]

Pathology

Hunner's original description of the pathology still holds. Broders has defined it still more precisely as a nonspecific chronic inflammation of the connective tissue of the bladder beginning in the subepithelial tissues and extending to the deeper layers.[14] Although a chronic state, it goes through acute, subacute, and chronic phases with frequent exacerbations of the acute phases. The bladder wall becomes thickened, but the epithelial layer thins, often becoming only one or two layers thick. In other instances the epithelium disappears, and superficial ulceration remains. In the subepithelial connective tissue there are increased vascularity, numerous small lymphocytes, polymorphonuclear leukocytes, intra- and extravascular edema in varying degrees. The process is less pronounced in the other layers. The serosa and adventitia become thickened. Fibrosis varies in direct proportion to the extent of the inflammatory process.

Broders feels it closely resembles a stomach ulcer or in some instances "linitis plastica of nonneoplastic type." When infection has been superimposed on ulcerated interstitial cystitis, it may resemble simple chronic cystitis with ulceration. Here the main inflammatory process is superficial in the mucosa, the extent depending on the severity of the infection.

Symptoms

Interstitial cystitis is a chronic disease of adult life. Engel's youngest patient was sixteen years old, Hand's youngest was thirteen.[10,8] The disease exists for years before the proper diagnosis is established. Frequency, clocklike in character, occurring day and night is characteristic. The interval between voidings becomes shorter as the disease progresses. Nocturia is an essential feature of the disease. The frequency becomes so disabling that patients refuse to leave their homes, cannot work, and may become social outcasts. One of our male patients occupied a bedpan constantly day and night until the diagnosis was made and treatment instituted.

Pain is a constant feature. This is usually suprapubic but may be referred to the rectum, urethra, abdomen, perineum, or inguinal region. This pain is lancinating and may be excruciating. It is produced by voiding and is maximal with overdistention of the bladder. The pain in one of Lower's patients was so incapacitating that 38 grains of morphine were taken weekly for relief.[15] The pain may be aggravated by motion, jarring, riding, and even by intestinal peristalsis. Voiding brings temporary relief. The bizarre distribution of pain has led to considerable unnecessary extraurinary surgery without relief of pain, and consequently these patients often become extremely neurotic.

A clear urine is common, but hematuria occurs in about one third of the cases. Intermittent hematuria will occur eventually in most patients. Previous urologic examination or coincident cystitis will usually produce confusing pyuria and changes in the urinary picture.

Cristol, Greene, and Thompson and others have observed that symptoms are characteristic irrespective of sex.[5,8] In our experience the female is readily diagnosed by the urologist because the persistence of urinary symptoms in the absence of obvious explanatory urologic disease provokes careful study of the bladder. In the male, on the other hand, there is usually other masking urologic pathology present such as renal stone, urethral stricture, gonorrhea, prostatitis, prostatism, etc., obviously sufficient to account for the main symptomatology, and so the urologist is misled. Consequently, the disease is allowed to progress undiagnosed, and the pain and nocturia are considered complications of the masking disease rather than the main disease. In cases where obstructive symptoms exist, removal of associated pathology, such as fibrous bar of obstructing prostate, does not relieve the obstructing symptomatology.[5] This causes confusion even to the experienced urologist. Such cases will respond only by proper attention to the primary disease.

Diagnosis

An alertness to the existence of this disease in men is a primary prerequisite to its early diagnosis. The characteristic history of frequency, nocturia, and pain of vesical overdistention should stimulate careful and repeated examination to establish the diagnosis. The persistence of vesical pain and frequency after the treatment of urethral prostatic or vesical disease in the male requires careful study of the bladder. A presumptive diagnosis may be made by passing a urethral catheter into the bladder and filling it to capacity.[10] A diminished capacity of 200 cc. or less with reproduction of the characteristic pain and a pink urine with overdistention beyond this point should lead one to suspect the existence of the disease. Occasionally, in the office where only local anesthesia is available and cystoscopic visualization is impossible due to limited vesical distensibility, a therapeutic test with silver nitrate solution may be used as a presumptive test. In general, the precise diagnosis is made by complete cystoscopic study of the bladder. Due to pain and decreased vesical capacity this procedure may be impossible under local anesthesia, and spinal or general anesthesia must be used. The cystoscopic picture varies with the stage of the disease. Engel has described three general types:[10]

Type 1.—Early nonulcerative stage. There is a diffuse involvement of the bladder without ulceration. Bladder capacity is limited. There is a smooth bladder wall with pale mucosa having abnormal vessel distribution. These vessels are shortened, fragmented, and appear and disappear suddenly.

Type 2.—Ulcerative stage, single or multiple. This is the most common type, comprising 75 per cent of the cases. The ulcers are small, on the movable portion of the bladder, and often on the dome near the air bubble. The lesions are salmon-pink in color and have a puckered or contracted appearance, forming a small ridge on which is a linear ulcer or fissure. These are usually multiple. Instrumental palpation of the ulcers reproduces the pain. The overdistention of the bladder causes splitting of the mucous membrane with trickling of blood from the lesions. The surrounding bladder is normal except for the bizarre vascular distribution.

Type 3.—The late ulcerated and contracted stages (15 per cent). The entire bladder is involved diffusely with ulceration and fibrosis, and the capacity is diminished to 30 cc. or less, the slightest distention causing bleeding. The diagnosis is difficult and may be made only by exclusion.

Simple overdistention of the bladder under anesthesia will produce symptomatic relief and also will be diagnostic. In the differential diagnosis, simple ulcer with chronic cystitis will be confusing but will respond to antibiotics. Tuberculous ulceration can be ruled out by presence of upper urinary tract pathology, location and distribution of ulcers, and cultural and guinea pig studies. Early infiltrating carcinoma is readily diagnosed by biopsy. The radium ulcer seen with irradiation of the cervix in the female rarely has to be considered in the male. Extravesical pathology, such as diverticulitis of the colon and malignancy, may adhere to the bladder wall and cause confusion. Cystoscopy reveals an area of inflammation on the bladder wall surrounded by bullous edema. Complete study of the patient rules this out. Neurosis is eliminated by the history and cystoscopic findings.

Therapy

The treatment may be surgical. Nonsurgical measures have included silver nitrate instillations in increasing strength, phenol applied to the lesions, submucous injection of alcohol about the lesion, aniline dye instillations, deep x-ray therapy, histidine, placental extracts, vitamins, and emetin hydrochloride.[16–22,7] Hydrostatic distention and fulguration under anesthesia have proved effective.[23]

Surgical measures have included the removal of foci of infection, local excision of the ulcer, segmental resection of the bladder, subtotal resection of the bladder, presacral neurectomy and sacral ganglionectomy, alcoholic paravertebral injections, ureterocutaneous and ureterointestinal anastomosis, and, more recently, anterolateral chordotomy.[2,24,25,10,15,26]

In general, conservative types of therapy should be used to alleviate the pain, relieve the symptoms, and increase the bladder capacity. Conservative treatment will give excellent results in the first two stages of interstitial cystitis. We prefer the use of silver nitrate in increasing concentrations as advocated by Pool.[3] In addition, the bladder is overdistended under spinal anesthesia with the lesions visualized constantly to avoid extravasation. The overdistention increases the bladder capacity, relieves the pain, and also aids in the absorption of intramural inflammatory products, as with the dilating of urethral strictures. In the male associated urologic disease also must be treated with urinary antiseptics, massage, and transurethral resection as indicated by the coexisting pathology.

Satterthwaite and White have recently reported successes with streptomycin in two of three male cases.[27] The cases were refractory to treatment and were of two years duration. They all had Bacterium coli and another organism as complicating feature. The antibiotic probably eliminated the superimposed infection which was making the cases refractory to usual measures of therapy. In view of the tendency towards late remissions in these cases final evaluation must be deferred.

Where the pathology is far advanced and irreversible by conservative measures, ureterointestinal anastomosis is the procedure of choice. In selected cases Nesbit's recent suggestion of anterolateral chordotomy may be used, but inasmuch as the neurophysiologic mechanisms are not fully understood and the results unpredictable it is advisable to use this measure in the male only as a last resort because of the possible interference with potency and the dangers of hypesthesia produced.[28]

To date all our cases in the male have responded to conservative treatment.

Case Reports

Case 1.—J. M., thirty-nine-year-old white male, was admitted in May, 1940, with right abdominal pain, nausea, and vomiting and history of left ureterolithotomy at age fourteen with persistent urinary infection since. Urologic studies revealed right ureteral calculus and functionless left kidney. The right ureteral calculus was removed cystoscopically, and subsequently a left nephrectomy was performed. Perineal pain with marked urgency and frequency occurred. This was ascribed to coexistent prostatitis, and local measures produced transient relief. Symptoms persisted, and in 1945, an eminent Boston urologist diagnosed vesiculitis and treated him without relief. He then returned, and a transurethral resection for prostatic fibrosis and calculosis was performed. Symptoms progressed. In May, 1946, linear ulcers, bleeding on vesical distention, were found on the lateral wall. The diagnosis was not made, and the patient went to another urologist for perineal prostatectomy for persistent perineal pain. On cystoscopy, the same lesions were seen and the diagnosis established. By this time the patient was a narcotic addict. The time interval before specific diagnosis was six years.

Case 2.—R. T., a thirty-nine-year-old white male, was admitted in February, 1941, with frequency, perineal pain, and hematuria for eight years during which a urologist had been treating him for a "spot on the kidney." There was a history of specific urethritis at sixteen and resultant urethral stricture. Subsequently, he had persistent pyuria and a B. coli infection, prostatic calculi, and vesical neck contracture. Cystoscopy revealed inflammatory areas on the bladder walls which bled on palpation and distention. In addition to treatment of the ulcerated areas, treatment had to be directed at the other lesions present. Time interval before specific diagnosis was ten years.

Case 3.—J. T., a thirty-seven-year-old white male, was admitted in July, 1948, with frequency day and night, passage of clots, and pain in the right loin. A urologist had done a right nephrectomy for stone, but the bladder symptoms persisted postoperatively. He complained of severe perineal pain and a rectal mass with loose bowel movements. Cystoscopy revealed "crushed strawberry" areas of granulation on the lateral and posterior vesical walls. Repeated proctoscopies, barium enemas, and cultures were normal. Repeated urologic studies were negative for organisms. The diagnosis was established on the third cystoscopy under spinal anesthesia, the first two giving incomplete visualization with local anesthesia due to pain. Overdistention produced remarkable and dramatic relief of pain. Time interval before specific diagnosis was fourteen months.

Case 4.—W. T., a twenty-four-year-old white male weaver, was admitted on January 3, 1940, with frequency, dysuria, penile pain, and nocturia every two hours. He had had an acute gonorrheal infection five years before admission with hematuria. Urine showed trace of albumin and occasional red and white cells. Intravenous and retrograde studies and cultural studies were normal. Cystoscopy revealed typical Hunner's ulcer in the dome of the bladder. Fulguration produced marked improvement. Duration of disease was five years.

Case 5.—T. M., a seventy-two-year-old Italian male, was admitted in November, 1941, complaining of pain on urination. He had gonorrhea at age twenty, and ten years before admission a diverticulum containing squamous carcinoma was removed from the posterior wall of the bladder. In May, 1940, cystoscopy revealed transitional carcinoma with papillary growths on the anterior vesical wall just above the neck. Two others were seen on the left posterior-lateral wall. These were fulgurated. Transurethral fulguration for recurrence was repeated in September, 1940. Frequency, urgency, and pain became progressive, and in November, 1941, cystoscopy revealed definite linear Hunner's ulcer on the left dome of the bladder. This bled on distention and was nonmalignant. There was no sign of tumor. Duration of mechanisms was eleven years.

This case is cited to demonstrate that location of previous tumors on the anterior bladder wall and posterior wall with fulguration eventually interfered with lymphatic drainage, and Hunner's ulcer developed in the dome, a considerable distance from the other lesions.

Case 6.—P. B., a forty-six-year-old white, widowed male, was first seen in January, 1938. He had had gonorrheal urethritis at age of twenty-two and again at thirty. At age forty-two he had prostatitis and left epididymitis. Subsequently, pain, burning, and frequency persisted for four years. He was hospitalized at another hospital and repeatedly cystoscoped. On discharge, he felt worse than on admission. He continued to pass grossly bloody urine with pain and was hospitalized at another hospital for ten weeks where excision of fistula-in-ano was done and cystoscopy repeated. He remained ten weeks and had some relief. Symptoms recurred with pain in rectum and perineum, burning in urethra, and discomfort on walking. He was then seen in this hospital for erysipelas, and after recovery cystoscopy for the urologic symptoms revealed bladder capacity of 90 cc. with Hunner's ulcers in the dome of the bladder. Associated were chronic tonsillitis, sinusitis, and otitis media which were corrected, but the disease was in no way affected. Duration of symptoms before specific diagnosis was five years.

Case 7.—H. C. V., a sixty-four-year-old white male, was admitted on June 12, 1945, for treatment of Hunner's ulcers of the dome of the bladder. He had a previous history of prostatitis. Three years before, a transurethral prostatectomy had been performed, and an infiltrating tumor on the left anterolateral wall was fulgurated. These ulcers had appeared during the follow-up cystoscopies.

This case, although not typical, is cited as evidence to show how certain pathologic lesions by their anatomic location may aid in the pathogenesis of Hunner's ulcer.

Comment

Four of the five primary cases of interstitial cystitis had a history of gonorrhea or of stricture. One of the cases, secondary to carcinoma, had an acute prostatitis. None had syphilitic infection. The primary cases (five) were in relatively young men, the average age being thirty-seven years. The two secondary cases occurred in males over sixty years of age.

Hematuria, either continuous or intermittent, was a characteristic feature in the primary cases. Severe pain was frequently referred to the perineum and rectum. Two cases had nephrectomy, one for calculus and the other for nonfunction subsequent to stricture and ureteral calculus.

The time from onset of symptoms until specific diagnosis varied from fourteen months to eleven years. Cases passed through the hands of from two to five urologists before the diagnosis was made. None of our male cases had carcinoma developing on an elusive ulcer.[29]

It seems reasonable to assume that, as Powell has stated, both anatomic and infectious factors of a recurring or chronic nature are the basis for this disease.[12] After all Hunner's ulcer is simply a cicatrix, the end result of some other disease. Cases where gonorrheal stricture, prostatitis, and renal infection occur certainly provide a mechanism for recurring infection, obstruction, and subsequent vesical fibrosis. In the male, the possible existence of Hunner's ulcer should always be considered where multitudinous urologic disease has existed for lengthy periods and painful vesical symptoms persist. It is our considered opinion that, because of these associated urologic diseases, Hunner's ulcer is often overlooked in the male until a late stage of the disease has occurred. In the one case described where the disease existed uncomplicated, the diagnosis was quickly and rapidly established.

Summary

1. Interstitial cystitis in the male is a well-recognized but infrequently diagnosed urologic entity.

2. A proper appreciation of the pathogenesis of the disease, the complex factors in its production, and the possibility of other masking concurrent disease must be considered in these cases.

3. Because of these masking urologic features it differs diagnostically from the disease as found in the female.

4. A precise knowledge of the pathology and clinical features at various stages is essential for its earlier diagnosis and the institution of proper therapy.

5. The stage of the disease determines the type of therapy.

6. The literature is reviewed; various etiologic theories are evaluated, and illustrative case histories are presented.

75 WILLETT STREET

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Discussion

W. G. Hayward, M.D., *Jamestown.*—It is a happy coincidence that two of the most complete and comprehensive papers ever presented on the subject of interstitial cystitis should appear so close together. This paper and that of J. R. Hand which was published in the February, 1949, issue of the *Journal of Urology* are the ones to which I refer. Both of them show extensive study plus the experience of the authors.

Many of the papers which in the past have been presented to the Urological Section might better have been presented to a meeting of general practitioners. I believe that this might also include a paper on interstitial cystitis because I am convinced that a comparatively small percentage of general practitioners have ever heard of it.

Interstitial cystitis in the male, however, is not a rehash of something we already know, for unless we are connected with large clinics we will have had the opportunity of seeing only a few cases in a lifetime. This is illustrated by the fact that less than one case a year was seen in a ten-year period out of 9,000 urologic cases at the Albany Hospital. The authors did not state how many cases were seen in females during that period, but from collected series of cases they estimated that about 7 per cent were in the male. Hand places the figure at 11 to 1.

I am interested in the description of the disease and the location of the lesion in this paper and in that of Hand. The latter reports over 40 per cent of his lesions on the trigone and base which is entirely foreign to my limited experience and to the present report. I also believe that a diagnosis can rarely be made before nocturia and clocklike regularity become manifest.

The etiology of the disease has been well covered in this paper, and I can only comment that "selective bacterial affinity" leaves me entirely cold. The work of Powell on lymphatic edema seems more attractive. Obviously, there must be an explanation of the extreme rarity of the lesion in the male sex. The finding of prostatitis, gonorrheal stricture, and kidney infections may, and probably does, have some relationship to the etiology.

It is difficult for me to comprehend how an early diagnosis can be made with a cystoscope if local anesthesia is employed. The bladder is so intolerant that it has to empty before enough distention occurs to cause bleeding. Since I routinely employ intravenous anesthesia on all cystoscopies, I can secure better filling. Even then it takes but a slight overfilling of the bladder to cause definite pain as evidenced by change in breathing and even movement on the table. I believe that the anesthetic of choice for therapeutic dilatation should be spinal. There is nothing that I can add to the already established modes of treatment. In terms of best results in my hands I should list them as follows: (1) combination of distention, fulguration, and silver nitrate therapy; (2) silver nitrate alone; and (3) distention alone.

Then there are the failures in which one must resort to ureterointestinal anastomosis.

The authors have done a great service in pointing out that this lesion should be searched for in men even when an associated condition is present that might partially explain the symptoms.

ANSON JONES: DOCTOR AND DIPLOMAT

T. Wood Clarke, M.D., Utica, New York

(From the departments of Pediatrics and Allergy, St. Elizabeth Hospital)

Anson Jones was born in Great Barrington, Massachusetts, in 1798. The first eighteen years of his life were spent working on his father's farm, attending school at intervals, and reading every book on which he could lay his hands. Although he had little formal schooling, he acquired a good knowledge of English literature, Latin, Greek, and mathematics.

When the boy was eighteen years of age, his father decided he was not physically strong enough to be a farmer and set him to the study of medicine in the office of Dr. Sheldon in Litchfield. For the next two years he alternated between studying medicine with Dr. Sheldon and teaching school at Goshen. In 1818 he came to Utica, New York, and continued his studies under Dr. Amos G. Hull, who had been the first president of the Medical Society of the County of Oneida in 1806 and was again serving in the same capacity. On September 20, 1820, he was examined by the Board of Censors of the county society and awarded a license to practice physic and surgery.

Now began a series of misfortunes for the debt-laden young doctor. In Bainbridge, New York, where he opened his first office, the rivalry of an older, well-established physician was too strong for him. In Norwich, New York, he opened a drugstore on credit obtained through Dr. Hull. As soon as it began to succeed, he was sued for an old board bill in Utica and had his entire stock confiscated by the sheriff. Heading for Virginia, he was arrested in Philadelphia for his debts to his New York pharmaceutical house. To settle these he gave up his watch and all his money except twenty dollars. Stranded in Philadelphia, he hired an office. Here he simply acquired more debts and, after a year, closed his office and returned to teaching. After six months of this he tried his luck as a physician in Caracas, Venezuela.

After two years in Caracas, where he made enough to pay all his obligations, he returned to Philadelphia with a considerable sum of money in his pocket. He again opened an office there and matriculated in the newly opened Jefferson Medical College. On receiving his M.D. in 1827, he continued to practice in Philadelphia and, to increase his acquaintance, joined the Masons and the Odd Fellows. Although in his lodge life he was so successful that he became Master of his Masonic lodge and Grandmaster of the Odd Fellows of the State of Pennsylvania, his devoted fraternal brothers, while allowing him to wear himself to exhaustion for their lodges, would not come to his office as patients.

When, in the fall of 1832, a Mr. Spear, a merchant of Philadelphia, invited Dr. Jones to join him in starting a mercantile business in New Orleans, the physician, again penniless and in debt, agreed, closed his office, and sailed for Louisiana. Here again, misfortune overtook him. No sooner had they opened their store than smallpox and cholera broke out in the city. Business was at a standstill, and Mr. Spear disappeared with the assets of the company. With sickness rampant in the city, Dr. Jones again hung out his shingle, developed a thriving practice, and fell ill with yellow fever. By the time he recovered, the epidemics were over, and his practice and money were gone. He took to drink and gambling.

Learning that in Texas, then a part of Mexico, there were great numbers of new settlers from the United States, a scarcity of physicians, and much illness, he took ship for that country and reached Brazoria on the Brazos River in October, 1833. Although Brazoria, just recovering from a cholera epidemic, was a hopeless-appearing town, Dr. Jones, with only seventeen dollars in his pocket and fifty dollars worth of medicine in his bag, was forced to remain there. Here his fortune changed. He was at once accepted as an outstanding citizen and developed an extensive practice.

The Texas Revolution

In the fall of 1833 the revolution of the Texans against Mexico was approaching rapidly; armed clashes were occurring with ever-increasing frequency. On November 3, 1835, a general convention, called "The Consultation," was held at San Felipe, at which a provisional government was formed, Henry Smith elected governor, and Sam Houston commissioned major general of the armies of Texas. Dr. Jones was the representative of Brazoria at "The Consultation." The revolution, which resulted from the convention, was at first intended simply to right the wrongs of the settlers in Texas who were sorely oppressed by the dictator, Santa Ana, and to bring about the division of the state of Coahuila-Texas and make Texas a separate state of the Mexican republic with a governor of its own. From the first, Anson Jones advocated complete independ-

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ence of Texas, and, in the late autumn of 1835, called together a convention at Columbia, Brazoria County, presided over it, and presented and advocated a resolution favoring a declaration of independence of Texas from Mexico, and calling a convention to be held on March 2, 1836, to form an independent government. Such a radical step at first frightened the Texans, but his resolution was signed by a considerable group of the delegates. The convention was held on the date designated, a declaration of independence adopted, a provisional government organized, and David G. Burnet elected president. When, four days later, Santa Ana slaughtered men, women and children at the Alamo, Texas became united in its enthusiasm for independence from Mexico. When hostilities broke out, Dr. Jones was appointed regimental surgeon and then assistant surgeon general of the army of Texas.

The capture of Santa Ana at San Jacinto on April 21, 1836, led quickly to the withdrawal of Mexican troops and the end of Mexican rule north of the Rio Grande. The Republic of Texas, although unrecognized by Mexico, was a fact. Anson Jones was elected a member of Texas' first Congress.

When Sam Houston became president of Texas in October, 1836, he appointed Dr. Jones the minister of the new republic to Washington. Recalled three years later by President Lamar, he was elected to the Texas Senate and soon became the presiding officer of that body. When Sam Houston was re-elected president in 1841, he appointed Dr. Jones Secretary of State. When the new secretary took over the State Department of Texas, he found himself with complicated problems on his hands. On one side he was badgered by the many citizens of Texas, originally from the Southern states, who wanted Texas annexed to the Union as a slave-holding state. Earlier efforts to purchase Texas by the United States having been rejected with scorn by the Mexican government, and three treaties of annexation drawn up between the two republics having failed to obtain the two-thirds majority in the United States Senate necessary for ratification, because of the antislavery sentiment in the Northern States, both President Houston and Secretary Jones had grave doubts as to the possibility of bringing about a union between the two republics, no matter how much the citizens of Texas might desire it.

On the other hand, although a truce had been arranged by England between Texas and Mexico, the latter refused to acknowledge Texan independence, considered that a state of war still existed, and was ready at any time to send an army across the Rio Grande.

Lord Aberdeen, British Secretary for Foreign Affairs, sent to Texas as chargé d'affaires an experienced diplomat, Captain Charles Elliott, R.N., who became very friendly with Secretary of State Jones and made it perfectly clear to him that England favored an independent State of Texas and would do everything in its power to prevent the annexation of Texas to the United States, to whose extension farther westward it was bitterly opposed. He also told Jones that his country was strongly opposed to slavery. Comte de Saligny, who had been sent over by France, backed Elliott in all his proposals.

The proposition that Lord Aberdeen presented to Secretary of State Jones through Elliott, known as "the Diplomatic Act," was that an alliance should be formed between Texas, England, France, and the United States. These combined powers would use their influence on Mexico to acknowledge the independence of Texas and would guarantee the integrity of her borders, by armed force if necessary. In return, Texas would agree to remain an independent republic, would refuse all offers of annexation "to any other power," and would extend to the contracting parties certain special trade priorities. Acceptance of this offer would preclude Texas ever becoming part of the United States and make her virtually a British protectorate. This plan was bitterly unpopular with most of the citizens of Texas and aroused indignant opposition in the United States.

President of the Texas Republic

As Sam Houston's second term as president drew to a close, and the Texan constitution forbade any man occupying the presidential chair for two consecutive terms, it became evident that his Secretary of State was his logical successor. There was, however, serious opposition from a large element of the Republic. The enthusiasm for the annexation to the United States was increasing rapidly. President Houston had always been lukewarm to it, preferring that Texas remain an independent republic. Jones, who had for years been a protégé of Houston, was believed by many to be also an antiannexationist, an opinion constantly harped upon by the opposition press during the campaign. In spite of this opposition, however, his outstanding qualifications for the position carried the day and, on December 9, 1844, Dr. Anson Jones was inaugurated President of the Republic of Texas.

During the last few weeks of his administration, after Anson Jones had been elected to succeed him, President Houston suddenly issued an executive order to his Secretary of State instructing him to accept Lord Aberdeen's offer of independence under the protection of England. Jones, however, well aware of the sentiment of the country favoring annexation to the United States, temporized and delayed until Houston's term had expired. Thus, by Jones' Fabian policy, Texas was saved for annexation to the Union at a later date, and a probable war between England and the United States was averted.

The election of Polk to the presidency of the United States on a platform of annexation of Texas to the Union made another offer of annexation a foregone conclusion. This aroused vigorous enthusiasm on the part of the annexationists in Texas and repeated demands on President Jones that he take immediate steps to bring this about. Jones, however, did nothing. The previous refusals on the part of the United States Senate to ratify a treaty of annexation had made him wary. He determined to sit tight until the United States took the first step. However, to egg the authorities in Washington on, he showed even increased friendship to Captain Elliott, so much so that he gave the false impression to his own people that he preferred independence under British protection to annexation.

Even when, in the last days of Tyler's administration, the Congress of the United States passed a resolution offering statehood to Texas, thus avoiding the two-thirds vote of the Senate requisite for a treaty, Jones took no action. Knowing that the next Congress might rescind the action, the cautious statesman believed in having two strings to his bow. If he should fail in annexation, he wanted a guaranteed independence. To accomplish this, President Jones asked Captain Elliott to go to Mexico City on a special mission to endeavor to procure from President Herrera, who had recently been elected to succeed the deposed Santa Ana, an acknowledgment of the independence of Texas. Elliott, hoping that his hard diplomatic labors were at last to be crowned with success and that the new president of Texas was going to accept Lord Aberdeen's proposal of a British protectorate, went off to Mexico fired with enthusiasm. With the great influence of Her Majesty's government behind him, his efforts were so effective that the Mexican government for the first time agreed to a treaty recognizing the independence of the Republic of Texas, on condition that Texas would remain independent and promise not to allow itself to be annexed by any other country. This treaty was forwarded to President Jones for ratification by the Texan Senate.

The Annexation of Texas

President Jones called a convention and put before it the two propositions, one for the continued independence offered by Mexico and the European powers, the other for annexation to the United States. On July 4, 1845, the convention voted almost unanimously for annexation, with the result that, on February 19, 1846, President Anson Jones turned over his authority to James Pinckney Henderson, the first governor of Texas under the United States, and the lone star flag of the Republic of Texas was replaced by the Stars and Stripes.

Although Anson Jones' policy of playing England against the United States had successfully brought about the desired annexation, the people of Texas did not appreciate it. His connection with the antiannexationist, Sam Houston, the violent newspaper invectives against him during the presidential campaign, and his three months delay after the invitation came, to assure independence if annexation failed, had so inflamed the populace that the patriotic president was considered to be a traitor. While he, in all justice, should have been elected the first governor or a United States Senator, he was completely ignored. In fact, just before the annexation ceremonies took place, there was a strong movement to impeach him. Sam Houston, whose direct orders to accept the "Diplomatic Act" and thereby prevent annexation for all time Jones had refused to obey when Secretary of State, was sent to the United States Senate in his place.

Retirement and Death

After the completion of the annexation ceremonies, the ex-president returned to his plantation on the Brazos River and became a gentleman farmer. Bored by the inactive life after his years of political strife, with little in common with his uneducated German neighbors, brooding over the injustice shown him by his fellow Texans, and suffering constant pain in an arm paralyzed and withered by a fall from a horse, he became greatly depressed. Trips to Philadelphia, once unsuccessfully to seek relief for his injured arm and once to attend the Grand Lodge of the I.O.O.F., broke the monotony of his life, and when, on one of these trips, a Philadelphia newspaper started a short-lived boom for his nomination to the vice-presidency of the United States, he came out of his depression for a time.

His first real exhilaration, since his retirement from the presidency, however, came when, in December, 1856, he received a letter from a Texan politician asking if he would be willing to have his name go before the next session of the legislature for nomination to the United States Senate.

Convinced that, at last, his services to Texas were to receive the recognition due them, he composed a statement of his services and policies for the papers and hastened to Austin. He occupied a room opposite the State House where the legislators could come to pay their respects and discuss his policies. He felt it was below the dignity of a former president to hunt out the legislators; they should come to him. Here he waited for two weeks. No legislator called and, when the senatorial balloting took place, he received not a single vote.

Physically suffering and spiritually broken, Anson Jones returned to his plantation. His depression increased; again he was a failure. He had failed many times in his early days and on each occasion had pulled up stakes and started over again in a new location. This time, at the age of sixty, he would again enter the practice of medicine in a new place. He sold his plantation and his slaves. At Galveston he purchased a house and stated that he would soon open an office. On his way home he stopped at Houston and took a room in a hotel, formerly the old capitol building, where he had started his political career a quarter of a century before. The next morning, January 6, 1858, they found the body of the brokenhearted statesman in his room, with a bullet through his head.

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Discussion

Richard A. Leonardo, M.D., *Rochester.*—Doctors have been criticized, often justly, for a certain amount of narrow-mindedness. The medical field is so big, doctors are so busy all the time, and it takes so much of their time to keep up with the latest scientific advances in medicine, they have little time left to cultivate a knowledge of other fields. It is no wonder that the average doctor is considered as being unqualified for anything except the exclusive practice of medicine. Once in a while, however, we have the brilliant example of just the opposite condition. In this particular instance, Dr. Clarke of Utica has again demonstrated to us the fact that, even though it may be rare, once in a while a doctor may attain considerable eminence in other fields, often totally unrelated to medical science.

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NEW WINDSOR: EIGHTEENTH CENTURY MEDICAL CROSSROADS

Charles B. Reed, M.D., Newburgh, New York

ONE might easily wonder by what strange quirk of destiny some of the most noted physicians of the eighteenth century were drawn to New Windsor, New York, between 1719 and 1783. Two of them authored the first medical works of this country, one of them being the most famous surgeon of his day and cofounder of the New York City hospital. The Boston Tea Party was a native son's brain-child. Another was the celebrated Dr. John Cochran, director general of the Revolutionary Medical Department.

Two sets of factors account for their presence here and explain this unique circumstance in early medical history. First, New Windsor's situation of great scenic beauty, set in the Hudson highlands, was outstanding enough to draw favorable comment from Henry Hudson on his exploring trip in 1609. Added to this was the subsequent lure offered by the British Crown, in the form of grants of land ranging from two thousand to three thousand acres, within the first quarter of the century. Second, during the Revolution, it supplied a third ferry to the two in nearby Newburgh, which formed a communication link between New England, West Point, and points south. Heavy traffic and proximity to West Point were responsible for the establishment of a general hospital mentioned in private papers as early as 1778, as the "New Windsor Huts Hospital."[1] It was also selected as a strategic site for encampment for the remnants of the Continental Army, while the forces were putting in time between the decisive battle of Yorktown in October, 1781, and the signing of the Treaty of Paris in the fall of 1783.[2] In the interim, occupation by the British of Penobscot Bay in Maine, New York City, Charlestown, and Savannah made the maintenance of an armed force obligatory. The town's prestige was considerably enhanced by the presence of much brass, including eight generals and a large medical staff headed by Dr. John Cochran and Dr. James Craik, personal physician to General Washington.[3] It seems strange that these events should so soon have been forgotten and dimmed to a point where they have been almost completely ignored by historians.

New Windsor was settled in 1685 by an English captain, his family, and a company of twenty-five. It was the first white settlement between Haverstraw and Kingston, which were Dutch. Among the first to take up a two thousand acre tract was Dr. Cadwallader Colden, who arrived about 1719 by way of Philadelphia and Long Island.[1] Although his home was situated over the boundary, a study of old maps showing these grants reveals that three quarters of his holdings were in the town of New Windsor. He was one of the rare, highly cultivated physicians who had migrated from his native Scotland to Philadelphia to practice medicine. Soon attracted to New York State by the promise of the position of Surveyor General, his rise politically, from then on, was as rapid as it was well-deserved. He was a man of Benjamin Franklin's stature, whose close friend he was. He had marked mental vigor and an unusual perception of what was going on around him. He was active and interested in almost everything. He was a philosopher, a physicist, an experimenter in remedies. In the administration of New York affairs, it was he who formulated policy toward the Indians and who rectified injustices and chaotic conditions resulting from large grants of land, often obtained by graft. His written work includes comprehensive records of his private and public life, thus affording an invaluable documentary source to students of history. A treatise on yellow fever was published in 1745. In spite of some inaccuracies, his *History of Five Indian Nations* is still considered the best work on the subject. He wrote on such topics as gravitation and principles of action in matter. A description of three to four hundred Hudson River flora titled *Plantae Coldinghamae* was incorporated by the University of Uppsala in the 1748 Royal Swedish Scientific Papers along with work of the renowned botanist Linnaeus. The New York Botanical Garden has one of five copies in this country of this fascinating work. Last, his *Treatise on Wounds and Fever* was published in 1765. He died soon afterward, in 1776, at his home in Flushing, Long Island, while holding the office of Acting Governor.

Undoubtedly because of acquaintanceship with Dr. Colden, considering the similarity of Philadelphia and Long Island backgrounds, Dr. Evan Jones and his family moved to New Windsor from Jamaica in the early 1740's. Unfortunately, lack of time prevents our dwelling on some of these colorful and wonderful medical men, since emphasis must be placed on those who made outstanding contributions. Born in Philadelphia, of Welsh-Quaker parentage, Dr. Jones was the son

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of Dr. Edward Jones and Mary Wynne, daughter of Dr. Thomas Wynne who had come over in William Penn's company. It isn't strange that a family so steeped in medicine should have produced, in Evan Jones' first son, the admirable and very capable Dr. John Jones.[4] This Evan Jones was obviously a man of high character, as revealed by his correspondence with Dr. Colden, among whose papers some of his letters are to be found. In one of them, he stated that, from his point of view, service to mankind from a professional man far transcends all material gain.[5] He was a man of wealth, having six Negro servants, according to town records of 1755, and contributing the sum of four hundred and thirty-two pounds to his son John's education, a large sum for those days.

John Jones and his brother Thomas, also a doctor, were born of a first marriage in Jamaica. There is no need to highlight Thomas' career, since he distinguished himself more as a financier than a physician. He married a Livingston, owned or controlled a tremendous amount of real estate, and had a considerable fortune. His fourth child, Catherine, later married Dewitt Clinton, Governor of the State. He served in the Revolution, but obscurely, since records merely mention his participation. On the other hand, Dr. John was important enough medically to have been generously documented. Everything about him is known, including the discomfort caused him by his tiszik (asthma). Although New Windsor does not claim him as a practicing physician, he spent considerable time at the homes of his father and brother, between trips to Europe and when his illness forced him to seek the salutary effect of the country. Early education was received in a private school in New York and the beginnings of medical instruction under his uncle, Dr. Cadwallader of Philadelphia. Then, the best schools in Europe were attended, where he studied under Pott in London, LeDran and Petit in Paris, at the Universities of Edinburgh and Leyden, finally receiving his degree from the University of Rheims in 1751. He settled in New York, where in cooperation with Dr. Samuel Bard he established the first hospital. He also taught obstetrics at King's College, which is now Columbia. Service in the French-Indian War supplied him with practical experience which was to serve his country well during the Revolution. His book, *Plain, Concise and Practical Remarks on the Treatment of Wounds and Fractures*, largely based on Pott and LeDran, was used as a guide by Revolutionary physicians. An intimate friend of George Washington, he ministered to the general a few months before his death. As personal physician to Benjamin Franklin, he attended the statesman during his last illness.

When history is taught as it should be, the fabulous Clinton family of Colonial and Revolutionary New York will be given full recognition. Headed by Colonel Charles Clinton, a large Irish company of relatives sailed up the Hudson, after having wandered up and down the Atlantic Coast, and settled in the town of New Windsor, in a section which they named Little Britain. This is the family which produced two governors of the State, one vice-president of the United States, two Revolutionary generals, doctors, lawyers, and surveyors. Two of Charles Clinton's sons were physicians. In this party there came along one John Young, a "connexion," as relatives were called in those days. He promptly married another "connexion," thus infusing a double dose of Clinton in his offspring. A prodigy resulted of this union in his eldest son, Thomas, born in a log cabin in 1731. He displayed at an early age that strain of genius which could cause his brother Joseph to write of him, "He was the most consummate physician I ever knew." He was chiefly self-taught, aided and abetted by his distinguished relative George Clinton, who quickly recognized the extraordinary gifts of this boy. His studies, in addition to physics to which he took like a duck to water, included Greek, Latin, and French. He later learned to speak high and low Dutch fluently. His medical apprenticeship began at the age of seventeen under a Dr. Kitterman. Patients were soon consulting the pupil with more confidence than the tutor.

As has been the fate of the town in which he was born, for some reason historians have chosen to ignore this truly great man so devoted to the cause of liberty that he sold many possessions, including a valuable library, to help defray Continental Army expense.[6] He first practiced at Sharon, Connecticut, removing very soon afterward to Albany, where he was joined by his brother, Dr. Joseph Young. Thomas, like many intelligent colonials smarting under British injustice, couldn't take Albany passiveness, not while the firebrands, John Hancock, Dr. Benjamin Church, Dr. Joseph Warren, and Samuel Adams, were blowing their tops in Boston in protest against taxes. He moved to that city, becoming one of their most ardent workers. There was nothing half-hearted about him. If the "Sons of Liberty" had a proclamation or a denunciation, according to a Bostonian's diary who apparently didn't approve of such goings-on, Dr. Young was at the head of a parade, with flags flying, drums beating, and French horns blowing, to make it public. An article appearing over his name in the Boston Evening Post on October 24, 1773, pointing out the erosive and poisonous qualities of tea was a subtle and advanced piece of propaganda. At the famous meeting at Old

South to determine what to do with the offensive cargo in the harbor and how best to prevent its landing, it has been stated on good authority it was Dr. Young's proposal that "the only way to get rid of it is to throw it overboard."[7] He followed up this suggestion, according to his brother, by appearing at the party without disguise. Two British officers attacked him about this time and left him for dead on the streets. Making his way to friends in Providence, he was soon found out. On being warned that he was to be taken prisoner aboard the Rose man-of-war, he managed, in a matter of hours, to make his escape disguised as a sailor. Arrived in Philadelphia, he served in the hospital as attending physician. His sudden death in 1777, of putrid fever, left an ailing wife and several children destitute.

Like men of his time, his talents and energies were not limited to political and medical affairs. He was a prolific writer, a philosopher, and a theologian. He liked to Latinize names such as Vert Mont and Amenia (pleasant). Vermont venerates him to this day for the assistance he gave to its initial efforts to become an independent state. The character and qualities of the man are best summed up in Ira Allen's *Political History of Vermont*. "Dr. Thomas Young of Philadelphia, who greatly interested himself in behalf of the settlers of Vermont by several publications, was highly distinguished as a philosopher, philanthropist, and patriot and for his erudition and brilliance of imagination. His death was universally regretted by the friends of American independence as one of her moral supporters and by the republic of letters as a brilliant ornament."

Not because of any special accomplishment but rather for their associations, we mention two other doctors practicing in New Windsor just prior to the Revolution, one Johnathan Bailey, born in Bridgewater, Massachusetts, a cousin by marriage of Samuel Adams of Boston, and Daniel Wood, later a captain in the army and father of John Wood, first governor of Illinois.[8]

There are many reasons for bringing up Dr. Moses Higby's name.[9] Two, however, are of special interest, namely the episode of the silver bullet and his feud with the Clintons over the use of inoculation. Locally he was the most legendary and most esteemed of the physicians mentioned above. He was sort of a "Man Who Came To Dinner" in reverse. No one ever tried to get rid of him; on the contrary, when he arrived at a house everything possible was done to keep him as long as possible. For that reason there were many occasions when the doctor was needed but could not be found. His professional association with the famous men stationed in the community, his good ministering abilities, and the bullet affair made a hero of him.

For details of this bullet episode: When Forts Montgomery and Clinton just below West Point fell to the British, General George Clinton set up his headquarters in the Fall's House in New Windsor. Sir Henry Clinton in New York, wishing to communicate with Burgoyne at Saratoga, entrusted a message in a silver bullet to one of his men. On arriving in New Windsor this man Taylor became confused when he heard the name of General Clinton and asked to be taken to headquarters. Too late he discovered that he had wandered into American hands. He swallowed the bullet. Dr. Higby, who lived nearby, was summoned and twice retrieved the bullet by using powerful emetics, Taylor having swallowed it a second time. The Britisher was hanged a few days later as a spy.

According to an amusing letter to be found among Governor Clinton's papers, attempt at state control of medicine is nothing new.[10] It was written by his brother, General James Clinton, who was in charge of Newburgh.

> Feb'y 26th, 1778
>
> D'r Brother:
>
> I think it proper to inform you that one Birdsall who was taken prisoner and brought to Poughkeepsie goal, but had liberty to Come to New Burgh to his Brothers, some way or other has got the small pox upon which Issac Belknaps and two other families Innoculated in the Neighborhood, near the Dock, a Little to the South'd of the Continental ferry; as soon as I heard of it I endeavored to prevent it, but I understand their Committee has consented to it though they have Promised to not suffer any more to be Innoculated in Newburgh town or near it where troops might be Exposed. Doct'r Igby is the person who Innoculates and I am just Informed that Mr. Ellison's family is going to Innoculate which would Occasion all the Inhabitants of New Windsor to Do the same, though I am Determined to prevent it till your pleasure is known; if I Should be Obliged to Confine the Doct'r I need not tell you the Damage it will do the Publick both on the acc't of the ferry and the work that is going on at New Windsor.
>
> I wait Impatiently to have your Opinion or orders about the affair. I am Yours,
>
> James Clinton

The perpetrator of inoculation must have persuaded the Governor that he was no menace to public health since he subsequently was made a member of his staff. When he died, he had practiced in this community for sixty-five years. He was at all times active in religious, political, and medical affairs.

As for the Revolutionary phase of this narrative, Dr. Cochran's return of 1781 showing the disposition of his medical staff, in War Department Records in Washington, places many medical officers in the region.[11] Dr. Benjamin Eustis of Boston, who was later Secretary of War in the Jefferson and Madison administrations, and Dr. Samuel Adams, son of the Boston patriot, were among them. All emphasis of this phase, however, must be placed on Dr. Cochran, because of his historical importance and his superiority of skill. He was born and educated in Pennsylvania, served in the French-Indian War, and had settled in New Jersey by the time the war began.

From the time the Medical Department was organized by the best professional brains in the country after the Battle of Lexington, there was constant and sincere endeavor toward improvement of the medical service, and no one was more instrumental and active in this than Dr. Cochran. What General Washington was to the army in devotion to duty, inspiration, and integrity, Dr. Cochran was to the Medical Department. In 1781, he succeeded three directors general who had either betrayed the cause or had been forced to resign under the cloud of court-martial. Washington's concern for the sick and wounded kept Dr. Cochran at his side during bad campaigns, thus affording the physician the sad experience of Morristown and Valley Forge. He was better prepared and more sympathetically inclined as a result and made a far better and more efficient director general than the other three. His humaneness and consideration for his staff were manifested over a long period of time in letters to Congress and to men in charge of finances, begging and imploring them to send supplies and money for his officers. Many of them, including himself, were not paid for two years at a time. Finally, gold came from France in 1781, and from then on conditions in the hospitals began to improve.

Made of the same stuff as the commander-in-chief, Dr. Cochran was more affable and flexible, endowed with a good sense of humor. Certain members of Congress, in a misguided attempt to pare down expenses, advocated dismissing some of his men and taking care of the sick in regiments rather than in general hospitals, claiming that more died in the latter. Dr. Cochran used to like to quote Dr. Joseph Young's remark "that it would seem the hight of folly for any Man to Venture in Bed, since it is well-known that more people died in Bed than in any other situation." Washington and Lafayette were devoted to him. The only letter known to have been written by the father of his country in a mood of levity was one addressed to Dr. Cochran about a projected visit to West Point by the physician and his ladies, his wife and a step-daughter. In moments of convivial relaxation with Washington and Lafayette he sang some ditty which had the constant refrain of "bones" in it.[12] As a result he was always referred to by them as "The Good Doctor Bones." In writing to him from France, having already given him his pistols, Lafayette mentioned a watch which he was sending him. This letter was addressed simply, "Doctor Bones, Headquarters, New Windsor." Washington gave him the furnishings from Newburgh Headquarters and another crony, Mad Anthony Wayne, offered him his sword.

After the war, he was appointed, through General Washington's influence, to the post of Commissioner of Loans for New York State. He retired to a grant in Palatine, Mohawk Valley, where he died at the age of seventy-six.

Thus for some sixty-five years men of outstanding credit to their profession haunted this curiously attractive medical crossroads.

205 LIBERTY STREET

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Discussion

Benedict V. Favata, M.D., *Rochester.*—This paper is very interesting and well written, and full of human interest details which serve to show the life of the times. The government always has been interested in promoting its territories. Here we see large land grants being given to encourage settlers, tradesmen, and the professions.

We see that the doctor was often the only educated individual in the community and thus became the administrator of affairs. This is true even today, and we see the doctor in small communities who is also the mayor or justice of peace. Thus, the doctors become the authors, historians, and naturalists of the pioneer days.

I was very much interested to read the early letter showing the fear of smallpox vaccination and how the writer was doing everything he could to restrain the doctor.

PUBLIC HEALTH PROBLEMS IN NEW YORK CITY DURING THE NINETEENTH CENTURY

George Rosen, M.D., New York City

(Director, Bureau of Public Health Education, Department of Health, New York City)

Among the situations that precipitated early action in the interest of the public health, epidemics occupied a prominent place. When these occurred governmental authorities sought medical advice on the proper measures to be taken. Confusion regarding etiology and transmission prevailed, but control was based upon two procedures, quarantine and environmental sanitation.

In 1795, for instance, the Governor of New York appealed to the State medical society regarding an epidemic then prevailing in the upper part of New York City. A committee was appointed to look into this problem, but there is no account of the report. For the following year, however, there is a report made by the same committee. This was intended to arouse the officials and the people of New York City to the danger of epidemics, and to give them an awareness of the methods by which they might be prevented.[1] The recommendations contained in the report deal essentially with environmental sanitation, more specifically with such matters as "the accumulation of filth in the streets," obstructed water drains and drainage of low-lying areas, improvement of docks and river shores to prevent the collection of refuse, and the pollution of the air by such establishments as slaughter houses and soap factories.

Effective implementation of these proposals was not possible, however, as long as there was no permanent health organization in the municipal government. Indeed, one of the basic problems involved in the genesis and development of public health in New York City during the nineteenth century was the need to create an effective administrative mechanism to supervise and to regulate the health of the community. There is mention of the appointment in 1796 of a health committee consisting of seven members. It would appear, however, that this was only a temporary body. In 1798, New York was struck by an epidemic of yellow fever, in which there were 1,500 deaths. Until then the municipality had no authority to issue health regulations, but the need for power to meet such emergencies was recognized by the State Legislature and the City was granted authority to pass its own health laws.

Organization and Administration

The beginning of a permanent public health administration did not come into existence until the following decade. It may be said to date from March 26, 1804, when John Pintard was appointed City Inspector of Health. Pintard was a very capable, intelligent man with an interest in humanitarian and cultural movements. In May, 1807, he was appointed clerk to the Common Council of the City. These duties he performed until April 10, 1809, when he informed the municipal authorities that it was no longer convenient for him to do so.[2]

New York's public health problems at this time may be envisaged from the report, dated January 20, 1806, of a committee of the Board of Health appointed to recommend preventive measures for safeguarding the health of the city.[3] This committee, composed of John Pintard, Edward Miller, and Wynant van Zant, Jr., made the following recommendations: procurement of an ample supply of pure drinking water, construction of sewers, drainage of low marsh land, construction of a masonry wall along the water front, prohibition of interments within the city limits, prohibition of the use of damp cellars as dwellings, provision of expanded accomodations at Bellevue Hospital and the erection of a private hospital for people of means, and finally the planting of trees and the encouragement of truck farming to supply fresh healthful vegetables.

Had this progressive program been translated into action, it would undoubtedly have contributed greatly to disease prevention in New York City. To the great detriment of the city's health, however, decades elapsed before effective action was taken. For years the health officials were to be faced recurrently by serious, immediate problems of epidemic disease.

During the first three decades of the nineteenth century New York grew steadily, if not spectacularly. In general, social conditions were favorable during this period, and such problems as poverty and pauperism were of no great importance. Reflecting this situation, public health administration was simple in organization and limited in scope. In a letter dated May 30, 1818, addressed to his son-in-law, Dr. Richard Davidson, John Pintard offers an illuminating glimpse of the administrative operations of the Board of

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Health.[2] "As to the proceedings of the Board," he writes, "they have no By laws. The Quorum is established by law, which in time of health meets daily to receive all Reports from the Officers, and applications. The ordinary business is minuted, and only official Reports and documents containing principles are entered formally by the Secretary. All Reports and letters are carefully filed. Business is conducted with the usual ordered [*sic*] observed in the Common Council. The Mayor presides, and all applications are referred to the proper officers. I would advise your Secretary, at the outset, to keep a portfolio for the preservation of all letters relating to the Board, and another for the Officers Official Reports, which should be dated and signed. After they have accumulated to a sufficient number, have them bound chronologically and indexed. This will perpetuate them, for I know by experience how easily loose papers slip thro' one's hands and after a while become irrecoverable. At some distant period reference may be had, and a different construction drawn when the document is lost, which may implicate the consistency and uniformity of your measures. You cannot be too careful at the outset in the preservation of your official documents."

The Board of Health to which Pintard refers had been created some ten years earlier. In 1807, the Common Council was authorized by the State Legislature to appoint a Board consisting of the Mayor, the Recorder, the Quarantine Comissioners, and five other members. This Board recommended to the Common Council measures for dealing with health problems. The responsibility for dealing with health matters on a day to day basis and for seeing that various laws and regulations were made effective was divided chiefly among three officials. These were the Health Officer, the Resident Physician, and the City Inspector. The Health Officer, appointed by the State, was concerned with application of quarantine laws to vessels entering the port. The Resident Physician was a municipal official whose function was to be on the alert for and to discover cases of communicable disease within the city. Health administration, environmental sanitation, and the collection of vital statistics were the areas within which the City Inspector, also a municipal appointee, performed his duties.

These positions were sought after, and were often subject to political influence. John Pintard, in a letter of April 18, 1818, addressed to his son-in-law, makes clear why such posts were desired. Dr. Davidson had been appointed consulting physician for the port of New Orleans, and in advising him as to his duties Pintard wrote: "The salary is not large, but will pay your house rent, and the introduction to public notice, with the benefit you will positively derive from attendance on masters of vessels and their crews, will I trust be productive of sufficient towards your comfortable support the present year and if your life be spared will encrease your practice and enable you to lay by something for a future day."[2] As to the health officer of the port with whom Dr. Davidson was to work, Pintard commented: "He will be in the way of receiving many handsome presents from Captains and Sup. [er] cargos who are always liberal to Health Officers. I hope he may afford a few trifles from his superabundance to you."[2]*

Political machinations played a considerable part in the filling of these posts. For example, in a letter of November 2, 1820, Pintard relates how "By the vigilance of our health officer Doctor Bailey at Quarantine, and of the Resident Physician Dr. Hosack, we have totally escaped [from yellow fever]. Yet such is the perversity of public bodies, that in the probable event of a new Council of Appointment opposed to Gov. Clinton, it is more than likely that Doctor H. will be removed, if not Dr. B. likewise. The latter however is so popular, and has been so long in the health department, nearly 20 years, off and on, assistant and principal, that it will excite great discontent in this city should he be displaced."[2]

An even more striking example is provided in the Townsend letters, a series of seven letters written by Dr. P. S. Townsend of New York to John Townsend of Albany. These letters cover a period of four years (December 22, 1838—January 28, 1842), and deal with Dr. Townsend's efforts to become Health Officer of the port of New York.† His claim was based upon professional ability and political services. It should be kept in mind that this was the Age of Jackson, characterized generally in our history books by the elevation to the dignity of a national principle of a slogan of New York politicians—"To the victors belong the spoils."

As Dr. Townsend expressed it in 1840: "Now you know that I ask for the Health Office and there I plant my standard, for I consider my claims professional and political tenfold stronger than any Knight from 'down east' or elsewhere that has entered the lists with me." And in the following letter he became even more explicit. "Seniority of age," he wrote, "and West Indian diseases, of which the rest [his rivals for the position of Health Officer] have no knowledge whatever except theoretically, ought to give me the first pick of the offices. As to political services, let them show an amount of labor equal to mine every day of my life for the last six years not six weeks of which I have been out of town . . . . It's a pity if we cannot at least have a New Yorker and one who has at least seen a case of yellow fever. Are we arrived to that point of degradation that three adventurers from down east not either of them twelve years in the city are to share all the fattest offices?"

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* Here Pintard adds another facet to the picture. Noting that Dr. David Hosack was appointed Resident Physician, he adds that this position was "of no great emolument, $1,000 but gratifying to his pride and feelings."

† Miss Gertrude L. Annan, librarian of the Rare Book Room, Library of the New York Academy of Medicine, very kindly called these letters to my attention. The complete text of these letters with explanatory notes will be published later.

Obviously, conditions of this kind did little to foster the growth of efficient public health administration. The resulting inefficiencies might be tolerated while social conditions were favorable, but the prolonged intrusion into such an unstable situation of a profoundly disturbing element was bound to throw into sharp focus the basic inadequacy of existing arrangements.

Promotion of Health and Prevention of Disease

At this very time profound changes in the political, economic, and social life of various European communities were setting in motion a stream of migration that was to upset with violent impact the situation that had obtained during the first three decades of the century. The terrific shock produced by the unexpected influx of swarms of impoverished immigrants was first felt in the larger seaboard cities like New York, where inadequate adjustment for the increasing complexity of such problems as housing, water supply, sewage disposal, and drainage soon brought into being a whole brood of evils that found their most characteristic expression in the urban slum.

Meanwhile, broadening contacts with Europe brought knowledge of what was going forward in other parts of the world. Facing slum conditions similar to those in Great Britain and France, Americans were greatly influenced by points of view and methods already applied in those countries. The pioneer studies of L. R. Villermé, in Paris, and the striking reports of Southwood Smith and Edwin Chadwick, in England, were paralleled between 1845 and 1865 by a series of equally significant inquiries in America.

In 1837, the physician Benjamin W. McCready had already called attention to the emergence of slums in New York, but the first penetrating study of the situation was made in 1845 by Dr. John C. Griscom.[4,5] In 1842, Griscom had been City Inspector of the New York Board of Health, and to his formal report at the end of the year he appended "A Brief View of the Sanitary Condition of the City." Three years later, Griscom expanded this supplement into a small book entitled *The Sanitary Condition of the Laboring Population of New York*.[5] Chadwick's influence is clearly manifest in the title of Griscom's inquiry.

This study already contains in essence the principles and objectives that were to characterize the health movement of the next thirty years. Briefly stated, these were: first, "that there is an immense amount of sickness, physical disability, and premature mortality, among the poorer classes"; second, "that these are, to a large extent, unnecessary, being in a great degree the results of causes which are removeable"; third, "that these physical evils are productive of moral evils of great magnitude and number, and which, if considered only in a pecuniary point of view, should arouse the government and individuals to a consideration of the best means for their relief and prevention"; and fourth, "to suggest the means of alleviating these evils and preventing their recurrence to so great an extent."[5]

Central to this program is the concept of preventable death. It was by exploring the associations between conditions of life and greater or lesser expectation of survival that the most notable successes in achieving reform were won. Despite the absence of knowledge concerning micro-organisms as materies morbi, it was possible to make an effective attack on the problem. In fact, it may even be said that this very ignorance of much of the content of modern medicine provided a favorable intellectual climate for the pursuit of studies on the relations between sanitary conditions and morbidity and mortality. Here the statistical approach provided an invaluable weapon, and vital statistics assumed a new social significance.

As early as 1810 John Pintard emphasized the need for accurate mortality statistics. In 1838 City Inspector Dunnell again called attention to this need, and to render such records more accurate he introduced the transit permit for out-of-town burials. Dunnell also advocated the registration of births, but it was not until several years later that this was done. Cornelius B. Archer, City Inspector in 1845 and 1846, secured the enactment of a law providing for birth registration, but in the Annual Report of the City Inspector for 1847, his successor A. W. White complained that "no penalty being attached to a noncompliance with its provisions, I regret to state that the whole number of births reported during the past year is actually less than one third of the number of stillborn and premature."[6] Nevertheless, there was a slow but marked improvement in the registration of vital statistics. White, who served from 1847 through 1851, was deeply interested in accurate medical statistics and in 1848 called attention to "a report made by a committee of physicians to the Medical Convention, assembled at Philadelphia in 1847, on the subject of *A Nomenclature of Diseases, Adapted to the United States* in which "will be found some valuable suggestions on this subject. . . . ."[7] Thomas K. Downing, City Inspector from 1852 through 1854, succeeded in 1853 in having enacted an improved Birth, Marriage, and Death Registration Act.

But, while many of the City Inspectors were qualified to deal with health matters, the administrative machinery available was intolerably inefficient. In his report for 1844, City Inspector Eli Leavitt pointed out that, "The compensation allowed the Health Wardens being only one hundred dollars per annum, little assistance can be expected from them; and the whole duties of the department devolve upon the City Inspector and one assistant; and in that season of the year when the most attention is required they must necessarily be but imperfectly performed."

As the problems facing the municipal authorities became more complex, steps were taken from time to time to amend and enlarge the administrative machinery. An act passed by the State Legislature in 1850 provided the framework for public health action from that date until 1866.[8] Authority was divided among four groups of officials. First, there was the Board of Health composed of the Mayor and the Common Council which had extensive power to act, but could be convened only by the Mayor. Then, there were the Commissioners of Health, a body consisting of the President of the Board of Aldermen, the President of the Board of Assistant Aldermen, the Health Officer, the Resident Physician, the Health Commissioner, and the City Inspector. This was intended to be an advisory body to the Board of Health and had no power. Third was the Health Officer who was charged with carrying out the quarantine regulations of the port. Finally, in addition to the Board of Health and the Health Commissioners, the internal regulation of public health was assigned to the Resident Physician, the Health Commissioner, and the City Inspector.

The duty of the Resident Physician was to visit all sick persons reported to the Board of Health, to the Mayor or to the Health Commissioners, but in practice he limited himself to visiting the sick poor. Despite his high-sounding title the Health Commissioner was actually only an assistant to the Resident Physician. It is worth nothing, however, that the Resident Physician received an annual salary of $1,250, while the Health Commissioner was paid $3,500. More important than either of these two officials was the City Inspector. His Department was the only one that exercised any extensive public health functions and within its jurisdiction fell such activities as street cleaning, disinfection, collection of vital statistics, and appointment of health wardens. By virtue of this fact the City Inspector occupied a strategic political position. He was in a position to expend annually a very large sum of money and could therefore distribute considerable political patronage.

In 1852 City Inspector Downing had recommended that a Bureau of Sanitary Inspection and a Bureau of Registry and Statistics be set up in his Department, and this recommendation was adopted. By 1857 the City Inspector's Department comprised the following staff: the City Inspector, the first clerk to the City Inspector, a Registrar of Records, a Superintendent of Sanitary Inspection, two registry clerks, and 22 health wardens.[9]

Catastrophe often precedes and brings into sharp focus the need for social change. In New York City during the nineteenth century this element was provided by recurrent epidemics of various communicable diseases—cholera, yellow fever, typhoid fever, smallpox, and typhus fever. While it was recognized that dire poverty, inadequate housing, and unsanitary surroundings took their toll in sickness and lives, this knowledge was dramatically impressed upon public opinion by every invasion or outbreak of epidemic disease, and the need for effective public health administration became a matter of terrifying urgency.

As New York's population grew more and more dense and the sanitary condition of the city deteriorated, it became increasingly evident that there was need for public health reform. Efforts to change the legal basis of health administration were thwarted by those interested in maintenance of the status quo. Clearly, for something concrete to be done it was necessary to mobilize the forces of the community for control of disease and improvement of health. This necessity led to the establishment after 1845 of a number of voluntary health associations, patterned in considerable degree after organizations that had been found effective in Great Britain. Characteristic of these associations were the nature of their membership and the stress laid on social action for reform. By bringing together physicians, public officials, and civic-minded laymen, such organizations were able to create a broad base for the mobilization of the forces of the community. Imbued with a high moral purpose, the members of these associations regarded themselves as "enlisted in a crusade against a gigantic and growing evil."[10] Among these unofficial organizations may be mentioned the

New York Sanitary Association and the Council of Hygiene and Public Health of the Citizen's Association of New York.

These voluntary groups undertook to educate the public to the advantages of public and private hygiene, to press for administrative reform, and to take direct action for the elimination of crowded, poorly ventilated and filthy tenements, impure water supplies, inadequate sewerage, and unwholesome food. This program won considerable popular support and scored several major victories, chiefly in relation to housing and administrative reform.

A committee of the New York State Senate, appointed in 1858, had taken evidence and reported the need for reorganization of the municipal health administration.[11] It attributed the high rate of mortality prevailing in New York to the "overcrowded condition of tenement houses, the want of practical knowledge of the proper mode of constructing such houses, deficiency of light, imperfect ventilation, impurities in domestic economy, unwholesome food and beverages, insufficient sewage, want of cleanliness in the streets and at the wharves and piers, to a general disregard of sanitary precautions, and, finally, to the imperfect execution of existing ordinances and the total absence of a regularly organized sanitary police." Nevertheless, basic reform was not initiated until after the publication in 1865 of a detailed report by the Council of Hygiene and Public Health on the unsanitary conditions prevailing in the city. The Council, formed in 1864, consisted of a group of prominent physicians, among whom may be mentioned Willard Parker, Valentine Mott, Edward Delafield, Alonzo Clark, Gordon Buck, Stephen Smith, Henry D. Bulkley, and Elisha Harris. This group undertook to carry out a sanitary survey of the city, and enlisted the aid of a group of young physicians. For the purpose of the survey, the city was divided into 29 districts, and to each one of the physicians was assigned as a sanitary inspector. The survey was carried out during the summer of 1864, and the reports were then published in a volume of over five hundred pages. The total cost of this enterprise was $22,000, but the money was well spent.

While the Council of Hygiene had been carrying out its survey, the other department of the Citizen's Association, the Council of Law, had drafted a public health law. Prepared under the judicious direction of Dorman B. Eaton, a New York lawyer, the bill was introduced into the State Legislature in 1865. After an initial defeat, the bill was passed early in 1866, and, on March 5, 1866, the Metropolitan Board of Health came into being. As organized under the new law, the health administration of the City was turned over to a Board of Health empowered to act within the Metropolitan Sanitary District of New York State. This area included the counties of New York, Kings, Westchester, and Richmond, and the towns of Newtown, Flushing, and Jamaica in Queens County. Extensive power was conferred upon the Board, which was empowered to create ordinances, to execute them, and to sit in judgment on its own acts. The Board consisted of a president appointed by the Mayor, four physicians who were sanitary commissioners, the health officer of the port, and four police commissioners. In 1870 the administrative organization was changed, and the nucleus of the present Department of Health was created. The Board of Health consisted of two commissioners of health, the health officer of the port of New York, the president of the board of police, and a secretary. Its jurisdiction included only the actual city of New York as then constituted, that is, the present boroughs of Manhattan and Bronx. The Department was divided into four bureaus—Vital Statistics, Sanitary, Street Cleaning, and Sanitary Permits.

The enactment of the New York Metropolitan Health Bill of 1866 was a major triumph and marks a turning point in the history of public health in New York City. It is not generally realized that among the difficulties involved in the pioneer efforts to improve the public health through legislative action was the lack of an adequate administrative mechanism. As we have seen, the civil service during the early nineteenth century was small in numbers, limited in function and recruited almost wholly by patronage. The change from a haphazard to an efficient administration was as essential to the developmen of a complicated urban industrial society as th provision of new scientific knowledge. In fact it was the provision of a stable administrative foundation which made it easier to incorporate new scientific knowledge into public health practice.

In the activities of the Health Department during the last three decades of the nineteenth century are to be seen the development of the modern public health program. It must be kept in mind that until the eighties there was firmly implanted in both the lay and the medical mind the idea that disease was caused by dirt. Translation of this idea into practical consequence took the form of specific measures intended essentially to eliminate filth and to improve the physical environment, especially of the poorer classes. This activity was fundamentally empiric and is reflected in the varied duties performed by the sanitary inspectors, most of whom were physicians. They investigated outbreaks of such communicable diseases as smallpox, typhus fever, typhoid, and scarlet fever, inspected tenement houses, reported on defective plumbing or ventilation, vaccinated against smallpox, and conducted sanitary surveys.

In 1874, an effort was made to stem the wastage of infant life, especially in tenement houses. A simple leaflet on infant care was prepared and widely distributed. In the same year leaflets describing the means by which diphtheria spreads, its symptoms, and the precautions to be taken were also issued by the New York City Health Department. These efforts may be considered the beginning of public health education in the City by an official agency. In 1874 a corps of vaccinators was also organized, and a laboratory for the preparation of vaccine virus was established. As the years passed and new problems appeared, new methods were developed. Food and drug inspection was undertaken, a system of milk permits was inaugurated, a campaign for the control of tuberculosis was begun, laboratory methods were introduced, and the new science of bacteriology began to be applied to public health work. The development of medical bacteriology brought with it a major shift of emphasis in the program of disease prevention. From the control of man's environment attention was turned to the control of specific communicable diseases. At the same time, the public health program was extended to take in specific groups in the population. In March, 1897, for example, 150 school medical inspectors were appointed, at a salary of $30 per month, to visit public schools and examine children suspected of having communicable disease. This was the beginning of the present school health service.

By the end of the nineteenth century, when the municipality of Greater New York was created, there had been established in the city a public health department which was basically sound in its administrative organization and progressive in its program. Much still remained to be done, but the more extensive cultivation of public health and the rich rewards that have been garnered in our century were made possible because basic organizational problems had already been solved.

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PRIZE ESSAYS

The Merrit H. Cash Prize and the Lucien Howe Prize will be open for competition at the next Annual Meeting of the Medical Society of the State of New York, May 8, 1950, in New York City.

The Lucien Howe Prize of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The Merrit H. Cash Prize of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York, who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device, and containing the name and address of the writer.

If the Committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York "to be published as it may direct."

All essays must be presented not later than February 1, 1950, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 292 Madison Avenue, New York 17, New York.

Armitage Whitman, M.D., *Chairman*
Committee on Prize Essays

THE USE AND ACTION OF THE NEWER ANTIBIOTICS—AUREOMYCIN, CHLOROMYCETIN, AND BACITRACIN

Erwin Neter, M.D., F.A.P.H.A., Buffalo, New York

(From the Departments of Bacteriology and Immunology of the Children's Hospital and the University of Buffalo School of Medicine)

NEVER in the long history of medicine have important contributions followed each other at such rapid pace as at the present time. This is particularly true in the field of chemotherapy of infectious diseases. To discuss briefly the use and action of the newer antibiotics is the purpose of this article.

Although antagonistic relationships between different micro-organisms were observed in the last century and attempts were even made as early as 1885 to cure tuberculosis through the inhalation of harmless micro-organisms, it was not until 1939 that the usefulness and tremendous potentialities of the antibiotics for clinical medicine were first appreciated.

Perhaps a word may be said regarding the connotation of the term antibiotic. Antibiosis, the counterpart of symbiosis, refers to an inhibitory or damaging influence of one type of organism against another. Any substance produced by a living organism which exerts adverse influences upon any other is referred to as an antibiotic. Penicillin represents just one of the numerous antibiotic substances produced by fungi, actinomyces, bacteria, and plants. The extremely favorable results obtained with this agent in a large variety of infectious diseases have served, since 1939, as a powerful stimulus for further studies and investigations. Unfortunately, many of the antibiotic substances cannot be utilized clinically because of prohibitive toxic side-effects. About two years ago two new compounds were added to the steadily growing list of clinically valuable antibiotics, namely, aureomycin and chloromycetin. In the brief period which has elapsed since their discovery they have already proved to be of immense value.

Aureomycin and Chloromycetin

Both aureomycin and chloromycetin are produced by members of the genus Streptomyces, the very same group to which the organism that manufactures streptomycin belongs, incidentally. Streptomyces aureofaciens forms, as the name indicates, a golden compound of high antibiotic activity which was first made public under the name of duomycin and is now referred to as aureomycin. Chloromycetin is produced by another mold, Streptomyces venezuelae, which was found in the soil of the South American Republic of the same name. Chloromycetin has since been synthesized in the research laboratories of Parke, Davis Company. The name chloromycetin was coined because of the large amount of chlorine present in the molecule.

Antibiotic Spectra.—From a practical point of view, it is important to emphasize that both aureomycin and chloromycetin are active against a large variety of different micro-organisms, or, in modern terminology, they possess a large spectrum of antibiotic activity. Both antibiotics are therapeutically effective in rickettsial diseases, such as Rocky Mountain spotted fever, typhus fever, etc., and represent, as a matter of fact, the first antibiotic active against these microbes. Remarkable, too, are the results of their action upon the virus-like agents, namely, those causing atypical pneumonia, psittacosis, and lymphogranuloma venereum. Aureomycin and chloromycetin are effective also against many of the pathogenic bacteria, and, finally, it has been shown recently that even a protozoon, the causative agent of amebic dysentery, is adversely influenced by aureomycin.

Aureomycin and chloromycetin offer still other advantages. First, in contrast to other antibiotics, optimal absorption follows oral administration. Second, micro-organisms, so far as we know at the present time, usually do not become resistant to aureomycin and chloromycetin, even following prolonged exposure. Third, micro-organisms which have become resistant to penicillin, streptomycin, or some other antibiotic are still susceptible to aureomycin or chloromycetin. Fourth, both aureomycin and chloromycetin are of remarkably low toxicity.

Although a final appraisal of aureomycin and chloromycetin is not yet possible, enough experimental and clinical data have already been accumulated to illustrate their clinical usefulness and to sketch their therapeutic potentialities.

Administration.—Both aureomycin and chloromycetin are usually given by mouth. After a prolonged study of the efficacy and toxic side-effects of parenterally administered aureomycin, the Food and Drug Administration, a few weeks ago, released aureomycin hydrochloride for in-

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travenous use. Because of local irritation it should not be given subcutaneously. In addition, an ophthalmic solution is now available for the treatment of infections of the eye. Studies are still being carried out on the absorption of both aureomycin and chloromycetin following rectal administration. It appears that the blood level of chloromycetin given rectally is only one fourth that following oral administration. At the Children's Hospital we have used both aureomycin and chloromycetin rectally as an adjunct to either intravenous or oral therapy without any noticeable ill effects. The rectal administration of aureomycin may be resorted to, particularly if the drug given orally causes nausea and vomiting, a side-effect which, unfortunately, is not rarely encountered.

The recommended oral dose of aureomycin may be calculated on a weight basis and generally amounts to 25 to 50 mg. per Kg. per day in divided doses. In infants and young children and in severe or somewhat resistant infections as much as 500 mg. per Kg. can be given safely. The recommended dose of chloromycetin for adults is 50 to 100 mg. per Kg. as the initial dose followed by 250 to 500 mg. every three to four to six hours. On a weight basis, 25 to 50 to 100 mg. per Kg. per day may be given in divided doses. Larger doses have been used in special cases. It must be emphasized that the optimal dosage of both drugs in many clinical conditions has not yet been established. It is generally recommended to continue treatment for several days following apparent recovery.

Absorption and Excretion.—Before proceeding with the discussion of the clinical usefulness of the newer antibiotics, it may be advantageous to present briefly data on their absorption and excretion. After a single oral dose, aureomycin is rapidly absorbed and is present in the blood in relatively high concentrations up to 4 micrograms per ml. for a period of at least six to twelve hours and in smaller concentrations for twenty-four hours. For this reason the drug need not be given more often than three times a day. Chloromycetin, too, rapidly appears in the blood following oral administration. The serum concentration may exceed 10 micrograms for eight hours, and smaller concentrations may be present for more than eighteen hours.

Both drugs, like other antibiotics and the sulfonamides, are excreted by the kidney and are concentrated in the urine. Aureomycin may be present in the urine in amounts ranging from 64 to 256 micrograms per ml., whereas the corresponding blood concentration amounts to only 1 to 8 micrograms.[1] Precisely for this reason these antibiotics, as well as the other antibiotics and chemotherapeutic substances, may be highly effective in the treatment of infections of the urinary tract and distinctly less so in systemic infections caused by the very same micro-organisms. Aureomycin is also concentrated in the bile, and favorable results in the treatment of biliary infections due to susceptible micro-organisms can be anticipated. Aureomycin and chloromycetin diffuse into the cerebrospinal fluid. The concentration of aureomycin in the spinal fluid, according to Herrell and Heilman, is only a fraction of that of the blood; it is possible, however, that in meningitis the diffusion of the antibiotic is enhanced.[1] Aureomycin is present also in various body fluids, such as pleural fluid, and in various tissues, such as liver, kidney, spleen, and lung. Both drugs pass the placental barrier and have been demonstrated in cord blood. Whether the antibiotics can be used to prevent infection of the fetus during pregnancy or of the infant during delivery remains to be seen.

Rickettsial Diseases.—One of the most amazing effects of both aureomycin and chloromycetin is that upon the rickettsiae, micro-organisms which stand midway between the bacteria and the viruses. The rickettsiae are responsible for epidemic and endemic typhus. Rocky Mountain spotted fever, scrub typhus, Q fever, and the more recently described rickettsialpox. Progress in the specific therapy of these diseases was not made until a few years ago when it was shown that para-aminobenzoic acid, the antagonist of sulfonamides, exerts beneficial effects. All other chemotherapeutic agents known until that time were without value. Para-aminobenzoic acid in Rocky Mountain spotted fever, for example, reduced the fatality rate from 10 per cent to zero. Aureomycin produced even better results, however, inasmuch as it further shortened the duration of the illness and reduced even the incidence of complications.

The same extremely favorable results have been observed in this group of infections with the use of chloromycetin. The results are excellent, even if the drug is administered late in the illness. In a group of 25 treated and 12 untreated cases of scrub typhus the duration of fever was reduced from eighteen to seven and one-half days, the duration of hospitalization from thirty to nineteen days, and the fatality rate to zero.[2] Favorable results have also been reported from the use of these antibiotics in Q fever and rickettsialpox. Without question, aureomycin and chloromycetin are the drugs of choice in rickettsial infections, and much suffering would have been avoided had at least one of these agents been available during World War II.

Diseases Caused by Virus-like Agents.—Of more practical interest to the physician practicing in this part of the country is the now established fact that both aureomycin and chloromycetin are extraordinarily effective against some of the larger virus-like agents, namely, those causing atypical pneumonia, psittacosis, ornithosis, lymphogranuloma venereum, and probably trachoma, epidemic keratoconjunctivitis, and inclusion blennorrhea.

In a series of 13 cases of proved atypical pneumonia, all patients responded promptly to aureomycin therapy, the temperature returning to normal within seventy-two hours.[3] The difference in the course of the illness of two groups of patients—one receiving the antibiotic, the other serving as untreated control—leaves no doubt that these antibiotics can now be considered as the drugs of choice in this condition. It must be appreciated, however, that the cause or causes of this malady have not yet been fully elucidated and that these drugs may not be equally effective in all instances.

In psittacosis and ornithosis, two other types of viral infection of the respiratory tract, the newer antibiotics are also effective. Woodward reported a dramatic recovery following treatment with aureomycin in a patient suffering from pigeon-acquired ornithosis.[4] From experimental observations it seems certain that aureomycin and chloromycetin should prove to be of greater value than the hitherto employed penicillin and sulfonamides.

Closely related to the atypical pneumonia-psittacosis group is the causative agent of lymphogranuloma venereum. It is not surprising, then, to learn that in experimental animals the newer antibiotics have proved to be of value in this infection. A few clinical observations have been published lately indicating that aureomycin treatment resulted in a decrease in the size of the bubos within four days of initiation of therapy.[5] Surgical intervention may yet be necessary. A word of caution may be added at this point. Since both antibiotics also exert some influence upon the spirochete of syphilis and since the efficacy of these antibiotics in syphilis is not yet established, every attempt must be made not to mask a concomitant syphilitic infection when treating a venereal disease such as lymphogranuloma venereum.

Although it is possible that aureomycin and chloromycetin may yet prove to be of value in some other virus infections, it must be emphasized that, according to the information available at the present time, both drugs are not at all effective against the smaller viruses of influenza, poliomyelitis, encephalitis, and others. Without question, this is regrettable, but it must be appreciated that at least a beginning has been made in successful specific therapy of virus infections.

Bacterial Diseases.—Not only are aureomycin and chloromycetin chemotherapeutically active against viral and rickettsial infections, they also are used with success in the treatment of certain bacterial diseases. Roughly speaking, aureomycin is effective against both gram-negative and gram-positive bacteria, whereas chloromycetin exerts a more powerful effect upon the gram-negative micro-organisms. If one were to compare both agents with penicillin and streptomycin, one might make the following tentative statement: In vitro, aureomycin is somewhat less effective than penicillin against penicillin-sensitive, gram-positive organisms and equal or superior to streptomycin against gram-negative microbes. Chloromycetin is superior or equal to streptomycin against the gram-negative bacteria.

A significant advantage of aureomycin is the now well-established fact that this drug is highly effective against certain bacteria which are or have become resistant to penicillin. For example, in a series reported from the Mayo Clinic, 68 per cent of staphylococci from a variety of lesions proved to be resistant to penicillin but were susceptible to aureomycin.[6] As a corollary four out of six cases of penicillin-resistant staphylococcus septicemia recovered following the administration of aureomycin. Aureomycin may also prove to be of benefit to patients suffering from various streptococcal and pneumococcal infections. As a matter of fact, recovery from pneumococcus meningitis following administration of aureomycin has already been reported. Much additional clinical work is needed before it will be possible to state with accuracy the relative merits of aureomycin, chloromycetin, and penicillin in this group of infections and to evaluate combined antibiotic therapy.

The newer antibiotics may also be effective against gram-negative cocci, the meningococcus, and the gonococcus, and favorable results have already been reported from the treatment of gonorrhea in a limited number of patients. It would be premature, however, to state that the new antibiotics should be generally used for the treatment of gonorrhea and meningococcus infections until it has been shown that they are superior to the hitherto employed, highly effective chemotherapeutic agents, penicillin and sulfonamides, respectively.

Both aureomycin and chloromycetin have been used in a large variety of infections caused by gram-negative bacilli. Most spectacular are the results obtained with chloromycetin in typhoid fever.

At the Buffalo Children's Hospital we had the opportunity to study four such patients. One patient was first unsuccessfully treated with penicillin in large doses and aureomycin in relatively small doses. Prompt recovery followed the use of chloromycetin. In a series of 21 cases treated with chloromycetin there was not a single fatality.[4] As pointed out by Smadel and his associates, it is necessary to continue treatment for one to two weeks if relapses are to be avoided.[7] It is interesting to note, however, that if therapy is discontinued too soon, chloromycetin is still effective in the treatment of the relapse. Unfortunately, from a limited number of observations it appears that this antibiotic is less effective in the treatment of chronic typhoid carriers.

Both aureomycin and chloromycetin have been used also for the treatment of salmonella or paratyphoid infections and bacillary dysentery. The results are not quite as striking as those in typhoid fever, and relatively high doses are recommended. In two convalescent salmonella carriers observed at the Children's Hospital, paratyphoid bacilli were not eliminated following administration of maximal doses (500 mg. per Kg. of body weight) of aureomycin and of chloromycetin for one week each. Indubitably, further clinical observations will give a more clear-cut picture of the usefulness and limitations of these antibiotics in salmonella and shigella infections.

The results of chloromycetin and aureomycin therapy in brucellosis are encouraging. Aureomycin exerts greater bacteriostatic activity against Brucella than streptomycin. Clinically, it has been observed that both drugs are remarkably effective in acute cases of brucellosis, and favorable results have been reported in chronic cases. A comparison of the two antibiotics shows that chloromycetin apparently is slightly superior to aureomycin, inasmuch as the duration of fever is three and eight-tenths days in the aureomycin group versus two and four-tenths days in the chloromycetin group.[4] However, further observations are needed before definite conclusions can be drawn. How reluctant one should be in conclusions on cure of chronic brucellosis is well illustrated by the finding of recurrences after apparent cure. Spink recommends a daily dose of from 4 to 6 Gm. for two weeks.[8] It is quite possible that the combined use of two chemotherapeutically active agents, for example, aureomycin or chloromycetin and streptomycin, may yield better results.

Aureomycin and chloromycetin have been shown to be valuable also in hemophilus infections, notably in whooping cough and influenza bacillus meningitis. For example, the period of paroxysmal cough was definitely shorter in the aureomycin-treated group than in the untreated control group. Of the 380 control cases only 25 had paroxysmal cough for less than twenty days, whereas of the 20 aureomycin treated patients this occurred in seven patients.[9] More information on the relative merits of the antibiotics and specific antisera in hemophilus infections are definitely needed.

It is well known that streptomycin is highly effective in tularemia. In experimental animals it has been shown that aureomycin is superior to streptomycin, while chloromycetin is less effective than streptomycin.

Other gram-negative bacilli are also susceptible to both drugs, namely, the Friedländer bacillus, Bacterium coli, B. aerogenes, and others. Remarkably good results have been reported from the treatment of urinary tract infections with aureomycin and chloromycetin. In a detailed study Rutenberg and Schweinberg tested a number of strains of B. coli, B. aerogenes, B. proteus, and B. pyocyaneus for their sensitivity to aureomycin and found that only an occasional strain is resistant to more than 200 micrograms per ml.[10] Since aureomycin is highly concentrated in the urine, it is not surprising to see that it is also effective clinically. It is noteworthy that the urine in eight of the ten cases became sterile, although this had not been accomplished by the administration of sulfonamides, penicillin, or streptomycin. Favorable results were reported also by Collins and Finland.[11]

Chloromycetin, too, is useful. In a series of 43 cases 16 were cured, 18 were improved, and nine remained unimproved. It must be emphasized that relapses are likely to occur if malformations or obstructions are not corrected. However, it is fortunate that both drugs can be administered over a long period of time or be given in several courses.

Occasionally, these gram-negative bacilli cause disease in other parts of the body, such as respiratory infections, otitis media, sepsis, cholecystitis, etc. Recently, at the Children's Hospital, we had the opportunity to observe two patients suffering from meningitis, one due to B. pyocyaneus, the other due to a very mucoid strain of B. aerogenes. In both cases recovery can be attributed to the use of aureomycin. They represent the first cures with aureomycin in these types of meningitis. In the case of B. aerogenes meningitis an interesting bacteriologic observation was made: The organism at first was not mucoid; following a short period of specific treatment, the strain became extremely mucoid, and just prior to sterilization of the spinal fluid it reverted to the nonmucoid type. Interestingly enough, this change was not accompanied by an increase in the resistance to aureomycin.

Spirochetal Infections.—A limited number of clinical observations indicate that aureomycin and chloromycetin may be effective in spirochetal infections. The drugs are active against the spirochete causing relapsing fever, and from the Mayo Clinic favorable results have been reported in the treatment of certain syphilitic lesions.[12] Naturally, it will take years before any statement can be made regarding the relative efficacy of aureomycin and chloromycetin on the one hand and penicillin on the other.

Mixed Infections.—There is another important group of diseases in which aureomycin may be used with success, namely, mixed infections. For example, extraordinarily good results have been observed in checking mixed infections of the respiratory tract associated with cystic fibrosis of the pancreas. Likewise, aureomycin is useful in preventing peritonitis when administered prior to gastric and intestinal operations.[13] Evidence has also been presented to the effect that aureomycin is valuable in the treatment of purulent peritonitis.[13] Patients suffering from chronic ulcerative colitis have greatly benefited from aureomycin therapy, although, obviously, cures cannot be claimed. It must be emphasized that the cause of this disease has not yet been fully elucidated and that the clinical improvement may be due to the effects of aureomycin on the bacterial flora of the intestine.

Protozoa.—Finally, it appears that aureomycin is effective even against certain protozoa, and favorable clinical results have already been reported in amebiasis.[14]

Bacitracin

There is yet another recently discovered antibiotic of clinical merit, namely, bacitracin. This compound is produced by Bacillus subtilis. The name bacitracin was coined because it is a product of a "bacillus," and the strain was isolated from a patient named "Tracy." Perhaps it is fortunate that the patient's name did not have ten syllables! Bacitracin, in contrast to aureomycin and chloromycetin, is somewhat toxic when administered systemically. For this reason, bacitracin, at the present time at least, is used only locally. A large variety of different bacteria are susceptible to this antibiotic. Of 100 cases reported by Meleney and Johnson, 88 per cent responded favorably to this antibiotic, and failures were observed in 3 per cent only.[15] Miller and associates observed cures in 70 of 87 adequately followed cases and failures in only 17.[16] The conditions included impetigo, folliculitis, infectious dermatitis, furunculosis, etc. Fortunately, sensitization of the patient to bacitracin is encountered only very rarely.

Indubitably, the developments during the last decade in the chemotherapy of infectious diseases has brought us much closer to the fulfillment of the dream of Paul Ehrlich, who, many years ago, visualized chemotherapeutic substances highly effective against pathogenic micro-organisms and yet almost innocuous to the human host, and who, with his systematic investigations into the arsenicals, gave the medical profession the first laboratory-produced chemotherapeutic agent and thus initiated the studies which have now culminated in the discovery of penicillin, streptomycin, aureomycin, chloromycetin, and bacitracin.

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REPLACEMENT OF LOST SIGHT AND HEARING

An announcement in regard to the replacement of lost sight and hearing through the medium of electric stimulation of certain areas in the brain has been made by Dr. Wendell J. S. Krieg, professor of neurology at the Northwestern University Medical School in Chicago, Illinois. He also believes that similar stimulation of the motor points of muscles may enable paralysis victims to walk again.

Animal experiments have demonstrated the plausibility of this approach to a possible restoration of these functions, but further technologic developments are necessary before application to humans.

CARCINOMA OF THE PROSTATE

A Review of 162 Cases with a Pathologic Classification

N. C. Foot, M.D., G. A. Humphreys, M.D., and E. C. Coats, M.D., New York City

(From the Department of Surgery (Urology), New York Hospital-Cornell Medical Center)

WE HAVE reviewed all cases of carcinoma of the prostate admitted to the Cornell Urological Service at the New York Hospital during the sixteen-year period from 1933 to 1948, inclusive. This review consisted of a pathologic study, as well as an analysis of our clinical experience, in hope of correlating the type of cancer with the clinical prognosis. Although 302 cases had been diagnosed as "carcinoma of the prostate" during this interval, only 222 cases could be considered accurately diagnosed beyond reasonable doubt in retrospect. The remainder had been studied inadequately or had been proved on subsequent admissions not to have had the disease. Of the 222 cases whose clinical course warranted the diagnosis, we were able to confirm the presence of the carcinoma by pathologic sections in 162 cases. Since adequate clinical records and, for the most part, complete follow-ups were available in these 162 cases, we have confined our study to this small but well-documented series.

Pathology

Since two of us had succeeded in demonstrating a significant correlation between the clinical prognosis and the pathologic type of renal tumors, it was natural to suppose that a similar relationship between type and prognosis might exist in the case of prostatic cancer. It was our impression that the multiacinar form would prove to be the most malignant.

Before this part of the work could be done, it was necessary to devise a classification that might indicate the site of origin of prostatic cancers in given segments of the tubular units. The prostate comprises more or less spiral tubules that dilate at their proximal extremities to form acini (Fig. 1). There are carcinomas resembling proliferated acinar epithelium and others that are tubular with smaller and better differentiated cells. Rare examples of epidermoid growth have been noted, one of them in our series. Figure 2 will give an idea of the possible subdivisions of the classification. A brief résumé of the salient features of each type follows:

Tubular Varieties.—There are two fairly clear-cut types of tubular carcinoma, one with large, the other with small cellular components; either may possess granular or clear and vesicular cytoplasm, apparently depending upon the glycogenic content of the cells (Figs. 3 and 4).

Multiacinar Variety.—In this the epithelium proliferates to form many small acini occupying the space of a single normal acinus; Moore calls them "acini in acino" (Fig. 5). The type may merge or may be combined with the large-celled tubular variety.

Solid Variety.—A comparatively small number of the tumors in our series exhibits a propensity to grow so precipitately that they produce mere spheroidal masses of closely packed cells like those of mammary "medullary carcinoma" (Fig. 6).

Epidermoid Variety.—This resembles any keratinizing epidermoid or "squamous-celled" carcinoma and needs no further elaboration (Fig. 7).

When the term "adenocarcinoma" is applied to prostatic cancer, it indicates a large-celled tubular form that comprises high columnar cells and resembles a benign adenoma that has become malignant.

Evaluation of the Classification

The incidence of carcinomas of the prostate by type in our series of 162 cases was as follows: large-celled tubular 65, duct celled 4, multiacinar 26, and epidermoid 2. The predominance of five-year survivals in certain categories was paralleled by the incidence of the same patho-

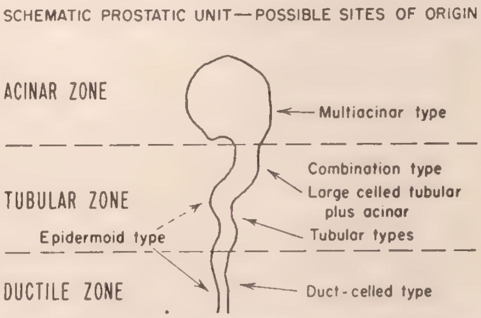

Fig. 1. Schematic representation of prostatic tubule with possible sites of origin of different types of carcinoma.

Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Urology, May 4, 1949.

CONDENSED CLASSIFICATION OF PROSTATIC CARCINOMA

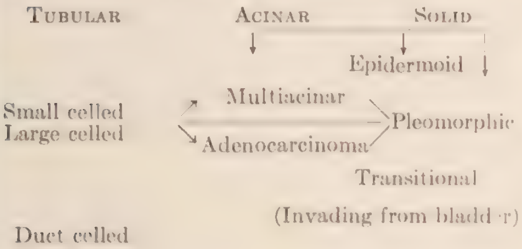

FIG. 2. Proposed classification. Arrows and lines indicate possible transitions between types.

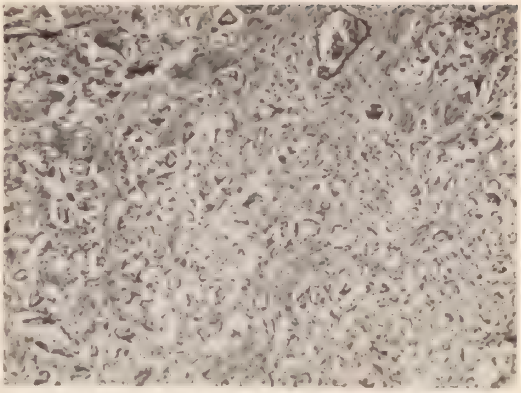

FIG. 4. Small-celled, tubular type carcinoma. (150 ×)

logic type in our series. Hence, the numerical preponderance of survivals in these categories was of no statistical significance in determining the clinical prognosis. In an attempt to explain why some patients survived and others died, microscopic sections of the five-year survival group were segregated and compared with sections of a group that died rapidly of carcinoma. Comparison showed that the sections exhibited no significant difference, whereby we have demonstrated that the histopathology of the tumor bears no discernible relation to the prognosis. Some factor besides site of origin of the tumor by pathologic criteria must determine the speed of growth and dissemination of the disease.

Survival

Having established that there is no definite correlation between the pathologic types of carcinoma of the prostate and prognosis, we determined how many of the 162 cases had died of causes definitely other than carcinoma, e.g., cardiovascular disease, trauma, respiratory infections, etc. This revealed that 119 cases had already died of determined causes, of which 99 had died of carcinoma, whereas 20 of these had died of causes other than the carcinoma. This five-to-one ratio may be somewhat weighted in favor of deaths by carcinoma inasmuch as numerous patients still living have a good chance of dying of causes other than cancer. Actually, only cases operated upon prior to ten years ago should be used in this series as some of these patients survived up to nine years, only to die of the disease. Among those surviving over five years, deaths from carcinoma outnumbered deaths from other causes six to five. One must not consider a five-year survival a "cure."

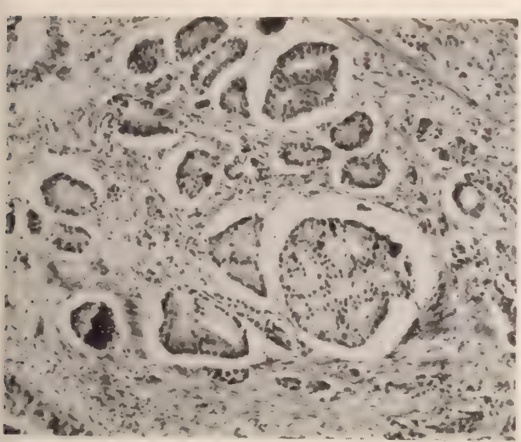

FIG. 3. Microscopic field in large-celled tubular carcinoma. Note one area in which multiacinar type is developing, a common occurrence. (150 ×).

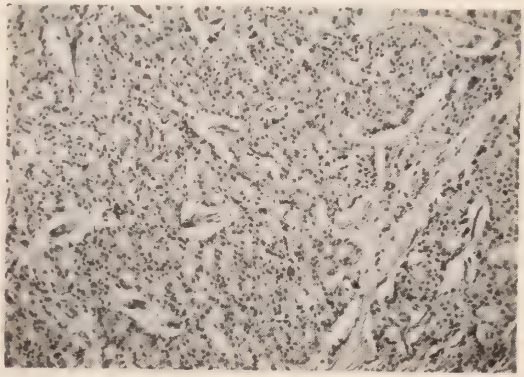

FIG. 5. Multiacinar variety of carcinoma. In some places there is also a tubular arrangement. (150 ×)

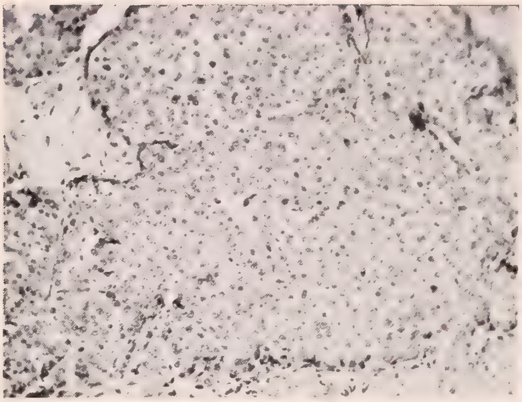

FIG. 6. Solid form of carcinoma, probably derived from precipitate growth of large-celled tubular variety. (150 ×)

There were 93 cases among the determinates who received palliation in the form of castration or estrogens. Thirty-three of these received orchiectomy, while 20 had stilbesterol as their only form of therapy. Forty of the 93 patients had both orchiectomy and stilbesterol. Although it was impossible to decide whether 33 of these patients showed any benefits from therapy, since it was instituted prior to symptoms of metastasis, it was considered that 40 of the 93 cases showed some degree of benefit. This was, for the most part, only temporary with a duration of approximately six months, although there were exceptional cases which showed benefits up to three or four years. Twenty cases showed no improvement following castration, orchiectomy, or both. In those who survived over five years from time of treatment ten had been orchiectomized, and 11 had not. Of interest is the fact that those patients who survived for nine years or more following operation by any procedure were not orchiectomized. Also, there is no definite correlation between the pathologic type of tumor encountered and the relief from estrogen therapy.

Of the 162 well-documented cases there were only 21 survivals for five years or more. Hence, there was a survival of only 13 per cent of the patients beyond this period. This did not demonstrate that they were cured of the disease, for nine were living and well beyond five years, six died at later dates up to the ninth year of the disease, and five died of causes other than carcinoma of the prostate.

Clinical Findings

The clinical findings agree with those reported by all essayists on the subject and are as follows:

Age.—The youngest patient was forty-one, the oldest ninety-six. The majority of patients (81 per cent) were found in the age group sixty to eighty.

Complaints on Admission.—The following are the various complaints given by patients on admission with the percentage of cases in which the particular symptom occurred:

Frequency and nocturia	88 per cent
Difficulty in urination	62 per cent
Loss of weight	40 per cent
Dysuria	26 per cent
Hematuria, gross	23 per cent
Sciatic pain	20 per cent

Rectal Palpation of the Prostate.—The following data on the condition of the prostate were elicited:

Small to twice enlarged	77 per cent
Asymmetric	65 per cent
Fixed to pelvic wall	40 per cent
Hard	52 per cent
Stony hard	36 per cent
Nodular	47 per cent
Induration at base	33 per cent

Phosphatase Studies.—Blood serum phosphatase studies were made in many of the cases. The results coincide with the reports of other observers. The test is of confirmatory value in a clinical diagnosis if either the acid or alkaline phosphatase is elevated, but in early carcinoma of the prostate normal values may be obtained, and such normal values cannot be used to rule out the possibility of carcinoma of the prostate. An elevated acid phosphatase means extension of the disease beyond the capsule of the prostate or recent trauma by biopsy or vigorous massage.

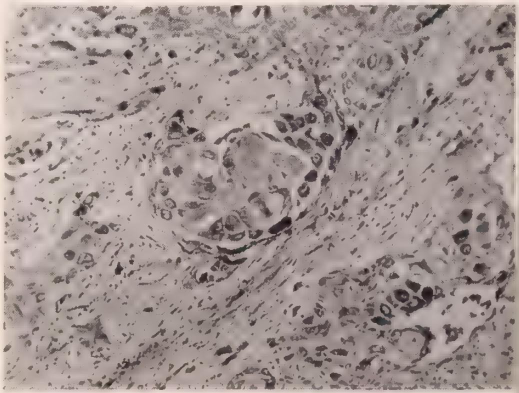

FIG. 7. Epidermoid carcinoma. Note the partially keratinized cellular elements resembling epithelial "pearls," an incipient form of which is in the center of the picture. (150 ×)

With metastatic prostatic carcinoma in the bone, elevation of both the acid and alkaline phosphatase usually but not invariably occurs. After estrogenic therapy or orchiectomy the acid and alkaline phosphatase values, if elevated, usually decline rapidly and may thereafter be a guide to the control of the metastatic spread. The test is, therefore, of confirmatory value only, not diagnostic.

X-ray Diagnosis

X-ray is one of our most important diagnostic aids in urology, and intravenous urograms and cystourethrograms were made in a large number of these cases. We can only report that the urograms were usually normal until rather late in the disease when obstruction of the lower ureter occurred. A small, rigid posterior urethra, as determined by cystourethrogram, was considered suggestive of carcinoma but was not in itself of much diagnostic value.

In metastatic disease to the bone, the roentgenologist is not always able to help us in making an early diagnosis. A positive diagnosis of metastatic bone disease was made in one case in four in this series, while clinical evidence of spread of the disease was noted twice as often. Many cases were repeatedly reported as negative for metastasis but showed osteoarthritis or Paget's disease until very late in their course, when the lesions became more typical. However, we must be suspicious of all atypical bony lesions seen on x-ray and, on the basis of supporting clinical evidence, consider them metastatic disease until proved otherwise.

In reviewing these cases, we wish to stress two findings that occur often enough to be of apparent importance in early diagnosis: (1) Microscopic hematuria was found in 39 per cent of the cases with otherwise normal urine, and (2) gastric upsets, epigastric distress, and gaseous eructations were noted in 14 per cent of the cases. Repeated examinations for the cause of persistent microscopic hematuria with otherwise normal urine, while keeping in mind the possible presence of carcinoma of the prostate, should result in earlier diagnosis in a few cases. The same may be true in complete investigation of gastric complaints, especially where x-ray series are negative for specific cause.

Treatment of Five-Year Survivals

There was no correlation in this series among the five-year survivors by type of operation performed. One of the cases had the diagnosis confirmed by biopsy of a cervical node after two years of intractable sciatica. He had no operation upon the prostate, merely castration, which gave him four years of relief of pain before he died after his fifth year following biopsy of diffuse metastatic carcinoma of the prostate as demonstrated by postmortem examination. One of the cases who had cystotomy with radon implantation died after five years with a disease other than carcinoma. Of the seven survivors who had suprapubic prostatectomies, one is alive and well fifteen years postoperatively. Of the ten survivors who had transurethral resections, the longest survivor lived eight years, only to die of the disease. Of the two survivors who had radical perineal prostatectomies both are alive now, six and eight years postoperatively. Although certain small carcinomas of the lateral lobes were removed accidentally by simple operations performed on the hypertrophies, the majority of such cases still died of carcinoma. It would appear that our operations were too late and inadequate even for the majority of these inadvertently encountered neoplasms. Since the percentage of survivals for over five years by type of operation is proportional to the frequency with which the operation was performed, we feel unable from our experience to attribute to any one procedure the distinction of being significantly better than the other in achieving a more prolonged survival. A much larger series of ten-year determinate cases is required if conclusions of statistical value are to be drawn.

Comment

After careful scrutiny of the records of 162 well-documented cases, one is impressed by the duration of complaints prior to admission for treatment, as well as the extent of the disease beyond the confines of the gland itself. The symptoms probably occur well after the onset of the disease and are too generalized and mild to bring the patient for medical care while there is still hope of surgical cure. Were bleeding and pain early signs of prostatic cancer and could early carcinoma of the prostate be diagnosed with more accuracy on rectal examination in a majority of the cases, the present poor operative results might be improved. Our series has demonstrated that the results to date have been very poor in our attempt to cure this progressive, insidious, fatal disease. A study of ten-year determinate cases is necessary in evaluating any form of therapy calculated to cure the disease. Our hope must lie in the development of some test that will enable early detection of the disease—then it might be followed by radical extirpation.

Summary

1. A clinical and pathologic review of our experience in 162 well-documented cases of carcinoma of the prostate on the Cornell Urological Service at New York Hospital is presented.

2. A histogenetic classification of carcinoma of the prostate has been formulated.
3. This classification gives no pathologic correlations with clinical prognosis.
4. A five-year survival of 13 per cent was obtained; many patients died later of the disease.
5. Earlier diagnosis and radical extirpation are our only hope for improvement.

Discussion

Leo E. Gibson, M.D., *Syracuse.*—Dr. Humphreys and his coauthors have presented a detailed study and follow-up of 162 cases of cancer of the prostate, with respect to the pathologic findings and life expectancy. This well-documented series of cases is to be commended, even though it does not contain thousands of cases. By spending time and effort to evaluate our individual clinical work, as these authors have done, we give the best medical service to our patients and respective communities. It is fortunate that good hospitals and efficient laboratories are available in which such work can be accomplished.

For a long time clinicians and pathologists have attempted to evaluate the prognosis in this serious disease of malignancy of the prostate in various ways and from various angles. The greatest amount of study, from a statistical point of view, has been done from the clinical aspect. The prognosis in prostatic cancer has been assessed from three points of view: first, the patient with a family history of carcinoma and personal history of long urinary difficulty leading to a hopeless situation; second, the objective findings of a fixed prostatic mass with induration extending into the region of the seminal vesicle, and, finally, the conditions found at operation which prevent satisfactory removal of sufficient tissue by any method.

We have seen that progress from the clinical classification has been of little value, and we are forced to depend on some histologic or biologic classification in order to get some help in the problem of therapy and prognosis.

Broders, one of the first to stress the importance of this aspect in malignancy, taught us that the more highly differentiated the cells in a tumor, the less malignant it is, and, conversely, the less differentiated they are, the more malignant they are. This theory has been helpful.

The importance of any pathologic classification in the prognosis of carcinoma would be related only to those cases in which a microscopic diagnosis of cancer has been made. The type of operation performed or method of obtaining tissue for examination would be most important in the value of any classification.

Transurethral resection fails in about one third of cases to obtain cancerous tissue when it is present because the carcinoma is present as a sheetlike growth of tissue in the posterior lobe, which the loop does not touch. I have done a few apparently very successful suprapubic prostatectomies only to have the patient succumb later to cancer arising in the capsule of the prostate. If involvement of the posterior lobe can be determined, perineal section for biopsy, if positive, permits a choice between a radical perineal operation and bombardment with hormonal therapy.

Drs. Foot, Humphreys, and Coats have presented a pathologic classification of carcinoma of the prostate, showing incidence of the types of tumors and the subsequent clinical behavior in regard to life expectancy. They have been most honest in stating that their anticipated success in finding a definite correlation between the pathologic type of carcinoma and the prognosis of the patient has been a dismal failure. This admission is important in that it establishes the fact and eliminates any dependence on similar reports from less reliable sources. The heterologous transfer of tissue to an alien host, in addition to establishing a biologic test for true cancer, may, after further study, shed some light on the problem of prognosis.

It is only by a careful study of the statistics of a series of cases, such as has been presented, that we will approach the solution of a better method for early diagnosis and establish the necessity for early radical surgery.

A.M.A. COUNCIL WARNS AGAINST UNWISE USE OF COLD TABLETS

The Council on Pharmacy and Chemistry of the American Medical Association at a recent meeting warned against indiscriminate use of antihistaminic substances now being widely promoted for prevention and treatment of colds.

The Council said: "The Council recognizes the evidence that has been accumulated relative to such uses but it is not convinced that this is sufficient to warrant the positive statements being made.

"Cases already are reported, and records show that about one third of those who take these drugs become drowsy or even fall asleep while at work or in occasional cases even when driving cars or operating machinery.

"Experience with these drugs is not yet long enough to know whether or not they are harmless when used over long periods of time. Furthermore, the amounts taken in persistent colds may be definitely beyond what has been established as safe."

—*A.M.A. News Release, December 2, 1949.*

SIGMOIDOSCOPY AND BIOPSY*

ROBERT TURELL, M.D., and BYRON J. GARSON, M.D., New York City

(From the Surgical Services of Beth Israel and Harlem Hospitals)

THE presentation of this subject is prompted by an observation made while serving in the armed forces that the value of endoscopic examination of the terminal portion of the colon was not appreciated by many physicians in uniform who came from different parts of the United States. The main reason for writing this article now is to stimulate a wider interest in sigmoidoscopy among those not solely interested in anorectocolonic diseases so that this examination may be performed by them more frequently than it is at present.

Indications

The accepted present-day indications for sigmoidoscopy are as follows: (1) bleeding from the anorectal outlet; (2) change in the intestinal rhythm; (3) protrusion from the anus; (4) diarrhea; (5) discharge of pus and mucus; (6) pain in the anoperineal region; (7) pain in the lower abdomen; (8) persistent backache; (9) unexplained anemia; (10) prior to the performance of any anorectocolonic operative procedure; (11) for the observation of the progression or regression of intestinal disease, and (12) when histologic or bacteriologic studies of rectocolonic lesions are desired. To these clear-cut indications should be added the desirability of sigmoidoscopy as a part of a physical examination performed by the general practitioner, internist, and general surgeons of individuals past forty years of age. The greatest usefulness of sigmoidoscopy becomes apparent when this diagnostic feature is routinely added to the periodic physical examination instituted for the search of possible neoplastic lesions in asymptomatic individuals.[1]

Bleeding from the anal outlet whether acute, chronic, persistent or recurrent, or microscopic or gross calls for a sigmoidoscopic study. Gross, profuse bleeding usually alarms most patients, and prompt medical consultation is sought. Microscopic bleeding from an intestinal lesion may result in a secondary anemia which is frequently unrecognized, uninvestigated, and untreated.

Blood originating from a lesion in the descending or sigmoid colon, if retained in the rectum long enough, may appear dark, resembling blood coming from a lesion in the upper intestinal tract or the stomach, while in the case of hypermotility of the intestines blood coming from a gastric or duodenal lesion occasionally may be bright red. Sigmoidoscopy will always detect and locate intraluminal lesions that are present within the reach and view of the instrument. Endoscopic examination frequently points to the existence of lesions situated above the reach of the sigmoidoscope by noting blood or abnormal excretions descending into the field of visualization.

Carcinomas are still frequently undetected prior to the performance of anorectal operative procedures for benign lesions which coexist with malignant neoplasms. Parenthetically, hemorrhoids occur frequently in association with carcinoma of the terminal bowel because of obstruction of the superior hemorrhoidal vein which is caused infrequently by the neoplasm. Garlock, Ginzburg, and Glass have stated that about 25 per cent of patients with cancer of the rectum seen by them had had a hemorrhoidectomy performed elsewhere from two to five months prior to the detection of the neoplasm.[2] At the University of Minnesota 60 per cent of patients with advanced malignancies of the terminal bowel had undergone hemorrhoidectomies about eighteen months preceding their admission to the University Hospital.[3] Since three out of four cancers of the terminal bowel can be diagnosed definitely with the aid of a sigmoidoscope, it is obvious that this examination should never be omitted prior to the performance of an anorectal operation, especially hemorrhoidectomy. Apparently, one cannot stress too often that, while internal hemorrhoids are the most common cause, carcinoma is the most important cause of bleeding from the anal orifice.

Case 1.—A man, fifty-six years of age, complained of intermittent bleeding from the rectum of unspecified duration. A hemorrhoidectomy was performed in June, 1946. Two months later, this patient was seen because of recurring bleeding. Proctosigmoidoscopy at this time led to the correct diagnosis of adenocarcinoma of the rectosigmoid which was confirmed by biopsy and later by operation. We observe two or three such cases yearly.

The omission of proctosigmoidoscopy prior to anorectal surgery is also responsible for the inexcusable performance of elective anorectal operations in the latent or in the mild forms of ulcerative colitis. In these cases, elective anorectal surgery may result in serious, intractable disabilities. It cannot be stressed too often that diarrhea, past or present, of five days duration or longer should be investigated proctosigmoidoscopically and bacteriologically.

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* Based on an exhibit presented at the Twenty-second Graduate Fortnight of the New York Academy of Medicine, New York City, devoted to "Advances in Diagnostic Methods," October 10 to 21, 1949.

As already indicated, proctosigmoidoscopy frequently will give a clue to the existence of an intestinal lesion that is situated beyond the reach and view of the sigmoidoscope by noting blood or abnormal excretions coming from above the end of the instrument. These pathologic excretions will be detected more readily if preliminary preparation with enemas is omitted.

Case 2.—A young man, thirty-six years of age, experienced several episodes of intermittent bleeding from the rectum. Several roentgen ray studies with the aid of opaque media (barium enemas and progress meals) failed to disclose evidence of organic disease. A sigmoidoscopy performed several hours after the onset of recurring bleeding (without preparation) elicited bright red blood which originated above the reach of the sigmoidoscope. This observation led to an exploratory laparotomy and the finding of a malignant neoplasm in the splenic flexure which had escaped roentgenographic detection. We have observed five similar instances.

Endoscopic examination of the colon in the presence of persistent back pain may reveal unexpected colonic disease.[4] Cancer of the rectum may produce pain in the sacral area, whereas cancer of the sigmoid colon produces pain in the lumbar region. Occasionally, back pain is the only complaint, and it usually signifies a penetrating type of advanced lesion.

In the presence of abnormal excretions from the anal outlet it is imperative to obtain specimens for bacteriologic and parasitic studies directly from the lesion through the endoscope.[5] Attention should be directed to the detection of the often overlooked anorectal gonococcic infection, a disease which is frequently found only when one looks for it.[6]

Sigmoidoscopy

Sigmoidoscope.—There are two types of sigmoidoscopes, those with distal and those with proximal sources of illumination. Each has advantages and disadvantages which have been discussed elsewhere.[5] To combine the advantages of both types, I designed a sigmoidoscope with proximal and distal illumination which may be used singly or simultaneously (Fig. 1).

Preparation.—In a large number of patients proctosigmoidoscopy may be performed successfully without preliminary cleansing enemas. In the presence of diarrhea, it is especially desirable to omit preliminary enemata because they may aggravate an existing inflammatory process.

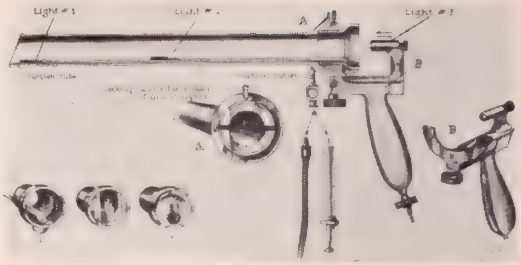

FIG. 1. Author's new sigmoidoscope with proximal and distal illumination. (*Courtesy of Williams & Wilkins Co., Baltimore*)

When preliminary preparation is utilized, an enema consisting of 1,000 to 2,000 cc. of plain lukewarm water or normal saline solution is given, usually ten to twelve hours and again three to four hours before the scheduled time of the examination. Frequently, an enema given in the morning immediately after normal defecation cleanses the bowel sufficiently well for the endoscopic examination to be carried out successfully at any time within eight hours of completion of the enema. Cathartics are neither necessary nor indicated.

Position.—The knee-chest or the knee-elbow positions are employed except in the case of debilitated or aged patients when the left lateral Sim's position is utilized. There seems to be little or no need for special inverting tables. Indeed, it may be dangerous to invert an elderly individual or one with cardiovascular hypertensive disease.[7]

Anesthesia.—In adults anesthesia or sedative premedication is usually unnecessary, as this examination does not produce pain when skillfully performed. In the presence of painful lesions, such as an anal ulcer, regional anesthesia is frequently given by some examiners. In our practice, if surgery is decided upon on the basis of history and inspection of the lesion, proctosigmoidoscopic examination is deferred to be carried out in the operating room after induction of caudal or spinal anesthesia. In infants or children under four years of age, sigmoidoscopy may be carried out with the aid of morphine as described by Paulson[8] or, preferably, under ether anesthesia.

Technic.—Proctosigmoidoscopy is always preceded by a monodigital or bidigital rectal examination which, incidentally, produces desirable relaxation of the anal sphincter muscles. A well-lubricated (preferably using a water-soluble lubricating jelly) and warm sigmoidoscope is first gently passed into the rectum somewhat anteriorly in the direction of the umbilicus (Fig. 2A) and then posteriorly and superiorly in the direction of the sacrum (Fig. 2B). The obturator is

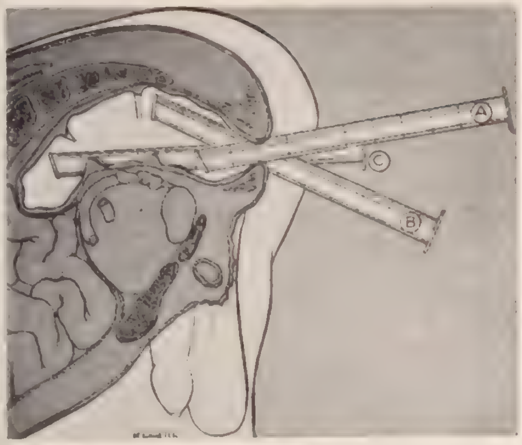

FIG. 2. Positions of the scope in the process of sigmoidoscopy.

removed and its tip is inspected for the presence of adherent blood or abnormal excretions. The endoscope is then advanced slowly and gently, always visualizing the intestinal lumen ahead of the distal end of the sigmoidoscope until the entire length of the instrument is introduced (Fig. 2C). The intestinal lumen is kept open either by atmospheric pressure spontaneously introduced through the open instrument or by gentle air insufflation of the bowel. Gentle air insufflation helps to smooth the mucosal folds, thus favoring the detection of small-sized ulcerations, polyps, etc., and providing an opportunity to examine several additional centimeters of the colon beyond the reach of the sigmoidoscope. There are examiners who object to air insufflation because of habit and tradition, while others object to it because of an exaggerated fear of pneumatic rupture of the bowel. We have never observed such a mishap or undue discomfort to the patient in the performance of several thousand sigmoidoscopies with the aid of gentle air insufflation. Discomfort or mild cramps in the lower abdomen may be experienced by the patient only upon the introduction of the sigmoidoscope into the rectosigmoid or sigmoid, regardless of whether or not air insufflation is used.

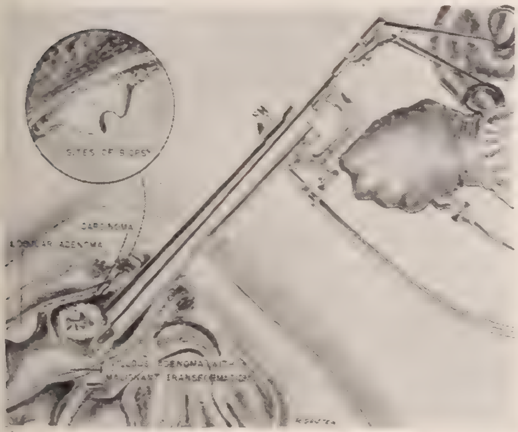

FIG. 3. Sites of biopsy.

Following the successful introduction of the full length of the sigmoidoscope, it is gradually withdrawn, and the interior of the colorectal tube is carefully observed and studied. The occasional occurrence of prolapse of the bowel or redundant mucosal folds into the tip of the sigmoidoscope is controlled or eliminated by gentle air insufflation while fluid or feces coming from above the end of the scope may be removed by means of gentle suction or cotton balls with the aid of an alligator forceps.

Contraindication.—The only real contraindication to sigmoidoscopy is the presence of an obstruction which prevents the insertion of the instrument into the anorectocolonic tube. However, it is wise for the casual examiner to follow the policy of Andresen who believes that if the sigmoidoscopic examination "is not possible due to persistent angulations of the bowel, to fecal accumulation, to bloody or other discharge, to the presence of a new growth or other objects obscuring the lumen, or to the struggles of a nervous, uncooperative patient, the examination should be immediately discontinued."[9]

Biopsy

It is now almost universally agreed that all suspicious, accessible colonic lesions, as well as the grossly apparent neoplastic lesions, should be studied microscopically. In the presence of sessile growths several good-sized pieces of tissue should be taken with a cold biopsy forceps from the center, the periphery, and the mucosa surround-

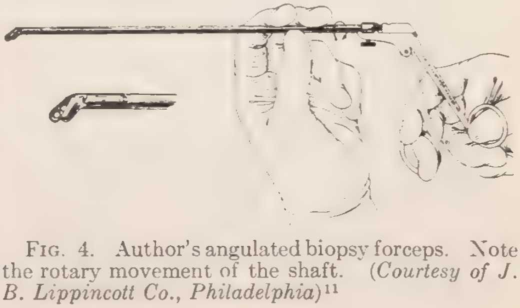

FIG. 4. Author's angulated biopsy forceps. Note the rotary movement of the shaft. (*Courtesy of J. B. Lippincott Co., Philadelphia*)[11]

ing the base of the growth (Fig. 3). A representative biopsy specimen should include submucosal structures or the basement membrane in order to show the presence or absence of infiltration of the growth; special care, however, must always be exercised lest perforation of the bowel occurs. Pedunculated polyps are usually removed at the base, or tissue should be obtained from the tip and the base of the pedicle. Mucosal excrescences, no matter how small, should be studied microscopically as most of these lesions have an adenomatous architecture and, therefore, should be considered as frank polyps.[10,1] Occasionally, a malignancy is encountered in these tiny lesions.

To facilitate the performance of biopsy, even of the mucosal excrescences, one of us (R.T.) has designed a biopsy forceps with an angulated cutting jaw mechanism that operates at an angle of 30 degrees from the axis of the shaft which can be rotated 360 degrees (Fig. 4).[11]

Pediatric Aspects

The indications for proctosigmoidoscopic examination in infants and children are the same as in adults. In performing sigmoidoscopy in juveniles special precautions are to be observed because of the peculiar anatomic arrangement of the rectum and the sigmoid colon with its sharp angulations and the fragility of the bowel wall. Infants and children, like adults, are subject to inflammatory bacterial and parasitic disease, suppurations, fistulas, fissures in ano, prolapse of the rectum, benign or malignant polyps, and other tumors. Unlike adults, juveniles seldom have internal piles but more frequently present congenital malformations of the anorectal outlet.

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RECOMMEND NATION-WIDE PROGRAM TO CONTROL UNDULANT FEVER

A nation-wide program to control and eradicate undulant fever in animals has been recommended by the National Research Council, a quasigovernmental organization established by the National Academy of Sciences under congressional charter. Approximately 4,000 cases of undulant fever (brucellosis) in human beings are reported annually to the state departments of health, but it is estimated that the truer figure would run to at least 30,000 to 40,000 cases annually. Man acquires the disease from drinking unpasteurized infected milk and from contact with infected material from animals.

The committee proposed a five-point program including diagnosis of the infection, eradication of the infectious agent, elimination of the susceptible host by immunization, isolation of infected animals, and use of therapeutic measures.

Approximately 5 per cent of the adult female cattle in the nation are affected by undulant fever, the report made by Drs. W. W. Spink, C. L. Larson, and C. F. Jordan; veterinarians L. M. Hutchings, C. K. Mingle, and W. L. Boyd, and Alice C. Evans, Ph.D., of Washington, D. C., and Chevy Chase, Maryland, stated.

At least 1,300,000 dairy and 800,000 beef cows are involved. These 2,100,000 infected cattle are confined to about 20 per cent of the herds throughout the country. The total annual loss from decreased milk production, fewer veal calves, and necessary replacements of dairy cows is approximately $92,000,000.

Packing house surveys indicate that between 1 and 3 per cent of the swine in the country are affected.

—*J.A.M.A., October 1, 1949*

TREAT SCARLET FEVER WITH HUMAN BLOOD FRACTION

Gamma globulin, a fraction of human blood, compares favorably with antitoxin as a treatment for scarlet fever, a study made by Dr. Francis F. Silver of Cleveland, Ohio, shows.

Dr. Silver treated 106 patients with gamma globulin and 108 with scarlet fever antitoxin, he reports in the September issue of the *American Journal of Diseases of Children.* The blood fraction and the antitoxin "affected the temperature and accelerated the fading of the rash in like manner and degree. There were fewer complications (15.7 per cent) in patients treated with human immune globulin than in those treated with scarlet fever antitoxin (25.6 per cent)."

Case Reports

AUREOMYCIN IN THE TREATMENT OF AMEBIASIS

G. E. MacDonald, M.D., New York City

(From the Medical Service of St. Luke's Hospital)

WITH the advent of the sulfa drugs and then of penicillin, certain medical conditions which had formerly been resistant to treatment or for which treatment had at least been unsatisfactory no longer presented any problem in therapy. More recently, the newer antibiotics, streptomycin, aureomycin, and chloromycetin, have aided the medical profession in making great progress in the treatment and eradication of other diseases which had been refractory to both the sulfa drugs and penicillin.

Amebiasis, a parasitic infestation primarily of the intestinal tract with secondary involvement of other organs, principally the liver, due to Endamoeba histolytica, is a disease which has plagued man throughout the world for centuries. To date, therapy in the form of emetine, diodoquine, chiniofon, vioform, the thioarsenites, carbarsone, and chloroquine have been the only medicaments available in combating this destructive process. Although these drugs usually have been effective in the control of symptoms and frequently have effected cure, the incidence of relapse has been rather high, and chronicity of symptoms, despite negative stool examinations for amebae, has been sufficiently common to justify the consensus of opinion that more effective agents in the treatment of amebiasis are still to be sought.

McVay, Laird, and Sprunt recently reported the favorable response that they had noted in the treatment of amebic dysentery with aureomycin.[1] Fourteen cases were treated with apparent cures in all of these. Their investigation had been prompted by the observance of an alteration of the stool consistency and a decrease in the bacterial flora in patients treated with aureomycin for conditions not related to the intestinal tract.

Aureomycin was then used empirically to test its efficacy in the treatment of intestinal infestation with E. histolytica. The response in each case treated was both prompt and favorable with subsidence of symptoms and with stool examinations becoming negative for the organism.

The following case report is submitted to supplement the findings of McVay *et al.* that aureomycin appears to be a potent new weapon in combating amebiasis.

Case Report

P. P., a forty-three-year-old Negro hotel proprietor from Nassau, Bahama Islands, was first seen in our medical clinic on May 4, 1949, with a complaint of recurrent periumbilical dull pain, frequent gaseous eructations, abdominal distention, anorexia, moderate intolerance to fatty foods, and three episodes of vomiting over the previous six-month period. He had noted a mild degree of constipation for many years, relieved by cathartics, but there had been no recent change in bowel habits nor in the consistency, color, or odor of his stools. His previous history was entirely negative with no known tropical diseases or parasitic infestations.

Physical examination at that time was entirely within normal limits, as were the laboratory data including a urinalysis, complete blood count, serology, serum amylase, and one stool examination for ova and parasites. X-ray examination of the chest and gallbladder likewise failed to reveal any abnormalities.

He was placed on a low fat diet and given tablets containing phenobarbital and belladonna with some improvement resulting over a three-week period. Business responsibilities obliged him to return to Nassau, and he was not seen again until he applied for admission to the hospital on August 30, 1949.

At the time of admission to the medical service, he complained of having had the urge to defecate 12 to 24 times per day during the preceding ten days. With each attempted evacuation only a small amount of semiliquid excreta and occasionally a small amount of blood were passed. A sense of fullness in the rectum persisted, and pain in this region was present with each attempted movement. Occasional bilateral lower abdominal crampy pain was also present. Four days before admission, a hemorrhoidectomy had been performed elsewhere because of the presence of enlarged tender hemorrhoidal varicosities. The symptoms had persisted, however, despite this procedure.

Physical examination revealed a well-developed and well-nourished Negro who appeared to be in no acute distress. There were no abnormal findings except for evidence of a recent hemorrhoidectomy and extreme tenderness on digital rectal examination. The liver and spleen were not palpable, and there was no abdominal tenderness. Laboratory data, including a urinalysis, complete blood count, serology, blood urea nitrogen and sugar, icterus index, alkaline phosphatase, and cephalin-cholesterol flocculation test, were all normal. A bromsulphophthalein test showed 18 per cent retention of the dye after fifteen minutes and 15 per cent retention after forty-five minutes. The erythrocyte sedimentation rate was 27 mm. per hour. Two stool specimens were negative for ova and parasites and gave a 1 to 2 plus guaiac reaction for blood. A stool culture yielded no pathogenic organisms.

On admission, the patient had been placed on a regime of stool precautions, a low residue diet, sitz baths three times daily, mineral oil 30 cc. morning and night, and anesthesin suppositories. Symptomatic relief had been partially effected by this regime.

Proctoscopic examination revealed a uniform picture from the anal sphincter upward for 12 inches. In addition to the areas of posthemorrhoidectomy granulation tissue, there were numerous superficial yellowish-gray ulcerations, 1 to 2 mm. in diameter, with increased redness and dullness of the intervening mucosa which bled easily. A moderate amount of mucus was also present. Specimens were taken for warm stage and smear examination and were positive for E. histolytica.

A barium enema revealed the entire large bowel to fill readily and empty in a satisfactory manner. Considerable diffuse irregularity of the rectal walls compatible with inflammatory change was demonstrated. Some spasticity of the cecum along with suggestive edematous changes of some of the mucosal pattern in the lower descending colon were also noted.

The administration of aureomycin, 500 mg. every six hours, was begun at this time. Within twenty-four hours the patient noted marked improvement, no longer having any sensation of rectal fullness or pain. In forty-eight hours he was entirely asymptomatic, and the stools had become semisolid. A warm stage stool examination on the day following the institution of aureomycin therapy revealed the specimen to be loaded with motile E. histolytica. Progress examinations two and four days later of stool specimens, which now showed a tendency to become more solid and formed, failed to demonstrate any amebae. A total of 10 Gm. of aureomycin was ingested.

Because of the pressure of business matters in Nassau, the patient requested that he be discharged to return for follow-up examination in two weeks.

He was readmitted on October 3, 1949, having been taking 250 mg. of aureomycin every six hours during the entire two-week period that he had been ambulatory. During this time he continued to be entirely asymptomatic. He had been having an average of two formed stools per day without blood or mucus. Physical examination was normal except for thickening of the anal mucosa. Laboratory data, including urinalysis, blood count, total protein, and albumin-globulin ratio, alkaline phosphatase, thymol turbidity, prothrombin activity, Hanger test, three stool specimens for warm stage and smear examination, erythrocyte sedimentation rate, and stool culture, were normal. There was 15 per cent bromsulphophthalein retention after forty-five minutes. Proctoscopy revealed the rectal and sigmoidal mucosa to be normal without evidence of ulceration or congestion. A repeat barium enema showed no abnormalities. The rectal and colonic irregularities and the cecal spasm were no longer present.

Comment

In the 14 cases of amebiasis that they treated, McVay *et al.* based their evidence for cure on the disappearance of symptoms and a return of the stools to normal. In the case reported above, not only were these features noted, but also there was the more substantiating evidence of visual proof that ulcerations had healed and an abnormal x-ray colonic and cecal pattern had returned to normal as a result of aureomycin therapy.

Further follow-up will be necessary in this case and others so treated before an unequivocal evaluation of the effect of aureomycin in the treatment of amebiasis can be given. However, in view of the most favorable response that has been obtained to date, it appears that in aureomycin a most potent amebicide, free of the potential toxicity of many of its predecessors, has become available.

Summary

A case of intestinal amebiasis treated with aureomycin with apparent cure is reported. Although ultimate evaluation will depend on further study, it appears quite possible that aureomycin will replace those drugs currently being used in the treatment of amebiasis.

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NEW YORK RANKS FIRST IN HOSPITAL FACILITIES FOR POLIO

The number of hospitals in the State of New York admitting poliomyelitis patients for treatment is nearly twice that in any other state, a nationwide survey of 6,276 American Medical Association registered hospitals shows.

The survey was completed by the A.M.A.'s Council on Medical Education and Hospitals at the request of the National Foundation for Infantile Paralysis, according to a report of the Council in the November 19 *J.A.M.A.*

Statistics for 1947 of the 1,243 hospitals which reported that polio patients are accepted for treatment reveal that 146 of these hospitals are in the State of New York.

Texas ranked second with 76 hospitals admitting polio patients for treatment, and Illinois third with 70 hospitals. Pennsylvania and California followed with 62 and 59, respectively.

On the basis of control, 181 of the 1,243 hospitals are listed as Federal hospitals, 294 under state, city or county control, 688 as church or other nonprofit associations, and 80 as proprietary hospitals.

SPONTANEOUS DELIVERY IN A WOMAN WITH MYOCARDIAL INFARCTION

Emanuel Goldberger, M.D., and Murray J. Pokress, M.D., New York City

(From the Electrocardiographic Department of Lincoln Hospital)

UP TO the present time only one case of pregnancy being complicated by myocardial infarction has been published.[1] It is for this reason that we are reporting the case of a woman who, after having had an attack of myocardial infarction, spontaneously delivered a viable infant.

Case Report

F. G., a thirty-seven-year-old Puerto Rican woman, was admitted to the medical service at Lincoln Hospital on February 8, 1947. She stated that three months after her last pregnancy she began to notice dyspnea on mild effort. Three weeks prior to admission she began to have paroxysms of nonproductive cough and vague pains at the base of the right chest posteriorly. On the day of admission the cough became productive of a sputum which was described as pinkish; on the day prior to admission she was given some brownish pills from a druggist for her cough. For three weeks she noticed that her abdomen had been becoming larger. In addition, she complained of some vague pains in both knees for about two weeks.

She had been in Lincoln Hospital once before and had a normal spontaneous delivery on July 22, 1945. Her last menstrual period was on October 16, 1946, which gave her an expected date of confinement on July 23, 1947. This was her fifth pregnancy; all previous deliveries were normal spontaneous, but one was a stillbirth. At time of last admission in 1945, she was discovered to have a positive Wassermann but had never had any antiluetic treatment after discharge. A systolic murmur around Erb's point was recorded antepartum.

She stated that for many years she had been subject to frequent sore throats and had been troubled with weakness and easy fatigue. For about two years she had been bothered with nocturia twice nightly. She stated that, in 1946, she had been in another hospital for some trouble with her liver. The rest of the past history and system review were noncontributory.

On admission the patient had a temperature of 100.6 F., pulse 134, respirations 40 per minute, and a blood pressure of 86/58. The patient appeared to be well developed and nourished; she was moderately dyspneic and orthopneic and appeared extremely apprehensive. The following were the pertinent physical findings: the neck veins were distended and readily filled from below. There was impaired resonance at both lung bases, and there were bilateral basal rales. The cardiac dullness was increased to the left; the heart sounds were distant, but distinct; there was a suggestion of both mitral systolic and diastolic murmurs, but no thrills were palpated and the murmurs were unaffected by alteration of position; the second pulmonic sound was greater in intensity than the second aortic sound. On abdominal examination the liver was hard and could be felt below the umbilicus. The spleen could be felt about one finger breadth below the left costal margin, and an abdomino-pelvic examination revealed the uterus to be the size of a three months pregnancy. There was some slight ankle and pretibial pitting edema.

It was felt that the patient had rheumatic heart disease (inactive) with a mitral stenosis and insufficiency and that she was in both right and left heart failure.

The patient was immediately digitalized with lanatocide C and thereafter maintained on digitalis leaf, 1½ grains daily. In addition, she was given 2 cc. of mercupurin intramuscularly. She received oxygen by tent and adequate sedation.

On the following day the patient was much improved. The dyspnea was less marked, the ankle edema gone, and the liver edge had receded somewhat. It was then noticed that the patient had small annular raised, nonitching, coppery skin lesions on her arms and abdomen, and the consulting dermatologist felt that these were typical skin lesions of tertiary lues.

The course of the patient was progressively good. The dyspnea gradually disappeared, and the liver edge progressively receded, although never completely; the spleen continued to be felt. The systolic and diastolic murmurs at the apex became better identified as her condition improved.

Two days after admission an electrocardiogram showed signs of an anterior myocardial infarction of indeterminate age (Fig. 1).

On February 11, 1947, an x-ray of the chest was reported as showing a markedly enlarged left ventricle, and there was a slight upward bulge of the left stem bronchus suggesting left auricular enlargement. The lung fields were clear.

The following were the pertinent abnormal laboratory findings—all others were normal: Both Wassermann and Kline tests were positive. The total protein was 8.1 mg. per cent, albumin 3.9 mg. per cent, and globulin 4.2 mg. per cent.

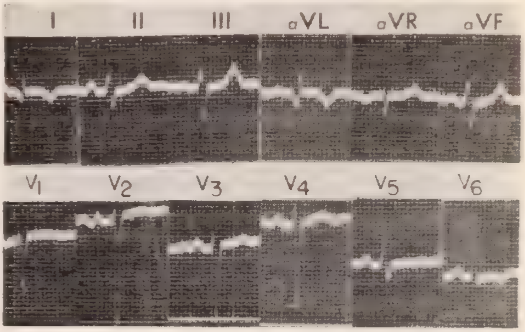

Fig. 1. Electrocardiogram taken in May, 1947 (identical with that taken in February). The aVL, aVR, and aVF are augmented unipolar extremity leads; V_1 through V_6 are unipolar precordial leads. Lead I shows a small Q and a deep, coved T, as does the left arm lead. These findings are typical of anterior infarction. The T wave changes in the precordial leads V_5 and V_6 may be partly due to digitalis. The large P in lead V_2 is due to auricular hypertrophy.

On February 10, 1947, before any further work-up, the patient signed out of the hospital. Discharge diagnosis was possible rheumatic or luetic heart disease; myocardial infarction of indeterminate age.

On May 12, 1947, the patient was readmitted to the hospital complaining of epigastric and right upper quadrant abdominal pains of a very vague nature. There were no other complaints, although the patient was obviously dyspneic. She could not give the date of onset of above symptoms, but it was discovered that she discontinued her digitalis after leaving the hospital.

On admission her temperature was 98.6 F., pulse 98, respirations 34, and blood pressure 100/80. She was dyspneic. Her neck veins were distended and pulsating and filled from below. There were bilateral, moist rales in both lungs. The cardiac findings were unchanged as compared to past admission except that the dubious apical diastolic murmur was no longer heard, and there was a gallop rhythm present. The liver edge reached the umbilicus, and the spleen was to be felt just below the left costal margin; there was pitting ankle and pretibial edema. The fundus of the uterus was at the umbilicus, but there were no fetal heart sounds to be heard, and it was felt that the fetus was dead. The patient felt no fetal movements.

The patient was sent to the obstetric service when she indicated on admission that she was having some lower abdominal pains. It was felt that she was in labor. She was immediately digitalized with oral digitoxin, and it was recommended to allow the patient to deliver spontaneously. She improved rapidly on digitalis, and on the following day fetal heart sounds were audible. The patient became ambulatory on the fifth day. It was decided to hold the patient in the hospital until she delivered.

An x-ray of the chest showed an increase in the cardiac dimensions as compared to previous admission. Electrocardiogram showed no changes when compared to the earlier tracings.

The only change noted in the laboratory work-up was the fall in the serum globulin so that the albumin globulin ratio was about 1:1.

On May 19, 1948, a course of antiluetic therapy was started. This consisted of an initial 2 cc. intramuscular dose of bismuth subsalicylate, and after four days the patient was started on a penicillin schedule of 60,000 units every two hours which was to have continued for ninety doses.

On June 10, 1948, the patient began to have vaginal spotting, and she was put to bed. She continued to show spotting on the following day and that night began to have increased bleeding followed by labor pains. For a while the fetal heart tones were irregular. On June 12, 1948, at seven and one-half months, she had a precipitate delivery in bed, producing a live baby. On the seventh postpartum day the patient was discharged to the outpatient service, but all further contact has been lost.

Summary

A case was described of a thirty-seven-year-old woman who spontaneously delivered a viable infant after having had an attack of myocardial infarction and at least two attacks of cardiac decompensation.

We wish to thank Dr. H. C. Ingraham, director of the Department of Gynecology and Obstetrics, for his cooperation.

Reference

1. Horwitz, O., LaPlace, Louis B., Shumway, N. P., and Stroud, W. D.: J.A.M.A. **121:** 1342 (Apr. 24) 1943.

MATERNAL MORTALITY

Two decades of progress in overcoming the hazards of pregnancy and childbirth have reduced the death toll from maternity in the United States to one seventh of its former rate, according to Dr. Louis I. Dublin, chief of statisticians of the Metropolitan Life Insurance Company.

The maternal mortality rate of twenty years ago was 7 per 1,000 live births, one of the highest in the civilized world at that time. The rate was down to 1.3 per 1,000 by 1947, the latest year for which complete data are available, and currently it is estimated to be about 1 per 1,000 live births.

"Our country is now in the vanguard of nations with respect to safeguarding maternity," Dr. Dublin observes.

Mortality due to childbearing is lowest in regions where hospitalization of confinements is most frequent, a study by the statisticians reveals. Most favorable rates prevail in New England, where 97 per cent of the births are in hospitals, and in the Pacific States, where 98 per cent are in hospitals.

The highest mortality is shown to be in the East South Central region, where only 55 per cent of the births are hospitalized.

In pointing out that rural mortality is higher than urban, Dr. Dublin foresees further reduction of the maternity death toll during the coming decade through the expansion of public health work in rural counties.

Special Article

THE DISTRICT BRANCHES AND THE STATE SOCIETY

A. H. Aaron, M.D., Buffalo, New York

(*From the Eighth District Branch and the Erie County Medical Society*)

IN ITS Annual Report to the House of Delegates in 1948 the Planning Committee for Medical Policies suggested and the House so ordered that "appropriate publicity be given this (Eighth District Branch pilot experiment) movement in our State Journal to the end that all district branches will become conversant with this progressive step to bring about closer relations between district branches and the central government of our Society and to establish improved and fruitful public relations in their own communities."[1]

An exhaustive account of the how, what, and why that resulted in the Advisory Council of Presidents and Secretaries of Medical Societies of the Eighth District branch has been in preparation for over a year and is herewith published as directed.

First steps toward the conversion of the Eighth District Branch of the Medical Society of the State of New York from a "one meeting a year" organization into a closely knit, active and aggressive, more mutually helpful coalition of eight Western New York county medical society elements was taken at a meeting in Buffalo on the night of December 12, 1946. This meeting was called by Dr. William J. Orr of Buffalo, then president of the Eighth District Branch, which embraces the Counties of Allegany, Cattaraugus, Chautauqua, Erie, Genesee, Niagara, Orleans, and Wyoming. The Erie County Medical Society played host to the visiting medical leaders. The assemblage comprised the presidents and secretaries of all eight county medical societies represented in the Eighth District. All were present in response to a letter of invitation from Dr. Orr. All knew the general purpose for which the gathering had been convened. All appeared to be in accord with the objective which had inspired the meeting. A spirit of good will and high interest in the project pervaded the session.

But what had taken place prior to this December 12 meeting which gave it authority, significance, and importance?

Briefly this: The spark which inspired this meeting had been struck a few weeks previously by Dr. Porter A. Steele, then president of the Erie County Medical Society. It all started at the 1946 Annual Meeting of the Eighth District Branch at Olean on October 17. In a brief and informal, but none the less deeply sincere, address to the Olean meeting, Dr. Steele blazed the way for the meeting held on December 12 by declaring that, in his judgment, the time had arrived to discard the "obsolete policy of conducting just one meeting a year," at which no official business is transacted, in favor of unification of Eighth District leadership and elements in "close cooperative relationships of a year-round character."

Dr. Steele pointed out that at no time in medicine's history has there existed greater need for consolidation of forces to resist "those who would upset the existing order of medical practice, hamstring scientific research, glorify cultism, break down medical standards, and regiment physician and patient." His theme was "In union there is strength."

Reactions to Dr. Steele's remarks were highly favorable throughout the Eighth District Branch and resulted in the dispatching by Dr. Orr to the already enumerated medical leaders of a letter which said in part:

> The call for this dinner get-together is the sequel to the address delivered by Dr. Porter A. Steele, president of the Medical Society of the County of Erie, at the annual luncheon meeting of the Eighth District Branch at Olean on October 17. On that occasion, as you will recall, Dr. Steele advanced the suggestion that in the early future the duly elected heads of the eight county societies in the District resolve themselves into a more closely coordinated group of representatives of the county societies for the exchange of professional information, dissemination of information and knowledge, and the discussion of problems affecting one or more of the county societies, thus insuring increased mutual helpfulness and district-wide cooperation—all in the high interest of preserving the ideals of medicine and advancing the public welfare.
>
> Because I wholeheartedly endorse this proposal, I am calling upon all officers of the Eighth District Branch and the presidents and secretaries of all eight county societies in the District to attend this informal conference, and my earnest hope is that you, along with all your officer-colleagues, will be able to arrange your engagements so as to attend and make your contribution to this progressive program—one certain, in my opinion, to strengthen the Eighth District organization immeasurably and enable it to render more effective service to the length and breadth of its membership.
>
> May the privilege be mine of hearing from you soon that you will be with us on the evening of December 12.

The closely integrated operation of the eight county societies, their leaderships and memberships, became an actuality on that occasion. Twenty-odd county society heads gave unanimous and hearty approval to the plan advanced by Dr. Steele that a coordinating body be set up *within the structure* of the Eighth District Branch.

The title chosen was the Advisory Council of Presidents and Secretaries of Medical Societies of the Eighth Judicial District. Some comment will

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Material for this article was prepared by Mr. Harold P. Jarvis, executive secretary of the Erie County Medical Society, under the supervision of Dr. Aaron.

be made on that word "advisory" later on. Such Council, it was agreed, would be composed at all times of the elected presidents and secretaries of record of the medical societies for the eight counties of the Judicial District with the five duly elected officers of the Eighth District Branch invited to sit in on an ex officio status. The chairman of the Advisory Council, it was agreed, would at all times be the president of record of the Eighth District Branch of the State Society. Agreement was reached that every county society in the Eighth District would have the same number of votes: two, one for its president and one for its secretary. It was definitely agreed that the voting power in the Advisory Council would *not* be on the basis of the numerical strength of a county society but upon the same principle that underlies the election of U. S. Senators, two for each state regardless of the size of the state. Hence, in this Advisory Council, Allegany and Wyoming Counties have the same voting power in a meeting as do Erie or Niagara Counties. Agreement was reached to hold meetings at convenient intervals at the call of the chairman, who, as stated, is at all times the president of record of the District Branch.

The duly elected representatives or members present at the meeting from each county medical society were requested to return home to their county society and:

One: Obtain their county society's formal approval of the organization of the Advisory Council and the participation of the president and secretary of the society in the Council.

Two: Procure, if so desired, from their county society an agreement to defray the necessary expenses, travel and dinner, of the Society's two representatives at every Advisory Council meeting.

Every county society in the Eighth District, so far as the records show, approved without a dissenting vote the establishment of the Advisory Council, the action of their representatives in voting its creation, and the participation of the same in the Council's meetings, programs, and actions.

How many county societies agreed to defray the nominal expenses of their official representatives at Council meetings is a matter of conjecture. Those county societies which came to such a decision have cloaked their action in privacy. Back of the action of these county societies which agreed to pay the necessary expenses of their envoys to each meeting seemed to be the feeling that, if busy doctor-officers of a county society were giving up time to travel to Advisory Council meetings, the least the society could do was to reimburse them for the costs.

Being the originator of the entire project, the Erie County Medical Society ratified the action of its representatives on the Advisory Council to assume the routine expenses of the undertaking. These have consisted of: The cost of Society paper and stamped envelopes for mailing out of notices of meetings of the Council; the cost of return post-cards enclosed; the time devoted to the typing and posting of such notices by an office typist; the cost of occasional telephone calls to Council officers; the cost of stationery involved in correspondence with prospective speakers at Advisory Council meetings; the cost of multigraphing forms for use of Council meetings in connection with the consideration of bills pending in the State Legislature; the cost of typing agenda for meetings. It is estimated that the actual out-of-pocket expenditures by the Erie County Society since the start of the Advisory Council for items as defined above would not exceed $100. That figure, of course, does not include the time or services of Mr. Harold P. Jarvis as executive officer or of Mr. Joseph J. Guariglia, secretary-attorney to the Workmen's Compensation Committee of the Erie County Society. Those services have been an outright, flat donation by the Erie County Society to the Advisory Council project.

To continue with the subject of finances. As already pointed out, the Erie County Society agreed as a good will gesture, as a concrete contribution toward the operation, growth and success of this venture known as the Advisory Council, to take on the relatively small expense of sending out notices, etc., as already detailed. The Erie County Society, because of its far superior size and its greater financial resources, and, most important of all, because of its having developed the Advisory Council, felt itself definitely obligated to provide the finances necessary to set the program in motion and get it rolling smoothly.

True, there was some discussion or mention of district-wide financing of the enterprise at the initial organization session on December 12, 1946, but the Erie County Society, through its representatives, took the position that, until the Council had grown sufficiently to stand on its own feet, the Erie County Society would relieve the participating county societies of all financial worries.

From time to time within the last year, at meetings of the Advisory Council, reference has been made to the fact that, in the judgment of this county society or that county society, the time was nearing when the Erie County Society should be relieved of the obligation of underwriting all routine expenses, and that a financial plan imposing upon each member county society a fair and equitable proportion of the modest operating costs should be worked out, approved, and put into operation.

Accordingly, the following pronouncement, designed to provide satisfactory answers to the questions in the minds of member-participants was evolved and promulgated:

1. The Advisory Council of Presidents and Secretaries is *not* designed or intended to supersede, replace, or serve as a substitute in any degree for the regularly and officially established county medical society of each county of the Eighth District, or for the Eighth District Branch organizations; or to disturb or to interfere in any way with the normal, customary recognized duties and functions of either unit.

2. The Advisory Council is an *unofficial* voluntary organization of county medical society leaders, established within the geographic boundaries of the Eighth District, *operating autonomously*, and aimed to help county medical societies to function and serve their members more effectively; likewise to serve as a medium for collective expression of county society views and unified action; no such expression or action, however, *necessarily to be binding* upon any county society as an organization.

3. The Advisory Council is concerned exclusively with the *economics* of medical practice. It is not directly concerned with the scientific or clinical aspects of medicine.

4. The Advisory Council, generally speaking, is designed to serve as a central meeting point for selected officers of the county medical societies of the Eighth Judicial District; for the exchange of information of mutual value and interest; for the discussion of problems and matters of mutual concern and interest, and the taking of group action thereon;

for giving ear to addresses by heads or representatives of organizations and groups having messages of interest or helpfulness to medicine; for the consideration and taking of action on pending legislation, State or Federal, and for other equally important purposes.

The principal object of the Advisory Council might well be summed up in the expression: "*To serve as a pilot organization to the county societies.*"

The Advisory Council for the Eighth District has proceeded for more than two years on the theory, and very satisfactorily so, that the president and secretary of a county medical society generally know pretty well how the body membership of their society stands or feels on every subject of general interest or concern to medicine. With the occasional exception of a difference of opinion among county society representatives on certain pieces of legislation up for action at Albany, members of the Advisory Council have seen eye to eye on almost everything that has come up for discussion and action.

But it always has been kept in mind that, when any decision was reached or action taken, it was the decision or action of the Advisory Council of Presidents and Secretaries of Medical Societies of the Eighth District, and it was under that heading or over that title that all letters, wires, or other correspondence have gone forward to Albany, Washington, etc.

If the Advisory Council for the Eighth District had served no other purpose than the one now stipulated, its organization was worth all the trouble involved. Refer to the boon it has proved and the aid it has rendered to heads of such groups as the Veterans Administration, the Western New York Medical Plan, the Veterans Medical Service Plan of New York, the State Health Department, the State Division of Placement and Unemployment Insurance, the Western New York Committee for Education on Alcoholism, and many other groups! Whereas, without such a central agency as the Advisory Council, heads of these organizations, with information or instructions to impart to doctors, or requests to be made of the medical profession, would have been forced to contact eight county societies individually, they had their work tremendously facilitated by being able to appear before representatives of the county medical societies for the entire Eighth District at one meeting, at one time.

Hot on the heels of its organization in December of 1946, the Advisory Council held its first regular meeting on February 20, 1947, at the Hotel Statler, Buffalo. Buffalo, which is centrally located in the District, seemed to lend itself best to a get-together in February, with unpredictable motoring conditions. This first meeting was convened for the specific purpose of considering and acting upon a list of bills pending in the 1947 State Legislature of interest or concern to medicine and the public health.

Eighteen county society representatives were present despite bad weather conditions. This meeting acted upon a wide range of pending bills. It also opened a drive by Western New York medical interests in support of the State Society's efforts to achieve an improved schedule of fees for care of patients under the Workmen's Compensation Law. It heard a request by the president of the New York State Pharmaceutical Association that all Eighth District county societies set up local joint Conference Committees on Medical-Pharmacal Problems. Inauguration of an Advisory Council Department in *The Erie County Bulletin* was announced. The February 20 meeting adjourned to meet next on April 17, just prior to the 1947 Annual Meeting of the Medical Society of the State of New York in Buffalo.

In order, however, that one may have a general idea of the nature and scope of these meetings, at the April 17 meeting, already alluded to, the Council received a report on the 1947 session of the Legislature, discussed the operation of the Veterans Medical Service Plan and the Blue Shield Plan, and voted for the drafting of several resolutions to be offered in the 1947 House of Delegates. In June, 1947, Chairman Orr created a program committee of five members to map the program or agenda for each Advisory Council meeting after consultation with Council members. It was also contemplated that this program committee should mail out to each Council member a copy of the agenda one week in advance of the meeting, thereby affording each member opportunity to scan the material, discuss the controversial items, if any, with his own county society people, obtain the benefit of their opinions and be better prepared to take part in the discussions and vote in a way that truly reflected the views of his county society. This practice was adopted for several meetings, then dropped. It should be resumed.

In other words, the Council should be kept *advisory* in its relationships to the county societies, just as its title indicates and specifies. It is hardly necessary to expand on why, in setting up an agency of this kind, one must play on the side of conservatism, even safety.

The year 1948 was witness to the advancement of the cooperative working relationships among county medical societies of the Eighth Judicial District.

On April 8, at a meeting held in Buffalo, there was formed the Central Conference Committee on Workmen's Compensation Problems of the Eighth Judicial District, an adjunct of the Advisory Council. Its membership consists of the chairmen and secretaries of the Compensation Committees of all eight component county societies and the elected officers of the Eighth District Branch of the State Medical Society. It is dedicated to the protection and the advancement of the physician's status in the field of workmen's compensation practice. Establishment of this central committee met a long-recognized need, and attracted the attention of the State Medical Society, which expressed the desire that similar groups be set up in all judicial districts of the State. This committee unquestionably will prove an agency for the safeguarding and promotion of the medical profession's economic rights and the taking of united-front action.

Dr. Guy S. Philbrick of Niagara Falls, chairman of the Workmen's Compensation Committee of the Niagara County Medical Society, was elected chairman of the Central Conference Committee, and Dr. Joseph C. O'Gorman, of Buffalo, chairman of the Erie County Medical Society's Workmen's Compensation Committee, was elected secretary.

The first regular meeting of the Central Conference Committee was held on June 17, 1948, at Buffalo, with an excellent and representative attendance. This meeting voted to invite Miss Mary Donlon, chairman of the New York State Workmen's Compensation Board, and Dr. J. Stanley Kenney, chairman of the Council Committee on Workmen's Compensation of the State Medical Society, to attend and address a joint dinner meeting of the Central Conference Committee and the Advisory Council of Presidents and Secretaries of Medical Societies of the Eighth District. This joint meeting was held on December 3 at Buffalo. The addresses of Miss Donlon and Dr. Kenney were well received. There were 25 in attendance.

In May of 1949, the Advisory Council embarked on a new project. It convened under its auspices a meeting of delegates, Branch officers and county society secretaries of the Eighth District at the Hotel Statler, Buffalo, on May 2, opening day in Buffalo of the 143rd Annual Meeting of the Medical Society of the State of New York. These elements resolved themselves into a standing group for the advancement of Western New York medicine's interests and agreed to assemble in like manner at the start of the 1950 Annual Meeting of the State Society in New York City and at every succeeding Annual Meeting of the State Society. This May 2 meeting ushered in a new Eighth District policy; to wit, the convening of the forces enumerated for the discussion of matters of common interest and the taking of unified action on the first day of each Annual Meeting of the State Medical Society. Thirty were present, and the principal accomplishment of the meeting was its mobilization of Western New York delegates' support for the Erie County resolution in the House of Delegates, revising the Constitution of the State Society to permit the enlargement of the membership of the Council Committee on Workmen's Compensation to provide genuine geographic representation on this important body. The resolution was adopted by the House of Delegates.

Reference

1. House of Delegates: New York State J. Med. 48: 16 (Sept. 1, Part II) 1948.

CARDIAC CATHETERIZATION

Cardiac catheterization in the diagnosis of congenital heart disease might at present be evaluated as follows:

1. It is diagnostic in the tetralogy of Fallot, Eisenmenger's complex, and uncomplicated pulmonic stenosis.
2. Although patent ductus arteriosus, ventricular septal defect, and atrial septal defect may usually be detected by cardiac catheterization, small defects are easily overlooked. Much depends on the skill of the catheter-passer in inserting the catheter through the defect or in placing the tip of the catheter in the stream of arterial blood that is being shunted from left to right.
3. Cardiac catheterization gives confusing or inadequate data for interpretation when there are multiple defects, such as in the case of the coexistence of atrial and ventricular septal defects together with a patent ductus arteriosus. Another example is that of tricuspid atresia with its accompanying atrial septal defect and ventricular septal defect or patent ductus arteriosus. In this case, the only abnormality revealed is atrial septal defect.
4. Small defects in the septa are easily missed. The size and precise location of a defect in a given septum, which is of crying interest to the cardiac surgeon, is not revealed except in a very general way by cardiac catheterization. It is not possible to detect aberrant coronary arteries, bicuspid pulmonic valves, or anatomic abnormalities confined to the left side of the heart.
5. It should be remembered that this is a physiologic method from which certain structural abnormalities can justifiably be deduced, just as angiocardiography is essentially an anatomic method from which many physiologic abnormalities may be deduced. There are limits beyond which interpretation of the findings by cardiac catheterization is not justified.—*Lewis Dexter, M. D., Boston, Massachusetts, in an address at the Twenty-second Graduate Fortnight, New York Academy of Medicine, October 12, 1949*

COLD-SUSCEPTIBLE PERSONS RATE HIGH IN ALLERGIES

Weather changes and wet feet often get the blame for frequent colds, but two University of Illinois doctors are convinced that a hidden allergy may be at fault. People for whom life is just one sniffle or sore throat after another during the common cold seasons have more allergies than hardy persons who resist the virus, Drs. Noah Fox and George Livingston of Chicago found. Reporting in a recent issue of *Archives of Otolaryngology*, the doctors describe a study of more than 3,000 cold victims of all ages and walks of life. Only 358 of this cold-susceptible group had no personal or family history of allergy, while 2,127 were or had been allergic.

"Frequently allergy goes unnoticed because it is of the borderline variety," the doctors write. "The nose and pharynx of the cold-susceptible patient must be examined to ascertain whether there are changes in the structures. The mucous membranes of the allergic person seem always to harbor organisms, ready, when the proper stimulus occurs, to overgrow.

"Although it is popularly believed that exposure to cold, humidity, fatigue, and debility are associated with lowered resistance to the common cold, confirmatory laboratory data are still lacking. However, these same factors are known to influence severely the allergic state of a patient. The great frequency of other allergies in the cold-susceptible person or in members of his family suggests a specific allergy to the virus or its proteins."

WHO'S WHO
in the
State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the JOURNAL *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MRS. ANNE M. ROETGER is in charge of the membership department of the State Society. The scope of her work includes keeping records up to date for over 22,000 individual physicians, the largest single group of the constituent societies of the A.M.A. The complexity of this job is evident—annually some 1,200 new members must be added; some 300 die, and some 300 resign. More than 500 members are retired, but still living. The membership index must be complete, and manifestly requires the constant and daily supervision of Mrs. Roetger and her staff. She has also for many years supervised the registration of the members of the House of Delegates at the Annual Meeting, and is known personally to many of our members.

Mrs. Roetger has been associated with the State Society since 1904 except for a ten-year period between her marriage and her husband's death She was born in New York City and now resides in Merrick, Long Island.

MISS ELIZABETH HANNA WHEELER is the assistant to Dr. David J. Kaliski, Director of the Bureau of Workmen's Compensation, a kind of court of adjudication for workers, employers, insurance companies, and the doctors of this State. Her duties, both clerical and executive, are manifold, for this Bureau has developed to large proportions in recent years and constitutes an important feature in the activities of the State Society. Miss Wheeler is one of our oldest employes in the sense of continuous service, having worked as a stenographer for the headquarters staff and for the JOURNAL before joining the Bureau of Workmen's Compensation. In the course of her work she has accumulated a vast amount of useful knowledge relative to the intricate problems associated with the daily activities of her department.

Miss Wheeler is a native of New York City, where she now resides.

MISS JANET ELIZABETH LOY is the supervisor of the compilation of material for the *Medical Directory* published by the State Society, which includes extensive data about the physicians whose names are included in the *Directory*, and staff listings of hospitals in New York State, in addition to other information of value to doctors. In order to keep the *Directory* files up to date, it is essential that all facts pertaining to each individual doctor be checked regularly and all new information added. The data constitutes a biographical record and includes facts of medical school graduation, hospital affiliations, membership in special societies, address, and telephone.

A graduate of the New Jersey College for Women, Miss Loy was born in Carlisle, Pennsylvania, and since coming to New York City, where she now lives, has worked continuously for our organization.

MISS ALICE ELIZABETH WHEELER joined the staff of the State Society in 1935, when the Bureau of Workmen's Compensation was established following the enactment of the new Workmen's Compensation Law, which went into effect that year. A graduate of the Y.W.C.A. Ballard Business School in New York City, she is stenographer for the Bureau, which is directed by Dr. David J. Kaliski. In this position she handles correspondence and records, helps adjudicate bills for physicians, and works with the *Directory* staff in supplying the workmen's compensation symbols for each doctor. She is the niece of Miss Elizabeth Wheeler, who also is with the Bureau of Workmen's Compensation.

Born in the Bronx, Miss Wheeler now lives with her parents in Little Neck, Long Island, where she is active in the work of her church.

MISS DORIS K. DOUGHERTY is executive assistant to the State Society Secretary, Dr. W. P. Anderton, and has been an active member of the staff since the time her father, the late Dr. Daniel S. Dougherty, was Secretary. She has done varied and valued work for the Society as office manager and now has under her care the official correspondence and records, the preparation of the minutes of the Council, the Board of Trustees, and the House of Delegates, the agenda for their respective meetings, the committee and officers' reports for the Annual Meeting, and supervises the production of the program booklet. Recently she was appointed recorder for the special committee on the history of the State Society.

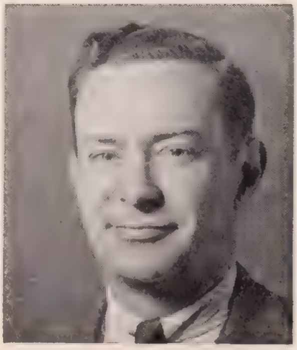
Miss Dougherty's long and intimate contact with the affairs and proceedings of the Society and her wide acquaintance with so many of its members makes her an almost complete encyclopedia of Society affairs. She was born in New York City and now resides in Bronxville.

MISS GRACE ISABEL WEST has presided over the advertising copy desk of the JOURNAL since January 1, 1939, work of the greatest importance in the publication of the JOURNAL. After advertisements have been passed upon by the Publication Committee, it is Miss West's duty to arrange these in proper form for the printer on a "dummy," to which final scrutiny is given by the Editor. The scheduling of advertising requires an exact knowledge of the JOURNAL's advertising contracts and their stipulations as to preferred position, color, and context. Judgment must also be exercised in the placing of the advertisements in relation to one another and to the text. This work requires the exercise of patient and careful editing and the special knowledge with which Miss West is well endowed.

Miss West is a native of New York City and resides in Manhattan with her brother.

CHARLES L. BALDWIN, JR., joined the staff in 1943. He is advertising representative for the JOURNAL and director of technical exhibits for the Annual Meetings. Formerly with the Hearst newspapers on the Pacific Coast and the Columbia Broadcasting System news room, Mr. Baldwin has for his advertising territory the Eastern United States, traveling to the New England states, south to Georgia, and in the New York City and Philadelphia areas. He studied English literature at Yale University and journalism at the University of Southern California.

Born in Bronxville, he now resides with his wife and two children, Jonathan, nine, and Andrea, eleven, in Mount Kisco. Interested in writing and book collecting, he has had two volumes of poetry published.



NECROLOGY

John Stanley Brady, M.D., of New York City, died on November 22 at his home at the age of sixty-eight. Dr. Brady received his medical degree from the College of Physicians and Surgeons, Columbia University, in 1905, and interned at St. Vincent's Hospital. He was subsequently president of the medical staff at St. Vincent's and was its director of pediatrics. Dr. Brady was also formerly president of the board of the New York Foundling Hospital and director of pediatrics at Harlem Hospital. From 1944 to 1947 he was a member of the New York State Board of Regents.

At the time of his death, Dr. Brady was a consultant in pediatrics at the French and Misericordia Hospitals in New York City. A Licentiate of the American Board of Pediatrics, he was a member of the American Academy of Pediatrics, the New York County and State Medical Societies, and the American Medical Association.

William Augustine Connolly, M.D., of Rochester, died on November 27 at the age of forty. Dr. Connolly was graduated in 1936 from the University of Rochester School of Medicine and Dentistry. He was consultant in industrial medicine at the Rochester General Hospital. Dr. Connolly belonged to the Rochester Academy of Medicine, the Monroe County and New York State Medical Societies, and the American Medical Association.

Curt Herman Falkenheim, M.D., of Rochester, died on November 7 at the age of sixty-six. Dr. Falkenheim received his medical degree from the University of Königsberg in 1919. He was assistant pediatrician at Strong Memorial Hospital, senior pediatrician at the Highland Hospital of Rochester, and visiting pediatrician at Rochester General Hospital. Dr. Falkenheim was a Licentiate of the American Board of Pediatrics, and a member of the American Academy of Pediatrics, the Rochester Academy of Medicine, the Rochester Pathological Society, the Rochester Pediatric Society, the Monroe County and New York State Medical Societies, and the American Medical Association.

Ulrich Friedmann, M.D., of Great Neck, died on November 16 at his home at the age of seventy-two. A native of Berlin, Germany, Dr. Friedmann received his medical degree from the University of Heidelberg in 1900. He served on the faculty of the University of Berlin, with the Robert Koch Institute in Berlin, and was chief of the department of infectious diseases in Rudolf Virchow Hospital, Berlin. In 1933 Dr. Friedmann served as a member of the National Institute for Medical Research in London, and in 1934 he was Dunham Lecturer at Harvard University.

Dr. Friedmann's reputation for research in infectious diseases and immunology resulted in his being invited, in 1936, to join the staff of the Jewish Hospital of Brooklyn as chief of the department of bacteriology, a position he held until his death. He was also consultant bacteriologist at the Kingston Avenue Hospital in Brooklyn. Dr. Friedmann was a member of the American Society of Immunology.

Rocco Dominick Guido, M.D., of Clinton, died on November 10 after a short illness, at the age of forty-six. Dr. Guido was graduated from the Syracuse University College of Medicine in 1929 and interned at the Binghamton City Hospital and the Faxton Hospital in Utica. He began his practice of medicine in 1930 in Clinton, where he had resided ever since. For the past twelve years, Dr. Guido had served as health officer of the Town of Kirkland. He also served as school physician for the Clinton Central School District and was attending physician on the staff of the Faxton Hospital, Utica. Dr. Guido was a member of the Oneida County and New York State Medical Societies and the American Medical Association.

John Hirsch, M.D., of Brooklyn, died on May 10 at the age of fifty-five. Dr. Hirsch was graduated from the University and Bellevue Hospital Medical College in 1920. He was a member of the Kings County and New York State Medical Societies and the American Medical Association.

Arthur Gaetano Keane, M.D., of New York City, died on November 25 at the age of seventy-three. Dr. Keane received his medical degree from the University and Bellevue Hospital Medical College in 1900 and interned at Bellevue Hospital. He had practiced in New York City for more than forty years. He was a member of the New York County and State Medical Societies and the American Medical Association.

Stephen Rumble Monteith, M.D., of Nyack, died suddenly on December 9 in New York City at the age of fifty-seven. Dr. Monteith suffered a heart attack in Pennsylvania Station while returning from Washington, D. C., where he had attended the meeting of the American Medical Association as a delegate from the Medical Society of the State of New York. Dr. Monteith was graduated from the University of Alabama in 1919 and interned at Gouverneur Hospital in New York City. In 1922 he started his practice in Pearl River and three years later moved to Nyack, where, in 1937, he became a member of the board of managers of Nyack Hospital.

For many years, Dr. Monteith was public health officer in Nyack, where he had supervised a program to enforce legal standards in public eating places. He was director of surgery at the Nyack Hospital and had been attending surgeon at Rockland State Hospital in Orangeburg. He was a past vice-president of the Medical Society of the State of New York, former president of the Second District Branch, chairman of the Subcommittee on Public Medical Care of the Council Committee on Economics of the State Society, chairman of the Subcommittee on Geriatrics of the Council Committee on Public Health and Education, and a past-president of the Rockland County Medical Society. Dr. Monteith was a Fellow of the American College of Surgeons and a member of the Rockland County and New York State Medical Societies and the American Medical Association.

Ludwig Parker, M.D., of Albany, died suddenly on November 17 at his home, at the age of sixty-five. Dr. Parker received his medical degree from the University of Berlin in 1911. He came to Albany from Germany thirteen years ago. Dr. Parker was consulting dermatologist at Memorial Hospital in Albany and dermatologist for the hospital's outpatient department. He was a member of the Albany County and New York State Medical Societies and the American Medical Association.

Harry Clayton Saunders, M.D., of Mount Vernon, died on November 27 at the Mount Vernon Hospital, at the age of sixty-seven. Dr. Saunders was graduated from the Bowdoin Medical College in 1908 and interned at Maine General Hospital in Portland. He began his practice in New York City and was an associate attending dermatologist at French Hospital and dermatologist for the French Hospital outpatient department, in New York City, as well as attending dermatologist and syphilologist at the Mount Vernon Hospital.

Dr. Saunders was a former clinical professor of dermatology and syphilology at the New York University School of Medicine and a former assistant visiting dermatologist at Bellevue Hospital in New York City. A Diplomate of the American Board of Dermatology and Syphilology, Dr. Saunders was a member of the American Academy of Dermatology and Syphilology, the New York Academy of Medicine, the Westchester County and New York State Medical Societies, and the American Medical Association.

Kenneth Kohler Slaght, M.D., of Rochester, died on November 22 at the age of forty-six. Dr. Slaght was graduated from the Syracuse University College of Medicine in 1926. He was assistant psychiatrist and physician at Strong Memorial Hospital and acting director of the Rochester State Hospital. A Diplomate of the American Board of Psychiatry and Neurology, Dr. Slaght was a member of the American Psychiatric Society, the Monroe County and New York State Medical Societies, and the American Medical Association.

John Mumford Swan, M.D., of Rochester, died on November 22, at the age of seventy-nine. Dr. Swan received his medical degree from the University of Pennsylvania College of Medicine in 1893. He retired in 1943 after having completed fifty years of practice. In 1921 he served as president of the American Society for Tropical Medicine. A Fellow of the American College of Physicians, he was a Diplomate of the American Board of Internal Medicine and a member of the Rochester Academy of Medicine, the American Clinical and Climatological Association, the Monroe County and New York State Medical Societies, and the American Medical Association.

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After Gilbert & Sullivan

I

The flowers that bloom in the spring tra-la
Have something to do with our race.
Were it not for the roses of spring tra-la
My practice 'ld be a poor thing tra-la
Those roses cause many a case
Those roses cause many a case
And that's what I mean when I say or I sing
Welcome the flowers that bloom in the spring
Trala lalalala, trala lalalala
The flowers that bloom in the spring.

II

Sans flowers that bloom in the spring tra-la
(I'll also include the tall grasses)
I couldn't afford my fall fling tra-la
Those pollens are quite a good thing tra-la
Tho' they trouble the ranks and the masses
They trouble the ranks and the masses
And that's what I mean when I say or I sing
Welcome the flowers that bloom in the spring
Trala lalalala, trala lalalala
The flowers that bloom in the spring.

III

The flowers that bloom in the spring tra-la
Cause many a good urticaria
And rashes that itch and that sting tra-la
Imagine the income they bring tra-la
You keep your infrequent malaria
You keep your infrequent malaria
And that's what I mean when I say or I sing
Welcome the flowers that bloom in the spring
Trala lalalala, trala lalalala
The flowers that bloom in the spring.

J. H. Werk, M.D.

Port Jefferson—*Bulletin of the Suffolk County Medical Society, May, 1949*

HOSPITAL NEWS

Nineteen Hospitals Associated with N.Y.U.-Bellevue Medical Center

NINETEEN hospitals, situated both in New York and three adjoining states, are now associated with the New York University-Bellevue Medical Center, the first annual report of the Center reveals. More than 1,200 physicians and scientific workers are now associated with the Medical Center, and they are conducting a far-flung research program which involves the expenditure of more than a million dollars annually.

New hospitals included during the year in the Center's regional plan are St. Vincent's in Bridgeport, Connecticut; Easton Hospital, in Easton, Pennsylvania, and the proposed rural Medical Center in Hunterdon County, New Jersey. These institutions are in addition to hospitals located in New Rochelle, Valhalla, Newburgh, Glen Cove, and Hempstead, New York, and Neptune and Long Branch, New Jersey, which participated in the Center's regional plan for a second year.

In Metropolitan New York, ten municipal and voluntary hospitals are now affiliated with the Center. Two of these, Willard Parker (Tuberculosis Service) and Gouverneur, first became associated with the Center during the past year. Other municipal hospitals affiliated with the Center are Bellevue (Third and Fourth Divisions) and Goldwater Memorial (N.Y.U. Division). Voluntary hospitals in Manhattan affiliated with the Center's program are: Lenox Hill, Beth Israel, Beekman-Downtown, St. Vincent's, and New York Eye and Ear.

During the year also, the Medical Center took over the operations of University Hospital (a voluntary hospital, formerly known as New York Post-Graduate), and legal negotiations are now being completed for the Center to assume control of the Stuyvesant Square Hospital. With a bed capacity of 405, University Hospital gave 115,000 days of care to patients during the year. Visits to the Hospital's clinics during that period totaled 212,000. Under the aegis of the Medical Center, the Hospital has undertaken the development of a comprehensive program for the care of patients in the middle income groups, particularly those covered by Blue Cross and similar insurance plans.

More than 1,200 doctors and scientific workers are associated with the Medical Center in either research or teaching capacities, while its nursing and nonprofessional staff brings the Center's total operating personnel to over 3,000.

Damon Runyon Cancer Fund Announces Grants to Hospitals

GRANTS totaling $101,000 to eight institutions in five states for cancer research were announced recently by Mr. Walter Winchell, treasurer of the Damon Runyon Memorial Fund for Cancer Research.

The grants to support cancer research "in action" were made to New York University-Bellevue Medical Center, the University of Rochester School of Medicine, the University of Notre Dame, to support the germ-free animal research directed by Dr. J. A. Reyniers; Tulane University School of Medicine, the University of Pennsylvania, and the Rutgers University-Presbyterian Hospital. Grants were also made to the Jewish Hospital in Brooklyn and to Harlem Hospital, New York City.

Mr. Winchell announced that the fund, started in 1947, is nearing the $3,000,000 mark. Fifty-five grants have been made to institutions in 31 states, totaling $2,380,000. Mr. Winchell said that "not one cent of the money collected has been deducted for administration expenses in the management of the fund."

Hospitals Adopt Baby "Rooming In" System

THE success of an experimental program in which mothers care for newborn babies in hospitals instead of lying idly by while the youngsters are isolated in nurseries is gradually spreading its influence among hospitals in New York City.

The program, known as "rooming in," had its first full-time major start on March 15, when French Hospital began its own experiment. Lebanon Hospital is now completing plans for its program and has set aside five beds and a special nursery for it. At Brooklyn Jewish Hospital, plans are being drawn for a "rooming in" project, while New York Hospital has been running a modified version in some of its maternity rooms.

According to Dr. Helen M. Wallace, chief of the New York City Health Department's Maternity, Newborn Division, the plan serves as "an adaptation of keeping the family unit which you had in home deliveries and translating it into hospital practice."

Dr. Wallace said that, in addition to having the mother get to know her baby immediately, the father also participates. He comes into the room set aside for the mother and baby, puts on a sterile coat and mask, and gets to know his baby instead of having to look at it from a corridor through thick glass.

"There is no question that it means much more personal relations between the father, baby and the mother," Dr. Wallace maintained. She pointed out, however, that the program is still relatively new in New York City. It has been carried on at Duke University in North Carolina; Women's Hospital, Detroit; New Haven Hospital, New Haven, and Jefferson Hospital, Philadelphia.

In the experiment the baby is put within arm's reach of the mother soon after birth. Only if he disturbs the mother is he placed in the special nursery for the night. Otherwise the mother takes care of all the baby's needs.

The parents who participate are first carefully briefed by their physicians. They are also carefully selected and their instruction is continued in the hospitals by nurses.

At French Hospital it was reported that fifty-three mothers have participated in the project since it opened. Letters of praise have come back telling how "the baby was no stranger" to the family and "now father knows the baby."

In one instance an emergency case forced the hospital to use one of the special rooms for a mother who had not been included in the experiment. After she had her baby and had cared for it under the experimental rules she was delighted, hospital officials said.

The program at Lebanon Hospital was developed under a committee of psychiatrists, obstetricians, pediatricians, and administrators. The project is intended to "integrate" the family right from the start by eliminating the separation of its members.

The New York Hospital modified project, which Dr. Wallace said has been going on for some time, allows babies to "stay out" with their mothers under certain conditions. Jewish Hospital in Brooklyn has been working out a "rooming in" plan in consultation with Dr. Wallace.

Hospital Construction and Additions Planned

ADDITIONS and new units for hospitals in New York State have been planned and many are now in the process of construction. Among these are the following:

New York Infirmary—The planning committee of the New York Infirmary building fund recently approved plans for a new hospital building, to cost an estimated total of $4,050,000, on the present Infirmary site, Livingston Place, between 15th and 16th Streets, facing Stuyvesant Square, in New York City. Construction of the new hospital, which will have an inpatient capacity of 215 beds, is expected to start sometime in 1950.

The new Infirmary will replace the cramped and antiquated quarters of the old Infirmary, improvised by the joining of five old buildings. Two of them were private homes when Livingston Place was one of the select residential districts of New York, the most recent being seventy-four years old. Present capacity of the Infirmary is 121 beds, so that the new structure will practically double inpatient care facilities while providing infinitely better and less cramped quarters for outpatient clinics, obstetric and surgical suites, laboratories, and other service facilities.

Mount Sinai Hospital—The Neustadter Home for Convalescents, in Yonkers, a branch of Mount Sinai Hospital, was reopened formally on December 4 after completion of a year-long $700,000 modernization program that included addition of a new wing, the Moses Weinman Memorial Building. The new wing includes eighteen single rooms, eight double rooms, a physiotherapy room, reading rooms, a beauty parlor, and a large recreation lounge. At the dedication ceremonies Dr. George Baehr, president of the medical board of Mount Sinai, reviewed the development of the thirty-year-old home and said that its new facilities were part of a modern emphasis on convalescent care and a new era in medicine. "The modern convalescent home of which Neustadter is the type," Dr. Baehr stated, "is predicated upon an understanding of the true nature of the present-day problems of medical care following recovery from illness, which are now intimately involved with physical and psychologic rehabilitation."

The new facilities and rehabilitation service at the Neustadter Home will make referral of convalescents there "an essential obligation of the Mount Sinai Hospital to many of its patients, whose final cure can be accomplished only at Neustadter," according to Dr. Baehr.

Hillside Hospital, Queens—With Governor Thomas E. Dewey as guest speaker, dedication ceremonies of the new $1,000,000 building at Hillside Hospital, Queens, were held in October, with more than 1,000 persons attending. The building, to be called the Morris Lowenstein Pavilion, will be a voluntary nonsectarian hospital for the care and treatment of incipient curable mental ailments and will increase the bed capacity of the institution from 88 to 172. The building was erected with funds from voluntary contributions, of which a major share was given by Mr. Leon Lowenstein, a vice-president of the hospital and son of the late Morris Lowenstein.

Ulster County Tumor Clinic—Dedication ceremonies were held in October for the Ulster County Tumor Clinic, in Kingston, constructed and equipped by the Ulster County Board of Supervisors at a cost of $475,000, of which about one third came from Federal funds. Accepting directorship of the clinic, Dr. L. Spottiswood Taylor, who is also director of Kingston Laboratory, said all the members of the Ulster County Medical Society, sponsors of the project, "have volunteered their services free until the institution is a paying proposition."

Mount Sinai Hospital to Present Lecture Series

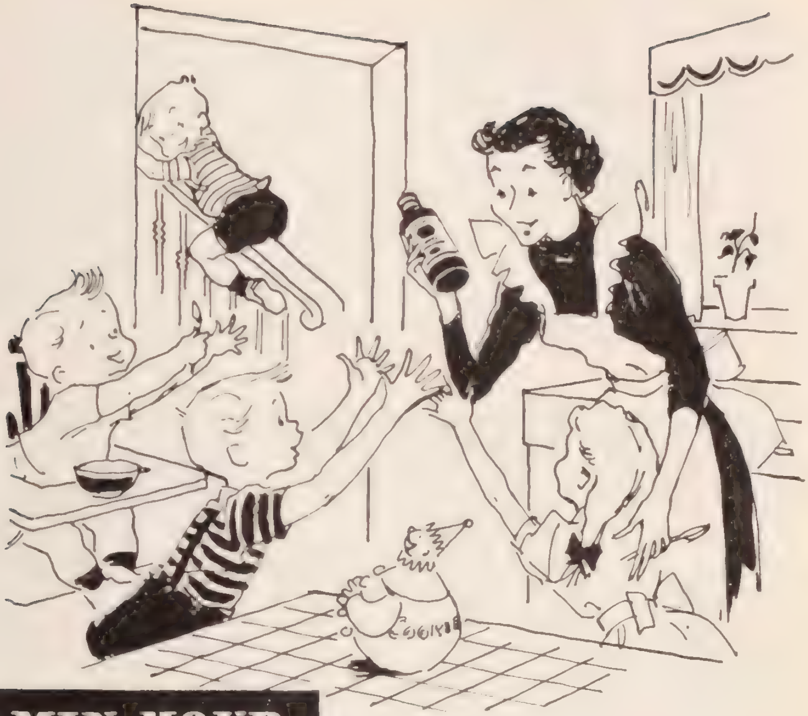
A SERIES of lectures on "Recent Advances in Disorders of Metabolism" is being presented at the Mount Sinai Hospital, New York City, on two Wednesday evenings a month. The ninth series of lectures, the programs will begin at 8:30 P.M. in the Blumenthal Auditorium, 1 East 99th Street.

The first lecture in the series was given on December 21, with Dr. S. J. Thannhauser, professor of clinical medicine, Tufts Medical School, and associate physician-in-chief, Pratt Diagnostic Hospital, Boston, Massachusetts, speaking on "Xanthomatoses."

Future lectures in the series will include the following:

January 4—"Newer Concepts of Iron Metabo-

[Continued on page 108]



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[Continued from page 106]

lism," Dr. Paul F. Hahn, director, Cancer Research Laboratories, Meharry Medical College, Nashville, Tennessee.

January 18—"Some Studies of Human Uric Acid Metabolism," Dr. DeWitt Stetten, Jr., chief, Division of Nutrition and Physiology, Public Health Research Institute, New York City.

February 1—"The Therapeutic Use of Potassium and Its Place in Fluid Pathology," Dr. Daniel C. Darrow, professor of pediatrics and in charge of the chemical laboratories in pediatrics, Yale University School of Medicine, New Haven, Connecticut.

February 15—"Sodium, Water, and Edema," Dr. John P. Peters, John Slade Ely professor of medicine, Yale University School of Medicine, New Haven, Connecticut.

March 8—"A Survey of Some Recently Proposed Chemical Tests for Malignancy," Dr. Harry H. Sobotka, chemist, Mount Sinai Hospital, New York City.

March 22—"Hyaluronidase Inhibitor of Human Blood Serum in Health and Disease," Dr. David Glick, associate professor of physiologic chemistry, University of Minnesota, Minneapolis, Minnesota.

April 5—"Studies on the Genesis and Function of Thyroid Neoplasms with Newer Tools of Investigation," Dr. Rulon W. Rawson, attending physician, department of medicine, Memorial Hospital, and chief, department of clinical investigation, Sloan-Kettering Institute, New York City.

City Museum Shows Hospital History in New York

AN EXHIBITION to show the history of hospitals in New York City and their meaning to the city was opened in October at the Museum of the City of New York and will continue through January. The exhibition, under the joint sponsorship of the Museum and the United Hospital Fund of New York, is entitled, "A Hospital Bed—The Growth of Hospitals in New York City."

The history of hospitals in New York City, beginning with an early attempt by the Dutch to establish a hospital known as the "Gast Huys," at 25 Bridge Street, in 1659, is shown in a series of nine dioramas. One diorama shows the office of Mr. Charles Lanier, treasurer of "The New York Hospital Saturday and Sunday Association," conducting a drive for hospital support in 1886. This organization, founded in 1879, became the United Hospital Fund of New York in 1917.

The exhibition also shows a series of dioramas of present hospital facilities, models of modern ideas for hospital construction, and illustrations of how new hospitals should be located to serve a large city.

One life-scale exhibit depicts the corner of a hospital ward in 1840, described as being a "muddled, dirty place offering little comfort," where the doctor visited every few days in his street clothes, the cooking was done on the ward stove, and "the tin tub in the corner was sufficient for any bathing."

NEWS NOTES

Roosevelt Hospital, New York City, celebrated the eightieth anniversary of the laying of its cornerstone on November 3, with a replica of the horse-drawn ambulance used by the Hospital in 1882 and nurses dressed in costumes of the eighties. Roosevelt Hospital was founded with $1,000,000 left for the purpose by James Henry Roosevelt, a New York lawyer and philanthropist who died in 1863. The cornerstone was laid on October 29, 1869, but it was not until November 2, 1871, that the first building was opened. It has grown from 730 patients to 8,748 a year, from 180 beds to 410, and now treats annually more than 30,000 patients in the emergency department.

• • •

At a special meeting of the Board of Directors of the Nassau Hospital, held in November, Dr. Otho C. Hudson of Hempstead was appointed chief surgeon to succeed the late Dr. Carl A. Hettesheimer, and Dr. Walter C. Freese, of Baldwin, was appointed as head of the division of general surgery.

• • •

Dr. Charles T. Mann, of Batavia, has discontinued his general practice there to become assistant resident in anesthesia at Bellevue Hospital, New York City, effective January 1.

• • •

Dr. Eugene Davidoff, former head of the Veterans Administration neuropsychiatric work in New York State, has been appointed as chief psychiatrist at Ellis Hospital, Schenectady.

• • •

Dr. Max Unger, formerly of Middletown, has been appointed assistant director of the Manhattan State Hospital.

• • •

Dr. John L. Edwards, Hudson surgeon and physician, has been named chief of staff of the Columbia Hospital, Hudson, to succeed the late Dr. Roslyn P. Harris.

• • •

At a recent meeting of the staff of the Rip Van Winkle Clinic, Hudson, it was announced that Dr. L. Whittington Gorham of Albany had accepted an appointment to the consulting staff of the clinic.

• • •

Dr. Robert Schwartz, chairman of the medical board of the new Williamsburgh General Hospital, Brooklyn, has announced the names of fourteen physicians who have been appointed to the staff of the institution, which opened on October 25. The staff physicians include: Dr. S. S. Amelkin, Dr. Julius Barchan, Dr. Solomon Glotzer, Dr. Max Gold, Dr. Lester Karlitz, Dr. Arthur J. Lapovsky, Dr. Robert Margolis, Dr. Lewis L. North, Dr. Louis Rosenberg, Dr. Edward Saskin, Dr. Irving Seinfeld, Dr. Maurice Silber, Dr. Norman Smith, and Dr. Hyman Sporn.

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As printed in International Clinics, Vol. 1, page 199, March 1937

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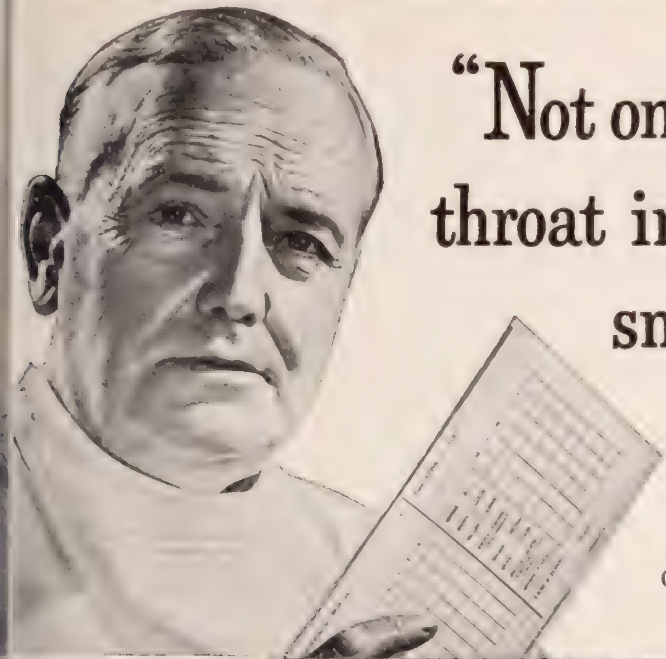

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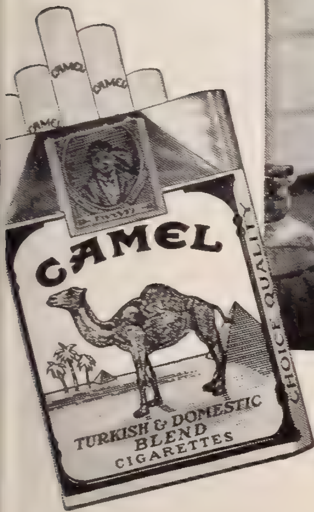
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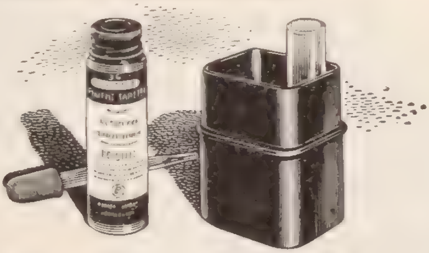

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1. Horton, B. T., Ryan, R. E. & Reynolds, J. L., Proc. Staff Meet. Mayo Clinic, 23:105, Mar. 3, 1948.
2. Friedman, A. P., N. Y. State Jl. of Med. (in press).
3. Ryan, R. E., Postgraduate Medicine (in press).
4. Hansel, F. K., Annals of Allergy (in press).

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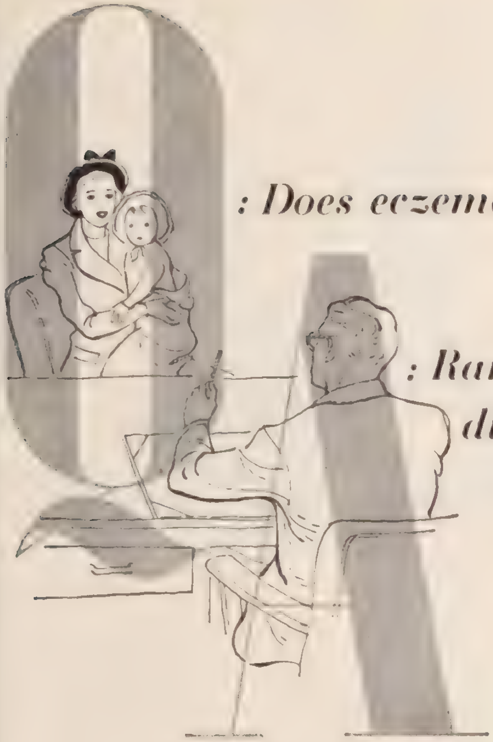

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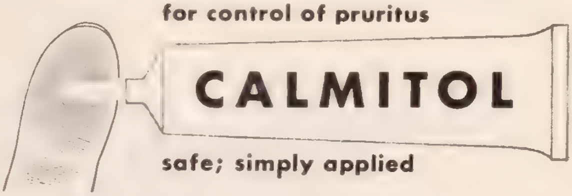

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1. American Committee for the Control of Rheumatism, Pemberton, R.: Rev. Gastroenterol., 9:91, 1942.
2. Spackman, E. W. et al: Am. J. M. Sci., 202:68, 1941.

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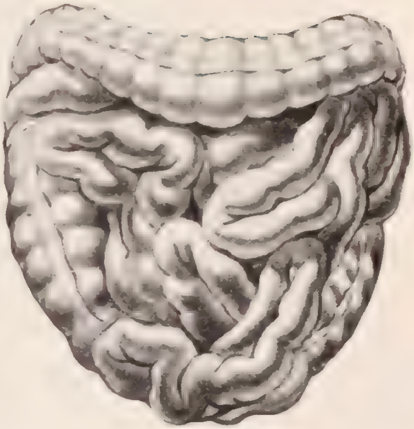

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2. assure prompt disintegration in the acid medium of the stomach and upper duodenum, *where iron is best absorbed.*

Smith, Kline & French Laboratories, Philadelphia

Feosol Tablets

the standard iron therapy

Each Feosol Tablet contains 3 grains exsiccated ferrous sulfate—
the equivalent of approximately 5 grains crystalline ferrous sulfate.

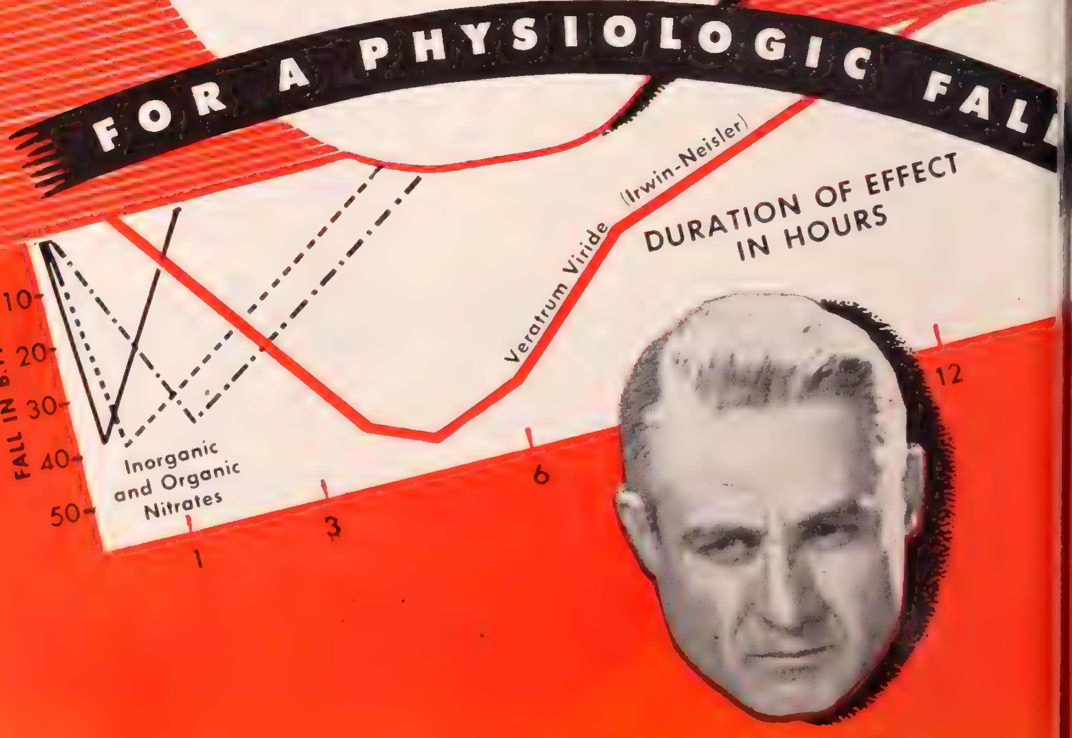
in hypertension

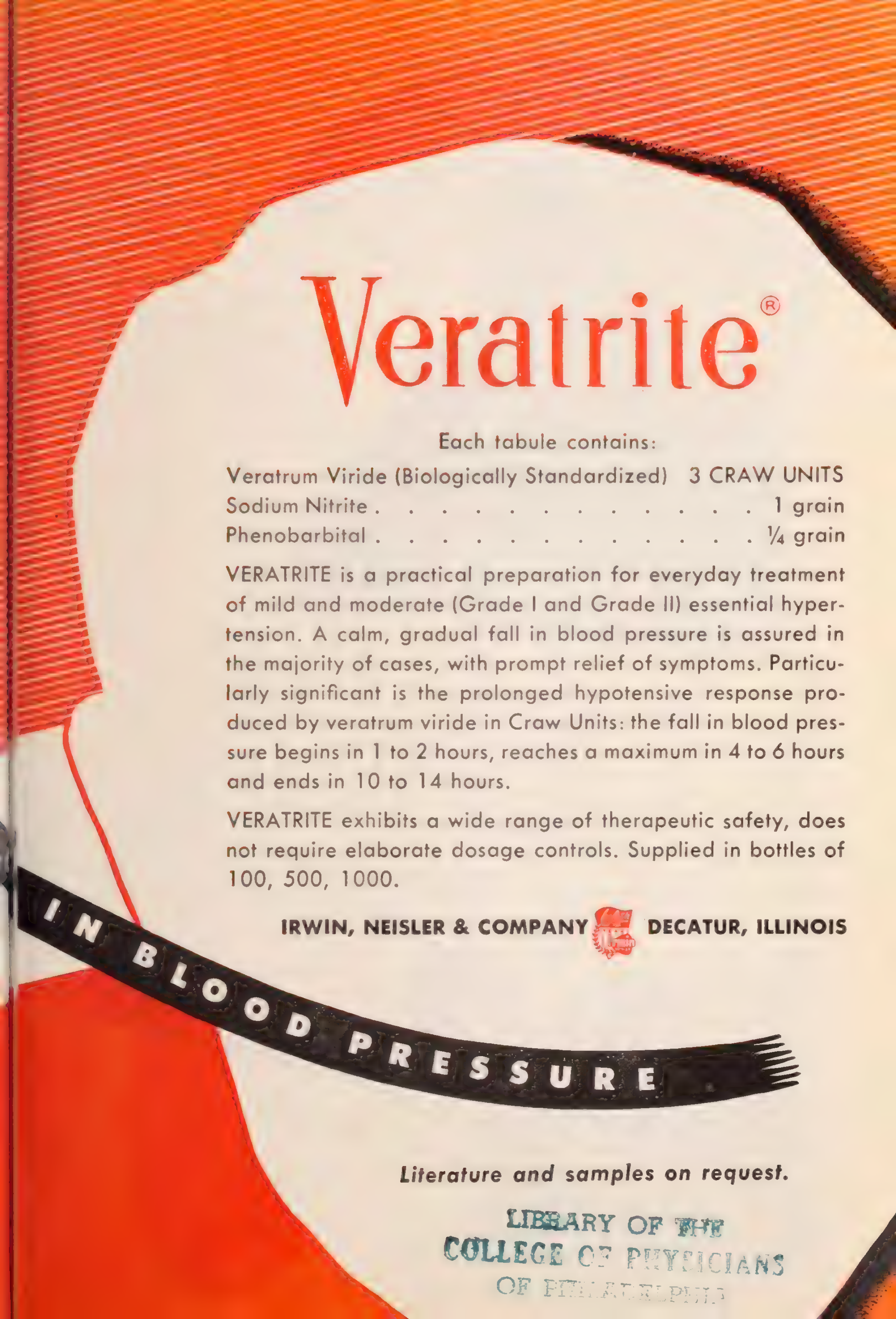
veratrum viride in CRAW UNITS*

Of the many drugs commonly used to lower arterial pressure in essential hypertension, veratrum viride (Biologically Standardized in CRAW UNITS) is the only drug that produces a physiologic fall in blood pressure.

A prominent feature in the integrated response to oral doses of veratrum viride in CRAW UNITS is *a reduction in peripheral resistance without compromise of circulation and without disrupting circulatory equilibrium.*

* The CRAW UNIT is a multiple of the amount of whole-powdered veratrum viride which causes cardiac arrest in the test animal, Daphnia Magna. VERATRITE® and VERTAVIS,® both products of Irwin-Neisler research, are the only therapeutic agents available today that contain a Biologically Standardized veratrum viride in Craw Units.





Veratrite®

Each tabule contains:

Veratrum Viride (Biologically Standardized)	3 CRAW UNITS
Sodium Nitrite	1 grain
Phenobarbital	¼ grain

VERATRITE is a practical preparation for everyday treatment of mild and moderate (Grade I and Grade II) essential hypertension. A calm, gradual fall in blood pressure is assured in the majority of cases, with prompt relief of symptoms. Particularly significant is the prolonged hypotensive response produced by veratrum viride in Craw Units: the fall in blood pressure begins in 1 to 2 hours, reaches a maximum in 4 to 6 hours and ends in 10 to 14 hours.

VERATRITE exhibits a wide range of therapeutic safety, does not require elaborate dosage controls. Supplied in bottles of 100, 500, 1000.

IRWIN, NEISLER & COMPANY DECATUR, ILLINOIS

Literature and samples on request.

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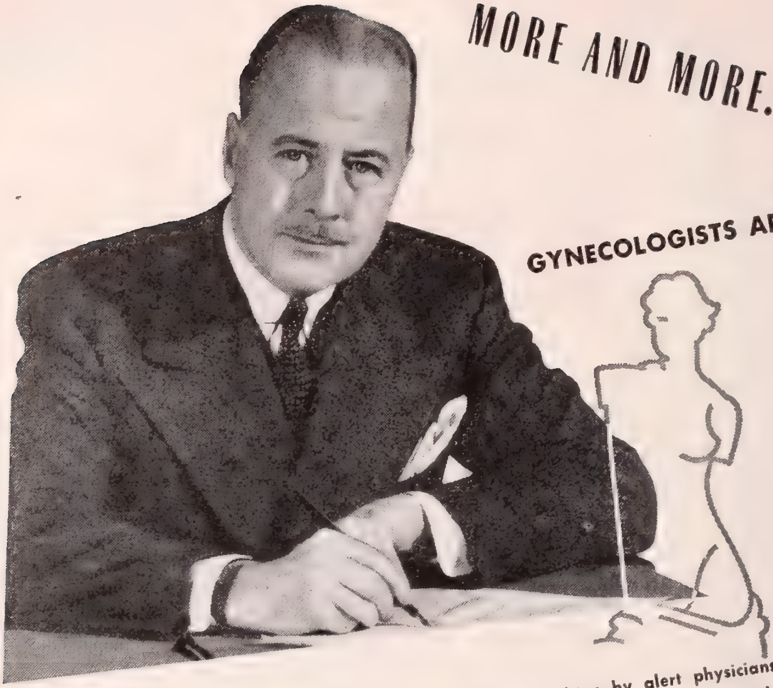
GYNECOLOGISTS APPROVE



Ethical prescriptions for Koromex Jelly and Koromex Cream written by alert physicians attest to the value of these pertinent and important time-tested factors...instantly spermicidal on contact...adjusted viscosity eliminates leakage...compatible with vaginal flora...adhesiveness and cohesiveness provides dependable film barrier.

The uniformly high degree of patient acceptance of Koromex Jelly or where less lubrication is required Koromex Cream...and the genuine approbation of gynecologists support the fact that the jelly and the cream are not surpassed for effective, safe, and pleasant use where pregnancy is ill advised.

ACTIVE INGREDIENTS: BORIC ACID 2.0%, OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02% IN SUITABLE JELLY OR CREAM BASES.

FOR MORE COMPREHENSIVE DATA PLEASE SEND FOR AVAILABLE PROFESSIONAL LITERATURE

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"A CHOICE OF PHYSICIANS"

KOROMEX JELLY

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MERLE L. YOUNGS • PRESIDENT

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a valuable nutritional supplement during pregnancy and lactation

PRECALCIN®

Each colorful, two-tone capsule provides, in a dry, ***oil-free*** powder:

DICALCIUM PHOSPHATE (Anhydrous) ...... 0.45 Gm. (7 grains)
BONE PHOSPHATE* .0.15 Gm. (2⅓ grains)
VITAMIN A (Ester) .... 2,000 U.S.P. Units
VITAMIN D (Irradiated Ergosterol) ...... 400 U.S.P. Units
THIAMINE HCl .... 3.00 mg.
RIBOFLAVIN .... 2.00 mg.
NIACINAMIDE .... 10.00 mg.
ASCORBIC ACID ..... 30.00 mg.
FERROUS GLUCONATE . 45.00 mg.
*FLUORINE CONTENT . 0.07 mg.

No fishy taste or odor.

SUPPLIED: Bottles of 100. Available through all prescription pharmacies.

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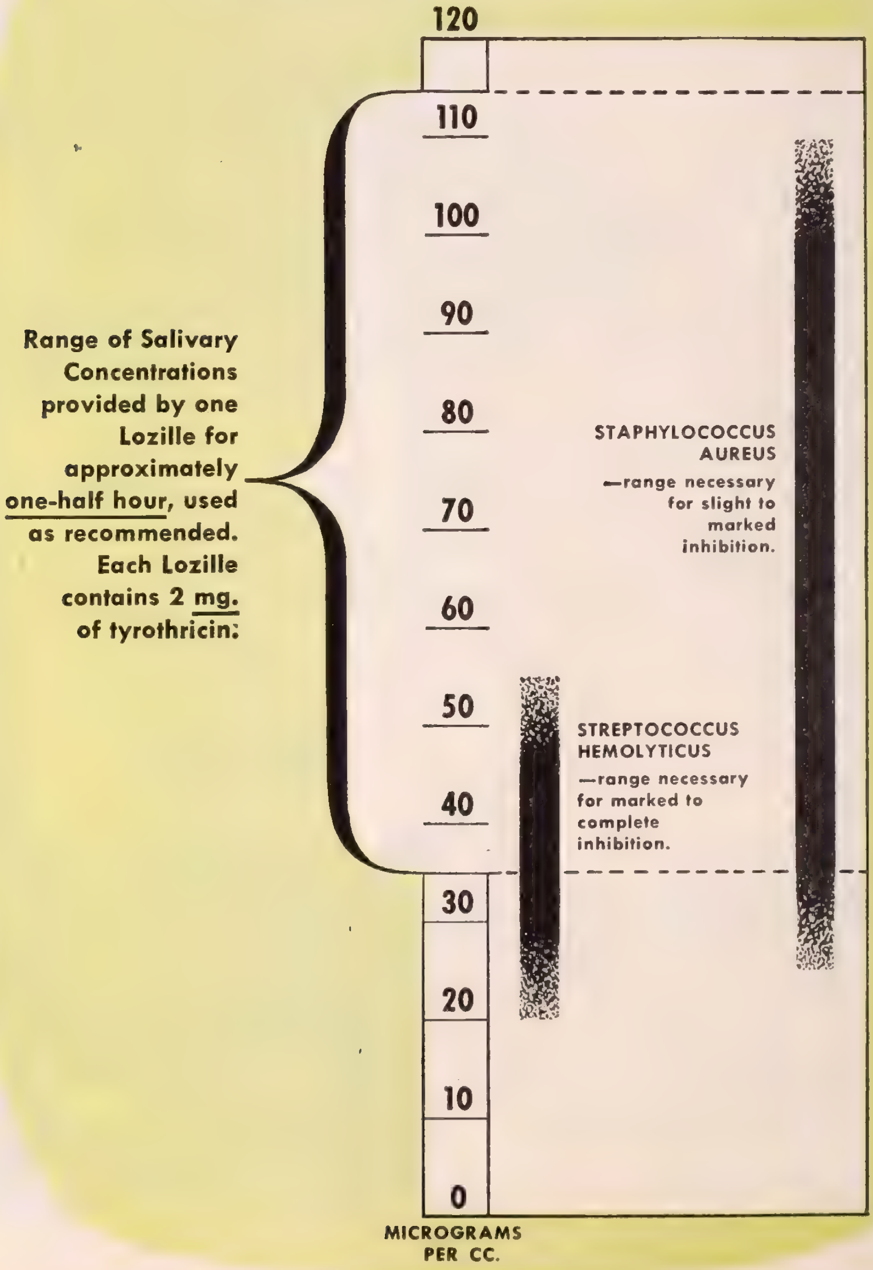
MOUNT VERNON, N. Y.

100 CAPSULES
WALKER'S
PRECALCIN

EFFECTIVE Salivary Levels

Effect on Salivary Suspensions of Streptococcus Hemolyticus and Staphylococcus Aureus, Resulting from One-Half Hour's Exposure to Various Concentrations of Tyrothricin.



# of Tyrothricin in Acute Oropharyngeal Infections

EFFECTIVE SALIVARY LEVEL

When used as recommended, one Lozille—containing 2 mg. of tyrothricin—maintains for approximately *one-half hour* salivary tyrothricin levels as shown in accompanying chart.

POTENT ANTIBIOTIC ACTION

The sustained salivary concentrations provided by Lozilles are required to insure broad and effective anti-bacterial action against gram-positive organisms responsible for acute oropharyngeal infections and to offset tyrothricin-inhibiting effect of saliva.

NON-TOXIC, NON-SENSITIZING

Tyrothricin, unlike topical penicillin, is remarkable for its *lack of local toxicity.*

PROMPT, LONG-LASTING ANALGESIA

Propesin, a non-toxic, non-irritating local analgesic agent brings effective and *prolonged* relief to irritated or inflamed mucosal surfaces.

PALATABLE

Pleasant-tasting, Lozilles' mild citrus flavor assures patient cooperation at all ages.

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(LAH-ZEELS)

TYROTHRICIN-PROPESIN LOZENGES

Each Lozille contains 2 mg. of tyrothricin and 2 mg. of propesin. Supplied in vials of 15 Lozilles.

WHITE LABORATORIES, INC.
Pharmaceutical Manufacturers, Newark 7, N. J.

Pure, Crystalline Anti-Anemia Factor

IMPORTANT PRICE REDUCTION

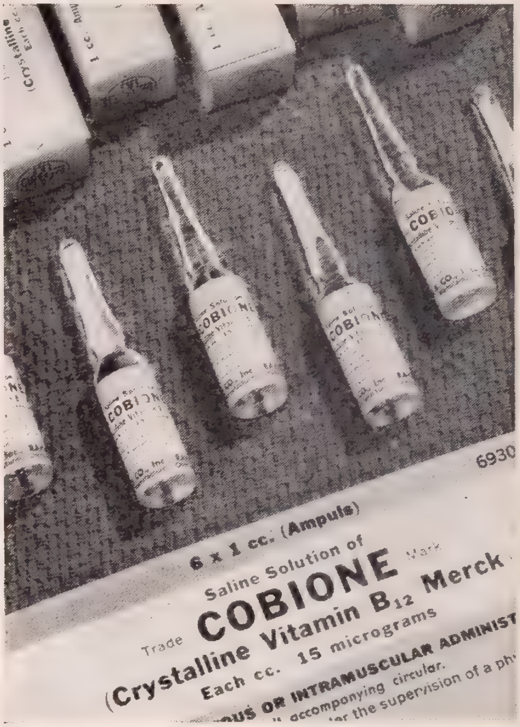
Economical—the new, low price of Cobione* makes this highly potent therapeutic substance a most economical preparation.

Weight for Weight, the Most Potent Therapeutic Substance Known

Minimum Dosage—Maximum Therapeutic Activity

Nontoxic—Stable—Nonsensitizing

Effective and well tolerated in patients sensitive to liver or concentrates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6 x 1 cc. (Ampuls)
Saline Solution of
Trade COBIONE Mark
(Crystalline Vitamin B12 Merck
Each cc. 15 micrograms
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accompanying circular.
the supervision of a ph

RAPID THERAPEUTIC EFFECT

Because Cobione is virtually nonirritating on injection, large doses capable in many instances of producing *rapid relief of neurologic manifestations* in pernicious anemia may be administered with this pure, *crystalline* anti-anemia factor.

P-R-O-L-O-N-G-E-D ACTION

Large doses of Cobione also may be given without tissue irritation or induration to obtain a more prolonged therapeutic effect.

The U.S.P. Anti-anemia Preparations Advisory Board has recently advised that—with the exception of preparations of *Crystalline* Vitamin B_{12}—it is considered to be contrary to the best interests of patients and of the medical and pharmaceutical professions for the result of unofficial assay procedures for Vitamin B_{12} to be stated on the labels of U.S.P. Anti-anemia Preparations.

*COBIONE is the registered trade-mark of Merck & Co., Inc. for its brand of Crystalline Vitamin B_{12}

MERCK & CO., Inc.
Manufacturing Chemists
RAHWAY, N. J.

B_{12} Cobione®

Crystalline Vitamin B_{12} Merck

announcing

Nuclon

a turning point in the treatment of **the common cold**

Nuclon—a dramatic new application of antihistaminic therapy—
is a truly effective weapon against the common cold.
Nuclon is no ordinary antihistaminic preparation, but a judicious combination of three outstanding ingredients: thenylpyramine fumarate, 'Dexedrine'* Sulfate and acetylsalicylic acid. These three agents work together to perform an essential function in combating the head cold.

Nuclon is so effective that, in the majority of cases, it will either completely abort the common cold or will markedly reduce its duration and severity.

Each dose (one capsule) contains:

Thenylpyramine (methapyrilene) fumarate . .	37.5 mg.
'Dexedrine'* Sulfate	1.25 mg.
Acetylsalicylic acid	2.5 gr.

Smith, Kline & French Laboratories *Philadelphia*

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

External Cod Liver Oil Therapy

DESITIN OINTMENT

Contains Crude Cod Liver Oil, Zinc Oxide, Talcum, Petrolatum and Lanolin

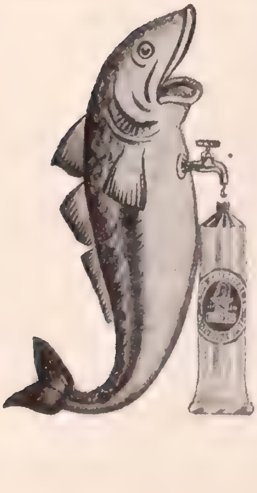
Used effectively in GENERAL PRACTICE for the treatment of Wounds, Burns, Indolent Ulcers, Decubitus, Intertrigo, Skin Lesions, Hemorrhoids, Anal Fissures, etc.

In PEDIATRICS for the treatment of Diaper Rash, Exanthema, Chafed and Irritated Skin caused by Urine, Excrements or Friction, Prickly Heat and in the nursery for General Infant Care.

Fatty acids and vitamins are in proper ratio, thereby producing optimum results. Non irritant, acts as an antiphlogistic, allays pain, stimulates granulation, favors epithelization. Under Desitin dressing, necrotic tissue is quickly cast off. Dressing does not adhere to the wound. In tubes 1 oz., 2 oz., 4 oz., and 1 lb. jars.

Desitin Medicinal Dusting Powder is super fatted with crude cod liver oil in a non irritating powder base. Indications: In infant care in the treatment of IRRITATED SKIN, SUPERFICIAL WOUNDS, DECUBITUS, INTERTRIGO, PRURITUS and URTICARIA. In 2 oz. Shaker-Top Cans.

Professional Samples on Request



For the Medical Profession

DESITIN CHEMICAL COMPANY

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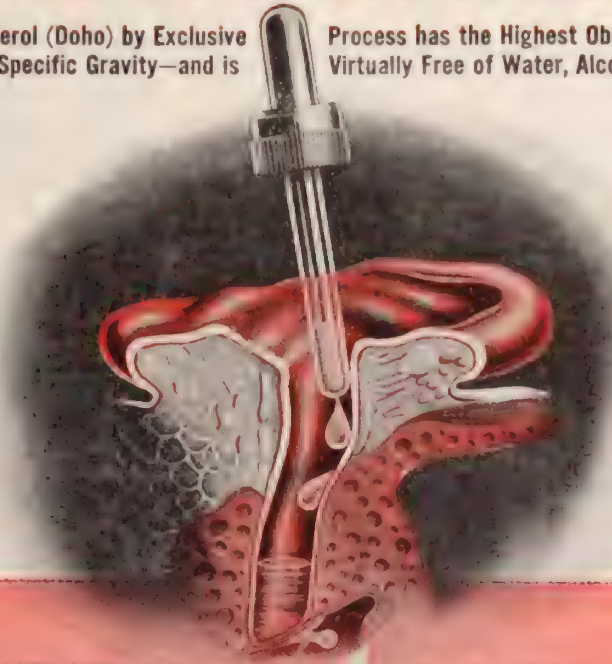
THE INDICATION DICTATES THE CHOICE OF MEDICATION

Glycerol (Doho) by Exclusive Process has the Highest Obtainable Specific Gravity—and is Virtually Free of Water, Alcohol and Acids



IN ACUTE OTITIS MEDIA

REMOVAL OF IMPACTED CERUMEN

AS AN ADJUNCT TO SYSTEMIC ANTI-INFECTIVE THERAPY, AS PENICILLIN, ETC.

CONTAGIOUS DISEASE EAR INVOLVEMENTS

USE ***Auralgan***

. . . because its potent decongestant, dehydrating and analgesic action provides quick, efficient relief of pain and inflammation in any intact drum involvement.

FORMULA:

Glycerol (DOHO) (Highest obtainable spec. grav.)	17.98 GRAMS
Antipyrine	0.81 GRAMS
Benzocaine	0.21 GRAMS

IN CHRONIC SUPPURATIVE OTITIS MEDIA, FURUNCULOSIS AND AURAL DERMATOMYCOSIS

USE

O-TOS-MO-SAN

. . . a potent chemical combination *(not a mere mixture),* combining Sulfathiazole and Urea in AURALGAN Glycerol (DOHO) Base—because it exerts a powerful solvent action on protein matter, liquefies and dissolves exuberant granulation tissue, cleanses and deodorizes, and tends to exhilarate normal tissue healing in the effective control of chronic suppurative otitis media.

FORMULA:

Urea	2.0 GRAMS
Sulfathiazole	1.6 GRAMS
Glycerol (DOHO) Base	16.4 GRAMS

Literature and samples sent to physicians on request.

DOHO CHEMICAL CORP.—Makers of AURALGAN and O-TOS-MO-SAN NEW YORK 13

Babies respond to nourishment with good flavor

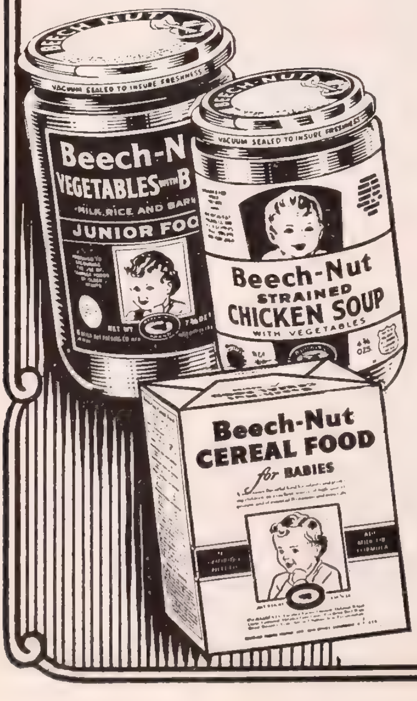
When baby enjoys his food he'll eat it—eagerly—without coaxing. And when his meal time is a HAPPY TIME that's when food is digested more readily and when a baby derives most benefit from it.

Beech-Nut makes foods of high quality that babies enjoy. The reputation of Beech-Nut goes into every single one of these foods—they have that distinctive Beech-Nut flavor that appeals to the taste.

Babies love them... thrive on them

Beech-Nut

FOODS *for* BABIES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VACUUM SEALED TO INSURE FRESHNESS
Beech-N
VEGETABLES with B
MILK, RICE AND BARL
JUNIOR FOO
Beech-Nut
STRAINED
CHICKEN SOUP
WITH VEGETABLES
Beech-Nut
CEREAL FOOD
for BABIES

Beech-Nut high standards of production and ALL ADVERTISING have been accepted by the Council on Foods and Nutrition of the American Medical Association.

A Complete Choice

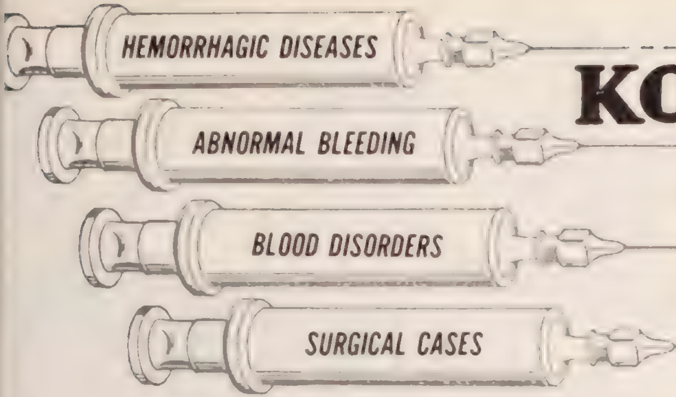
to meet the normal dietary needs of babies

SOLD IN GLASS
EVERYWHERE

Only one uniform method of packing

AND NOW—The NEW Cereal Food

That you may study the approximate analysis and know the nutritional value of this new Beech-Nut Cereal Food—we think it is excellent—we will be only too happy to send you this information if you request it. Having these facts in mind you will be in a position to recommend this fine food with even greater confidence and enthusiasm. Address Beech-Nut Packing Co., Dept. JM, Canajoharie, N. Y.



KOAGAMIN®

IS INDICATED IN

EVERY CASE

REGARDLESS OF THE UNDERLYING CONDITION

Its prompt action—*a matter of minutes*—differs from that of vitamin K and its synthetics, which must first be converted to prothrombin in the liver—*a matter of hours.*

Clinical investigation has demonstrated that vitamin K is useful *only* in cases where prolonged prothrombin time is a factor. Yet, even in these conditions, KOAGAMIN should also be used for its rapid action.

KOAGAMIN IS INDICATED IN EVERY CASE!

PREOPERATIVELY—
provides a clearer field of operation—minimizes cauterization or need for local hemostatics.

POSTOPERATIVELY—
for control of secondary bleeding.

THERAPEUTICALLY—
aids in the control of bleeding and should be used routinely in blood dyscrasias and hemorrhagic conditions.

Supplied in 10 cc. diaphragm-stoppered vials.
Literature upon request.

Chatham

CHATHAM PHARMACEUTICALS, INC.
NEWARK 2, NEW JERSEY, U. S. A.
Available Through Your Physician's Supply House or Pharmacist

GREATER COMFORT

in Bronchial Asthma

Elixir Thalfed is a valuable means of producing prompt and prolonged relief from the severe distress of asthma, and minimizing recurrence of paroxysms. It exerts a direct bronchial relaxing influence through the action of its contained aminophylline and ephedrine, and a central action by means of phenobarbital.

Each teaspoonful (5 cc.) provides:

Aminophylline	100 mg.	(1½ gr.)
Ephedrine	20 mg.	(⅓ gr.)
Phenobarbital	20 mg.	(⅓ gr.)

Elixir Thalfed is particularly useful in chronic asthmatic states because of its preventive action against recurrence of seizures and because it combats the frequent tendency to nightly paroxysms. Valuable also in controlling the cough associated with allergic rhinitis and chronic asthmatic bronchitis. Elixir Thalfed is available on prescription through all pharmacies.

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

SEMCo

Elixir THALFED

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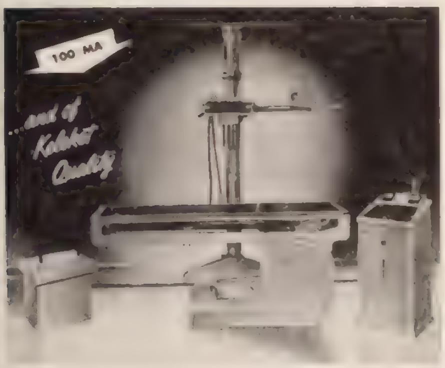
GIVE YOU COMPLETE X-RAY EQUIPMENT

as low as
$1641.00
NON-tilt table $1366.00



Above: 100 MA Combination with the basic table and Floor-to-Ceiling tubestand and the famous Multicron 100 Generator.

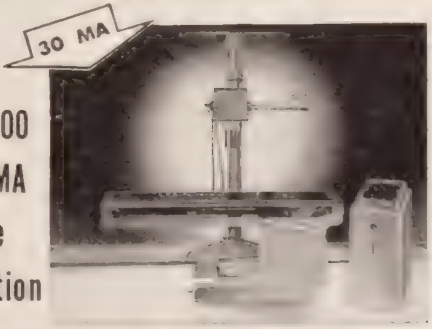
for full range FLUOROSCOPY and RADIOGRAPHY

Keleket scores again, with a new approach to the use and purchase of X-Ray equipment. Keleket has developed a FULL SIZE Standard Tilting Table with a completely new, highly flexible floor to ceiling tubestand. This basic X-Ray equipment is equally adaptable for either 15 MA Head, 30 MA Head or 100 MA tube and generating units.

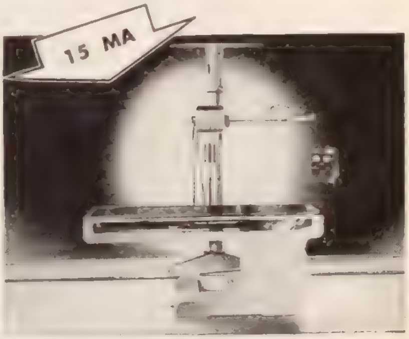
THROUGHOUT ALL INTERCHANGES YOU RETAIN THE SAME KELEKET "ADAP"-TABLE AND TUBESTAND.

This means you eliminate new table and tubestand costs as you step up tube capacity and power.

For only $1641.00 you get a 15 MA Standard Size X-Ray Combination



Above: 30 MA Combination with the same basic table and Floor-to-Ceiling tubestand and control



Above: Same basic table and tubestand with 15 MA tubehead and control. This full size unit with non-tilt table, costs only $1366.00.

FULL RADIOGRAPHIC FLUOROSCOPIC FACILITIES

Any of these combinations will fully meet your current needs . . . perform horizontal, vertical and trendelenburg radiography; vertical and horizontal fluoroscopy. Even the lowest cost unit, at $1641.00, is equipped to accommodate a bucky diaphragm. Write us or have our representative call to give you complete information on this newest development in low-cost, flexible X-Ray equipment.

Choose the combination to suit your practice.

You purchase the new standard (not a reduced) size Keleket Tilt table and Tubestand. Then add either 15 MA Head, 30 MA Head or 100 MA tube and generating equipment. This new tubestand accommodates any X-Ray tube. You can advance from 15 to 30 and to 100 MA but still retain the original table and tubestand. As a result, this investment is never lost when you step up to higher power tubes and generating equipment.

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Less Tax on Time, Patience and Ingenuity

- **1** In 97% of chronic ulcerative colitis patients, evidence of the disease may be seen through the proctoscope.[1]
- **2** The field disclosed through the proctosigmoidoscope is the mucosa of the lower bowel.
- **3** The field of Nisulfazole is the lower bowel. The Suspension is placed in the rectum and sigmoid to act against the infection and inflammation.

These three facts account for the all-out satisfaction of patients with Nisulfazole, which, to the physician, is but a part of his multiple approach to the therapy of chronic ulcerative colitis.

A narrowly specialized sulfonamide, Nisulfazole acts locally; does not appreciably enter the blood stream.

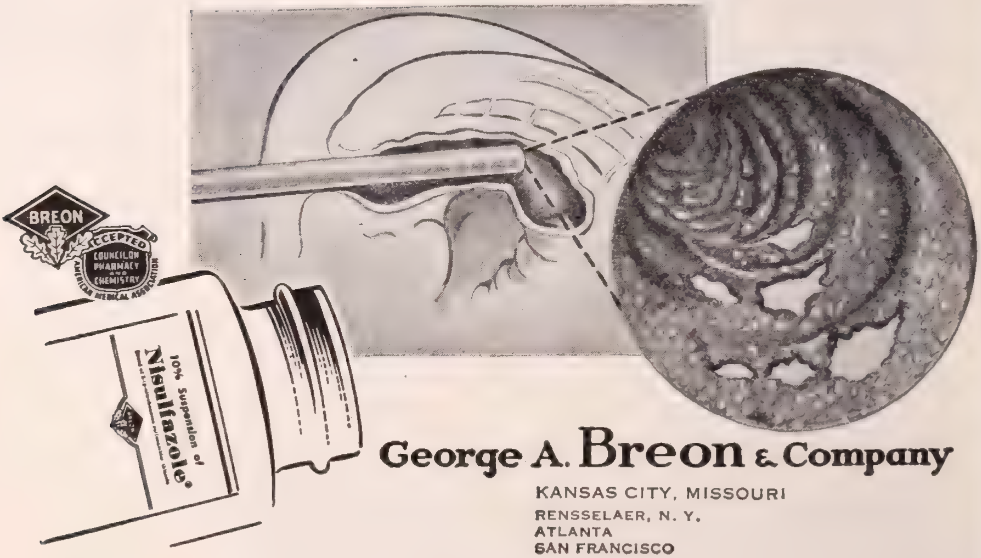
The physician's time, patience, and ingenuity are less taxed by unruly ulcerative colitis when he prescribes

Nisulfazole®

10% Suspension

(Brand of PARANITROSULFATHIAZOLE)

in bottles of 296 cc (10 fl. oz.)


BREON
ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
AMERICAN MEDICAL ASSOCIATION
10% Suspension of
Nisulfazole®

George A. Breon & Company

KANSAS CITY, MISSOURI
RENSSELAER, N. Y.
ATLANTA
SAN FRANCISCO

---

[1] Ricketts, W. E. and Palmer, W. L.; Gastroenterology 7:55, 1946.

by every clinical criterion a **better,** more **rational** cough therapy

In Robitussin 'Robins', *glyceryl guaiacolate* (reported to exert the most intense and prolonged action of all expectorants[1,4]) has been united with the adrenergic stimulant, *desoxyephedrine* (to relax bronchioles[3] and improve the patient's mood and sense of well-being[2]), in an aromatic, syrupy vehicle. Thus, in welcome contrast to the older empirical approach, Robitussin is highly rational and effective, yet non-toxic and non-narcotic. It helps make expectoration easier and freer—and eases dry, irritating cough.

INDICATIONS: Acute head and chest colds, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, influenza, measles, etc.; also helpful as a palliative of harmful cough in tuberculosis, chronic paranasal sinusitis, tobacco cough.

COMPOSITION: In each 5 cc. (1 teaspoonful) of palatable aromatic syrup: glyceryl guaiacolate, 100 mg., and desoxyephedrine hydrochloride, 1 mg.

DOSAGE: *Children:* One half to one teaspoonful according to age, three or more times daily. *Adults:* One or two teaspoonfuls as necessary, every two or three hours.

REFERENCES:
1. Connell, W. F. et al.: Canadian M.A.J., 42:220, 1940.
2. Foltz, E. E. et al.: J. Lab. & Clin. Med., 28:603, 1943.
3. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.
4. Perry, W. F. and Boyd, E. M.: J. Pharmacol. Exper. Therap., 73:65, 1941.

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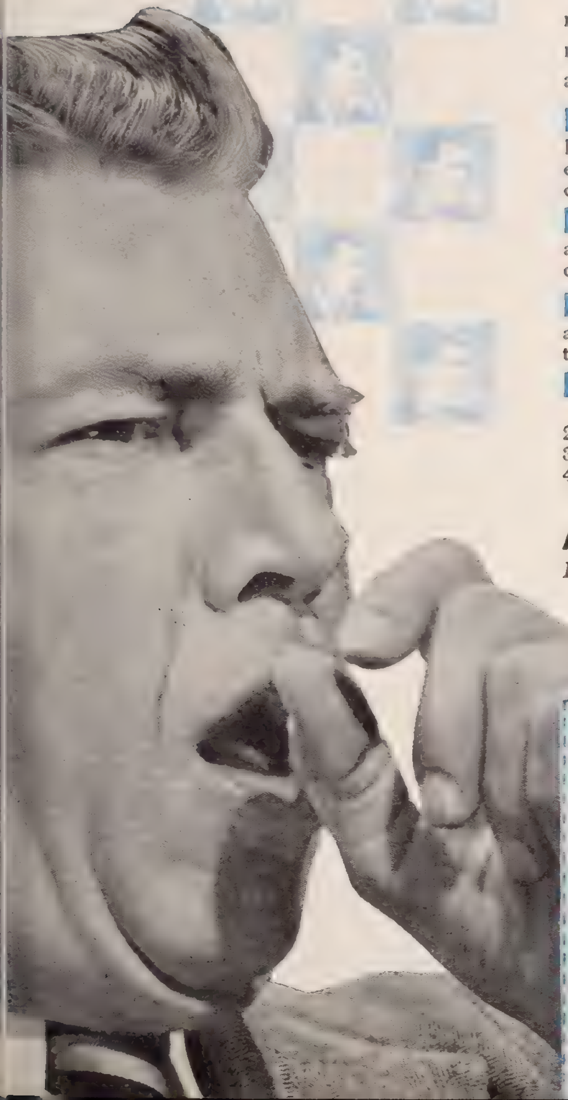
Ethical Pharmaceuticals of Merit since 1878



To facilitate productive cough
. . . to minimize harmful cough

℞ Robitussin®

Robins

PATTERNED AFTER HUMAN MILK

S-M-A, ready to feed, has the same percentage of protein, fat, carbohydrate, and ash as human milk.

Amino Acids—Content of essential amino acids equals or exceeds the average values for human milk.

Carbohydrate is lactose, favoring correct acidophilic intestinal flora.

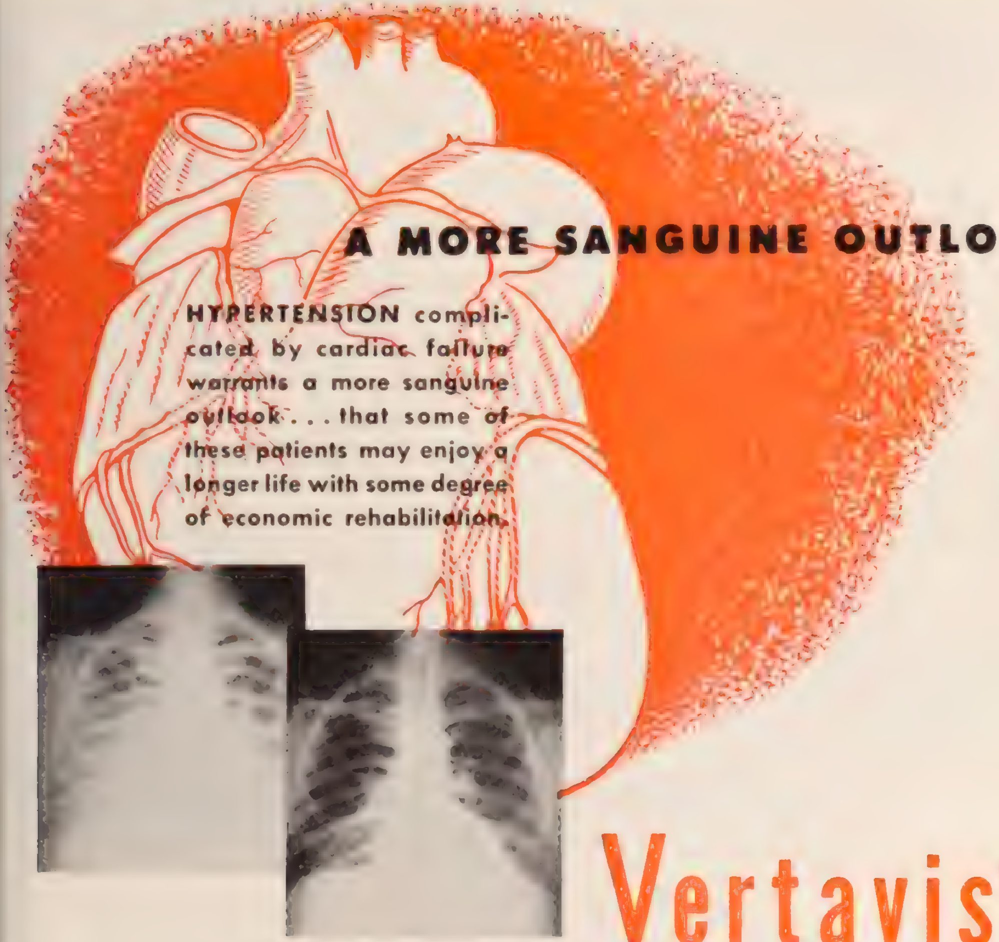
Fats—Index of unsaturated fatty acids is standardized at the top of the range found in human milk.

Vitamins (including **vitamin C**)—S-M-A equals or exceeds human milk in content of all vitamins for which minimum daily requirements are established.

Minerals—S-M-A exceeds values of human milk for calcium, phosphorus, and iron. Both S-M-A and human milk supply an average of 20 calories per ounce.

S-M-A® builds husky babies

Wyeth® WYETH Incorporated, Phila. 3, Pa.



A MORE SANGUINE OUTLOOK

HYPERTENSION complicated by cardiac failure warrants a more sanguine outlook . . . that some of these patients may enjoy a longer life with some degree of economic rehabilitation.

Vertavis®

VERTAVIS in the medical management of severe hypertensive cardiovascular disease was responsible for a diminution in cardiac size and reversal of electrocardiographic changes toward normal in these patients.

One of the most favorable aspects of an investigation by Freis and Stanton[1] was the effectiveness of VERTAVIS in patients with hypertensive cardiovascular disease. Remarkable dilatation of retinal arterioles has been observed, with pronounced relief of such symptoms as palpitation, nervous irritability, headache, exertional dyspnea and cardiac oppression.

- VERTAVIS in tablet form contains veratrum viride as the whole-powdered drug, selected and collected under rigid controls and biologically assayed in CRAW UNITS —an Irwin-Neisler research development.

Supplied: Vertavis 10 Craw Units • Vertavis with Phenobarbital • Vertavis 5 Craw Units
In bottles of 100, 500, 1000.

[1] Freis, E. D., and Stanton, J. R.: Am. Heart J. 36:723-738, 1948.

NOTE: Illustrated brochure on clinical findings, indications and administration of VERTAVIS in severe hypertension sent on request.

IRWIN, NEISLER & CO. DECATUR, ILLINOIS

	Calories	Protein Gm.	Calcium Gm.	Copper mg.	Iron mg.	Phosphorus Gm.	Vitamin A I. U.	Thiamine mg.	Riboflavin mg.	Niacin mg.	Ascorbic Acid mg.	Vitamin D I. U.
National Research Council Allowances, Sedentary Man (154 lbs.)	2,400	70	1.0	1.2	12	1.5	5,000	1.2	1.8	12	75	Small Amount
Ovaltine in Milk, 3 Servings*	676	32	1.12	0.5	12	0.94	3,000	1.16	2.0	6.8	30	417
Percentages of N. R. C. Allowances Provided by 3 Servings* of Ovaltine in Milk	28%	46%	112%	42%	100%	63%	60%	97%	111%	57%	40%	Abundance

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A sure step to dietary adequacy

The aim of the dietary at all times and under all conditions is to provide ample amounts—not just minimum amounts—of all nutrient essentials. Only when the daily nutrient intake is fully adequate, based on the most authoritative nutritional criteria, can the possibility of adequate nutrition be assured. It is for this reason that a food supplement assumes great importance in daily practice. It should be rich in those nutrients most likely deficient in prevailing diets or in restricted diets during illness and convalescence.

The *multiple nutrient dietary food supplement*, Ovaltine in milk, is especially suited for transforming even poor diets to full nutritional adequacy. This is clearly shown by the data in the table above.

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Sweet Chocolate Flavored OVALTINE Food Supplement
THE WANDER COMPANY

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Clinically, MENAGEN Capsules are exceptionally well-tolerated, and (being natural estrogen) impart that feeling of well-being so rarely obtainable with synthetic estrogens. Unvarying potency is assured by rigorous standardization.

MENAGEN: Available in bottles of 100 and 1000 capsules. (Each capsule contains 10,000 International Units of estrogenic activity.)

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flavors and colors. Quickly prepared, and in no way changing the
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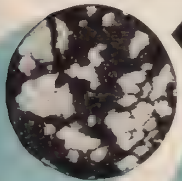
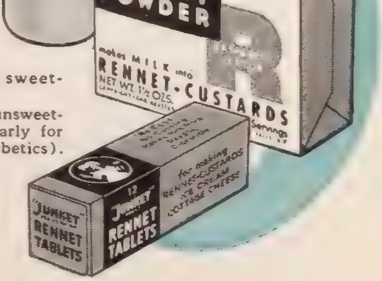
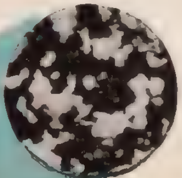


Untreated Milk—showing coarse, tough curds, often hard to digest.



"Junket" Rennet Powder — sweetened, six flavors.
"Junket" Rennet Tablets — unsweetened, unflavored (particularly for very young infants and diabetics).



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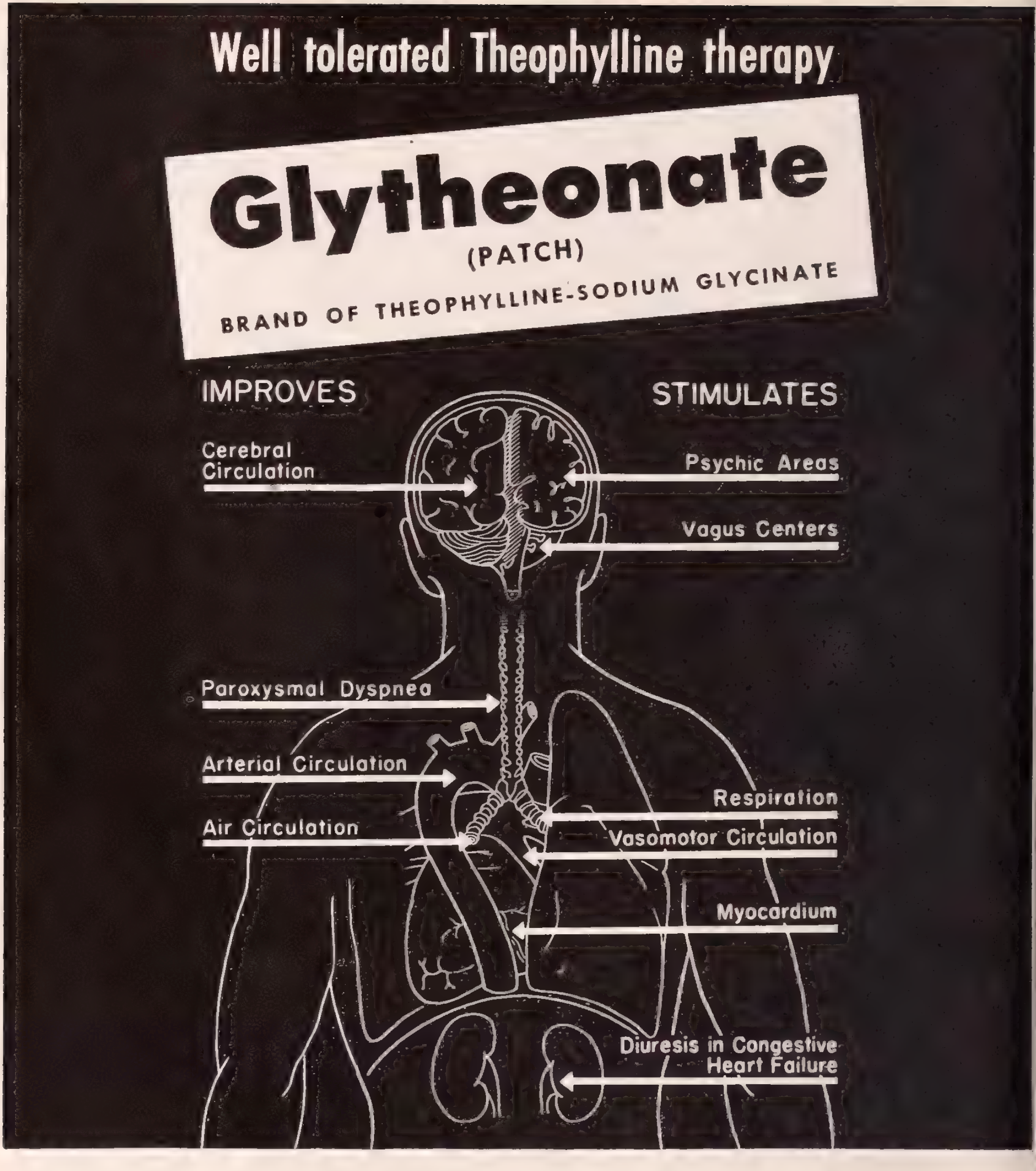
nilk with rennet
led, showing fine
dily digested curds.

"JUNKET" is the trade-mark of Chr. Hansen's Laboratory, Inc. for its rennet and other food products.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Glytheonate
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BRAND OF THEOPHYLLINE-SODIUM GLYCINATE
IMPROVES
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GLYTHEONATE is a combination of theophylline and sodium glycinate representing 50% theophylline U.S.P.

GLYTHEONATE permits intensive oral theophylline therapy with minimal gastric irritation[1, 2] in treating bronchial asthma and Cheyne-Stokes respiration, and in relieving paroxysmal attacks of cardiac dyspnea. Indicated in all cases where aminophylline is used.

Available as:

TABLETS Plain (Uncoated)—containing theophylline-sodium glycinate 325 mg. (5 grs.), representing theophylline U.S.P. 162 mg. (2½ grs.). In bottles of 100 and 500.

SYRUP—Each teaspoonful (5 cc.) contains theophylline-sodium glycinate 325 mg. (5 grs.) representing theophylline U.S.P. 162 mg. (2½ grs.). In pint and gallon bottles.

SUPPOSITORIES (Rectal)—containing theophylline-sodium glycinate 0.78 Gm. (12 grs.), representing theophylline U.S.P., 0.39 Gm. (6 grs.). Boxes of 12 suppositories.

Also tablets with Phenobarbital, tablets with Phenobarbital and Racephedrine and tablets with Phenobarbital and Rutin.

THE E. L. PATCH COMPANY, Stoneham, Mass.

1. Paul, W. D., and Montgomery, A. E.: J. Iowa State M. Soc. *38*:237 (June) 1948.
2. Bubert, H. M. and Cook, S.: S. Med. Journ. *41*:146 (Feb.) 1948.

Because "SUDDEN" is a dangerous word in cases of hypertension... it has become almost instinctive with physicians to prescribe Nitranitol. An ideal vasodilator, Nitranitol produces *gradual* reduction of blood pressure in essential hypertension. Nitranitol maintains lowered levels of pressure for prolonged periods. Virtually non-toxic. Nitranitol is safe to use over long periods of time.

NITRANITOL®

For gradual, prolonged, safe vasodilation

Merrell
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When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combines Rutin 20 mg. with above formula.)

here are the 2 safest sulfonamides combined in palatable fluid form

"The value of sulfonamide mixtures in reducing crystalluria and renal complications is based on undisputed experimental evidence."[1]

Eskadiamer *is a combination of the two safest sulfonamides* now in general use—sulfamerazine and sulfadiazine.

Children—and adults who balk at bulky half-gram tablets—take Eskadiamer willingly because it tastes good and is easy to swallow. Because Eskadiamer is so unusually palatable, it is particularly useful when a prolonged course of therapy (as in prophylaxis) is indicated.

1. J.A.M.A. 139:398 (Feb. 5) 1949

Eskadiamer

the delicious fluid preparation of sulfamerazine and sulfadiazine

Smith, Kline & French Laboratories, Philadelphia

Each 5 cc. (one teaspoonful) contains 0.25 Gm. (3.86 gr.) microcrystalline sulfamerazine and 0.25 Gm. (3.86 gr.) microcrystalline sulfadiazine—the dosage equivalent of the standard 0.5 Gm. (7.7 gr.) sulfonamide tablet.

Independent progressive action of three vasodilators identifies

RAY-TROTE improved

as a "Time Capsule"

Long Range Management of the hypertensive patient suggests the employment of *Ray-Trote Improved* capsules, the active ingredients of which are timed to give prompt relief; to afford sustaining action and to maintain lowered pressure for comparatively long periods.

Ray-Trote Improved capsules contain three effective vasodilators—Nitroglycerin—for prompt relief—Sodium Nitrite—for its sustaining action—and chemically standardized *physiologically active* Veratrum Viride—to maintain reduced pressure between doses. Phenobarbital, in a mildly sedative dose, completes this well-rounded formula which has been used by physicians with excellent results for a quarter of a century.

We are sure that you, too, will find *Ray-Trote Improved* worthy of a place in your practice. Please use the coupon for a liberal clinical supply.

Each *Ray-Trote Improved* capsule (Green) contains: Phenobarbital, 15 mg. (¼ gr.); Sodium Nitrite, 30 mg. (½ gr.); Nitroglycerin, 0.25 mg. (1/250 gr.); Potassium Nitrate, 60 mg. (1 gr.); Veratrum Viride Tincture (containing 0.1% alkaloids), 0.25 cc. (4 minims); Crataegus Fluidextract, 0.06 cc. (1 minim)

For the 30% of hypertensive subjects with capillary fault—***Ray-Trote with Rutin*** capsules (Yellow and Green): The above formula with 20 mg. (⅓ gr.) Rutin added.

Available at all pharmacies on prescription

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Please send me complete literature and a clinical supply of *RAY-TROTE IMPROVED.*

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plus essential
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Theptine

A *new* and strikingly effective

anti-depressant and

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indications: Theptine is an ideal preparation for those patients in whom mental depression and nutritional inadequacy manifest themselves as apathy, lethargy and physical debility.

formula: Theptine combines, in a light and pleasing elixir, the unique anti-depressant effect of 'Dexedrine'* Sulfate and the nutritional action of thiamine, niacin and riboflavin.

dosage: Theptine assures patient acceptance by virtue of its pleasant flavor and pleasing color. The usual dosage is one teaspoonful (5 cc.) three times a day, *after* meals.

Each 5 cc. contains:
'Dexedrine'* Sulfate, 2.5 mg.;
thiamine hydrochloride, 5.0 mg.;
riboflavin, 0.45 mg.; niacin, 6.7 mg.

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*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

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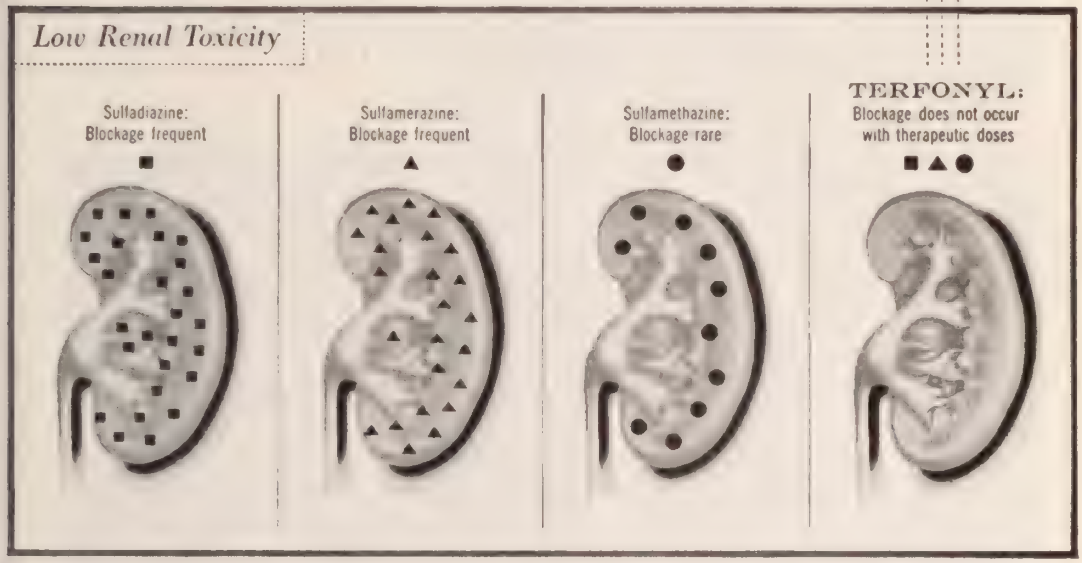
Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFE SULFONAMIDE THERAPY


Low Renal Toxicity
Sulfadiazine: Blockage frequent
■
Sulfamerazine: Blockage frequent
▲
Sulfamethazine: Blockage rare
●
TERFONYL: Blockage does not occur with therapeutic doses
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With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated. Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets, 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint and gallon bottles

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'TERFONYL' IS A TRADEMARK OF E. R. SQUIBB & SONS

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Designs developed over many years, in full consultation with obstetricians, insure ample support for the abdominal musculature, pelvic girdle and lumbar spine without constriction at any point. All Camp Supports are accurately fitted about the pelvis. Thus the uterus is maintained in better position, the abdominal muscles and fasciae are conserved and there is support for the relaxed pelvic joints. The patient is assisted in maintaining better balance in the course of the postural changes of pregnancy. Physicians may rely on the Camp-trained fitter for precise execution of all instructions.

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THIS EMBLEM is displayed only by reliable merchants in your community. Camp Scientific Supports are never sold by door-to-door canvassers. Prices are based on intrinsic value. Regular technical and ethical training of Camp fitters insures precise and conscientious attention to your recommendations.

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from *head* to *toe*

CEREVIM-fed children showed greater clinical improvement, in the following nutrition-influenced categories, than children fed on ordinary unfortified cereal or no cereal at all:[1]

hair lustre
recession of corneal invasion
retardation of cavities
condition of gums
condition of teeth
skin color
skeletal maturity
skeletal mineralization
*blood plasma vitamin A increase
*blood plasma vitamin C increase
subcutaneous tissues
dermatologic state
urinary riboflavin output
musculature
plantar contact

Here's why: CEREVIM is not just a cereal.

Much more: CEREVIM provides *8 natural foods:* whole wheat meal, oatmeal, milk protein, wheat germ, corn meal, barley, Brewers' dried yeast and malt – PLUS added *vitamins* and *minerals.*

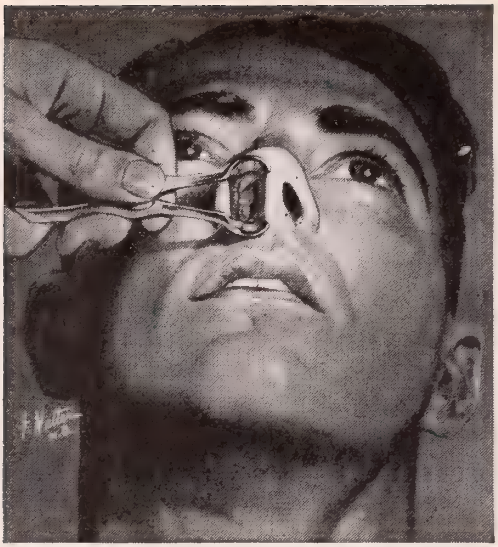
CEREVIM

CEREALS + VITAMINS + MINERALS

[1] "A Study of Enriched Cereal in Child Feeding" Urbach, C.; Mack, P. B., and Stokes, Jr., J: Pediatrics 1:70, 1948.

*Cerevim contains neither vitamin A nor C, but apparently exercises an A-and-C sparing effect attributed to its high content of predigested protein and major B vitamins.

M & R DIETETIC LABORATORIES, INC. • *Columbus 16, Ohio*



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Par-Pen provides: 1. The more rapid, more prolonged shrinkage of Council-accepted Aqueous Solution Paredrine Hydrobromide. The Paredrine promotes ventilation and drainage and thus facilitates bacteriostasis at the site of infection.

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PAR-PEN is packaged in 1 fluid ounce bottles.
Crystalline sodium penicillin, 500 units per cc., in
Aqueous Solution 'Paredrine' Hydrobromide 1%.

Par-Pen the penicillin-vasoconstrictor combination for intranasal use

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ULCERATIVE COLITIS

The patient with ulcerative colitis needs psychiatric, dietary, medical, and possibly surgical care. SULFATHALIDINE *phthalylsulfathiazole is particularly valuable for medical control because of its small dose, bactericidal efficiency, and negligible toxicity.*

SHARP & DOHME

Indications: Ulcerative colitis, regional ileitis. Intestinal surgery, to reduce incidence of peritonitis, speed recovery.

Actions: Reduces enteric coliform bacteria, even during diarrhea; controls cramps and bloody stools of ulcerative colitis within 48 hours; reduces threat of peritonitis, aids recovery in enteric surgery.

Advantages: Low dose (3 to 6 Gm. daily), low cost, negligible toxicity. Bowel retains 95% of dose. Supplied in bottles of 100, 500, 1,000 tablets, 0.5 Gm. Sharp & Dohme, Philadelphia 1, Pa.

Sulfathalidine®

tablets phthalylsulfathiazole, 0.5 Gm.

two simple twists . . . 5 seconds

Time saving is made easy with the newly designed disposable syringe for **'Duracillin'** (Crystalline Procaine Penicillin—G, Lilly). Just two simple twists of the wrist, and it's ready to use. Because it is presterilized and the dosage premeasured, it eliminates needless bother—saves precious time. Take this less pressing moment to order a supply for the daily occasions when every second counts. Complete literature on disposable syringes for **'Duracillin'** is available from your Lilly medical service representative or will be forwarded upon request.

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VOLUME 50 JANUARY 15, 1950 NUMBER 2

Editorials

The Annual Meeting

Every year in January, the Journal reminds its readers that the Annual Meeting of the Medical Society of the State of New York will be held in May, this year from May 8 to 12, inclusive, at the Hotel Statler, New York City. This will be the 144th meeting of the State Society.

It is hoped that attendance will break all previous records. But, if this is to be so, arrangements for hotel accommodations should be made as early in the year as possible.

The Editors therefore urge all members to arrange *now* to attend. Then mark your new appointment books. Make a New Year's resolution to write legibly so that when the time comes you can read what you have written, save a little money each day, and may you have a really Happy New Year!

Retrospect, I

In this fiftieth year of its continuous publication for the practicing physicians of the State of New York, this Journal might well recall for the benefit of the membership some of the quaint ideas and practices of former years.

Such recollections are the more useful and instructive in that, doubtful at the present time of where we are going, we may at least reflect seriously upon where we have been. This is not to be nostalgic concerning the past but to be cognizant of the obligation we owe to history. Of the people en masse, Hegel, in the nineteenth century, in apocalyptic fashion remarked, "The masses are advancing." "Without some spiritual influence, our age, which is a revolutionary age, will produce a catastrophe," wrote August Comte. John Stuart Mill in his essay on "Liberty" wrote: "Mankind are greater gainers by suffering each other to live as seems good to themselves, than by compelling each to live as seems good to the rest." Certain quaint economic laws such as those of "supply and demand," and "the law of diminishing returns" were influencing men's thinking, for example, in the years which witnessed the founding of such institutions as the Medical Society of the State of New York (1807), years which saw the transcontinental railroads built and the founding of vast industrial, agricultural, and communications enterprises.[1] From the beginning of recorded European history in the sixth century to the year 1800, twelve centuries, population in Europe had remained at about 180 millions. From 1800 to 1914, little more than a century, the European population grew from 180 to 460 millions.[2] In the United States the population increase between 1790 and 1910 was from about 3,900,000 to 91,900,000, respectively.[3]

In 1901, the year the JOURNAL started publication, there was little consciousness on the part of the medical profession of the impact which the events of the nineteenth century would ultimately exert on the profession of today. William McKinley was President of the United States, the automobile was still a somewhat "crazy contraption" or a "gas buggy," the public debt of the United States (in gold) was a mere $1,263,416,913, and people were reading the 107th edition of the *Old Farmer's Almanack*. By 1900 the Spanish War had been concluded, "dinner, dirt, and diarrhea," the familiar sequence of events, had killed more men by typhoid fever and dysentery than the Spanish Mausers, and it would be seven more years before Osler's *Modern Medicine* would be published by Lea Brothers and Company of Philadelphia and New York. Osler could say in 1907, in his introduction, "The necessarily imperfect state of organic chemistry has given an undue prominence to certain half-truths, and no department of medicine has lent itself more easily to pseudoscience....Vaccines, antitoxins, curative sera of various kinds have been discovered, and with this rapid progress it is not astonishing that at times we have gone too fast and too far...."

Medicine in this era was being heavily endowed by the captains of American free enterprise in banking, industry, commerce, and merchandising. Their energy and their constructive imagination projected and obtained superiority and dynamic leadership for the United States in their respective fields. They foresaw the necessity for better public and personal health. Colleges, universities, medical schools, hospitals, and libraries shared in the large fortunes which free enterprise produced.

The American Medical Association had about 11,000 members and had just reorganized (1901), creating its House of Delegates as a truly "representative body of the Medical profession of the United States."[4] Dr. George Simmons was editing the *Journal of the A.M.A.*, and that year reported that its circulation was 25,000 copies weekly! The College of Physicians and Surgeons in New York City in 1900 had "801 students attending lectures and 165 graduates at the Commencement."[5] The New York Medical College and Hospital for Women graduated four women doctors in the same year.

The examples here quoted serve to emphasize the slow progress of medical education when compared with the usually unnoticed but staggeringly rapid increase in populations under certain conditions. Emigration from Europe to these shores in the latter half of the nineteenth century was in large volume, and in 1900 the United States' population numbered 75,994,575, of which total New York State had 7,268,894.

---

[1] Hadley, Arthur T.: Economics, G. P. Putnam's Sons, New York City, Knickerbocker Press, 1896, pp. 43, 74, 75.

[2] Gassett, Ortega y: Revolt of the Masses, New York City, N. W. Norton, 1932, p. 54.

[3] World Almanac, 1949, p. 456.

[4] Fishbein, M.: History of the A.M.A., Chicago, Illinois, American Medical Association, 1947, p. 213.

[5] Walsh, James J.: Medicine in New York, New York City, National Americana Society, 1919, vol. 2, p. 493.

Between 1800 and 1900 the United States population increase was from 5,308,483 to the above quoted total, a gain of 70,686,092 in the century! This was almost exactly the period of greatest turbulence in the medical profession of the Empire State.

(*To be continued*)

The A.M.A. Dues, I—The Cold War

Since its founding in 1847 no physician has ever paid dues directly and as such to the American Medical Association.

Three classes of membership were and still are defined in Article 5 of the Constitution and Bylaws as: (*a*) Active, (*b*) Associate, and (*c*) Fellows of the Scientific Assembly. Active membership is

> limited to those members of constituent associations who (1) hold the degree of Doctor of Medicine or Bachelor of Medicine and (2) are entitled to exercise the rights of active membership in their constituent associations, including the right to vote and hold office, as determined by their constituent associations, subject to the provisions of the Bylaws.
>
> (*b*) *Associate Members.*—Associate membership shall be limited to those members who are not active members of their constituent associations and who hold the degree of Doctor of Medicine or Bachelor of Medicine, subject to the provisions of the Bylaws.
>
> Sec. 2. *Fellows of the Scientific Assembly.*—Active members in good standing of the Association who have complied with the pertinent provisions of the Bylaws are Member Fellows of the Scientific Assembly of the American Medical Association. The Bylaws may provide for other types of Fellowship and set forth eligibility and qualification requirements.

Subscription to the *Journal of the A.M.A.*, now $12 a year, always has been and is voluntary on the part of any member in good standing. As defined in the Bylaws:

> Members in good standing of the constituent associations of the American Medical Association are either active members or associate members of the American Medical Association, provided they possess the qualifications set forth in Article 5 of the Constitution and after they have been certified officially for enrollment by the secretaries of their constituent associations to the Secretary of the American Medical Association. All members listed at the time of the adoption of these Bylaws shall be either active or associate members, provided they possess the requisite qualifications.

Article 11 of the Constitution and Bylaws says:

> Funds may be raised by an equal assessment or dues of not more than twenty-five dollars annually on each of the active members on recommendation by the Board of Trustees and after approval by the House of Delegates. Funds also may be raised from the publications of the Association and in any other manner approved by the Board of Trustees. Funds may be appropriated by the Board of Trustees to defray the expenses of the Association, to carry on its publications, to encourage scientific investigations, and for any other purpose approved by the Board of Trustees.

We bring these excerpts to the attention of our membership and other readers of this JOURNAL in view of the action of the House of Delegates at the Interim Session in Washington, D. C., December 6 to 9, 1949. The Trustees recommended and the House unanimously voted dues of $25 to be paid for the year 1950 by every member.

This is as it should be. The physicians of the United States are presently proudly engaged, as citizen-taxpayers, in a war. It is no less a war although nobody is shooting any one and although it is being fought with educational materiel. Like any war, it is expensive and must be paid for. Doctors are proud of their profession, proud of their hospitals and medical schools, of their professional societies and of their accomplishments for and on behalf of the citizens, the men, women, and children of this nation.

Doctors are working men and women. To some, the payment of $25 dues will be a hardship. Maybe some will have to buy a slightly cheaper car in 1950 or forego a few days of vacation, or a new pair of shoes, make a 1949 suit do for a year longer, or curtail smoking, or put off for a few months the purchase of a television set. That is no more than thousands of other working men and women, miners, carpenters, business men, and salespeople have had to do *just to exist* for many years. Pay *your* dues now!

Is this war necessary? Yes. It is the unfortunate fact that it has been thrust upon us. The medical profession has always had as its objective the betterment of the public and individual health of the citizens of any country in which doctors have practiced. They have fought disease and death on behalf of those citizens relentlessly. They have not always been right, nor wholly successful, but they have never compromised nor quit.

In this war to which we are now committed, not by our choice but of necessity, we have just begun to fight. The $25 dues are the model M1, 1950. Make it good, and make it fast!

(*To be continued*)

Current Editorial Comment

Cold Cures Not Harmless. The possible harmful effects of antihistaminic substances advertised as cold cures are discussed in the *J.A.M.A.*[1]

> The Council on Pharmacy and Chemistry at a recent meeting warned against the indiscriminate use of antihistaminic substances which are now being promoted for the prevention of colds and even for the treatment of those suffering from colds. The Council, while recognizing that data have been accumulated relative to such uses, is not convinced that they are sufficient to warrant the positive statements that are being made. *The Council warns that instances have been reported of users of these drugs becoming drowsy and even falling asleep while at work and, in occasional cases, while driving cars or operating machinery.*[2] A review of the present status of these products will be prepared so that physicians who prescribe the drugs may be aware of their possibilities. In the meantime the Council declares that experience with these substances is insufficient to permit knowledge of whether they are harmless when used over long periods of time. Furthermore, the amounts taken in persistent colds may exceed what has been established as normally safe.

The current fatality rate from operation of motor vehicles and the appalling incidence of industrial accidents seem reason enough for extreme caution in the use of these substances. The dangerous factor of drowsiness as a side-effect must be assumed to attend their use until definite evidence is accumulated by which under ordinary conditions of living and working, this can be assayed as a positively calculable risk.

Our Senator Speaks. In a recent public address by Senator Irving M. Ives, reported in the *New York Times* (December 16, 1949), there is contained a statement by him "that there was no doubt that under the present administration the United States was drifting toward socialism and that we can save our country from socialism if we can get the American people to recognize that drift." We applaud the Senator for these courageous expressions and likewise the statement that he was opposed to compulsory health insurance.

It is questionable whether, at the present time, people realize how gradual has been this drift towards the socialist doctrines, how insidious has been a change in the thinking of individuals who have embraced the projected imposition of social security, so-called, as a duty of government rather than as a function of their own and individual efforts. Again we want to commend our Senatorial representative and trust he may find much support among his colleagues in the upper house.

Child Adoption. Physicians are frequently consulted by patients who desire to adopt a child and need guidance in giving advice. There are official agencies in this State, through which adoptions should be made, but for definite information about laws and procedures attention is called to a comprehensive pamphlet recently issued by the Federal Children's Bureau, which affords a comprehensive review of the subject. The pamphlet is numbered 331 and may be obtained from the United States Government Printing Office, Washington 25, D.C., at fifteen cents per copy.

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[1] J.A.M.A.: 141: 1059 (Dec. 10) 1949.

[2] Italics ours—*Editor.*

DEVELOPMENTS IN PUBLIC HEALTH

From the New York State Department of Health

William A. Brumfield, Jr. M.D., Editor

On Improving the Accuracy of Death Certificates

At the beginning of this century, accurate national and even State mortality statistics were practically nonexistent. When in some sections of the country people still died from "drinking cold water" or "mortification," statistical offices could not tabulate the data under all of the terms appearing on death certificates or accept in every instance the statement of the certifying physician as to he cause under which a death should be classified.

Stress was, therefore, rightly placed upon completeness of certification, and consistency in the selection of the primary cause was secured by means of arbitrary rules. Here the determining consideration was the combination of causes entered on a certificate and not necessarily the relationship to the atal issue. For example, when diabetes was mentioned in conjunction with a disease of the heart, the death was invariably classified as one from diabetes, but when the companion condition was pulmonary tuberculosis it was designated by the latter term. As a consequence, the recorded mortality rom some diseases which were given statisical preference overstated in varying degree he loss of life caused by them; the converse was true of diseases which were relegated to contributory standing. No wonder then hat many physicians were inclined to give little thought when entering a multiple ertification on a death certificate, because hey knew that statistical rules and not heir professional judgment would determine to what cause the death would be ssigned.

Now this system has been abandoned, and y agreement among the member-countries f the World Health Organization the tabulation of deaths will be based on the opinion f the attending physician as expressed in is certification. If he believes that a ingle cause describes the case adequately he should enter this one cause in Part I, line "*a*" of the medical certification; if an adequate description requires the entry of two or more causes, the disease directly related to the death should be entered first, in line "*a*," and the antecedent causes, in *reverse chronologic order*, in lines "*b*" and "*c*." The death would be assigned to the one entered last, which the physician considered as the underlying cause—the first link in the chain of events which led to death.

If the deceased suffered from a disease or injury which, while contributing to the death, was not related to the direct cause, this disease or injury should be entered in Part II of the certification. For instance, if a sufferer from tuberculosis died from a disease which was not related to the tuberculosis, the latter should be entered in Part II. This would make it possible to calculate not only the number of persons who died from tuberculosis, but also the number of tuberculous persons who died from some other cause.

A review of the death certificates filed with the State Department of Health in 1949 shows that in a great majority of cases the death certificates are being filled in logical order. There are, however, instances to the contrary, as, for example, this certification:

a. Coronary sclerosis
b. Myocardial insufficiency
c. Uremia

The proper order should have been:

a. Uremia (the direct cause of death)
b. Myocardial insufficiency
c. Coronary sclerosis

This death was tabulated as one from coronary sclerosis, the underlying cause.

The physicians of the State should remember that henceforth the official mortality statistics will be based not on statistical rules but on their judgment, and, therefore, this judgment must be clearly indicated in the medical certification. Once this practice becomes universal, the resulting figures will depict truly what the people of the State die from in terms of current professional opinion.

Since medical science is not static, improvement in diagnosis will affect the comparability of data over the years. For instance, the number of deaths in New York State in 1947 from cancer of the lung was 193 per cent greater than in 1931, but deaths from all types of cancer increased only 51 per cent. Has the prevalence of cancer of the lung actually trebled in the sixteen-year interval? Hardly. The more likely explanation is that given some time ago by a superintendent of one of the New York State tuberculosis hospitals: "Now that we are *looking for it* we shall find more and more cancer of the lung." Accuracy in mortality, as in other types of statistics, is not an absolute concept, but is related functionally to the time in which an observation is made and the result expressed in numbers.

PRIZE ESSAYS

The Merrit H. Cash Prize and the Lucien Howe Prize will be open for competition at the next Annual Meeting of the Medical Society of the State of New York, May 8, 1950, in New York City.

The Lucien Howe Prize of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The Merrit H. Cash Prize of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York, who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device, and containing the name and address of the writer.

If the Committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York "to be published as it may direct."

All essays must be presented not later than February 1, 1950, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 292 Madison Avenue, New York 17, New York.

Armitage Whitman, M.D., *Chairman*
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1. Holder, H. G., and MacKay, E. M.: Mil. Surg. *90*:509-518 (May) 1942.
2. Holder, H. G., and MacKay, E. M.: Surgery *13*:677-682 (May) 1943.

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Scientific Articles

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ADULT HEART DISEASE

DIFFERENTIAL DIAGNOSIS OF RHEUMATIC AND CONGENITAL HEART DISEASE IN ADULTS

J. G. Fred Hiss, M.D., Syracuse, New York

(From the Department of Clinical Medicine, Syracuse University College of Medicine)

In discussing this subject I shall not attempt to cover every possible congenital or rheumatic heart condition but will try to restrict myself to a discussion of those lesions which I have encountered most frequently, including only those more uncommon lesions that are of special importance or for which a special treatment is available so that their diagnosis is desirable. Likewise, I will not try to enumerate all the symptoms and signs of each lesion but will restrict myself to mentioning only those that have been of special help to me in reaching a diagnosis.

Usually the best way to start the study of any patient with any disease or abnormality is to obtain a good history. This is also true with this problem, even though some of the lesions have such typical signs that nothing else need be known about the patient. A history of cyanosis or a heart murmur since birth indicates a congenital defect rather than a rheumatic lesion. Likewise, a history of one or more typical attacks of rheumatic fever in childhood suggests a rheumatic type of heart disease. However, the problem is not always as simple as this. Cyanosis or heart murmurs, although due to congenital defects, may not develop for weeks or months or even years after birth. Some murmurs depend on those blood pressure levels or those differences in the blood pressure of the two circuits that are reached only many months after birth. If this is not recognized, a lesion may be called acquired, usually rheumatic, when it is really a congenital defect. Or there may be no early observations of the patient available. In the case of rheumatic lesions the original infection may have been atypical, unrecognized, very mild, or even subclinical. It is, of course, also possible for a person with a congenital defect to have rheumatic fever and develop a superimposed rheumatic lesion.

It is of interest in connection with a discussion of history to mention that some investigators feel that certain congenital cardiac defects are sequelae to an attack of German measles in the mother early in the period of gestation. I have not been able to verify this point in my own practice.

Formerly, it sufficed merely to recognize that a congenital defect existed and to make a prognosis based on the presence of cyanosis and cardiac enlargement. Later, cases were classified into cyanotic, potentially cyanotic, and acyanotic groups as suggested by Maude Abbott.[1] However, with the advent of surgical treatment for some defects, more exact diagnosis has become imperative. It is rather easy to bear in mind that there are three conditions that are being treated surgically: (1) persistent ductus arteriosus, (2) narrowing or coarctation of the aorta, and (3) narrowing or obliteration of the pulmonary artery.

In the persistent ductus arteriosus, the procedure consists of ligating, with or without cutting, the vessel that carries blood from the pulmonary artery to the aorta before birth but has

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Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, Teaching Day, May 3, 1949.

failed to atrophy after birth and now carries blood from the aorta to the pulmonary artery.

In the case of the aortic coarctation, there is a narrowing or even complete obliteration of a portion of the aorta. The surgical procedure here consists of a resection of the abnormal part of the aorta and an end-to-end anastomosis of the ends of the normal aorta.

In those patients who have a stenosis of the pulmonary artery or of the outflow tract of the right ventricle, there are usually other congenital defects, such as interventricular septum defects, dextroposition of the aorta, etc. The most frequent combination of these defects constitutes the tetralogy of Fallot. The treatment here consists of anastomosing the normal part of the pulmonary artery beyond the constriction with a branch of the aorta or even with the aorta itself.

In addition to these three congenital defects, one must add a very common defect which at present is not amenable to surgical treatment, namely, an interventricular septum defect. Interauricular septum defects are much more common pathologically but are not frequently diagnosed, especially if they are uncomplicated.

Suppose we review the most valuable symptoms and physical signs in making a diagnosis and also in differentiating these lesions or defects from other cardiac conditions. Most of the patients with a persistent ductus have no abnormal symptoms unless the communication is a large one. Then there may be dyspnea and at a late stage some cyanosis. The most valuable sign is a rather characteristic "machinery-like" or "train-in-the-tunnel" murmur, usually heard in the pulmonary valve area, that is, the second left interspace. It may be one space higher or lower. Usually it is widely distributed, sometimes even through to the back. Very frequently, it is accompanied by a thrill in this same area. The second pulmonic sound is nearly always accentuated. A forceful thrust of the precordium immediately to the left of the lower part of the sternum indicates an hypertrophied enlarged right ventricle. Percussion of the left border tells us how much enlargement of the left ventricle exists. In general, the size of the heart varies with the size of the communicating vessel. If this is small, there may be no change in size; if large, a very great change occurs. The right ventricle hypertrophies because it must contract against a higher pressure; the left ventricle enlarges to compensate for the useless work of pushing an extra volume of blood into the aorta to overcome the amount that flows back into the pulmonary artery without carrying its load of oxygen to various parts of the body. In my experience I have not noticed any appreciable change in the peripheral pulse. Fluoroscopy shows an enlargement of the pulmonary artery and of the right ventricle, especially of its outflow tract. Electrocardiograms usually show a right axis deviation due to the right ventricular hypertrophy. It is important to determine whether there are other defects present, because, if there are, the patient should usually not be treated surgically. In such cases the persisting connection is frequently a compensatory mechanism.

Let us now consider coarctation of the aorta. In this condition there is a narrowing or even a complete closure of a segment of the aorta. This may be present at birth or may develop after birth due to the failure of a segment of the aorta to grow with the rest of the aortic wall. Patients with this condition may be entirely without symptoms, or they may experience some weakness of the lower extremities on exertion. The signs of this defect can best be understood and remembered if one bears in mind that the blood has difficulty in getting from the proximal portion of the aorta to the distal portion of the aorta and because of this a collateral connection between these two portions is established through the intercostal arteries. As a result there is an upper extremity hypertension and a lower extremity hypotension and a more or less complete loss of the normal pulse wave in all blood vessels originating from the distal portion of the aorta. The intercostal arteries become enlarged and tortuous, and their exaggerated pulsations can sometimes be felt in the chest wall. On x-ray and fluoroscopy the notching of the lower margins of the ribs by these enlarged arteries produces a reliable diagnostic sign. This means of examination also shows the absence or diminution of the aortic knob. Practically every patient with this condition has a systolic murmur, many times audible through the back, but, in general, there is nothing characteristic about this murmur to aid in making a diagnosis. Without a doubt, the most practical way to detect these cases is to feel for the femoral artery pulsation in every patient and to take lower extremity blood pressures in all persons under thirty who have an upper extremity hypertension.

It might be of passing interest to know that, beginning this fall, every child who enters one of the Syracuse schools for the first time will be examined by a doctor or nurse for the presence or absence of femoral artery pulsations, and, if such pulsation is absent, the pupil will be referred for additional study.

Congenital pulmonary stenosis occurs much more frequently in combination with other defects than it occurs alone. The most frequent combination is that of pulmonary stenosis, interventricular septum defect, marked hypertrophy of the right ventricle, and a dextroposition of the aorta.

This condition is not frequently seen in adults because its great severity usually causes death in childhood, but occasionally such a patient does live three, four, or five decades. The outstanding symptoms and signs are cyanosis from birth, clubbed fingers, dyspnea, polycythemia, and usually dwarfism. In addition, the most constant physical signs are a loud systolic murmur just to the left of the sternum and enlargement of the heart to the right. A very important finding on fluoroscopy or x-ray is the marked concavity along the left border of the heart where the bulge of the pulmonary artery is normally located. Rarely a dilatation of the pulmonary artery beyond the point of constriction will give the appearance of a dilated or enlarged artery and may lead to a clinical diagnosis of an Eisenmenger complex instead of a tetralogy of Fallot.

Small interventricular septum defects produce no symptoms, while large ones may produce the common signs of cardiac insufficiency. As the flow of blood is from the left ventricle to the right ventricle, cyanosis is absent, although it is theoretically possible under special conditions which temporarily increase the pressure within the right ventricle. The most characteristic sign is the "Roger murmur," a loud, harsh, blowing systolic murmur located in the third or fourth left interspace and well transmitted to the left, sometimes even around to the back. Many times it is palpable as a systolic thrill.

Fluoroscopy or x-ray shows the heart normal in size or shows an enlargement of the right ventricle and pulmonary artery area. If the communication is a large one, the left ventricle may become enlarged secondarily to the great amount of useless work it must do.

So far I have not mentioned either intravenous or intra-arterial angiography or intracardiac catheterization because these are not usable procedures in ordinary private practice. They are, however, invaluable in the complete study of congenital defects and should be used in all cases that are to be treated surgically, first to establish the diagnosis definitely and second to rule out the presence of additional defects that might be made worse by the correction of the most prominent one. Many other congenital cardiac defects can only be diagnosed by these newer methods. There are many other congenital defects in addition to the previously mentioned ones that are so severe that they are rarely or never found in adults.

Let us then briefly review the predominating symptoms and signs of these four most common or important congenital defects:

1. Persistent ductus arteriosus.
    (*a*) "Train-in-the-tunnel" or "machinery-like" murmur in the pulmonic area extending through both phases of the cardiac cycle.
    (*b*) Frequent thrill in this same area.
    (*c*) Enlargement of the pulmonary artery by x-ray or fluoroscopy.
2. Coarctation of the aorta.
    (*a*) Upper extremity hypertension.
    (*b*) Lower extremity hypotension and complete or almost complete absence of pulsations in femoral, popliteal, and dorsalis pedis arteries.
    (*c*) Evidence of enlargement and tortuosity of the intercostal arteries by feeling their pulsations and seeing by x-ray the notching of the ribs.
    (*d*) Absence of the aortic knob on x-ray.
3. Pulmonary stenosis (usually as part of the tetralogy of Fallot).
    (*a*) Cyanosis since birth.
    (*b*) Clubbing of fingers.
    (*c*) Systolic murmur, sometimes with a thrill.
    (*d*) Enlargement of the heart to the right.
    (*e*) Absence of pulmonary artery shadow on fluoroscopy and x-ray.
4. Interventricular septum defect.
    (*a*) Harsh, blowing systolic murmur in the third or fourth left interspace, close to sternum and well transmitted to the left. No cyanosis.

Numerically, congenital cardiovascular heart defects in adults have not been very frequent, but their number can be expected to increase because of our increasing ability to keep these patients from dying of subacute bacterial endocarditis in childhood by the use of massive doses of penicillin.

Now let us look at the rheumatic heart disease problem in the adult. After all, most of the disability from rheumatic heart disease is found among the adult group, especially between the ages of twenty and forty, rather than in the childhood group where active rheumatic fever with or without active carditis is the main problem. I will merely mention rheumatic pericarditis and rheumatic pericardial effusion, as these are usually part of the acute picture and do not occur in the chronic phase. Chronic rheumatic myocardial damage is hard to detect clinically unless one assumes that the degree of cardiac enlargement is determined, in part, by the muscular damage rather than by the amount of valvular impairment alone. The relative importance of the muscular and the valvular factors is always difficult to estimate. In a similar manner one might also assume that the rheumatic heart that develops serious rhythm disturbances, especially fibrillation, has sustained more serious myocardial damage than the one that does not develop such arrhythmias.

It may well be that myocardial damage may be a much more important factor in determining the ultimate prognosis than is the endocardial damage, but because of the difficulty in evaluating this damage with any degree of accuracy, much more attention has been paid to the valvular endocardial changes. Any one of the four sets of valves or any combination of these may be involved. By all odds, mitral valve damage exceeds the others. Next comes a combination of mitral and aortic valve involvement and then comes aortic valve involvement alone. Right-sided valvular involvement is not infrequent, even though it is comparatively rarely diagnosed. One might say in a very general way that mitral insufficiency is the most frequent valvular lesion of rheumatic heart disease, while mitral stenosis is the most characteristic lesion and aortic regurgitation is the most serious lesion. Aortic stenosis is probably the least frequent of the left-sided lesions. These four lesions can be differentiated from each other and from the congenital defects previously discussed by noting four different groups of signs: (1) the murmur present, (2) the changes in heart sounds, (3) size and shape of the heart as determined by percussion by palpation and x-ray, and (4) the changes in the peripheral arterial pulsations.

In patients with mitral regurgitation we find a systolic blowing murmur at the apex or in the mitral area well transmitted to the left and sometimes to the back. The first heart sound in the mitral area is partially or entirely replaced by the murmur, while the second sound in the pulmonic area is definitely accentuated. The left ventricle, the left auricle, and the pulmonary artery area are enlarged. The peripheral pulsations are usually unchanged.

In patients with mitral stenosis we find a presystolic rumbling crescendo murmur ending in a sharp first sound, located medial to the apex and very poorly transmitted. Sometimes the rumbling can be heard in the mid-diastolic or in the entire diastolic period. Many times the murmur can be felt as a thrill and the sharp first sound as a "systolic shock." The second pulmonic sound is accentuated. The right ventricle, and especially its outflow tract, and the left auricle are enlarged. The peripheral artery pulsations are small, and the pulse pressure is low.

In aortic regurgitation one finds a soft, blowing, diastolic decrescendo murmur along the left border of the sternum from the second to the fourth interspace. Sometimes it is heard in the second right interspace, and if loud, it may be heard over the entire precordium. The second aortic sound is partially or entirely replaced by this murmur. The left ventricle is greatly enlarged and extends down and to the left. The other chambers of the heart are normal in size and shape. The peripheral artery pulsations are increased so that one gets a water hammer pulse, a high pulse pressure, a pistol shot sound over some of the arteries, capillary pulsations, Duroziez sign, etc.

With aortic stenosis, one finds a rough, rasping systolic murmur, heard best in the aortic area and transmitted to the neck vessels, and an absent aortic second sound. Frequently, there is a systolic thrill in the aortic area. The heart is not enlarged much, if at all, even though the left ventricle may show a great deal of concentric hypertrophy. The pulse is "slow, small and late," and the pulse pressure is low.

When two or more of these valvular lesions are present, the signs of each will be present except when the signs are opposite in nature. Then the predominating lesion will determine the actual physical findings.

Of the right-sided lesions I shall mention only one—probably the most frequent—namely, tricuspid regurgitation. The chief findings are large pulsating neck veins, pulsating liver, enlargement of the heart to the right, frequently slight cyanosis, a peculiar thrust of the entire chest to the right with each beat, and sometimes a systolic blowing murmur over the lower end of the sternum.

Necessarily, many details which at times are of extreme importance must be omitted in a paper of this length, but I am sure that if one uses only the points herein mentioned, there should be little difficulty in correctly diagnosing the lesions present in most young adults having either rheumatic heart disease or congenital cardiovascular defects.

505 State Tower Building

Reference

1. Abbott, Maude E.: Atlas of Congenital Heart Disease, American Heart Association, 1936.

MAKE YOUR PLANS NOW TO ATTEND THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, MAY 8 TO 12, 1950, HOTEL STATLER, NEW YORK CITY

RECENT TRENDS IN HYPERTENSIVE HEART DISEASE

MORRIS F. MISSAL, M.D., F.A.C.P., Rochester, New York

(From the University of Rochester School of Medicine and Dentistry and the Medical Service, Rochester General Hospital)

THE subject of hypertensive heart disease is a difficult one to discuss because the cause of hypertension is, in most instances, unknown. At the present state of our knowledge the subject is highly controversial, and the problem cannot be separated from that of the underlying hypertensive state. Its importance, however, is shown by estimates that half of the population over the age of forty will die of hypertension or its complications, and, of those having hypertension, half will die of cardiac disease caused or aggravated by the condition. It is a subject of current interest because of additions to our knowledge of physiology and the hopes engendered by the newer therapies. On the other hand, many of the problems of hypertensive heart disease are common to other forms of heart disease. This applies particularly to congestive heart failure, coronary insufficiency, myocardial infarction, and the arrhythmias. In years past the condition was frequently masked under the diagnosis of "cardiorenal disease" or "chronic myocarditis."

The cause of human essential hypertension is unknown despite the extensive clinical and experimental work already done. It is a complex disorder of which elevated blood pressure is merely one manifestation. Goldring prefers to consider the kidneys as one contributor to a constitutional disorder involving, in addition, the vascular bed, the vasomotor centers, and the cerebral cortex.[1,2] As yet he is unprepared to accept Goldblatt's monumental work on renal ischemia as the counterpart of the human syndrome.[3] Goldring's evidence that renal blood flow is normal and arteriolosclerosis often absent in early cases forms part of the basis for this conclusion. If disease of the genitourinary tract or unilateral kidney disease can produce human hypertension, it does so in extremely rare instances. Several of the published case reports will stand rigid clinical analysis.[1,4]

There is some evidence of an endocrine relationship in certain types of hypertension. Adrenalectomy abolishes or prevents the development of experimental renal hypertension or the production of vasoexcitor material.[5] Hypertension can be produced in animals by adrenal steroids or anterior pituitary corticotrophic hormones. These effects can be exaggerated by high protein or high salt diets and can be prevented by low salt or low protein diets.[6] Desoxycorticosterone causes a vasopressor effect and salt and water retention in man.[7,8] The relationship of these findings is not clear, except possibly in Cushing's disease.

No discussion of hypertension would be complete without indicating the various conditions that may be associated with diastolic and/or equivalent systolic hypertension:[9]

1. Organic renal diseases: diffuse glomerulonephritis, pyelonephritis, polycystic disease, hydronephrosis, amyloid contracted kidney, diabetic glomerulosclerosis, renal arterial or venous occlusion, and aberrant renal artery.
2. Diffuse vascular disease: periarteritis nodosa, disseminated lupus erythematosus, and thromboangiitis obliterans with visceral involvement.
3. Endocrine gland hyperplasia or neoplasia: pheochromocytoma, adrenal cortical tumors, ovarian tumors, and pituitary basophilic adenoma (Cushing's syndrome).
4. Specific toxemia of pregnancy.
5. Coarctation of the aorta.
6. Intracranial disease: brain tumors, trauma, and infection of the brain stem.
7. Essential hypertension (the condition in the large majority of cases in which no specific etiologic agent can be demonstrated): In only approximately 10 per cent of the routine cases studied can the cause be recognized, and in many of these the condition cannot be reversed by the removal of the agent. The remaining group of 90 per cent falls into the category of essential hypertension, and it is this group that presents such a tremendous problem at present. It is important, however, that one be "etiology conscious" lest one of these reversible problems be overlooked. Particularly should one be aware of the possibility of pheochromocytoma, since this may be a cause of not only paroxysmal hypertension but chronic sustained hypertension. Specific tests are now available that help in its recognition, and in many instances surgery can cause a reversal of the process.[10]

Primary or essential hypertension may be classified into various groups according to the degree of elevation and fluctuation of the arterial tension and the presence of cardiac, neurologic, renal, and retinal complications. A benign form

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of hypertension may be present without complications for decades; an intermediate type characterized by angiospasm and a higher fixed blood pressure tends to develop headache and dyspnea early. Cardiac hypertrophy is usually present, death occurring in six to ten years, or the condition may turn into the "malignant phase." This last group shows marked retinal angiospasm, hemorrhages, exudate, and papilledema. Marked evidence of renal damage is present. Cardiac decompensation occurs, with death in two or less years from uremia.

Hypertensive heart disease is the result of changes that have led to the development of left ventricular hypertrophy. The hypertension has caused structural changes in the heart and small arteries. As the process evolves, one encounters several factors which contribute to the production of a relative inadequacy of the coronary supply. The increased aortic pressure tends to increase the coronary flow but not in proportion to the greatly increased work of the left ventricle. The subendocardial region is particularly vulnerable. The intramyocardial pressure during systole is increased in the deeper layers and exceeds the aortic pressure. There is thus an interruption of coronary flow in this region, whereas such interference does not occur in the outer zone of the ventricular muscle. The subendocardial areas of the septum and left ventricle are particularly susceptible to ischemia and may develop patches of fibrosis. The capillary count per square millimeter of muscle is decreased in hypertrophy, and there is impaired diffusion of oxygen, nutriments, and the products of metabolism.[11] Associated coronary disease further reduces the blood flow.

In this day of precision instruments and intensive laboratory studies, the importance of the history and physical examination are not emphasized sufficiently. Yet these may be a source of important data not obtainable by other means.

There are no symptoms of hypertensive heart disease until complications arise, and there are no symptoms particularly characteristic of this type of heart disease. Dyspnea on exertion is usually the first symptom. This may progress to marked failure dyspnea and orthopnea unless proper therapy is instituted. Acute left ventricular failure manifested by nocturnal dyspnea or following excitement may eventually occur. This is often designated as "cardiac asthma" and should not be confused with bronchial asthma because of the differences in indicated treatment. Right ventricular failure may occur later or may be more prominent from the onset than the left heart failure.

Because there is always some coronary sclerosis present, many of these patients develop angina pectoris and eventually myocardial infarction. Almost any of the arrhythmias may occur at some stage; auricular fibrillation is probably the commonest. The only constant sign of hypertensive heart disease is cardiac enlargement. This may be difficult to recognize early in the disease. The etiology of the heart disease may occasionally be in doubt because at the time of examination the hypertension may have subsided, particularly if heart failure or myocardial infarction has occurred. As cardiac enlargement occurs, there develops dilatation of the left ventricle and aorta with aortic and apical systolic murmurs. In more advanced cases the aortic ring may be stretched with the production of an aortic diastolic murmur. This may lead to an incorrect diagnosis of aortic valve disease. Until the heart begins to fail the aortic second sound is accentuated. With the beginning of left ventricular failure, the pulmonic second sound increases in intensity due to increased pressure in the lesser circulation. Under these circumstances the pulmonic second sound equals or exceeds the intensity of the aortic second sound. Careful notes of these findings made at the time of examination may help in following the course of the disease. It is not unusual to detect prominent pulsations of the innominate artery and carotid arteries above the inner ends of clavicles. These may simulate aneurysm. With the development of congestive failure, arrhythmias, gallop rhythm, or pulsus alternans may be found. The importance of examination of the ocular fundi need not be dwelt upon.

The use of the electrocardiograph is of particular interest in the study of hypertension or hypertensive heart disease, particularly in the patient not yet incapacitated. Abnormalities may be absent in the early compensated stages. As the heart fails to carry its load, electrocardiographic changes occur which closely correspond to the structural and physiologic changes. There are identified changes due to hypertrophy, impaired cardiac nutrition, and stages of myocardial degeneration. At any time coronary artery occlusion may occur. Serial electrocardiograms at intervals may show changes in the pattern which, when considered alone, would be inconclusive. Such base line tracings may help decide the significance of changes present when myocardial infarction is under consideration. The usual evolution is the development first of a normal left axis shift and later the progressive evolution of S-T and T changes indicative of left heart strain. The superimposition of right heart strain is shown by development of S-T changes in leads 2 and 3. Where left ventricular hypertrophy is present, changes in the S-T segment and T wave may develop in the absence of left axis deviation.

The left axis deviation is not an invariable or necessarily an integral part of the electrocardiographic pattern of left ventricular hypertrophy. That the left axis deviation is due largely to associated obesity with transverse heart is shown by the much less frequent occurrence of left axis deviation in slender subjects with hypertension. In the more advanced stages, intraventricular block is not uncommon.

Electrocardiograms are of some help in determining the prognosis. The death rate of hypertensive patients with normal electrocardiograms is nearly twice that of an age equivalent group with normal blood pressures.[12,13] The presence of changes suggesting left ventricular hypertrophy or left ventricular strain increases the proportion of deaths over the normal expectancy to 2.7. Where the patterns are typical of left ventrical hypertrophy, the death incidence is 3.4 times normal, and, if evidence of coronary insufficiency or myocardial fibrosis is also present, the death incidence over the expected normal rises to 3.7 times. These differences in mortality rates among the electrocardiographically separated groups are not related to differences in levels of arterial pressure. Serial electrocardiograms aid in judging the effect of hypertension on the heart and in helping to distinguish between hypertension and hypertensive heart disease and the extent of the latter. The electrocardiogram cannot be used as the exclusive criterion of the cardiac state. The diagnosis of left heart strain is easily made from the electrocardiogram and may be made before the heart enlarges greatly. However, the pattern of left heart strain is not a specific finding for hypertension alone. It may occur in coronary arteriosclerosis, aortic valve disease, pure mitral valve regurgitation, and coarctation of the aorta. It may be simulated by the administration of digitalis and quinidine. Following operative treatment, diet, and/or certain drug therapy, these electrocardiographic changes may occasionally be reversed.

Just as diverse factors have been indicated as causes of hypertension, so has the treatment of this condition followed complete cycles of acceptance, rejection, and rediscovery of specific and nonspecific treatment, none of which has withstood critical analysis. In some individuals, reduction of blood pressure and/or symptomatic relief can result temporarily from almost any treatment given with superficial psychotherapy and reassurance.[9] The fluctuation of blood pressure inherent to the disease is frequently forgotten. Evans has well shown the fluctuations in blood pressure that can result following the administration of placebos.[14] In a group of 64 subjects, 27 showed a drop in systolic blood pressure varying from 15 to 75 mm., in nine there were rises in the systolic blood pressure from 15 to 50 mm., and in 28 there were no changes of significance in the blood pressure during a two-week control period on a placebo mixture. He was also able to demonstrate striking variations in the blood pressure of a single patient when the administration of various medications was intermingled with periods on placebos. Ayman demonstrated similar fluctuations in blood pressure when he gave a group of control hypertensive patients ten drops of dilute hydrochloric acid in colored water before each meal.[15] These fluctuations of blood pressure must be borne in mind when attempting to evaluate the results of any treatment. Subjective symptoms in hypertensive disease frequently do not depend on the level of blood pressure, since it is frequently observed that lowering of the blood pressure level by any means is not necessarily accompanied by relief of symptoms. Furthermore, symptoms are often relieved when the blood pressure level has not been lowered. The decline of the blood pressure level is not to be interpreted as reversal of the underlying cause of the disease but rather as amelioration of those secondary and reversible factors which are superimposed on the basic mechanism.[2]

The various diagnostic procedures—the sedation, cold pressor, and postural tests, spinal anesthesia, and renal function tests—are, at best, only prognostic guides. They may or may not help in the selection of patients for surgical sympathectomy. They are unable to help decide which therapeutic procedure—diet, drugs, or surgery—will produce the greatest relief for the individual patient. As yet only a therapeutic trial will determine the most effective procedure.

Drug Therapy

Search for drugs that would block sympathetically enervated vasoconstriction has been stimulated by surgical sympathectomy.[16] Several drugs are known, but few are as yet practical for clinical long-term use. Among these are tetraethyl ammonium salts, dibenamine, pentaquine, and the derivatives of ergotoxine. These agents have in common the following pharmacologic effects: All produce a drop in blood pressure, particularly in the erect position, and this is variable in degree and duration, often not related either to dosage or to the completeness of the sympathetic blockade. Tetraethyl ammonium has the shortest effect, derivatives of ergotoxine and dibenamine intermediate, and pentaquine the longest effect. These drugs differ in their site of action: tetraethyl ammonium salts cause parasympathetic block; dibenamine, a nitrogen mustard derivative, blocks or inhibits both excitatory sympathetic functions and the effects of epinephrine. Pentaquine, a synthetic derivative of plasmochin originally used for malaria therapy, blocks sympathetic reflexes in the central nervous system rather than at the ganglia or peripherally. Although this last can be given orally and is often associated with a striking drop of blood pressure including those in the malignant phase, the effect is variable, and the large doses needed produce toxic effects. These last consist of abdominal pains, anorexia, and methemoglobinemia. The postural hypotension lasts several days after the drug is discontinued.

The dihydrogenated alkaloids of the ergotoxine group produce a central blockade of the sympathetic reflexes. The most useful one to date is apparently dihydroergocornine (DHO180). It can be given orally or intravenously, and the hypotensive effect lasts hours to several days. Toxic effects are minimal, and this drug seems very promising. This whole approach to the hypertensive problem is so recent that little can be concluded as to the ultimate value of these drugs.

Veratrum viride, a drug formerly condemned, is once more receiving attention and probably is nearer practical clinical use than some of those referred to previously.[17] Hypotensive effects can be obtained from nontoxic doses, and so far as is known there are no harmful effects to the heart or kidneys following prolonged administration. Originally these alkaloids were discarded because they were thought to be cardiac depressants and because they had been misused. Recently, it has been shown that a fall in blood pressure can be produced after therapeutic doses. A decrease in peripheral resistance occurs. The drug stimulates the afferent vagal endings in the stomach, thorax, and, particularly, in the myocardium of the left ventricle from which impulses travel to the brain and initiate a reflex drop in blood pressure and pulse rate. It may be administered parenterally or orally. The latter is preferable, as the hypotensive effect produced is of longer duration. In a group of 30 patients to whom we have administered the drug for periods not exceeding six months, we have encountered untoward effects in 20 per cent (six patients). In only three of the cases have we been impressed with the favorable effects of the medication. However, in these three patients we have obtained results not encountered in a two-year control period including various therapies among which was rigid sodium restriction.

Case 1.—The first patient was a seventy-five-year-old woman whose blood pressure had varied from 200 to 230 systolic and 90 to 100 diastolic. Following the use of the drug for three weeks, readings of 150 over 60 were obtained.

Case 2.—The second patient was originally seen because of retinal hemorrhages and hypertension with readings varying from 210 to 230 over 110 to 135. During a two-year follow-up her systolic pressure never fell below 190 or diastolic below 110. She demonstrated a blood pressure of 140 over 90 after four weeks on veratrum viride.

Case 3.—The third patient showed a less spectacular drop in blood pressure, but, nevertheless, a reading that was not encountered during the control period. Her systolic pressure had varied from 220 to 270 over 116 to 140. Her arterial tension after five weeks on the drug was 150 over 100. It is too soon to determine what the ultimate value of this drug will be.

The effective oral dose produces an effect within one or two hours after administration, reaches a maximum in four to six hours, and then tends to lose its effect in ten to fourteen hours. It is better to administer the drug at eight- to twelve-hour intervals in order to avoid a cumulative effect. Often undesirable effects may appear from doses only slightly greater than the therapeutic dose and in some patients in doses insufficient to produce a hypotensive effect. Many of these unpleasant effects may be avoided by a proper spacing of the doses. A few cases have been reported in which there has been regression in cardiac size and also reversal of the electrocardiographic picture of left ventricular strain.[17]

Toxic effects are usually nausea and vomiting, a sense of tightness in the throat, excessive salivation, or paresthesias of the hands and feet. These disappear in a few hours after stopping the drug. Collapse may occur from too great a drop in blood pressure.

Diet Therapy

Diet therapy is at the moment receiving greater attention than drug therapy. It has long been known that weight reduction, where indicated, frequently produces a decrease in blood pressure. This can be accomplished in a cooperative patient with a 1,200-calorie diet and may be all that is necessary in certain patients with hypertension.

In our hands, the Kempner "rice diet" has been difficult to administer.[2,18,19] It is unpalatable, monotonous, and for many patients very weakening. Many become discouraged. The formula is as follows: approximately 2,000 calories consisting of 5 Gm. of fat, about 20 Gm. of protein, and not more than 200 mg. of chloride and 150 mg. of sodium. Weight loss occurs early due to inadequacies of calories in some patients and the loss of visible and invisible edema. The initial diet consists solely of rice, fruit, and sugar. Later, small amounts of legumes, meat, fish, and potato are permitted.

Although Kempner claims an ability to maintain his patients in nitrogen balance, due to the protein-sparing action of the high carbohydrate intake, there has been some disagreement on this point.[20] Most workers in this field believe that the diet is effective because of the low sodium content rather than because of any special advantage of the protein derived from rice. On this regime the blood cholesterol and nitrogen levels decrease.

We have had greater success with diets more generous in protein, comparable to those published by Bryant and Blecka.[21] Although this diet contains but 200 mg. of sodium, it has 80 to 175 Gm. of fat, 70 Gm. of protein, and 130 to 230 Gm. of carbohydrate. Fluids are permitted to 3,000 cc. in contrast to the fluid restriction of the Kempner regime.

On either of these regimes, certain patients show a decrease in heart size, improvement of ocular fundi, improvement in electrocardiogram, a decrease in edema, and improvement in symptoms. The diets are extremely difficult for those compelled to travel, but many are able to follow them for months.

Grollman and Harrison were able to obtain some experimental confirmation by demonstrating a drop in blood pressure in hypertensive rats fed on low sodium diets.[22] The addition of salt prevented a blood pressure drop.

These diets should not be used without excluding the presence of renal or adrenal tumors or infection. They are indicated in all serious cases of acute and chronic nephritis and heart failure. An exception is nephritis with sodium loss. Either of these diets should be tried in cases of hypertensive vascular disease when more liberal regimes have failed. They are not contraindicated in diabetes mellitus, and in many of these cases the insulin can be decreased. These diets should not be used unless frequent checks of blood and urine chemistry determinations are made.

These diets are not without danger, particularly where there is excessive loss of sodium chloride. Several observations have already been published demonstrating a striking rise in blood urea and other nitrogenous fractions after relatively short periods on low sodium diets, particularly when diuretics have also been used.[19] It should be emphasized that episodes of hypochloremia may be confused with cerebral vascular accidents. It is well to bear this possibility in mind in any patient given this type of regime. The administration of salt by mouth or injection will promptly relieve such symptoms.

In all such diets the patient must be meticulously instructed in the choice of foods with natural low sodium content, and about the avoidance of such easily forgotten sources of sodium as baking soda, various dentifrices, including sodium perborate, bakers bread, and others. The preparation of such diets is aided by the use of dialyzed milk (Lonalac).*

Approximately 30 per cent of the patients whom we have had on low sodium diets showed a moderate to significant drop in blood pressure after several weeks. Rarely was this maintained for long periods of time. In evaluating the effect of this diet one should recall the blood pressure ranges of patients given placebos and the effect of weight reduction alone. Where cardiac failure is present, benefit is usually great even in the absence of hypotensive effect.

For more rapid effect, particularly in the presence of hypertensive encephalopathy, we have used, in addition to the diet, mercurial diuretics administered daily to weekly. In a few patients this combination of approaches seemed of great help in the treatment of hypertensive crises. The mercurial diuretics assist in the excretion of sodium.

Surgery

The value of sympathectomy in the treatment of hypertension is in better perspective, although the question is still a controversial one. The longer the postoperative cases are followed, the fewer successes can be ascribed to this procedure. Palmer demonstrated a diminishing return of favorable results from 70 per cent shortly after sympathectomy to 25 per cent when the patients were followed for three to five years after the operation.[23] Nevertheless, he noted a higher percentage of favorable results than occurred in a control group treated "medically." Most impressive are the results obtained in malignant hypertension. In our present knowledge, sympathectomy can be considered the treatment of choice for these patients. In view of the many uncontrolled factors and the varied course of the disease, patients with lesser degrees of hypertension should not be subjected to dorsolumbar sympathectomy until a substantial period of observation has shown the trend of the disease and, even then, not without carefully considering the social and economic status of the patient. Final judgment may depend on balancing the present status and estimated future of the patient with the induced postoperative discomfort and prolonged postoperative disability, which in some cases lasts from six months to a year.

There is no evidence that sympathectomy improves renal blood flow in hypertension. This is in contrast with earlier claims about the efficacy of the operation. Few persistent cures have resulted from any of the operations. The chief benefits to be hoped for in those subjected to surgery are a decrease in arterial tension in some patients, relief of incapacitating symptoms (particularly headache), improvement of certain objective criteria, such as electrocardiographic or fundoscopic picture, and, in the case of early malignant hypertension, a markedly significant increase in survival time.

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* Manufactured by Mead-Johnson Company. This company has for distribution a very complete list of sodium and potassium analyses of commonly used foodstuffs.

The criteria for the selection of cases are not well established. The responses to amytal, caudal or spinal anesthesia, and tetraethyl ammonium chloride have been disappointing. We have seen a few brilliant results where seeming contraindications to operations were present and where the operation was offered as the sole alternative for a desperate, critically ill patient after trying unsuccessfully all other forms of suggested therapy.

Fishberg in an analysis of 119 patients selected for sympathectomy on clinical criteria determined by himself after evaluating the preoperative and postoperative courses came to essentially the same conclusions.[24] In 30 of the patients the diastolic blood pressure was reduced 25 per cent or more. Retinopathy cleared in 12 of 17 patients. Headache and retinopathy may disappear after operation without fall in blood pressure. After weighing the favorable and untoward effects, he feels the operation is indicated in less than 4 per cent of patients with essential hypertension.

The treatment of congestive heart failure in hypertensive heart disease is little different from the problem presented in other forms of heart disease. The mainstay of treatment is rest, sodium restriction, and digitalis in any of the several forms available, all regulated according to the needs of the individual patient. The more recent tendency towards sodium restriction and the more frequent use of mercurial diuretics have definitely improved the outlook for an increased and more comfortable span of life. There should be careful individualization of all such programs, since patients vary in their requirements and responsiveness.

A similar generalization could be made about the treatment of the anginal syndrome or myocardial infarction, namely, that its treatment differs little from its occurrence in other forms of heart disease.

In concluding this discussion of hypertensive heart disease, one must admit that we are far from the ideal goal of removing the cause or causes of this problem. The effects of specific or general therapy must be evaluated in terms of the natural history of the disease. Although the outlook at the moment appears not too encouraging, much can be accomplished by thorough medical work-up and competent medical psychologic management. There is often a long period intervening between the discovery of elevated blood pressure and the appearance of the first significant symptoms. Much can be done in active and prophylactic management as well as in preparation of the patient for his future life. This early period, properly managed, is of the utmost importance as a means of preventing or delaying complications of the underlying disease.

28 Strathallan Park

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THE DIAGNOSIS AND TREATMENT OF PERIPHERAL ARTERIAL DISEASE

J. Sutton Regan, M.D., Buffalo, New York

(From the Buffalo General Hospital)

During the past twenty years many articles have been written on the diagnosis and treatment of peripheral vascular disease. However, there is still some variation of opinion as to what type of treatment actually should be given, and, therefore, it was thought timely to present the results obtained at the Buffalo General Hospital, especially the surgical treatment.

The largest group of patients seen at the Hospital is the occlusive vascular disease which embraces arteriosclerosis obliterans, with and without diabetes, and thromboangiitis obliterans, more commonly known as Buerger's disease. The diagnosis of these conditions is not difficult, one of the most important features being an accurate history. By and large, the onset of arteriosclerosis obliterans has a much shorter history than does that of thromboangiitis obliterans. In fact, the onset of the former may be rather sudden, due to a thrombosis in the sclerotic artery akin to coronary thrombosis. The outstanding feature in these patients is their inability to walk any distance without claudication pain. Also, poor healing power is frequently noted, as is the presence of cold feet. Too frequently, the patient presents himself with intractable pain from an open lesion which has been present continuously for a period of time. The diagnosis is not too difficult to arrive at, and no fancy gadgets are necessary. The most important single sign is the palpability of the dorsalis pedis and posterior tibial arteries around the ankle, the popliteal behind the knee, and the femoral in the groin. Elevation pallor is usually present in people with insufficient blood supply. A person with normal circulation can elevate his legs, moving his feet 25 times, and maintain good color and capillary response. Dependent rubor following elevation is indicative of poor blood supply, and the length of time it takes for the rubor to come on is an index of the degree of impairment. Another important observation is the vein filling time; that is, with the patient lying down, elevate the leg for two or three seconds, and then see how long it takes for the superficial veins to fill after emptying by gentle massage.

After determining that there is occlusive vascular disease with symptoms, one can use other diagnostic measures which are very helpful as to future treatment. The degree of calcification on x-ray is helpful although not a deterrent factor against surgery. With the patient in a constant temperature room the amount of warming up of the foot following the application of heat to the lower abdomen (reflex heat) or immersing one arm in hot water gives an indication of the degree of vasospasm present in the remaining patent arteries. By far the most accurate and best preoperative test is the use of sympathetic block with novocain. This anesthetizes the sympathetic ganglia, and the resultant vasodilatation can be measured by the increase in warmth of the extremity. This test is the one used almost exclusively at our Hospital. Very frequently, however, the patient with obliterative vascular disease does not respond with good warming of the feet to such a test. An even better index is the walking test following a sympathetic block. The patient walks up and down the corridor at a definite speed as determined by the intern, and claudication time is measured. Following this a lumbar sympathetic block is done, and the patient is similarly walked to see if we can prolong the onset of such claudication pain. This is an excellent indication of the ability to increase muscle blood supply by sympathectomy (Table 1).

TABLE 1.—Sympathectomies for Peripheral Vascular Diseases

Number of patients	99
Extremities sympathectomized	142
Mortality	0

In cases of arteriosclerosis obliterans where there is severe pain day and night or where there is obvious gangrene of a digit, it is our belief that sympathectomy offers less value than in other cases where claudication pain is the major symptom. In those cases where sympathectomy is not advisable, treatment consists of wrapping both legs with heavy cotton, having the patient take whiskey three times a day, and use of reflex heat by putting an electric pad to the abdomen for a number of hours daily. Many of these cases, of course, result in amputation. We have been careful in the selection of our patients with arteriosclerosis obliterans for sympathectomy, the results of which are shown in Table 2. By

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TABLE 2.—Arteriosclerosis Obliterans

Number of cases	21
Results	
Marked relief	20
Slight relief (one arm with superficial gangrene of finger sympathectomized with relief of pain and healing)	1

marked improvement is meant increased warming of the foot or prolongation of claudication time. This continues to improve as the postoperative period extends. We have about come to the conclusion that a person with arteriosclerosis obliterans who has a unilateral sympathectomy should actually have a bilateral sympathectomy, since the disease usually involves both legs, and some patients who have had a unilateral sympathectomy return later for sympathectomy on the other side. It has been the opinion in our Hospital that lumbar sympathectomy for arteriosclerosis obliterans associated with diabetes is not too desirable. However, because of the reports to the contrary from other clinics we feel that lumbar sympathectomy should be done much more frequently in the future than it has in the past for this condition.

Concerning thromboangiitis obliterans, which in our series occurred only in young men, we have tested patients in the manner mentioned above. However, it is our belief that nearly every patient with Buerger's disease should be sympathectomized regardless of the results of the preoperative tests. Poorer results should be expected from patients with longstanding Buerger's disease than from those with a shorter history. It must be said that any patient with Buerger's disease who does not cease smoking most probably will end in an amputation, even in spite of sympathectomy. It is our opinion that the operation should be refused any patient with Buerger's disease who does not cease smoking. The results of sympathectomy in thromboangiitis obliterans are shown in Table 3.

TABLE 3.—Thromboangiitis Obliterans

Number of cases	23
Legs sympathectomized	31
Arms sympathectomized	6
Results	
Marked relief	20
Moderate relief	2
No relief (1 case gangrene, 1 case very delayed)*	2

* Sympathectomy best done early in disease.

In consideration of the vasospastic states this includes a variety of conditions, the most prominent being Raynaud's disease. This disease, which occurs almost universally in women and involves mostly the upper extremities, is characterized by attacks of vasospasm of the fingers initiated by exposure to cold. During the attacks there is blanching of the fingers, numbness, and stiffness with limitation of motion. Such attacks are relieved only by rubbing or exposure to heat. When these attacks of spasm occur frequently during the day, superficial ulcerations may develop at the tips of the fingers. We have seen one case of gangrene of the tip of a finger in this condition. The use of medications is of little value because, as Sir Thomas Lewis puts it, "vasodilating drugs are so evanescent in their action that little relief can be expected from their use." Preganglionic dorsal sympathectomy as proposed by Smithwick is the procedure of choice in these conditions. The results of the treatment in these conditions can be seen in Table 4.

TABLE 4.—Raynaud's Disease (Including 3 Cases with Vasospastic Phenomena)

Number of cases	15
Results	
Complete relief of symptoms	15

The next most common condition considered under vasospasm is post-traumatic dystrophy, commonly known as causalgia. This condition is a painful state usually following a trivial injury. In the early weeks after such injury there may be swelling and increased warmth of the extremity associated with the continuous pain. However, later on at the time that such cases present themselves for treatment, vasospasm occurs with marked cooling of the extremity despite good palpability of the arteries. This condition is very discouraging and should be treated vigorously in order to expect a good result. Many of such patients, if treated early with repeated sympathetic blocks, will get a cure from such treatment. However, in the prolonged case (duration of one or two years) sympathetic blocks will not give lasting relief, and sympathectomy has to be resorted to. The results in our series are shown in Table 5.

TABLE 5.—Post-traumatic Dystrophy (Causalgia)

Number of cases	21
Results	
Marked relief	13
Slight relief	4
No relief	4

It can be seen by these figures that marked relief occurred in 13 patients, and slight or no relief occurred in eight. In the latter groups seven of the eight patients were women, and all were compensation cases. These present such a problem that it is a question in our minds whether or not sympathectomy should be done in women who have had industrial accidents. These failures continue to complain of pain in the incision and in the extremity, so much so that it is questionable whether or not they have developed a pain pattern in their cerebral cortex. By and large, the operations on the lower extremity are attended with greater success than those on the upper extremity for this condition. We have had only one failure in a man which involved a painful amputation stump of the upper extremity.

The problem of scleroderma is usually associated with Raynaud's phenomenon. In this condition there is usually a marked thickening and edema of the skin of the fingers and markedly impaired flexion of the fingers. Most frequently, the condition also involves the skin of the upper extremity and the face giving a typical tight appearance to the facies. The skin is drawn tightly over the nose. There is frequently inability to open the mouth to the full degree. It is important in this condition to determine whether or not the sclerodermatous condition of the upper extremity is part of a generalized disease known as dermatomyositis or whether it is just limited to the upper extremities. Before sympathectomy is done, a biopsy of skin and muscle should be taken, preferably from the upper arm or subclavicular region, to determine whether or not myositis is present. If this condition is found, the value of sympathectomy is questionable. If, however, no myositis is present, sympathectomy might be considered. The results in our series representing a small number of cases have not been encouraging. All patients had warming of the hands and were free of ulceration for a period of eighteen months to two years. However, vasospasm has recurred, and in two cases gangrene of the fingers developed approximately two years after surgery. One patient, as a result of gangrenous ulceration, has had all fingers amputated. The results of this condition in our series are shown in Table 6.

TABLE 6.—SCLERODERMA WITH RAYNAUD'S PHENOMENA (ALL INVOLVING ARMS)

Number of cases	5
Results	
Relief of vasospasm in all for a time	
Later recurrence of gangrene in some	

It might be mentioned that we have done sympathectomy with successful results in one case of pernio, one case of hyperhidrosis, one case of postpoliomyelitis vasospasm with ulceration, and one case of intractable angina.

In conclusion, a review of 142 sympathectomized extremities shows that: (1) good results can be expected in early cases of arteriosclerosis obliterans and Buerger's disease; (2) cures follow sympathectomy for Raynaud's disease; (3) the results in causalgia are better in men and in the lower extremities, and that (4) only temporary relief is usually obtained in scleroderma.

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W. P. ANDERTON, M.D., *Secretary*

MEDIASTINAL EMPHYSEMA WITH SPONTANEOUS PNEUMOTHORAX

DONALD R. MCKAY, M.D., F.A.C.P., Buffalo, New York

(From the Medical Department, University of Buffalo)

MEDIASTINAL emphysema is an entity which has been recognized for over a century, but the frequent recognition of the lesion and the understanding of the method of production did not come till a decade or so ago. Present knowledge is due to or stimulated by the clinical and experimental observations of Hamman and Macklin.[1–5]

The rather characteristic onset and frequent association of spontaneous pneumothorax strongly suggests that the production of the latter is more often than not dependent on the former. There is still a strong general conception that most cases of spontaneous pneumothorax are of tuberculous origin. While in tuberculous patients the rupture of visceral pleura may be the cause of pneumothorax, the majority of patients presenting lung collapse today certainly have no clinical evidence of tuberculosis. Since accumulated evidence appears to be strongly in favor of mediastinal emphysema as the principal factor in the production of spontaneous pneumothorax, it would seem worthwhile to review briefly the mechanisms involved, both in the development of mediastinal emphysema and the production of spontaneous pneumothorax, and to report two cases of the combined conditions and five others which we believe developed lung collapse by intrapleural air secondary to mediastinal emphysema.

Air may enter the mediastinum in several ways: through perforation of an air-containing structure, such as the esophagus, trachea, or bronchus; via fascial planes of neck following pharyngeal, thyroid, or other operations on the neck; from the retroperitoneal space, and from the interstitial pulmonary tissue.[6,7]

In the earlier period of lung surgery the imperfect closure of the bronchus stump in either lobectomy or pneumonectomy occasionally resulted in mediastinal emphysema. Cases due to esophageal perforation have been reported. In these the symptoms arising from the presence of air may be masked by those of infection. Air may enter the mediastinum from the abdomen, traveling along the esophagus or aorta. Perforation of the stomach or intestine or the pneumoperitoneum for the treatment of tuberculosis or perirenal air injections for roentgen surveys may produce mediastinal emphysema.

The creation of interstitial pulmonary emphysema is believed to be the chief cause of mediastinal emphysema. Macklin has demonstrated by his experiments on small animals that by overinflation the alveoli can be made to leak along the pulmonary blood vessels toward the lung roots with subsequent break through into the mediastinum. If pressure is continued, air may enter the neck, face, axillary chest wall, arm, retroperitoneal space, or rupture through the mediastinal wall into one or both pleural spaces. The analogy to humans of such experiments is indicated by Macklin and Hamman where the following conditions are present: (*a*) straining with the glottis closed as in heavy lifting, parturition, especially in primipara, or straining at stool, and (*b*) occlusion, partial or complete, of the trachea or bronchi usually accompanied by cough. Aside from these factors, chest trauma, pneumothorax induction improperly done, and spontaneous alveolar rupture due to no apparent cause may produce interstitial pulmonary emphysema with subsequent mediastinal emphysema.

Occlusion of trachea or bronchi is an important cause of interstitial pulmonary emphysema. When blockage is complete, atelectasis results in overdistention of surrounding pulmonary tissue. When occlusion is partial and regional, there may be marked overdistention of alveoli in the area involved, and, when partial and complete as in involvement of the trachea and/or the larger bronchi, the lungs may become generally greatly distended. In either case distended alveoli may rupture.

Macklin believes that in those cases of spontaneous alveolar rupture due to no apparent cause bronchial obstruction may be an important factor. Hamman has suggested that, since mediastinal emphysema tends to recur, there may be an inherited defect in tissue quality of the alveoli.

The following brief case reports are presented. For the sake of brevity normal findings are omitted.

Case Reports

Case 1.—J. J., a forty-nine-year-old man, had chronic cough for many years, productive of small amounts of yellowish, odorless sputa; dyspnea on exertion for past year, especially in climbing stairs;

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sharp knifelike, left anterior chest pain just below nipple, off and on, for past year and made worse on deep inspiration. Chest x-ray on December 1, 1948, was reported emphysema with blebs. Around December 25, 1948, he had severe left chest pain, dyspnea, and hemoptysis. About January 15, 1949, he was sent to hospital with diagnosis of pneumonia. While there, he had a sudden and severe coughing episode followed by marked dyspnea and substernal pain. Left pneumothorax was diagnosed.

On transfer to another institution he was found to have blood pressure 138/92, pulse 72, trachea deviated to right, hyper-resonant left chest, no breath sounds, splashing sound heard in base. A few rales were heard in right mid chest. There was no cardiac dullness; all sounds were hyper-resonant. The heart was shifted to right. A peculiar crunching sound was heard just to the left of lower sternum and more prominent during systole. Heart tones were metallic in character, similar to water dripping into an empty bucket. Venous pressures were as follows: left arm 150 mm. of water, right arm 130 mm. water. Electrocardiogram indicated clockwise rotation of heart, low voltage, and diffuse nonspecific T wave changes. Blood studies were as follows: hemoglobin 12 Gm., red blood cells 4,360,000, white blood cells 8,350; differential—10 eosinophils, 4 stabs, 49 segmented polymorphonuclears, 37 lymphocytes. X-ray on February 1, 1949, showed a zone of air about the heart, extending upward about aortic shadow, and extensive left lung collapse which was incomplete due to peripheral adhesions. X-ray on March 22, 1949, showed almost complete re-expansion.

Case 2.—L. Z., a man aged twenty-three, was under observation from September 24, 1948. He claimed no illness until three years ago when he noted dyspnea on exertion. Loss of weight, lack of appetite, and malaise followed. Twelve months previously, he had a constant sharp pain in precordial area radiating to the back. Eight months previously, an identical attack occurred. Pain was present in each episode for four to five days. Two days before admission he had had a similar attack. Jaundice and malaria were present while in service in the South Pacific.

Physically he was a well-developed and nourished young white man; there was no elevation of temperature, pulse, or respiratory rate. Blood pressure was 110/50. There were no abnormal chest findings. The heart appeared slightly enlarged to the left and regular with a rate of 80. In the prone position or when lying on the left side, a high pitched friction rub, best heard in systole and increased by deep inspiration, was noted. At first it was abolished by sitting up or lying on the right side. An hour or two later it could be heard in subdued intensities in these positions. In the prone and left chest positions a palpable rub near the cardiac apex was evident. He had firm cervical, epitrochlear, and inguinal glands. Blood counts showed mild hypochromic anemia. Kahn and Wassermann tests were negative. Electrocardiogram was normal. X-ray of chest on September 24, 1948, showed a small pneumothorax over the upper aspect of the left lung and air along the cardiac border. All pain subsided within four days, and lung re-expanded rapidly. There was no evidence of subcutaneous emphysema.

Case 3.—R. R., thirty-five-year-old man, on lifting an oil drum on March 9, 1949, noted sudden, severe pain of increasing intensity in precordial region radiating to right side. Coronary occlusion was suspected. Examination on the following day revealed a pneumothorax on the left side. When seen on March 12, 1949, there was no respiratory distress, pain, or other subjective complaints. He gave no history of pulmonary symptoms, having always had good health; he had spent several years in the Armed Services. On clinical and x-ray examination a nontensive, fairly complete left pneumothorax was noted. On April 21, after uneventful convalescence, almost complete expansion was noted.

Case 4.—L. G. was a thirty-seven-year-old man. On February 9, 1948, while lifting a barrel, patient coughed and at once experienced severe right anterior chest pain which subsided in a few moments. He continued to work the remainder of the day. In the evening he noted dyspnea and a sense of being "choked-up"; he was hospitalized for six days with good recovery. On March 17, 1948, he again experienced marked tightness in throat and shortness of breath. His past history indicated upper respiratory tract allergy with bronchial asthma present in autumn months. No history of tuberculosis or tuberculosis contact. When seen on March 18, extensive collapse of right lung was noted. Intrapleural pressure was plus 10, plus 2, reduced by 600 cc. aspiration to minus 5, plus 4, and observation was continued in hospital. Smears and gastric washings were negative for tubercle bacilli. Vollmer patch test was positive. X-ray on April 16 showed almost complete re-expansion. Subsequent course was uneventful on return to his previous occupation on May 10, 1948.

Case 5.—M. H. was a girl of twenty. On October 20, 1944, she had had an uneventful delivery of first child. One week later she suffered a stabbing pain in right side. The following day she had dyspnea but did not report it because she wished to be discharged. During the following five weeks she continued to have dyspnea but no pain. Increasingly severe dyspnea prompted hospitalization and x-ray survey on February 6, 1945, at which time a pneumothorax of the left lung with almost complete collapse and a very slight right lateral shift of the mediastinal structures were demonstrated. On February 13, 1945, considerable re-expansion had taken place.

Case 6.—R. W., twenty-year-old girl, began to have a sharp continuous pain in precordial region, increasing in severity and radiating to neck and shoulders, while walking up a flight of stairs on November 28, 1944. A sedative was prescribed, and x-ray on November 29, 1944, showed collapse of the left lung. Bilateral first degree cervical ribs were noted. On December 6, 1944, there was considerable re-expansion of the lung, and by December 18, 1944, complete re-expansion had taken place. There was no antecedent history of illness except for a rather prolonged cold one year before, and it is

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known that her health was normal for over two years after collapse.

Case 7.—J. P. was a man aged forty-three. Since 1942, this man had had asthmatic attacks, the last severe episode three years ago. He had had a short attack of severe substernal chest pain in 1943. On August 11, 1948, he complained of asthma of three days duration and pain in right chest of two days duration. Pain appeared to originate in mid-epigastrium and was referred to right hemithorax and right shoulder region. Examination and x-rays revealed a spontaneous pneumothorax of right lung with about 50 per cent collapse. Blood counts, urinalysis, and sputum studies were not significant. Aside from a fever of 101 F. on August 19 his hospital course was uneventful, and by October 1 the lung was completely expanded. On January 14, 1949, moderate wheezing was noted bilaterally, but x-ray of lungs showed no significant lesion.

Comment

One of the most striking symptoms of mediastinal emphysema is pain, not usually as severe as seen in coronary occlusion, located substernally, in the upper epigastrium, or toward the neck, referred to the back, shoulders, and occasionally down the arms or to one or both sides of the chest.[8] Pain may, in its less severe phases, be caused by pulmonary interstitial emphysema with the formation of large air bubbles about the pulmonary vessels at the lung root before breaking through to the mediastinum. Any marked amount of air in the mediastinal tissue is painful. This is, to a large extent, due to tissue distention, although interference with coronary circulation has been suggested as a possible source of some of the pain. Changes in the character of pain that often take place suggest the transfer of air about the pulmonary vessels into the mediastinum. There frequently is a sense of pressure or constriction which accounts for some of the dyspnea often present. Greater degrees of dyspnea and cyanosis appear to be proportional to the degree of air pressure built up in the mediastinum, causing increased obstruction to cardiac filling or pulmonary outflow. In extreme cases complete circulatory failure may occur unless prompt relief measures are undertaken.

Any marked amount of air in the mediastinum obliterates cardiac dullness and results in the production of Hamman's sign. The former may not be striking if the amount of air present is small, but the latter appears to be very characteristic so long as even small amounts of air are present. These sounds which are of greatest intensity in systole appear to vary a great deal in character. In many cases the patient himself is aware of the sound. It has been variously described as "crunching, crackling, clicking, bubbling, or churning noise," "the rattle of dried peas on a taut canvas," the "wrinkling of a newspaper," and the "grinding of gears." In our second case the sound strongly suggested a pericardial friction rub. The pitch and loudness of the sound apparently depends on the amount and tension of the air present. X-rays and fluoroscopy are often of great value in outlining mediastinal air. Air may be shown in lateral views trapped between the anterior chest wall and the pericardium or in posteroanterior films as a sharp band with an inner translucent pericardial cushion. We believe our first case demonstrates this feature remarkably. Electrocardiography may prove to be of some value especially in spontaneous left pneumothorax.[9]

Other manifestations of mediastinal emphysema are, for the most part, due to air escape mechanisms. These include subcutaneous emphysema which may involve the soft tissues of the neck, face, thorax and abdomen, retroperitoneal emphysema, and spontaneous pneumothorax. Subcutaneous emphysema, when present, is almost proof positive of mediastinal emphysema, providing wounds of the chest and neck operations are exluded. Retroperitoneal emphysema is less easy to recognize, although patients may complain of abdominal pain or discomfort on swallowing.

The presence of mediastinal emphysema and spontaneous pneumothorax together is often demonstrable. Our first two cases show the combined lesion. The reasons for the various manifestations are not entirely clear. Probably the location of the air and the individual integrity of the mediastinal pleura are the two most important factors. After a chest injury there is often dyspnea and cyanosis with evidence of pneumothorax, at times involving the side opposite the injury. In the absence of rib fractures it is difficult to explain pneumothorax, mediastinal, and subcutaneous emphysema on a basis other than the formation of interstitial emphysema. This frequently occurs, and yet all evidence, experimental and clinical, indicates that air never enters the mediastinum from the pleural space. Certainly, with pneumothorax contralateral to the injured side, the evidence is very strong that injury may cause alveolar rupture, interstitial emphysema, subcutaneous emphysema, and spontaneous pneumothorax. Such cases often demonstrate a tension pneumothorax. On the contrary, mild forms of mediastinal emphysema and pneumothorax may be overlooked. As stated before, there appear to be great variations in the holding power of the mediastinal pleura. It is suggested that large tears may result in the rapid escape of mediastinal air with consequent loss of emphysema signs, leaving only the evidence of pneumothorax of various degrees, depending upon the continuance of air leaks from pulmonary interstitial emphysema.

The striking symptom common to the first two cases was rather severe pain located in the precordial region. The other five cases showed a very similar pain pattern, i.e., precordial pain or choking sensation with radiation to the back, neck, shoulders, or epigastrium. Case 5, showing a left pneumothorax, was the only exception, and it is noted that the pain began on the right side followed later by dyspnea.

Of further interest in Cases 1, 2, 4, 5, and 7 is the history in each case of one or more previous episodes strongly suggestive of mediastinal emphysema or spontaneous pneumothorax. Such a history is common in these conditions. In Cases, 1, 4, and 7 there was a history of antecedent disease, either bronchitis or bronchial asthma, and in Case 1 there was x-ray evidence strongly suggestive of emphysema with blebs. In the latter type one might expect direct rupture into the pleural cavity, yet in this case the evidence definitely points to mediastinal emphysema with associated spontaneous pneumothorax. In no other case was there demonstrable evidence of serious general or local pulmonary disease other than bronchial asthma.

We do not presume to reject the possibility of spontaneous pneumothorax due to visceral pleura rupture secondary to tuberculosis, carcinoma of the lung, trauma, etc. We have included only those cases with no marked pulmonary disease. In these we have a marked similarity of symptoms, history of previous attacks, and bronchial asthma in some. This similarity of history suggests that in the last five cases mediastinal emphysema was probably present before the development of pneumothorax. Since the latter is an escape mechanism, is it not possible that the signs of mediastinal emphysema may rapidly disappear when an outlet for air is available, thus escaping the examiner's detection? The subsequent courses and recoveries also bear a striking similarity.

Treatment

It is most important to recognize severe pressure symptoms in those cases of mediastinal emphysema where no escape mechanism is operative. Unless the air is allowed to escape via a neck catheter or sternum-splitting operation, fatal results may ensue.

If tension pneumothorax with embarrassment is present, air withdrawal by interrupted or continuous aspiration is indicated. Intrapleural pressure should be reduced to approximately atmospheric pressure.

When absorption of air is assured, no prolonged bed rest is needed. Most patients can be discharged from hospital in two weeks with no particular instructions other than the avoidance of competitive sports, lifting, and straining. Chronic bronchitis or bronchial asthma should receive appropriate treatment.

Summary

The etiology of mediastinal emphysema and spontaneous pneumothorax has been briefly reviewed.

Two cases of mediastinal emphysema with associated spontaneous pneumothorax have been reported.

Five other cases of spontaneous pneumothorax which presented symptoms and clinical courses comparable to those developing the combined lesion have been reported. It is suggested that in each case mediastinal emphysema was present before the escape method (pneumothorax) was operative. Furthermore, it is suggested that in apparently healthy persons pneumothorax, when it occurs, is preceded by mediastinal emphysema in the majority of cases. Five of the seven cases had histories suggestive of previous attacks.

Treatment has been discussed briefly.

333 Linwood Avenue

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Discussion

David Ulmar, M.D., *New York City.*—When I was asked to participate in this program, my first thought was to look into the incidence and magnitude of the problem. Accordingly, I reviewed the files of two chest hospitals with which I am associated. Their combined bed capacity is roughly twenty-five hundred with an annual admission rate of between two and three thousand. I was unable to discover in the diagnosis files any recorded case of mediastinal emphysema. A similar search was then made in an active general hospital with an annual admission rate of about six thousand, with equally barren results. It would seem, therefore, that the incidence of this condition is not very high. Of course, there is also the possibility that the diagnosis is being missed or that the diagnosis, when made clinically, is not recorded among the diagnoses when the patient is discharged and the chart filed in the record room. I believe, however, that this omission is not too frequent. The low incidence rate does not mean nonexistence. Dr. McKay has well demonstrated that this condition can occur, and this should make us cognizant of the problem. Only by looking will we find it.

It is interesting to conjecture regarding the mechanism of production of mediastinal emphysema. The first requisite, of course, is a break in the normal continuity of the lining of the air-containing spaces. This break can be due to trauma or necrosis. When traumatic, it may be secondary to instrumentation, such as endoscopy, or secondary to excessive intrabronchial air pressures which produce rupture of the mucosa. The point where the rupture or break occurs is purely accidental. If the break is on the pleural surface of the lung, a pneumothorax will ensue, even without further increase in intrabronchial pressure, since pleural pressures are subatmospheric.

The dissection of interstitial spaces by air, however, is dependent entirely on the pressure relationship between the contained air and the tissue space. Inasmuch as the pleural space is the only area of the body which is below atmospheric pressure, all others being in equilibrium with the environment, it follows that the only way that air can force its way through the interstitial spaces is by means of an intrabronchial pressure that is appreciably higher than atmospheric. The slight variation in pressure incidental to normal respiration is not enough. The cough mechanism, however, does produce an increase in pressure which is quite high, as does any straining with a closed glottis. The prolongation of any emphysema, therefore, must mean the maintenance of this mechanism in order to continue pumping air into the tissue. The therapeutic implications of this are obvious.

The point of rupture for the escape of air is dictated by pure chance. For the rupture to take place in two places simultaneously or within a short time of each other, while conceivable, is a rather unlikely possibility. There is no normal communication or pathway for air leakage from the pleural space to the mediastinal space. On theoretic grounds, therefore, the combination of mediastinal emphysema and spontaneous pneumothorax should be rather rare. I do not recall ever having seen these two conditions simultaneously in the same patient.

Dr. McKay has presented to us an interesting and instructive group of cases. They illustrate the basic mechanism involved in the initial breakthrough of the air and its path of travel along the fascial planes. They should stimulate us all to the possibilities of this condition so that we may be on the alert for its existence.

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PNEUMONECTOMY FOR TUBERCULOUS BRONCHOSTENOSIS

E. N. Packard, M.D., F.A.C.P., Trudeau, New York

(*From the Trudeau Sanatorium*)

It is a common observation that tuberculous ulceration of a main bronchus or of a subsidiary bronchus may be present with little or no manifest tuberculosis of the lung. Tests of respiratory function in such cases may show but slight, if any, impairment in the gaseous exchange, even if bronchostenosis is present. In the case to be discussed there was ulceration and narrowing of the left main bronchus and of the bronchus leading to the upper lobe, as revealed by bronchoscopy, but the roentgenograms and physical examinations indicated disease of very limited extent in the lung. Yet, bronchospirometric studies showed a marked reduction in the lung's ventilatory function. Microscopic examination of sections of the lung removed at operation gave the explanation for this finding.

Case Report

The patient, F. F., a man, age thirty-eight, was a reserve officer in the Navy during World War II. In August, 1945, he developed a cough, and an x-ray of the chest taken in November, 1945, revealed a lesion of minimal extent in the upper third of the left lung in which a small cavity was indefinitely outlined. Sputum examination showed the presence of small numbers of acid-fast bacilli. The patient was transferred to Sampson Naval Hospital in December, 1945. In January, 1946, artificial pneumothorax was induced. However, on account of extensive adhesions which thoracoscopy showed could not be safely severed, the pneumothorax was abandoned in May, 1946. Upon full re-expansion of the lung no cavity could be visualized on the roentgenogram. In the fall of 1946, there was an increase in cough and expectoration, and a small, mottled shadow appeared in the upper third of the right lung. Soon afterward the patient began to notice a wheeze, and he had a sensation of not being able to get air into the upper part of the left lung, and cough and expectoration increased.

Bronchoscopy revealed an ulcerative lesion involving the lateral wall of the main bronchus and the orifice of the left upper lobe bronchus. Physical signs of bronchial obstruction were present, such as inspiratory and expiratory wheezes, and the fluoroscope revealed trapping of air in the left lung, as shown by a shift of the heart and mediastinum into the right hemithorax on forced expiration, the lighting up of the left lung field as compared to the normal clouding of the right lung field, and the low position of the left leaf of the diaphragm compared with the rise of the right diaphragmatic leaf. Streptomycin was given with symptomatic relief, and at the termination of the treatment the bronchoscopist reported that the bronchial ulceration had apparently healed but that 3 cm. from the carina the lumen of the main bronchus was only 4 mm. wide. A subsequent bronchoscopy, however, showed that the ulceration had reappeared and had extended up the main bronchus toward the carina.

During 1947, the roentgenograms showed continued "clearing" of the abnormal shadows in the upper left lung so that by the end of the year there were only a few small foci to be visualized.

In January, 1948, the patient awoke one night with a feeling of suffocation. He had great difficulty getting air in and out of his lungs. He coughed and vomited and dislodged a small lump of mucus, after which the breathing was easier. At this time breath sounds were absent over the upper left chest but exaggerated below. At no time did the patient have cyanosis.

Following this episode respiratory studies, including bronchospirometry, were made. The maximum breathing capacity tests* showed only a small reduction from the predicted (predicted 159 L. per minute, determined 146 L. per minute), but the bronchospirometric studies revealed that, on quiet breathing, the left lung was performing one third less of its normal function, as shown by the following determinations:

	Right Lung, %	Left Lung, %
Minute ventilation	67	33
Oxygen consumption	71	29
Carbon dioxide output	62	38
Vital capacity	63	37

In the past many tuberculous patients suffering from endobronchial disease and stenosis associated with destructive pulmonary processes have had thoracoplastic operations performed, often with brilliant results. The much-feared trapping of secretions behind a stenosed bronchus after thoracoplasty failed to materialize, and many of these patients obtained an arrest of their disease. In the case under discussion, however, there was no extensive fibrocaseous disease in the lung which, by its inherent tendency to contract, would aid in the collapse of the lung if the overlying ribs were resected. Moreover, a total thoracoplasty would be necessary, and there was the probability that the lung would not collapse readily as it had developed a moderate degree of obstructive dilatation. In addition, the ulcerative process in the left main bronchus had slowly encroached upon the carina, and, if a thoracoplasty was performed, with the reservation that

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Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, Section on Chest Diseases, May 6, 1949.

* Performed by Dr. George Wright, head of the Physiology Laboratory, Trudeau Foundation.

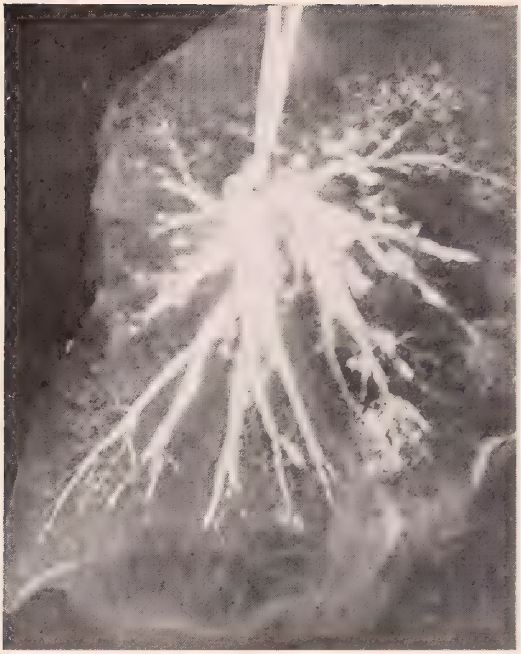

FIG. 1. Lipiodol injection of resected lung showing lack of filling of peripheral bronchi and arteries. Compare with Fig. 2.

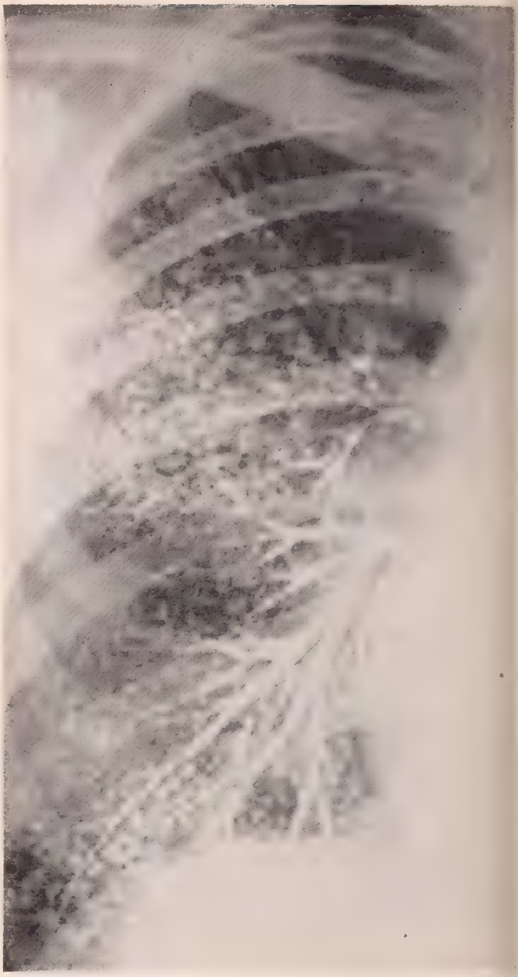

FIG. 2. Normal bronchogram showing well-filled peripheral bronchi.

if the result was not successful a pneumonectomy could be done, it might then be too late to make a satisfactory resection of the main bronchus. The lung function tests had shown that the left lung carried little of the respiratory burden and that its removal would not materially reduce the respiratory function. The right lung showed but a slight amount of apparently inactive disease, not to such an extent as to deter the surgeon from performing a left pneumonectomy. For these reasons a pneumonectomy was decided upon, and the operation was performed successfully in February, 1948.

Following the removal of the lung, Dr. Joseph Gordon of the Ray Brook State Hospital injected the bronchi and arteries with lipiodol and the specimen was then x-rayed. The roentgenogram showed that the smaller branches of the bronchial tree and arteries failed to fill with the exception of two or three small areas (Fig. 1). A comparison with a bronchogram of a normal lung in the living subject reveals the marked difference in the filling of the peripheral bronchi in the two lungs (Fig. 2). That this difference is not due to the fact that one is a "living" lung and the other a "dead" lung or that there was some technical difficulty in injecting the lipiodol into the specimen is shown by the pathologist's examinations in which he found extensive tuberculous inflammation and ulceration of the bronchioles.* His report follows:

Gross Pathology.—The lung is about normal size but has been injected and fixed. The pleura medially is thin, but laterally over both lobes it is thickened and opaque. The main bronchus has been cut about 2 cm. from its bifurcation where the mucosa appears smooth and pale. About 1 cm. from the cut end, there begins an area of roughening and discoloration which extends especially into the main branch to the upper lobe. The main stem bronchus narrows down to an opening 4 mm. in diameter. The ulceration completely surrounds the upper lobe bronchus. This bronchus is somewhat irregular in circumference and somewhat narrowed but appears no less than one half normal size. The lower lobe bronchus appears normal except for the presence of gray mucoid material. The upper lobe is slightly contracted, but there is no distortion of the main bronchi. On section the upper lobe contains scattered, firm, grayish-white foci of fibrosis up to 1 cm. in greatest dimension. Most of the intrapulmonary bronchi are of normal size, taper normally, and show pale mucosa and delicate walls. One of them, however, is narrowed and tortuous, and its wall is thickened and yellow in color. This bronchus leads to a small, elongated focus of soft yellow material 1 by 0.5 by 0.5 cm. in size, presumably the cavity once recognized by x-ray. The alveoli are coarse but uniform in size. The lower lobe is perhaps slightly enlarged. The dorsal branch bronchus is like the one in the upper lobe described above. The other bronchi are not remarkable. The alveoli of this lobe are coarse but uniform in size, and the tissue is homogeneous.

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* **Dr. Philip Pratt, Assistant Pathologist, Trudeau Foundation.**

Micropathology.—Secotins of lung are generally air-containing. A conspicuous feature is the appreciable dilatation of scattered bronchioles which reveal tuberculous ulceration. Elsewhere there are isolated and clustered tubercles in all stages of development ranging from caseonodular to epithelioid and fibroplastic. The small bronchi also reveal tuberculous ulceration which in instances involves the whole thickness of the wall and encroaches upon the cartilage.

Diagnosis.—Chronic pulmonary tuberculosis with tuberculous bronchitis, bronchiolitis, and bronchiolectasis.

Comment

This case is presented to emphasize again the fact that extensive endobronchial tuberculosis may be present and yet the lung itself may show little clinical evidence of parenchymal disease. Meissner of the New England Deaconess Hospital has studied 200 lungs resected for pulmonary tuberculosis and finds that about 90 per cent show endobronchial disease of varying extent.* The distribution of the bronchial lesions in our case was somewhat unusual, namely, main stem bronchus and upper lobe bronchus and diseased bronchioles. The mid zone bronchi were normal.

If a lung harboring tuberculous lesions "clears" roentgenographically, it does not mean that the pulmonary tissues have been freed of disease. Large, manifest areas of inflammation may resolve, but there remain foci of tuberculosis too small to be visualized by the x-rays. These residuals and their adjacent diseased bronchioles are important factors in limiting the respiratory function of the lung.

Stenosis of a bronchus may result in few or no manifest secondary changes in the lung, or it may be the cause of collapse of air cells (atelectasis), or the reverse may take place, namely, dilatation of air cells due to trapping of air beyond the obstruction. The narrowed lumen may permit air to enter the lobe or lobule, but it may prevent or retard its escape so that the movement of air in and out of the area is impeded. Normal exchange of gases does not take place and blood flowing through the affected part is not properly oxygenated. Thus a lung may appear quite normal by x-ray examination, the air may be heard to enter and leave the lung freely, and yet the lung's value as an organ of respiration may be very low.

It is important in the treatment of pulmonary tuberculosis that functional studies of the lungs be made before major lung surgery is undertaken in order to determine the efficiency of the "good" lung so that irreversible measures such as thoracoplasty or pneumonectomy will not be undertaken without due consideration of all factors.

Summary

The case report of a patient with endobronchial tuberculosis of the left lung is presented in which the problems of treatment are discussed. Pneumonectomy was performed, and a study of the sectioned lung gave the reasons why the ventilatory function of the lung was low, although by x-ray the parenchyma was involved to a minimal degree. The main bronchus and upper lobe bronchus were ulcerated and stenosed, but there was also found extensive tuberculous bronchiolitis and bronchiolectasis. Thus the capacity of the lung to perform its respiratory function was markedly reduced.

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* Personal communication

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1950 ANNUAL CONVENTION OF THE MEDICAL SOCIETY OF
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DIAPHRAGMATIC HERNIA

Herbert Willy Meyer, M.D., New York City

(From the Lenox Hill Hospital)

DIAPHRAGMATIC hernia is diagnosed and considered more frequently in differential diagnosis than formerly. One reason for this is that surgical intervention is more successful and safer than in former years. Therefore, many more operations have been performed for this condition. Harrington, Truesdale, Ladd and Gross, Donovan, and Sweet are prominent authors in the literature of diaphragmatic hernia.[1-14]

Embryologically, the diaphragm is susceptible to weak areas through which hernias may occur. The communications between the peritoneal and pleural cavities close in the third month of intrauterine life. The muscle that grows in between these serous cavities is derived from the third and fourth cervical myotomes. The pleuroperitoneal membrane grows vertically and closes the pleuroperitoneal hiatus between the pleural and peritoneal cavity. The weak points in the diaphragm occur where improper or imperfect fusion of the various components of the diaphragm take place. These points are (1) foramen of Bochdalek, pleuroperitoneal hiatus situated dorsolaterally; (2) the outer crus; and (3) the esophageal hiatus. If the esophageal hiatus does not properly develop embryologically, the chance of an esophageal hiatus hernia developing later in life is much greater. The various embryologic factors involved explain the fact that hernias occur more frequently on the left side than on the right side.

Anatomically, the diaphragm is composed of the sternal, costal, and lumbar portions. Failure of fusion of the costal and lumbar portions results in persistence of a triangular defect—the hiatus pleuroperitonealis. This was described in 1848 by Bochdalek and, therefore, is called the foramen of Bochdalek. If there is failure of fusion of the sternal with the costal portion of the diaphragm, an opening persists to either side of the xiphoid process. These openings are called foramina of Morgagni or Larrey's spaces. The esophageal hiatus transmits the esophagus, its vessels, and the vagus nerves. The size varies greatly. The muscle bundles forming the hiatus are innervated by the left phrenic nerve. The loose connection between the lower esophagus and cardia and the muscle edge of the hiatus allows for free motion of the esophagus in the esophageal hiatus.

One of the most useful classifications of diaphragmatic hernia is that of Marks:[15]

1. Thoracic stomach with very short esophagus and the entire stomach above the diaphragm.
2. Diaphragmatic hernia with short esophagus, with part of the stomach above the diaphragm.
3. Hiatus hernia—esophagus of normal length, the hernia is composed of the stomach, possibly the colon, which pass through the hiatus.
4. Congenital hernia through the foramen of Bochdalek or through the foramen of Morgagni. These hernias contain large and small bowel, frequently also other organs.
5. Congenital absence of the diaphragm.
6. Eventration of the diaphragm.
7. Traumatic hernia.

Of these 7 types several require surgical intervention, as follows: (1) esophageal hiatus hernia, (2) traumatic hernia, (3) absence of diaphragm, (4) hernia through the hiatus pleuroperitonealis (foramen of Bochdalek), and (5) hernia through the foramen of Morgagni.

Thoracic Stomach

This is a congenital anomaly not amenable to surgery. It is not a hernia in the true sense as the stomach was always in the chest and never below the diaphragm. The esophagus is only about 3 inches long and enters the top of the stomach.

Diaphragmatic Hernia with Short Esophagus

The esophagus is short and ends at about the level of the seventh or eighth thoracic vertebra. The stomach lies in the posterior mediastinum and is surrounded by a serous sac. There is no rounded fundus of the stomach which at its upper end looks like a dilated esophagus. The esophagus, however, enters at the uppermost end of the stomach. By x-ray the stomach is at all times within the chest even with the patient erect. A stricture may be present at the junction of the esophagus with the stomach causing some difficulty in swallowing. Whether surgery is indicated depends on the symptom complex.

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It is always difficult surgery. However, by permanently paralyzing the diaphragm a repair of these hernias can be effected as has been shown by Harrington in his various publications.[1-5]

Hiatus Hernia

The small paraesophageal hernias with a small pouch protruding above the diaphragm alongside of the esophagus form about one third of all the cases of hiatus hernia. Most of the symptoms of this type of hernia can be relieved by conservative surgery, such as left phrenic nerve crush or actual repair of the hernia.

In the large hernias the esophagus of normal length lies entirely above the diaphragm, and the stomach extends either into the mediastinum, the left chest, or possibly the right chest.

These cases form two thirds of all types and require surgical repair.

The very small pulsion types of hernia, due to incompetency of the hiatus, occur in older people. They are caused by atrophy of the diaphragmaticoesophageal membrane. They do not require surgery.

Hiatus diaphragmatic hernias are the commonest type. They must always be considered in the differential diagnosis of upper abdominal pathology. If a good part of the stomach passes through the hiatus, it may drag the gastrocolic omentum along and thereby drag the colon or the omentum into the hernial sac. The stomach may be inverted. Usually it lies in the mediastinum, but it may lie to the left of the midline, rarely to the right.

Symptoms.—These may be vague. Small hernias may give rise to as severe symptoms as large hernias. Pain, fullness, or distress in the epigastrium coming on at the beginning of a meal may be so severe that the patient has to stop eating. On getting up and walking about the symptoms suddenly disappear, and the patient can continue to eat. Ohler and Ritvo state that this syndrome practically establishes the diagnosis of hiatus hernia.[16] Cardiospasm and esophageal diverticulum give similar symptoms, but they do not disappear on getting up and walking about. Pain, distress, eructation, vomiting, dyspnea, heart palpitation, and weakness are frequent symptoms. Hemorrhage and secondary anemia, erosions, ulcers, and varicosities of blood vessels in the herniated portion of the stomach occasionally occur.

Differential Diagnosis.—The differential diagnosis is most important. The conditions which must be considered are gastric and duodenal ulcer, cholecystitis with or without stones, hyperacidity, cardiac disease, especially angina pectoris, carcinoma of the cardia, stricture and diverticulum of the esophagus, appendicitis, and intestinal obstruction.

Physical Signs.—These are not very evident unless the hernia is a large one. Then there may be gurgling, tinkling, or splashing sounds in the chest.

Diagnosis.—This is best made by careful x-ray study with contrast medium.

Treatment.—Treatment is conservative in the very small hernias and surgical in the large hernias.

A. Palliative treatment: Temporary or permanent interruption of the left phrenic nerve. This may prevent spasm of the hiatus in the small type of hernias and relieve symptoms.

B. Radical surgical repair:
   (1) Temporary or permanent interruption of the left phrenic nerve, either as a preliminary procedure if the abdominal approach is employed or within the chest at the time of operation if the thoracic approach is employed.
   (2) Intratracheal anesthesia with the use of positive pressure.
   (3) Surgical approach:
      (*a*) Abdominal: This is advised by Harrington except in the large type of hernia of the right side.
      (*b*) Thoracic: Sweet has shown that there is less tendency to recurrence of the hernia if the thoracic approach is used. We also feel that this approach is the best in the majority of cases. The phrenic nerve is easily available. The hernial sac and contents lie before one. The hiatus is easily visible, and the sac can be freed from the margins of the hiatus and from the cardia, the contents reduced, and the hiatus closed. In very large hernias Sweet has suggested making a counter incision through the diaphragm, reducing the hernial contents through the hiatus and bringing them out of the counter incision temporarily while repairing the hiatus aperture.
   (4) In the abdominal approach the left lobe of the liver must be mobilized and the spleen either freed or removed.
   (5) In the thoracic approach the hernial sac can be entirely removed, while in

the abdominal approach the sac is either removed if it is a small one or allowed to retract into the chest after freeing it. In the thoracic approach Sweet suggests plicating the sac in some instances and allowing it to drop into the abdominal cavity.

(6) The defect in the hiatus opening can be closed either by the use of living fascia lata suture with cotton or by silk or cotton sutures only. A large stomach tube inserted into the stomach may help one in determining how tight to make the repair around the esophagus.

(7) The thoracic approach seems to be the method of choice.

A girl, E. L., twenty-six years of age, was admitted to the Lenox Hill Hospital in November, 1947, with the history of nausea, vomiting, and epigastric pain of three years duration. An x-ray diagnosis of esophageal hiatus hernia was made with practically the entire stomach and a portion of the colon in the right chest cavity. She had evidence of secondary anemia.

The patient was operated on November 25, 1947, under intratracheal anesthesia. In this instance it was decided to use the abdominal approach, as the stomach and colon were in the right chest. In retrospect it would have been technically easier if the left transthoracic approach had been employed. Air was allowed to enter the hernial sac through the esophageal hiatus opening, and the contents of the hernia could then be reduced easily. Closure of the hiatal opening after separation of the hernial sac from the stomach and hiatus margins was difficult. A stomach tube had been passed into the stomach. The phrenic nerve had not been crushed. The stomach was extremely large and atonic and filled a large portion of the abdominal cavity. The abdomen was closed in layers.

During several months of the postoperative course, the patient had evidence of complete atony of the stomach with marked gastric retention. Gastric analysis with both histamine and the Hollander insulin test showed evidence of vagus nerve section. With the use of gastric lavages and the use of urecholine, the patient completely overcame this gastric atony with retention. She was perfectly well and working full time eight months after the operation. The hiatus hernial repair at present writing has completely healed. She has gained almost 20 pounds in weight.

Congenital Hernia

The most frequent congenital hernia is through the foramen of Bochdalek. A hernia may occasionally occur through the esophageal hiatus. A third type is through the foramen of Morgagni. The latter usually give symptoms later in life. The hernias through the foramen of Bochdalek have no hernial sac, while those through the foramen of Morgagni do have a hernial sac.

Symptoms in newborn infants are severe and are cardiorespiratory as well as gastrointestinal in character. Dyspnea, cyanosis, or vomiting shortly after birth, especially while nursing or while crying, should always make one suspect a congenital diaphragmatic hernia through the foramen of Bochdalek.

Physical signs are rapid respiration and a heart which may be displaced away from the affected side. Tympany or dullness on percussion and absent breath sounds with gurgling on auscultation are frequent signs. The abdomen, being partly empty, may be scaphoid. The diagnosis is made by suspecting the presence of a hernia and by x-ray confirmatory evidence, preferably without contrast medium.

Early operation, preferably in the first forty-eight hours of life, gives the best results. The intestines are not as distended at that time and can be placed into the empty abdominal cavity with greater ease. Newborn infants withstand major surgical procedures better than when they are a week or ten days old.

The infants must be prepared for operation by proper hydration, enemas to deflate the bowel, gastric suction, and oxygen inhalation in a tent with 95 per cent oxygen. Intratracheal anesthesia is best. The principles of the operation are as follows:

1. Preliminary phrenic crush in the neck region.
2. Abdominal approach.
3. Vertical or subcostal incision.
4. Allow air to enter the chest cavity through a catheter introduced through the hernial aperture to facilitate reduction of the hernial contents.
5. Denude the edge of the hernial ring of serous membrane.
6. Suture the edges of the hernial opening with two rows of silk or cotton mattress sutures.
7. Suck the air out of the chest through a catheter placed through the hernial opening in order to expand the collapsed lung just before tying the last suture in the hernial repair.
8. Realize and consider the physiology of respiration as affected by the repair of the hernia. The sound lung may be compressed by the increased intra-abdominal pressure, and the bad lung may not have had a chance to fully expand.

Therefore, the advice of Ladd and Gross comes into serious consideration. They advise a two-stage operation, cutting transversely across the rectus muscle after undercutting the skin at the time of the closure of the abdominal wound at the first operation following the repair of the hernia. This is done in order to slide the skin across the intestinal contents. Only the subcutaneous fascia is sutured with interrupted mattress sutures, and the skin is closed over this with interrupted sutures. The resulting ventral hernia is then repaired five to six days later at the time of the second stage of the operation. By that time the abdominal wall has sufficiently stretched.

This technic is less shocking, avoids strain on the suture line of the diaphragmatic repair, and avoids postoperative cardiorespiratory embarrassment. Ladd and Gross feel that in this manner they have definitely reduced the mortality. Fluid balance, transfusion, and oxygen inhalation are also important factors in the postoperative treatment. Care must be exercised to recognize the development of pleural effusion.

Congenital Absence of Diaphragm

This rare condition is discovered at the time of operation. It is the result of a large defect at the level of the eighth rib and runs mesially to the esophageal hiatus. It is difficult to repair. Either the chest wall must be brought to the diaphragm by thoracoplasty of the lower ribs or the diaphragm brought to the chest wall. Rives and Baker have suggested using the perirenal fascia or the latissimus dorsi muscles in repairing these defects.[17] It requires permanent interruption of the phrenic nerve.

Congenital Hernia Through Foramen of Morgagni

This is a direct hernia with a hernial sac and is the result of failure of fusion of the sternal and costal portion of the anterior diaphragm. It is a rare type. The right true lateral x-ray film usually clinches the diagnosis when an anteroposterior film has made one suspicious of its presence or of pathology in the lower lobe of the lung just above the diaphragm. The colon, omentum, and intestine may be in the sac, and intestinal obstruction is a frequent symptom.

Treatment is always by surgery with an abdominal approach through an oblique rectus incision.

Congenital Short Esophagus with Partial Thoracic Stomach

This requires permanent interruption of the phrenic nerve, and as described by Harrington the diaphragm can be closed above the cardia around the esophagus. By freeing the esophagus thoroughly it can be brought down several centimeters.

Eventration of the Diaphragm

This rare condition is caused by aplasia or atony of the muscle fibers of the diaphragm. It is more common in males than in females and occurs more frequently on the left than on the right side but may be bilateral. Diagnosis is made by x-ray examination. There is no special treatment indicated.

Traumatic Diaphragmatic Hernia

These are always false hernias without sacs. They are the result of penetrating injuries or crushing or falling injuries. In World War II many cases of traumatic diaphragmatic hernia caused by shell fragments, bullets, or other missiles were seen. They may occur anywhere in the diaphragm, and the torn area may vary greatly in size, permitting evisceration of abdominal contents into the pleural cavity with signs of intestinal obstruction. Symptoms are severe and progress rapidly.

Treatment is always surgical, and the transthoracic approach is always best. Proper débridement of the hernial tear in the diaphragm is possible, and an overlapping repair can then be effected. Negative pressure must be re-established and underwater drainage instituted. Antibiotics and chemotherapy are of real value. Air may have to be aspirated to re-establish proper physiologic conditions within the chest. Wangensteen suction of the stomach before and after operation is important. Intratracheal anesthesia and oxygen therapy are necessary.

Case Reports

Case 1.—During our recent war experience, traumatic diaphragmatic hernia cases were seen and operated. One soldier had been wounded by a shell fragment which had entered the left lateral axillary region. Omentum presented in the thoracic wound of entrance. After proper preparation a thoracotomy was performed. A lacerated left lower lobe of the lung was débrided and sutured. The diaphragm was badly lacerated, and a torn, bleeding spleen had herniated into the pleural cavity. The spleen was removed. A 4-cm. wound of entrance in the posterior wall of the stomach near the greater curvature and a wound of exit in the anterior wall of the stomach were repaired. The shell fragment which had entered the under surface of the liver was then palpated and removed from the dome of the left lobe of the liver. The liver cavity was drained through an anterior abdominal stab wound. The diaphragm, after débridement, was repaired with interrupted silk. During a lengthy convalescence and evacuation to the zone of the interior, an empyema cavity developed and was drained. In this cavity two silk sutures, used in repairing the diaphragm, were found and removed. The patient eventually recovered completely with a firm repair of the diaphragmatic hernia.

Case 2.—Another soldier had a perforating gun shot wound of the left chest. The wound of entrance was anterior and the wound of exit posterior.

The entire stomach had herniated through a tear in the left diaphragm. The patient was admitted in shock. On introduction of a Levine tube 1,200 cc. of dark fluid were emptied from the stomach. The shock condition immediately improved on allowing the mediastinum to shift back to the midline, and respiration and pulse rate returned to normal. After x-ray study and preparation thoracotomy was performed. The tear in the diaphragm was enlarged in order to be able to reduce the stomach into the abdominal cavity. The phrenic nerve was crushed. After crushing of the phrenic nerve and débridement of the diaphragm, the rent was repaired. Underwater drainage was instituted. This soldier has been followed, and as of December, 1947, he was entirely well.

Comment

The normal embryologic development of the diaphragm and its anatomy must be understood in order to treat cases of diaphragmatic hernia properly. Some types of diaphragmatic hernias must be treated surgically, and others should be left alone. These types are discussed.

True short esophagus with the entire stomach in the chest cannot be treated surgically. Eventration of the diaphragm is likewise not treated surgically. Diaphragmatic hernia with shortened esophagus can be repaired, if symptoms warrant, by operation with permanent interruption of the phrenic nerve. Hiatus esophageal hernias should be treated surgically, either by conservative or radical surgery. The small hernias in older people should be left alone. Thoracic approach is preferable in the radical surgical treatment.

Congenital hernias should be operated very early in life, preferably in the first forty-eight hours of life. Safeguards to reduce mortality are discussed. The hernias occur through the foramen of Bochdalek and also, later in life, through the foramen of Morgagni. The abdominal approach is preferable in all cases.

Congenital absence of the diaphragm is rare. It is diagnosed at the time of operation, and its repair is difficult.

Traumatic hernias require early surgical intervention. Symptoms are severe, and intestinal obstruction may occur. The transthoracic approach is advisable.

Conclusions

Diaphragmatic hernia must be included in all differential diagnosis of upper abdominal symptoms.

Surgical repair of certain types of hernias is indicated. The usual preoperative and postoperative care is most important.

Expert anesthesia, with the use of the intratracheal method, is an essential factor in surgery of this condition.

170 East 78th Street

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Discussion

John D. Stewart, M.D., *Buffalo.*—Dr. Meyer has very properly emphasized the problem of diagnosis in his discussion of diaphragmatic hernia. There are few lesions so often overlooked, for the symptomatology in many instances lacks specificity. As a result the patient with diaphragmatic hernia often becomes a chronic invalid and acquires the label of psychoneurotic.

With regard to the indications for surgical treatment, I am in agreement with Dr. Meyer. Small paraesophageal hiatal hernias are not uncommon and frequently produce no symptoms. For years I have routinely examined the esophageal hiatus in all upper abdominal surgery with the demonstration of small hiatal hernia as a not uncommon incidental finding. It is the larger hernia, the hernia without a sac, and the hernia which occasions mechanical interference with the function of abdominal or thoracic viscera which require repair.

Except in patients with a broad costal angle and a low diaphragm, I prefer the transthoracic approach for the repair of diaphragmatic hernia. In some instances it is helpful also to make an incision through the diaphragm from above to assist in reduction of the hernial contents and to place the sutures more accurately in the crural fibers. The hiatal hernia with short esophagus presents a difficult problem, and I am not optimistic about relieving this condition by plastic operations on the diaphragm. Rather, I prefer to perform transthoracic vagotomy and hope to relieve any symptoms occasioned by regurgitation of acid into the lower esophagus in that manner.

TRANSITORY CHANGES OF REFRACTION IN DIABETES MELLITUS

John J. Stern, M.D., Utica, New York

TRANSITORY changes of refraction in diabetes are not uncommon. They have been estimated to occur in 6 per cent of unselected and in over 50 per cent of selected, untreated patients with this disease. A few typical brief case reports appear worthy of presentation in order that emphasis should be directed to the practical aspects of these transitory changes in visual acuity. Failure to appreciate these changes of refraction may lead to unnecessary worry and expense on part of the patient.

Case Reports

Case 1.—A. B., a white man aged thirty-eight, had always been well except for trivial diseases. He had always worn glasses. During the week prior to examination he noticed that his present glasses did not give him full correction. He had been suffering from recent onset of fatigue and noticed that he drank more fluids than usual. Aside from the fact that his father had had diabetes, the family history was irrelevant.

The patient's lenses were −1.5 diopters for both eyes. Visual acuity uncorrected was 20/200; with −1.5 correction it was 20/40 partially and with −3.0 correction was 20/20. No abnormality of media or fundus noticed.

Because of the sudden change of refraction, presence of symptoms suggestive of diabetes, together with a family history of this disorder, he was referred to an internist whose examination revealed a glycosuria of 3 per cent and a fasting blood sugar of 250 mg. per cent, thereby establishing the diagnosis of acute onset of diabetes mellitus, causing a change of refraction in the sense of increased myopia. The remainder of the examination was within normal limits.

The patient received an appropriate diet and 5 units insulin daily. After five days the urine was free of sugar, and the blood sugar was 120 mg. per cent. After two more weeks the refraction returned to its original state of a myopia of −1.5 and a visual acuity of 20/20 with this correction.

Case 2.—H. F., a white woman aged sixty, had always been well. Eighteen months previously, her reading glasses had been changed; at that time vision was 20/20 right, 20/25 left. For reading, +3.0 correction was prescribed.

Four weeks prior to the examination she consulted a physician, complaining of general weakness, marked thirst, and polyuria. Blood sugar was 220 mg. per cent, and sugar in the urine was 10 per cent. She was put on a strict diet and received 10 units of insulin twice daily. Three weeks later after being on this regimen she suddenly noticed that her eyesight had deteriorated. She put on her reading glasses which corrected her vision for the distance, but she was unable to read or write.

When her eyes were examined, vision in both eyes was 20/200 and could be corrected to 20/20 right and 20/25 left with +3.0 correction. For reading she required +6.0 correction in both eyes. Fundus and media were normal. The urine contained 3 per cent sugar; blood sugar was 120 mg. per cent.

Four weeks later the urine was free of sugar, and blood sugar had fallen to 90 mg. per cent. Vision in both eyes was 20/40 and could be corrected with +1.5 diopters to 20/20 right and 20/25 left. After two more weeks no correction was necessary for distance, and her reading glasses were satisfactory again.

Case 3.—N. N. was a white man aged forty-six. His mother was a diabetic. He had always been healthy until four years previously when he suffered a cardiac infarction. Since then he had occasional complaints, probably referable to his cardiovascular disorder.

In June, 1947, he consulted his physician for an itching of the skin and the diagnosis of psoriasis was made. A routine urine examination was made, and 5.8 per cent sugar was found. Blood sugar was 292 mg. per cent, and there were no ketone bodies in the urine.

The patient was treated with diet alone. During this treatment he suddenly "lost his vision." During the next few weeks he consulted several ophthalmologists who prescribed various changes in his glasses, but he received only temporary help each time. The following table summarizes the course of his disease.

TABLE 1.—Course of Disease in N. N.

Date (1947)	Blood Sugar (Mg. Per Cent)	Sugar in Urine (Per Cent)	Carbohydrates in Diet (Gm.)	Refraction in Both Eyes
June 9	292	5.8	300	+1.0
19	233	2.9	140	+1.75
26	169	negative	100	+2.5
July 3	142	negative	80	+4.0
10	126	negative	80	+4.0
18	122	negative	100	+1.0

After the blood sugar had been stabilized around 122 to 130 mg. per cent, the refraction remained stationary. Media and fundi had always been normal.

Comment

These three cases are good examples of the changes in refraction which can occur in diabetes mellitus. The first two patients are very typical. The first one exhibits the sudden onset of myopia during the acute development of a diabetes and the steady normalization when adequate treatment is instituted. The second patient shows the typical dramatic onset of hypermetropia while the diabetes is treated too energetically. The third case is unusual because dietetic treatment alone resulted in increased hypermetropia, an occurrence commonly seen in instances in which excessive insulin is administered. Joslin states, "The appearance of hypermetropia in a treated diabetic should suggest too rigorous insulinization."[1]

The sudden onset of myopia in an adult should always suggest a urinalysis. In a known diabetic it indicates the improper control of the disorder. The change of the refraction is transitory, and a normal level is regained as soon as the diabetes is under control.

Several explanations have been put forward for this occurrence. All are based on the assumption that the sudden appearance of myopia is due to an increase of the refractive index of the ocular media. There is no agreement, however, on the point at which this increase occurs. Duke-Elder explains the change of refraction with a disturbance of the osmotic equilibrium between lens and aqueous humor.[2] As the sugar concentration increases, the osmotic pressure of the aqueous humor has the tendency to rise proportionally to the disappearance of osmotically active substances from the blood. The lens with its sluggish metabolism does not participate in this fluctuation of the body fluids and tries to maintain its original molecular concentration. The osmotic equilibrium, however, has to be maintained, which is accomplished by the entrance of fluid into the lens from the aqueous. This causes the lens to swell and its surfaces to adopt increased curvatures. In addition, the optic density of the peripheral layers decreases, while that of the nucleus remains unchanged. Both these factors cause the refractive power of the lens to increase and the eye to become myopic. If the blood sugar concentration decreases, the opposite mechanism comes into play.

The theory ascribing the responsibility for the myopia to the presence of sugar, as such, in the refractive media of the eye is untenable for physical reasons. Even in severe diabetes the blood sugar concentration rarely is more than 1 per cent. Such an increase of the sugar concentration raises the refractive index of the aqueous and the vitreous humors to such a small extent that it cannot be the cause of the myopia. The refractive index of the normal aqueous is 1.3353; that of a 1.3 per cent sugar solution in physiologic saline is 1.3363. In order to cause a myopia of 6 diopters, the index of the aqueous ought to be 1.42; this corresponds to a sugar concentration of 20 per cent. Apart from these considerations the theory is also not capable of explaining the changes in astigmatism which are occasionally observed.

Adler has contributed an attractive additional hypothesis.[3] He assumes that the aqueous humor follows the blood sugar changes earlier than the vitreous, which reaches equilibrium with the blood at a slower rate. If the refractive index of the aqueous alone changes, a very small change produces a considerable ametropia. Adler has shown in animal experiments that these differences in the sugar concentration of aqueous and vitreous humors actually occur, and these differences, alone or together with changes in the lens, he considers responsible for diabetogenic myopia.

To conclude, mention is made of a rather unique observation reported to the author by an intelligent female patient having diabetes. She stated that she can regulate her diabetes according to the distance at which she can read comfortably. If she has to hold her book away from the eyes to focus, she knows that she ought to go slow with her insulin; if the reading distance becomes uncomfortably close, she slightly increases the daily dosage.

Summary

Three cases of changes of refraction in diabetes mellitus are presented, one of sudden onset of myopia in a fresh, untreated case, and two of sudden onset of hypermetropia in treated cases. The physiologic basis for these changes is discussed.

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PLAN NOW TO BE IN NEW YORK CITY MAY 8 TO 12, 1950, FOR THE ANNUAL CONVENTION OF THE STATE SOCIETY AT THE HOTEL STATLER.

PACKING OF MEDIASTINUM IN THE TREATMENT OF HEMATEMESIS DUE TO ESOPHAGEAL VARICES

John H. Garlock, M.D., and Max L. Som, M.D., New York City

(From the Surgical and Laryngological Services of Mount Sinai Hospital)

In 1947, we reported two cases of bleeding due to varices of the esophagus treated by gauze packing of the upper mediastinum. The seemingly beneficial effect in the first patient was obtained quite by accident and led to the development of the rationale of the procedure to be described in this paper. This patient in March, 1941, sustained a perforation of the cervical esophagus during esophagoscopy for varices following a severe hepatitis one year before. The infection of the posterosuperior mediastinum was drained by Dr. Touroff of our surgical staff through a cervical incision, and packing was inserted.

During the succeeding three and one-half years it was noted by his physician, Dr. Sohval and one of us (M.L.S.), that there had been no further bleeding. Whereas the pre-esophagoscopic esophagram indicated the presence of varices, a repeat x-ray examination one year later showed that they had disappeared. This observation led to considerable speculation, and it was decided that the packing procedure had resulted in the formation of granulation tissue in the mediastinum surrounding the upper esophagus. It was postulated that a new venous plexus had formed in this area, extensive enough to take the load from and reduce the pressure in the varices, thus diverting more blood from the portal to the caval circulation.

This patient has remained well to date, a period of eight years. The second patient, one with portal hypertension of extrahepatic origin, had repeated severe hematemesis. His superior mediastinum was packed as a definitive procedure in December, 1945. The beneficial effect obtained in this case led to further trial of the operation, and we would like to report our experiences with six additional patients.

A knowledge of the pathologic anatomy of the venous blockade in portal hypertension is essential for an understanding of the rationale of the packing operation. It appears that the most important area centers about the cardiac end of the stomach and lower esophagus. The evidence is clear that, except in unusually rare instances, the lower esophageal veins drain into the caval system and the veins in the upper stomach drain into the portal system. In 1934, Kegaries, by careful injection studies, showed that there also exists a fine anastomotic connection between the lower esophageal and cardial veins, thus uniting the portal and caval circulations at this point.[1] These anastomosing vessels lie in both the submucosal and submuscular areas, as do also the regularly demonstrated veins in the lower esophagus and upper stomach.

It is also well known that not every case of portal hypertension, whether of intrahepatic or extrahepatic origin, is complicated by bleeding from esophageal varices. It seems clear to us, therefore, that the reason for this is to be found in the extent and degree of the anastomotic network between the caval and portal systems at the cardial and lower esophageal areas. With a poorly developed communicating network, the chances for compensatory dilatation of the lower esophageal veins would be greatly minimized. In the presence of a rich anastomosis, the increasing pressure in the portal system would be transmitted more easily through these communicating channels into the esophageal venous system, thus causing the formation of submucosal varices. In the presence of a poorly developed communicating system, the compensatory mechanism in this area takes other directions, mainly through the azygos and diaphragmatic veins. However, it is well known that these latter communications may also be poorly developed.

The observations of Blakemore, Whipple, and others have shown that portal hypertension may be of intrahepatic (cirrhosis) or extrahepatic origin (thromboses of splenic and/or portal veins, cavernomatous transformation of the portal vein, external portal vein compression, etc.).[2,3] The effect in each instance is the same and is measured in terms of a markedly increased pressure within the portal system. The finding of venous dilatations, whether they be located at the cardia and lower esophagus, in the hemorrhoidal area, along the falciform ligament of the liver, or the retroperitoneal area, is evidence of an attempt at establishing a compensatory mechanism, the main purpose of which is to reduce the pressure in the greater splanchnic area and portal bed by shunting blood into the caval system. All observers of the general symptom-complex of portal hypertension are agreed that the most alarming symptom, one prone to cause death of the patient

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quickly, is bleeding from esophageal varices. Therefore, all therapeutic efforts have been directed toward eliminating or greatly minimizing this all too frequently fatal complication.

Since 1894, when Banti first suggested splenectomy, all therapeutic efforts have been in the direction of alleviating the most important symptom of portal hypertension, namely, bleeding from esophageal varices. Many remedies have been suggested and tried: (1) omentopexy; (2) portocaval anastomosis, first successfully consummated by Vidal in 1903; (3) various vein anastomoses; (4) ligation of various gastric vessels; (5) injection of sclerosing solutions into the esophageal varices, first performed by Crafoord; (6) suture and nonsuture anastomoses between portal vein and inferior vena cava and splenic to renal veins; (7) extensive gastric resection (Wangensteen), and (8) total gastrectomy (Phemister and Humphreys).[4-6]

Of all the remedies suggested to date, the portocaval shunt operation and the splenorenal vein anastomosis recommended by Blakemore and Whipple have the most physiologic basis.[2,3] Yet, it must be remembered that only 25 per cent of the portal hypertension patients are suitable candidates for these procedures; the operations are of great magnitude, and the operative mortality is high.

On theoretic grounds we are opposed to the operation of total or almost total gastrectomy in the treatment of portal hypertension. It is difficult for us to understand why these procedures should separate the portal from the caval circulations. The jejunum, which is utilized in effecting these anastomoses, is as much a part of the portal back flow as is the stomach. There is good reason to assume, therefore, that, following the gastrectomy, anastomoses will form between the jejunum and the upper stomach or esophagus, thus re-establishing the connection between the portal and caval systems. Inasmuch as most of the esophageal veins are located in the submucosal area, the back pressure will be felt again in the varices, and hematemesis should recur.

Our approach to the problem of bleeding from esophageal varices has been more direct, in that advantage is taken of the communicating system at the cardia between the portal and caval circulations. By producing a new periesophageal plexus surgically, it is felt that there will be a rerouting of portal blood from the vulnerable submucosal varices to the new plexus, mainly because of the marked differences in pressure in the portal system and the caval circulation. The direction of flow is from a higher to a much lower pressure area. It is because of this fundamental physiologic fact that the operation of mediastinal packing is proposed.

Since our first report in which it was suggested that packing of the posterosuperior mediastinum should be tried, we have extended the operation to include, as a second stage in selected cases, packing of the entire posterior mediastinum from the arch of the aorta to the diaphragm through a right transpleural approach. Two of our patients have been treated by the latter method.

Procedure

The first procedure offers no difficulties in its performance. Through a left oblique cervical incision along the anterior border of the sternomastoid muscle the retroesophageal area is exposed by retracting the carotid sheath laterally and the thyroid lobe mesially. The lateral and posterior surfaces of the esophagus are bluntly separated from the prevertebral fascia as far down in the mediastinum as the finger will reach, usually in the neighborhood of the arch of the aorta. Into this space is packed dry plain gauze, not too tightly, the end of which emerges from the lower angle of the cervical incision. The latter is sutured throughout most of its extent. The packing is removed after twelve to fourteen days without much difficulty.

The operation of packing the lower posterior mediastinum is one of greater magnitude and requires meticulous dissection. A long incision is made over the right seventh rib which is resected subperiosteally. The chest is entered, and a rib-spreader is inserted, thus affording a clear view of the entire mediastinal pleura overlying the esophagus. A longitudinal incision is made along the mediastinal pleura, care being taken not to injure the azygos vein. The flaps of pleura should be preserved for later use in closure. The esophagus is now carefully freed from its mediastinal bed from the aortic arch almost to the diaphragm. In accomplishing this maneuver, it may be necessary to ligate a few small veins in the mediastinum. Three strips of 1-inch, single-thickness gauze packing are placed longitudinally along the esophagus. A channel is now bluntly dissected between the parietal pleura and the rib cage, and the long ends of the three packings are withdrawn beneath the lateral flap of mediastinal pleura into this channel and brought out extrapleurally through a stab wound in a subjacent intercostal space. The incision in the mediastinal pleura is now repaired, thus effectively covering the esophagus and the gauze packings.

The chest is closed without drainage after inflation of the lung. The packings may be teased out of the stab wound without difficulty after twelve to fourteen days. We believe the latter should be done with the patient anesthetized.

Abstract of Case Reports*

Case 1.—B. S., a man, had hepatitis in 1940. He developed esophageal varices with episodes of hematemesis. Esophagoscopic perforation of cervical esophagus was treated with packing of upper mediastinum on May 27, 1941. There has been no further bleeding since (eight years). The esophagram done one year after operation showed disappearance of the varices.

Case 2.—E. R., a man age twenty-one years, had portal hypertension due, most probably, to traumatic thrombosis of splenic vein. Splenectomy was performed in 1942 at Bellevue Hospital. There was repeated severe hematemesis from esophageal varices. At one time hemoglobin dropped to 16 per cent. Many morrhuate injections of the varices were made by one of us (M.L.S.) with little effect on the bleeding. Packing of superior mediastinum was done on December 7, 1945. There has been no recurrence of the previously severe hematemeses, but, because of six episodes of tarry stools, the second-stage operation, packing of the lower mediastinum by the right transthoracic route, was carried out on March 3, 1949. A most important observation at this operation was the finding of an extraordinarily extensive network of vessels in the periesophageal area above the arch of the aorta, the site of the first packing operation. It is too soon to make any statements about the effect of the second procedure.

Case 3.—P. S., a man age twenty-six years, had portal hypertension of extrahepatic origin for which a splenectomy was done in 1939. Repeated severe hematemeses occurred during the succeeding nine years. The esophagram disclosed extensive varices in the lower third of the organ. Packing of superior mediastinum was done on January 13, 1948. The patient had one episode of bleeding two weeks after leaving hospital but has shown steady improvement since then.

Case 4.—L. D., sixty-one-year-old man, was a case of severe alcoholic cirrhosis of three years duration with extensive varices and severe bleeding episodes. Packing of superior mediastinum was carried out on November 18, 1947. There had been two episodes of bleeding since then, in January, 1948, and August, 1948. The patient is now confined to Presbyterian Hospital. This case must be classed as a failure.

Case 5.—R. C., a child of two and one-half years, had cavernomatous transformation of the portal vein with extensive varices involving the entire thoracic esophagus. Splenectomy was performed in 1946. Severe hematemeses recurred. Superior mediastinum was packed on November 8, 1947. In March of 1948, there was noted an extensive collateral venous engorgement over the left shoulder, arm, and antecubital fossa, indicating that an increased load was being thrown on the superior caval circulation. On December 14, 1948, following a long interval, he had another severe hematemesis. Therefore, the second stage, packing of the thoracic mediastinum, was carried out on December 24, 1948. It is too soon to make any statement concerning the result of this procedure.

Case 6.—L. L., a man of sixty years, had severe alcoholic cirrhosis of one year duration, complicated by frequent hematemeses and ascites. The superior mediastinum was packed on May 25, 1948. He had two subsequent bleeding episodes and died on March 5, 1949, after the second one. This case must be classed as a failure.

Case 7.—E. S., a woman of forty-nine years, had extrahepatic portal hypertension due to thrombosis of the splenic vein demonstrated at operation at another hospital. Diagnosis of polycythemia was made seven years before, and x-ray therapy to the splenic area was carried out. For three months preceding admission to Mount Sinai Hospital she had repeated episodes of severe hematemesis. Packing of the superior mediastinum was carried out on June 30, 1948. This patient has not been seen since she left the hospital. On March 15, 1949, we learned that she had two episodes of bleeding requiring transfusions and that, in February, 1949, splenectomy had been performed in Chicago. A recent communication states that there have been no further hematemeses. Transient melena was noted on two occasions.

Case 8.—A. P., a woman of sixty-two years, was transferred from New York Hospital on November 5, 1948. She had a history of repeated hematemesis over a period of forty-one years. Splenectomy was attempted on two occasions, but the operations were abandoned because of bleeding from most extensive venous channels in the abdomen. During her last admission to New York Hospital, her condition was so precarious because of bleeding that she required 700 cc. of blood daily for bare maintenance. Packing of the superior mediastinum was carried out on November 23, 1948. The esophagus was separated from the prevertebral fascia behind and from the trachea in front as far down as the aortic arch. The packing practically encircled the esophagus. Subsequent examination showed that there had been an injury to the left recurrent laryngeal nerve. She was readmitted on January 1, 1949, following a small hematemesis with all the evidence of a moderately severe homologous serum jaundice. She recovered and was discharged on February 20, 1949. There has been no recurrence of bleeding up to the present writing.

Comment

From our observations with these eight patients, there is considerable evidence to indicate that, following the packing operation, periesophageal collateral circulation does develop. It has also been noted both by us and by Dr. Arthur Blakemore that, when subsequent hematemeses do occur, they are not as severe or profuse as previously, indicating that some of the venous load has been taken from the submucosal varicose network. Further experience with a larger series of patients will indicate whether the operation has any merit in portal hypertension due to cirrhosis of the liver. When hematemesis is the presenting symptom and the esophagram discloses varices, we would suggest that the simpler operation of mediastinal packing in one or two stages be carried out first before considering the more extensive and complicated venous shunt procedures. Only by a more extended trial can it be determined when the packing operation will yield desirable results and when it is considered contraindicated.

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* These were reported in detail at a recent meeting of the American Association for Thoracic Surgery and will be published in the *Journal for Thoracic Surgery.*

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Discussion

Max L. Som, M.D., *New York City.*—The creation of a collateral circulation shunting the blood from the submucosal varices to a deeper periesophageal plexus and then to the caval system seems possible. There is reason to believe that the packing procedure results in the formation of granulation tissue in the mediastinum, surrounding the esophagus. Characteristic of such granulations is the abundance of newly created vascular channels.

Dr. Beck has attempted to augment the cardiac circulation in cases of angina pectoris by promoting new granulation tissue, with its increased vascularity, in another way. He performed a pericardial implantation of the subpectoral muscle in the hope of establishing a new collateral circulation. It could be argued that, after the initial irritative effect of the procedure has disappeared, the granulation tissue may be replaced by an avascular scar with the disappearance of the newly created vascular network. While this may happen in many instances, it is unlikely to occur when there is an accompanying, marked hypertension of the portal circulation. Such increased venous pressure should tend to keep the newly created vessels patent and, in addition, will seek to increase the venous bed.

There seems to be support for this hypothesis by the observations of Dr. Garlock in the two patients who were subjected to a second-stage packing of the lower mediastinum. In both cases (2 and 5), an extraordinary, extensive network of vessels was found in the periesophageal area above the arch of the aorta at the site of the initial packings.

Furthermore, in Case 2 the endoscopic picture changed considerably after the packing of the upper mediastinum. Previously, large varices always presented themselves into the esophagoscope in spite of repeated sodium morrhuate injections. Endoscopic examination six months after surgery showed the esophagus to be free of varicose veins in the upper three quarters and showed fibrotic, shrunken varices surrounding the cardia.

Although the results are promising, further observations will be necessary before any definite conclusion can be drawn as to the merit of the packing procedure. It is to be expected that the problem of the treatment of esophageal varices will become all the more important because of the recent, sharp increase in the various types of hepatitis.

Edwin Boros, M.D., *New York City.*—Dr. Garlock's contribution marks an adventure which was originally undertaken for an accidental perforation of the swallowing tube by means of a rigid esophagoscope. It offers considerable hope in a most difficult field.

Under no circumstances can the presence of esophageal varices be regarded as a simple malady. Its diagnosis is not always easy, and its differentiation from suggestive ailments may tax one's resourcefulness. The roentgenologist can be of much help, but the positive establishment of the presence of dilated veins requires actual instrumental visualization. In the past, the rigid esophagoscope was relied upon for this purpose. This imposed fear and restraint with the result that clinically available patients with this disorder were proportionate to the limited number of esophagoscopies which were performed. Not only was this reluctance shared by internists generally but also by many gastroenterologists as well.

Today, such fear need no longer exist. With the availability of flexible tube esophagoscopy as a simple, safe, and easy procedure, restraint in subjecting patients to diagnostic instrumentation is no longer justified. More and more patients with esophageal varices can be detected and studied, and at a much earlier stage. The technic described by Dr. Garlock can thus be employed on a wider scale to the greater benefit of the patient. Postoperative endoscopic surveys can be encouraged with more freedom and frequency.

VICTIMS OF COLON DISEASE ARE LIABLE TO CANCER

Cancer tends to occur as a complication of chronic ulceration in the colon, according to an article in the December 3 issue of the *Journal of the American Medical Association.* Drs. William G. Sauer and J. Arnold Bargen of the Mayo Clinic, Rochester, Minnesota, point out that sufferers from this condition of the colon should have periodic medical examinations. They report 41 cases in which cancer occurred as a complication of the disease. The cancers occurred both among men and women.

Chronic ulcerative colitis generally had been present about sixteen years before cancer was discovered in these patients, according to the article. Patients with longstanding chronic ulcerative colitis should be checked periodically by the maintenance of a complete history and by physical examination laboratory tests, and x-ray inspection of the colon These measures are advisable to ensure the earlies possible detection of malignant developments.—*J.A M.A., December 3, 1949*

MONALDI DRAINAGE—A VALUABLE ADJUNCT IN THE SURGICAL TREATMENT OF PULMONARY TUBERCULOSIS

Warriner Woodruff, M.D., and Carl G. Merkel, M.D., Saranac Lake, New York

WE ARE pleased to present this paper on Monaldi drainage because we have made use of this procedure as occasion demanded over a period of eight years in the treatment of 11 cavities in 102 patients. While it plays a minor role in the over-all treatment of pulmonary tuberculosis, we feel that it is an important adjunct because it frequently gives us help when we need it most, namely, in certain of those patients with far-advanced disease for whom other procedures are not possible.

Before reporting our experience, it might be worth while to outline treatment of pulmonary tuberculosis as a whole. Of course, the basic factor in recovery from tuberculosis is the degree of resistance of the individual patient to the particular organism. All therapy is aimed at tipping the balance in the patient's favor. Modes of therapy may be divided into three groups: (1) hygienic-dietetic, best represented by the regimen of rest in a well-regulated sanatorium; (2) specific therapy directed against the bacillus: the two agents holding the greatest promise at present are streptomycin and para-aminosalicylic acid; (3) surgery.

Surgery itself is divided into three general types: relaxation and collapse therapy, excision, or cavity drainage. Drainage may be either cavernostomy (open drainage) or catheter drainage (Monaldi). Successful treatment demands the use of that type or combination of types of therapy which offers the patient the most help in combating his infection.

When Dr. Monaldi in 1938 reported his first series, he reintroduced a treatment which had been tried but largely discarded, namely, that of cavity drainage.[1] However, he made two important modifications: (1) catheter drainage and (2) intermittent suction. Following his original publication, many surgeons in various countries attempted to duplicate his results, and there was an initial wave of enthusiasm which has now largely subsided.[2-17] Eleven years have now elapsed, which is sufficient time to allow a fairly accurate evaluation of the method and assessment of its value and limitations. As a result of our eight years experience, we feel that the method is extremely valuable in the treatment of certain cavities, although we have not been able to match the results of the sponsor, who reports that he has more than 100 patients well and working as a result of the procedure alone.

In his papers, Dr. Monaldi has explained in detail the theoretic bases for expecting benefit. To us, the single, most important point brought out by him was that the size of a cavity is frequently much greater than the amount of pulmonary tissue which has become necrotic and excavated. For a long time it has been recognized that certain cavities are resistant to collapse by the ordinary methods. These cavities have definite characteristics and have been variously termed "pressure," "tension," "blocked," or "insufflation" cavities.[6-9] They tend to be spheroid, frequently with a fluid level, and often vary in size in successive films. In many of them a pressure above atmospheric can be determined by introducing a needle. The explanation seems to be that with endobronchial disease, as the bronchial lumen becomes narrower, it reaches a point where air enters the cavity on inspiration but is trapped on expiration, distending the cavity walls. Any attempt at collapse by pneumothorax or thoracoplasty is unlikely to succeed because the draining bronchus is compromised. On theoretic grounds, if drainage can be established, there should be an immediate decrease in cavity size. We have found this to be true in a very large percentage of our patients.

Indications

In general, we have attempted to integrate the use of this procedure in the over-all treatment of the disease. We have used it alone only in those patients with far-advanced and otherwise hopeless disease in which the palliative effect of reducing cough, expectoration, and toxicity has made the patients' remaining days more comfortable. In this group the reduction in the size of the cavity is incidental. We shall show you, however, several instances in which palliation was the original objective, but the resulting improvement was sufficient to justify thoracoplasty or excision or both. For this favored few, "Monaldi" was truly a life-saving procedure.

We have found it extremely valuable in giant cavities, as a preliminary to thoracoplasty. The decrease in cavity size has made a smaller collapse possible and more effective. Table 1 lists our indications in the entire series.

In 54 instances the contralateral side had cavity, empyema, unexpanded pneumothorax, or permanent collapse. In 61 instances the cavity

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TABLE 1.—INDICATIONS (FREQUENTLY MORE THAN ONE)

Bilateral pulmonary tuberculosis. Opposite side had cavity, unexpanded pneumothorax, empyema, thoracoplasty, paraffin plombage in 54	101
Large cavity (many of them "tension")	61
Cavity with acute spread of disease	40
Limited respiratory reserve	22
Age of patient	2
Previous unsuccessful thoracoplasty	4
Refused thoracoplasty	1

itself was large enough to justify the introduction of the catheter. In some of these the immediate decrease in size was dramatic. In 40 instances there was evidence of acute disease. Miscellaneous indications included limited respiratory reserve, advanced age, previous unsuccessful thoracoplasty, or thoracoplasty refusal.

Technic

Time does not permit a full discussion of technic and some of our findings. A detailed report based on the first seven years experience with 100 cavities will appear in the *Journal of Thoracic Surgery*.[17] Several of the charts presented are based upon this first series; others are based upon the entire series as of December 31, 1948.

Technic of drainage is divided into two parts: (1) obliteration of the pleural space and (2) the actual insertion of the catheter. Various methods of obliterating the space have been advocated, including the instillation of the patient's own blood, sulfanilamide crystals, or talcum into the space. We now resect the first intercostal muscles, usually together with a section of the first and second ribs, sprinkle the space with sulfanilamide crystals and pack it with gauze packing, close the skin, and then remove the pack in five days.

Insertion of the catheter, under fluoroscopic control, is performed two to three weeks after the packing. With a 19-gauge aspirating needle, the location and depth of the cavity are ascertained, and manometric readings of cavity pressure are obtained. The Kupka modification of the Monaldi trocar is used, with the safety flange set at the proper depth, as determined by the aspirating needle; the needle is withdrawn and the trocar inserted at the same point, in the same direction and to the same depth, and manometric readings are again taken. The catheter is then inserted and the trocar withdrawn. The catheter is secured to the skin with a clove hitch and adhesive.

Twenty-four hours after insertion of the tube, negative pressure is begun. For this purpose we have devised a cabinet with a small pump. The apparatus can be set so that a constant negative pressure can be maintained at between 20 and 30 cm. of water. A full description of this cabinet has appeared in the *American Review of Tuberculosis*.[18] Figure 1 shows the cabinet in operation.

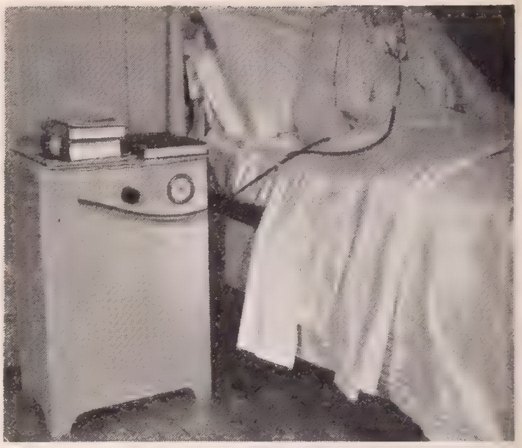

FIG. 1. Cabinet in use at bedside. Note height of cabinet, position of switch and gauge. (*Photograph used through the courtesy of the publishers of the American Review of Tuberculosis in which it first appeared*).

Complications

Complications of insertion have been minor. The most common has been bleeding. One hemorrhage, which was later fatal, occurred when the trocar was inserted, despite the fact that bleeding was encountered with the aspirating needle. A second fatal hemorrhage occurred two weeks after a catheter had been introduced into a small residual postthoracoplasty cavity. In this patient, because of the location of the cavity, we felt that we did not dare to introduce the large blunt trocar, and, accordingly, after the cavity had been found with the exploratory needle, a small cautery tip was used to make an opening. The catheter was introduced without incident, but a fatal hemorrhage ensued two weeks later, due, we believe, to the slough from the cautery.

There was one air embolism with temporary hemiplegia. Small pneumothoraces have, on several occasions, been a complication. If one is discovered with the aspirating needle, we feel that further attempts should be delayed. Pneumothoraces not discovered until after the insertion of the catheter are more troublesome. In only one instance was it necessary to aspirate air. One pneumothorax proved fatal because of empyema. This occurred when the trocar traversed the fissure which had not be obliterated.

Table 2 lists late complications which are not particularly great. We have listed bleeding as a complication in 45 per cent. This includes everyone who at any time had any blood in the catheter. Usually it was a minor complication, and in only two instances was it severe enough to force withdrawal of the catheter. We have listed 16 per cent as having had abscesses or sinuses around the tube. In only one instance was this a major problem.

TABLE 2.—Complications After Insertion

Bleeding through catheter (2 severe enough to force withdrawal of catheter)	37 (45%)
Chest wall abscess or sinus around tube	13 (16%)
Perforation of posterior cavity wall with resultant empyema—thoracotomy and thoracoplasty	1

After insertion, if there is frank bleeding, suction is discontinued for a day or two. In case of a large hemorrhage, we have abandoned the procedure and withdrawn the catheter.

It is not uncommon for the sinus tract to develop a low-grade secondary infection, and secretions may become profuse. Rarely, a chest wall abscess will develop around the catheter. If one develops, it is incised and drained. Streptomycin, either intramuscularly or by topical application, has cleared most of these promptly. This has not been a serious problem. The only late complication, which later proved fatal, was the erosion of the posterior cavity wall, with death occurring two years after insertion of the catheter.

Table 3 is a summary of the entire series of 114 cavities in 102 patients. Catheters were successfully inserted in only 94 instances in 86 patients, but the mortality rate and end results are based on the entire series because the first-stage procedure was performed on this 114. There were 61 men and 41 women, and the average age was thirty-three years, the oldest patient being sixty-one and the youngest nineteen.

TABLE 3.—Accepted for Monaldi (102 Patients, 114 Cavities)

	Patients	Cavities
Pre-Monaldi procedure resulted in improvement so Monaldi not done (cavity closure—4)		6
Catheter could not be introduced		9
Catheter not introduced because of deterioration in patient's condition		4
Pre-Monaldi too recent		1
Total Drainage	86*	94

* Six patients had 2 cavities drained; 1 patient had 3 cavities drained.

Tables 4, 5, and 6 are based on the first series of 82 cavities drained. Table 4 shows the pressure measured at the time the cavity was first aspirated. You will note that it was positive in only 47 of the 82 cavities.

TABLE 4.—Mean Cavity Pressure

Pressure	Cavities
Positive (plus $1\frac{1}{2}$ to plus 18)	47
Neutral	26
Negative (minus $2\frac{1}{2}$ to minus 6)	9
	82

Table 5 shows what happened to the cavities after drainage; 48 per cent closed as a result of the drainage.

TABLE 5.—Effect of Monaldi on Cavity Drained

	Cavity
Cavity closure	
Within 1 month	6
1 to 3 months	21
3 to 6 months	6
6 months or more	7
	40 (48%)
Cavity smaller	33
Cavity unchanged	9
Total treated	82

After the catheter was removed, five of these cavities remained closed without further treatment for periods ranging from twenty months to five and one-half years. In 13 instances, however, the cavities reopened in from three weeks to fifty-nine months. For that reason we always attempt thoracoplasty, where possible, to decrease the chance of reopening.

Table 6 shows what happened to the bacillary content of the drainage and the sputum in the 82 cavities.

TABLE 6.—Sputum and Drainage Statistics

	Drainage (Cavities)	Sputum (Patients)
Time of initial disappearance of tubercle bacilli by concentrated smear		
1 to 3 months	26	20
4 to 6 months	8	5
6 months or more	6	9
	40*	34
Always positive	42	42
Total	82	76

* Of the 40 negative drainages the sputum remained positive in 18.

Obviously, a patient with extensive bilateral disease might be expected to continue with a positive sputum even after the drainage from the cavity had become negative, and we see that this occurred. Whereas 40, of the 82 cavities drained, sooner or later showed an absence of bacilli in the drainage, only 34 patients had conversion of sputum.

Results

Tables 7, 8, and 9 are based upon the entire series of 114 cavities in 102 patients. Table 7 shows that 37 per cent of the entire group has already had more definitive surgery. Since January 1, 1949, one other has had a pneumonectomy, and two others have had thoracoplasty. When it is realized that without Monaldi this therapy would have been denied most of these patients, it can be seen that it has been of definite value to them.

It is difficult to evaluate fairly the end result of a unilateral procedure on a patient with bilateral disease. For instance, a patient, with cavity closure by Monaldi, who continues to have an open contralateral cavity beneath thoracoplasty,

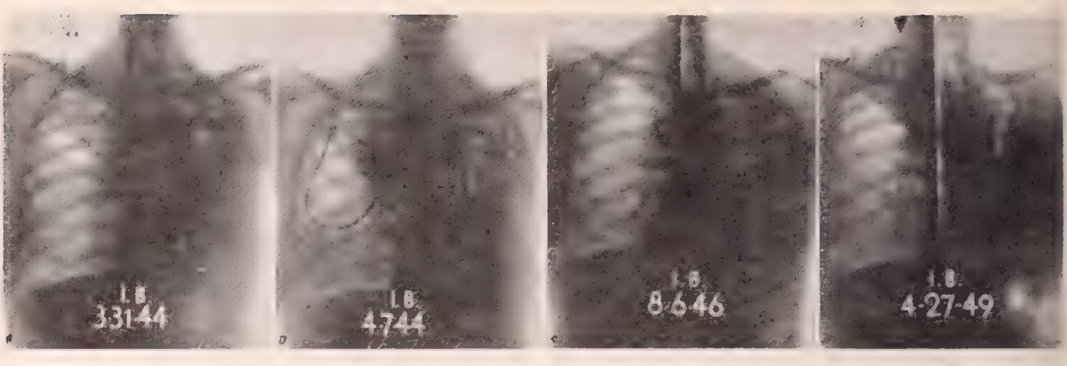

FIG. 2. I. B. (Case 33), female, age 47; indication—palliative.

A. Bilateral disease; pneumothorax, left, 1933 to 38; lung failed to re-expand, pleural cavity filled with bloody serous fluid; sputum Gaffky viii; temperature to 99.4 F.; cavity, right; pre-Monaldi rib resection, anterior end of first rib, February 10, 1944.

B. Catheter inserted April 7, 1944, pressures +12, −6; first drainage Gaffky x. Lateral view strongly suggested cavity in apex of lower lobe; if true, catheter traversed fissure without incident.

C. Cavity not visualized since June, 1944; drainage negative, July and August, positive October 5, 1944; sputum negative October 5, 1944; drainage negative October 16, 1944; catheter removed November, 1944.

D. Cavity remained closed through 1948; sputum low positive and then negative and remained well, doing own housework until spring of 1949, when opened a new cavity and sputum Gaffky v.

may be improved but cannot be considered well. Although 38 patients have had more definitive treatment, they are not all well. Table 9 shows that eight who have had thoracoplasty are now dead. Some of the remaining 30 have small residual cavities or active contralateral disease.

We know that four patients, with the five cavities mentioned above which have remained closed with Monaldi alone, are apparently well without additional treatment. In the spring of 1948 we tabulated 12 others who were apparently well with other procedures. Since then eight more have been able to undergo thoracoplasty following improvement with Monaldi drainage, but surgery in this group has been too recent to allow evaluation of the results.

Table 8 shows the relation of deaths to treatment. Only three can be attributed to the procedure; three were due to nontuberculous complications, and the remaining 35 were due to the progression of the disease. Several deaths occurred without the tube having been introduced.

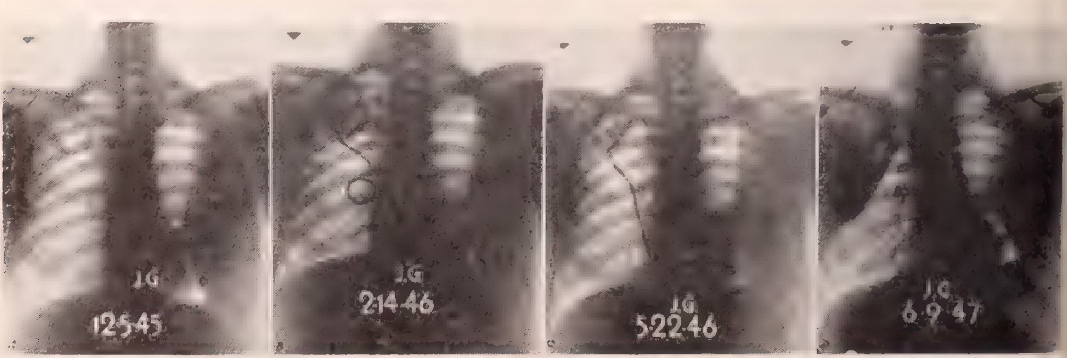

FIG. 3. J. G. (Case 59), male, age 22; indication—palliative, possible prethoracoplasty if function adequate.

A. Unexpanded pneumothorax, left, with fluid; cavity, right, with fluid level. Pneumothorax, right tried and abandoned because cavity became larger.

B. Resection anterior ends of first and second ribs, January, 1946; catheter inserted February 14, 1946

C. Cavity closed; sputum negative but drainage Gaffky i; functional studies by Dr. George Wright Trudeau Laboratory of Pulmonary Physiology, revealed maximum breathing capacity 79 L. per minut oxygen consumption 78%, right, 22% left.

D. Six-rib thoracoplasty completed September 7, 1946. Note poor apical collapse because of regeneration of first and second ribs anteriorly. Sputum negative. Well and working, April, 1949.

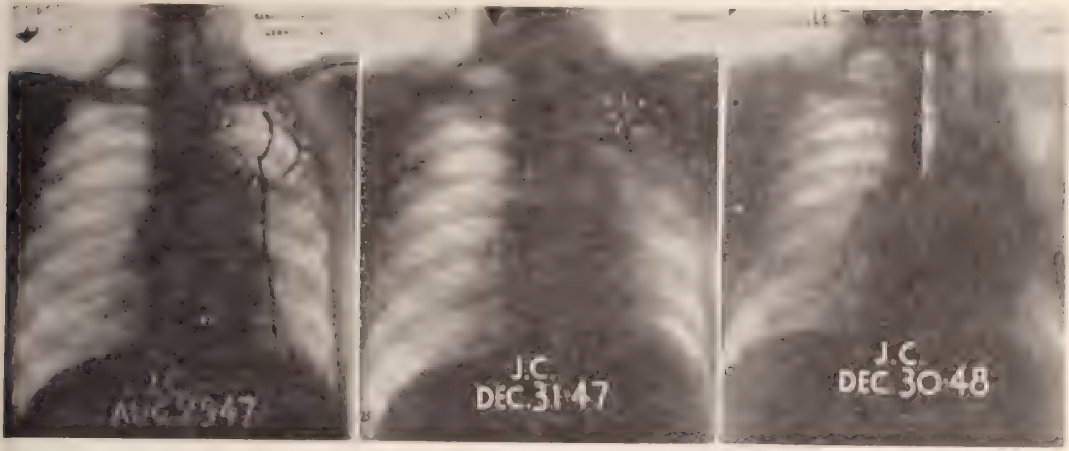

FIG. 4. J. C. (Case 87), male, age 36; indication—large cavity; infiltration contralateral lung; copious quantities of highly positive sputum; acutely ill.

A. Catheter introduced August 25, 1947.

B. By December 31, 1947, cavity had become much smaller; clinical condition improved. Note infiltration in second anterior interspace, right.

C. Thoracoplasty completed February 10, 1948. Sputum has remained intermittently positive. Lesion on right developed a 1.5-cm. cavity which is not now seen. Patient markedly improved. Sputum negative May 4, 1949.

TABLE 7.—SUBSEQUENT PROCEDURES

Procedure	Patients
Thoracoplasty	33
Cavernostomy	1
Cavernostomy and lobectomy	1
Thoracoplasty and pneumonectomy or Pneumonectomy and thoracoplasty	3
Total who had more definitive procedure	38 (37% of entire series)
Thoracoplasty or resection probable	5
Total who have had or may have more definitive procedure	43

TABLE 8.—DEATHS AS RELATED TO TREATMENT

		Number
Tube never inserted		7
Early—within 1 month		
Hemorrhage	2	
Empyema	1	3
Late		
Less than 1 year	12	
1 to 2 years	7	
2 to 3 years	4	
3 to 4 years	3	
Over 4 years	5	31
Total		41 (40%)

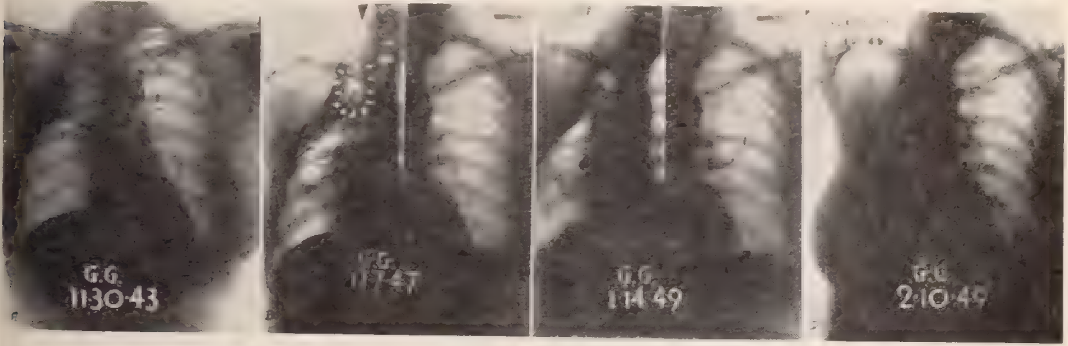

FIG. 5. G. G. (Case 90), female, age 52; indication—control of post-thoracoplasty cavity until bronchial disease would permit resection.

A. Two-stage, 6-rib thoracoplasty, 1943, cavity apparently closed.

B. Reactivation of disease in fall of 1946; extensive tracheobronchial tuberculosis, right; sputum highly positive; redevelopment of cavity, 3 by 6 cm., right apex beneath thoracoplasty.

C. Anterior pre-Monaldi December 6, 1947; Monaldi catheter inserted December 27, 1947. Development of cavity lower half, right. Apical cavity closed June 12, 1948. Drainage became and remained negative, June, 1948, but sputum continued positive; development of infiltration, left base.

D. Pneumonectomy, right, January 18, 1949, after improvement of bronchial disease with dihydrostreptomycin. Sputum negative on 3-day concentrate twice since February, 1949, and one negative culture.

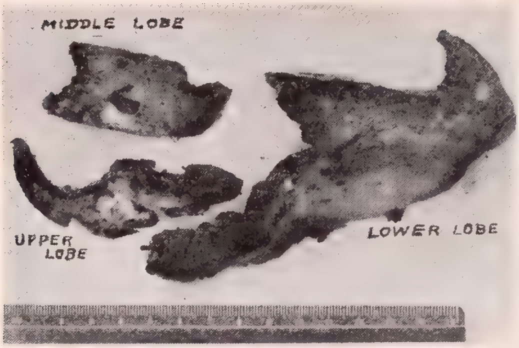

FIG. 6. G. G. (Case 90)—Pneumonectomy specimen: Small shrunken upper lobe shows extensive fibrosis but no cavity. Middle lobe reveals 1.5-cm. cavity. Lower lobe has scattered foci.

Table 9 gives the cause of death in all cases.

TABLE 9.—CAUSES OF DEATH

Progression of disease (Post-thoracoplasty, postpneumonectomy 1; withstood thoracoplasty 4)		26
Hemorrhage—either side		9
Empyema		1
Air embolism—late (withstood thoracoplasty)		1
Pulmonary insufficiency (post-thoracoplasty)		1
Nontuberculous		3
Hypertension and nephritis	1	
Suicide, post-thoracoplasty	1	
Carcinoma	1	
Total		41

Many more will eventually die of their disease, but it is encouraging that we have so many who are apparently well, either with Monaldi alone or with subsequent procedures. Most of those who have not had arrest of their disease have had their lives prolonged with marked amelioration of their symptoms.

Figures 2 to 6 show the progress of four representative patients who have been subjected to intracavitary drainage.

Summary

The Monaldi procedure is a valuable adjunct in the treatment of certain cases of pulmonary tuberculosis with cavity. By its use the condition of many patients has been improved, and in some the disease has been arrested. Others have sufficiently improved so that they have been able to have more definitive therapy. Still others have had their symptoms ameliorated and their remaining days made more comfortable.

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Discussion

Allan Stranahan, M.D., *Albany.*—I would like to summarize briefly the indications for Monaldi drainage and present one case which illustrates the type of problem in which we feel it is most useful.

The indications as presented by Dr. Woodruff may be summarized as follows:

1. Bilateral pulmonary tuberculosis: Certain patients with a large cavity on one side and extensive disease such as empyema, cavitation, pneumothorax, or thoracoplasty in the contralateral lung may receive considerable benefit from Monaldi drainage.

2. Large tension cavities: Drainage of this type of cavity will often alter the mechanics of the cavity and decrease the size to such an extent that the chance of closure with thoracoplasty will be greater.

3. Cavity with acute spread of disease: Drainage in this type of case is beneficial as it allows time for the spread to subside, while the cavity is kept under control.

4. Patients with limited respiratory reserve: By reducing the size of the cavity by drainage, the extent of the subsequent thoracoplasty may be reduced, and hence one will preserve pulmonary function.

5. Palliation: This is another indication for endocavitary drainage. In patients that raise a large amount of sputum and have a distressing cough, external drainage will almost invariably decrease the cough and sputum and make the patients more comfortable. A certain small per cent of these patients will subsequently come to thoracoplasty if the original lesion is kept under control.

I would like to present a case which we feel illustrates the main indication for endocavitary drainage. This twenty-six-year-old woman entered Glenridge Sanatorium in Schenectady on May 28, 1947. After a period of bed rest streptomycin was started, and she was given a total of 158 Gm. over a five-month period. There was considerable clearing of the scattered disease, but the large tension cavity remained. Monaldi drainage was done on February 9, 1948, after a preliminary anterior stage thoracoplasty and pleural packing. After three and one-half months of drainage the cavity was markedly reduced in size, and there was marked clinical improvement. Thoracoplasty was done on May 29, 1948, and at the present time the patient is beginning exercise. Her sputum has been negative for over six months.

DECORTICATION OF THE LUNG IN NONTRAUMATIC LESIONS

HERBERT C. MAIER, M.D., and WALTER W. FISCHER, M.D., New York City

(From the Surgical Service, Lenox Hill Hospital)

WHEN a lung has been collapsed by air or fluid in the pleural space, re-expansion may be prevented by the formation of a restrictive covering over the pleura. Surgical removal of such an unyielding membrane or layer may permit pulmonary re-expansion, provided that bronchial obstruction and disease of the parenchyma do not interfere. During the recent war the value of decortication of the lung in the management of chronic hemothorax was firmly established. Since then, it has been demonstrated that this procedure has a definite place also in the treatment of a variety of nontraumatic lesions of the thorax.

Although pulmonary decortication has been employed sporadically for many years, the full possibilities of the procedure were not realized because of a misconception of the pathology involved. The impression that the firm wall of an empyema cavity represents a thickening of the pleura itself is often erroneous. Usually there is a thickened layer *over* the pleura, but not *of* the pleura. When the restrictive layer or membrane is not an integral part of the lung, it is separable from the visceral pleura. When pulmonary decortication is feasible, the visceral pleura remains relatively intact following the procedure.

The chief objectives of decortication of the lung are (1) to improve or restore pulmonary function by permitting re-expansion of a lung which is held in a collapsed state by intrapleural factors and (2) to aid in curing a chronic infection in the pleural space by removing the diseased, thickened walls which are too abnormal and rigid to permit spontaneous obliteration of the pleural cavity. Although decortication of the lung by chemical means has been attempted, an analysis of the pathology and goals of therapy indicates that, to date, such methods have only a very limited application. Surgical removal of the layer of tissue which prevents pulmonary re-expansion is usually the preferable procedure.

The indications for the operation may be listed as follows:

1. Lung collapsed by a hemothorax which is not satisfactorily managed by nonsurgical measures.
2. Chronic pyogenic empyema or an acute empyema in which simpler methods are not readily curative.
3. Chronic pneumothorax.
4. Unexpandable lung following artificial pneumothorax therapy for pulmonary tuberculosis, provided that the parenchymal lesions do not contraindicate re-expansion.
5. Tuberculous empyema, but again provided that the lesions of the pulmonary parenchyma do not contraindicate the operation. Because of the extent of the parenchymal pathology in many cases of tuberculous empyema, a pleuropneumonectomy (resection of lung and walls of empyema cavity together) is often necessary. In some cases, decortication may be combined with lobectomy.

Before decortication of the lung is undertaken, several factors must be investigated. Collapse due to bronchial and pulmonary parenchymal disease must be ruled out. The lung must be capable of re-aeration if decortication is to accomplish a useful purpose. This does not necessarily mean that full re-expansion must be attainable. In some patients, notably those with pulmonary tuberculosis, a satisfactory result may be secured although only partial re-expansion is obtained, provided that a partial thoracoplasty is also performed. Then, by the combined procedures decortication may result in obliteration of the pleural space by enabling the partly re-expanded lung to fill a hemithorax of reduced size completely.

Preoperatively, the history and all available roentgenograms should be reviewed in order to obtain maximum information concerning the status of the underlying lung. If significant disease of the parenchyma of the lung is established, decortication alone may not be advisable. Bronchoscopy is often indicated preoperatively to assure patency of the larger bronchi. Tomography may aid in determining the status of the lung obscured by a pleural density. Unless these measures are observed, decortication of the lung will be performed in cases in which it is not advisable and thus lead to unsatisfactory results.

Although re-expansion of a lung usually leads to a variable increase in respiratory function, this does not always occur. If a collapsed lung has considerable emphysema and fibrosis, reinflation beyond a certain point may actually decrease function and even cause hypoxia. If a considerable part of the lung is contracted by disease, it is undesirable to attempt to overinflate the other portions in order to fill out an entire hemithorax. Under such circumstances the size of the hemithorax should be reduced by partial thoraco-

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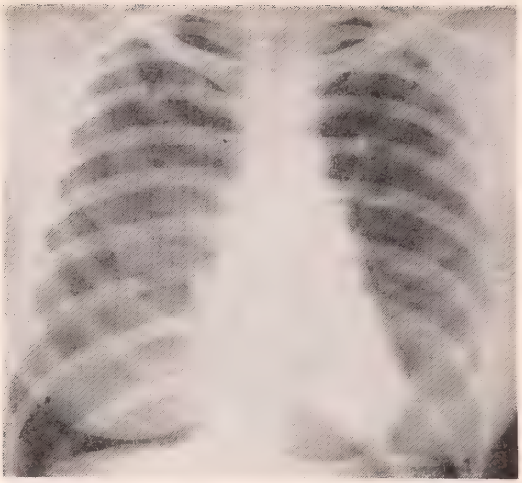

FIG. 1. Pneumothorax on right side. Membrane over pleura not apparent.

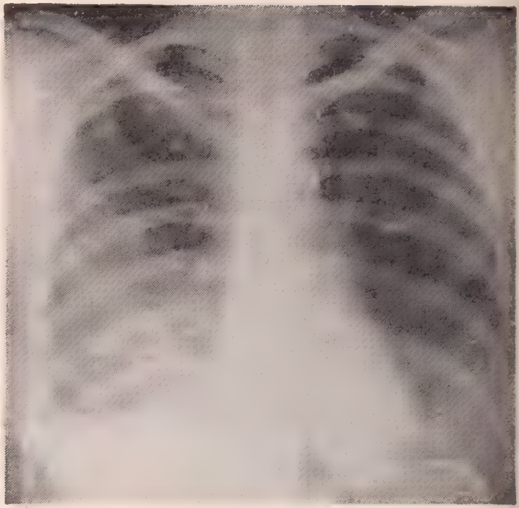

FIG. 2. Lung re-expanded following decortication.

plasty. If it is known that a thoracoplasty is necessary, it should usually precede the decortication. Otherwise, the thoracoplasty should be done at the same time or within a few weeks of the decortication.

The operative management of pulmonary decortication is similar to other intrathoracic procedures, but several points should be stressed. The removal of the layer of tissue overlying the visceral pleura should be very complete unless contraindicated in some areas due to underlying parenchymal disease. After the main thick layer has been removed, several additional layers, some of which may appear veil-like, are found in some cases. Although extremely thin, such membranes may interfere with re-expansion, especially if infolding of the lung has been produced. Decortication of the diaphragm and chest wall is also desirable in order to improve the ventilatory motion of the thoracic cage. It is highly desirable to attain early and complete obliteration of the pleural space. Even small residual air or fluid pockets may jeopardize the result. Therefore, several drainage tubes to which suction is applied are usually inserted at the time of operation and maintained for several days. Antibiotics are employed in the pre- and postoperative period. Transfusion is always indicated during operation, as considerable blood loss may occur.

Case Reports

Case 1.—D. B., a forty-three-year-old housewife, had repeated episodes of spontaneous pneumothorax during the five months prior to admission. Decompression of a tension pneumothorax was required five times. The lung re-expanded readily after the first decompression but never re-expanded fully during the month before admission when three decompressions were necessary. Re-expansion seemed to favor the development of another air leak.

Physical examination was essentially negative except for the findings of a right pneumothorax. Sputum examination for tubercle bacilli was negative. X-ray of chest showed a 40 per cent collapse of the right lung (Fig. 1). An adhesion was noted over the right upper lobe. At operation a thin dense membrane was found enveloping the entire right lung, and expansion was prevented, even when positive pressure was administered by the anesthetist. Complete decortication was performed followed by full expansion of the lung. It was not possible to demonstrate the site of air leakage; no pleural bleb was present, nor was there any palpable parenchymal disease. The parietal pleura was rubbed with gauze to favor the formation of fine adhesions. Closed drainage was instituted anteriorly and posterolaterally, and suction was applied for three days. The lung was shown to be completely expanded on x-ray examination the day after operation and has remained so (Fig. 2).

Case 2.—F. M., a forty-five-year-old man, had pneumonia in January, 1946, complicated by empyema. Thoracotomy was done, but, despite apparently adequate drainage, an empyema space remained. A second thoracotomy was done after three months without improvement. In September, 1946, an anterior thoracotomy was performed in another hospital in preparation for thoracoplasty to obliterate the space. Physical examination revealed a thin male who appeared chronically ill. The right hemithorax was markedly contracted. The lower right anterior thoracotomy wound drained thick pus. X-rays revealed 90 per cent collapse of the lung.

Complete decortication was done December 14, 1946. The visceral peel was about $^1/_2$ cm. in thick-

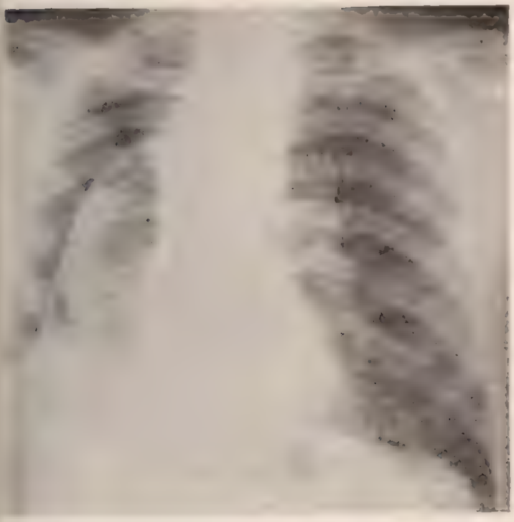

FIG. 3. Unexpandable right lung after prolonged pneumothorax therapy for pulmonary tuberculosis.

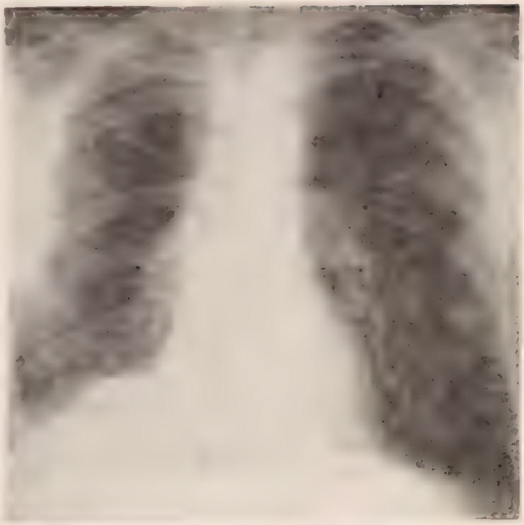

FIG. 4. Re-expansion of lung following pleural decortication.

ness, the parietal peel 1 cm. The lung expanded well to fill the thoracic cavity. The postoperative course was entirely uneventful. Pathologic examination of the peel revealed no evidence of tuberculosis. The wound healed by primary union. Postoperative x-rays showed complete obliteration of the empyema space. The patient has remained well since operation.

Case 3.—A. P., a thirty-one-year-old man, had pulmonary tuberculosis. A small cavity was noted in the right upper lobe and the sputum was positive in 1943. A right pneumothorax was induced and pneumonolysis was performed. The lung became completely collapsed, and a pleural effusion developed. Cultures of the pleural fluid were negative. During the last six months prior to surgery an attempt was made to re-expand the lung. The patient experienced dyspnea and discomfort in the right chest with the development of a highly negative pressure. Review of serial x-rays revealed that the patient originally had a small cavity at the apex with no disease in the lower half of the right lung. The preoperative film showed a pneumothorax on the right with more than 50 per cent collapse of the lung and evidence of the thickened visceral pleura with mediastinal shift to the right (Fig. 3). Decortication of the lung was done on March 26, 1948. The peel was about 1 cm. in thickness. Following decortication the middle and lower lobes expanded to a normal degree and the upper lobe incompletely, but the pleural space was obliterated. The postoperative course was entirely uneventful. During the year since operation there has been marked clinical functional improvement. The vital capacity now measures 3,100 cc. as compared to 1,700 cc. preoperatively (Fig. 4).

Case 4.—I. W., a thirty-nine-year-old man, had a right pneumothorax induced for pulmonary tuberculosis in 1935. His sputum became negative for tubercle bacilli within nine months and has remained negative. In 1942, serosanguinous fluid appeared, and the lung has been compressed by large fluid accumulations. The fluid, which was negative for tubercle bacilli, recurred following thoracentesis. General health remained good. Physical examination was essentially negative except for signs of right hydrothorax with some mediastinal displacement toward the left (Fig. 5). In 1948, pulmonary decortication was performed with considerable difficulty. The lung expanded fairly well. After several months the lung was almost fully re-expanded, and the breathing reserve was greatly improved (Fig. 6).

Case 5.—M. B., a thirty-six-year-old woman, had a history of pulmonary tuberculosis since 1932. Right pneumothorax was instituted, and a pneumonolysis was performed later. Left pneumothorax was started in October, 1937, when a cavity appeared in the left apex. Bilateral pneumothorax was then continued until 1943, when an unsuccessful attempt was made to re-expand the right lung which had been collapsed for ten years (Fig. 7). Left pneumothorax was abandoned after seven years in 1944. The sputum remained negative, and the patient felt well except for symptoms due to a highly negative pressure in the right pleural space. The patient was referred for thoracoplasty to obliterate the right pleural space, but it was decided to attempt decortication rather than sacrifice the remaining portion of the right lung in view of the impaired function on the left resulting from pneumothorax. The right lung at this time had been collapsed for a period of fifteen years. Decortication was done on August 9, 1948. The entire lung was restricted by a dense membrane

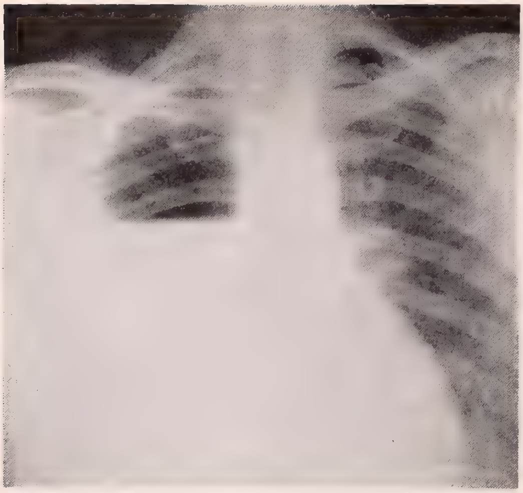

Fig. 5. Large accumulation of bloody fluid in right pleural cavity in spite of prolonged attempt to re-expand the completely collapsed lung.

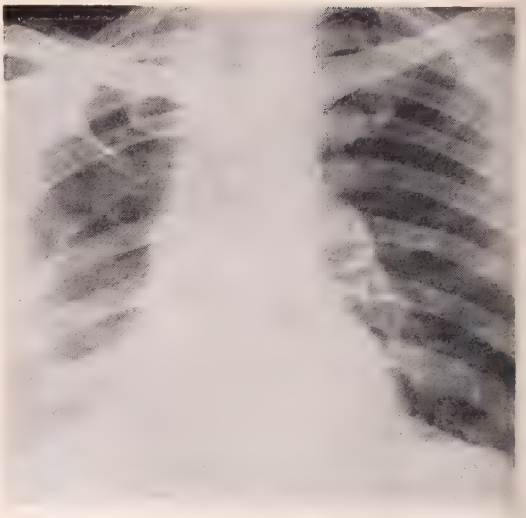

Fig. 6. Re-expansion of right lung following decortication. Pleural cavity now obliterated and pleural fluid formation has ceased.

about 1 cm. in thickness. The middle and lower lobes expanded well. The upper lobe was airless, shrunken, and fibrosed and was not decorticated. There was caseous appearing material in the free pleural space between the upper lobe and the mediastinum. It was felt that collapse of the upper lobe should be maintained; hence, the decortication was followed by an upper thoracoplasty two weeks later (Fig. 8). The lower and middle lobes remained well expanded. The patient's symptoms were relieved, and her clinical condition improved. She has remained well since then with negative sputum.

Summary

The value of decortication of the lung as demonstrated in traumatic hemothorax has been extended to a variety of nontraumatic lesions. Its primary purpose is that of preservation of lung

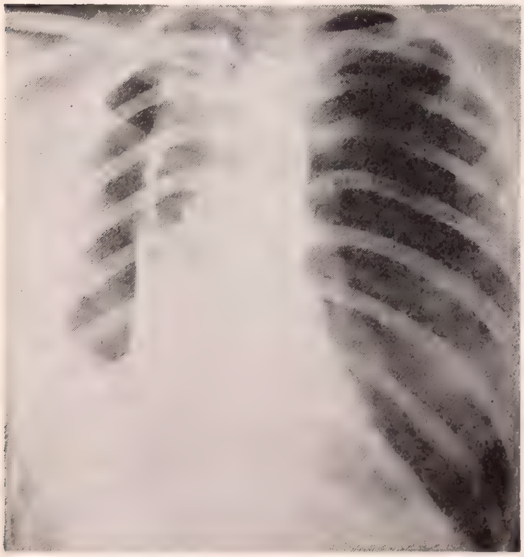

Fig. 7. Bilateral pneumothorax for pulmonary tuberculosis in 1942.

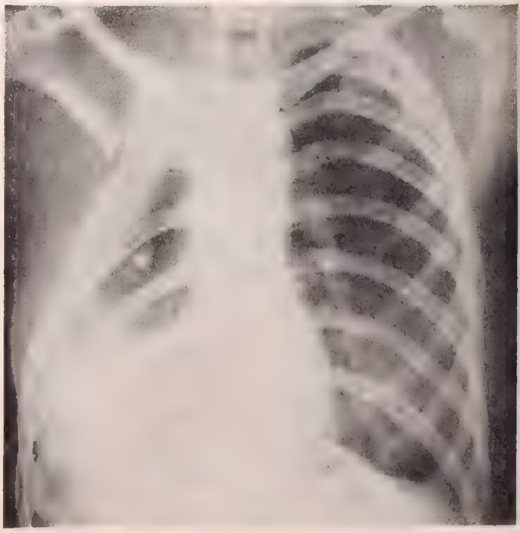

Fig. 8. Right tuberculous empyema cavity has been obliterated by combination of decortication and partial thoracoplasty. The left pneumothorax re-expanded uneventfully.

function, obliteration of the pleural space, and, in some cases, control of pleural infection. A careful preoperative appraisal of the status of the underlying lung is essential. The extent of the decortication and its combination with partial thoracoplasty in some patients depends upon the pathologic findings.

Discussion

Lew A. Hochberg, M.D., *Brooklyn.*—The name Delorme is intimately identified with the operation known as "decortication of the lung." In justice to his predecessors it should be pointed out that this procedure was advocated and employed routinely by some surgeons long before Delorme advised it in cases of chronic empyema. By decortication of the lung we imply the removal of the hull formed on the visceral pleura preventing the full expansion of the lung.

My remarks on the subject are based on experiences with twenty cases. In this series two were in patients who had pneumothorax for pulmonary tuberculosis and nine were in patients who sustained injuries to the chest and developed hemothorax; in the remaining nine cases the operation was undertaken for unexpanded lung due to pyogenic infection of the pleural cavity.

The two patients who had decortication of the tuberculous lung are of too recent date to warrant any conclusions. Of the nine cases in which the lung was collapsed by hemothorax, six had decortication performed within nine weeks from the date of injury and the results were uniformly good. In the remaining three cases, where the operation was undertaken three to seven months after the injury, complete expansion of the lung occurred in only one case. In the nine postinflammatory cases one was associated with an endothelioma of the visceral pleura in which instance the lung failed to expand after the operation. In the remaining eight cases complete expansion of the lung was obtained in five cases, one of these being in a patient whose lung was decorticated seven years after the initial empyema.

From these cases it appears that the procedure should be undertaken as soon as one is convinced that other, simpler measures will not help the lung expand. It must be borne in mind that the object of decortication of the lung is expansion of the lung and obliteration of the pleural cavity. This does *not* mean restitution to respiratory function, for expansion of the lung is not necessarily related to increased function of the lung.

A.M.A. NEVER OPPOSED VOLUNTARY PLANS

In a bulletin published recently by the A.M.A. Bureau of Medical Economic Research, Director Frank G. Dickinson says that "the A.M.A. has never opposed development of voluntary sickness insurance plans in this country as they exist today."

The bulletin, No. 70, is available from the bureau. The foreword says:

"The American Medical Association has never opposed the principle of voluntary sickness insurance, per se. It has never objected to the individual or family purchase of health insurance from the firmly established insurance companies, many of which had been writing this type of coverage long before the development of what usually are called voluntary plans.

"It has continuously encouraged the development of the voluntary plans along a sound financial and medical care basis. As early as 1934 the association drew up 10 principles to serve as a guide in development of these plans and to insure soundness in their execution.

"Through experience a new type of voluntary insurance developed in which the harmful features gradually were eliminated. With the establishment of this new type of insurance, the House of Delegates in 1938 gave its wholehearted approval to voluntary sickness insurance as a means of meeting the costs of medical and hospital care.

"Since that date, there has been no question as to the support of voluntary sickness insurance by the American Medical Association."

Case Reports

ERYTHEMA NODOSUM WITH PULMONARY INFILTRATIONS

MAXWELL L. GELFAND, M.D., and EMANUEL APPELBAUM, M.D., New York City

(*From the Fourth Medical (New York University) Division, Bellevue Hospital*)

ERYTHEMA nodosum as a clinical entity is characterized by painful, nodular, erythematous skin lesions, which most commonly involve the shins but at times also the upper extremities. In most instances the patient also presents evidence of systemic involvement, particularly fever and arthralgia or arthritis. For many years the characteristic skin lesion has been regarded as a manifestation of either tuberculosis or rheumatic fever. Recently, however, a plurality of causes has been recognized. In a high percentage of cases erythema nodosum has been found in association with infections due to hemolytic streptococci. In addition, the lesions have occurred in tuberculosis, rheumatic fever, meningococcemia, coccidioidomycosis, and other infections, as well as following the use of certain drugs.

In the European literature there are many references to the occurrence of pulmonary infiltrations in erythema nodosum. In this country similar observations were noted by Paul and Pohle, Poppel and Melamed, Spink, and Favour and Sosman.[1-4] The pulmonary involvement in erythema nodosum is characterized by marked hilar lymphadenopathy and the presence of either miliary infiltrations or coarse reticular striations.

The case herein described is an illustration of erythema nodosum associated with pulmonary infiltrations and hilar adenopathy.

Case Report

M. R., a man, aged twenty-four, was admitted to Bellevue Hospital on May 12, 1947, with the complaints of fever, pain in the legs, inability to walk, and a rash on both lower extremities. He was in perfect health until nine days before admission when he was suddenly seized with a chilly sensation and severe pain in both legs. That same night he noticed numerous red, elevated areas on the anterior portion of both lower extremities that were extremely sensitive to touch. On May 10, 1947, he developed difficulty in walking and swelling of both ankles. The skin lesions became more pronounced and widespread over both legs. In addition, there was a rise in temperature, weakness, and anorexia. The past history was irrelevant, since the patient did not have sore throats or any serious illness. He was a member of the armed forces during World War II and was discharged about a year before the onset of the present illness in apparent good health. There was also no history of the ingestion of any drugs.

Physical examination revealed a fairly well-developed, slender, adult white male in no apparently acute distress with a temperature of 101.8 F., a pulse of 76, and a respiratory rate of 18. His scalp, face, eyes, ears, nose, and throat were entirely normal. The neck was supple, and there were no palpable cervical nodes or masses. The heart was normal to percussion, and the sounds were of good quality with regular rhythm. There were no murmurs, and the blood pressure was 106/70. The lungs appeared normal on percussion and auscultation. There were no masses or organ edges felt on abdominal examination. The rectal examination was negative. His upper extremities were normal, and no clubbing of the fingers was noted.

The lower extremities revealed many erythematous nodules, some discrete in outline and others confluent. These extended from below the knee to the level of the ankles and were extremely painful to touch. In addition, there were many erythematous and bluish lesions diffusely scattered along the shins. The skin appeared shiny and stretched. The ankles were swollen with marked limitation of motion. Many subinguinal lymph nodes were palpable bilaterally.

The urine revealed a specific gravity of 1.033, and

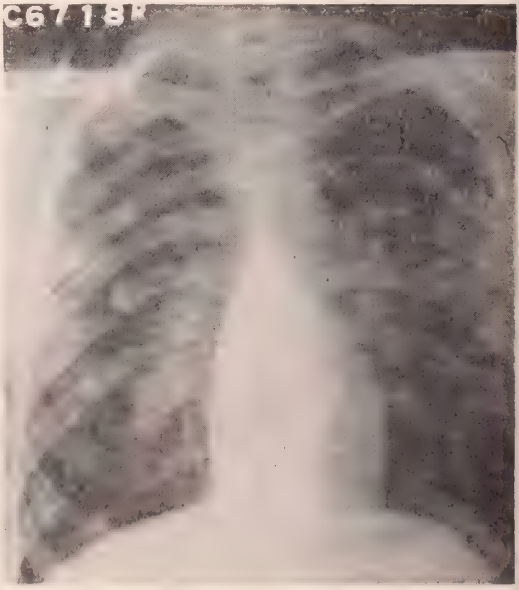

FIG. 1. Bronchopneumonic consolidation of both lungs with tendency to confluence on the left side.

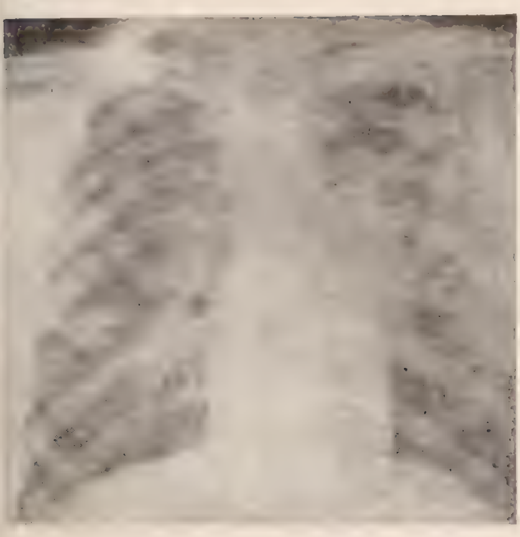

FIG. 2. Cottony infiltrations throughout both lungs with bilaterally enlarged hilar nodes.

no albumin or sugar was present. On microscopic examination an occasional white blood cell was noted, but no casts, pus cells, or red cells were detected. The total white blood count was 9,500, of which 74 were polymorphonuclear cells, 15 lymphocytes, and 9 monocytes. The red blood count numbered 5,300,000 cells with a hemoglobin of 13.4 Gm. The Mazzini test for syphilis was negative. His sputum was negative for acid-fast bacilli. A throat culture revealed few Bacterium coli, hemolytic streptococci, pneumococci, staphylococci, and Streptococcus viridans.

The blood chemistry disclosed a nonprotein nitrogen of 28, cholesterol 196, cholesterol esters 66, calcium 8.9, and phosphorus 3.09 mg. per cent. The total blood proteins were 6.5 Gm. per cent, of which the albumin was 4.1 and the globulin 2.4 Gm. per cent. The alkaline phosphatase was 2.3 Bodansky units.

Roentgenograms of the legs and skull, taken on May 13, 1947, were normal. The chest film taken on the same date revealed a bronchopneumonic consolidation of the mid third of both lungs, with some tendency to confluence of lesions on the left side (Fig. 1).

Intradermal skin tests with purified protein derivative and coccidioidin were negative. A biopsy of the skin lesion taken on May 14, 1947, was reported as acute panniculitus. A lymph node biopsied on May 28, 1947, was found to be normal.

During the first week of the patient's hospital stay the temperature ranged between 101.8 and 103 F. Defervescence, accompanied by a sense of well-being, occurred in the second week. At first the treatment was palliative, but in the sixth and seventh weeks a course of penicillin was administered for a total of 5,600,000 units. It should be noted, however, that there was satisfactory clinical progress prior to the institution of the antibiotic therapy.

In spite of the general clinical improvement, the chest films continued to show striking findings. A roentgenogram taken on June 3 was reported as follows (Fig. 2): "There are bilaterally enlarged hilar nodes as well as cottony infiltrations throughout both lungs. Boeck's sarcoid is among the first considerations." The same findings were noted in films taken on June 13 and 26.

The patient was discharged on the fifty-second hospital day, much improved and referred to the outpatient clinic for follow-up. From then on, there was progressive clinical improvement, but the roentgenographic evidence of recession of the pulmonary infiltrations did not appear until November 15, 1947. The last film, taken on January 24, 1948, shows almost complete healing of the pulmonary lesions (Fig. 3).

Comment

This case is a definite example of the association of erythema nodosum with pulmonary infiltrations and may well represent a distinct clinical entity. The precise diagnosis, however, remains in doubt, particularly since the lung involvement observed in our patient was strikingly different from that usually encountered in erythema nodosum. It is quite possible that the pulmonary condition represents the primary disease and the skin eruption a complicating feature. A clinical picture of this type may be seen, for example, in coccidioidomycosis, in which there is a 5 per cent frequency of erythema nodosum. However, the negative coccidioidin skin reaction together with the benign clinical course of our patient eliminates, according to Smith, the diagnosis of coccidioidomycosis.[5]

Of particular interest is the possible diagnosis of sarcoidosis as suggested by the roentgenologists. Several investigators, notably Kerley and Reissner, have pointed out that identical pulmonary x-ray findings are encountered in sarcoidosis and in erythema nodosum and have postulated a relationship between these two conditions.[6–8] Sarcoidosis has, of course, a specific histopathology—that of a cold

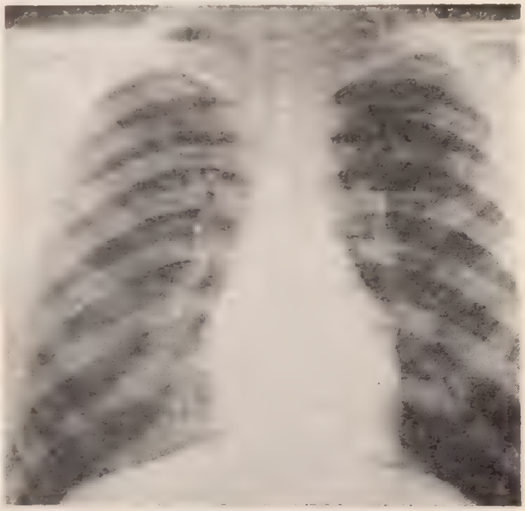

FIG. 3. Both lungs appear almost completely healed.

tubercle—which was not demonstrated either in the skin or the lymph node biopsy of our patient. It may also be of interest to note that hyperglobulinemia, a frequent although not invariable finding in sarcoidosis, was not present in our case. In general, the clinical course of our patient does not conform with that described for sarcoid.

The skin biopsy report of panniculitis adds further to the diagnostic uncertainty. This may indicate the presence of Weber-Christian disease. However, to the best of our knowledge, there are no references in the literature to the occurrence of pulmonary involvement in this disease. It is also necessary to point out that occasionally pathologists find it difficult to differentiate between erythema nodosum and Weber-Christian lesions.

The possibility of tuberculosis is very likely ruled out by the negative sputa, negative tuberculin reaction, and the clinical course.

Summary

We have recorded a case of erythema nodosum associated with unusual pulmonary infiltrations. It remains uncertain whether the case represents a distinct clinical entity or is an instance of some form of pulmonary disease complicated by erythema nodosum lesions.

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AN UNUSUAL REACTION FOLLOWING THE USE OF PYRIBENZAMINE

Paul A. Towers, M.D., and Lawrence J. Giuffra, M.D., Brooklyn, New York

(*From the Medical Service of St. Catherine's Hospital*)

THE two most widely used antihistamine drugs are Benadryl (B-dimethylaminoethyl benzhydryl ether hydrochloride) and Pyribenzamine (N-pyridyl-N-dimethylenediamine monohydrochloride), both of which are complex chemical structures involving benzene rings and possessing similar pharmacologic properties.[1]

In view of the fact that these drugs are in such common use today, it was felt that a report of a case showing what was most probably a severe toxic reaction to Pyribenzamine would be of value. As far as could be ascertained, no similar reaction has been reported to date.

Some of the features presented by this patient might conceivably be explained on the basis of alkalosis resulting from prolonged hyperpnea. However, the authors feel that her subsequent course was not consistent with this factor alone.

Case Report

L. W., a thirty-nine-year-old American-born housewife, came to the Emergency Room at 9:00 P.M. on August 15, 1947, complaining of inability to breathe, sharp pain in the anterior chest radiating up to the neck, and a burning sensation in the mouth. She had had these symptoms for about three hours.

Three years previously, she had had a "nervous breakdown," apparently precipitated by the entrance of a son into the army. She was treated at home by her private physician. During the subsequent years, she had frequent episodes of difficulty in breathing, associated with marked apprehension and excitement. These attacks were most severe at night when she would waken from a sound sleep, turn on the lights, and sit up for hours in fear of impending death. Occasional bouts of exertional dyspnea accompanied by some poorly localized, nonradiating anterior chest pain were also noted.

During these years, a physician was consulted repeatedly, who prescribed mild sedatives for "nervousness." Four weeks prior to her admission, she had a particularly severe episode and saw another physician who told her that she had asthma. He prescribed capsules containing $^{1}/_{4}$ grain papaverine, $^{1}/_{4}$ grain extract of belladonna, $^{1}/_{300}$ grain hyoscine hydrobromide, hyoscyanamide extract, and $^{1}/_{25}$ grain desoxyn. These capsules were to be taken three times daily. In addition, she was given Pyribenzamine in 50 mg. tablets and advised to take one tablet three times a day, increasing the dose to two tablets three times daily during exacerbations of her asthma.

Examination in the Emergency Room revealed an apprehenisve female appearing older than her stated age. There was an increase in the rate and depth of respirations. No cyanosis was noted. The blood pressure was 110/60, pulse rate was 100, and the temperature was 98 F. The heart was not enlarged, sounds were of good quality; the rhythm was regular, and no murmurs were audible. The lungs were resonant to percussion, and breath sounds were everywhere vesicular. The impression of the examining physician was one of cardiac neurosis.

The patient was reassured and advised to return home; she was to report to the Medical Clinic if her symptoms persisted. A few minutes later, while rising from the examining table, respirations suddenly ceased, she became deeply cyanotic, her entire body became rigid, and heart sounds were inaudible. Artificial respiration, oxygen, and respiratory stimulants were administered. Within wo minutes respirations were re-established, and he color improved. The pulse again became palpable at the rate of 130 per minute; breath sounds were harsh throughout, with occasional sibilant rales. Pupils were in mid dilatation with a minimal reaction to light. At this time, the deep tendon reflexes were absent, nor could the superficial abdominals be elicited. There was a flexor response to plantar stimulation. The patient was carefully observed in the Emergency Room until 2:00 A.M., toward the end of which period the deep tendon reflexes became equally active. Shortly thereafter, she became extremely restless, excited, and disoriented and was given 200 mg. of Demerol and 0.2 Gm. of sodium amytal. She was transferred to a medical ward in restraints because of prolonged, intermittent bouts of extreme excitement with screaming. Examination on the ward revealed no change in physical findings. Fundoscopic examinations were not possible because of complete lack of cooperation on the part of the patient.

It was learned from the patient's family that she had taken Pyribenzamine in excess of the prescribed dosage on several occasions. About ten days prior to admission, she had taken 400 to 500 mg. within a twenty-four hour period. In the forty-eight hours immediately preceding her admission, she had taken 1,350 mg. The total amount taken in four weeks was 6,350 mg.

The following morning, the patient was somewhat stuporous but restless in restraints, complaining of pain in the left arm and shoulder. There was a distinct pallor; lips and tongue were dry. She was moaning, somewhat disoriented, but responded to questioning, although prompting was required. Neurologic examination revealed no abnormalities; again, the fundi could not be visualized. The temperature was 100.6 F. rectally, pulse rate 88, respirations 24, and the blood pressure was 100/70. A few crepitant rales were heard over the right base posteriorly.

At 7:00 P.M. on August 16, the patient was quite rational, complaining only of a mild soreness of the throat. She remembered none of the events of the preceding three days. Temperature was 100 F., pulse rate 90, and the blood pressure 106/70. She was taking fluids and semisolids by mouth and appeared fairly well hydrated. She was incontinent of urine. Examinations of the lungs revealed a prolonged expiratory phase with some diffusely scattered inspiratory and expiratory wheezes. The remainder of a complete examination was again not remarkable. Meanwhile, a telephone conversation with her private physician verified the history of therapy as outlined.

Admission urinalysis showed a 1 plus albuminuria and 2 to 3 granular casts per low power field. Repeated urine studies at twenty-four-hour intervals were all within normal limits. Blood count revealed 4,400,000 red cells and 85 per cent hemoglobin. There were 14,000 white cells, of which 86 per cent were polymorphonuclears, and 14 per cent were lymphocytes. The platelet count was 201,000. Prothrombin time was twenty-eight seconds compared with a control of twenty seconds. A fasting blood sugar was 115 mg. per cent; nonprotein nitrogen was 35 mg. per cent; creatinine 1.05 and blood cholesterol was 106 mg. per cent. The cephalin flocculation was 2 plus.

On August 17, the patient was completely rational and cooperative but still had no memory of events of the three days preceding admission. She was having occasional mild episodes of asthmatic breathing.

On the evening of August 17, a temperature elevation to 102 F. was noted, and the patient began to complain of a distressing cough. Subsequent course and findings were those of bronchopneumonia which responded to chemotherapy. On August 29, completely asymptomatic, the patient was discharged to both Medical and Allergy Clinics.

Comment

A review of the literature has failed to disclose a report of any similar reactions to the use of Pyribenzamine. In several series of cases, notably those of Friedlaender and Friedlaender, Feinberg and Friedlaender, Chobat, Epstein, and Koepf, Arbesman, and Munafo, the following signs and symptoms were noted following the use of Pyribenzamine: sleepiness, nausea, vertigo, and headache frequently; gastric disturbances, insomnia, dry mouth, nervousness, vomiting, and tachycardia moderately.[2–6] One case of granulocytopenia, probably due to Pyribenzamine, has been reported by Wyndham and Owens.[7]

There are many other signs and symptoms that have been noted either occasionally or in isolated instances, none of which has been particularly severe. We have found no reported case in which the reaction was as severe as was noted in this patient.

It is interesting to note that an observer, quoted by Ratner, described aggravation of asthma in 3 per cent of a series.[8] Ratner himself believes that both Benadryl and Pyribenzamine are potentially as dangerous as morphine to an asthmatic, since these drugs can dry up bronchial secretions, produce suffocation, choking sensations, and can conceivably kill a patient in status asthmaticus.

Summary

An unusual reaction following the use of Pyribenzamine has been presented. The initial complaints of inability to breathe, sharp pain in the anterior chest radiating to the neck, and a burning sensation in the mouth were shortly followed by a period of deep cyanosis, rigidity of the entire body, and inaudible heart sounds. Subsequently, the patient became extremely irrational and uncooperative. Within twenty-four hours her mental status was normal. She was unable to remember any of the events that had occurred during the three days preceding admission.

By questioning her family and inspecting her supply of Pyribenzamine, it was estimated that she had taken 1,350 mg. of the drug during the forty-eight hours before admission. No similar case was found in the literature.

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SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on November 10, 1949, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of illness for three members for 1949; eight War Memorial assessments were remitted for 1949 on account of illness and one was remitted and refunded on account of service with the armed forces.

Communications.—1. Letter dated October 14, 1949, from Dr. Fred H. Voss, secretary, Medical Society of the County of Ulster:

"The Medical Society of the County of Ulster does hereby petition the Council to vote that our member, Dr. Harry M. Eberhard, be allowed to be a member of the Philadelphia County Medical Society and the Medical Society of the State of Pennsylvania as well as the Medical Society of the County of Ulster and the Medical Society of the State of New York.

"Dr. Eberhard resides in Ulster County from June through September and in Philadelphia the rest of the year. At present Dr. Eberhard wishes Philadelphia as his permanent address and when he retires he will use New York State as his permanent address."

It was voted that this petition of the Medical Society of the County of Ulster be granted, which would allow Dr. Harry M. Eberhard to be a member of two state and two county medical societies, but not to be carried on the roster of the Medical Society of the State of New York or the American Medical Association as a member of our Society.

2. As result of a letter from Dr. Lee S. Preston, president, Madison County Medical Society,

It was voted that permission be granted to Dr. Marvin Brown and Dr. John D. George, Jr., to be transferred to the Madison County Medical Society in accordance with the bylaws.

3. Letter dated October 31, 1949, from Dr. Henry W. Ingham, requesting the following resolutions adopted at the October 6, 1949, annual meeting of the Eighth District Branch be brought to the attention of the Council:

"*Be it resolved,* by the Central Conference Committee on Workmen's Compensation Problems of the Eighth Judicial District, that it go on record as favoring and strongly recommending that Dr. Kaliski be named by the Medical Society of the State of New York to the Committee for Revision of the Fee Schedule and if this cannot be done then that Dr. Kaliski be specifically named to act as consultant and adviser to the Committee."

It was voted that the President be requested to appoint Dr. Kaliski as consultant to the Special Committee.

"*Be it resolved,* that the Eighth District Branch here assembled in its 44th Annual Meeting go on record as strongly urging the Council of the Medical Society of the State of New York that it take any and all steps necessary to obtain an increase in home, office, and hospital visit fees for general practitioners."

It was voted that this be referred to the Workmen's Compensation Committee.

4. Letter dated October 25, 1949, from Michigan State Medical Society, proposing an informal meeting in Washington of legal counsels of various state medical societies to consider certain factors of common concern.

It was voted that Mr. William Martin be requested to attend this meeting as an observer.

5. Letter dated October 27, 1949, from the New York State Nurses Association, Albany, N. Y., was read for information:

Dear Dr. Masterson:

At the Biennial Convention of the New York State Nurses Association, held in Buffalo, October 16 to 21, the House of Delegates overwhelmingly voted to adopt a recommendation from the Board of Directors that the members of the New York State Nurses Association, as citizens and as a delegate body, oppose the proposed socialized and compulsory medical care plans.

Sincerely yours,
Katherine E. Rehder, RN
Executive Secretary

6. Invitation dated November 7, 1949, from Dr. James F. Norton, president, Medical Society of New Jersey, to President Masterson, to attend the first Annual Statewide Press Conference to be held by the Medical Society of New Jersey on Friday afternoon and evening, November 18, beginning at 2 P.M., at the Stacy-Trent Hotel in Trenton.

It was voted that the Society be represented at this meeting and that the chairman of the Public Relations Committee and the Public Relations Officer be requested to attend.

Activities.—Your Secretary during the past month has attended committee meetings about which you will hear the reports. He also attended the Sixth District Branch meeting at Cortland and the Second District Branch meeting at Bronxville. It seems likely that the First District Branch will not meet in 1949. Its executive committee voted not to meet until revision of its bylaws had been sufficiently completed for presentation to the district branch.

At your last meeting the Secretary failed to turn over a page of the report of the Office Administration Committee, thereby omitting to bring to your attention the recommendation that Mrs. Virginia Kelley of Syracuse be awarded departure pay. Mrs. Kelley was the late Dr. O. W. H. Mitchell's secretary for several years and was an invaluable help to his committee. It is, therefore, suggested that you request the Board of Trustees to vote the aforesaid departure pay for Mrs. Kelley.

This was voted.

On October 13, the Board of Trustees voted the extra budgetary appropriation for administration salary increases as requested by the Treasurer. The matter of compensation and travel expenses for Mr. Dwight Anderson and salesmen in connection with advertisements in the *Medical Directory of New York State* was tabled for a month.

Your request for an appropriation for extraordinary expenses was complied with.

It was voted to request the Board of Trustees to appropriate funds for extraordinary expenses which may occur during the month.

Annual Meeting of County Society Secretaries.—The afternoon of Wednesday, November 2, 1949, was spent by your Secretary at the Annual Conference of County Society Secretaries at the Hotel Ten Eyck, Albany. Thanks to Dr. Robert R. Hannon's fine arrangements, the meeting and luncheon went smoothly. Thirty county society secretaries were present as compared with twenty-five last year. There were fourteen additional persons present both last year and this. Among these were four executive secretaries. There were also present Dr. Carlton E. Wertz, Dr. Albert F. R. Andresen, Dr. J. Stanley Kenney, Dr. Laurance D. Redway, Dr. Robert R. Hannon, Dr. David J. Kaliski, Mr. George P. Farrell, Mr. Frederick Miebach, Mr. Martin J. Tracey, and Mr. Stephen K. Leech.

The agenda consisted of eight short topics: Legislation, Dr. Robert R. Hannon; Medical Care Plans, Dr. Carlton E. Wertz and Mr. George P. Farrell; Workmen's Compensation, Dr. J. Stanley Kenney; Disability Benefits Law, Dr. David J. Kaliski; Home Town Care of Veterans and War Memorial, Dr. W. P. Anderton; NEW YORK STATE JOURNAL OF MEDICINE and *Medical Directory of New York State*, Dr. Laurance D. Redway; Physicians' Home, Dr. B. Wallace Hamilton, and House of Delegates, Dr. Albert F. R. Andresen. This was followed by a discussion period for secretaries' problems which brought forth several matters of interest.

Annual Meeting of State Medical Association Secretaries and Editors.—November 3 and 4 were spent by your Secretary in Chicago at the Annual Conference of State Medical Association Secretaries and Editors which was also attended by Dr. George W. Kosmak, Mr. Dwight Anderson, and Mr. Frederick Miebach. The evening of November 3 your Secretary discussed, "What's Wrong with Medical Editors?," making a fool of himself as requested.

Your Secretary spent the morning of November 5 at the Second Annual Public Relations Conference of the American Medical Association. That afternoon I attended a meeting of the Correlating Committee of the Committee on Medical Care for Industrial Workers of the Council on Medical Care of the American Medical Association. At this meeting State laws on disability benefit payments were discussed.

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon reported that seven of the district branch meetings have been completed. The First District Branch prefers not to hold a scientific meeting until the executive committee has approved new bylaws, probably not this year.

Dr. Hannon reported he attended a meeting of the secretaries of the County Societies in Albany on November 2 and a meeting of the Legislative Committee in New York on November 8.

Reports of Committees

Legislation.—Dr. Dattelbaum, chairman, thanked the JOURNAL Editorial staff for articles about legislative activities and thought that they should be continued as they were instructive. He stated the committee met on November 9, 1949, and recommended to the Council that Mr. James Beasley be retained as counsel to our Executive Officer, Dr. Robert R. Hannon, for a period of one year.

It was voted to approve this recommendation.

It was voted to recommend to the Board of Trustees the employment of Mr. Beasley beginning December 1, 1949.

Problems of Alcoholism.—Dr. Anderton read a letter from Dr. Milton Potter, chairman, as follows:

> "In order to comply with the regulations of the Council of the Medical Society of the State of New York, I suggest as chairman of the Special Committee on the Problems of Alcoholism that the Council approve the suggestion that the New York Academy of Medicine be officially invited to initiate jointly (if they so wish) with the State Medical Society the legislation pertaining to the alcoholic program. A rough draft of this proposed legislation has already been approved by the Council of the Medical Society.

Approval was voted.

> "In order to advance further the friendly cooperation between the two organizations on the alcoholic problem, I would further suggest that the President be instructed to forward to the Academy the names of John Norris, Rochester, Dr. Texon of New York County, and myself to represent our Society on a joint committee dealing with the possible future legislation on the alcoholic problem.

Approval was voted with the addition of the name of Dr. Maurice J. Dattelbaum, chairman of the Legislative Committee.

> "I also suggest that the Society obtain official approval from the New York Academy and the New York City Bar Association on the action of their joint committee in approving our suggested alcoholic legislation."

No action was taken.

Convention.—Dr. Eggston, chairman, presented the following report: "The Reference Committee on Report of the Council, Part I, suggested to the House of Delegates in Buffalo, May 4, 1949, that a Section on General Practice be instituted, following the precedent of the American Medical Association. This was referred to the Council. On June 16, 1949, the Council referred this suggestion to the Subcommittee on Scientific Program for study and report with recommendations.

At a meeting of the Subcommittee on Scientific Program, Saturday, October 15, 1949, in New York City, it was voted unanimously that a Section on General Practice is desirable."

It was voted to adopt the recommendation.

It was voted that the Council for its annual report to the House of Delegates recommend that the President appoint the chairman, the secretary, and the delegate for the Section on General Practice for the year 1951.

Economics.—Dr. Azzari, chairman, presented the following report:

Bureau of Medical Care Insurance—During the month of October, Mr. Farrell attended the Eighth, Sixth, and Second District Branch meetings. Material on the progress of the New York State Society approved plans was distributed at the Sixth and Eighth District meetings and Mr. Farrell commented briefly on it.

On October 26, Mr. Farrell attended and reported on the Section meeting on Medical Care Insurance of the American Public Health Association at the Hotel New Yorker. Dr. Dean A. Clark, formerly Medical Director of the Health Insurance Plan of

Greater New York and now Superintendent of Massachusetts General Hospital, presided.

Dr. Azzari stated that his Committee had studied the so-called Linowitz Plan referred to them by the Council. He made no recommendations.

Ethics.—Dr. Reuling, chairman, reported that the House of Delegates referred to the Council the revision of our Principles of Professional Conduct, that his committee had met, and he hoped to have a revision in the hands of the members of the Council not later than the January meeting.

Finance.—Dr. Reuling, chairman, presented the budget for the year 1950. After each item had been discussed and acted upon,

> *It was voted* that the Council recommend to the Board of Trustees for their consideration the budget as approved by the Council.

> *It was moved and carried* that a vote of thanks be extended to Dr. Reuling, Mr. Anderson, Mr. Alexander, and those who have labored on this budget for many hours and sometimes late into the night, including Dr. Dattelbaum and the other members of the committee.

Office Administration and Policies.—Dr. Anderton reported for Dr. Cunniffe as follows:

Under the heading of unfinished business at the meeting of the Office Administration and Policies Committee on October 21, 1949, it was voted that the Committee recommend to the Council the renewal of the existing lease on premises at 292 Madison Avenue, now occupied by the State Society, in accordance with proposition made by Messrs. Cross & Brown, present agents, and dated September 12, 1949.

> *Approval was voted.*

Also the Committee recommended that the Council request an appropriation from the Board of Trustees for a Christmas party for the New York City employes of the Society.

> *Approval was voted.*

Publication.—Dr. Kosmak, chairman, reported that the Committee met on November 9, 1949. The question of continuing to include Union Health Center in the *Medical Directory* was taken up, and, after hearing representatives from the Medical Society of the County of New York and the Union Health Center, it was decided to retain the Union Health Center in the next issue.

Various JOURNAL matters were discussed, the main item being financial.

Public Health and Education.—Dr. Curphey, chairman, reported that he had attended various meetings and arranged postgraduate instruction and Teaching Days for several counties.

The report of the meeting of the Council Committee on Public Health and Education with representatives of the New York State Department of Health at Commissioner Hilleboe's office includes a recommendation to the Council regarding the appointment of a committee to study the working conditions of pathologists in State-approved laboratories.

> *It was voted* that this committee be appointed and that the President be empowered to designate the representatives of the State Society.

A meeting on October 27, with Dr. Hilleboe, Dr. Howard, and Mr. Cooley, was called to review the possibility of establishing Citizens' Health Councils in New York City. It was decided to defer action until a questionnaire sent out by Dr. Howard and Mr. Cooley had been returned to the American Medical Association.

The report of the meeting with Dr. Frederick H. Wilke, chairman of the Subcommittee on Child Welfare; Dr. Charles A. Gordon, chairman of the Subcommittee on Maternal Welfare, and Dr. Bernard S. Wortis, chairman of the Subcommittee on Mental Hygiene, was accepted.

Dr. George Deaver, chairman of the Subcommittee on Cerebral Palsy, forwarded to Dr. Morton Levin of the State Department of Health his criticisms and suggestions concerning the Department's proposed Cerebral Palsy Program which would bring it into conformity with the requirements of the medical profession. Dr. Levin indicated his desire to incorporate these changes into the program wherever possible, pointing out that suggestions applying to New York City might not hold for the entire State. Dr. Deaver stated he was submitting the program, with the revisions, to Doctors Canning and Lane of his committee for final approval.

Dr. John L. Norris, chairman of the Medical Film Review Board Subcommittee, reports that to date six local film review boards have been started or are in the process of organization: Albany—Chairman, Dr. Ray Trussell, preventive medicine and public health, epidemiology and parasitology; Syracuse—Chairman, Dr. Edward Hughes, obstetrics and gynecology; Syracuse—Chairman, Dr. Leon Sutton, plastic surgery; Syracuse—Chairman, Dr. Gordon Hoople, ear, nose and throat; Syracuse—Chairman, Dr. Lee Hadley, radiology; Rochester—Chairman, Dr. J. D. Goldstein (area not determined).

It was reported that this Committee had received a letter from Dr. A. Vander Veer, secretary of the Medical Society of the County of Albany, stating that the society had taken the following action:

> We hereby resolve that the Medical Society of the County of Albany go on record as opposing the establishment of a Red Cross Blood Bank in this area.

Public Relations.—Dr. Floyd S. Winslow, chairman, reported on the activities of the Bureau.

Veterans Administration, Liaison with.—Dr. Anderton read a letter from Dr. Bauckus in which he reported on the efforts of the Veterans Administration to establish clinics and do away with the private physician on a fee basis.

Workmen's Compensation.—Dr. Kenney, chairman, reported on the activities of the Committee.

New Business

Renewal of Contracts.—The renewal of the contracts for Dr. Hannon, Dr. Kaliski, and Mr. Farrell was discussed and

> *It was voted* to recommend to the Board of Trustees renewal of these contracts for the year 1950.

First District Branch.—Dr. William Crawford White appeared before the Council and explained about the contemplated changes in the Bylaws of the First District Branch.

> After discussion, Dr. Masterson stated that these matters would be referred to a committee of the Council for a report and recommendations, and Dr. White would be informed of the decision.

> *Change of Meeting Date.*

> *It was voted* that the next meeting of the Council be held December 1, 1949, as the meeting of the American Medical Association House of Delegates in Washington conflicts with the usual date.

WHO'S WHO
in the
State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the Journal *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MISS EILEEN MARY CARMODY is the assistant to Miss Loy in the compilation of material for the *Medical Directory* published by the State Society. In this position she assists in the work of collecting and editing information about physicians, hospitals, medical schools and organizations, and in keeping the record cards for each doctor up to date. Careful checking of all information received and of all membership lists and records means that each edition of the *Directory* is as accurate as Miss Loy, Miss Carmody, and the staff can make it. In addition to her responsibilities for the *Directory* work, Miss Carmody for the past three years has been in charge of the general registration desk at the Annual Meeting of the State Society.

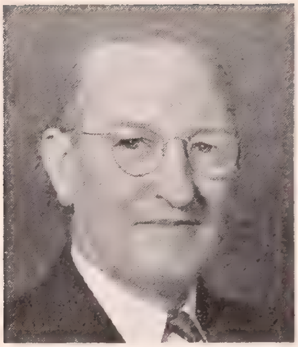
Born in New York City, where she now resides with her parents, Miss Carmody is a graduate of the Mother Cabrini High School in Manhattan and before joining the staff in 1943 was a copywriter and proofreader for the H. W. Wilson Company, library publishers.

MISS MOLLIE PESIKOFF joined the staff in 1944 and is associated with the administrative details concerning the Annual Meeting, the War Memorial scholarships, compilation of the index of actions of the House of Delegates, and other duties. Miss Pesikoff collects, arranges, and edits the material for the booklet program distributed at each Annual Meeting, arranges meeting rooms, schedules, necessary equipment, and other details for the sections and sessions on the scientific program, the scientific exhibits, and other parts of the Annual Meeting program. The holder of a Bachelor of Arts degree from Hunter College, New York City, where she majored in English, Miss Pesikoff during the recent war was with the Emergency Medical Service, Office of Civilian Protection. She worked with doctors in setting up casualty stations and emergency centers all over the State.

A native of New York City, where she now lives, Miss Pesikoff is this year president of the Kinereth Business and Professional Division of Hadassah, national women's Zionist organization.

MRS. MARY T. ARMANDE is a member of the administrative staff, and as such does secretarial work for Dr. Anderton, Secretary of the State Society, and for Miss Dougherty, his executive assistant. Mrs. Armande handles the incoming mail, stamping and sorting it for the various departments. In addition, she keeps up to date the lists of officers of the county medical societies, types the minutes and agenda of the Council for distribution, and files correspondence.

Born in Malden, Massachusetts, where she was graduated from the Malden High School, Mrs. Armande moved to Jamaica, Long Island, twenty years ago, and resides there now with her husband, who is a salesman. She joined the State Society staff in 1944. During World War II, Mrs. Armande served as a member of the American Red Cross Motor Corps. Her hobbies include amateur photography, driving, and homemaking.

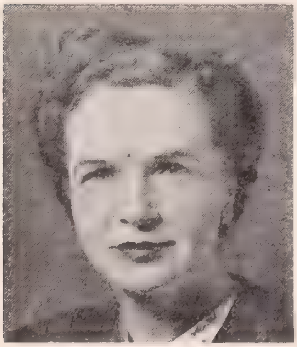


WILLIAM H. BONZER joined the staff in 1944 as mail room supervisor With two assistants, he is in charge of receiving all materials coming int the office, of handling all outgoing mail, and supervises all the mimeograph and addressograph work that is done. At the Annual Meeting Mr. Bonzer handles all mimeographing and mailing for the press an public relations headquarters. Before joining the State Society staff he served for twenty years as a member of the New York City Fire Department, retiring in 1944. For thirteen years he was stationed in Greenwic Village and for seven years in Harlem. One of the most famous fires t which he was assigned was the two-day blaze at the Cunard pier at 13t Street.

Born in New York City, Mr. Bonzer now lives in Woodside, Long Island with his wife and daughter. He is a graduate of DeWitt Clinton Hig School. A member of the B.P.O.E., he is interested in fishing, motoring and bowling.

MRS. ALICE H. ARANA is the assistant to Mr. George P. Farrell, Director of the Bureau of Medical Care Insurance. The Bureau, authorized by the House of Delegates at the 1944 Annual Meeting, began its operation in January, 1945, and Mrs. Arana joined the staff the following month. Activities of the Bureau include establishing better doctor-plan and doctor-patient-plan relations, correlating the activities of the A.M.A., other states, and other countries in regard to voluntary medical care plans, preparing information and statistics on the progress and activities of the plans, of which there are now six in New York State, and studying possibilities and procedures for a State-wide plan. In all of these activities Mrs. Arana assists Mr. Farrell. Before joining the staff, Mrs. Arana was for eight years office manager for the Medical Society of the County of Westchester headquarters in White Plains.

Mrs. Arana was born in Denver, Colorado, and now resides in White Plains. She completed a three-year business administration course at Allentown, Pennsylvania, Business School.

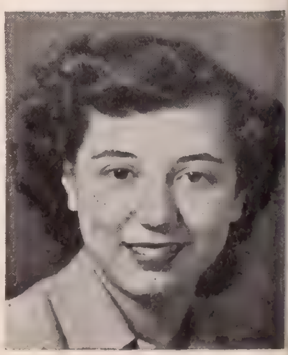


MRS. EUNICE B. MERRIAM is the purchasing agent for the Stat Society headquarters. In addition, she is the reservation clerk, handles th receipt of all checks and monies, and assists with general office details She joined the staff in 1945, after having spent several years doing volunteer hospital work during the war. Mrs. Merriam, who was formerl married to a diplomat in the foreign service, lived abroad for several year in Egypt, Syria, Turkey, France, and England. She returned to th United States in 1939 just after war broke out in Europe. Before he present work with the headquarters staff, she was in charge of the copy department for the *Medical Directory* published by the State Society.

Born in Binghamton, Mrs. Merriam now resides in New York City She has one son, John, sixteen, who is a student at Loomis School in Windsor, Connecticut. She is a member of the Town Hall Club.

MRS. MARIE VAROUXIS joined the headquarters staff in December, 1945, after having been with the personnel office at the U. S. Navy Yard in Brooklyn. She is in charge of processing all changes of address for members of the State Society, a procedure which includes changing the address stencil, notifying the Malpractice Insurance Board, and turning the information over to the *Directory* copy department. In addition, she has charge of mailing copies of the JOURNAL to the authors represented in each issue and to others receiving complimentary copies.

A native of Brooklyn, Mrs. Varouxis is a graduate of Girls Commercial High School and now resides in Brooklyn with her husband, a U.S. Army Air Corps veteran, who is a tool and die maker. She is a member of the Ladies Auxiliary of the Greek-American Veterans Association and is active in the work of her church.



NECROLOGY

J. Leon Blumenthal, M.D., of New York City, died December 13 at the Mount Sinai Hospital, after a brief illness, at the age of seventy-one. Dr. Blumenthal was graduated from the College of Physicians and Surgeons, Columbia University, in 1900. In 1913 he joined the New York City Department of Health and in 1924 became director of the Bureau of Child Hygiene, serving until his retirement in 1940. About ten years ago he joined his medical school classmates in a plan for the establishment of a class medical committee to provide medical attention for the membership and to help each other live longer. Dr. Blumenthal was active in charitable and youth organizations, having served as vice-president of B'nai B'rith for the Eastern District, as president of the home maintained by B'nai B'rith in Yonkers, as medical adviser of the Ninety-second Street Y.M. and Y W.H.A. and the Educational Alliance, and as a member of the Manhattan Council, Boy Scouts of America. He was a member of the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

John James Buscaglia, M.D., of Buffalo, died on November 13 at his home from a heart attack at the age of forty-eight. Dr. Buscaglia was graduated from the University of Buffalo School of Medicine in 1925, interned at Columbus Hospital, and had practiced in Buffalo ever since. He was attending obstetrician at Columbus Hospital. Dr. Buscaglia served as a captain in the U.S. Army Medical Corps during World War II. He was a member of the Erie County and New York State Medical Societies and the American Medical Association.

James Elmer Cummins, M.D., of Freeport, died on November 26 at his home at the age of sixty-one. Dr. Cummins received his medical degree from the New York Homeopathic Medical School in 1912. He had been a police surgeon in Freeport for the past twenty years. Dr. Cummins served as a first lieutenant in the U.S. Medical Corps during World War I and during World War II was chairman of the Freeport medical draft board. He was active in civic, religious, and fraternal organizations, having served as chairman of the Nassau County Boy Scout Council. Dr. Cummins was a member of the Nassau County and New York State Medical Societies and the American Medical Association.

Joseph Davidson, M.D., of New York City, died on November 30 at his home after a brief illness, at the age of seventy-nine. Dr. Davidson, a native of Germany, came to the United States as a boy, and in 1892 received his medical degree from the College of Physicians and Surgeons, Columbia University. He had practiced in New York City for more than fifty years and for twenty-five years was a member of the staff of the Mount Sinai Hospital. Dr. Davidson was a member of the New York County and State Medical Societies and the American Medical Association.

Edwin Fauver, M.D., of Brighton, died on December 17 at the age of seventy-four. Dr. Fauver was graduated from the College of Physicians and Surgeons, Columbia University, in 1909. He was a member of the Rochester Academy of Medicine, the Monroe County and New York State Medical Societies, and the American Medical Association.

Caroline L. Garlock, M.D., of Canajoharie, died suddenly on November 26 at the age of eighty-two. Dr. Garlock received her medical degree from the University of Michigan Medical School in 1896 and interned at the Women's Hospital in Philadelphia, Pennsylvania. In October, 1897, she opened her practice in Ames, New York, making her calls over an extensive territory in a horse and buggy. In 1921, Dr. Garlock moved to Canajoharie and continued her large country practice together with that of the village. During these years, she was a member of the medical staff of the Amsterdam City Hospital.

Dr. Garlock was honored recently by the Montgomery County Medical Society for her long years of unselfish service. A student of history, she was a life member of the New York State Historical Society and the Montgomery County Historical Society. Dr. Garlock belonged to the Montgomery County and New York State Medical Societies and the American Medical Association.

Tipton Mullins Jolliffe, M.D., of Larchmont, died on October 7 at the age of forty-eight. Dr. Jolliffe received her medical degree from the University of Tennessee in 1929 and in 1943 received a master's degree in public health from Columbia University. She was physician for the industrial relations division of the New York State Department of Labor and a member of the medical staff of the New Rochelle Hospital. From 1944 to 1946 Dr. Jolliffe served as a commander in the Marine Corps, United States Naval Reserve. A Fellow of the American Public Health Association, she was a member of the New York County and State Medical Societies and the American Medical Association.

Angelo Lo Schiavo, M.D., of Brooklyn, died on November 20 at the age of fifty-four. Dr. Lo Shiavo received his medical degree from the University of Naples in 1920 and came to this country in 1923, when he started his practice in Brooklyn. He was a member of the Kings County and New York State Medical Societies and the American Medical Association.

John Angelo Marchetti, M.D., of Brooklyn, died on October 13 at the age of fifty-one. Dr. Marchetti was graduated from the University and Bellevue Hospital Medical School in 1924 and in 1925 began his practice in Brooklyn. At one time he was assistant in surgery at the Coney Island Hospital, Brooklyn.

Donald Parker, M.D., of Syracuse, died on October 25 at the age of seventy-five. Dr. Parker was graduated from the University of Buffalo School of Medicine in 1898. He was a member of the Syracuse Academy of Medicine, the Onondaga County and New York State Medical Societies, and the American Medical Association.

Otto E. F. Risch, M.D., of Brooklyn, died on November 30 at his home at the age of eighty-five. Dr. Risch, a native of Germany, came to the United States as a boy with his father, also a physician. He

[Continued on page 228]

MEDICAL NEWS

Plan to Increase Number of General Physicians Described

A PLAN to increase the number of general physicians and family doctors practicing in this country has been described by Dr. Currier McEwen, dean of New York University College of Medicine, a unit of the New York University-Bellevue Medical Center, who said that this program is now being put into effect at the College.

Dean McEwen termed the role of medical schools in the training of the general physician and family doctor a "major current issue," and said: "Even the public is well aware of the trend toward specialization which has been increasing in recent years. An important cause of the trend can be traced to the medical schools themselves. There is an apparent lack of concern on the part of the schools for the training of the general practitioner."

Dean McEwen said that "There is a very real interest in the problem of the general practitioner in most medical colleges, as illustrated by the frequent discussion of the the topic at meetings devoted to medical education; but this expressed interest is neutralized by teaching and staffing practices."

"It is inevitable," he said, "that teaching hospitals are staffed by specialists, and residencies are, for the most part, devoted to training specialists. This is advantageous because of the importance of having good specialty services. However, it is disadvantageous, too. The student sees many specialists among his teachers but no general physicians, and he sees great pains being taken in the training of residents to become specialists, but no program for training general physicians. It can hardly be surprising if he concludes that this is a career which is not worth while."

Dean McEwen endorsed voluntary prepaid health insurance plans because under those plans physicians practice in clinical groups which constitute ideal units for training general practitioners. "The key physicians in these groups act as general practitioners," Dean McEwen said. "Outside of these groups, there is very little opportunity for the undergraduate, or even graduate, medical student to observe the practice of truly comprehensive medical care."

Ambulance Service for Premature Babies

THE Premature Ambulance Service of the New York City Departments of Health and Hospitals transported 545 infants during its first year of operation, reported Dr. Helen Wallace, Chief of Maternity and Newborn Division, at a "birthday party" celebrating the first anniversary of the Service.

The birthday party, held at the Maternity Center, 654 Madison Avenue, was given by the Citizens Committee on Children of New York, Inc., the Maternity Center Association, the Department of Health, and the Department of Hospitals and was attended by the infants who were transported in the ambulance during its first month of operation in November, 1948.

The Premature Ambulance Service was established to transport children who were born prematurely in their homes or in hospitals not equipped to give them the highly specialized care they need to hospitals where that care is given. The ambulance used by the Service is especially built and was provided by the Department of Hospitals. It contains a heated cubicle and oxygen-fed incubators. It is staffed by five public health nurses who are specially trained in the handling and care of premature babies. The infant to be transported is placed in a preheated incubator, and the incubator in turn is placed in the heated cubicle of the ambulance. A twenty-four-hour-a-day service is maintained by the Health and Hospital Departments which operate the Service jointly.

A broad program to encourage and aid hospitals in setting up and maintaining special centers for the care of premature infants is being carried on by the two Departments. Federal funds for one third of the cost of establishing such centers is available under the Hill-Burton Act. Aided by the Departments of Health and Hospitals, eight New York City hospitals have applied for Federal aid for such centers. The first premature center to be set up with Federal aid is that at Babies Hospital of Columbia Presbyterian Medical Center which was officially opened on December 6. It will be able to care for 30 premature infants at a time.

Six hospitals of the Department of Hospitals—Harlem, Queens General, Lincoln, Bellevue, Fordham, and Kings County—are also obtaining Federal aid for the establishment or expansion of premature centers. These six hospitals are now equipped to handle a total of 58 babies and, when expanded, will have facilities for 185 infants. St. Vincent's Hospital will have a premature unit and will be able to care for 28 babies. Thus, the eight hospitals asking for Federal aid can now care for 58 premature babies, and when their units are established or expanded, these eight hospitals will be able to care for 225 infants.

Gifts to N.Y.U.-Bellevue Medical Center Announced

TWO separate gifts totaling $550,000, one from Bernard M. Baruch, elder statesman and philanthropist, in the amount of $450,000, and the other from the Louis J. and Mary E. Horowitz Foundation, Inc., in the amount of $100,000, both to be devoted to the advancement of the work of the Institute of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center, have been announced by Nevil Ford, chairman of the public appeal currently being made for the Center. The two gifts will be applied to the construction of that section of the Medical Center which will house the Institute of Physical Medicine and Rehabilitation in its new, permanent home. Actual construction of the first unit of the Center has already begun on an 11-acre site just north of Bellevue Hospital.

When completed, these facilities will provide a permanent home for the full-scale development of the Center's program of physical medicine and rehabilitation now being carried out in temporary quarters of the Institute at 325 East 38th Street.

In addition, a gift of securities with an approximate value of $500,000 from John D. Rockefeller, Jr., the second gift of this size which he has made to the New York University-Bellevue Medical Center, was announced recently by Mr. Ford. These, together with other recent gifts, have brought the total of the funds received in the public appeal for the Medical Center to $21,616,999, Mr. Ford stated.

It is hoped to start construction in the near future on three new units for the Medical Center, Mr. Ford reported, in addition to the Center's Institute of Physical Medicine and Rehabilitation. The next units to be built are listed as being: first, the facilities for the College of Medicine and Post-Graduate Medical School, including laboratories, classrooms, and library; second, the Alumni Hall Auditorium; and third, the Hall of Residence.

MEDICALLY SPEAKING—

Doctors Invited to Use Services—Since October, the Domus Medica, International Center of Medical Welcoming Organizations, has occupied a new office at 111 East Oak Street, Chicago. This organization has corresponding offices in the principal countries of the world. Physicians may write to the Domus Medica for information or for international contacts, as well as for scientific, cultural, artistic, and tourist viewpoints. Physicians who plan to visit a foreign country are invited to contact Dr. Valentin Charry, delegate of Domus Medica, at the Chicago address.

Civilian Intern Program Announced by Air Force Medical Service—The U.S. Air Force Medical Service is offering commissions to 200 selected civilian interns in the United States to serve in the Air Force Reserve as first lieutenants on active duty with full pay and allowances, according to an announcement by Major General Harry G. Armstrong, USAF Surgeon General.

Eligible to receive commissions are physicians who will be graduated from approved medical schools between January 1 and July 1, 1950, and who are to begin internships between those dates in approved civilian hospitals.

Physicians who are so commissioned will serve two years of active duty for each year of internship as commissioned U.S. Air Force Reserve officers at Air Force medical installations.

Information concerning the intern program may be obtained by written request to deans of medical schools or the Officer's Procurement Branch, Office of the Surgeon General, Headquarters, U.S. Air Force, Washington 25, D.C.

University of Illinois Awards Fellowships—Ten research fellowships will be awarded for one calendar year in the fields of medicine, dentistry, and pharmacy by the University of Illinois Graduate College in Chicago. The fellowships carry stipends of $1,800 per year for medical and dental graduates and $1,200 for pharmacy graduates, with exemption from tuition fees for all appointees. In unusual cases, a $2,400 stipend may be awarded to those holding a doctor's degree. Registration in the Graduate College for full time credit toward M.S. or Ph.D. degrees is required.

Fellowships provide opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are primarily for graduates who are in the early stages of their preparation for a teaching and research career in medical and dental problems, although time credit toward specialty board requirements in basic sciences is recognized.

Fellows may be reappointed in competition with new applicants.

Candidates for fellowships must have completed a minimum training in any one of the following ways or the equivalent thereof: (1) bachelor's and M.D. degrees, (2) bachelor's and D.D.S. degrees, and (3) bachelor's degree in pharmacy and M.S. degree.

Appointments will be announced March 1 for fellowships beginning July 1 or September 1, 1950.

Formal application blanks may be secured from the Assistant Dean, The Graduate College, University of Illinois, 808 South Wood Street, Chicago 12, Illinois.

Health Department Distributes Procaine Penicillin—Procaine penicillin G with 2 per cent aluminum monostearate is now being distributed to physicians without charge by the New York City Department of Health for the treatment of syphilis and gonorrhea.

Penicillin will be supplied in recommended dosages, after verification of diagnosis, for the treatment of patients with gonorrhea, primary syphilis, secondary syphilis, other early syphilis of less than two years duration, or syphilis in pregnancy. The Department will continue to distribute arsenical drugs and bismuth. Physicians are urged to begin treatment with their office supply of penicillin when necessary, without waiting until they receive the supply from the Health Department.

Patient report forms 417V, drug application blanks, and mailing envelopes are obtainable from the Bureau of Social Hygiene, Department of Health, 125 Worth Street, New York 13, New York.

Portrait of Dr. Tilney Presented—On November 30, in the Conference Room of Neurological Institute before a gathering of three hundred, a portrait of the late Dr. Frederick Tilney, eminent neurologist, was unveiled by his widow. The portrait, painted by Ivan G. Olinsky, was then presented to the Institute on behalf of a committee of friends and associates of Dr. Tilney, by Dr. Henry A. Riley, attending neurologist and committee chairman. The portrait was accepted by Mr. Charles P. Cooper, president of the Presbyterian Hospital and long associated with the late Dr. Tilney as a trustee of Neurological Institute before it merged with the Presbyterian Hospital in 1938.

Registration at Record High in State Hospital Schools of Nursing—The number of students admitted annually to the 18 schools of nursing conducted by the New York State Department of Mental Hygiene has more than doubled in three years, recent registrations show. Enrollment of 360 new students in September this year is the largest in the Department's history, marking an increase of 208 over the number who enrolled in September, 1946, for the first postwar classes. Seventy-four per cent of the 1,500 nurses currently on duty in the State's 27 mental institutions are graduates of the department's schools.

A survey conducted recently shows that more than three fourths of the 4,000 nurses graduated from the department's schools since 1921 have become registered nurses, 35 per cent serving in psychiatric hospitals and more than 20 per cent in general hospitals. Public health and industrial nursing account for nearly 3 per cent. Since the department awarded its first diplomas in nursing at Buffalo State Hospital in 1886, more than 8,000 students have been graduated.

Multiple Sclerosis Clinic—A research clinic for multiple sclerosis and related disorders of the nervous system has been established at the Montefiore Hospital, Gun Hill Road and Bainbridge Avenue in the Bronx, New York. This clinic has been made possible through a grant by the National Multiple Sclerosis Society in conjunction with the facilities offered by the Montefiore Hospital.

The only other research clinic thus far established by the Society is located in Boston, Massachusetts.

The Montefiore Clinic will serve as a research center and will conduct investigations into new and current forms of diagnosis and treatment of multiple sclerosis.

Due to the large number of patients suffering from these disorders and to the limited time and personnel available for their care, all patients must wait their turn. They will be seen as rapidly as possible, but it must be realized that this may require some time. Appointments may be made for the clinic only in writing. Inquiries should be addressed to the Multiple Sclerosis Clinic, Montefiore Hospital, New York 67, New York. The clinic is open to residents of Greater New York and Westchester and Nassau Counties. In addition to the clinic care, patients from these areas who are in need of admission to the Hospital will be considered by the clinic for admission.

It is preferable that patients be referred by their local physician with a letter of reference containing a short statement of their disorder. Complete reports will be sent upon request to the referring physicians. Other patients who cannot afford the services of a private physician may communicate directly with the clinic.

Dr. Fishbein Appointed—Dr. Charles W. Mayo, editor-in-chief of *Postgraduate Medicine*, recently announced the appointment of Dr. Morris Fishbein to the editorial executive staff as contributing editor. *Postgraduate Medicine* is the official journal of the Interstate Postgraduate Medical Association.

National Cerebral Palsy Drive Announced for Spring of 1950—Plans for the first nation-wide drive for funds to fight the scourge of cerebral palsy were presented at a Planning Conference of the recently organized United Cerebral Palsy Associations, Inc., at the Hotel Statler on October 15.

J. Patrick Rooney, executive director of the Association, announced that the budget for the national organization that will be raised next year totals $1,034,000, which will be used for training of personnel, research, expansion of treatment facilities, public education, and community service. The goal of the state and local affiliates will be determined later.

More than 100 delegates from some 50 state and local cerebral palsy associations in 20 states attended the all-day planning session.

A.E.C. Report on Isotope Distribution—More than 300 universities, hospitals, and research laboratories in 41 states and territories of the United States are using isotopes produced by the U.S. Atomic Energy Commission for medical, biologic, industrial, agricultural, and scientific research and medical diagnosis and treatment, the Commission stated in a report published recently.

The report, "Isotopes—A Three-Year Summary of U.S. Distribution," is available to the public from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for a price of 45 cents.

The report provides a useful measure of the value of isotopes to peacetime research by listing more than 1,850 publications that have been issued on work done with these valuable products of the atomic energy program. The list is the most comprehensive bibliography yet published on research progress made through the use of Commission-produced isotopes.

The report also summarizes the growth of the isotope distribution program during the three years it has been in effect, outlines the various methods of isotope production, and describes the typical ways in which isotopes are used in the United States and 21 foreign nations.

Biennial Congress of International Society of Hematology—The International Society of Hematology will hold its Biennial Congress at the University of Cambridge, Cambridge, England, from August 21 through 26, 1950.

The Program Committee is in the process of receiving titles for papers and scientific exhibits to be presented at the Congress. Material to be submitted for consideration for the program may be sent to Dr. I. Davidsohn, Mt. Sinai Hospital, Chicago, Illinois, or Dr. S. Mettier, University of California, San Francisco, California. Those desiring to present scientific exhibits should make application as soon as possible.

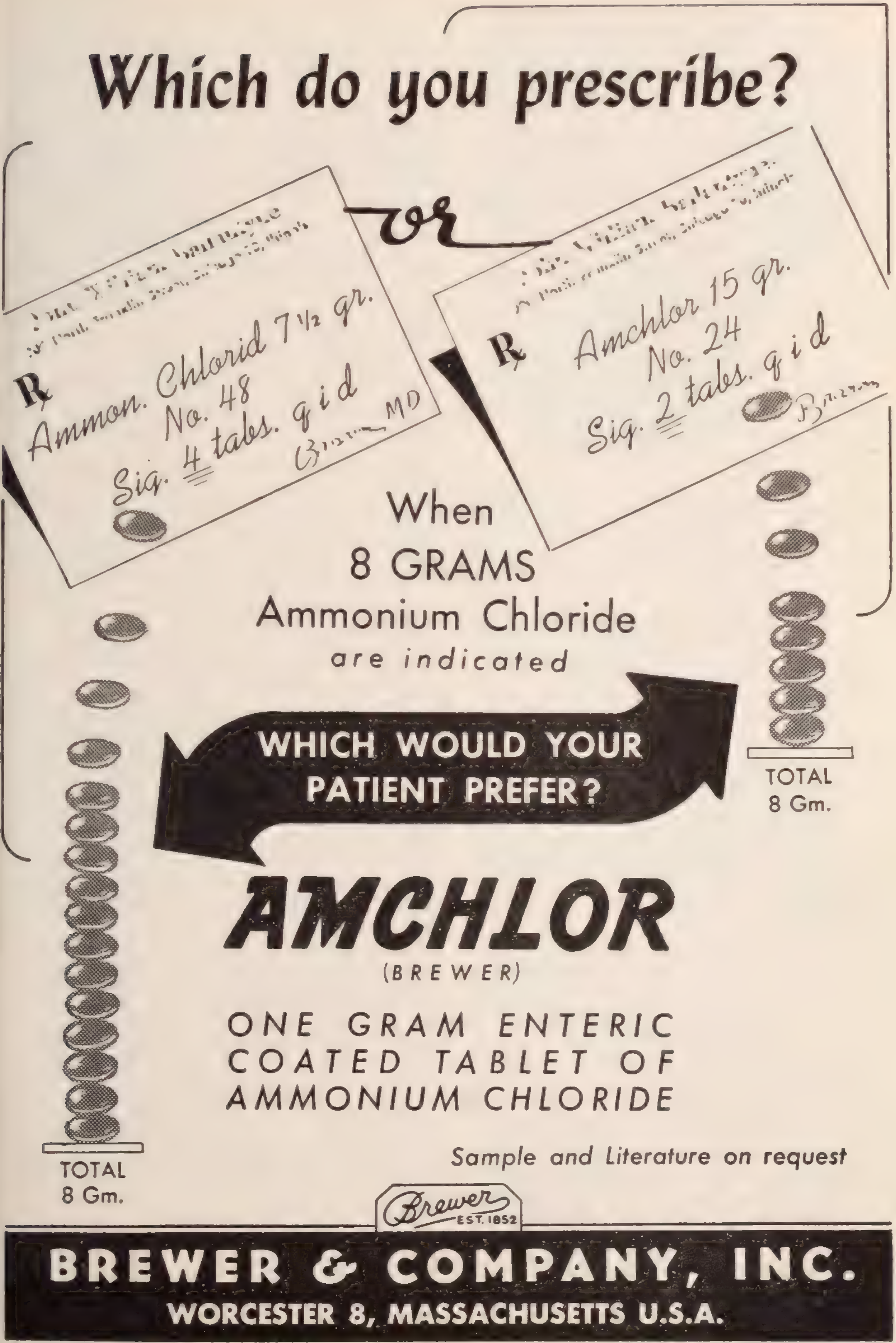
New York Allergy Society Award—The New York Allergy Society announces a prize of $150 for the best essay of merit by a student of a medical school in Greater New York City. For the coming year 1949–1950 the topic selected by the Annual Award Committee is "Bronchial Asthma and Its Relation to Foci of Infection in the Upper Respiratory Tract." The essay should not exceed 15,000 words; it should contain some reference to clinical experience gained in the medical school or hospital, and references to published work should be indicated in a bibliography. It should be approved by the head of the department of medicine of the medical school in which the essayist is a student.

A report of original investigations in the fields of general allergy or of immunology, which the committee deems meritorious, will be given consideration equal to that of essays on the designated topic.

All essays must be sent to the Secretary of the New York Allergy Society, Dr. Frederick R. Brown, 39 West 55th Street, New York City, prior to May 1, 1950.

Association of American Physicians and Surgeons Sponsors Contest—The Association of American Physicians and Surgeons has invited all county and state medical societies to participate in the Association's fourth annual national essay contest for junior and senior high-school students. The essay topic for the 1950 contest will be, "Why the Private Practice of Medicine Furnishes This Country with the Finest Medical Care." The ultimate goal of the essay contest is to have all state and county medical societies sponsor local competition with cash prizes to be awarded by each county society, each state furnishing cash prizes for the three contestants submitting the best essays in the state. The three

[Continued on page 226]



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[Continued from page 224]

prize-winning essays from each county society will compete for state awards and the best three from each state will then be submitted to A.A.P.S. for entry in the national contest.

Six national prizes will be awarded by A.A.P.S. as follows: first prize $1,000, second $500, third $100, and three prizes of 25 dollars each.

The Association of Physicians and Surgeons has made the following recommendations to medical societies:

Medical Societies are urged to appoint local Essay Contest Committees now—well in advance of the starting date, February 1, 1950.

Enlist the aid of the Auxiliary, newspapers, schools, and civic groups to gain wide student participation, teachers' cooperation, and local publicity.

Locally, award at least three cash prizes.

Inquiries regarding the contest should be addressed to Wilson C. Wolfe, M.D., Chairman, A.A.P.S. Essay Contest Committee, Suite 704, 360 North Michigan Avenue, Chicago 1.

Radar in Cancer Case-Finding—An improved cancer case-finding aid may be evolved from a technic used in the instantaneous processing of radar photographs. An Army invention, the process has potential value in the rapid examination of individuals for cancer of the stomach. Funds for development of the process were included in ten new grants for cancer control announced by the Federal Security Administration.

The ten new grants plus renewal of 12 grants now in effect make a total of $437,203 approved by Leonard A. Scheele, Surgeon General of the Public Health Service, upon recommendation of the National Advisory Cancer Council.

Instantaneous processing of photofluorographic films will reduce the cost of x-ray screening for signs of early gastric cancer. Development of this equipment will be under the supervision of Dr. Russell H. Morgan, professor of radiology at Johns Hopkins University, Baltimore, Maryland. The project is an extension of Dr. Morgan's work in developing and testing the Schmidt fluorographic camera for routine x-ray examination of individuals for signs of gastric cancer.

The unique feature of the camera is its optical system, which enables it to take sharp pictures of the relatively dim image appearing on a fluoroscopic screen. Its efficiency is said to be ten times that of any photofluorographic unit previously available. The photofluorographs define the internal organs clearly enough to show tumors or other abnormalities, without exposing either examinee or operator to an excessive amount of radiation.

In addition, four grants were awarded to assist in the development of a diagnostic test for cancer, based upon observed differences between the blood of normal individuals and cancer patients, it was announced. Two of these grants were awarded to Drs. Locke L. MacKenzie of New York Post-Graduate Medical School and Salvator L. Colangelo of the University of Buffalo School of Medicine.

Doctors' Orchestral Society of New York—The twelfth season of this famous symphony orchestra of doctors and dentists started off with a huge enthusiastic attendance in all instrumental sections. The annual election of officers and administrative council brought new impetus to the coming year's plans and activities. The new officers are Sidney J. Robbins, M.D., president, Mrs. Zena Scherer, vice-president, Charles Auer, M.D., treasurer, Frank Spielman, M.D., secretary, and an administrative council of ten active members of the organization.

All members of the medical, dental, and allied professions who play *string* instruments are invited to join, providing they have had some experience in playing with orchestral groups or in chamber music. There are several places also open in the brass section to members of the professions, while the entire reed instrument section is now filled to capacity.

Many celebrated and well-recognized conductors acted as guests during the fall season, and programs of wide variety are now in the making. There will be two or three concerts given for the benefit of medical institutions, and it is hoped that these will prove equally as successful as the past concerts for the Roosevelt Hospital, New York University-Bellevue Medical Center, the Physicians' Wives' League, and other worthy causes.

All inquiries regarding membership or benefit concerts may be addressed to the office of the president, Sidney J. Robbins, M.D., 30 East 60th Street, New York, Plaza 9-5803 or Plaza 9-5804.

New Seminar on Office Management of Venereal Disease—A completely new series of lectures for physicians on the office management of venereal disease started on January 14 sponsored by the Bureau of Social Hygiene, New York City Department of Health. It will be a fourteen-week seminar designed to keep the practicing physician abreast of latest developments in the diagnosis and treatment of venereal disease.

Dr. Marion B. Sulzberger, professor of dermatology and syphilology, Post-Graduate Medical School, New York University-Bellevue Medical Center, opened the series with a lecture on "Allergy in Venereal Disease." All meetings will start at 10:30 A.M. and will be held on consecutive Saturdays through April 15, in the Second Floor Auditorium of the Health Department, 125 Worth Street, Manhattan. No registration or fee is required.

National Heart Institute Awards Total $11,000,000—Since its establishment by Congress in August, 1948, the National Heart Institute has awarded nearly $11,000,000 in Federal funds to medical schools, hospitals, and research institutions in 32 states, the District of Columbia, and 3 foreign countries.

These figures, however, do not include the Institute's intramural and clinical research program in laboratories at the National Heart Institute, the National Institutes of Health, U.S. Marine Hospitals, U.S. Public Health Service stations, the U.S. Naval Medical Center, and cooperative projects in universities and other research centers.

The grants, approved by Surgeon General Leonard A. Scheele of the Public Health Service, following recommendation by the 16-member National Advisory Heart Council, will be used for stepped-up heart research, for expanded programs of heart teaching in medical schools, and for building additional heart research laboratories throughout the country.

According to Surgeon General Scheele, the grants under the National Heart Institute "complement the programs of the American Heart Association and other nongovernmental groups. Alone, neither the privately supported programs nor the Federal effort would provide this urgently needed mobilization of forces against the leading cause of death in the United States."

[Continued on page 228]

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[Continued from page 226]

Heart and Tuberculosis Groups Unite in State Program—A pioneering experiment in uniting the objectives and services of two leading voluntary health agencies in New York State was announced by the American Heart Association and the State Charities Aid Association. The program will be administered by S.C.A.A. and State, county, and city committees on tuberculosis and public health.

The joint demonstration between the national, state, and local groups has been initiated on the state level, but will exclude New York City, Orange County, and the eight counties comprising the Western New York Heart Association where heart associations previously have been organized. The undertaking will be under the direct immediate supervision of Dr. John W. Ferree, Pleasantville, director of public health for the American Heart Association, and Robert W. Osborn, New Rochelle, assistant secretary of the State Charities Aid Association and executive secretary of its State Committee on Tuberculosis and Public Health. Dr. Harry S. Mustard, health commissioner of New York City, whose appointment as executive director of the State Charities Aid Association became effective on January 1, will exercise general oversight of the project.

Conference on Physicians and Schools a Success—The Second National Conference on Physicians and Schools was held at Highland Park, Illinois, on October 13 to 15. The conference, sponsored by the Bureau of Health Education of the A.M.A., drew more than 160 physicians, educators, and public health officials interested in school health problems. They came from 35 states and three territories.

The four working sessions brought out considered thinking on the subject. The discussions are bound to bear fruit in programs which will be planned and put into effect.

It was the conclusion of the conference that:

(1) The family physician is a key figure in a solution of the problems and should be brought into the school health programs at the planning stage;

(2) Greater community and professional recognition of the role of the school physician is needed;

(3) School health services should be considered a part of a total community health program and be integrated into such a program;

(4) Medical schools should give additional training on school health to medical students.

It was the opinion that the greatest long-pull advantage to the pupil is when the traditional family-physician relationship exists. In that connection it was urged that physical examinations should be the province of the family physician whenever possible.

There was agreement on the need for more trained personnel, more facilities, and additional funds to carry out a well-developed school health program.

New Army Plan to Conserve Medical and Dental Skills—A newly adopted Department of the Army plan will result in greater economy in the use of scarce professional personnel in military hospitals in theaters of operations, according to an announcement by Major General R. W. Bliss, the Army Surgeon General.

"Under this plan," said General Bliss, "fewer physicians or dentists will be ordered to active duty with Army medical units until those units are ready to move into a theater of operations. This should allow each doctor to remain in active practice in his community until the Army has an actual need for his services with troops in combat."

The new plan is the result of an intensive study of experiences of the Army Medical Department during World War II. At that time doctors were required to join units while medical technicians and administrative personnel were being trained in the setting up, operating, and dismantling of mobile field medical equipment. This resulted in a loss of skilled professional manpower, not only to the Army but to the doctor's civilian community as well.

Hospital personnel will now be divided into two groups, administrative and professional personnel. The professional group will be known as the "professional complement," and will be made up of physicians, dentists, nurses, and other specialists. They will not be required to join the unit until such time as the unit is engaged in the actual care of patients. Further, when the requirement for this group has ceased, they may be moved to another theater of operations or to another area within a theater where their professional services will be put to use with a minimum of delay. The administrative group would remain to oversee the moving of equipment and records of the unit. In this way maximum use may be made of the professional complement's services.

Out of the 47 professional people required for a type of field hospital, under the new plan, only four officers would be required at all times for duty with the unit. The remaining 43 officers would not be needed during the organization and training period of the unit.

NECROLOGY

[Continued from page 221]

was graduated from the Long Island College Hospital Medical School in 1887 and had served on the staff of the Caledonian Hospital in Brooklyn. For the past sixty-two years he had been in practice in Brooklyn. Dr. Risch was a member of the Kings County and New York State Medical Societies and the American Medical Association.

Ernest Goodrich Stillman, M.D., of New York City, died on December 16 at his home at the age of sixty-five. Dr. Stillman was graduated from the College of Physicians and Surgeons, Columbia University, in 1913, and served for a short time as an assistant in pathology at the Presbyterian Hospital in New York City. Dr. Stillman then joined the Rockefeller Institute research staff, working on respiratory ailments, particularly pneumonia and influenza. He had been at his post there until his retirement last July, except for a period of service during World War I as an officer in the U.S. Army Medical Corps. Dr. Stillman was an honorary deputy chief of the New York City Fire Department and was a member of the American Society of Clinical Investigation, the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

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BOOKS

Books for review should be sent to Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

REVIEWED

A-B-C's of Sulfonamide and Antibiotic Therapy. By Perrin H. Long, M.D. Duodecimo of 231 pages. Philadelphia, W. B. Saunders Co., 1948. Cloth, $3.50.

This compendium is extremely well written and has many valuable pointers in therapy. Unfortunately, it contains no mention of aureomycin, chloromycetin, and the more recent antibiotics. One questions the statement concerning the lack of absorption of orally administered streptomycin from the gastrointestinal tract. This reviewer has given large doses by mouth and has obtained satisfactory blood levels. This book is well recommended as a reference book. IRVING GREENFIELD

Present Concepts of Rehabilitation in Tuberculosis. A Review of the Literature, 1938–1947. By Norvin C. Kiefer, M.D. Octavo of 398 pages. New York, National Tuberculosis Association, 1948. Cloth, $3.50.

This is a very complete book on the subject of rehabilitation in which the author has gathered together all the information obtainable on the subject and has presented it in a most orderly and progressive fashion.

Those interested in this important phase in the management of pulmonary tuberculosis will find in this book a veritable mine of information. The last chapter is devoted largely to the expression of the patients' own philosophy on the subject, and it certainly makes entertaining reading. Your reviewer must confess that he cannot agree with all the ideas expressed by the author, but he must salute him for the zeal and enthusiasm he displays in stating them. FOSTER MURRAY

Deep Massage and Manipulation Illustrated. By James Cyriax, M.D. Third edition. Octavo of 278 pages, illustrated. New York, Paul B. Hoeber, 1948. Cloth, $5.00.

Deep massage and manipulation have an important place in medical practice and, as the author of this excellent book points out, are too often left to the irregular practitioner to use with outstandingly good results. Apparently the training of the physical therapy technician is further advanced in this country than it is in England, as certain deficiencies which the author complains of are not true of our accredited schools. The second and major part of this book is devoted to a very complete and fully illustrated description of the specific use of deep massage and manipulation in a large number of painful conditions, many of which are often resistant to any other form of treatment. Certain aspects of this special work are considered by the author from an unusual angle and furnish material for serious thought on the subject. JEROME WEISS

Handbook of Diseases of the Skin. By Richard L. Sutton, M.D., and Richard L. Sutton, Jr., M.D. Octavo of 749 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $12.50.

The object of the authors was to cover the subject of dermatology in as concise a manner as possible and still be complete. They have succeeded in doing this in 749 pages, with rather close and fine print. In their attempts to be brief, however, they were compelled to sacrifice detailed clinical descriptions of the various dermatoses. While their conception of some of the dermatoses, such as acne, neurodermatitis, and others, may not be generally accepted, the book in general is very satisfactory. It is well illustrated and gives a good bibliography. It should be a great help, not only to the student of dermatology but also to the practitioner of general medicine. ABRAHAM WALZER

Surgery of the Eye. By Meyer Wiener, M.D. Second edition. Octavo of 426 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $12.

The reviewer first became acquainted with the author in the fall of 1918 at the Medical Officers Training Camp at Camp Greenleaf. Dr. Wiener was the director of the School of Ophthalmology at that time. He proved to be an inspiring teacher and a highly skilled surgeon.

This book does not purport to be an exhaustive "System of Ophthalmic Surgery," but in its nearly four hundred pages it covers the whole field with particular emphasis on the technics which have proved most successful in the author's hands—some of them original and some a simplification of other recognized ones. It is highly recommended.

CHARLES A. HARGITT

Allergy: What It Is & What to Do About It. By Harry Swartz, M.D. Octavo of 210 pages. New Brunswick, Rutgers University Press, 1949. Cloth, $2.75.

The author attempts to unravel the mystery of allergy by tracing the development from its earliest concept to the most recent advances in the subject.

All of the possible causes of allergy are noted and classified thoroughly. The author presents the various diagnostic procedures and discusses the solution of the involved problems. The subject matter, together with a glossary, is written in a comprehensible style. The layman, student, physician, and allergist can enjoy the complete information of this timely and important subject.

MATTHEW BRUNNER

Obstetric Analgesia and Anesthesia. Their Effects Upon Labor and the Child. By Franklin F. Snyder, M.D. Octavo of 401 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $6.50.

The author has been an outstanding worker in the field of fetal respiration for many years. He has been prominent in establishing the existence of intrauterine fetal respiration and has experimentally used this phenomenon to demonstrate the sensitivity of the fetus to depression by analgesic drugs.

The text gives sufficient evidence to show that

[Continued on page 232]

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[Continued from page 230]

the highest peak of mortality during the entire life span coincides with the day of birth, and that fetuses die during labor or soon afterwards chiefly from respiratory impairment.

The book is scholarly, complete with references after each chapter, and well illustrated. It is highly recommended. ALEXANDER H. ROSENTHAL

Technique of Treatment for the Cerebral Palsy Child. By Paula F. Egel. Octavo of 203 pages, illustrated. St. Louis, C. V. Mosby Co., 1948. Cloth, $3.50.

The growing interest and understanding concerning the problem of cerebral palsy are exemplified by this excellent book. The many difficulties encountered in treatment of the various types of cerebral palsy and their proper handling are very well described. The use of rhythmic exercise and the development of assisting apparatus represent a distinct advance in the training of these unfortunate cases. Excellent photographs and line drawings supplement the carefully prepared text, making the book a most valuable contribution toward the better treatment of cerebral palsy. JEROME WEISS

Dementia Praecox. The Past Decade's Work and Present Status: A Review and Evaluation. By Leopold Bellak, M.D. Octavo of 456 pages, illustrated. New York, Grune & Stratton, 1948. Cloth, $10.

The contents of this excellent source book consist chiefly of a detailed account of the various shock therapies of this severe mental disorder. Unfortunately, psychotherapy, including the most recent advances in psychoanalytic therapies, gets very little mention. The author wastes a good deal of print and paper discussing the various obscure etiologic and diagnostic criteria, as found in the literature, that bear scientific validity. A good deal more space could have been given for the constructive and useful material in the treatment of this mental illness by the psychiatric specialist both in the hospital and in private practice.

In addition he presents his own theory as to its etiology. In considering the disorder as a psychosomatic disturbance, he feels that the patient should be studied totally with no particular emphasis on either the soma or the psyche, but on both. His differentiation of schizophrenia from dementia praecox, by saying that the former is "more prominently psychogenic and benign" and the latter "more constitutionally determined" and hence more severe and hopeless, is open to question. Most of us who have treated psychotics either in mental institutions or in private practice are prone to pigeon-hole our therapeutic failures as "constitutionally determined." A finer psychoanalytic technic and a more constructive theory of human motivation rather than old concepts should be utilized before we resort to a hopeless, pessimistic attitude toward these patients.

On the whole, Dr. Bellak attempts to sum up our present status on this all too frequently seen illness which he prefers calling a syndrome rather than a disease entity. His bibliography is extensive and therefore useful to those who need source material on the subject for further work. For the general psychiatrist who uses the shock therapies exclusively for this disorder, it is probably of great help.

JOSEPH ZIMMERMAN

Handbook of Pediatric Medical Emergencies. Adolph G. DeSanctis, M.D. Chairman, Publication Committee. Duodecimo of 89 pages. New York, New York Post-Graduate Medical School and Hospital, 1948. Paper, $2.00.

This is in a sense a potpourri of conditions, all of which are not "emergencies."

The second half of the booklet concerns itself with poisons and their treatment. The chapter on burns is very well done and deserves commendation.

HARRY APFEL

The Frontal Lobes. Proceedings of the Association December 12 and 13, 1947, New York. [Res. Publ. Ass. Nerv. Ment. Dis., Vol. 27.] Ed. Bd., John F. Fulton, M.D., Charles D. Aring, M.D., and S. Bernard Wortis, M.D. Octavo of 901 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $12.50.

In the process of evolution, the frontal lobes have become the dominant factor in making the human being what he is today and are what differentiates him from all other mammals. In the last decade surgical operations on the frontal lobes have become an accepted procedure in the treatment of chronic and heretofore incurable psychotic patients. Hence the importance of this volume.

The book contains 37 chapters divided into four groups: the biology of the frontal lobes, experimental studies, clinical studies, and frontal lobotomy. In brief, there are different topics devoted to the anatomy, the physiology, and the experimental work on animals and to the various forms of surgical procedure on the frontal lobes. As a whole, the book is a well-organized and well-written explanation of a most vital subject that is currently of great interest to psychiatrists, neurologists, and neurosurgeons and to all others who are concerned with the human being as an entity. It is highly recommended as a source of valuable information.

IRVING J. SANDS

Operating Room Technique. By Edythe Louise Alexander, R.N. Second edition. Octavo of 765 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $10.

We had the opportunity of reviewing the first edition of this valuable book some years ago. It then impressed us most favorably. The second edition has not lost any of its importance. Every phase of operating room technic is treated with most minute detail; preparation for every operation is discussed. This book should be studied not alone by all operating room nurses, but by surgeons as well.

GAETANO DE YOANNA

Early Recognition of Disease. Edited by Sir Heneage Ogilvie, M.Ch.(Eng.), and William A. R. Thomson, M.D. Octavo of 134 pages. London, Eyre & Spottiswoode, Ltd., 1949. Cloth, 10/6. ("The Practitioner" Handbooks.)

This is one of a series of handbooks prepared for the general practitioner as a compendium. It is contributed to by 14 authors, each of whom has prepared a brief résumé of symptoms which may be of value to the general practitioner. It was not intended to be a scholarly guide but could serve as a starting point in the solution of complex medical problems. IRVING GREENFIELD

The Healthy Hunzas. By J. I. Rodale. Octavo of 263 pages, illustrated. Emmaus, Pa., Rodale Press, 1948. Cloth. $2.75.

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[Continued on page 234]

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[Continued from page 232]

some 22,000 people living in a sort of Shangri-La tucked in a valley not far from Tibet. While the authenticity of existence of this fantastic people who so abound in health that they should really never become aged or die may be questioned, the lesson is pointed that modern civilization is robbing mother earth of her nutrients without regard to replenishing them. Our progeny will likely pay the penalty for our present shortsighted "scorched earth" practices. The book is engaging and well worth reading, however farfetched may be the medical claims. GEORGE E. ANDERSON

Fractures & Orthopaedic Surgery for Nurses and Masseuses. By Arthur Naylor, M.B.(Eng.). Second edition. Octavo of 296 pages, illustrated, Baltimore, Williams & Wilkins Co., 1948. Cloth. $5.00.

Although the title of this very excellent book describes it as presented for the use of nurses and masseuses, its value is by no means limited to these workers. Instead, it is a most complete review of orthopedic practice, with a very comprehensive outline of the surgical procedures. Detail of these operative procedures, of course, could not be included in a book of this size. Many suggestions for improved handling of the orthopedic case as well as the special nursing care required are very well described and illustrated. JEROME WEISS

Coronary Artery Disease. By Ernst P. Boas, M.D., and Norman F. Boas, M.D. Octavo of 399 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $6.00.

The monograph reviews the anatomy, physiology, embryology, and pathology of the coronary system as well as the clinical features and therapy of coronary disease. There is some repetition in the various chapters, which, however, may be useful for emphasis. Some of the therapeutic measures discussed, such as the use of lecithin, thyroid, and iodides in the treatment of arteriosclerosis and khellinine in angina pectoris, the benefits of which are not fully established, should have perhaps been omitted.

The book generally is well conceived and well prepared and depicts the wide experience of the authors. LOUIS H. SIGLER

Thank God for My Heart Attack. By Charles Yale Harrison. Duodecimo of 144 pages. New York, Henry Holt & Co., 1949. Cloth, $2.50.

This is an interesting and often amusing story by a patient who suffered a coronary occlusion. Written by a distinguished novelist, there is much helpful and hopeful information in it for the layman.

ANDREW BABEY

Social Medicine. Its Derivations and Objectives. The New York Academy of Medicine, Institute on Social Medicine, 1947. Edited by Iago Galdston, M.D. Octavo of 294 pages. New York, Commonwealth Fund, 1949. Cloth, $2.75.

Social Medicine, edited by Iago Galdston, M.D., gives a history of social medicine as an ideal to work for. It deals with social pathology and with social relations as a means to control disease. There is a strong plea for the study of social conditions, attributing to medicine a responsibility in service to humanity. Psychiatry in human relations is outlined and analyzed with respect to world conditions as a preventive and cure for unadjusted social relationships.

The last chapter is by Lord Horder. It is a strong condemnation of socialized medicine as found at present in England. ARTHUR D. JAQUES

Practical Aspects of Thyroid Disease. By George Crile, Jr., M.D. Octavo of 355 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $6.00.

The conclusions of this book are based mainly upon observations made on approximately 1,000 patients with thyroid disease treated by the author. He draws also upon the experience of his eminent father in over 25,000 thyroidectomies, as well as of other members of the Cleveland Clinic. It is a thoroughly practical and sensible handbook and summary of present-day knowledge of the thryoid gland, its disease and treatment. It is recommended for the use of students, internists, and surgeons.

JOHN H. BOGLE

The Pharmacologic Principles of Medical Practice. A Textbook on Pharmacology and Therapeutics for Medical Students, Physicians, and the Members of the Professions Allied to Medicine. By John C. Krantz, Jr., Ph.M., and C. Jelleff Carr. Octavo of 980 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

This is an excellent book in a field where modern and good texts are scarce. Exhaustive in its material, it is well written and easy to read. Considering the difficulty of new drugs being introduced daily into modern therapeutics, it is remarkably up to date. Particularly well covered are the sections on autonomic drugs, antianemic factors and chemotherapeutic agents, and antibiotics. It is recommended as a must for internists and others who in their practice deal extensively with drugs.

JOSEPH R. DIPALMA

Campbell's Operative Orthopedics. J. S. Speed, M.D., Editor, Hugh Smith, M.D., Associate Editor. Second edition. In two volumes. Quarto of 1,643 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $30.

Among the outstanding orthopedic surgeons that will ever be remembered was Willis C. Campbell of Memphis, Tennessee. Ten years ago, he and his associates published a volume entitled *Operative Orthopedics*. It was characterized in the literature of this specialty as a practical contribution. Dr. Campbell, at the time, expressed his deep appreciation for the effort which made that volume possible, paying gratitude to Dr. Hugh Smith and Dr. J. S. Speed, among many others, who helped him in the endeavor.

Carrying the torch of the practical application of *Operative Orthopedics*, Dr. Speed and Dr. Smith assumed the responsibility for a second edition which they chose to publish in two volumes instead of one.

During the intervening decade, many variables in the progress of the specialty occurred. Dr. Speed and Dr. Smith realized their significance, and, out of their enthusiasm, a two-volume edition of *Campbell's Operative Orthopedics* has been given to the medical profession. There are few contributions in the English language that are so inclusive and practical. The book, as a whole, stands as a monument to a master surgeon by their torch bearers, individuals in their own right, Dr. Speed and Dr. Smith.

One cannot choose a given chapter to comment on more highly than a comparable chapter in some other textbook in the English language. These two

[Continued on page 236]

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[Continued from page 234]

volumes properly belong in every medical library. In contrast to other publications, the work is not a reference book; it is a working book which cannot be overlooked as a distinctive, outstanding contribution to the progress of bone and joint surgery in America.

DONALD E. MCKENNA

Mayo Clinic Diet Manual. By The Committee on Dietetics of the Mayo Clinic. Octavo of 329 pages. Philadelphia, W. B. Saunders Co., 1949. Paper, $4.00.

This manual on diet gives patterns for practically all types of diet required for the therapy of disease. They are standards but, it has been emphasized, must be fitted to the individual needs of the patient. The ultimate diet must be tailored to the peculiar needs of the individual rather than be accepted categorically. The rationales are clearly depicted.

The manual covers some 325 pages and has an appendix of valuable food tables such as sodium, cholesterol, calcium, and oxalic content of foods. This is an excellent reference book.

GEORGE E. ANDERSON

Diseases of the Liver, Gallbladder and Bile Ducts. By S. S. Lichtman, M.D. Second edition. Octavo of 1,135 pages, illustrated. Philadelphia, Lea & Febiger, 1949. Cloth, $18.

This book has been thoroughly revised and enlarged by the addition of 229 pages and 52 new illustrations. Among the new additions are the most recent advances in the physiology of the liver and the chapter on symptoms and signs of liver disease. Liver function tests and procedures have been extended and clarified. The chapter on infectious hepatitis has been entirely rewritten. Cirrhosis of the liver has been extensively revised and much of the newer work on cirrhosis added. In fact, so many changes have made this book practically new.

This book is a must reading for the general practitioner, gastroenterologist, and surgeon.

REUBEN FINKELSTEIN

Your Child or Mine. The Story of the Cerebral-Palsied Child. By Mary Louise Hart Burton, in collaboration with Sage Holter Jennings. Duodecimo of 64 pages, illustrated. New York, Coward-McCann, 1949. Cloth, $1.25.

The age-old problem of cerebral palsy has long been accepted as one without solution. Only recently has scientific attention to this affliction shown that a large proportion of its victims are capable of considerable improvement by early and proper training. This fascinating book presents case histories, written for lay reading, of a number of different types of cerebral palsy, some amenable to treatment, others less so. A summary at the end of the text carries a most vital appeal for a popular conception of cerebral palsy such as is today generally accorded the poliomyelitis cripple.

JEROME WEISS

Oral Anatomy. By Harry Sicher, M.D. Quarto of 529 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $15.

This book will be an excellent addition to the dentist's library, fulfilling as well its function as a textbook, confined to the subject of oral anatomy, for the student. It is well illustrated, excellently printed, and well indexed. The chapter, "The Propagation of Dental Infections," will be extremely useful for both the general practitioner of dentistry and the oral surgeon. The author has done a very thorough job throughout the book.

LAWRENCE JOSEPH DUNN

The 1948 Year Book of Neurology, Psychiatry and Neurosurgery. **Neurology** edited by Hans H. Reese, M.D., and Mabel G. Masten, M.D. **Psychiatry** edited by Nolan D. C. Lewis, M.D. **Neurosurgery** edited by Percival Bailey, M.D. Duodecimo of 750 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $5.00.

This volume maintains the unexcelled reputation of its predecessors in keeping the specialist, physician, and student interested in these specialties up to date with significant, recent world-wide advances. Commendable selectivity of a vast literature includes, among a host of topics, radioactive tracer studies, shock therapy, "psychosurgery," and developments in neurosurgery. Startling results of transorbital lobotomy are revealed, as well as delimitations of the field of lobotomy. Surgical treatment of epilepsy, nerve suturing, sympathectomy, intervertebral herniation, and arteriography are brought into focus. No other volume of commensurate size encompasses so many usable facts.

FREDERICK L. PATRY

Cardiac Catheterization in Congenital Heart Disease. A Clinical and Physiological Study in Infants and Children. By André Cournand, M.D., Janet S. Baldwin, M.D., and Aaron Himmelstein, M.D. Quarto of 108 pages, illustrated. New York, Commonwealth Fund, 1949. Cloth, $4.00.

The monograph attempts to correlate the clinical findings with the physiologic data obtained by catheterization of the right heart, arterial puncture, and the measurement of the oxygen of the expired air in 17 cases of congenital heart disease. It consists of two parts. In the first part, the method of catheterization of the right heart is lucidly described and demonstrated by roentgenologic studies. The various intracardiac and arterial blood pressure patterns in the normal and abnormal states are clearly demonstrated, and formulas are given for the calculation of the blood flow.

In the second part, each case is discussed from a viewpoint of clinical diagnosis and the physiologic data. The value of cardiac catheterization as an aid in diagnosis and also its occasional failure are thus demonstrated.

The monograph is an excellent presentation of a timely subject and is highly recommended to those who are interested in this field.

LOUIS H. SIGLER

The Epidemiology of Hemolytic Streptococcus During World War II in the United States Navy. By Alvin F. Coburn, M.D., and Donald C. Young, M.D. Octavo of 229 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $4.00.

This detailed report of the findings of the Bureau of Medicine and Surgery of the Navy Department, covering the research problems which Epidemiology Units attempted to, and in many cases did, solve during World War II with regard to diseases caused by the Hemolytic Streptococcus in naval personnel, deserves a wide distribution among and a careful study by all members of the medical profession throughout the world.

The book is easy to read and extremely interesting. A list of unsolved problems is given which should stimulate the curiosity of other research workers.

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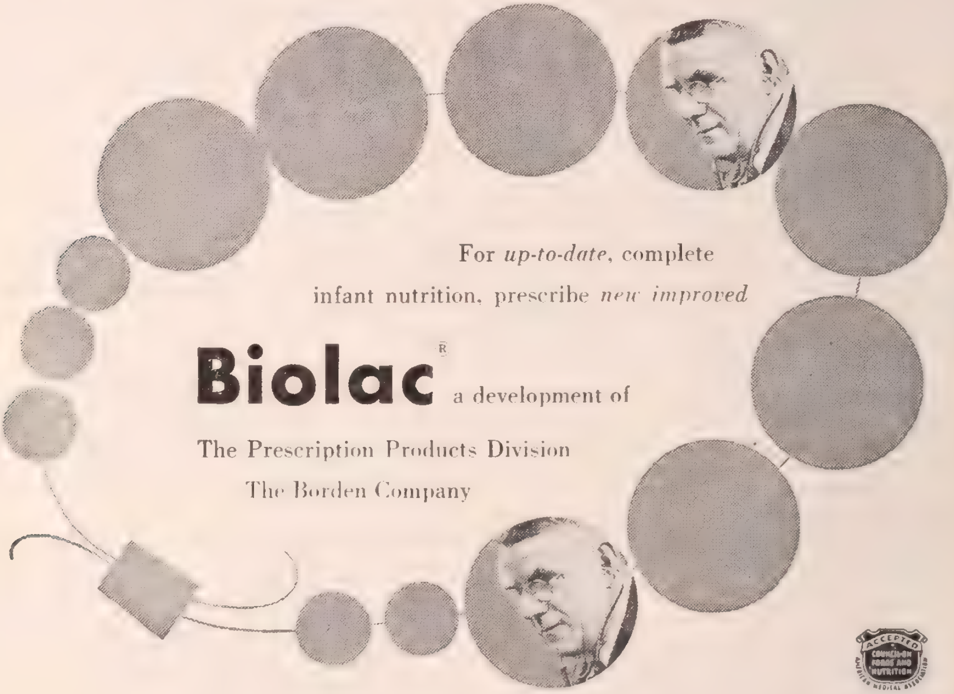

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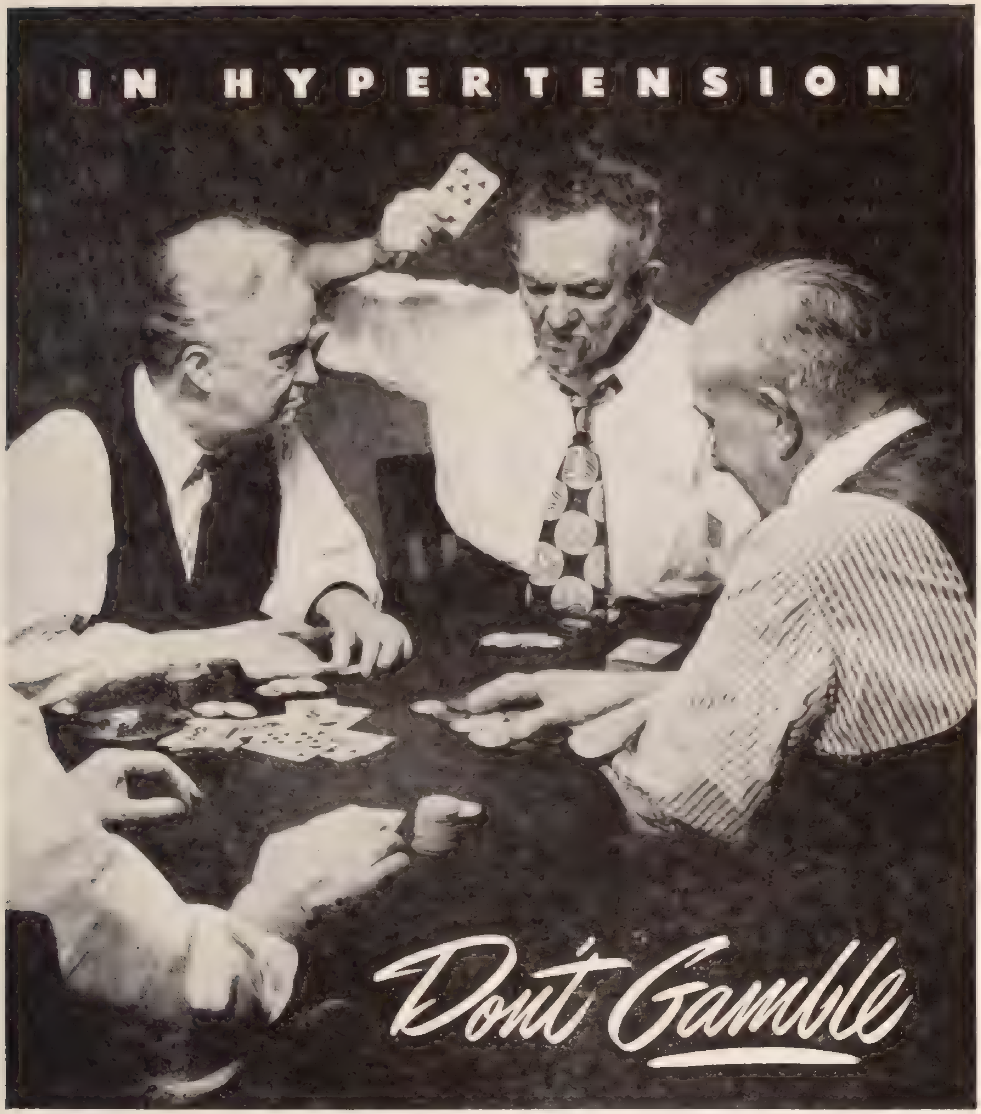

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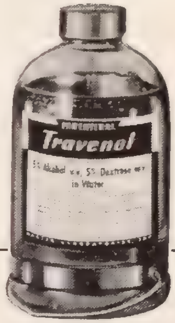

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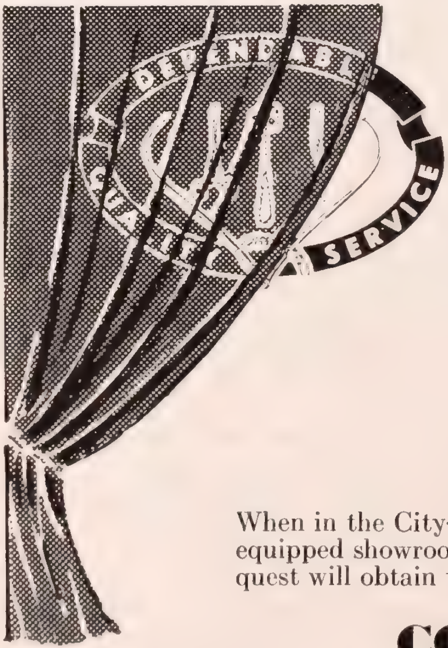

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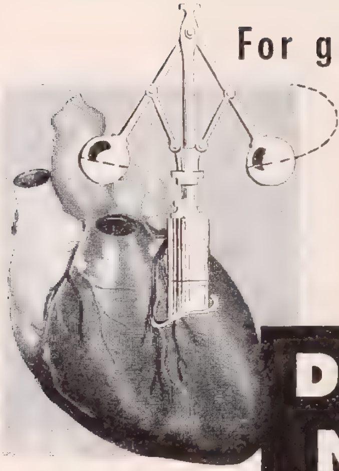

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ANTIPHLOGISTINE RUB A-535 has been thoroughly tested both clinically and in more than 6,000 homes. It was created for the symptomatic relief of the aches and pains of Chest Colds, Arthritis, Rheumatism, Neuritis, Sprains, Sore Muscles, and Headaches.

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RUB A-535 . . . may be used by children as well as adults. It is pure white, stainless, and has a pleasant refreshing odor.

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CAUBREN® COMPOUND

cold combatant

this compound is an effective agent in the therapy of the common cold

Caubren Compound is remarkably effective against the common cold because it is a carefully designed *cold combatant*. It is more than a good antihistaminic. It is an antihistaminic PLUS . . . because in addition to Chlorothen Citrate (25 mg.), antihistaminic of low toxicity, it contains acetophenetidin (320 mg.) and caffeine (32 mg.), analgetic and antipyretic synergists. The caffeine also counteracts drowsiness occasionally encountered in some patients even with so mild an antihistaminic as Chlorothen Citrate.

A most recent report (Industrial Medicine And Surgery, December 1949)[1] on a controlled clinical trial of Caubren Compound states: "In 92 persons observed for an adequate period of time who were treated with a compound antihistaminic analgesic preparation,* the average duration of colds was 2.7 days as compared with an average duration of 5.3 in 74 treated with aspirin."

"Nineteen of the persons receiving the compound* had no evidences of the infection after 24 hours."

"The compound* may be administered with safety within the dosage levels prescribed because of the low incidence of toxic effects."

"This compound* is an effective agent in the therapy of the common cold, aborting the infection when administered early, abating the symptoms and shortening the duration when administered later."

*Caubren Compound: Available only on your prescription in bottles of 20 and 100 tablets.

[1] Phillips, W. F. P., and Fishbein, W. I.: Indust. Med. & Surg. 18:526 (Dec.) 1949

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(1) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (2) Wilkins, et al.: J.A.M.A. 140: 261-265, 1949.

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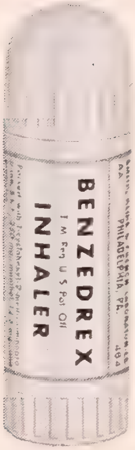

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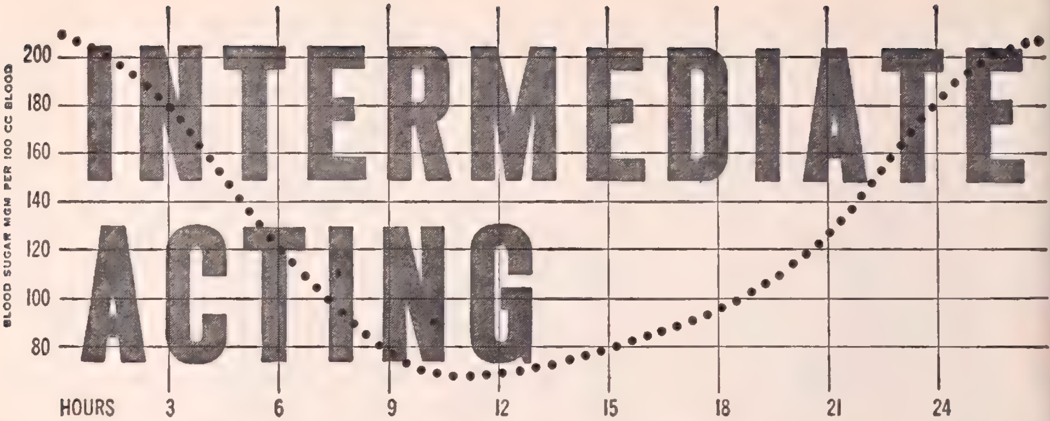

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...was developed to fill the "need for an insulin with activity intermediate between that of regular insulin and that of protamine zinc insulin."[1]

IN 1939, Reiner, Searle and Lang described a new "intermediate acting" insulin.

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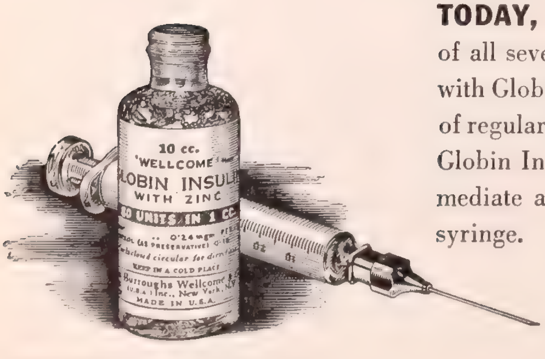
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1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.

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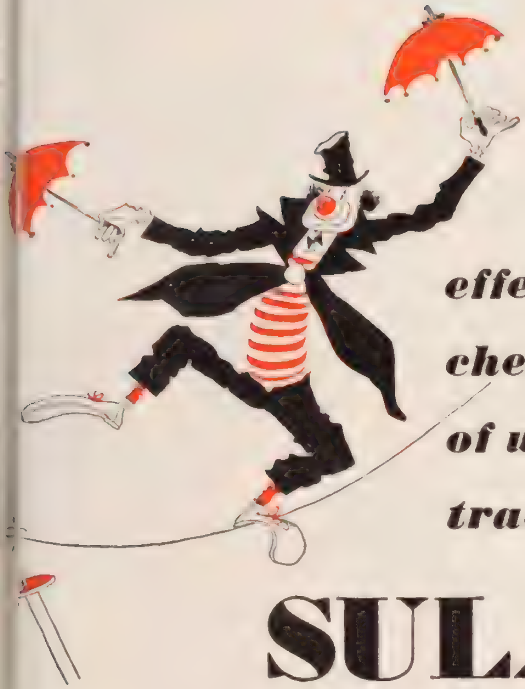

effective chemotherapy of urinary tract infections

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(Sulfacetimide-Schering)

high pathogen specificity[1]	low blood levels[3]
high antibacterial activity[2]	low tissue concentration[3]
high urine concentration[3]	low systemic toxicity[3]
high urine solubility[4]	low renal risk[1-5]

Dosage: SULAMYD® (Sulfacetimide-Schering), 2 tablets three times daily after meals. For prophylaxis, SULAMYD, 2 tablets twice daily beginning 24 hours prior to manipulative or surgical procedure and continuing for 48 hours after.

Packaging: SULAMYD Tablets of 0.5 Gm., bottles of 100 and 1000 tablets.

Bibliography:

1. Alyea, E. P., and Parrish, A. A.: South. M. J. *36*:719, 1943.
2. Nesbit, R. M., and Glickman, S. I.: J. Michigan M. Soc. *46*:664, 1947.
3. Lehr, D.: J. Urol. *54*:87, 1945.
4. Joelson, J. J.: J.A.M.A. *129*:157, 1945.
5. Kearns, W. M., in discussion on Herrold, R. D.: Wisconsin M. J. *41*:467, 1942.

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FOR URINARY

TRACT INFECTION

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Gratifying Relief

from distressing

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Prompt and effective relief from distressing symptoms of urinary tract infections often can be achieved through the action of orally administered Pyridium.

The analgesic action of Pyridium is entirely local, reducing the urinary frequency and pain and burning on urination, without systemic sedation or narcotic action.

Pyridium is virtually nontoxic in therapeutic dosage and can be administered concomitantly with streptomycin, penicillin, the sulfonamides, or other specific therapy.

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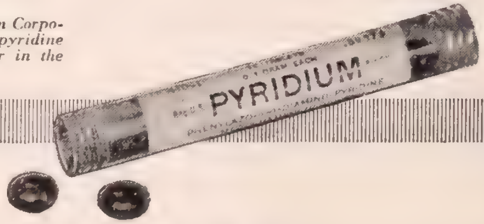
The complete story of Pyridium and its clinical uses is available upon request.



Pyridium®

(Brand of Phenylazo-diamino-pyridine HCl)

MERCK & CO., Inc.   Manufacturing Chemists   RAHWAY, N. J.

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Appointment for anointment

Advise the arthritic to have an appointment with himself twice daily—

to apply ARTHRALGEN®

arthralgesic unguent

to painful joint and muscle areas. Relief from musculoskeletal discomfort after a single application is gratifyingly rapid, in a matter of minutes, and is of long duration, extending up to six hours following concomitant exposure of the affected parts to moist or dry heat.

Why does Arthralgen work so well? Its special formula advantageously blends the old and the new in local therapy. Rubefaction due to thymol and menthol plus analgesia due to methyl salicylate are synergistically combined with the unique vasodilating action of methacholine chloride. Arthralgen dilates both capillaries and arterioles. The resulting active hyperemia tends to counteract the vasospasm found in articular and non-articular rheumatism, relieves pain and discomfort and brings a welcome feeling of deep warmth and relaxation. All this is facilitated by Arthralgen's special ointment base containing selected wetting agents which enhance surface penetration and facilitate speedy effectiveness of the active ingredients.

Arthralgen is beneficial in the treatment of arthralgias, myalgias and neuralgias—sprains, lumbago, synovitis, bursitis, neuritis and myositis. In chronic arthritis, Arthralgen is a valuable topical adjunct to systemic therapy.

Arthralgen, Arthralgesic Unguent, contains 0.25% methacholine chloride, 1% thymol, 10% menthol and 15% methyl salicylate; available in 1 ounce tubes and half-pound jars.

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powder
inhalation

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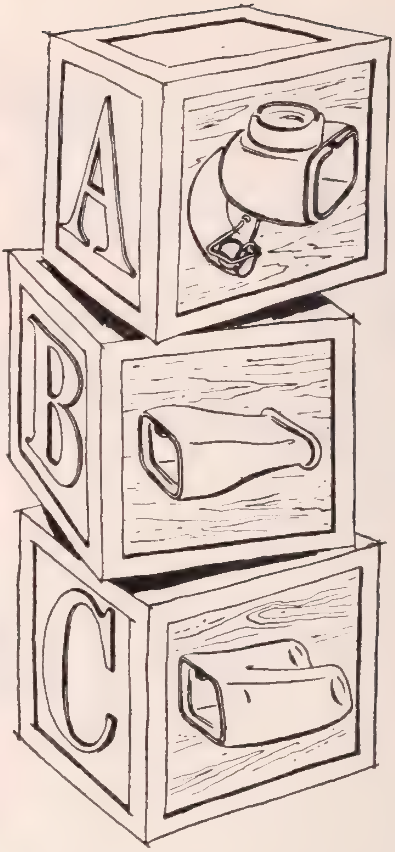

Inhale—remove—exhale. That's clinically-proved penicillin powder inhalation with the Aerohalor, the handy, pocket-sized device the patient smokes like a pipe. The Aerohalor has separate, easily-interchanged attachments for oral or nasal inhalation. Its *tap-sift* action permits only a small amount of powder to be inhaled with each inspiration. And its wide mouthpiece provides optimum conditions for an open airway on through the mouth. • Your pharmacist can supply the Aerohalor, boxed singly, and—in quantity needed—disposable Aerohalor* Cartridges, each containing 100,000 units of finely divided crystalline penicillin G potassium, stable at room temperature. Investigate the Aerohalor soon. First step? Write for literature.

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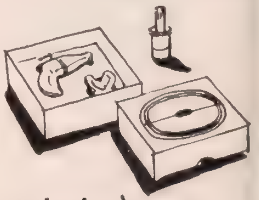
Aerohalor®

(Abbott's Powder Inhaler)



[1] Krasno, L. R., and Rhoads, P. S. (1949), The Inhalation of Penicillin Dust; Its Proper Role in the Management of Respiratory Infections, Amer. Prac., 11:649, July.

*Trade Mark for Abbott Sifter Cartridge. Aerohalor and Aerohalor Cartridge patented in U. S. and foreign countries.

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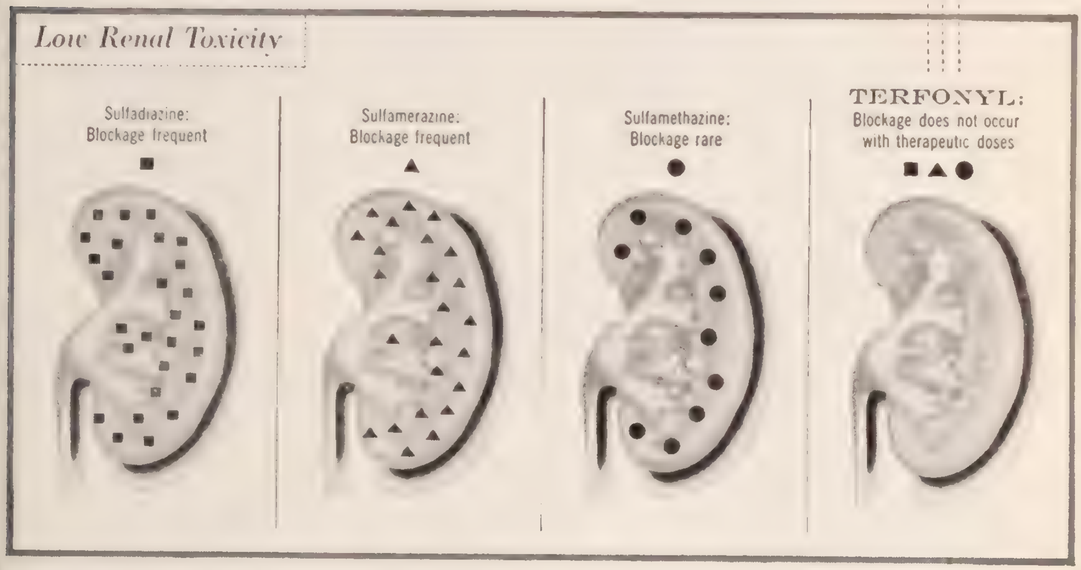
Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFE SULFONAMIDE THERAPY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Sulfadiazine: Blockage frequent
■
Sulfamerazine: Blockage frequent
▲
Sulfamethazine: Blockage rare
●
TERFONYL: Blockage does not occur with therapeutic doses
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With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated. Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets, 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint and gallon bottles

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'TERFONYL' IS A TRADEMARK OF E. R. SQUIBB & SONS

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Orally Potent CONESTRON provides the advantages of **Conjugated Estrogens** from **Natural Sources**

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For the menopausal patient
TABLETS of 0.3, 0.625, 1.25, and 2.5 mg.

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Wyeth Incorporated, Philadelphia 3, Pa. *Wyeth* ®

fast disintegration

fast action

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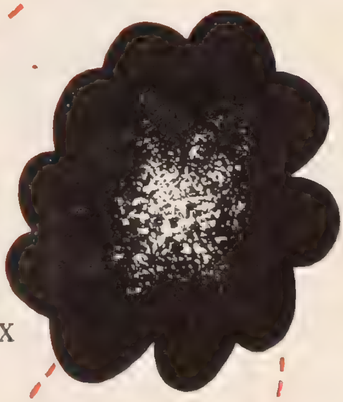

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Reaction in the stomach: $RX + HCl + RX.HCl$
RX = anion exchange resin with the acid binding substituents X
When the resin and the attached acid molecules reach the alkaline medium of the intestine, the acid is released and neutralized; the resin is then excreted in its original form.

Reaction in the intestine:
$2RX.HCl + Na_2CO_3 \rightarrow 2RX + 2NaCl + H_2O + CO_2$

No interference with normal bowel function[1]
No alteration of acid-base balance of body fluids[2]
No toxicity even with massive dosages[3]

[1] Kraemer, M.: Postgrad. Med. 2:431 (Dec.) 1947.
[2] Kraemer, M., and Siegel, L. H.: Arch. Surg. 56:318 (Mar.) 1948.
[3] Martin, G. J., and Wilkinson, J.: Gastroenterology 6:315 (Apr.) 1946.

"Exorbin" No. 373 is presented in tablets of 0.25 Gm. (4 grains); bottles of 100. Also available in Powders, 1 Gm. (15 grains), No. 372; boxes of 50.

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"Exorbin" *brand of* **Polyamine Resin**

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A Better Tasting Choline

The extremely pleasant citrus flavor of Solution Choline Gluconate-C.S.C. overcomes one of the greatest obstacles to prolonged choline therapy. This preparation is exceptionally well tolerated and is readily taken in the prescribed dosage over the prolonged periods usually required in the treatment of chronic hepatic disorders.

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Containing 61.7% choline gluconate or the equivalent of 25% choline base, Solution Choline Gluconate-C.S.C. provides an exceptionally large amount of choline base equivalent per teaspoonful. *Adequate* dosage may be given for utmost therapeutic value. This greater choline content is made possible by the high concentration of the choline gluconate salt.

Outstanding Economy

In terms of choline equivalent, Solution Choline Gluconate-C.S.C. offers outstanding value to your patients. This point is of utmost importance since the management of chronic hepatitis, hepatic insufficiency, and cirrhosis of the liver usually involves treatment extending over a period of several months.

Solution Choline Gluconate-C.S.C. is available on prescription in 16 oz. bottles. Because of its economy, it is suggested that the original 16 oz. bottle be prescribed.

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Choline Gluconate
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A Division of COMMERCIAL SOLVENTS CORPORATION
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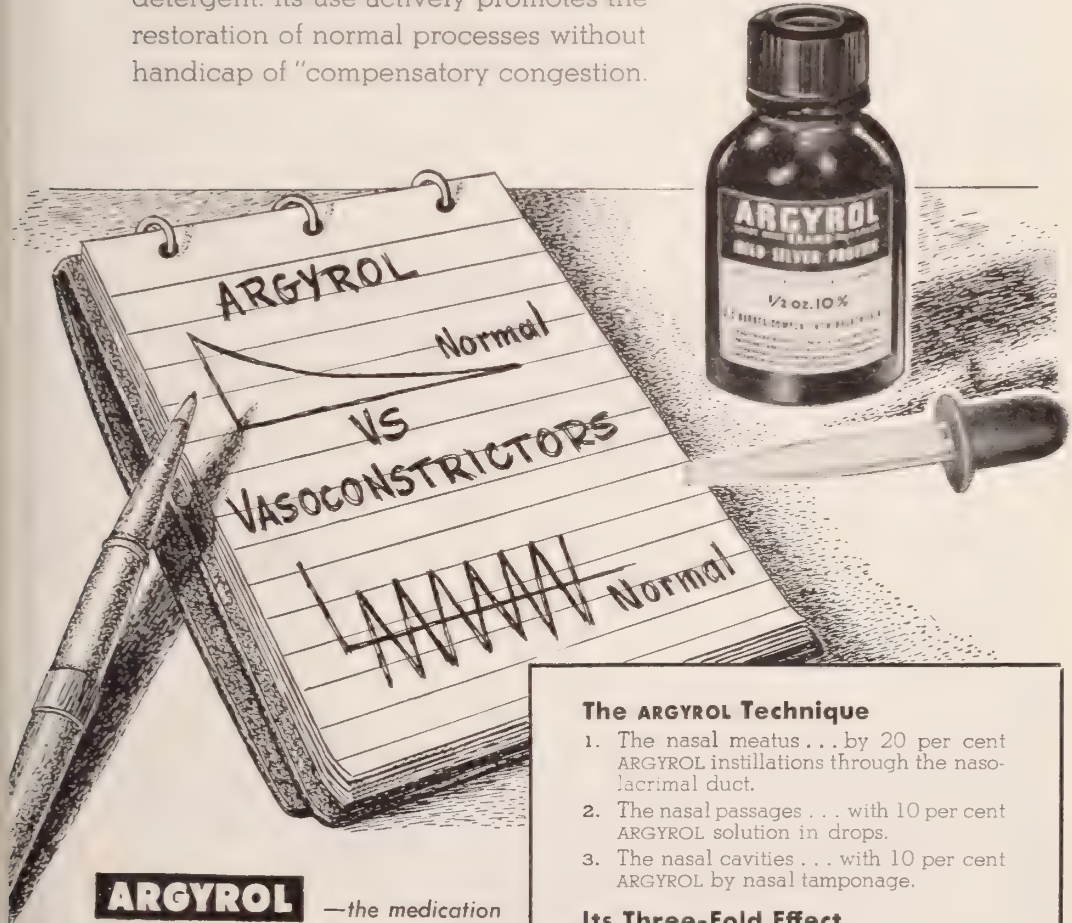
In Para-nasal Infection **ARGYROL**

attains the objective . . .

a return to normal . . .
without congestive rebound!

ARGYROL is bacteriostatic, demulcent and detergent. Its use actively promotes the restoration of normal processes without handicap of "compensatory congestion.



The ARGYROL Technique

1. The nasal meatus . . . by 20 per cent ARGYROL instillations through the naso-lacrimal duct.
2. The nasal passages . . . with 10 per cent ARGYROL solution in drops.
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1. Decongests without irritation to the membrane and without ciliary injury.
2. Definitely bacteriostatic, yet non-toxic to tissue.
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JOURNAL OF MEDICINE

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VOLUME 50 FEBRUARY 1, 1950 NUMBER 3

Editorials

Publicity Versus Public Relations

In view of certain trends which have become manifest in recent years, it would appear timely to draw a distinction between these two terms and not use them interchangeably. A distinction does not appear evident, judging from the mass of "releases" which come to the editorial office of the Journal. We desire to make note in particular of the maneuver developed by certain hospitals and other institutions in New York and elsewhere in order to gain public attention for some new "wonder" drug or procedure developed within their walls. This information (*sic*) is usually distributed in the form of "releases" to the press, including lay and medical. The latter ordinarily weighs the evidence as to its validity, but a newspaper publishes the "release," bait, hook, and sinker, the morning after distribution of the "copy." A hospital, for example, which indulges in this sort of thing indulges in *publicity;* this is not *public relations*, which is an entirely different matter. An announcement such as that recently emanating from one of our well-known and highly esteemed hospitals in New York City, dealing with a "new drug to relieve itching" and extensively quoted in the *New York Times* (December 17, 1949) is but *one of numerous examples* of what appears to be a campaign for gaining institutional "publicity." And, we are informed, certain hospitals and certain medical schools have actually engaged "public relations counsel" for such purposes.

If this course is regarded as objectionable by a medical journal, the latter might be accused of maintaining a narrow point of view, in that the public is entitled to be informed of the progress in medicine, even to the extent of relying on its own judgment in the taking of drugs. Witness the present radio advertising of all sorts of preparations infallible for whatever ails an individual, free to interpret his own symptoms. We cannot agree that this is a desirable situation or that hospitals should become similarly involved in what might be designated, perhaps vulgarly, as a "publicity stunt," mentioning the names of the doctors concerned as well as the manufacturer of the drug, and even giving the details of administration.

If an individual physician should publicize his attainments in similar fashion, he would be regarded as a violator of medical ethics and subject to censure by his county society. However, the new way would appear to absolve him. It seems to us bad practice to inform the public about medical advances through newspaper channels, rather than through professional journals, so that a scientific, and not a garbled, presentation is offered to other physicians for more extended trial and observation. We realize that hospitals and research institutions may desire to call attention to their accomplishments, perhaps with the idea in mind that the public's purse strings may be loosened in their support, but we protest that this is an undesirable course to follow, for people are aroused to try anything, just once at least, and it may be to their detriment rather than their benefit in constituting themselves voluntary human guinea pigs. We ask the perpetrators of these methods to study carefully the terms which head this editorial.

The A.M.A. Dues, II—The Aggressor

In our first editorial we wrote of the Cold War which had been thrust upon the medical profession, a war not of our seeking, but which, in the interests of the American people, the physicians are compelled to wage and are proud to prosecute.[1] The sinews of this war are provided by the $25 dues unanimously voted by the House of Delegates in December, 1949, to provide the weapons—the guided missiles of the educational campaign of the A.M.A.

Is this war necessary? Yes, it is. It has been *thrust* upon us by an aggressor. To the medical profession, war is an old story. Doctors did not create the diseases that afflict mankind; doctors did not invent or devise the disabilities that resulted from the diseases; doctors did not provoke or invite death for the people, except certain Nazi beasts who in no conceivable manner could be considered doctors of medicine. Doctors of medicine from the beginnings of time have fought relentlessly disease, disability, and death.

To do this they created the weapons: education in medicine, training of personnel, disciplines of procedure and personal conduct, schools, hospitals, laboratories, professional associations. These things, *constantly improved by the profession itself*, have made the excellence of the modern practice of medicine possible, workable, and practical.

Now, to the ancient war on disease, disability, and death, the doctors of medicine have been compelled to add another campaign: *a war against the dissolution of the profession itself.* It is in an early phase at this time, a cold war.

The aggressor in this modern war is subtle The aggressor in this cold war uses poisons, not to kill but to blunt the intellect, to warp the judgment, to distort the facts, to undermine resistance, to substitute false values for true, to bribe with subsidy, to press upon the palsied necks of bemused people the heavy yoke of arrogant authority, oppressive controls, exorbitant taxes, to set one man against another in suspicion and hate. His poisons produce a lassitude, a desire not to think independently but to follow blindly, a contentment to be dependent, to permit others to control and regulate, to be spendthrift and heedless. His poisons are propaganda and distortions of truth, false promises and lies.

The profession of medicine stands squarely in the aggressor's path of conquest; it benefits the people directly; it frees them from disease; it binds up their wounds; it comforts them; it stands between them and the spectre of death from the cradle to the grave. No aggressor can view such potenial power unmoved. It incites him to nvy, covetousness, malice, hatred, and ll manner of uncharitableness. Therefore, he must destroy it, accomplish its dissoluion, and annex it piecemeal. It is the echnic of Fabius.

---

[1] New York State J. Med. 50: 163 (Jan. 15) 1950

It is fortunate that the general staff of the American Medical Association has recognized the attack for what it is. A year ago he Trustees, after deliberation, assessed the membership $25 apiece to commence a campaign of public education. No more than he then hue and cry, the cacophony of discordant protests, the stridulous yells of the lupes of the aggressor were necessary to prove that the forces of discord, the sappers and fifth columnists were at their work. The barrage of criticism of the profession in some of the public press that followed and has continued to rise in volume, dedicated to breaking up the unity of the doctors, discrediting them and their institutions, is again ample reason for the action of the House of Delegates in December, 1949, unanimously to vote annual dues of $25 a member.

No man can serve two masters. He that is not for us is against us. This is war. The JOURNAL is proud to urge every doctor in the Empire State to pay his dues promptly. War is costly. It is not of our seeking. To prosecute it successfully money must be forthcoming. Now.

(*To be continued*)

The Golden Anniversary Year—Retrospect, II

In the address of Dr. W. W. Keen, president of the American Medical Association in 1900, the broad picture of the medical profession in the nation is given. Of the 100,000 *regular* physicians in the United States, 9,000 only were members of the A.M.A. But the United States population in that year was 75,994,575! In round numbers, one regular physician to each 759 persons. Dr. Keen however, urged "the necessity for endowment of medical schools so that they might more nearly fulfill their educational functions." He proposed further "the establishment by the American Medical Association of a fund for scientific grants-in-aid of research," a proposal which resulted in action by the A.M.A. in the granting, by 1946, of "more than $1,000,000 of its funds for such purposes" and the setting aside "as a permanent fund for research more than $2,000,000 additional." In the following year (1901) Mr. John D. Rockefeller gave "$200,000 for medical research, under the able chairmanship of Dr. William H. Welsh."[1]

In 1901 also, the first Educational Number of the *Journal of the A.M.A.* appeared, on September 21. In 1905, of the more than 160 medical schools in the country, many admitted students without a complete high school education, and "there were only five requiring two or more years of premedical work."[2] In 1900, there were 1,300 medical societies in the United States, an increase from 40 in 1847.[3]

In the Empire State "the power to grant licenses was placed wholly by legislation in the hands of the Regents" only in 1890.[4] It was not until 1907, however, that Commissioner Draper, head of the New York State Department of Education, formulated the principle that "the State should establish a fundamental standard for all medical practice, which would protect the people against ignorance and let those who can come up to that standard practice. In 1907, a single examining board replaced the three previous boards of the *regular*, the *homeopathic*, and the *eclectic* schools."[4] Little or nothing is found in the record of anyone proposing at this period of our history government subsidy of medical education. On the contrary, in 1900, at the Atlantic City session of the A.M.A., "The name of the Section on State Medicine was changed to the Section on Hygiene and Sanitary Science."[5] In that era, what now is known broadly as the science of public health was referred to as "state medicine."

By 1901 agitation for the amalgamation of the New York State Medical Association and the Medical Society of the State of New York was commencing; old differences of opinion valid in 1884 had lost their weight; many New York City physicians belonged to both organizations, but legal difficulties related to the looseness of the early by-laws of the two bodies held up the reunion until 1906.

Advertising in the JOURNAL was limited to eight pages. Van Horn and Company, Park Avenue and 41st Street, New York City, were advertising sterilized catgut and kangaroo-tendon in hermetically sealed glass tubes. Maltine, plain and with peptone, or creosote or hypophosphites and cascara sagrada took a full page. Glycothymoline (Kress) and Peptomangan and Merck & Company and the Oakland Chemical Company of New York were represented by half pages each, the former advertising ichthyol, stypticin, and bromipin, the latter hydrogen dioxid.

Editorial offices of the JOURNAL were at 64 Madison Avenue, New York City. The first issue of the JOURNAL carried on page v of the advertising section a boost for the *Medical Directory of New York, New Jersey, and Connecticut* by the *Medical Record*, September 29, 1900, to the effect that the *Directory* "is an almost indispensable work for the physician in this city or State who cares to know anything of his colleagues and of the work in which they are engaged."

The *Directory* of the year 1901 was in course of compilation. Apparently its publication date was "sometime early in September." The previous issue had "contained more than 22,000 classified names, to say nothing of important data concerning hospitals, medical societies, and the like."

Volume 1, Number 1, January, 1901, of the JOURNAL contained three original articles: "The Successful Treatment of Ichthyosis Hystrix by the Electric Arc-Light," by G. W. Goler, M.D., of Rochester; "The Relation of Migraine to Epilepsy," by Alvin A. Hubbell, M.D., of Buffalo, and "Trichinosis: Report of Two Cases," by H. C. Gordinier, M.D., of Troy. The total pages, including advertising section, were 32.

We have then in brief retrospect a picture of the national and State scene of fifty years ago. One is impressed by the self-reliance and vigor, the scientific adventurousness and forward look of a vital profession in a developing land of free enterprise. One is brought up short to think that this was but thirteen short years before the assassination of the Archduke Ferdinand at Sarajevo and the commencement of World War I.

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1. Fishbein, M.: History of the American Medical Association, Philadelphia, W. B. Saunders Company, 1947, p. 197.

2. *Ibid.*, p. 893.

3. NEW YORK STATE J. MED. **1**: 2 (Jan.) 1901.

4. *Ibid.* **49**: 2256 (Oct. 1) 1949.

5. Fishbein, M.: History of the American Medical Association, Philadelphia, W. B. Saunders Company, 1947, p. 200.

(*To be continued*)

Dr. Fishbein Retires

For many years, Dr. Morris Fishbein has been an outstanding figure in medical journalism, and the *Journal of the American Medical Association* constitutes a worthy memorial to his industry and ability. Dr. Fishbein has given thirty-seven years of his life to the Association in its varied fields of activity, a period filled with accomplishments as an editor, organizer, speaker, and writer. He contributed much to the development of the Association as the largest and most influential group of physicians in the world. We are informed that Dr. Fishbein will continue in another field to exercise his literary abilities—in this new work we extend to him our sincere good wishes and felicitations—and to Dr. Austin Smith, his successor as Editor, we tender likewise our best wishes for success in this important position.

Current Editorial Comment

Getting To the Heart of the Matter. Everyone connected with the practice of medicine, doctors, hospital administrators, and the public, is concerned with rising costs. We have been adjured to leave no suggestion neglected whereby they may be reduced. Always anxious to oblige, we submit for consideration the following quotations. Were we not absolutely confident of their author, the well-known cardiologist, Dr. Samuel Levine, and of their source, *The Journal of the American Medical Association*, we should not have believed they could be true.

> During the same period of brilliant clinical advances, older and simpler methods of examination have suffered. This is not surprising or incomprehensible. The interest and energy expended in the development of the new have taken place at the expense and sacrifice in the application of the old. The greater the time spent in taking three electrocardiographic leads and later nine and now twelve leads, the less time is left to elicit an adequate history of the case or to auscultate the heart properly. The teaching curriculum in the medical schools has become so overwhelmed with new fields of medical and correlated knowledge that some of the old teaching and emphasis has had to be curtailed. As a result of this change, auscultation of the heart has been neglected. It is now a not uncommon experience that a patient may have a complete cardiac work-up, with roentgen examination and multiple electrocardiographic leads . . . . and finally may be pronounced to have "some myocardial damage," when careful auscultation in one minute would have revealed an overlooked faint diastolic murmur of aortic insufficiency or a slight presystolic murmur of mitral stenosis. The pity of it all is that the information obtained by auscultation is there for the asking, so to speak. It requires no additional expense in the time or money and is available to any physician with no more tools than he always has with him.[1]

This would seem to exemplify the truth of Sir Joshua Reynold's observation that "There is no expedient to which a man will not resort to avoid the real labor of thinking." To which we might add, "or listening."

Dr. Levine summarizes:

> There are many auscultatory observations which at present are overlooked or misinterpreted that can easily be made and properly analyzed by any physician by the simple use of the stethoscope. Some of these observations are practically pathognomonic, and others are strongly suggestive of certain cardiac diagnoses that otherwise would not be made. The decision can often be made in a few minutes, and, occasionally, the condition is critical and requires immediate institution of therapy. It is urged that medical teachers and practitioners pay more attention to the ancient art and science of auscultation of the heart.

What we find difficult to understand is how a generation of doctors returning from the various theaters of war can submit to a seemingly senseless and unwarrantably prodigal exploitation of clinical laboratory facilities. What is even more inexplicable is that men returned from the war, who have been forced in the field to rely on whatever sense they may have had in their heads, the stethoscopes and other simple tools they could carry with them, should content themselves and condone in their confrères the tendency to relax while the laboratory carries on for them, at great expense to the hospital and the patient, and, as Dr. Levine points out, frequently to the great harm of the patient.

To revert to our thesis—the saving of expense for everyone concerned; we would put the burden of proof on each examining doctor that he had taken a history and made a thorough physical examination by the primitive methods at any physician's command, except in the extraordinary emergency, *before* he ordered laboratory tests. If he had not done so, should he not defray the expense of the laboratory test himself, perhaps?

If you are ever so wise, there are many things of which you are ignorant—Anonymous

Control of Sickness Compensation Legislation. A two-day discussion study and comparison of the sickness pay laws now in effect in New York, Rhode Island, New Jersey, and California, sponsored jointly by the New York Joint Legislative Committee on Interstate Cooperation and the

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[1] Levine, Samuel A.: J.A.M.A. **141:** 589 (Oct. 29) 1949.

Council of State Governments, held in New York, December 16, 1949, resulted in resolutions opposing Federal action by all but one representative of eighteen industrial centers. Majority sentiment was for control by the several states. As reported in the *New York Times:*[1]

> Other resolutions adopted at yesterday's closing session declared that interruption of earnings due to sickness or injury not connected with employment was a matter that "demands appropriate state governmental action" and urged that states without such legislation at present draw on the experience of those with it to obtain programs of their own.
>
> In a discussion prior to the adoption of resolutions, it was brought out that *Rhode Island, which pioneered the field, is the only state that regards pregnancy as a compensable disability.* The three others rule out pregnancy along with self-induced disablements. In Rhode Island, William E. Connell, director of the Cash Sickness Division, reported *30 per cent of total state payments are for pregnancy cases.* Rhode Island pays pregnancy benefits for fifteen weeks, and in other cases for twenty-six weeks.
>
> All four states with existing programs recognize alcoholism as a compensable disability, it was brought out. But all four require a one-week waiting period between the onset of a disability and the start of compensation. *One of those at the conference remarked that any person who carries a hangover for eight days is entitled to some compensation.*
>
> Dr. I. Jay Brightman of the New York State Health Department told the conference that alcoholism was an illness in every sense of the word. He employed the term in its medical rather than popular sense to describe an uncontrollable desire for liquor.
>
> Dr. Brightman, W. F. Dittig, superintendent of the New Jersey Disability Insurance Service, and Mr. Connell reported that their sickness disability programs had reduced the cost of general relief. A similar effect is expected in New York when the program becomes fully operative next July.
>
> Dr. Brightman also observed that operation of such a program should improve the general health level of the community by bringing more persons in need of medical assistance into contact with doctors and by providing better statistics of nonfatal ailments. *All four laws require certification of a disability by a physician before compensation is payable.*
>
> In a discussion of whether benefits should be payable entirely out of a state fund, as in Rhode Island, or whether employers should have the option of procuring the benefits through insurance policies with private carriers or the state fund, as in the other three states, *it was brought out that organized labor is strongly on record in New Jersey and California as favoring the state fund.*

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[1] December 17, 1949.

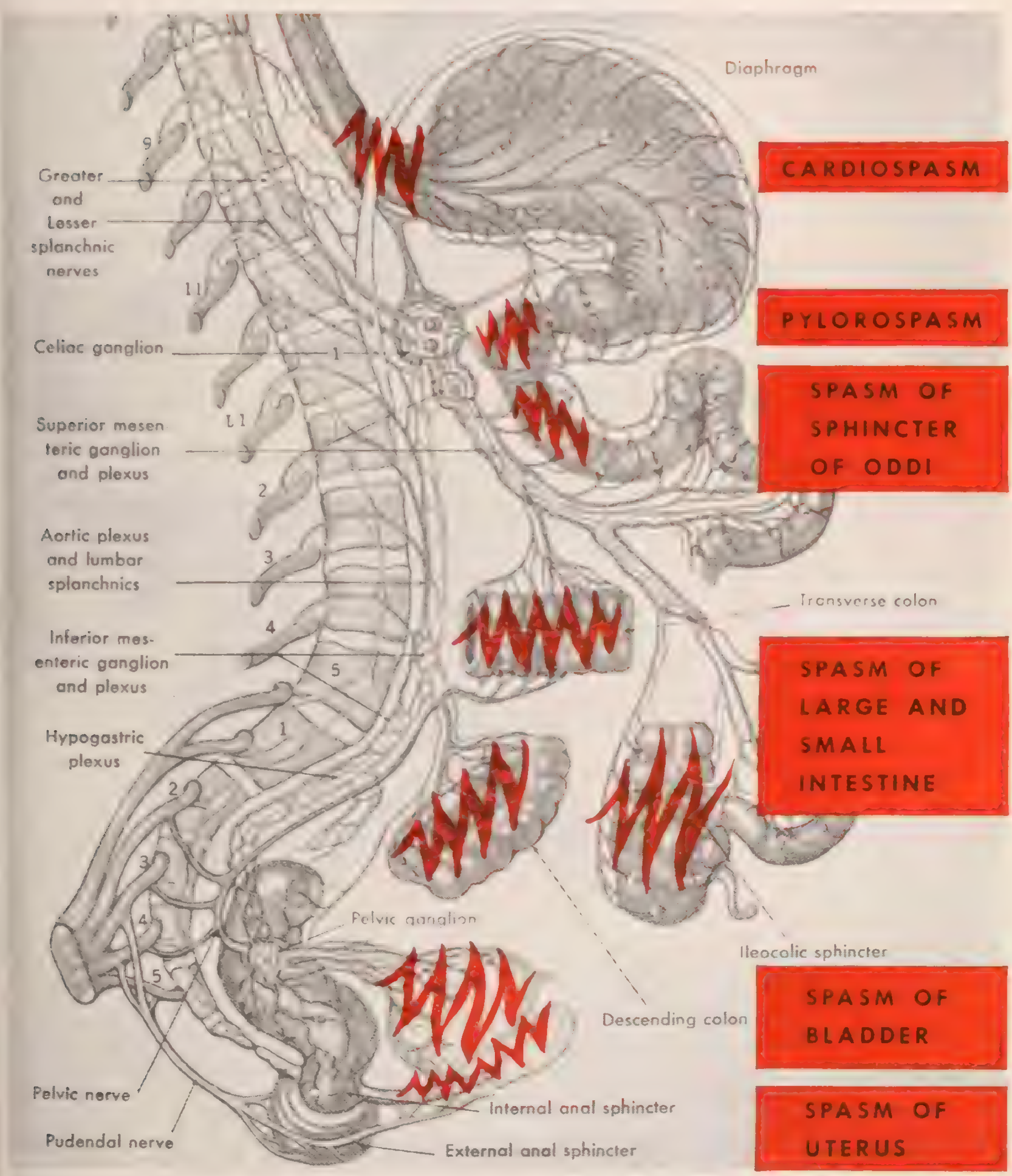
Italics ours—Editor.

OFFICE MANAGEMENT OF VENEREAL DISEASES

"The time has now arrived when the diagnosis and treatment of venereal diseases should properly revert to the office of the private physician . . . . " are the words prominently displayed on the cover of a valuable and useful booklet recently issued by the Bureau of Social Hygiene of the New York City Department of Health, in cooperation with the New York State Department of Health and the United States Public Health Service. This booklet outlines for the physician the management of venereal disease patients and is up-to-date on the new methods of treatment, including penicillin and other antibiotic agents, although the final word on these remedies cannot be written at this time.

The publication is well worthy of the attention of the practitioner and may be obtained from the Department of Health, 125 Worth Street, New York 13, New York.

MANAGEMENT OF SPASTIC STATES WITH PAVATRINE WITH PHENOBARBITAL


Diaphragm
CARDIOSPASM
PYLOROSPASM
SPASM OF SPHINCTER OF ODDI
Greater and Lesser splanchnic nerves
9
11
Celiac ganglion
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11
Superior mesenteric ganglion and plexus
2
Aortic plexus and lumbar splanchnics
3
4
Inferior mesenteric ganglion and plexus
5
Transverse colon
SPASM OF LARGE AND SMALL INTESTINE
Hypogastric plexus
1
2
3
4
5
Pelvic ganglion
Ileocolic sphincter
Descending colon
SPASM OF BLADDER
Pelvic nerve
Internal anal sphincter
SPASM OF UTERUS
Pudendal nerve
External anal sphincter

Combining musculotropic and neurotropic spasmolysis with central nervous system sedation. Pavatrine® with Phenobarbital is highly effective in the management of spastic states.

RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**

TRASENTINE-PHENOBARBITAL

a powerful antispasmodic...with selective action avoiding undesirable side effects

Effective relief of visceral spasm is generally obtained with Trasentine or Trasentine-Phenobarbital. By its selective action, Trasentine avoids the undesirable side effects of dryness of the mouth and pupillary dilatation frequently produced by belladonna or atropine. These advantages have caused physicians to prescribe more Trasentine and Trasentine-Phenobarbital than probably any other brand of antispasmodic.

- Average adult dose is one or two tablets 3 or 4 times daily as required.

TRASENTINE-PHENOBARBITAL – Tablets (yellow) contain 50 mg. Trasentine hydrochloride with 20 mg. phenobarbital, in packages of 100 and 500.

TRASENTINE – Tablets (white) of 75 mg., in bottles of 100 and 500; also suppositories of 100 mg., and ampuls of 50 mg.

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Scientific Articles

Symposium

THE CONTROL OF PAIN

NEWER ANALGESIC METHODS AND AGENTS OF VALUE IN THE CONTROL OF PAIN

E. M. Papper, M.D., and E. A. Rovenstine, M.D., New York City

(From the Department of Anesthesiology, New York University Post-Graduate Medical School)

IN ALL the history of medicine, there have been few problems to compare in importance with the control of pain. Although it is an ubiquitous symptom of many and varied disorders and is, therefore, the daily business of all physicians, the therapy of this common presenting complaint has too often been haphazard on the one hand or routine on the other. Often, the results have been inadequate because of the lack of a clear plan of attack on the pain problem. The lack of clarity of therapeutic approach is due, in large measure, to the unfortunate difficulties in evaluating analgesic measures.

A dispassionate examination of the record of the physician in understanding pain reveals a wonderful industry but a considerably less spectacular result for his efforts. This pessimistic note does not serve to minimize the energetic scholarship which has been continually directed toward the alleviation of human suffering. It indicates, rather, the need to observe the pain phenomenon, primarily, as a subjective experience with objective manifestations. The challenge of developing technics to evaluate pain and, therefore, analgesic substances in objective fashion has been a real one. Such methods have been developed and have provided some useful information. However, despite the large amount of data available, it appears that a definitive attack on the value of analgesic methods must rest upon the relief afforded by such a method or agent to a patient in unequivocal pain. Current technics of study do not satisfy these requirements completely. Further effort is indicated in this direction.

The fact that a discussion dealing with this subject is presented at a meeting of physicians may be interpreted simply as the desire to collect some of the newer information which deals with the methods of pain relief. On the other hand, there is the inference that there may be a basic error in our thinking about the control of pain which leads to the path of refinements of old and not completely acceptable principles rather than a fresh orientation toward the problem of pain. The latter contention finds ready support in the constant effort of chemists and pharmacologists to develop chemicals which are as potent as morphine and are not encumbered by its unhappy side-effects or to find a more rational and effective method of use of well-known analgesic materials. It is necessary that further study be expended in this type of experimental activity, coordinating the interests of the pharmacologist, chemist, and clinician. It is possible that this type of research may end the disheartening crude trial of a new analgesic drug, its early enthusiastic reception, a phase of discouraging results, and an ultimate uneasy return to morphine with its attendant disadvantages.

With full recognition of these difficulties inherent in the pain problem and an awareness of the ephemeral nature of staking claims for the

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Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, General Sessions, May 4, 1949.

therapeutic efficiency of analgesic procedures, a summary is presented of some of the more recent developments in the control of pain.

A significant and interesting aspect of the management of painful states has been the administration of procaine intravenously. Although the current method of injection of dilute solutions (0.1 or 0.2 per cent) in the conscious patient is of recent origin to therapeusis, the principle of achieving pain relief with this drug by the intravascular route was recognized shortly after the synthesis of procaine.[1] That procaine provides analgesia when injected into the blood stream is certain beyond question. The difficulty in interpretation of its effects in patients with pain is another problem entirely.

In examining a fairly large clinical literature general agreement can be found that procaine intravenously is efficient in the control of pain associated with trauma.[2-5] It seems to be the experience of most observers that the painful sequelae of burns, fractures, sprains, and surgical procedures can be influenced favorably. The analgesic efficacy in the pain of malignant diseases, the several neuritides, and arthritis has been less remarkable.

The mechanism of the analgesia observed is far from clear. It has been postulated that procaine exerts its action centrally. Some support for this thesis is found in the observation of Bigelow and Harrison.[6] Graubard and his coworkers have considered that analgesia is the result of leakage from the vascular bed, permitting procaine to bathe free nerve endings.[7] The latter concept is insecure because of the extraordinarily rapid intravascular hydrolysis of procaine and the clinical fact that some types of pain due to inflammation are not ameliorated by this drug.[8]

It is necessary to add a note of caution in evaluating the ultimate role of intravenous procaine. Despite the current popularity of the method, critical examination of the data reveals the paucity of controlled observations in the clinical studies completed. Psychic factors and other poorly understood elements in the pain complex have, in many instances, not been taken into consideration. Another important issue which has been largely neglected in the studies of intravenous procaine is that the characteristic pain pattern of some of the painful states treated is noted for spontaneous remission. This is an entirely human error which stems from traditional concepts of pain in certain situations.

For example, it is commonly accepted by most clinicians dealing with surgical patients that pain in the postoperative period, particularly the first two or three days, is an important although unhappy aspect of surgical recovery. This traditional premise was the basis of a study conducted at Bellevue Hospital which was concerned, among other things, with the efficacy of intravenous procaine and its derivatives in the management of the supposedly universal pain following operation. It became apparent early in the studies that the basic orientation toward postoperative pain needed revision since it was observed repeatedly that the presence of pain after operation was not universal. It was less apt to occur in aged patients and in wards where sympathetic, but not oversolicitous, nursing care was available and where early ambulation was practiced. In fact, more than half of postoperative surgical patients required either no analgesia or could be managed with salicylates, codeine, and even small doses of the barbiturates.[9] These data are still too small in number to urge a definite change in attitude toward postoperative pain, but they bear upon the central point of the discussion. It is impossible to accept uncritically the general use of a method such as intravenous procaine in the management of postoperative pain when the precise nature of the problem undergoing therapy is not defined adequately. This criticism is probably as pertinent when assessing the value of an analgesic method in lesions notorious for their remissions, such as arthritis.

It is not the present purpose to suggest to clinicians who are responsible for the therapy of the painful states mentioned previously that intravenous procaine is without value. It may be a technic of permanent utility in analgesia. However, the evidence brought together thus far suggests that the physician who employs this modality do so critically and with judgment reserved. Pain relief after therapy may be associated with factors other than the drug employed.

The newer applications of procaine and related compounds have not been confined to intravascular injections. The well-accepted principles of therapeutic nerve block and infiltration have been expanded toward the management of other painful states. In some instances, methods have been developed for the chemical interruption of pain pathways previously inaccessible. More often, a well-known procedure has been adapted to a lesion hitherto treated by other analgesic modalities. A few of these procedures deserve comment as examples of methods of treating pain with local anesthetic drugs.

Although blockade of intercostal nerves is by no means new to the regional anesthetist, its clinical utilization in the management of patients with fractured ribs is a recent addition to therapy. The problem here is not one of analgesia alone but represents the noxious systemic effects of pain in a vulnerable area of the body. Although it is perfectly true that simple uncomplicated rib fractures are not problems in pain control or in survival with a minimal morbidity, the same cannot be said for multiple rib fractures which are associated with intrathoracic complications. Pain in the latter situation is not only uncomfortable but leads to impaired pulmonary ventilation, retention of secretions, and the damage of infection and anoxia. The relief of pain permits improved ventilation and minimizes the potentiality of the morbid developments described. Pain relief obtained by immobilization or opiate medication is attended by adverse effects on respiratory activity. Appropriate intercostal block, preferably by the paravertebral route, is an effective analgesic method which promotes rather than impedes respiration. Satisfactory pain relief can be obtained with procaine block in over 80 per cent of patients. A recent summary of the experience here indicates that the mortality in more than 200 patients treated in this manner is only 4.1 per cent.[10] This is an analgesic method which is worthy of increased utilization, particularly if employed directly after injury.

Nerve block procedures have been applied recently to the pain of herpes zoster. It is somewhat difficult to evaluate these results in the light of conflicting findings. It appears, however, that the most satisfactory clinical use is in herpes zoster of intercostal nerves and as early in the course of the disease as the recession of the skin lesions warrant. It may be argued with justification that persistent therapeutic benefit is a coincidence, since the usual pain syndrome in this lesion is self-limited. Herpes involving other peripheral nerves, e.g., the brachial and lumbosacral plexuses and the trigeminal nerves, is usually unsatisfactory in response to nerve block. However, it can be stated with some assurance that the method is at least worthy of trial in herpes zoster of the thoracic wall.

A new nerve block technic, described a few years ago in this clinic, has been utilized extensively in the management of a variety of painful lesions of the shoulder.[11] This clinical experience was summarized recently.[12] The method depends upon specific interruption of the suprascapular nerve by local anesthetic solutions. Since this nerve subserves sensation to the shoulder joint and its adjacent bursa, its injection should ameliorate pain in this area. The clinical data suggest that its greatest utility lies in the therapy of subacromial busitis which is acute and rather intense. Therapeutic efficacy is of a lower order of magnitude in chronic shoulder complaints, although it does serve a useful function in some instances in this group of patients. It must be emphasized that suprascapular nerve block is merely an accessory to the therapy of shoulder lesions. It does not replace the definitive principles of orthopedic care.

Another nerve block procedure of value in a small but desperately unfortunate group of patients is superior laryngeal nerve block in the management of terminal, hopeless cases of pain originating from laryngeal carcinoma or tuberculosis.[13] This block, performed with procaine and alcohol, is a new application of an established technic. It serves to make the last few weeks or months of life tolerable for these patients.

An extremely interesting and provocative approach to the therapy of the somatic aspects of cardiac pain has been developed recently by Travell and Rinzler and their associates.[14] These observers have extended the initial observations of Weiss and Davis relating to the therapy of visceral pain by local anesthesia of the somatic structures concerned in the perception of pain.[15] The studies include the uncovering of the presence of zones of hypersensitivity or trigger areas in skeletal muscle. These trigger areas are in myofascial structures and produce a specific and characteristic reference of pain on pressure stimulation or needling. This pattern of reference is the same, regardless of the activating cause of the trigger mechanism. The muscles involved in this phenomenon in coronary artery disease are the pectoralis major and minor and the serratus anterior, and it is essential that careful palpation of muscles be carried out to ascertain the precise location of these trigger areas. The technic consists of infiltrating the hyperalgesia zones with a few cubic centimeters of 0.25 per cent or 0.5 per cent procaine or spraying the area with ethyl chloride. Best results are obtained in patients whose painful syndromes referred to somatic structures were precipitated by myocardial infarction. The least satisfactory effects were found in patients whose pain was a manifestation of effort angina either without infarction or preceding this accident. Although the theoretic explanations for these effects are far from clear, Travell emphasizes the fact that this type of pain can be managed satisfactorily in the clinic by infiltration of the trigger zones.

This type of study not only provides a new and simple means of managing difficult painful states, but it also provokes a searching curiosity about some of the more elusive aspects of pain. This is another example of the strange fact that the interruption of a pain cycle by procaine may lead to relatively permanent pain relief for long periods after drug action has ceased.[16] It is suggested that closer study of the nature of this finding may be fruitful in elucidating some aspects of the pain experience hitherto unappreciated.

The principle of interruption of autonomic pathways in certain of the sympathalgias has been the object of recent study. The beneficial effect of sympathetic block in a variety of these lesions has been noted.[16] The causalgic states have been explored most from this standpoint.

The experiences with sympathetic block have been duplicated by systemic autonomic blockade with chemicals, such as tetraethyl ammonium salts.[17] Although some patients can be permanently cured by these methods, for the most part, autonomic blockade is a diagnostic and prognostic aid for surgical section which is the definitive therapy in causalgia. Perhaps a word of comment is indicated on the relative merits of sympathetic nerve block and tetraethyl ammonium salts in these lesions. Although both methods can produce the desired effect, it seems more reasonable to employ nerve block at some time prior to operation. This represents a temporary section of specific pathways and will furnish, therefore, a more exact guide to the surgeon than a diffuse total blockade of all autonomic synapses. It is possibly a small point of argument, but precision is of value in defining the extent of ultimate therapy.

A discussion of newer analgesic agents of value in the control of pain necessarily includes the recently developed morphine substitutes. Such a discussion must be built around the consideration of the criteria for suitable and effective analgesic agents in order to evaluate more critically the possible future utility of these newer drugs. Batterman suggests that an effective, useful analgesic agent should be capable of producing satisfactory analgesia in severe pain, regardless of the underlying disease, in at least 90 per cent of parenteral administrations.[18] It should be effective in at least 60 per cent of oral trials. Since severe pain is in frequent association with smooth muscle spasm, it is advantageous that the agent be antispasmodic or at least not be spasmogenic. It is desirable that side-effects be minimal, particularly upon respiration and circulation and that the drug be free of hypnotic or sedative effects. It is highly advantageous that repeated or prolonged usage should not lead to cumulation, tolerance, or addiction in the sense of physical dependence. If possible, the potential of universality of use in all patients with pain, regardless of age or disease, should be included. It can be appreciated readily that few, if any, potent analgesic substances can meet these criteria. This is presented, not to discourage the utilization of these newer agents which will be considered, but to suggest that their limitations be accepted and that overenthusiastic expectations be avoided if a proper estimate of the future value of these agents is to be realistic.

In the intensive efforts to develop a substitute for morphine, hundreds of morphine derivatives have been made. Some, like Dilaudid, have had clinical use. Another derivative which has excited clinical interest recently is metopon (methyldihydromorphinone). Metopon is a potent analgesic, approximately twice as active as morphine, which appears to have fewer of the unfavorable side actions of morphine.[19] In animals and in man it produces little sedation, euphoria, and emesis. With prolonged administration, tolerance and dependence develop more slowly than with morphine. A rather interesting property noted is the similarity of doses for analgesia for the parenteral and oral routes. These properties suggested to Eddy and his associates that metopon could be used to advantage for the therapy of chronic pain, since it can be administered orally with a minimum of side-effects and a relatively long interval before tolerance and habituation are noted.

An unusual large-scale clinical experiment was sponsored by the Committee on Drug Addiction of the National Research Council in which orally administered metopon was made available to physicians for the therapy of cases of terminal malignancy. These reports were studied by Eddy and published.[19] Pain relief, as judged by many physicians, was satisfactory in 74 per cent of all the trials. Mental clarity was maintained in an equal number. Side-reactions were not noted in 2,096 patients, or 90 per cent of the total. Nausea was the single largest offender, and this was of minor incidence in this large group of patients. It was observed that the best analgesia was obtained in patients who had received no previous medication. Eddy pointed out that metopon is difficult to manufacture and expensive. Its expected limited supply indicates that it will not replace morphine in many instances. Its use, for example, in pre- and postoperative medication is discouraged. Its specific advantages lie in the therapy of ambulatory or semiambulatory patients with chronic pain requiring a drug of morphine-like potency. If it is started before tolerance to other narcotics has occurred, the oral administration of metopon in from 5- to 10-mg. doses, at intervals spaced as widely as possible, will provide adequate pain relief for weeks or longer without side-reactions and with minimal tolerance and dependence.

However, even this modest expectation must be taken with caution. In an intensive and careful study of five patients with carcinoma, Houde *et al.* were able to report adequate analgesia in but one of these, even with larger doses than recommended by Eddy.[20]

Of the many synthetic compounds which are potent analgesics, two have assumed clinical importance in recent years, Meperidine, or Demerol, and Methadone.

Meperidine has been in clinical use since its synthesis by Eisleb and Schaumann in 1939.[21] Although it was first investigated for its spasmolytic properties, these soon assumed secondary importance to the effective analgesic actions which can be substituted for morphine. Although it is active orally, it is more effective parenterally. Meperidine differs in important respects from morphine. It causes much less depression of respiration (except in the aged and in patients with expanding intracranial masses), no suppression of cough, little euphoria, and fewer toxic symptoms. In general, it may be contrasted with the action of morphine on smooth muscle tone in the gastrointestinal tract. Except for the sphincter of Oddi, Meperidine relaxes smooth muscle of the gut.[22, 23] Batterman has shown that mild toxic effects, such as dizziness, are very common in ambulatory patients and rare in those hospitalized. Addiction and tolerance do occur but much less so than with morphine. Meperidine is of great value in preoperative medication, in the control of postoperative pain when present, and for analgesia in obstetrics. This drug, valuable though it is, is still not the ideal potent analgesic because of its definite addiction potential and its limited safety in aged patients with pain. However, it merits the widespread usage it enjoys at the present time.

Methadone is one of the most recent developments of the synthetic chemist for the production of analgesia. Originally produced in Germany during the war as a morphine substitute, Methadone has been studied extensively by Chen and Scott and their coworkers in this country. Chen has recently summarized the available data.[24] Methadone exerts many pharmacologic actions which are strikingly similar to morphine. It produces analgesia at least as profound as that of morphine in similar doses. Nausea, emesis, and constipation are its most frequent untoward consequences. The question of tolerance and addiction has been a matter of some dispute, but the prevailing evidence suggests that the possibilities of these undesirable effects are real.[25, 26] However, there are differences between Methadone and morphine which appear to offer utility to the clinician in favor of Methadone. Therapeutic doses of Methadone cause less circulatory depression, less sedation, less respiratory depression, and infrequent euphoria in nonaddicts as contrasted with morphine. Methadone appears to be valuable in the therapy of painful states which require a drug as potent as morphine. It does not seem advantageous in preoperative medication because of its lack of euphoria or safe in obstetric analgesia because of the depression of fetal respiration.[27]

Summary

A brief review of some of the recent methods and agents of value in the control of pain has been presented. It is suggested that these be considered critically with regard to clinical application because of the serious difficulties inherent in the accurate and precise evaluation of any method in the treatment of pain.

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PLAN NOW TO BE IN NEW YORK CITY MAY 8 TO 12, 1950,
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RELIEF OF PAIN BY SURGICAL THERAPY

Jefferson Browder, M.D., Brooklyn, New York

(From the Surgical Service of the Long Island College of Medicine)

DURING the past sixty years there has been continuous improvement in definitive surgical treatment of patients with pathologic processes that have had mild to moderate pain as an outstanding feature. This successful advance in surgical therapy has, in a large measure, been due to two factors: a more complete understanding of the pathophysiology of the disease producing the pain and a better-trained group of surgeons highly skilled in the execution of the difficult technical procedures required of them. This has become an ever-expanding enterprise, the horizon of today becoming the zenith of tomorrow. Each year new technical procedures are added to our armamentarium; some, through trial and error, are found wanting and fall by the wayside, others become established methods of procedure. Empiricism has at times been encouraged, and in exceptional instances this has led to short-lived surgical quackery; however, progress of a high order has been achieved, and continued improvement is to be expected.

The part assigned for my consideration in this symposium, namely, the surgical treatment of intractable pain, brings up memories of surgical experiences, some of which left much to be desired, for it should be stated at the outset that complete lasting relief of pain by surgical therapy is seldom attained, except in the instances in which the lesion responsible for the pain lends itself to definitive treatment, leaving the patient normal or near normal after removal of the offending process. To most of us the designation "relief of pain by surgical therapy" implies pain of unknown cause or pain associated with an abnormal state of known pathogenesis for which no definitive surgical therapy is available up to the present time. In any event, a consideration of patients with pain due to known causes that may be cured by definitive surgical therapy has been arbitrarily excluded from the present communication. Moreover, it is not within the scope of this presentation to elaborate on the numerous theoretic concepts regarding the neural mechanisms involved in the production of the discomfort that we call pain. Briefly stated, we are concerned with pain of unknown origin and that due to inoperable and/or metastatic malignancy.

There are four general categories into which our surgical endeavors may be placed: (1) modification of the emotional response to pain, as follows prefrontal lobotomy of Moniz; (2) the interruption of the pain-carrying pathway of a part, as follows anterolateral cordotomy; (3) the reduction of recurring painful skeletal muscle spasms of extremities, as follows lumbosacral anterior rhizotomy, and (4) the abolition of the knowledge of the painful part as follows dorsal cordotomy. It would seem more profitable to discuss the efficiency of the several surgical procedures placed in these four groups than the clinical entities, having, as their outstanding feature, pain that may be favorably altered by appropriate therapy.

Modification of the Emotional Response to Pain

One may successfully defend the position that the emotional response of any patient with unrelenting pain would be radically altered by any procedure that abolishes the pain. Be that as it may, the above classification is used here in a more restricted sense and is intended to encompass the alterations produced by operations upon the frontal lobes of the brain. This includes prefrontal lobotomy, topectomy, and the undercutting operations in different subcortical areas of the frontal lobes that are now being given an experimental trial. At present, sufficient experience has been had with prefrontal lobotomy to insure a position for this procedure in the treatment of patients with pain of known cause not amenable to definitive surgery. Patients with a malignancy, especially in its late stage, that in one way or another has resulted in pain and total incapacitation, may be made reasonably comfortable by lobotomy. The operation should be carried out on both frontal lobes if enduring relief is to be anticipated. Recently, there have been reports to the effect that lobotomy of one frontal lobe will relieve pain of malignant disease. This may obtain in a limited group; however, in our experience unilateral lobotomy is followed by a respite of only a few weeks at best, necessitating a section of the fiber pathways of the other frontal lobe at a second operation. If the effects of the unilateral operation were lasting, it would be the procedure of choice, since the intellectual blunting that almost invariably follows the bilateral operation would be obviated. On the other hand, to alter the mental status of a patient with an incurable disease to the point where he is wholly indif-

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Presented at the 143rd Annual Meeting of the Medical Society of the State of New York, Buffalo, General Sessions, May 4, 1949 ferent regarding his future seems highly desirable. The production of this distinct "change in personality" by a bilateral prefrontal lobotomy should be understood by all concerned before the procedure is performed, regardless of the causative factor for the pain. It seems to me that we should be on the conservative side in the application of any surgical procedure that results in irreversible changes, especially in cases of longstanding pain of unknown etiology. Furthermore, we must not lose sight of the fact that the incurable of today may be the curable of tomorrow.

Interruption of Pain-Carrying Pathways of a Part

Surgical procedures placed in this group comprise not only those performed on the central and peripheral somatic nervous systems but also a limited number carried out on the vegetative system as well. Although some of these are performed for pain of unknown cause, as in tic douloureux, they have become well recognized as effective operations and need no special comment here. From the group of procedures that interrupt the pain-conducting pathways, four that seem important examples in this discussion have been selected, namely, anterolateral cordotomy, dorsal rhizotomy, peripheral nerve section, and sympathetic ganglionectomy.

For the past thirty years surgical section of the anterolateral columns of the spinal cord has been carried out with increasing frequency for the control of intractable pain, especially in the distal half of the trunk and the lower extremities. Less frequently, the operation has been utilized for relief of pain in the thorax and upper extremities. According to indications it may be performed either unilaterally or bilaterally. The unilateral operation is most effective when carried out either in the upper cervical region for pain in one upper extremity or in the upper thoracic spinal cord for pain on one side of the abdomen or one lower extremity. Seldom are there troublesome sequelae following the procedure. Since it is infrequently employed for pain other than that of malignancy, relief is temporary, the other half of the body becoming implicated sooner or later. Therefore, the unilateral operation is performed only in exceptional instances. Section of both anterior quadrants of the cord in the upper cervical region at a single operation is frequently attended by serious alteration in respiratory functions, thereby making this a relatively unsafe procedure. This bilateral operation carried out in the upper thoracic region is a satisfactory method for the relief of intractable pain in the abdomen, lower spine, and lower extremities, but there is a resulting disturbance in the function of the rectal and vesicular sphincters. If the sections in the spinal cord are of sufficient extent to insure lasting loss of appreciation of painful and thermal stimuli distal to the level of section, then there will be some permanent alteration in the control of the urine and feces. It is this undesirable feature that limits the usefulness of the procedure. Even so, there are some patients with slowly advancing malignancy of the distal spine and/or abdomen who are incapacitated only because of pain and may, therefore, be largely rehabilitated by anterolateral cordotomy. Probably a bilateral prefrontal lobotomy would relieve the pain as effectively but would blunt the intellect. It should be said, however, that in most clinics the operation of prefrontal lobotomy for the relief of pain due to malignancy is gradually replacing anterolateral cordotomy. Section of the pain-carrying pathways of the spinal cord still has its place in our armamentarium.

Dorsal rhizotomy has only limited application. Occasionally, the distribution of pain in an upper extremity, especially that due to regional extension of carcinoma of the breast, may best be treated by a combination of rhizotomy and unilateral cervical cordotomy. Rhizotomy is particularly applicable to a small group of patients who for various reasons have continued pain in the chest following a thoracotomy. It is to be remembered that it is necessary to divide about twice as many dorsal roots as would appear indicated in order to obtain the desired zone of anesthesia and analgesia on either side of the pain-bearing area.

Division of peripheral nerves for the relief of pain of known as well as unknown cause in the extremities has been practiced for many years. The fact that in the vast majority of cases only temporary relief is obtained does not seem to deter its proponents. Furthermore, the knowledge that all peripheral nerves regenerate following anatomic interruption appears not to inhibit many surgeons in the use of this method in the treatment of painful neuromas of a stump and the neuromas that may follow the laceration of a digit. The so-called stump neuromas present a special problem, and the numerous operations employed for the relief of the intractable pain associated with them attest to the difficulties encountered. It has been reported by several observers that stretching of a peripheral nerve, as in some examples of traumatic dislocation at the knee, is followed by minimal if any regeneration of the tibial and common peroneal nerves. The reason for the failure of the stretched nerve to regenerate appears to be the fact that the axonal interruption occurs at variable levels in a relatively long segment of the implicated trunk. The application of this observation in the treatment of painful neuromas of a stump has met with considerable success. It seems that the failures have been due to interruption of the axons at too sharp a level. If the method is to be given a trial, it is suggested that as much of the nerve as is feasible be exposed proximal to the bulbous end which is left attached to the surrounding structures. The stretching may then be accomplished by means of a broad-surfaced instrument without sharp edges, and passed beneath the nerve trunk to which manual traction is applied. Finally, it should be stressed that the procedure of section of peripheral nerves for the control of pain should be used only under very exceptional circumstances.

Sympathetic ganglionectomy has been established as definitive surgical therapy for several disorders of the vascular system. In addition, the procedure has been successfully employed, somewhat empirically, in cases of the clinical syndrome known as causalgia. Although sympathetic denervation of the part involved results in marked to complete relief of the continuous burning pain of causalgia, this may not endure. Recurrence of pain may be due to inadequate sympathetic denervation of the part, or, more likely, the pathologic process implicates the somatic as well as the vegetative system. A complete understanding of this syndrome would probably direct the way toward more effective therapy.

Reduction of Recurring Painful Skeletal Muscle Spasms of Extremities

Muscle spasms or contractions of an involuntary character are commonly associated with partial to complete physiologic interruption of the spinal cord. They are observed infrequently in patients with hemiplegia secondary to cerebral embolism, thrombosis, or hemorrhage. Paraplegia due to contact trauma is the outstanding example of the group. Many young men sustained spinal injuries during the recent war that resulted in paraplegia associated with involuntary muscle spasms and contractures. In some, the spasms were not accompanied by pain, whereas in others this was outstanding. In addition to comparable traumatic examples encountered in civil practice, there are others, notably patients in the end-stages of multiple sclerosis, with painful muscle spasms as described. We are indebted to Dr. Donald Munro of Boston for developing the operation of anterior rhizotomy in the lumbosacral region which abolishes the muscle spasms in the lower extremities. During the past year and a half, one of my associates, Dr. Everett Corradini, has removed the distal half of the spinal cord in three cases for the relief of painful spasms. Observations in this small series suggest that all of the spinal cord distal to the transverse lesion should be removed if complete cessation of recurring muscle spasms is to be expected. Evaluation of the procedure awaits further surgical experience.

For the patients with hemiplegia of cerebral origin associated with marked spasticity and recurring painful muscle spasm, removal of the parietal cortex will convert the "motor" hemiplegia into a sensorimotor one, thereby releasing the spasticity sufficiently to relieve the pain. Human material for adequate appraisal of the procedure has not been available; however, satisfactory results have followed the operation in three of five patients.

Abolition of the Knowledge of the Painful Part

Following the amputation of a part or all of an extremity, there persists, for variable periods, a phantom of the part removed. In a few, the phantom assumes a distorted shape and posture, and in some of these the abnormal position is perceived as a tightly clenched fist or hyperextended foot that cannot be altered. Continuous cramplike pain often attends such a phantom. So far as can be determined, this syndrome is entirely independent of neuromas or the causalgic-like burning pain that may reside in the distal part of the stump. Numerous therapeutic measures have been tried—anterolateral cordotomy, rhizotomy, sympathetic ganglionectomy, and psychotherapy—all of questionable benefit. In consideration of the syndrome, the logical approach would be to deprive the patient of the knowledge of the position of the affected part. Two approaches have been used: partial ablation of the parietal cortex of the brain in the cerebral hemisphere contralateral to the cramped phantom and section of the dorsal column of the spinal cord on the side of the phantom at a level cephalad to the amputated extremity. Both successes and failures have been reported following each of these procedures.

In an over-all consideration of the operations that are now being employed for intractable pain of obscure etiology and for pain that results from malignant disease, it became evident that in the vast majority of instances the best the surgeon can do is to substitute a painless neural defect for an intolerable pain. Even one of the simplest problems of solution, namely, division of a part of the dorsal root of the fifth cranial nerve for tic douloureux, has as a sequel a partly numb face which, at times, is said to be most annoying. Investigation now being conducted in several clinics may eventually be fruitful of a procedure that will abolish pain in a part without the production of functional defects.

THE PROGRAM FOR PREMATURELY BORN INFANTS IN NEW YORK CITY

LEONA BAUMGARTNER, M.D.,* New York City

(*Assistant Commissioner, Department of Health of the City of New York*)

THE infant mortality rate has long been recognized as an index of the effectiveness of a community's public health and medical care program. The rate of 26.4 established in New York City in 1947 and again in 1948 is an enviable one.** It is considerably below the national average and also below that of most other larger American and European cities, including, since 1946, that of Chicago. How can one further reduce this rate, or are we almost at an irreducible minimum? When one evaluates the New York City program for prematurely born infants, several facts stand out:

1. Gains made in the past have been chiefly in the saving of lives in the second through the twelfth month of life. In other words, there has been relatively much less of a reduction of mortality rate in the first month of life. This is seen graphically in Fig. 1.
2. Three quarters of all deaths of infants within the first year occur in the first month of life.
3. Premature birth looms as the single largest factor associated with all infant deaths in the city today. Thus, about 40 to 50 per cent of all infant deaths occur among those infants who weigh 2,500 Gm. or less at birth. Prematurity is also listed as the leading cause of death on the death certificate by the physician in 50 per cent of all deaths under one month of age. The cause of death has been verified by an autopsy in 44 per cent of the deaths.

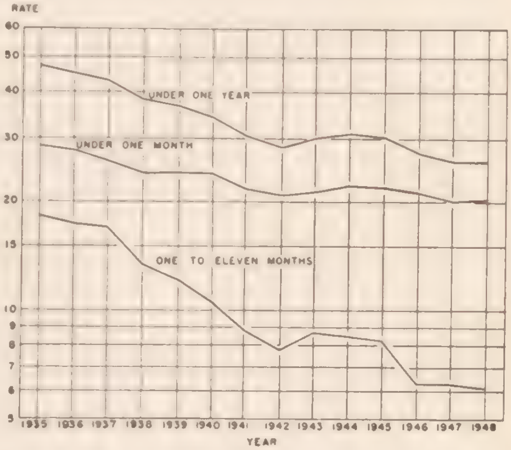

FIG. 1. Infant mortality—rates per 1,000 live births in New York City from 1935 through 1948.

Thus, in the light of our present knowledge, if further progress is to be made in reducing the infant mortality rate, particular attention must be paid to the prematurely born infant. To be sure, the greatest gains must be made in preventing premature interruption of pregnancy, but that problem must be left largely to the obstetrician and the research laboratory.

Incidence of and Mortality Associated with Prematurity

Birth weight has been recorded on birth certificates in New York City since 1939. From 7.1 to 8.3 per cent of all babies born alive have weighed less than 2,500 Gm. Depending on the birth rate, this has meant from 7,000 to almost 14,000 premature infants born each year. Mortality rates in this group have fallen from 18.4 in 1939 to 14 per cent in 1947.† Figures for the latter year are seen in Table 1.

TABLE 1.—PREMATURE INFANTS*: BIRTHS AND DEATHS UNDER ONE YEAR OF AGE BY COLOR AND BIRTH WEIGHT—NEW YORK CITY, 1947

Birth Weight (in Gm.)	Births						Deaths					
	Number			Per cent			Number			Rate per 100 Births		
	Total	White	Non-white	Total	White	Non-white	Total	White	Non-white	Total	White	Non-white
Under 1,000	584	479	105	4.2	4.1	5.1	546	450	96	93.5	93.9	91.4
1,000 to 1,499	859	711	148	6.2	6.1	7.1	471	387	84	54.8	54.4	56.8
1,500 to 1,999	2,307	1,928	379	16.8	16.5	18.3	416	347	69	18.0	18.0	18.2
2,000 to 2,499	10,032	8,592	1,440	72.8	73.3	69.5	491	402	89	4.9	4.7	6.2
Total	13,782	11,710	2,072	100.0	100.0	100.0	1,924	1,586	338	14.0	13.5	16.3

* Known birth weight of less than 2,500 Gm.

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* Now Associate Chief of the Children's Bureau, Federal Security Agency, Washington, D. C.

** Deaths of infants in the first year of life per 1,000 live births.

† In 1947 there were 3,895 babies born in New York City whose birth weight was unknown. Length of gestation was known, and it was possible to allocate these babies by birth-weight groups. As a result of this allocation, the corrected mortality per cent among prematurely born infants was 16.7.

The well-recognized lowering of mortality as weight increases and the higher rates in Negro infants are verified in these figures. There is one other item of particular interest. That is the relatively large percentage (72.8) of babies in the group weighing 2,000 to 2,499 Gm. In the figures collected in the nation-wide Academy of Pediatrics study, only 63.1 per cent of the births under 2,500 Gm. were in this weight group.[1] Comparisons of mortality rates of premature infants in New York City with those in upstate New York indicate that the considerably lower rate in the former is apparently due to the greater proportion of babies in the higher weight groups. We are still searching for a fuller explanation of these differences, but the low mortality reported on a city-wide basis in New York City is certainly influenced by the large numbers of babies in the higher weight groups in which mortality is always lower. It is possible that the early and comparatively better prenatal and obstetric care available in a large urban area allows more babies to be carried in utero into the latter months of pregnancy.

Current Status of Care for Prematurely Born Infants

Almost all (99 per cent) births in the city today occur in hospitals. The current survey of neonatal deaths being conducted by the Academy of Medicine, when completed, should give a comprehensive picture of the kind of care given the premature infant in these hospitals today. Intensive surveys have also been conducted in the past three years by teams of obstetricians, pediatricians, and nurses from the Department of Health, with the aid of pediatric advisory groups and the cooperation of medical, nursing, and administrative hospital staffs. These surveys have indicated that, despite the excellent care given in a few centers, the majority of newborn services, particularly those in the small hospitals, do not provide adequate care for the prematurely born infant.

In 1946, a survey of the equipment in the 110 hospitals operating maternity services showed that in the delivery room only one had an incubator, and only 61 had a heated crib ready to receive the prematurely born infant. Moreover, no incubators at all were available in 19 maternity hospital services, and three had no means (except emergency hot water bottles or heating pads) of providing the additional heat needed by the premature. The technics used in the preparation of milk formulas have been such, in many hospitals, as to throw doubt on the safety of the product fed, although much progress has been made in this regard in the past four years. Many prematures are not seen by pediatricians, although they may be under the care of physicians who have had no training for or little experience in the care of prematures. Similarly, many such infants receive their nursing care entirely from practical nurses or from aides who have not received the necessary special instruction that might prepare them to care for premature infants and who have little or no supervision. Others are cared for by registered nurses who remain only a short time on the premature service and most of whom have had no training in the care of prematures. In only a few hospitals are the so-called nursing personnel adequately supervised by registered nurses who have had any particular training.

Feeding practice varies widely. Propping of bottles, even for the three-pound baby, is not uncommon—to be followed at times, as one would expect, by demonstrable aspiration pneumonias. In some hospitals, contrary to accepted practice, prematures are offered a formula within a few hours after birth without any initial period of starvation or gradual increase in the amount of food offered. Examples of overfeeding and, to a lesser extent, underfeeding, as gauged by generally accepted standards, are common.

Oxygen, although usually available, is used spasmodically and with little reference to the condition of the baby. "Whiffs at infrequent intervals" are sometimes actually ordered as a nursery routine. The methods of resuscitation vary widely. One gains the general impression that they are used with little understanding of the underlying physiologic indications for their use. Appropriate resuscitation equipment is poor or lacking; procedures requiring special skill, such as tracheal catheterization, are undertaken by personnel not trained in their performance. There seems to be an indiscriminate and excessive use of such dangerous drugs as alphalobeline, metrazol, and coramine, often apparently at the discretion of the nurse.

In contrast to the inadequate care provided in some hospitals, other hospitals are well equipped and staffed and give as good care as the best in pediatric circles can provide. Specific examples of these contrasts have been reported elsewhere.[2]

In summary, it is felt that in only approximately 12 out of 106 maternity hospital services operating in New York City today do prematurely born infants get the kind of care usually recognized by pediatricians as necessary for proper protection. The total bassinet capacity in these twelve premature nurseries is only 113. This information has been secured from cooperative staff physicians, nurses, and hospital administrators, all desirous of improving current conditions but whose individual efforts cannot always succeed in changing the conditions in a hospital nursery, the practices of all of the medical staff, or the picture of care for all premature infants born in the city.

A Community Program

In the face of these facts, what steps have been and are being taken? As long as twelve years ago, the Commissioner of Health appointed a city-wide committee of practicing pediatricians, obstetricians, and nurses which accomplished much.* They agreed on desirable standards of care, kept records of mortality in certain hospitals, investigated nurseries, promoted a home nursing service, improved autopsy procedures for newborns, and undertook a variety of other educational and professional activities as well. In addition, they recommended the provision of an active consultation service and the development of a city-wide program by the Department of Health. A special demonstration involving various aspects of care of prematures was carried on by the Cornell Medical College and the Federal Children's Bureau. The war interrupted many of these activities. The recent activities can best be discussed under the following heads:

1. Setting of standards for care and general educational efforts to promote better care for all prematures.
2. Development of so-called premature centers.
3. Provision of an adequate transport service.
4. Development of special training courses for physicians and nurses.
5. Provision of home care.
6. Continuing studies of the city-wide picture.

Standards for Care

Desirable standards have been set up and widely distributed by the Pediatric and Obstetric Advisory Committees of the Department of Health.** Since the care given in *all* hospitals with a maternity service is important in any effort to reduce the mortality associated with premature birth, attention has been directed to improving care given on all maternity services as well as standards desirable in those nurseries that give care exclusively to premature infants.[3,4] These written statements of desirable practice have been formulated with the help of many of the local leaders in the medical and nursing professions. They are being used in a variety of educational projects. The nursing groups have been particularly active in using them. They are also used as guides by the Department of Health consultant teams that visit hospitals for the purpose of assisting the hospitals in improving the care given on maternity and newborn services. Wide use has also been made of the standards set up by other groups, particularly those of the Children's Bureau and the Academy of Pediatrics.[6] The comprehensive work of Dr. Ethel Dunham is also proving invaluable.[7]

Development of Premature Centers

It has been the consensus of many groups that the most practical solution to New York City's problem of caring for the premature is the development of relatively large premature centers in certain hospitals. This concept fits well into the regional plan for hospital care for the city envisaged by the local Hospital Council. Calculations indicate that, in general, premature centers developed in a few of the larger hospitals can take care of the load. It has been recommended that, by and large, the "center" concentrate on the smaller infants for whom more expertness of care is needed to save life. To date, 18 hospitals have declared an interest in expanding their premature nursery services. Nine of these have well-developed plans and have already received promises of Federal funds totaling $552,000 for building and equipping premature centers. An additional five hospitals have applied or are applying. Roughly, a total of 500 bassinets is proposed, with units varying from 18 to 50 in each hospital. This would supply five times as many bassinets for prematures as are now available in the same hospitals. Six units with a total of 187 beds are approved for municipal hospitals. The chief difficulty in developing the centers in the voluntary hospitals has been a financial one. Some assistance has been given, as previously noted, through Federal funds for construction, but operational costs are notoriously high for this group of patients. The city administration has approved the idea of the proposal of the Department of Health to contribute such subsidies, and it is hoped that details can be settled in the near future so that those hospitals dependent on such subsidy will be able to proceed with their plans. The Department of Health is also making some incubators available. With these joint efforts of public and private agencies, the development of a series of well-equipped and well staffed premature centers in New York City should not be long delayed.

Provision of an Adequate Transport Service

Study has revealed that there were difficulties in transporting prematures. The city Departments of Health and Hospitals have, therefore, set up a free transport service. An ambulance specially equipped with an incubator, oxygen, heat, and staffed with nurses who have received training in the care of prematures is on twenty-four-hour call. In the first four months of operation, (from November 1, 1948, to March 1, 1949) 169 infants were transported. Of these, 33 were born at home. The rest were born in 39 hospitals, chiefly in small ones not equipped and not staffed to care for them. Most of these babies weighed less than four pounds. Thirty-five of the 169 have died, the size of the group being, so far, too small to evaluate.

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* Under the chairmanship of Dr. Hugh Chaplin.

** Under the chairmanship of Drs. Howard R. Craig and Howard C. Taylor, respectively.

Already the lack of beds in the hospitals equipped to care for the smaller premature is evident. On 22 occasions requests by physicians for transfer of prematurely born infants have not been filled because of the lack of a vacancy in any hospital equipped and staffed to care for them.

Training of Personnel

The training of physicans and nurses in the proper care of the premature is of paramount importance in any community program. Emphasis on training of nurses, however, without concomitant training of physicians, is unsound. Adequate care of prematures cannot be given without expert pediatric guidance by physicians who keep abreast of modern developments. To date, New York City has had no training facilities comparable to those in Baltimore, Boston, Chicago, or Colorado, but Federal funds via the Children's Bureau and the New York State Department of Health are making possible the development of these at the Cornell Medical College. The Cornell course is designed for physicians and nurses who are actively engaged in caring for premature infants. Physicians will be given a two-week period of intensive practical and theoretic work, nurses a four-week course. In the meantime, 56 nurses from different New York City hospitals have spent a month at Sloane Hospital learning better care of the newborn, and four have taken special work in the care of prematures in the Baltimore, Chicago, and Boston centers. Considerable improvement in practice has been evident when these nurses returned to their own hospitals. By November 1, 1949, the six premature centers in municipal hospitals were supervised by nurses who have had this special preparation in the care of prematures.

Home Care

As every pediatrician knows, one of the most discouraging experiences in caring for prematures is to bring the small infant through long, weary weeks in the nursery, when the battle for life has been truly a desperate one, and finally to send the patient home as a thriving specimen of health only to have him return within ten days with an infection, loss of weight, or other setback. This is an all too common experience when there is no knowledge of home conditions or no way to help the mother learn how to care for her own infant. Happily, this essential activity of any community's premature program has long since been provided in New York City. The public health nurse is fully equipped to investigate the home of any prematurely born infant before the baby is ready for discharge, report conditions to the attending physician, and assist in preparing the home and the mother for the baby's homecoming. She also visits in the home after the baby is there to help the mother carry out the physician's recommendations and teach her the actual care of her infant. This service has apparently not been more widely used because of the slowness of individual physicians and heads of services to make the proper arrangements with the nursing agencies.

Continuing Study

Obviously, much that is currently known about the prevention of premature birth and the proper care of the prematurely born infant is not being put into practice. Certain efforts to improve this situation have just been discussed, but it is equally clear that without continuing knowledge of the success or failure of these efforts, with modification of activities as indicated, and without continued basic research into the fundamental causes of premature birth and death, any progress made will be of short duration. On the administrative side, the Department of Health will continue to analyze the over-all city picture and hopes to assist the individual hospital in more accurately determining its own progress. To this end, a special form for recording information on the birth and death of a premature infant is now being tried experimentally in two hospitals. Should it prove practical, the Department stands ready to extend evaluation methods to all hospitals which wish to study their own problems.

In conclusion, New York City has long maintained an enviable record in saving infant lives. More recently, the problem of saving those lives associated with premature birth has become more conspicuous. With the continued joint efforts of public and private agencies in a city-wide premature program, there seems every reason to believe that the problem can be solved. The extent to which this is done within a reasonable time, however, depends largely upon the active cooperation of all members of the medical and nursing profession.

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A MODIFICATION OF THE BENZIDINE OCCULT BLOOD TEST

Harold Elcaness, M.D., Bronx, New York

(From the Fordham Hospital)

THE occult blood test may frequently point to early carcinoma of the gastrointestinal tract long before symptoms of this disease are present and occasionally even before definite roentgenologic signs are evident. However, the occult blood test is honored more by its breech than by its performance because of a certain degree of impracticability.

Because of the difficulties involved in the handling and examination of feces, the general medical practitioner rarely performs this test in his own office. Only on special occasions will he order the test done at the laboratory.

It is because of the need of more routine examination of the feces for occult blood and because of the extreme simplicity and practicability of the present test that I am presenting this modification for consideration.

Test papers are prepared as follows: A small pinch of benzidine granules is placed in a clean dry test tube, and a few cubic centimeters of glacial acetic acid are poured into the tube. The tube is shaken for a few moments, and the liquid is then filtered through a pure type of filter paper, care being taken to wet the entire filter paper uniformly. The filter paper is then unfolded and allowed to dry partially, after which it is cut into strips of about a centimeter in width. These strips are then stored in tightly stoppered, lightproof bottles. The ordinary brown bottles obtainable at the pharmacist's will do. Properly stored in a cool dry place, these papers will keep for many months.

The test is performed by rubbing a small wisp of feces on the paper with an applicator stick or a match stick and a drop of fresh hydrogen peroxide is allowed to wet the smeared portion of the test paper. An inky blue color is indicative of a positive occult blood test. Several minutes may be required before the bluish color is evident. Usually, however, the reaction is prompt. In the case of the delayed reaction, fainter traces of occult blood are present, but whether the test is prompt or delayed, the same significance is given.

This test approximates an accurately done benzidine occult blood test performed in the more standard manner. The test can detect as little as one part of blood in 5,000,000 parts of water. Since 1 cu. mm. of blood contains 5,000,000 erythrocytes, on an average, it can readily be seen that the test is sensitive to the hemoglobin contained in at least one erythrocyte.

Due to the great sensitivity of the benzidine occult blood test, there are certain precautions which must be observed lest the origin of the blood be misconstrued. The presence of menstrual blood as a contaminant of the feces is a possible source of error. The patient must not brush his teeth for a period of three days, and meat must be excluded from the diet for the same period of time. Hard dry stools may scratch the mucosa. Hemorrhoids also are common causes of occult blood. A recent epistaxis or those slight nosebleeds encountered during the common cold may also make the test difficult to evaluate.

The most extensive use of the occult blood test, which may easily be performed by the patient, will give a more rational indication than we now have for the selection of patients for extensive roentgenologic studies.

243 East Gun Hill Road

A NEW BIOPSY FORCEPS

Alfred J. Cantor, M.D., Flushing, New York

BIOPSY forceps construction has always followed a single pattern. The jaws of the forceps are arranged in alligator fashion. Thus, the power of the cutting stroke is reduced rather than amplified in the action of cutting. In any event, it is a cutting action of minimal strength. In fact, the usual biopsy specimen is torn away rather than cut, because of the inadequate leverage of the stroke and because the cutting edges rarely remain sufficiently sharp to incise cleanly after the first brief period of usage.

The tearing effect is particularly noticeable when the tumor tissue is more firm than usual. Thus, it has long been apparent that a more adequate biopsy instrument is needed.

New Biopsy Punch

The assembled biopsy punch is shown in Fig. 1. An entirely new principle is employed. There are no jaws in this instrument. Cutting is achieved by an actual punch operation. By squeezing the handles the inner tube of the punch simply moves forward. The proximal end of this inner tube is sharpened, hardened cutting steel. Thus, the cutting edge moves forward into the tissue-receiving cup. The cutting action so achieved is of such great force that sponge rubber can be cut with ease in perfect cylinders. There is no tearing action.

Should the tumor be of unusual consistency, cartilaginous or even bony, the inner cutting tube is so arranged that it can be rotated by means of the milled handle at the control end of the instrument. This rotating action of the blade permits cutting specimens from tumors as hard as bone.

A rectangular slot is positioned in the cutting cylinder just proximal to the cutting edge. In most cases the specimen will lodge in the distal cup or receiving sphere. However, if the specimen should remain within the cutting cylinder, a probe passed through the rectangular slot enables removal of the specimen. The specimen can in no case be lost within the bowel, inasmuch as it is kept enclosed after its severance.

FIG. 1. The assembled biopsy punch illustrating the simple grip handle (1), the biopsy slot (2), and the milled handle for rotating the cutting edge in unusually fibrous tumors (3).

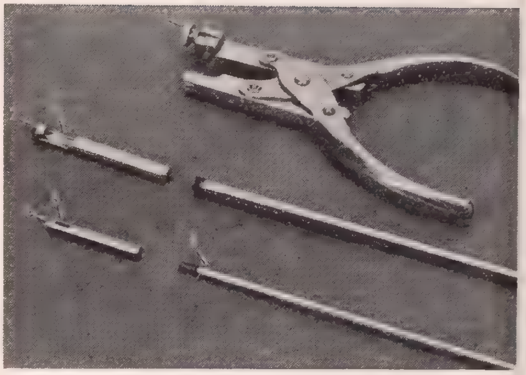

FIG. 2. The disassembled instrument showing the simple grip-type handle and the simple screw lock (1) for assembly. Center left is the biopsy receiving cup (2) and the biopsy slot (3). This segment attaches by screw action to the outer sheath. Lower left is the cutting cylinder (4) with the specimen-removal slot (5) just proximal to the cutting edge. This section also attaches by screw action to the driving inner shaft (6).

The simplicity of construction of the instrument is worthy of note (Fig. 2). There are very few parts. The entire shaft assembly is easily removed from the handle and easily replaced and held firmly in position by a single screw lock. The cutting cylinder is detachable from the thrust shaft, being held by a thread and screw action. The specimen-receiving cup is also detachable in a similar fashion from the outer tubing. Thus, the instrument is readily cleaned, sharpened, and assembled. The removable tip construction enables simple interchange of parts. At the present time we have under construction an angled tip that will permit taking biopsy specimens from otherwise inaccessible areas.

An entirely new principle in biopsy punch design is introduced. The new punch is simple in construction and enables a thrust-action biopsy with positive pressure from the operator. Thus, it offers great improvement over the older jaw action with its insufficient leverage and tearing cut. The action of the new punch is so powerful that the tissue is cut away in a single stroke.

I should like to acknowledge here the invaluable assistance of Mr. Frank Reck in the design and construction of this instrument.

RATIONAL THERAPY FOR COMMON COLDS AND NASOSINUSITIS

MAX UNGER, M.D., New York City

FABRICANT has recently given a brief but comprehensive and well-balanced appraisal of the current status of common cold therapy.[1] I do not wish to cover the entire field of common cold therapy, but I would like simply to present some observations on anatomic and physiologic conditions that have to be considered in the application of local and general antiseptic therapy in that condition and in what is known as "sinus trouble," i.e., acute or chronic inflammation of the nose and accessory sinuses that does not require surgical intervention. I wish particularly to discuss the use of penicillin, the sulfa drugs, and vasoconstrictors.

The extraordinarily successful results in many diseases that were reported after the introduction of, first, the sulfa drugs and, later, penicillin caused rhinologists to turn eagerly to them in the hope that the same measure of success would attend their use in nasal conditions. Enough time has elapsed and enough cases have been treated to enable us to evaluate the benefit to be derived from their use, and, in general, the results have been disappointing. There is no need to cite references to prove this statement because they are too numerous to be mentioned. Almost every article on colds and sinusitis has some comment on this matter.

It seems to me that a study of the normal and pathologic anatomy and physiology of the nasal mucous membrane will throw some light on the reasons for these disappointing results. The internal nose and the accessory sinuses are covered by an actively secreting mucous membrane that has an area of about 25 to 30 square inches (150 to 175 square cm.). This membrane is very richly supplied with blood vessels and is covered, for the most part, with columnar ciliated epithelium. The inner surface of the middle turbinate is covered with olfactory epithelium, and some parts of the sinuses are covered with cuboidal and polyhedral stratified epithelium.[2] The membrane is very susceptible to internal and external stimuli, secretes a large amount of mucus, and is capable of swelling to an extent that blocks the nasal passages. The photomicrographs that accompany this article show how the mucous membrane functions.

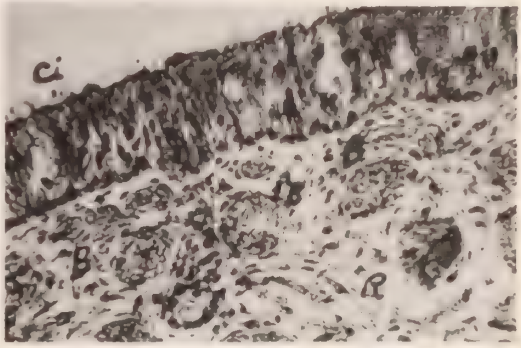

FIG. 1. Photomicrograph of section of middle turbinate of six-months fetus—*Ci*, cilia; *B*, blood vessels; *R*, round cells. (365 ×)

Figure 1 shows a section from the middle turbinate of a six-month-old fetus. Since the mucous membrane has not yet functioned or been exposed to atmospheric and infective conditions, it may be regarded as normal and can serve as a standard of comparison for sections taken at later periods of life. The cilia, the size and shape of the cells, and the vascularity of the supporting connective tissue are well shown. Figure 2 shows a section from a fairly normal adult middle turbinate. It illustrates how the mucous discharge is produced. The vacuoles represent cells whose contents have been liquefied and discharged to the surface. It also shows numerous round cells infiltrated between the epithelial cells on their passage to the surface to destroy infective bacteria. Figure 3 is from a section of an infected adult middle turbinate. There are a great number of vacuolated epithelial cells that have discharged their mucus, and the interepithelial

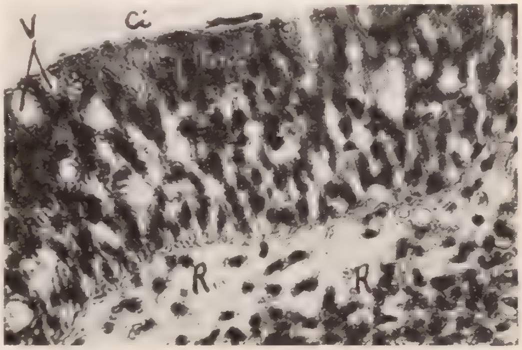

FIG. 2. Section of almost normal adult middle turbinate—*Ci*, cilia; *R*, round cells; *V*, vacuoles. (365 ×)

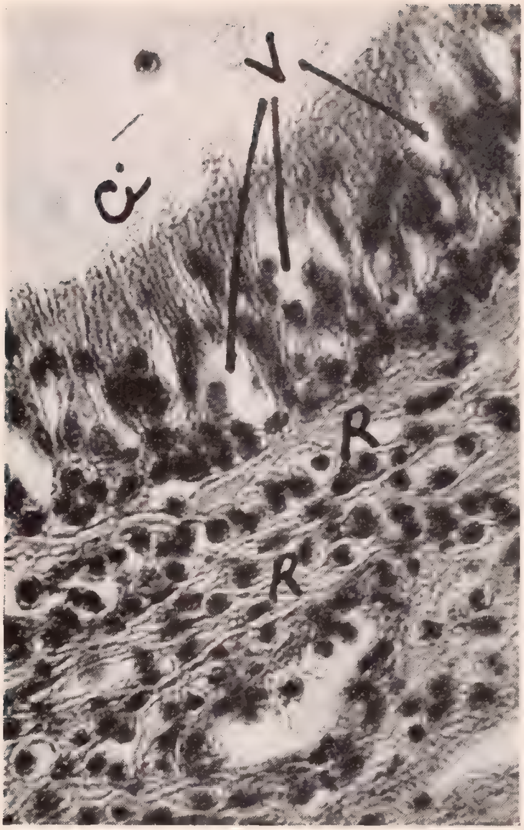

FIG. 3. Section of infected adult middle turbinate—*Ci*, cilia; *R*, round cells; *V*, vacuoles. (365 ×)

spaces are literally crammed with round cells that are migrating to the surface. One cell is seen free above the surface. The defenses of the nasal mucous membrane are seen, therefore, to be the cilia that entangle the infective material and wave it along, the round cells that destroy it, and the mucous fluid that washes it away. The fluid also serves to moisten the inhaled air, and the great vascularity serves to warm it.

The warming and moistening of the inhaled air have been described by Morrow, Phillips, Richardson, Aschenbrand, and others.[3–5] Inhaled air, when it reaches the nasopharynx, has been raised to a temperature of 86 F., regardless of the outside temperature. At the same time, its humidity is raised from that of the outside air to practical saturation (95 to 100 per cent) by the fluid exuded by the mucous membrane. A few simple calculations show how much fluid is given off by the mucous membrane to raise the humidity from 60 per cent in the outside air to 95 per cent in the pharynx. The physicists have shown that this requires about 0.025 Gm. of water vapor per liter of air. The average amount of air inhaled in twenty-four hours is 7,000 L. Multiplying 0.025 by 7,000, we get a total of 175 Gm. of fluid picked up by the inspired air in twenty-four hours. This, however, is not all the fluid secreted by the nasal mucous membrane. A great deal more is needed to keep the mucous membrane moist enough to give off this amount of water vapor and to wash away solid matter deposited on the membrane. A conservative estimate is 750 to 1,500 cc. of fluid normally secreted during twenty-four hours. This is almost equal to the amount of urine excreted by the kidneys. This amount of nasal secretion is not apparent ordinarily. Much of it is exhaled as vapor into the air, some is blown out of the nose as fluid, and much of it drains into the pharynx and is swallowed.

During an acute cold, however, the amount of fluid is greatly increased. Where a person normally may not have enough nasal discharge to fill one handkerchief a week, during an acute cold he can fill a few dozen daily. It is no exaggeration to say that the nasal secretion is increased to 4,000 or 5,000 cc. in the twenty-four hours. I have weighed patients at the beginning and end of acute colds and have found losses of 2 to 5 pounds, in spite of copious draughts of water and fruit juices.

What local medication that requires a little time for its action can have an effect when opposed by such profuse flushing? Not only does the fluid dilute and wash away the medication, but the cilia move it along and keep it from continuous contact with the tissues. This, I think, is the reason for the poor success achieved with sprays of penicillin and the sulfa drugs, liquid or airborne. The drugs simply cannot stay in contact with the mucous membrane long enough to have an effect on the infection.

A similar explanation accounts for the lack of success with these drugs when they are used internally, by mouth or by hypodermic. Any of the drug that is brought to the mucous membrane by the blood and exuded into the tissues passes so rapidly into the nose that it is not in the tissues long enough to have an appreciable effect.

Another type of drug frequently used is the vasoconstrictor. Liquid vasoconstrictors are often used in association with solutions or suspensions of penicillin and sulfa drugs. Gaseous constrictors are used alone in inhalers. Inhalers and liquid vasoconstrictors without penicillin or sulfa drugs are purchasable by the public without physicians' prescriptions, and enormous quantities of them are bought for self-medication. Nobody, not even the manufacturer, claims any curative action for them. They serve only to constrict the tissues and open the air passages. This gives the patient a feeling of relief, but this feeling of relief is something of a delusion and a snare. We have seen above that the defense processes of the nasal mucosa to combat infection consist of the exudation of fluid and pus cells to destroy and wash away the offending agents. The vasoconstrictors serve to diminish the blood supply to the tissues, hence to diminish the serum and phagocytes extravasated. Therefore, it is a direct hindrance to the defense of the mucosa. The feeling of relief that the patient experiences makes him neglect the use of other, curative remedies. My experience has been that cases so treated last longer than cases not treated at all.

The generally accepted plan for combating infection in other parts of the body is to destroy the infective agent, remove the products of inflammation, and help restore the tissues to a normal state and function, this plan being applied according to the anatomy and physiology of the part. We have seen how futile it is to use antiseptics on the nasal mucosa, so the next best thing is to reinforce nature's effort to remove the infection and the products of inflammation. I do this by copious and frequent irrigations with warm normal saline solution.

Approximately normal saline solution can be made by dissolving 30 grains (4 Gm.) of sodium chloride tablets in an ordinary drinking glass (8 ounces or 500 cc.) of warm water. If sodium chloride tablets are not available, one-half a level teaspoon of coarse (not fine) table salt may be used. The best temperature is 115 to 120 F. The heat has a soothing and tonic effect on the tissues. A good return flow irrigator, such as I have devised, is a great help, but if it is not available, the patient can be taught to snuff up the solution from the palm of the hand.[6]

The irrigations must be done frequently. A good way to gauge the frequency is to follow the sneezing attacks. A sneeze is a sign that some irritant must be expelled. The irrigation helps do this. Even if the irrigation is done every hour, this is not too often. Admittedly, this is an irksome procedure for the patient to follow, but if he manages to get six or seven irrigations during the first twelve hours of his cold, he will be able to pass a comfortable night without the use of sedatives. The first few hours are the hardest, but as the sneezes diminish, the irrigations may be spaced more widely.

With this form of treatment, I have found that the duration of a cold is greatly shortened, and there are fewer sequelae.

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PRIZE ESSAYS

The Merrit H. Cash Prize and the Lucien Howe Prize will be open for competition at the next Annual Meeting of the Medical Society of the State of New York, May 8, 1950, in New York City.

The Lucien Howe Prize of $100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The Merrit H. Cash Prize of $100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York, who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed with the name of the prize for which the essay is submitted, and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device, and containing the name and address of the writer.

If the Committee considers that no essay or contribution is worthy of a prize, it will not be awarded.

Any essay that may win a prize automatically becomes the property of the Medical Society of the State of New York "to be published as it may direct."

All essays must be presented not later than February 1, 1950, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 292 Madison Avenue, New York 17, New York.

ARMITAGE WHITMAN, M.D., *Chairman*
Committee on Prize Essays

INTRAVENOUS QUINIDINE THERAPY FOR AURICULAR FLUTTER RESULTING IN 1:1 AURICULAR FLUTTER AND OTHER CHANGES

Harris Blinder, M.D., Julius Burstein, M.D., William Horowitz, M.D., and
Eugene Gersh, M.D., New York City

(From the Department of Electrocardiography, Morrisania City Hospital)

During a study of the effects of intravenous quinidine on a series of normal and abnormal hearts, which will be subsequently reported, there occurred an interesting alteration of auricular flutter.* This case illustrates some of the known pharmacologic effects of quinidine on the heart.

Quinidine acts as a depressant on heart muscle. It lengthens the refractory period and prolongs the conduction time of auricular muscle, both by its direct action on auricular muscle and by suppressing or abolishing vagal tone. According to the Lewis theory of the circus movement of auricular flutter, quinidine may abolish the abnormal rhythm if its major effect is to lengthen the refractory period. When the refractory period and the transmission time are equally lengthened, the circus movement will persist, but the auricular rate is reduced, since the wave revolves more slowly.[1] It should be mentioned that not all observers accept the circus movement theory of auricular flutter.[2-4]

The effect of quinidine on the auriculoventricular junctional tissues is a multiple one. By its direct action on junctional tissue it decreases auriculoventricular transmission. Suppressing vagal tone increases transmission. Reduction of auricular rate also increases auriculoventricular conduction. The latter two effects frequently overbalance the former. Thus the ventricular rate is often paradoxically increased in quinidine-treated auricular flutter in which the abnormal rhythm remains uninterrupted.

The effects of quinidine on the conduction time of heart muscle and auriculoventricular junctional tissue are illustrated in the following examples of auricular flutter (Fig. 1):

A. Control graph of a forty-eight-year-old rheumatic cardiac with mitral disease and chronic auricular flutter. The P-P interval is 0.21 second; the auricular rate was 286 per minute with 2:1 ventricular response.

B. Taken during left carotid sinus pressure, the graph shows the same auricular rate and P-P interval. There is characteristic auriculoventricular block caused by vagal effect on the junctional tissue, with a 15:1 and 5:1 ventricular response; 0.65 Gm. of quinidine lactate in 10 cc. of solution was then given intravenously within two minutes.

C. Taken two minutes after the injection. Reveals the quinidine effect of prolonging the conduction time of the auricles. There is an increase in P-P interval to 0.24 second, with an auricular rate of 250 per minute and varying ventricular response.

D. Five minutes after quinidine. The conduction time of the auricles is markedly prolonged so that the P-P interval is now 0.31 second with an auricular rate of 194 per minute. The slowing of the auricular rate from 286 to 194 per minute results in an increase in auriculoventricular conduction. Quinidine itself increases conduction as described above. This combined effect on the junctional tissues allows each auricular beat, at the slower rate, to get through to the ventricles. The result is auricular and ventricular rates which are equal at 194 per minute. This is 1:1 auricular flutter.

E. Ten minutes after quinidine, the P-P interval is 0.30 second, and auricular rate is 200 per minute with a continued 1:1 ventricular response.

F. Twelve minutes after quinidine, the auricles have a P-P interval of 0.29 second; the auricular rate is 207 per minute with a 1:1 ventricular response. The first eight complexes resemble ventricular tachycardia. However, this is a continuation of 1:1 auricular flutter since the rate is 207 per minute, which approximates the preceding auricular and ventricular rate shown in (E). Similarly the P or flutter waves measure out exactly with the easily identifiable P waves seen at (*X*) where an increase in auriculoventricular block occurs and the ventricular rate is halved, with a return of 2:1 auricular flutter. The abnormally wide QRS waves are probably due to aberrant conduction within the ventricles, caused by the fatiguing effects of the rapid ventricular rate and the known slowing effect of quinidine on intraventricular conduction.[5] Quinidine probably has a minor role in causing this aberrant intraventricular conduction, since the QRS waves return to their normal configuration when the ventricular rate slows from about 200 to 100 per minute (*X*).

G. Fifteen minutes after quinidine, the P-P interval is 0.27 second. The auricular rate is 229 per minute with a 2:1 ventricular response.

H. Thirty minutes after quinidine. The P-P interval is 0.26 second. The auricular rate is 250 per minute with varying ventricular response. An occasional QRS wave shows intraventricular block

I. Twenty-four hours after quinidine. The P-P interval is 0.21 second. The auricular rate is 286 per minute with a varying 2:1 and 3:1 ventricular response.

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* Quinidine lactate solution was supplied by Eli Lilly and Company.

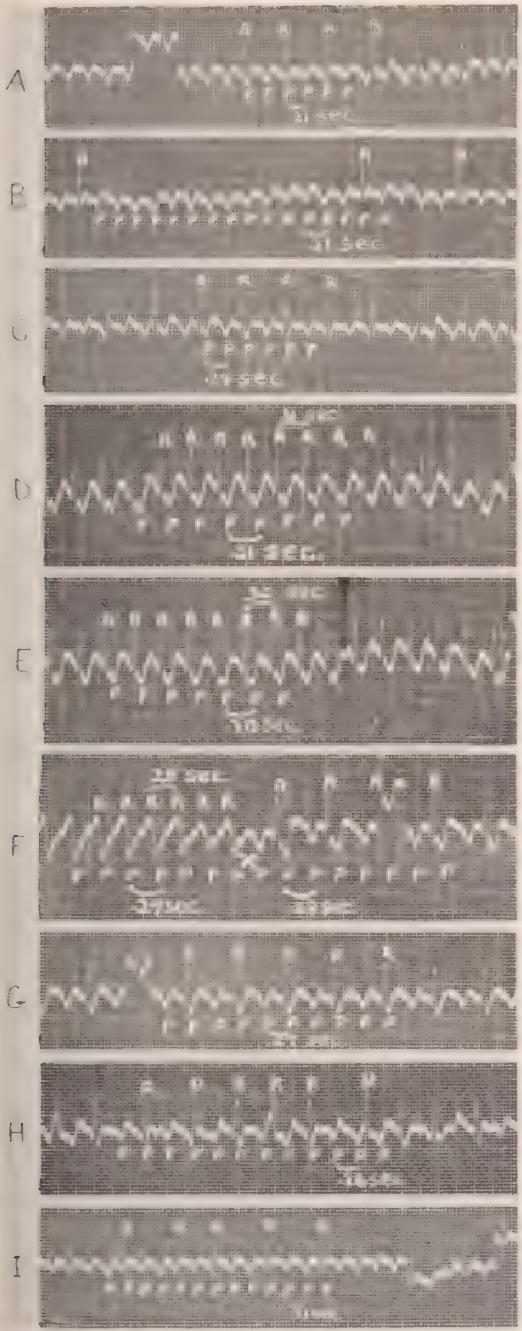

FIG. 1. All tracings shown are lead II. A. Control, before quinidine. B. Left carotid sinus pressure. After intravenous quinidine: C, two minutes; D, five minutes; E, ten minutes; F, twelve minutes; G, fifteen minutes; H, thirty minutes; and I, twenty-four hours.

Comment

A slowing effect on the transmission rate of the auricles was apparent within two minutes after intravenous administration of quinidine. The maximum effect on auricular transmission rate was apparent at about five minutes. A waning effect was apparent between fifteen and thirty minutes. Twenty-four hours after the administration of the drug, there was no apparent effect on the transmission rate, since the P-P interval has returned to 0.21 second with an auricular rate about equal to that of the control records of 286 per minute.

At the time of the conversion to 1:1 auricular flutter in this case and in another case which will be subsequently reported, there were alarming symptoms of collapse. These symptoms, occurring five to ten minutes after the administration of quinidine, were probably due to the sudden rapid ventricular rate and the known hypotensive effect of the drug.[5] Chapman observed severe systemic reactions following intravenous quinidine.[6] An identical dose of quinidine administered intramuscularly to these patients produced prolongation of the transmission time of the auricles without symptoms of collapse. It is our feeling at this time that intravenous quinidine is contraindicated except in emergencies, such as ventricular tachycardia, that do not respond to oral or intramuscular administration of the drug.

Summary

The administration of 0.65 Gm. of quinidine intravenously converted a 2:1 auricular flutter, with an auricular rate of 286 per minute, to a 1:1 auricular flutter with an auricular and ventricular rate of about 195 per minute. There also occurred an intraventricular conduction disturbance, so that the electrocardiograph could easily be confused with ventricular tachycardia. Symptoms of collapse occurred five minutes after intravenous administration of the above dose.

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False weights and measures are guarded against by law; but against overreaching a man in worldly concerns there is no law but the law of conscience.—Anonymous

RE-EMPHASIS OF THE AUSCULTATORY METHOD FOR ASCERTAINING THE SIZE OF THE LIVER

Seymour H. Rinzler, M.D., New York City

(From the Medical Service, Beth Israel Hospital)

THERE are instances in which one cannot accurately determine the size of the liver by palpation because the patients either have extremely obese abdomens, splint their abdominal musculature, will not breathe deeply, etc. For some years, I have been using an auscultatory method for outlining the liver in these difficult cases which has proved sufficiently accurate and satisfactory to be of clinical value in estimating the size of the liver.[1] This method of auscultatory percussion is mentioned in texts on physical diagnosis but has apparently been discarded in recent years.[2-4] Elmer and Rose state that "in delimiting the borders of solid organs and tumors, and in the estimation of the relative tympanicity of the adjacent hollow viscera auscultatory percussion, with the employment of a superficial percussion blow or a light stroking movement upon the abdominal surface, is most serviceable."[4] The value of this method has been established by myself and my colleagues at the Hospital, and its re-emphasis has prompted this report.

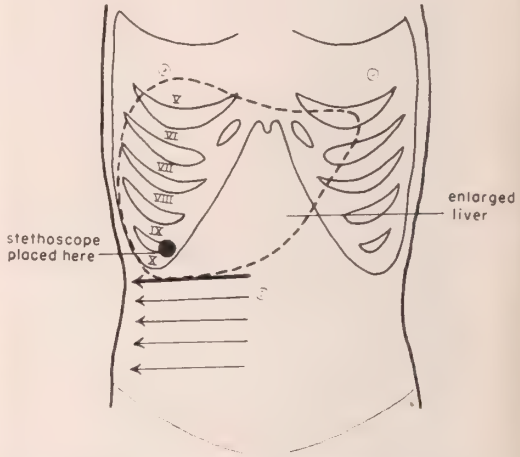

Fig. 1. Diagrammatic representation of body showing an enlarged liver in outline and the dot indicating the area for placement of the stethoscope. The arrows indicate the direction of scratching. The thicker arrow represents an increase in intensity of the sound over the edge of the liver.

Method

The bowl of the stethoscope is placed in the nipple line just at the costal margin, as shown in Fig. 1. The nail of the right index finger is used to scratch the abdominal wall beginning about midway between the umbilical line and the symphysis pubis. The same intensity of scratching is used as would be necessary to elicit an abdominal or cremasteric reflex. The direction of the scratching is from left to right across the abdomen starting at about the linea alba. One proceeds in a cephalic direction, scratching in about finger-width intervals. When the edge of the liver is reached, the intensity of the sound increases markedly and to a volume equal to that which would be evoked by scratching immediately next to the bowl of the stethoscope. The reason for this lies in the better transmission of sound through a solid organ.

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AUREOMYCIN REPORTED EFFECTIVE IN WHOOPING COUGH

Whooping cough is another in a growing list of diseases that has yielded to aureomycin, two Minneapolis doctors have reported.

Aureomycin is a golden-colored antibiotic drug that checks a variety of infectious diseases immune to penicillin and streptomycin.

Drs. Wesley W. Spink and Ellard M. Yow of the University of Minnesota Medical School said the effectiveness of aureomycin against whooping cough was indicated in recent experimental and clinical studies.

However, the antibiotic has not shown promise against chickenpox and mumps, they added. They said aureomycin has been effective against numerous bacterial infections and those of rickettsial and virus origin.—*New York Times, December 2, 1949*

THE INSULATING EFFECT OF THE MASTOID PROCESS ON BONE CONDUCTION

E. Markey Pullen, M.D., New York City

(From the Department of Otolaryngology, St. Clare's Hospital)

THE increased interest in the Lempert fenestration operation, which places a premium on a good auditory nerve, must lead to a reexamination of the methods commonly used in selection of proper cases for this surgical procedure. It is possible that the interpretations now placed upon the method employed may be faulty and may be wrongfully eliminating patients whose hearing loss could be ameliorated by the Lempert operation.

In general, the psychologic impact on a person with a hearing loss is tremendous. In marked contrast to the treatment accorded the blinded or partially blinded individual, the deafened man is the butt of his fellowmen. One merely has to turn to the movies, radio, newspapers, and magazines for confirmation. Whereas the blinded man is treated with compassion and understanding, the deafened man has jokes built around him. He develops a sense of insecurity, depression, and anxiety, all too often resulting in persecution paranoias.

Restoring more normal hearing to these persons is a challenge to otologists. If a more critical analysis of bone conduction standards which have been set up for the Lempert fenestration will result in an increasing number of suitable candidates, then it is a task which otologists should welcome.

It is not within the province of this paper to set forth in detail the various criteria established for the Lempert operation inasmuch as this paper is concerned with but one factor. It has been stated that a bone conduction loss of more than 25 decibels is presumptive evidence of eighth nerve lesions. Inasmuch as the Lempert operation is predicated on an unimpaired auditory nerve, such a bone conduction loss automatically disqualifies the candidate for surgery. It is possible, however, that our interpretation of bone conduction loss is inaccurate and that other factors besides nerve lesions may be the cause of lowered bone conduction.

For the most part this acceptance of auditory nerve damage in impaired bone conduction has been on theoretic considerations alone, and only scanty evidence has been advanced to support the concept. Physiologically it need not be so, as pointed out by Stevens and Davis, "If bone conduction is impaired, the inner ear *may* be damaged, but not necessarily."[1]

In bone conduction, sound is transmitted via either osseous or osseotympanic pathways. By osseotympanic pathways sound waves pass from the bones of the skull to the air conduction apparatus of the middle ear. In discussing the various osseous pathways of bone conduction, Guild emphasizes Békésy's evidence that the semicircular canals communicate with the scala vestibuli, and when under compression, fluid is forced into the scala vestibuli.[2] After outlining the various osseotympanic and osseous pathways, Guild concludes that the organ of Corti is more effectively stimulated by sound waves which approach it from a certain direction through the intralabyrinthine fluids than it is by sound waves from other directions. Guild also concludes that the sound waves which reach the otic capsule via the subaditus trabeculae are more effective in stimulating the organ of Corti than those through other osseous paths.

Békésy showed that both air conduction and bone conduction ultimately produce similar movements of the endolymphatic fluid and of the basilar membrane in the cochlea.[3] The airborne waves are transmitted via the ossicles. Bone conducted waves bypass the ossicles reaching the inner ear and labyrinth.

It has been shown that in bone conduction the osseous rather than the osseotympanic pathway is more important. Such a conclusion is justified from a consideration of these facts. Normally, individuals hear better by air conduction. The sound waves traveling via the air conduction mechanism of the middle ear enter the perilymph through the footplate of the stapes, which is part of the lateral wall of the vestibule and is near the place where the scala vestibuli opens into the anteroinferior part of the vestibule. In studying the preferred osseous pathway, it is evident that the subaditus trabeculae are in an almost direct line with the lower part of the posterolateral wall of the vestibule. This part of the vestibular wall is near the footplate of the stapes and almost opposite the opening of the scala vestibuli into the vestibule. The location of the sacculus and the utriculus is such that there is a continuity of perilymph in a direct line to the orifice of the scala vestibuli, and the anatomic arrangements are such that sound waves transmitted to the otic capsule via the subaditus trabeculae reach the organ of Corti from a direction and in a manner simulating the pathway followed in the air conduction mechanism.

The conclusion that the most important pathway of bone conduction is osseous rather than osseotympanic was proved by animal experiments of Guild and Wever and Bray.[4] When the ossicular chain was broken at the incudostapedial joint, air conduction was diminished by 50 to 60 decibels, but bone conduction was reduced not more than 5 or 10 decibels.

A study by Guild of temporal bone sections and the clinical records of human cases revealed significant data. He noticed fractures of one or more of the subaditus trabeculae with fibrous union of the broken ends. The clinical records revealed that there was greatly impaired bone conduction in those cases which had complete fractures of the subaditus trabeculae. Those cases which had only incomplete fractures showed normal or only slightly impaired bone conduction. According to Guild, the frequency of fractures of this region increases with advancing age. Other investigators have reported lower bone conduction values in individuals in each decade beyond forty years.

An additional factor of importance in determining the etiology of impaired bone conduction and which has not been discussed in the literature is the insulating effect of the mastoid process. The mastoid, although highly cellular, is coated with hard bone and contains in its aerated structure the labyrinth and cochlea, thus acting to a degree as a muffler or insulator of sound waves. Variations in the anatomic structure of the mastoid can account for changes in bone conduction. There are four main types to consider: (1) large cellular mastoid (pneumatic), (2) small cellular mastoid (diplooic), (3) underdeveloped mastoid, and (4) sclerotic mastoid.

A correlated study of stereoscopic roentgenograms and audiometer recordings reveals certain significant data concerning patients in the four categories.

1. *Large Cellular Mastoid* (*Fig. 1*).—When the x-rays revealed mastoids filled with large air cells, the clinical records, in general, showed marked bone conduction loss, the degree of impairment in accordance with the cellularity of the bone and age of the patient.

2. *Small Cellular Mastoid* (*Fig. 2*).—Most of these occurred in women. When the stereoscopic x-rays showed small diplooic mastoids, the bone conduction was normal or only slightly impaired.

3. *Underdeveloped Mastoid.*—X-rays show a typical forwardly placed sinus. The bone, cancellous about the tip, is solid or thickened about the inner ear. In these instances bone conduction was normal or only slightly impaired.

4. *Sclerotic Mastoid* (*Fig. 3*).—The x-rays show a solid, sclerosed mastoid process such as occurs after middle ear infection, mastoidectomy, and Lempert operation. The bone conduction in these individuals was normal or only slightly impaired.

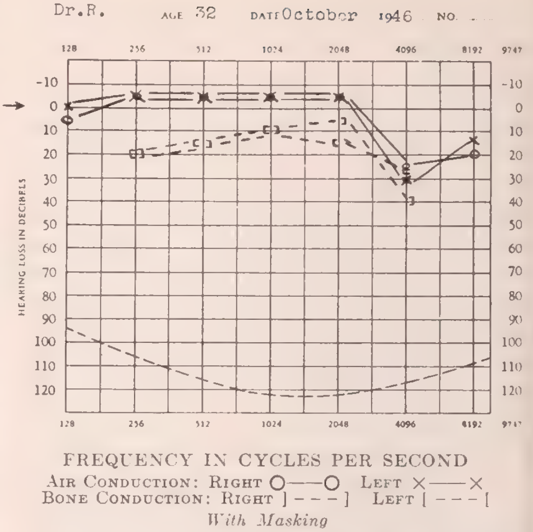

Fig. 1. Stereoscopic x-rays show large cellular mastoids, therefore there is a loss of bone conduction. The difference of air and bone conduction in this case is as much as 25 decibels. (This man did continual flying of multiengined ships for five years while in the U.S. Army. This probably accounts for the 30-decibel loss at cycle 4,096).

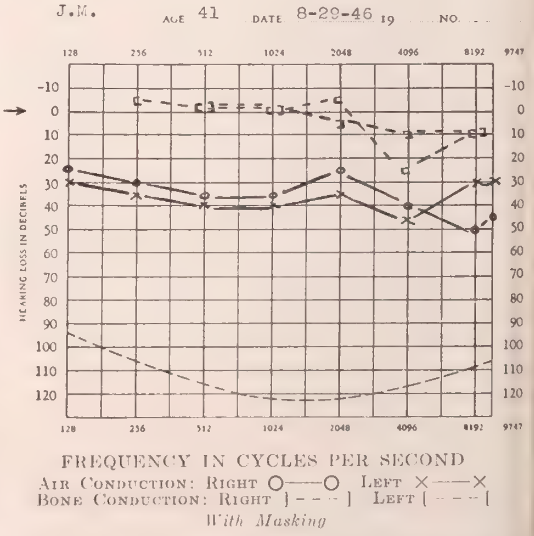

Fig. 2. Both mastoids in this case are small cellular. The cells do not extend into the squamous. The cells show a moderate amount of osteitic thickening, and, therefore, there is better bone conduction than normal.

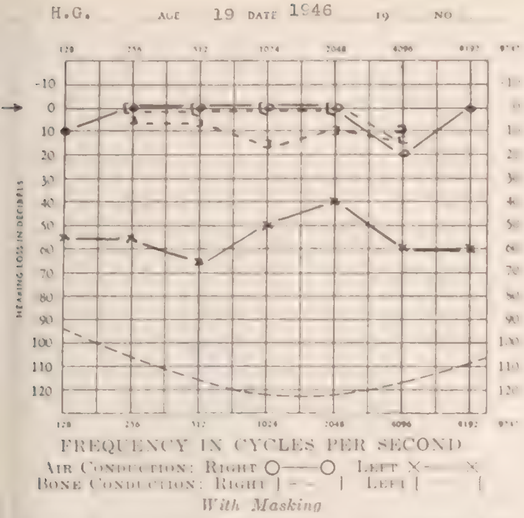

FIG. 3. Left mastoidectomy ten years ago. Stereoscopic x-rays show the right mastoid to have fine trabeculae with the loss of 5 to 10 decibels. The left mastoid is sclerotic around the inner ear; the bone conduction is zero.

Summary

With the increased interest in the Lempert fenestration operation, a re-examination of the etiology of impaired bone conduction is necessary.

Lowered bone conduction need not mean auditory nerve lesions. The osseous pathway of bone conduction via the subaditus trabeculae is most important. Fractures of subaditus trabeculae result in impaired bone conduction. The structure of the mastoid process may have an insulating effect on sound waves entering the inner ear and thus result in impaired bone conduction losses up to 20 to 25 decibels with normal auditory nerve. Four types of mastoid are of importance. The large, cellular type containing many air cells acts as an effective sound insulator and may be responsible for bone conduction loss up to 25 decibels.

Conclusion

Selection of patients for Lempert fenestration operation should include stereoscopic x-rays of mastoid to determine the role of mastoid cell insulation in impaired bone conductions. Such a differential provides a better selection of cases for surgery.

30 EAST 40TH STREET

Sincere thanks are hereby extended to Dr. William R. Cashion, of the X-ray Department of the Manhattan Eye and Ear Hospital of New York, for his assistance.

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.T.A. GROUP OPPOSES SOCIALIZED MEDICINE

The West Virginia Congress of Parents and eachers, representing a membership of 85,000, is he first state P.T.A. group in the nation to adopt a esolution opposing socialized medicine.

The resolution, adopted at the 27th annual conention in Huntington recently, read:

"Accepting the definition of health of the World ealth Organization as being that complete state of hysical, mental, and social well-being and not erely the absence of disease or infirmity, and beeving it is our duty and privilege as parents and eachers to accept our community responsibility to ork toward achieving this for the people of West Virginia, and believing that the best interest of the public will be served by the people in the local communities working in cooperation with the medical profession to improve our present medical, hospital and nursing facilities;

"*Be it resolved* that the West Virginia Congress of Parents and Teachers through its state, county and local organization cooperate with the State Health Department, the West Virginia State Medical Association, and the West Virginia Rural Health Conference in their efforts to extend and improve health facilities and services in all the areas of the state and that this Congress go on record as opposed to any form of socialized medicine."

A CERVICAL "SCRAPER"

Ernest Myller, M.D., New York City

(From the University Hospital, New York University-Bellevue Medical Center)

PAPANICOLAOU'S detection of exfoliated cancer cells in the vaginal smear has added greatly to the early recognition of malignant disease. The present method of scraping the cervical canal in order to obtain a greater concentration of cancer cells, and especially more cells from the cervical epithelium, is considered an improvement over the simple vaginal smear. The important region to be investigated is the junctional region between the columnar cell epithelium and the squamous cell epithelium, since the majority of cervical cancers originate in that area. The detection of cancer of the cervix and the fundus at the earliest possible moment will increase the curability of this disease to a considerable degree. The well-founded assumption that a noninvasive carcinoma may be present intraepithelially for many years without any symptoms and without progress justifies an examination of every adult woman by the vaginal smear method or with a cervical scraping, or both.

A simple instrument, the cervical "scraper," facilitates obtaining satisfactory specimens with every routine vaginal examination.* This instrument consists of a small metal cone attached to a handle (Fig. 1). On both sides of the cone there is a fin (Fig. 2). These two fins converge on the top of the cone. The free sides of the fins are rectangular but not sharp. When used properly no trauma occurs; only epithelial cells will be scraped off. Satisfactory smears can be obtained by an examiner without previous experience.

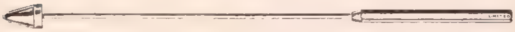

Fig. 1.

After exposure of the cervix with a speculum, the cone is inserted into the cervical canal and rotated once or twice with very slight pressure (Fig. 3). Occasionally, suspicious areas outside the canal should also be scraped off with the top of the instrument where the two fins join. The epithelial cells will adhere to the fins, and the material thus obtained is transferred to glass slides by smearing it from the fins directly on the slides. The slides are immediately immersed in the fixative solution.

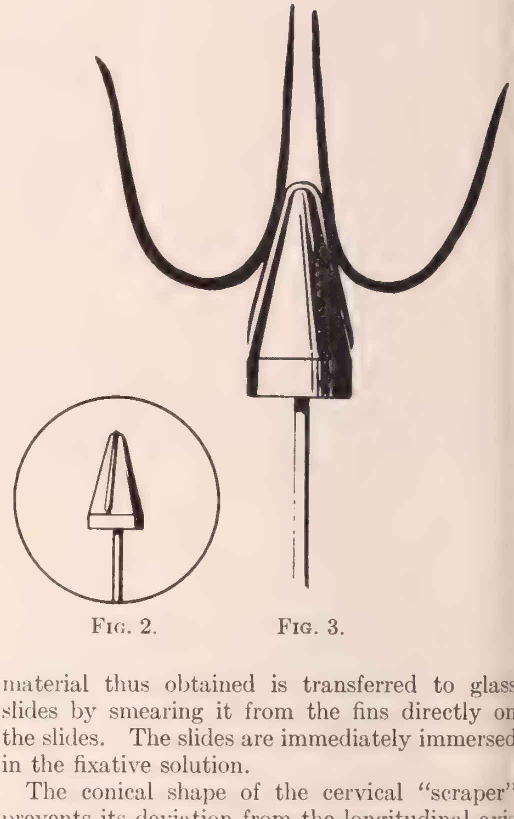

Fig. 2.

Fig. 3.

The conical shape of the cervical "scraper" prevents its deviation from the longitudinal axis of the cervical canal; the scraper is bound t come in contact with the epithelial junction lin whether the cervix is small or large.

The cervical "scraper" is easily sterilized an can be used repeatedly to obtain cells from th cervix. In comparing smears taken with thi scraper and with disposable wooden spatulas, i appears that more sheets of well-preserved cervical cells are obtained with the former with littl or no bleeding. The instrument penetrates a easily into the nonparous cervical os as into lacerated, diseased cervical canal.

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* Manufactured and distributed by United Surgical Suppl Co., 160 East 56th Street, New York City.

Of all fools a traveled fool is the most intolerable. He brings back the follies of other nations and adds them to his own.—Anonymous

THE SIMULTANEOUS OCCURRENCE OF PLASMA CELL MULTIPLE MYELOMA AND HODGKIN'S DISEASE

Benjamin B. Greenberg, M.D., Daniel Stats, M.D., and Maurice Goldberg, M.D., New York City

(From the Second Medical Service of the Mount Sinai Hospital)

In this communication we are reporting two cases of multiple myeloma with Hodgkin's disease. As far as we have been able to determine, these are the first such cases observed or reported. In the future, if such a combination of diseases proves to be as rare as it has been in the past, these cases will remain as curiosities; as a result of this presentation it may be that additional examples will be found, in which instance a true relationship between the conditions could be hypothecated. The reticulum or reticuloendothelial cell could then be looked upon as the parent cell which could proliferate in the direction of one or the other disease in the presence of appropriate stimuli. Actually, in recent years various authors have pointed out instances of Hodgkin's disease confined to or primary in the bone marrow and solitary myelomas or plasmacytomas originally, at least, affecting extraosseous and lymphatic tissues. Such occurrences point up the possible connections between these diseases. There are scattered indications in the literature of the relationship which may exist between multiple myeloma and leukemia and among lymphosarcoma, reticulum cell sarcoma, lymphatic leukemia, and Hodgkin's disease.[1] Gordon and Churg, in pointing out the frequency of visceral involvement in myeloma, have directed attention to the systemic nature of this disorder.[2] Plasma cell proliferations or plasmacytomas in Hodgkin's disease have been described by Ziegler, von Rütte, and Leitner.[3-5]

Case Reports

Case 1.—S. G., a white man, fifty-four years old, first came under our observation in December, 1947, complaining of progressive weakness and loss of weight since the summer of 1946 and severe constant pain in the lower half of his back, right hip, and right shoulder for the previous six months. The diagnosis of Hodgkin's disease had been made previously (see below). During the summer of 1946, he developed a persistent cough and fever which was diagnosed as pneumonia. He was confined to bed for six weeks, and his symptoms subsided. A roentgenogram of his chest at that time revealed enlarged mediastinal lymph nodes. Nine months later he suffered a recurrence of cough and fever associated with marked weakness and swelling of the glands in his groins and behind the angle of the mandible on the right side. In October, 1947, biopsy of a right axillary lymph node was performed at another hospital. This showed numerous large cells with hyperchromatic nuclei, lymphocytes, eosinophils, and multinucleated Sternberg-Reed cells. The diagnosis was Hodgkin's disease. He was given a course of radiotherapy to the chest, back, and groins which resulted in a decrease in the size of the glands.

Examination disclosed a pale, poorly nourished, afebrile man who could barely stand without support because of marked pain in his lower back. He walked cautiously, holding his trunk rigidly and limping on the right side. The erector spinae musculature in the lumbar region stood out as taut spastic bands. There was marked restriction of all of the motions of the trunk because of pain and spasm. Slight pressure over the dorsolumbar spine elicited exquisite sensitivity. Motions of the cervical spine were markedly limited by pain. There was no sensitivity to pressure over the skull. There was no motion at the right scapulohumeral joint. Motions of the right hip joint were moderately restricted by pain in the gluteal region, and there was no sensitivity of the ribs. Palpation revealed a hard submental lymph node measuring 3 by 5 cm., several pea-sized posterior cervical nodes, as well as shotty, pea-sized axillary and inguinal nodes. The liver was palpable one fingerbreadth and the spleen two fingerbreadths below the costal margin. The ocular fundi revealed scattered fresh and organizing hemorrhages. Neurologic examination failed to disclose any abnormality.

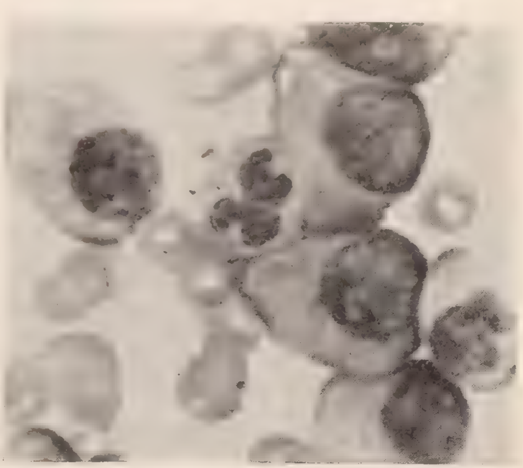

Fig. 1. Bone marrow aspiration showing plasma cells (both cases).

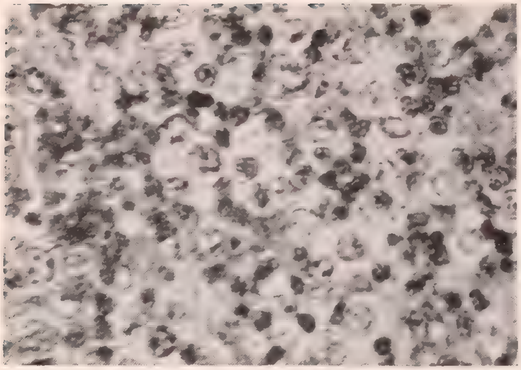

FIG. 2. Lymph node biopsy showing Hodgkin's disease (Case 1).

Roentgenographic studies of the dorsolumbar spine revealed riddling osteolytic defects of the entire spine with compression of the bodies of the eleventh and twelfth thoracic vertebrae. Multiple osteolytic defects were seen in the pelvis and upper femora. Several small osteolytic lesions were noted in the skull.

A sternal marrow puncture in December, 1947, revealed a cellular marrow in which 50 per cent of the nucleated elements were plasma cells (Fig. 1). There were no other abnormal cells present. The diagnosis of plasma cell multiple myeloma was made. The hemoglobin was 42 per cent (6.1 Gm. per 100 cc.), red blood count 2,200,000 per cu. mm., white blood count 3,100 per cu. mm., and platelets 130,000 per cu. mm. There were 66 per cent segmented neutrophils, 6 per cent nonsegmented neutrophils, 1 per cent segmented eosinophils, 15 per cent lymphocytes, 9 per cent monocytes, 3 per cent plasma cells, and 0.5 per cent reticulocytes. The sedimentation rate (Westergren) was 153 mm. in one hour. The serum albumin was 3.7 Gm. per 100 cc., and the globulins were 3 Gm. per 100 cc. Later in the course the serum proteins were 10.5 Gm. per 100 cc. with the albumin 2.1 Gm. per 100 cc. and the globulins 8.4 Gm. per 100 cc. The gia globulin and serum formol gel tests were positive. Bence-Jones proteinuria was not observed.

The patient was admitted to the Mount Sinai Hospital, and a course of 2.85 Gm. of stilbamidine was given over a period of one month. One week after the beginning of therapy the pain in the back was markedly diminished, but the chest pain continued. Needle aspiration of the ilium revealed essentially the same findings as noted by the sternal aspiration. In December, 1947, the submental node previously noted was removed and showed Hodgkin's disease with no myeloma cell infiltration (Fig. 2). The patient was discharged in February, 1948. He subsequently suffered a number of severe epistaxes requiring blood transfusions. The course was rapidly downhill, and he expired in June, 1948. Permission for an autopsy examination was not obtained.

Case 2.—When this white male patient, S. K., was thirty-five years of age in 1934, he was observed for the first time because of generalized and right lower abdominal quadrant pain, and a mass was palpated in this region. He had enjoyed good health until the onset of these symptoms, and there were no other relevant facts in the anamnesis. He was afebrile and did not appear ill. There was no adenopathy or hepato- or splenomegaly, and neither bone tenderness nor pain was present. The blood count was normal. At laparotomy at another hospital an irregular, lobulated, firm mass was visualized in the retroperitoneal region along the right external iliac artery and to the right of the aorta at the bifurcation. The appendix and the other intraperitoneal organs were normal. A portion of the lesion, which was removed, was described as lymphatic tissue measuring 3.5 by 2.5 by 2.5 cm. The architecture was completely wiped out. The tissue had a well-defined capsule which was not invaded. Throughout the specimen there were many large pale polygonal cells with one to three vesicular nuclei. Mitotic figures were rare, and eosinophils were not present. Focal fibrosis was observed. The pathologic diagnosis was Hodgkin's disease in an early, very cellular stage (Fig. 3). Examination of the slides by a number of competent pathologists yielded some variance of opinion. Some refused to make a commitment, while others agreed with the original diagnosis.

Recovery was prompt and uneventful. Following a course of x-ray therapy anteriorly and posteriorly over the right lower abdomen (600 r over each of two fields), the mass disappeared. The patient remained in fairly good health for six years at which time enlargement of the supraclavicular lymph nodes on each side and a rapid erythrocyte sedimentation rate were noted. He had maintained his weight and strength, and there were no other abnormalities on physical examination or in the blood count. Over a period of four months he had two courses of x-ray therapy to the neck and axillae with a disappearance of the glandular enlargements in these areas and a return of the sedimentation rate to normal. Nine years after the onset deep radiation therapy to the abdomen caused

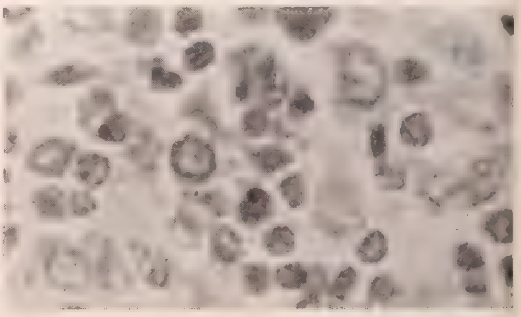

FIG. 3. Lymph node biopsy showing Hodgkin's disease (Case 2).

the cessation of diarrhea that he had had intermittently for six months. Except for the beginning of gradual loss of weight and strength, the patient was fairly well and able to attend to his daily business activities. For the first time he was found to have a mild anemia of 3,580,000 erythrocytes per cu. mm. A leukopenia of 4,000 to 5,500 per cu. mm. was ascribed to the courses of radiation.

Ten years after the beginning of his disease the only findings upon examination were slight pallor and evidence of weight loss. There was no adenopathy or enlargement of visceral lymph nodes or of any of the organs. The hemoglobin was 60 per cent (8.7 Gm per 100 cc.), red blood count 3,670,000 per cu. mm., white count 4,000 per cu. mm., and platelets 140,000 per cu. mm. There were 35 per cent segmented neutrophils, 6 per cent nonsegmented neutrophils, 3 per cent segmented eosinophils, 1 per cent segmented basophils, 48 per cent lymphocytes, 2 per cent monocytes, and 5 per cent plasma cells. The reticulocytes were 0.5 per cent, and marked rouleaux formation of the red cells was observed. The sedimentation rate (Westergren method) was 120 mm. in one hour. The sternal bone marrow obtained by aspiration was moderately cellular; 51 per cent of the cells were plasma cells, indicating the presence of plasma cell myeloma (Fig. 1). There were no other abnormal cells present. Bence-Jones protein was present in the urine. The serum formol-gel test was immediately positive. The serum proteins were 9.2 Gm. per 100 cc. of which the globulins were 7.2 Gm. per 100 cc. The blood urea nitrogen was 21 mg. per cent. X-ray examination of the skull, chest, and long bones at this time failed to disclose any abnormalities.

From this time until his death two years later the patient was never free of distress. Shortly after the above laboratory tests were made, he developed thoracic herpes zoster. Upon its clearing he first noted pain in the thoracic spine. This continued with remissions and exacerbations, eventually requiring the use of a spinal brace and finally incapacitating him. Frequent nose bleeds occurred and were related to thrombocytopenia, which was marked at the end. There was a progressive loss in weight. Repeated blood transfusions were used to combat the persistent anemia. On numerous physical examinations the only finding of note was bone tenderness. There was no splenomegaly or lymphadenopathy. Eleven years after the onset of his disease a course of stilbamidine injections (total 1.3 Gm.) was given, which effected a temporary remission in the bone pain. Death resulted from pneumonia. The autopsy examination revealed extensive honeycombing of the vertebrae with cavities of various sizes which were filled with soft grayish-red tissue. Most of the vertebrae were collapsed. Similar areas were present in the sternum, ribs, and femur. The mesenteric lymph nodes were small, shotty, and hard. There was no other significant change in the lymphatic apparatus or the spleen. Microscopic examination revealed plasma cell multiple myeloma and no evidence of Hodgkin's disease.

Summary

The first case concerns a patient in whom bone marrow punctures and lymph node biopsies performed at the same time showed unmistakable evidence of plasma cell multiple myeloma in the former and Hodgkin's disease in the latter. The second patient had Hodgkin's disease for ten years after which pathognomonic evidence of plasma cell multiple myeloma was found. Examination of the tissues at autopsy in this case failed to reveal any changes of the initial disorder. It is possible that Hodgkin's disease and multiple myeloma may be related, in view of their simultaneous occurrence in the first case and their successive occurrence in the second. It is suggested that the reticulum cell may be the common ancestral cell of both conditions.

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TALE OF TWO CITIES

Old ways are best in Budapest, according to observations recently published by Suranyi.* The infant mortality in the twin city had reached the deplorable level of 269 per 1,000 in July and August of 1945; in the corresponding months of 1948 it had dropped to 57. The reason given for the improvement was a health campaign in which breast feeding was emphasized, aided in a practical manner by the application of short wave therapy to the breasts. Ten such treatments, it is said, resulted in a prolonged 50 per cent increase in milk excretion in a third of the cases.

Figures indicate that up to 4,166,500 Gm. of human milk have been collected and dispensed in one month through the 19 centers that have been established in the city. An average of 2,500 infants per month have received the benefits of this service, preference being given to premature and sick babies. During a test period the mortality rate among infants receiving the breast milk was 36 per 1,000, as against a rate for the city as a whole of 79 per 1,000.—*Editorial, New England Journal of Medicine, December 1, 1949*

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* Suranyi, G. Il Lattante **20**: 129 (1949)

ANIMAL CHARCOAL AS A SUBSTITUTE FOR ANTABUS IN THE TREATMENT OF ALCOHOLISM

G. L. Moench, M.D., F.A.C.S., New York City

(From the Department of Gynecology, New York University-Bellevue Post-Graduate Medical School)

THE treatment of alcoholism by conditioned reflexes, or by making alcoholic beverages unpalatable, is not new. The latest report of such treatment is by Jacobsen and Martensen-Larsen of Denmark.[1] These two investigators used Antabus (tetraethylthiuram disulfide) to conquer alcoholic addiction. Antabus is described as a relatively safe drug, and no effects were observed in man after the ingestion of 3 Gm. or after daily doses of 1 Gm. for months.

However, Antabus produces a hypersensitivity even to small doses of alcohol in any form. Such hypersensitivity is seen as early as three to four hours after a dose of 1 Gm. of the drug and lasts about twenty-four hours.

The symptoms begin five to fifteen minutes after alcohol has been taken and consist mainly of cardiovascular changes and flushing of the face and neck, sometimes extending even to the chest and arms. Usually, some edema of the lower eyelids also occurs. The pulse rate rises to 120 or 140, and the cardiac output is increased but without any rise in the blood pressure. Respirations also become more frequent. Nausea and vomiting may occur, and in some cases unconsciousness has supervened.

This report of Jacobsen and Martensen-Larsen interested me greatly since the identical vasomotor symptoms described as the result of Antabus and alcohol ingestion are exactly those (minus the nausea and vomiting and loss of consciousness) which I have reported following the drinking of alcohol after previous animal charcoal medication.[2,3]

Animal charcoal, even today, is regarded as having only a physical action. This, however, is not true. I first discovered in 1917 that animal charcoal can have a pronounced pharmacologic action not shared by any other adsorptives which I investigated. This discovery came about in the following manner: A patient had taken one teaspoonful of carbo animalis three times a day for a week because of a severe gastrointestinal disturbance. At the end of this time, following the ingestion of one glass of beer (alcoholic contents between 1 and 2 per cent), he became quite flushed and after four glasses his whole head, neck, and upper chest, as well as both hands and feet to above the wrists and ankles, were deep red. The pulse rate was 120, and the respirations 40 to the minute. There was severe cardiac palpitation and some dyspnea. The symptoms lasted for several hours. At first no thought was given to a possible connection between the charcoal and the alcohol, but a recurrence of the diarrhea with the same sequence of events made me suspect the relationship which was confirmed by a series of test cases. A number of volunteers were given animal charcoal for several days and then a small quantity of alcohol. In each case the described vasomotor symptoms occurred to a greater or lesser degree. None of the controls, who had received the same amount of alcohol but no charcoal, showed any unusual reaction.

Since then I have seen many such cases in patients who, although warned against drinking alcoholic beverages when taking animal charcoal, failed to take heed. I have also used the charcoal in alcoholics without issuing a warning with, at times, good results.

The action of animal charcoal is not immediate. A single dose followed by alcohol never had any effect in my cases. Usually medication for two to three days was necessary before the vasomotor effects, which never showed increased but frequently decreased blood pressure, occurred. Even minimal amounts of alcohol produced the typical reaction whose severity seemed to depend both on the amount of the charcoal and the amount of alcohol ingested. There was no relation between the severity of the symptoms and the dilution of the alcohol.

Since, apparently, Antabus is not an entirely innocuous drug, it may be of value to know that animal charcoal (never wood charcoal) will have exactly the same effect with less danger of toxic manifestations. Also animal charcoal is cheap and readily available, while Antabus is not, at least at the present time.

The objection to animal charcoal is its appearance, but this can be overcome by giving the drug in cachets or wafers or in black coffee, and the constipating effects can be overcome by judicious diet and appropriate laxatives.

Just what the dynamics of animal charcoal may be is still unexplained, and physiologic chemists could give me no answer. Evidently, we are dealing with a process of selective absorption. In none of my patients was the smell of acetaldehyde noticed in the expired air.

27 West 55th Street

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SOME CONSIDERATIONS OF MORPHOLOGY AND METABOLISM IN MALIGNANT NEOPLASIA*

MAURICE M. BLACK, M.D., HERMAN BOLKER, M.D., and ISRAEL S. KLEINER, PH.D.,
New York City

(From the Departments of Pathology and Biochemistry, New York Medical College)

WITHIN recent years there has been a growing interest in the cytologic characteristics of cells desquamated from normal and tumor tissue as well as increasing studies of the metabolism of cancer.**[1,2] Associated with this interest, there has been a gradual identification of the cancer cell with atypia both in morphology and in its metabolic activity, and attempts have been made to use the latter characterization in an effort to establish a "rational" chemotherapy of malignant neoplasia.[3] In short, the growing body of literature on the subject tacitly suggests that cancer is synonymous with morphologic and chemical anaplasia. While it would appear that chemical and morphologic anaplasia is indicative of malignancy, it is far from proved that cancer must be associated with such alterations of form and metabolism.

In view of the importance of this question, particularly in regard to chemotherapy, it was decided to evaluate the available data from this point of view. The studies may be roughly divided into those concerned with tissue and cytologic morphology and studies of metabolic and chemical characterizations of cancer. While our knowledge in both of these fields is all too limited at present, there is at least sufficient data available to suggest paths for further investigation and to make us aware of specific facets of our ignorance.

From the standpoint of the pathologist, malignant neoplasia is said to be present when a tissue presents evidence of atypia, heterotopia, loss of polarity, and increased mitotic activity. In addition, cytologic studies have revealed that desquamated cancer cells are typified by a condensation of the chromatic material, nucleolar prominence, and an increase in the nucleocytoplasmic ratio. While the former criteria have been used for many years by the pathologist in evaluating the malignant potentialities of tissues, anyone familiar with the actual reading of slides is well aware of the difficulty in interpretation of marginal cases and the occurrence of divergent opinions expressed by competent pathologists reading the same slide. This is particularly true in the case of urinary bladder papillomata, rectal polyps, and some thyroid tumors.

The difficulties inherent in the definitive diagnosis of malignancy in rectal polyps were stressed by Ortmayer who submitted slides prepared from 19 polyps to three competent pathologists and obtained a striking lack of agreement: "Classifying on the basis of benign, suspicious (called precancerous by some pathologists), and carcinomatous, all three agreed in diagnosis on only three of the slides made from the biopsies. Of these three one was malignant and two were benign. There was total disagreement on six of the biopsies. Each of the six was called by one pathologist benign, suspicious by another, and malignant by the third pathologist. This leaves ten polyp biopsies in which the combined opinions ended two to one; eight of these ten were pronounced benign by two pathologists and two suspicious."[4]

Perhaps the most striking instance of discrepancy between morphologic appearance and biologic propensity occurs in the so-called juvenile type of melanoma. Here the histologic appearance is well-nigh indistinguishable from that of the true malignant melanoma, yet its clinical course is almost invariably benign. In addition, it should be recalled that although the Broders classification of grading malignancy is of statistical significance, it is notoriously inadequate in describing the clinical course of individual cases of malignant growths.

In a similar manner the cytologic examination of cells scraped from a tumor mass reveals variations in form from the clearly atypical appearance of the "malignant" cell to cells which are indistinguishable from the normal parenchymal cells of the organ of origin. In addition, the situation may be further confused by the finding of markedly atypical cells, difficult or impossible to distinguish from the "malignant" cell in the presence of inflammatory processes or after radiation therapy.

An additional example of discrepancy between morphology and biologic attributes is found in the histologic appearance of lymphoid tissue in Hodgkin's disease and Brucellosis. The microscopic appearance may be well-nigh indistinguishable, yet the biology of the two diseases certainly

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** The use of the term "cancer" in this paper will include all forms of malignant neoplasia—sarcoma and carcinoma.

differs as to etiology, clinical course, and prognosis.

Despite the foregoing difficulties tissue biopsy remains an extremely accurate method of definitive cancer diagnosis, and the cytologic technics, while less accurate, are of great value. There is little doubt that the tissue and cytologic criteria mentioned earlier constitute manifestations of malignant neoplasia. Of equally great significance, however, is the still unanswered question as to how great an extent these changes reflect the essence of the malignant process. Greene and Newton have thrown some light on this problem through their study of the evolution of uterine cancer in the rabbit.[5] They utilized the technic of homologous and autologous transplantation and repeated biopsies in an effort to study the development of autonomy of malignant growths and the factors of the host related to such progression. The data obtained may be summarized as follows:

1. Cancerization of cells and tissues represents a gradual rather than a sudden transformation wherein the primary neoplastic area is not a cancer in its morphologic or biologic characteristics.

2. The process of development to the malignant state is dependent on factors peculiar to the spontaneous host and does not obtain in the normal host. "The earliest focus of neoplasia is utterly unlike a cancer. In fact, its mere existence is completely dependent on the constitution of the tumor-bearing animal. It will not live in normal animals and will survive only in the environment of the primary host or of animals bearing spontaneous tumors of the same nature."

3. The cancer development appears to consist of two merging but dissociable components: the initiation of neoplasia and the development of neoplasia to cancer. The former does not appear to be dependent on the constitutional makeup of the normal animal, whereas the latter is.

In general, it would appear from these studies that the original focus of neoplastic growth undergoes a gradual and progressive development in its malignant potentialities. Thus, the initial growth which is capable only of transplantation to another site of the host or to a host bearing a similar tumor (autologous transplantation) acquires the ability to be transplanted to a healthy host (homologous transplantation). However, its malignant potentialities are not yet fully attained at this stage, for the homologous transplant is still sufficiently affected by the new host so that it fails to undergo further development and remains a local, confined tumor. This is in contrast to its continued acquisition of malignant potentiality if left in situ or after autologous transplantation wherein full biologic autonomy or cancer supervenes. While this biologic progression occurred in 14 of 15 animals studied, these changes were only roughly paralleled by alterations in tumor morphology: "In some instances the morphology of the tumor remained constant throughout its course and complete development to autonomy occurred without change of grade, while in others an advance in grade was not accompanied by significant changes in biologic properties."[5]

Alterations in the morphology of malignant cells without attendant changes in biologic characteristics have also been observed by us in the course of a study of the effect of chemotherapy on acute leukemia.[3] In this case the myeloblast lost its prominent cytoplasm as well as the prominent nucleoli and took on the appearance of an atypical lymphocyte, although none of the malignant potentialities of the disease were altered when these cells predominanted in the peripheral blood. However, there appeared to be an alteration in the metabolic pathways of the two cell types, since the former was sensitive to the glycolytic inhibitors (fluoride, iodoacetate, and malonate) while the latter showed no such sensitivity but was sensitive to sodium azide, although no significant difference in the malignant propensities of either cell was observed.

That distinct processes operate in the initial appearance of the tumor as contrasted with its progression and later growth is also indicated by our own observations of the effects of chemotherapy on tumor-bearing mice.[6] We have found that, in mice bearing spontaneous mammary tumors which are regressing coincident to therapy with glycolytic inhibitors, it is not uncommon to find a new tumor appear. However, the new growth remains very small and will often disappear completely under continued treatment. This would suggest that, while the origin of the tumor was independent of the milieu of the host, its subsequent growth was definitely sensitive to it.

It would appear from these observations that, at least in its initial stages, malignant neoplasia represents a delicate balance between the local growth and the milieu of the host. Corroboration of this concept is also found in studying the effect of caloric restriction on the inhibition of tumor formation.[7] Thus, the problem of the effect of food intake (calories, vitamins, etc.) on cancer may be divided into two aspects: (1) the effect on the origin of malignant growth and (2) the effect on the growth once it is established. Tannenbaum has found that "at least eight different types of tumors and leukemia of the mouse are inhibited by caloric restriction." The inhibition involved both a delay in the average time of appearance of the tumors and also a decrease in the number of tumors found. His findings also suggested that there appeared to be a rather critical point in the caloric reduction of the diet at which the inhibition of tumor formation appeared most striking. Thus, a sigmoid-type curve was obtained when the percentage of mice developing tumors was plotted against the degree of caloric restriction. Further work suggested that caloric restriction was most effective in tumor inhibition at the time of initial appearance of the growth.

The existence of a significant host milieu-tumor relationship is also indicated in the studies of Deming and Hovenanian.[8] These investigators, studying the hormonal factors in heterologous growths of human prostatic cancer, found that initial transplants took in 43.6 per cent of 94 males and 11.3 per cent of 28 females; growth occurred in 75 per cent of the males but not in the females, even after five generations. However, by the eighth generation 50 per cent of the males and females grew tumors. This would indicate in its early stages the growth, although malignant, exhibited androgen dependence which was generally lost as greater autonomy was attained.

It should be noted that Willis points out ". . . . that a tumor is not, as often tacitly implied, something foreign to the body and possessing unlimited independent growth capacity, but rather that it is a part of the individual's own tissues and is subject like all other tissues to the unknown laws of age and death. This conception provides at least a reasonable view of the curious fluctuations, delays, recrudescences, and retrogressions which appear so mysterious in the progress of occasional neoplasma."[9]

The role of constitutional factors in antagonizing malignant growths is usually not discernible, although the infrequent occurrence of spontaneous cures of proved cancers has long suggested its presence. Further, it has been known for some time that the tumor-destructive activity of radiation therapy is dependent not only on the energy of the incident beam but also on some factors in the host, since clinically effective doses of radiation applied to tumor cells in tissue culture are without appreciable effect. In our studies of the effects of glycolytic inhibitors on mouse mammary carcinoma, we have found that, while regression and even cures may be induced in a significant number of cases with the use of smaller doses in the order of magnitude of LD_{20} to LD_{50}, higher doses leading to toxicity and eventual death of the host are without appreciable effect on the tumor. Further work is needed on identification of those factors of the host responsible for this phenomenon.

The application of various analytic technics of biochemistry to cancer tissue has revealed that fairly characteristic alterations of tissue metabolism and enzyme content are manifest with the advent of malignancy. Most prominent among these is an increase in aerobic and anaerobic glycolysis and a decrease in cytochrome-c and cytochrome oxidase as well as alterations of certain derived quotients relating oxidation to glycolysis. Thus, Burk has indicated that "the metabolic diagnosis of malignant tumors as compared with normal tissue may be correlated with pathologic diagnosis in well over 95 per cent of tested cases."[10] In an exhaustive review of enzymes in normal and neoplastic tissue, Greenstein put forth certain generalizations indicating that "tumors have qualitatively the same kind of enzymes as normal tissue. The enzymatic pattern of a tumor is largely independent of its age, of its growth rate, and of the strain of animal in which it grows. The range of activity of each enzyme is much narrower among tumors than among normal tissues, i.e., tumors possess a more uniform and less diverse pattern of enzymatic activity than normal tissues. When a normal tissue becomes neoplastic, the specific functional activities markedly decrease or are lost altogether. Tumors tend to converge enzymatically to a common type of tissue."[11]

These data and others have been incorporated in a diagramatic schema of depicting the metabolic pathways of malignant tissues by Black, Kleiner, and Bolker.[3] On the basis of this hypothesis, the following would be predicted: (1) The preferred sites for inhibiting the primary glycolytic mechanism in order to obtain maximum destruction of energy-yielding reactions in malignant tissue. These should occur at the points of creation of the high energy phosphate bonds, namely, the coupled oxidation-phosphorylation of 3-phosphoglyceraldehyde to 1,3-diphosphoglyceric acid and the enolization of 2-phosphopyruvic acid to phospho-enol pyruvic acid. These reactions are inhibited, respectively, by iodoacetic acid and sodium fluoride. (2) Such inhibition would have minimal effects on normal tissue.

In a study of the effect of the glycolytic inhibitors—fluoride, iodoacetate, and malonate—on a series of more than one hundred cases of diverse forms of human cancer, it was found that objective evidence of tumor inhibition was found in cases of lymphosarcoma, acute leukemia, and Hodgkin's disease. This was not the case in patients with carcinoma of the colon, fundus uteri, ovary, pancreas, rectum, or in chronic leukemia, melanoma, chorionepithelioma testis, or with squamous cell cancers of the cheek and pharynx. Some response of a questionable nature was elicited in cancers of the adrenal cortex, breast, cervix, lung, stomach, testes, and in fibrosarcoma. It would appear from these observations that, while certain cancer types behave as if they were particularly dependent upon glycolytic mechanisms for their energy requirements, this is certainly not the case for all or even the majority of them. Furthermore, even in those cases which may exhibit definite regression under glycolytic inhibitor therapy, an insensitivity develops and reactivation of the process occurs. Whether or not more adequate therapeutic results would be obtained if the active agents functioned as prosthetic groups of larger molecules is worthy of investigation. In any case it would appear that our knowledge of the metabolic pathways of normal and malignant tissue is far from complete.

In view of the uniformity of tumor tissue metabolism as studied in vitro, it would be expected that chemotherapeutic procedures that could inhibit a unique or essential property of one type of cancer tissue should be able to produce similar changes in most if not all others. To date, however, the variety of chemical agents possessing any selectivity of action on neoplastic tissue as contrasted to its normal homologue have all been dismally ineffective in their action on diverse forms of cancer. That this is so is attested to not only by the results just cited but also by the clinical experience with agents like urethane, nitrogen mustards, aminopterin, Fowler's solution, hormone therapy, and radiation therapy itself.

The limitation of the therapeutic efficacy of these agents to individual tumors or related neoplastic types would seem to be extremely significant and cannot be underestimated in our concepts of malignancy, particularly in regard to attempts at the development of a rational chemotherapeutic control. At least two possible alternative explanations appear plausible. Either the inhibitory effect with the individual compounds represents an action on a unique metabolic or structural feature of these particular growths, or the concept of an essential entity of all malignant neoplasia, as tacitly predicated on the basis of chemical and cytologic observation, is false or inadequate. That is, the in vitro biochemical characterization of tumor tissue may be a measure of a manifestation of malignancy rather than of its subtle essence, or it may fail to reflect the ability of tissues to adapt to unfavorable environmental factors by alterations of their metabolic pathways. Critical knowledge is needed of the changes incumbent on the transformation of normal tissue to tissue possessing good organoid and functional potentiality yet possessed with the ability of unlimited growth, extension, and metastasis. Much remains to be learned of the mechanism, relative significance, and relation of the acquisition of malignant potentialities and the development of chemical and morphologic anaplasia.

The discovery of chemical carcinogens and the investigations of the chemical characteristics of tumor tissue resulted in great emphasis on the local growth, although in more recent years attention has been turning toward the systemic alterations in the tumor host. These latter observations have strengthened the concept that cancer is a systemic disease whose local manifestations may vary but whose presence is associated with a surprising uniformity of alterations of body milieu. These changes may be roughly divided into two main groups: (1) tissue changes, most particularly changes in liver metabolism and cytochemical activity, and (2) changes in the blood and urine of the cancer host.

Abels *et al.* found that a significant depression of a wide variety of hepatic functions occurred in patients with active gastrointestinal carcinoma.[12] These findings were independent of the presence of liver metastases and were not noted in patients who had experienced successful resection of the growth. Extension of this line of investigation was reviewed recently by Rhoads.[13] It was found that the presence of a gastric carcinoma was associated with a lowered serum albumin content which was not correctable by dietary or parenteral administration of proteins, despite the presence of a positive nitrogen balance. Similarly, analysis of liver biopsies from patients with gastric carcinoma revealed a decrease in glycogen content which was not elevated, despite dietary or parenteral administration of carbohydrates. However, it was also found that administration of adrenal cortical extract in conjunction with the protein or carbohydrate administration resulted in elevation of the serum albumin concentration and liver glycogen, respectively. These studies indicate the association of cancer and hepatic insufficiency and explain to some extent the "unexplainable" deaths sometimes seen in cancer cases.

Cytochemical studies of the liver of tumor-bearing patients and animals have revealed a decrease in the catalase activity which, in animals at least, shows a correlation between the tumor size and the depression of the liver and kidney catalase activity.[14] Perhaps the most striking aspect of these observations is the fact that practically all types of tumors in a variety of species give rise to this common change. Similarly, decrease in liver d-amino acid oxidase and arginase occurs in tumor-bearing animals, a phenomenon which may underlie the failure of protein fabrication mentioned above. In general, the changes in liver enzyme activity in the tumor-bearing animal are in the direction of changes expected if the liver itself was the seat of malignant neoplasia.

In addition to the alterations in cytochemical components of the tissues of the tumor host, well-defined alterations have been observed in the blood and urine of cancer patients. Some of these alterations are generalized and occur in a wide variety of malignant neoplastic conditions, while others are associated specifically with a single or a small number of new growths. In some cases these former changes are so constant as to have decided diagnostic and prognostic significance. Among these changes one finds alterations in serum fluorescence, steroid hormone excretion, plasma-reducing power, and heat coagulation, as well as excretion of gonad and splenotrophic substances in the urine of cancer patients.

Serum Fluorescence.—Herly has extended his observations on the fluorescence of malignant tissue to samples of serum obtained from patients with and without malignant disease.[15] The procedure employed consists in the utilization of near ultraviolet light to illuminate unknown serum specimens in comparison with serum from a known control or cancer case, thus permitting estimation of the relative fluorescence of the samples as well as their turbidity. According to the results of testing several thousands of cases, it appears that the presence of malignant neoplastic disease is associated with an increased transmission of light and diminution of fluorescence as compared to sera samples from control patients and patients with a wide variety of non-neoplastic disease. This observation has been found to hold for man and for tumor-bearing rats and mice.

In animal experiments it has been shown that the transplantation of minute amounts of malignant tissue causes a diminution in serum fluorescence in twenty-four to forty-eight hours. The converse of this has also been found to occur. Thus, the operative removal of all malignant tissue was followed by a return of normal serum fluorescence within one week in animals and within twenty-one days in humans.

While most types of cancer will induce this change, Herly points out that this type of change is not limited to cancer. Hyperpyrexia, toxemias, pregnancy, and certain medications may yield reactions indistinguishable from those in cancer cases. While these findings stress the need for caution against indiscriminate haste in diagnostic application, they do not mitigate against these changes being considered as a systemic component of malignant disease.

Steroid Metabolite Excretion.—As mentioned earlier, the presence of gastric carcinoma is associated with a failure of protein fabrication and glyconeogenesis. Extensive study of the excretion of metabolites of the adrenal cortical hormones has been carried out at the Memorial Hospital, and in a review of cancer as a systemic disease Rhoads has indicated that, "Normal individuals of both sexes and every decade of life show few qualitative differences, although quantitative differences from person to person are marked. When individuals with disease are studied, the picture is quite different. Pregnancy, hyperplasia of the adrenal gland, and Cushing's disease are all marked by the presence of strikingly abnormal hormone patterns composed of chemical substances not excreted by any normal individual. Patients with cancer also show uniformly qualitative abnormalities of hormone excretion, and these are distinctly different from the abnormal patterns in pregnancy, Cushing's disease, and adrenal hyperplasia or tumor. The conclusion, however, is inescapable, that cancer is associated with the excretion of one specific steroid frequently, and many others irregularly."[13]

Gonad and Splenotrophic Substances in the Urine.—It has been claimed by some investigators that cancer tissue, regardless of type, has in common a trophoblastic character. In this connection the study of Beard, Halperin, and Libert on the effect of intraperitoneal injection of malignant urine extracts in normal and hypophysectomized rats is of interest.[16] The authors reported that the intraperitoneal injection of concentrated alcohol-ether extracts of urine from cancer patients into young rats resulted in an increase in spleen and gonad size in two to four days. These changes were quantitated in terms of ratios—body weight:spleen and body weight:gonad. Empiric determinations indicated that a drop of 20 per cent or more in the value of these ratios was indicative of the presence of malignancy.

When this technic is applied to hypophysectomized rats, there is a loss of this differential reaction between the urine of control and cancer patients. The investigators conclude, in part, that "all malignant urines so far tested by ourselves (with one exception) and others contain a substance X which is protein-sterol in nature and which stimulated the rat pituitary to produce increased amount of another substance, Y, possibly a gonadotropic hormone, which is then responsible for the biologic test for human malignancy."

Reducing Power of Plasma.—In 1944, Savignac *et al.* reported on an interesting correlation between the presence of malignancy and the reducing power of serum as tested by reaction with methylene blue dye.[17] These studies have been extended and corroborated by us, using a slightly different technic.[18] Under the conditions employed, plasma or serum samples from healthy individuals yield a distribution curve of reducing-time values whose peak is at eight and one-half minutes, the upper limit of which is at ten and one-half minutes. This is at variance with the results of similar studies of plasma or serum samples from individuals with a wide variety of malignant diseases. Here the reducing-time values are more often prolonged, and in some cases may require more than twenty minutes to bring about complete reduction of the dye. The percentage of cancer cases which have reducing times of eleven minutes or more is evident in the following listing of some common cancer types: carcinoma of the breast, 40 per cent; carcinoma of the lung, 73 per cent; carcinoma of the cervix, 59 per cent, and carcinoma of the colon, 68 per cent. In 600 cases of diverse forms of malignant neoplasia, evidence of a decreased reducing power was found in 75 to 80 per cent when tested with the methylene blue and brilliant cresyl blue technics, while less than 2 per cent of approximately 2,000 control cases showed any such change. While most common diseases and benign tumors gave reactions similar to the control group, this was not the case in plasma samples from patients with tuberculosis, rheumatic fever, cirrhosis, and gravid females. This would indicate that the alteration in reducing power, while seemingly associated with the presence of malignancy, is not specific for it.

The mechanism of this change in reducing power in association with the presence of cancer appears to be part of the systemic effect on protein metabolism. The studies of Savignac *et al.* referred to above appeared to implicate the albumin fraction as the principal plasma component responsible for the methylene blue reduction. Our own studies suggest that the -SH group of a protein component of plasma, most probably albumin, is responsible for the reducing power as measured by the technic described.[18] Furthermore, the reduction of the dye appears to be a measure of the reactivity or appearance of the reducing groups rather than a measure of the total number of such groups potentially available. Thus, studies of the *total* reducing groups of plasma or serum reveal no difference between individuals with and without malignancies.[19]

Fibrinogen and Heat Coagulation of Plasma.—While the presence of malignant disease is associated with deficiency in albumin fabrication as evidenced by a lowering of the serum albumin concentration and reducing power, the fibrinogen concentration tends to rise. This finding, reported by various investigators and corroborated in our own studies, indicates that the various protein components of the plasma are influenced differently by the presence of malignant disease.[20,21]

When plasma samples from individuals with and without malignant disease were exposed to a standard amount of heat, it was noted that the former group tended to show a greater degree of turbidity. When the procedure was quantitated by the use of a turbidimetric reading with the photoelectric colorimeter, it was found that plotting the values of plasma samples from healthy individuals yielded a curve whose peak had the value of 48 and that less than 2 per cent of the cases extended beyond 82. On the other hand, plasma samples from cancer patients yielded values of 80 or above in more than 60 per cent of the cases. Further, it has been amply demonstrated that the successful resection or therapy of a malignant lesion is followed by a fall in the elevated coagulation values to normal levels As with other systemic changes occurring in the presence of cancer, certain non-neoplastic diseases induce similar changes, viz., tuberculosis rheumatic fever, cirrhosis, and pregnancy, indicating again that this response of the host is no completely specific for the presence of cancer However, it should be indicated that these alterations are not an expression of cachexia which might develop in the end stages of a variety o conditions, since they have been observed in patients with relatively small lesions and otherwise in apparent good health.

Chemical investigation of the basis of these changes indicates that it is related to the fibrinogen concentration. Thus, similar heating o serum samples fails to induce turbidity, and parallel determinations of fibrinogen and coagulation values reveals a correlation between the two

While the various systemic changes just discussed have intrinsic value of a diagnostic and prognostic nature, they are perhaps equally valuable in raising the curtain on the field of systemic changes in cancer and the unanswered problems therein. It is quite significant tha many of these changes appear early. Thus Ayre has noted that, in approximately 70 pe cent of cases with precancer lesions of the cervix he has obtained significant alterations of eithe or both the reducing power and the coagulatio value of plasma.[22] Whether these alteration represent an attempt on the part of the host t resist the new growth or whether they are a expression on the part of the cancer in inducing favorable field for its growth is a question we worth examination.

Summary

In view of the various data presented above, would appear that the development of a malignan neoplastic growth is a gradual process which involves alterations in the tissue of origin as we as in the host. While well-defined alterations i tissue morphology, tissue chemistry, and th tumor host occur with the advent of the large majority of tumors, none of these changes is completely specific, since some or all of them may fail to appear in individual cases of malignancy, while at times some or all of them may be found in the presence of disease processes other than malignant neoplasia. These findings lay stress on the importance of the tumor-host relationship in the development and biologic characteristics of cancer.

Experimental observations and hypotheses have value not only in explaining that which is known but also in suggesting new paths for exploration. It is hoped that this discussion will aid in highlighting the elusive nature of the essence of the phenomenon of malignancy and perhaps suggest worth-while problems for further investigation.

The morphologic characteristics and biochemical alterations in tumor tissue and the tumor host are reviewed in regard to their specificity to cancer and implications of chemotherapy. Pertinent experimental data indicate that the tumor process is a gradual one and involves changes both in the tissue of origin and in the tumor host. Although available studies are incomplete, it appears that the definition of a malignant growth in terms of its biologic characteristics cannot be accounted for by the histologic or biochemical changes of the local growth. Further work on cancer as a systemic disease in general and the tumor-host relationship specifically appears justified at this time.

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PREVENTION OF MASSIVE NECROSIS IN ACUTE HEMATOGENOUS OSTEOMYELITIS WITH STAPHYLOCOCCUS AUREUS SEPSIS

JULIUS KAVEE, M.D., F.A.C.P., and FREDERICK S. COLEMAN, M.D., New York City

(*From the Medical Service of Harlem Hospital*)

THE successful achievements of any medication are measured by the results of its use in decreasing mortality and morbidity. Acute osteomyelitis is an excellent proving ground for the effectiveness of the newer bacteriostatic and bacteriocidal agents. The value of penicillin in Staphylococcus aureus sepsis with osteomyelitis is proved by its ability to overcome the initial septicemia or pyemia and to prevent further septic embolization. Small necrotic pulmonary and bone lesions caused by this organism may be noted to retrogress and disappear under parenteral treatment with penicillin. The use of penicillin precludes urgent surgical intervention in these infections. However, surgery has often been necessary to eradicate the larger necrotic bone foci and their attendant sequestra and sinuses.

In a series of 1,547 cases of acute osteomyelitis, reported by Kenney, before the effective use of bacteriocidal agents there was a mortality of 23 per cent.[1] In toxic patients with a temperature of 103 F. or higher, or where the blood culture was positive for S. aureus, the mortality was 46 per cent. Septic embolization occurred in one third of these patients.

The effectiveness of penicillin in the treatment of acute osteomyelitis with or without soft tissue abscesses has frequently been publicized.[2-7] Greengard described several infants with acute hematogenous osteomyelitis, mostly with single bone involvement.[8] Complete restitution of bone occurred in one infant with septicemia and a single area of hematogenous osteomyelitis without specific therapy, but most of the other infants who received no penicillin and recovered developed sequestra and required drainage of the osteomyelitis or of soft tissue abscesses. Under parenteral treatment with penicillin rapid clearing of the septicemia and early recovery from the osteomyelitis were noted. The comprehensive work of Altemeier and Helmsworth thoroughly reviews various aspects of penicillin therapy in acute osteomyelitis.[9] The necessity of early diagnosis and institution of adequate therapy is emphasized by these authors.

Prior to the advent of penicillin all the patients at Harlem Hospital with staphylococcus septicemia and multiple embolization to the lungs or bones died, despite early diagnosis and heroic treatment. Since the use of penicillin was started at Harlem Hospital, three patients, with overwhelming staphylococcus aureus sepsis, marked toxemia, and multiple septic embolizations of the lung have recovered fully. In one of these patients who had, in addition, multiple large areas of bone destruction, there was complete regeneration of the involved bones without surgical intervention. This patient is the subject of the following report.

Case Report

W. J., a fourteen-year-old youth, was admitted to the medical service at Harlem Hospital on August 18, 1944. One week prior to admission he had fallen, hurting his right shoulder. Because of continued pain and disability he went to a physician who applied a Sayre-Velpeau bandage. He felt ill but continued ambulatory until four days later when he noted severe pain in his right groin and began to drag his right leg. On the following day his left knee became swollen and painful. On the day of admission he complained of a sore throat, had a severe chill, and became stuporous.

On admission the physical examination revealed a severely ill, well-developed boy who was disoriented and delirious. He was neither cyanotic nor dyspneic. His neck was rigid, but the remainder of the neurologic examination was normal. The pupils were dilated and reacted well to both light and accommodation, and optic fundi were normal. The pharynx was congested, and the tonsils were hypertrophic. The Velpeau bandage was removed; no fracture was noted in the region of the right shoulder girdle, but movement of the shoulder was painful. In the right axilla several herpetiform impetiginous ulcers were noted. No adventitious signs were elicited over the lungs. The heart seemed normal in size, shape, and position. The heart rate was 110 with regular rhythm. A soft systolic murmur was heard over the entire precordium but was most marked over the base of the heart. The abdomen was soft, and no viscera or masses were palpable. Flexion of the thighs elicited pain. The left knee was swollen, red, and fluctuant. A slight inguinal lymphadenopathy was present. The blood pressure was 106 systolic and 66 diastolic. The temperature was 104 F., pulse 110, and respiration 20.

He had a normal blood creatinine, urea, and glucose, a negative Kahn, and a normal urine. The hemogram revealed a hypochromic anemia and a moderate polynuclear leukocytosis. The hemoglobin (Sahli) was 50 per cent. The red blood cells 2,850,000 per cu. mm. The white blood count was 21,600 of which 78 per cent were polymorphonuclear

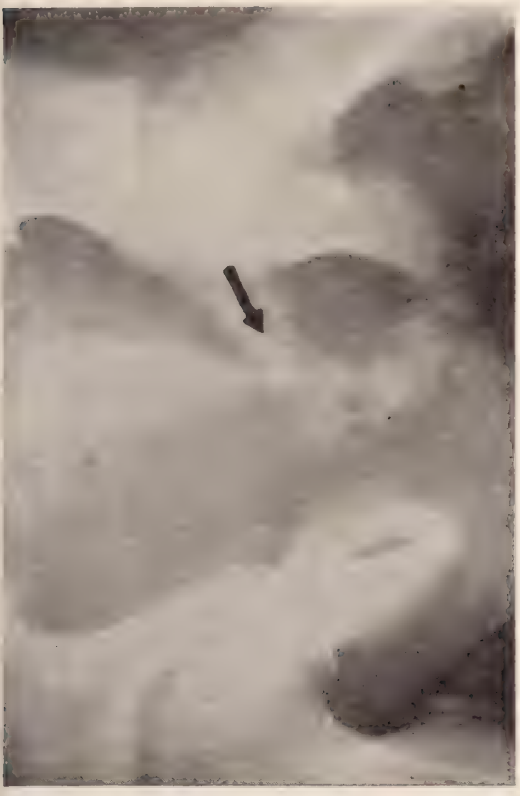

Fig. 1. Almost complete destruction of right pubic bone.

neutrophils, 2 per cent polymorphonuclear eosinophils, 1 per cent polymorphonuclear basophils, and 19 per cent lymphocytes. Because of the nuchal rigidity a lumbar puncture was performed. The spinal fluid was clear, under normal pressure, and contained 3 lymphocytes per cu. mm. The spinal fluid chemistry was normal, and no organisms were found on smear or culture. The left knee was aspirated, and thick yellow pus was obtained which contained many polymorphonuclear leukocytes and staphylococci. These were grown on broth and agar solid media and proved to be a coagulase positive S. aureus. A similar organism was cultured from the ulcers in the right axilla. The blood cultures on the first and second day following admission revealed numerous colonies of the same cocci.

The roentgenogram of the right shoulder taken on the day of admission revealed a disorganized state of the bone at the epiphyseal junction and upper third of the right humerus and a similar destructive process in the right pubic bone involving the body and both rami. Roentgenograms of the left knee and the other long bones failed to reveal any abnormality. On August 20, 1944, the roentgenogram of the chest revealed many scattered round opaque shadows about 0.5 to 1.5 cm. in diameter in both lung fields. These areas contained small cavities characteristic of septic embolizations of the lung due to S. aureus.

During August 18 and 19, the patient was treated with sulfadiazine, and a blood level of 8.9 mg. per cent was obtained. No improvement was noted in the patient's toxic state or local manifestations. On August 21, three days after admission, he was given a 500-cc. whole blood transfusion for his anemia, and thereafter 100,000 units of penicillin were injected intramuscularly every three hours for three days. The following day his temperature was lower, his toxemia moderated, and his abnormal mental state disappeared. On August 23 he began to move his right arm and right leg. Thereafter he received 25,000 units of penicillin every three hours for the next forty days so that a total dose of 9,100,000 units was employed. The blood culture taken after the third day remained sterile, as did subsequent blood cultures taken on the fourth, fifth, ninth, and twenty-first days following admission.

The chest roentgenogram became normal on August 29, 1944. The left knee, however, remained swollen, and thick pus was obtained on aspiration for the first two weeks. The pus at this time contained no staphylococci on smear or culture. On September 1, the left knee was aspirated, and 10,000 units of penicillin were injected. Thereafter the swelling did not recur, and he began to use the left

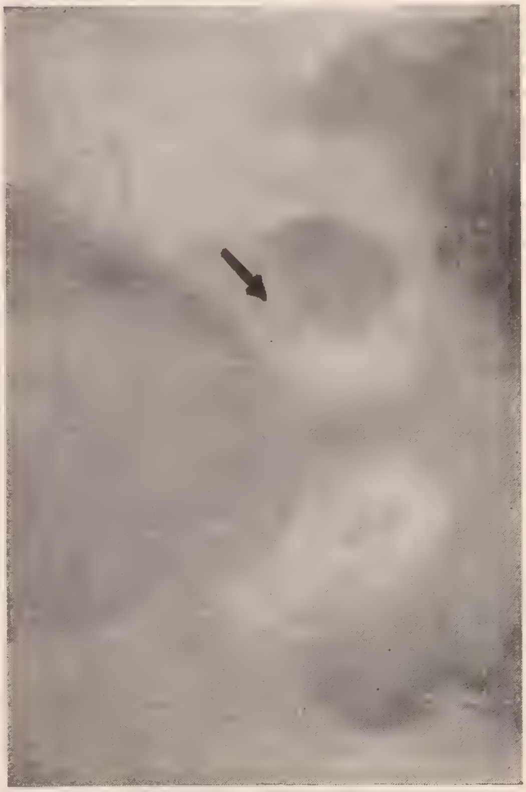

Fig. 2. Healing of right pubic bone.

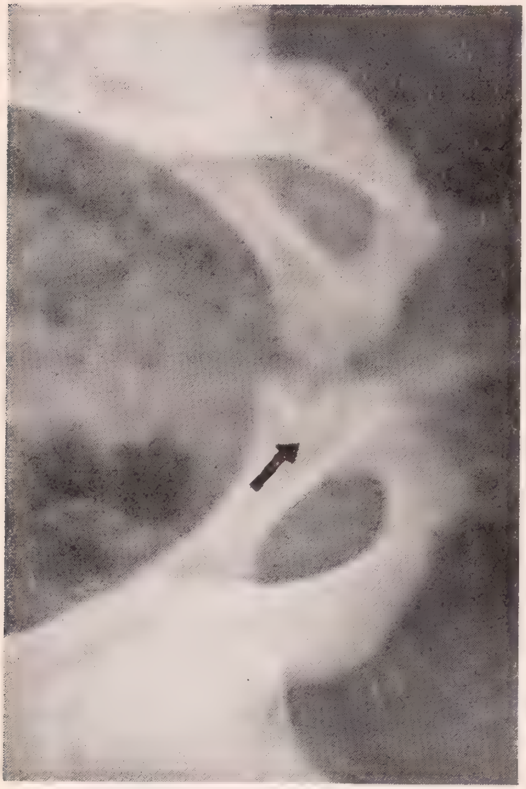

FIG. 3. Restitution of right pubic bone to normal; no sequestration occurred.

leg freely. On the thirty-fourth day of hospitalization, September 22, 1944, he became afebrile, and the temperature remained normal until his discharge. A roentgenogram taken on September 29, 1944, showed almost complete destruction of the right pubic bone (Fig. 1). He became ambulatory on October 5, 1944.

The destruction noted in the right pubic bone remained unchanged as late as October 17, 1944, but healing was noted on a roentgenogram taken on December 7, 1944 (Fig. 2). Nevertheless, the patient was discharged and resumed his normal activities. A follow-up examination and roentgenogram of the pelvis still revealed some disorganization of the pubic bone on March 15, 1947. On October 6, 1947, a roentgenogram revealed fairly normal pubic bone (Fig. 3). The patient has remained well, has partaken in all youthful activities, and has developed and grown normally.

Summary and Conclusions

This is the report of a fourteen-year-old boy who acquired a staphylococcus aureus skin infection following trauma. He became desperately ill with S. aureus sepsis and multiple septic emboli to the lungs and bones of the left knee, right humerus, and right pubis. The initial roentgenograms revealed an early osteomyelitis of the right humerus and complete destruction of the right pubic bone. As is not unusual in younger patients, the endotoxins of the staphylococcus produced a hypochromic anemia and marked psychic mental and meningeal disturbances. With massive doses of penicillin the destruction of the staphylococcus was quickly achieved with sterilization of the blood, lung, skin, and bone lesions. The healing of the markedly disorganized pubic bone was slow, but after a period of three years complete restitution of the pubic bone occurred without the formation of sequestra, soft tissue abscesses, or sinuses and without surgical intervention.

The ability of penicillin administered intramuscularly to overcome penicillin-sensitive S. aureus infections in man is well known. Its effective use in the local pyemic manifestations caused by this organism, such as osteomyelitis, is well established. The use of large initial doses in patients with S. aureus sepsis is an effective method of saving life and forestalling the appearance of penicillin resistance in these organisms during overwhelming infection. The parenteral use of penicillin over an extended period of time (one month or longer) has been necessary in the treatment of certain infections, such as acute putrid lung abscess, to assure permanency of the healing of these infections without thoracic surgery. Because of the frequent failure of the involved lung to re-expand, such extended use of penicillin without surgical intervention has not been equally successful in thoracic empyema.

In this patient with massive bone destruction, the extended use of penicillin over a period of forty-two days resulted in the complete restitution of the destroyed bone to normal without sequestration, the formation of soft tissue abscesses or sinuses, and without surgical intervention. It is suggested that such extended parenteral use of penicillin after the subsidence of the acute osteomyelitis may be effective in preventing future sequestration and sinus formation and may thus decrease the necessity for later surgical treatment in patients with acute S. aureus osteomyelitis with extensive bone destruction.

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METRAZOL AND ELECTRIC STIMULATION AS DIAGNOSTIC AIDS IN EPILEPSY

Theodore Meltzer, M.D., and E. Louis Reder, M.D., New York City

(From the Neurological Outpatient Department of Greenpoint Hospital)

A PATIENT who has convulsive attacks but shows a negative electroencephalographic record often presents a problem in diagnosis. The senior author had observed that in such cases a small, intravenous dose of Metrazol would induce a convulsive attack clinically. This raised the question of whether or not epileptic patients have a lowered threshhold to Metrazol or electric stimulation as compared with the normal individual, and, if this were so, whether the procedure could be utilized as a means of diagnosis. The present paper is a report of the experimental study of this problem.

The idea has long been entertained that the brain, as an excitable tissue, has a "threshhold" and that a "discharge" is produced whenever a stimulus exceeds this "threshhold." The advent of electroencephalography has shown that such discharges may occur without any clinical manifestations. It is also known that certain maneuvers may induce an attack in a person with epilepsy, either clinically or on the electroencephalographic record. These maneuvers include the McQuarrie water-retention test, hyperventilation, stimulation of the carotid sinus, lowering of the blood sugar, and others. An investigation of the literature revealed that the use of Metrazol as a diagnostic test for epilepsy has been studied and recorded, especially by South American investigators. However, the use of an electric current as a clinical diagnostic test has received scant attention.

Method of Investigation

Twenty-eight patients suffering from grand mal epileptic seizures and 28 psychoneurotic patients without any history of convulsions were studied. All of the patients with epilepsy had been treated over a period of years in the outpatient department, and each had been observed at one time or another, either by a member of the nursing staff or the neuropsychiatrist in charge, in a grand mal attack. The control group of psychoneurotic patients was carefully screened for any history of convulsive seizures.

Each patient with epilepsy was deprived of medication for a two-week period. Each then received an intravenous injection of 1 cc. of 10 per cent Metrazol given as rapidly as possible and followed by an electric stimulus of from 60 to 70 volts for a duration of two-tenths second. A minimum of one hour was allowed between the injection of Metrazol and the application of the electric stimulation, and in most cases the two moduli were given on different days. A Rahm 60-cycle, alternating-current apparatus, recording in volts, of the type ordinarily employed in electric shock therapy, was used in these experiments. The machine did not record the resistance of the head. With this machine the minimum current required to produce a convulsion in therapeutic cases was 95 volts at two-tenths second, while most patients required a voltage of from 105 to 110. Therefore, it was thought that a current of from 60 to 70 volts would constitute an adequate test for epilepsy. Although the values obtained on our machine may differ somewhat from those recorded by other machines of identical or different manufacture, our machine gave nearly constant values as shown by many hundreds of therapeutically induced convulsions. The set time was always two-tenths second.

The physical precautions ordinarily employed in producing therapeutic convulsions were used. A pillow was placed beneath the patient's arched back. He was mildly restrained. Dental appliances were removed, and a mouth gag was used. Curare or other medication was not administered before or after the experiment. The electrodes were temporally placed, and ordinary electrode jelly was used. The first electric shock was given at 60 volts with the time set at two-tenths second, and, if there was no convulsion, a second stimulus of 70 volts at two-tenths second was given at least two minutes later.

Results

Of the group of 28 patients with epilepsy, five responded with a grand mal attack when subjected to 60 volts at two-tenths second; five more reacted similarly when subjected to 70 volts for the same length of time, making a total of ten patients, or 35.7 per cent (Table 1). Four patients responded with grand mal attacks when given an intravenous injection of 1 cc. of 10 per cent Metrazol. Two of these had previously experienced a grand mal attack when given 60 volts. Thus, 12 patients out of a total of 28 (43 per cent) responded to either Metrazol or electric stimulation or both with a grand mal attack. In

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Presented at a meeting of the New York Neurological Society, May 11, 1948.

TABLE 1.—CLINICAL RESULTS IN 28 EPILEPTICS

Cases	Age	Sex	Symptoms (Years)	Electric Stimulation —0.2 Second—		Metrazol (1 Cc.)
				60 Volt	70 Volt	
1	46	M	14	Grand Mal	. . .	0
2	32	F	12	0	0	0
3	34	M	22	0	0	Grand Mal
4	41	F	16	0	Grand Mal	0
5	64	M	5	0	0	0
6	20	M	15	Grand Mal	. . .	0
7	54	F	20	0	0	0
8	34	M	8	0	0	0
9	22	M	5	0	0	0
10	12	F	3	0	Grand Mal	0
11	37	M	8	0	0	0
12	14	M	3	0	Grand Mal	0
13	28	M	3	0	0	0
14	46	M	17	0	0	0
15	58	M	10	0	Grand Mal	0
16	33	M	18	0	0	0
17	25	M	6	Grand Mal	. . .	0
18	61	M	11	0	0	0
19	57	M	8	0	0	0
20	23	F	8	Grand Mal	. . .	Grand Mal
21	38	M	27	Grand Mal	. . .	Grand Mal
22	20	F	4	0	0	0
23	41	F	10	0	0	0
24	19	M	3	0	0	0
25	32	F	14	0	0	0
26	52	M	20	0	0	0
27	27	F	11	0	0	Grand Mal
28	48	F	20	0	Grand Mal	0
Grand Mal Total				5	5	4

contrast to these figures, not one of the control group of 28 psychoneurotic patients, with negative histories for epilepsy, responded with a convulsion to 70 volts at two-tenths second. The reaction of these patients to 1 cc. of Metrazol was not determined in this study, since this point is well covered in the literature and there is ample control in the fact that Metrazol-induced therapeutic seizures in psychotic and depressed patients consistently require doses of from 4 to 6 cc.

Neither the age, which varied from twelve to sixty-four years, the sex of the patients, nor the duration of symptoms had any relation to the incidence of convulsions.

Discussion

Our results compare favorably with those that have already appeared in the literature. This is especially true of Metrazol. A considerable amount of work has been done with this drug as a cerebral stimulant. As will be pointed out, the various workers have all arrived at approximately the same results from which, however, they have drawn different conclusions. On the other hand the literature reports few instances of the use of electric stimulation for cases of suspected epilepsy.

Metrazol.—In 1939, Sal y Rosas gave Metrazol to 21 patients with epilepsy and found that, in many, unusually small amounts of the drug, often as little as 0.5 cc., would induce a convulsion.[1] The highest dose required was 6 cc. In 1940, Goldstein and Weinberg gave subcutaneous injections of 10 per cent Metrazol in doses of 5 cc. per 100 pounds to 34 persons with epilepsy.[2] Of these, 16 had grand mal attacks during the subsequent twenty minutes. The authors concluded that this "test" was at least equal to the McQuarrie water-retention test. It is interesting that of the 84 schizophrenic patients used as controls only one had a grand mal attack under the conditions of the test. In 1940, Ventriglia, an Italian worker, gave graduated amounts of 10 per cent Metrazol to 74 persons with epilepsy and to 50 nonepileptic persons.[3] He found that a minimum of 2 cc. was required to elicit a reaction in the nonepileptic patients, while 14 per cent of those with epilepsy responded to less than 2 cc. Even with 2 cc. the patients with epilepsy showed a greater response.

In 1942, Guidotti and also Bardenat reported greater sensitivity to Metrazol in epileptic patients.[4,5] In 1943, Roismiser gave Metrazol in varying amounts to 38 epileptic patients and 18 nonepileptic patients and concluded that this test was of value in the diagnosis of epilepsy.[6] The data of these three investigators showed that the lowest dose required to produce a grand mal attack in the nonepileptic patients was 3.5 cc. but that this dose resulted in convulsions in 92.1 per cent of those with epilepsy. Coloma, in 1943, concluded that there was scant value in the use of Metrazol in the diagnosis of epilepsy.[7] However, study of his figures indicates that patients with epilepsy responded to as little as 1 cc. of Metrazol. In 1947, Walker *et al.* found that, when 93 patients with post-traumatic epilepsy were given 2 cc. of Metrazol, 12 had generalized seizures while 62 showed alterations in the electroencephalographic record.[8]

From our studies and those presented in the literature it is safe to say that, as a group, the dose of Metrazol necessary to induce convulsions in patients with epilepsy of the grand mal type is smaller than the amount necessary in those who are not epileptic. If 1 cc. were taken as a standard testing dose, then it would be found that a small percentage of persons with epilepsy would react with a convulsion, while those free of the disease would not. Thus, this test is valuable only if it is positive. A negative result does not rule out the possibility of epilepsy.

From the standpoint of the physiology and etiology of epilepsy it is of great importance to elucidate how and why such a reaction occurs. Probably, it is not peculiar to Metrazol alone.

Although some authors disagree, patients with epilepsy generally have been found to be more sensitive to the McQuarrie water-retention test. Again, convulsions are more easily produced in epileptic patients when the water content of the brain is increased, regardless of the specific method involved. Hyperventilation, with the creation of a relative alkalosis, also elicits convulsions more readily in epileptic patients, whereas others seem to be highly sensitive to carotid sinus manipulation. The important point to remember is that all patients with epilepsy do not react positively to such tests. One can only assume that all the factors necessary to produce a convulsion clinically may not be in operation at the time of the test.

It has been demonstrated by Dandy that a convulsion will occur more readily if the brain is first injured.[9] Elsberg has stated that less absinthe is required to produce a convulsion if the animal is thyroidectomized or if the intracranial pressure is increased.[10] In a recent interesting case Barker and Wolf reported a grand mal attack occurring during sodium amytal abreaction in a patient who had an abnormally low sugar-tolerance curve and an abnormal interseizure electroencephalographic record which was aggravated by hyperventilation.[11] It is probable that many causative factors are at work in epilepsy and that convulsions occur clinically only when one factor is present in great abundance or when a modicum is synchronously contributed by each of several factors.

That Metrazol induces some alteration in the brain is indicated by a number of reports in the literature. Walker *et al.* have shown that subconvulsive doses of Metrazol are useful in posttraumatic epilepsy, since 44 per cent of the patients will show an alteration in the electroencephalographic record.[8] This work has been confirmed by Ziskind and Bercel in both human and animal studies.[12] An experiment conducted by Dripps and Larrabee in 1940 indicated that when Metrazol was given, less electric current was needed to stimulate the exposed cortex of animals on the operating table.[13] They concluded that Metrazol facilitated the transmission of impulses across the synaptic junctions to the cell bodies. Gurdjian, Webster, and Stone recently showed that alterations in cerebral metabolism take place in dogs submitted to Metrazol-induced convulsions.[14] Davies and Rémond found that in dogs there is an increase in oxygen consumption of the cerebral cortex during Metrazol-induced convulsions.[15]

Electric Stimulation.—The use of electric stimulation in the diagnosis of epilepsy is complicated by the "resistance" of the head and brain, because this "resistance" varies during the passage of the current. Nonetheless, using standard equipment, the same amount of current as recorded on the dials of the machine has been found to be necessary to induce a convulsive attack. For example, Kalinowsky and Kennedy found that with the time set at one-tenth second the absolute minimum amount of current necessary to induce an attack in nonepileptic patients was 85.2 volts in women and 92.6 volts in men.[16] In their famous work on anticonvulsants Merritt and Putnam determined that the amount of current necessary to produce a convulsion in an animal was remarkably constant.[17]

In order to eliminate as many variables as possible, all tests were done on the same machine, and the duration of the flow of the current was always two-tenth second. The results show the correctness of the assumption that 70 volts would constitute an adequate test for epilepsy, since this amount of current did not cause a convulsion in any of the 28 nonepileptic patients. It may be concluded that convulsions will occur with a considerably lower amount of voltage in epileptic patients than in those who are not epileptic.

The literature covering such experiments in the human is meager. Kalinowsky and Kennedy tried lower voltages on only 12 persons with epilepsy and concluded that the test was not of much use.[16] However, as in the case with Metrazol, it is pointed out that only a positive result is of value whereas a negative result does not exclude the possibility of epilepsy. In 1943, Stolze concluded that the patient was epileptic if a convulsion occurred with 50 ma.[18] In Mexico Garciadiego found that persons with epilepsy had convulsions with currents as low as 60 volts.[19]

The work of Kalinowsky and Kennedy and of Goodman, Swinyard, and Toman also showed that the electric convulsive threshold can be modified in both humans and in animals by the McQuarrie water-retention test by the administration of such drugs as Dilantin and Tridione.[16, 20]

Electroencephalography.—The electroencephalograph is perhaps the best method of determining epilepsy. However, there are certain limitations. Gibbs, Gibbs, and Lennox stated in 1943, "In about 48 per cent of persons with a history of seizures, a routine electroencephalograph is of great value in diagnosis and in about 42 per cent it is of little or no value."[21] From the results of our tests we would suggest that when the diagnosis cannot be made by the electroenecephalograph alone the patient be given Metrazol and electric current tests under the conditions set forth in this paper.

Summary and Conclusions

1. Persons with epilepsy of the grand mal

type tend to be more sensitive to convulsant agents, such as Metrazol and the electric current.

2. The intravenous injection of 1 cc. of 10 per cent Metrazol can be used as a simple diagnostic test. However, when the injection does not result in a convulsion, the possibility of epilepsy is not ruled out because only a positive test is of value. The use of only 1 cc. of 10 per cent Metrazol is emphasized.

3. Instead of Metrazol the electric current can also be used as a convulsant, provided the machine used is well standardized and the provocative amount of current given is definitely below the amount necessary to produce convulsions in normal individuals. Here again, a negative result does not rule out the possibility of epilepsy.

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UNWHOLESOME HOME LIFE CALLED BREEDER OF RHEUMATIC FEVER

Impoverished and disrupted homes are breeders of rheumatic fever, according to Dr. Robert L. Jackson of the University of Iowa, Iowa City, writing in a recent issue of the *Journal of the American Medical Association.*

Rheumatic fever, an infectious disease which runs a long course and which frequently results in a damaged heart, causes more deaths among children than other communicable diseases combined. It has been estimated that 2 per cent of school children of the United States have heart disease as a result of the rheumatic condition.

"The disease tends to breed in families where serious, longstanding social problems exist," Dr. Jackson says. "In our experience the economic factors are secondary in importance to the sociologic factors, because society has ways and means of helping the needy.

"Students of rheumatic fever cannot fail to learn how important wholesome family life is to the welfare of children and how devastating immoral practices, such as selfishness, greed, drunkenness, promiscuity, and divorce, are to wholesome family life. Only when an attack on these complicated detrimental forces is made, utilizing supernatural and natural resources, can one hope for the eradication of this scourge of childhood."

Dr. Jackson cites the histories of 266 Iowa rheumatic children. A study of these reveals that, if the disease is definitely inactive, an excellent diet and wholesome living conditions will practically eliminate the chance of recurrence with a heart damage.

During the acute stage of the disease the child's most urgent need is complete rest in bed, he says, adding: "When the rheumatic child comes under medical care the home environment of the child should be evaluated by an experienced and understanding medical social worker. When it is found inadequate, as it most frequently is, the work of raising the level of the environment should be started immediately.

"Special emphasis is placed on insuring a good dietary regimen for the child and for his family. This, however, is not the only phase of family rehabilitation that is undertaken. When the family social situation is poor, great effort is made to improve it, too. A good environment for the rheumatic child to live in is essential.

"The family of each child is instructed regarding the importance of an adequate diet, which should include for daily consumption: 1 quart of milk; one or two eggs; one serving of meat, fish, fowl, or liver; two vegetables ($^1/_2$ cup is considered a medium serving); one orange, apple, or tomato; one other fruit in addition; 1 teaspoon or equivalent of cod liver oil; 6 teaspoons of butter or margarine.

"They are also told that other foods, such as bread, cereal, and potatoes, can be added to satisfy the appetite and maintain correct weight, but in no circumstances are they to replace any of the foods previously named; cereal is not to be served more than once daily. Rather, the child is to be encouraged to eat larger quantities of fruits and vegetables; varieties of these are to be used, so the child will not form likes and dislikes.

"Each family is advised to have the child sleep in a room of his own whenever possible, or at least to sleep alone, and to have about ten hours of rest each night. The importance of proper clothing is stressed, as well as control of the temperature and the humidity of the home.

MERCUHYDRIN ADMINISTRATION BY SUBCUTANEOUS INJECTION

Arnold Koffler, M.D., and Joel J. Brenner, M.D., New York City

(From the Cardiac Clinic of the Fourth Medical Division, Bellevue Hospital)

THE importance of sodium retention in congestive heart failure has been emphasized in recent years. Gold *et al.* have reported a favorable response to a regime in which mercurial diuretics were the primary therapeutic agent.[1] This system consisted of daily injections of Mercuhydrin intramuscularly until a "dry weight" was reached, and then the mercurial was used as often as necessary to maintain this "dry weight."

It has been shown that there were few toxic effects when Mercuhydrin was given intramuscularly. As intramuscular injections are extremely difficult to give oneself, these frequent injections were given by medical and nursing personnel. Sussman found that Mercuhydrin was relatively nontoxic when given subcutaneously, and this finding prompted the following study.[2]

Sixty-nine ambulatory cardiac clinic patients were given 274 injections of Mercuhydrin. Injections were in 2-cc. doses, given subcutaneously in the arm. The observations are based on the results of 217 of these injections. As may be seen from Table 1, no reactions occurred in 90 per cent of the injections.

Marked and severe reactions were frequently accompanied by ecchymosis and might have been due to local trauma of a vessel. Occasionally, a marked reaction could be anticipated by severe burning pain immediately after the injection. One patient who suffered from a severe reaction had fever, chills, and malaise, in addition to local pain, lasting for three or four days. However, when 2 cc. of Mercuhydrin was repeated the following week, there were no ill effects. Similar findings were also found in several other cases. There was no sensitivity to the drug, and subcutaneous injections of Mercuhydrin were never discontinued.

Mercuzanthin (mercupurin), given subcutaneously to several patients in $^1/_2$-, 1-, and 2-cc. doses, produced very painful reactions and was discontinued.

The diuretic effect was estimated by the weight loss a week after an injection, and the patient was questioned as to the extent of the diuresis immediately after the injection. However, several patients were weighed more frequently, and adequate diuresis was confirmed by marked weight loss.

Case 1.—Weight was 145$^1/_2$ pounds on January 18, 1949. The patient was given 2 cc. of Mercuhydrin subcutaneously. Excellent diuresis took place according to the patient, and on January 19, 1949, weight was 141 pounds and 142 pounds on January 25, 1949.

Case 2.—Weight was 156$^3/_4$ pounds on March 17, 1949. The patient was given 2 cc. of Mercuhydrin subcutaneously. On March 18, 1949, weight was 154$^1/_2$ pounds.

Case 3.—Weight was 144$^1/_4$ pounds on March 18, 1949. Two cubic centimeters of Mercuhydrin were given subcutaneously, and weight became 136 pounds on March 19 and 21, 1949. Two more cubic centimeters of Mercuhydrin were given subcutaneously. Weight was 133 pounds on March 22, 1949.

Case 4.—Weight was 124$^1/_4$ on March 21, 1949. The patient was given 2 cc. of Mercuhydrin subcutaneously. On March 22, 1949, weight was 122 pounds and on March 23, 1949, 121 pounds.

A good many of the patients lost considerable weight even after one week (Table 2). Those who were in chronic congestive failure and previously on maintenance of mercurials had regained their weight by the next visit. Their response was judged by the extent of the diuresis as stated by the patient (Table 3).

Several patients in the clinic were supplied with the necessary equipment and were taught to inject themselves subcutaneously. This was easily accomplished and resulted in less frequent visits to the clinic.

TABLE 1.—Reactions Following 217 Subcutaneous Injections of Mercuhydrin

Reactions*	Injections	
None	196	(90%)
1 plus	8	(10%)
2 plus	7	
3 plus	4	
4 plus	2	

* Reactions were evaluated according to the scheme employed by Modell, Gold, and Clarke[3]:
1 plus—barely perceptible discomfort
2 plus—moderate pain
3 plus—marked pain
4 plus—very severe pain

TABLE 2.—Weight Loss, One Week After Mercuhydrin Injected Subcutaneously

Number of Patients	Weight Loss (Pounds)
2	7
1	6$^1/_2$
2	4$^1/_2$
6	3$^1/_2$
3	3
2	2$^1/_2$
4	2
6	1$^1/_2$

TABLE 3.—DIURETIC EFFECT OF MERCUHYDRIN INJECTED SUBCUTANEOUSLY AS JUDGED BY HISTORY (217 INJECTIONS)

Diuretic Effect*	Number of Injections
None	2
1 plus	3
2 plus	9
3 plus	159
4 plus	44

* Diuresis was evaluated as follows:
1 plus—poor
2 plus—fair
3 plus—moderate
4 plus—marked

Comment

Modell, Gold, and Clarke found intramuscular injections of Mercuhydrin to be relatively nontoxic.[3] They gave 36 intramuscular injections of Mercuhydrin to 20 patients. Fifty-five per cent of the injections produced no discomfort (Table 4).

TABLE 4.—REACTIONS FOLLOWING 36 INJECTIONS OF MERCUHYDRIN INTRAMUSCULARLY, AS STUDIED BY MODELL, GOLD, AND CLARKE

Reaction*	Injections	
None	20	(55%)
1 plus	11	(45%)
2 plus	3	
3 plus	1	
4 plus	1	

* Reactions were evaluated as in Table 1.

Finkelstein and Smyth gave 234 injections of Mercuhydrin intramuscularly, and pain occurred at the site of injection in seven instances (3 per cent).[4] Reactions occurred in about 10 per cent of our series of subcutaneous injections as against 45 per cent of Modell's intramuscular series and 3 per cent of Finkelstein's intramuscular series.[3,4]

Hermann stated that Thiomerin, a mercurial which is 160 times less toxic than Mercuhydrin when given intramuscularly, could be injected subcutaneously without producing any significant pain or irritation.[5] However, this needs further investigation.

Summary and Conclusions

Mercuhydrin in 2-cc. doses given subcutaneously produced a diuresis which appeared to be as effective as intramuscular injections. Several patients appeared to have a better diuresis following the subcutaneous rather than intramuscular injection. Painful reactions occurred in 10 per cent of our cases. In addition, this method allowed a greater rotation of injection sites and enabled indurated buttocks to recover. Patients were easily taught to administer the drug to themselves in the same way diabetics daily inject their insulin. In this way the number of hospital visits was reduced. In addition, more frequent injections were given to severe cases of congestive failure and more effective treatment instituted.

Mercuhydrin may be injected subcutaneously with adequate diuresis. Toxic effects are less or no greater than when given intramuscularly. This enables greater rotation of injection sites, self-injection of the patients at their homes, and reduces the number of clinic visits.

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ELECTRONIC SELECTOR WILL CUT BOTTLENECK IN ATOMIC ENERGY RESEARCH AND OTHER FIELDS

A recently developed type of mechanical brain which will sift through the mass of scientific knowledge continually pouring from laboratories and select those facts needed for specific research jobs is being perfected jointly by the U.S. Department of Agriculture and the Atomic Energy Commission.

The machine, called the rapid selector, promises to help solve a crucial scientific problem of keeping the individual scientist abreast of the tremendous surge of new ideas and developments in his own and related fields.

The selector operates like a research worker looking through the cards in a library catalog, but at much greater speed. With properly coded entries, the machine will scan up to 120,000 subject entries per minute, compared to a dozen or two entries which a fast worker may examine in the same time. Moreover, it will reproduce, on the spot, an abstract of a document or, if properly set up, the original document, saving time now spent in searching shelves of local libraries or in waiting for the information to come from distant places.

Case Reports

STAPHYLOCOCCUS AUREUS HEMOLYTICUS SEPTICEMIA COMPLICATING A CASE OF CALCULUS IN THE LOWER END OF THE URETER; TREATMENT WITH MASSIVE DOSES OF PENICILLIN

Frank Richard Cole, M.D., Flushing, New York

PENICILLIN has altered the course of many diseases during the past few years, and its greatest effect has been on diseases that previously had high mortalities. One of those was that of Staphylococcus aureus septicemia. Skinner and Keefer reported a mortality of 80 per cent of 122 cases.[1] The latter figure included treatment with the sulfonamide drugs.

The following case report is given to illustrate the severe toxicity of the disease, the effect of massive doses of penicillin on the infection, the poor effect of streptomycin on the course of the disease, and the absence of any synergistic action between streptomycin and penicillin on the invasive activity of S. aureus.

Case Report

J. C., a man of fifty years of age, was admitted to the Horace Harding Hospital on January 10, 1949, complaining of severe pain in the right lower quadrant of two hours duration. The pain radiated to the loin and was accompanied by nausea and vomiting. There was no history of frequency, burning, hematuria, oliguria, or any previous attacks. Examination disclosed a middle-aged individual complaining bitterly of pain in the stated region. Temperature was 98.6 F., pulse 88, and white count 7,800 with 74 per cent polymorphonuclears. The urine showed 40 to 50 white blood cells with 26 to 30 red cells per high dry field.

Physically there was marked tenderness over the right costovertebral border and tenderness and spasm of the right lower rectus. Rebound tenderness in that region was absent.

A flat plate of the abdomen was negative. An intravenous pyelogram on January 11, 1949, the day after admission, showed no function on the right side and a normal kidney, pelvis, and ureter on the left side. The patient was cystoscoped under spinal anesthesia. A number five x-ray catheter was inserted in the right ureteral orifice with difficulty. Intravenous injection of indigo carmine showed no dye in ten minutes. X-ray revealed a small stone in the lower end of the ureter. The catheter was left in place, and the patient returned to his room.

The next day he developed a chill. Drainage from the catheter was bloody and heavy with sediment. The latter situation necessitated frequent irrigations. Penicillin was administered at the rate of 300,000 units in oil and wax daily. The patient's pain was alleviated somewhat, but on January 13 he complained of similar severe pain on the left side. The patient was taken a second time for cystoscopy, and the left side catheterized with a number six ureteral catheter. Bloody urine was recovered. This was mixed with the same heavy sediment as on the right side. The patient's pain increased in intensity on the left side, while that on the right side abated. The drainage on the right cleared, but the left remained bloody. An x-ray with the catheters in place showed the passage of the right ureteral stone. The left showed no calculi.

On January 16, the eighth hospital day, his fever began to mount. The penicillin was increased to 600,000 units. He began to have chills and fever. A blood culture revealed S. aureus hemolyticus. The urine culture revealed the same organism. Streptomycin, 2 Gm. per day, was given in addition to penicillin. There was normal temperature for one day. The temperature fluctuated in the next two days between 101 and 104 F. Clinically, he developed a bronchopneumonia on the left base although x-rays were negative. When the temperature reached 105 F., penicillin was stopped, and 0.5 Gm. of streptomycin given every four hours. There was no abatement in the symptoms. The patient complained of severe headache and nausea. He had choreiform movements accompanied by auditory hallucinations. The prognosis was extremely grave. At this time he developed a thrombophlebitis in the right lower extremity. The saphenous vein on the inner thigh was extremely tender. Our diagnosis at this time was S. aureus septicemia hemolyticus with a metastatic pneumonia and thrombophlebitis.

The patient was put on massive doses of penicillin, and the streptomycin was stopped. A million and one half units in oil and wax were given. The temperature reached 106 F. The patient's family then moved him home against medical advice. The next day his temperature reached 106.4 F. There were marked auditory hallucinations and headache. The patient was then given 3,000,000 units. The temperature chart showed a remarkable drop in fever which then remained down. The same dose was then administered for three days. The rales in his chest cleared on the second day, and the thrombophlebitis on the third day. From that time on recovery was uneventful.

Comment

Staphylococcus aureus is the most pathogenic of the staphylococcus group. There are two varieties to be differentiated: The Staphylococcus A which is coagulase positive and ferments mannite and Staphylococcus B which does not. The former is the more virulent of the two.

Spink and Hall report 12 per cent of 68 strains of coagulase positive strains were isolated from patients relatively resistant to penicillin.[2] Further sensitive strains to penicillin may become resistant to smaller doses of the drug but will be overcome by larger doses. These authors maintain that an adequate level is maintained by 200,000 to 300,000 units intramuscularly. This, as shown in our case, is much too little.

Parker stated that the bacterial effect of penicillin is unrelated to the number of bacteria present.[3] However, Hobby and Dawson state that the antibacterial action was not always independent of the density of the bacterial population but that the results were profoundly influenced by the size of the inoculum.[3] Parker, however, found that in a not inconsiderable group of strains somewhat more resistant to penicillin than the majority the outcome of tests for penicillin sensitivity is profoundly influenced by the number of bacteria present.

Kirby demonstrated a striking correlation between the concentration of penicillin and the rate of lysis.[4] Within limits, lysis was more complete and occurred more rapidly with smaller than with larger concentrations. Presumably, the greater initial growth of organisms is destroyed by smaller concentrates. Penicillin resistant organisms were susceptible to bacteriostatic action of penicillin but overcame this action when present in sufficient numbers. When present in insufficient numbers, they succumbed to the action of penicillin in the same manner as sensitized staphylococcus.

Garrod came to the conclusion from his study of the action of penicillin on S. aureus that the drug exercised a bacteriocidal action.[5] The latter action is accelerated by an increase in temperature and is impaired by an increase in the acidity of the medium between pH seven and five.

Wolinsky and Steenken found that certain organisms of the Smith strain of S. aureus possess a natural resistance to streptomycin, that this resistance is not predicated on the production of a streptomycinase, and that streptomycin resistance is not a relatively prominent characteristic and is not affected by several passages through mice.[6] The resistant organisms retain their virulence to the host. Penicillin and streptomycin resistance are independent of each other. Staphylococci, originally penicillin sensitive, retain their sensitivity to penicillin after being made resistant to streptomycin and vice versa. Treatment with relatively large amounts of streptomycin is ineffective with a streptomycin-resistant strain of S. aureus. The bacteriostatic effect of streptomycin diminishes as the pH goes down. The greatest diminution is from pH 6.6 to 5.9.

In 1945, Harford *et al.* reported 20 patients with severe staphylococcic infection.[7] Of these, three died (15 per cent mortality) with pencillin therapy. Sixteen had bacteremia, and four had staphylococcic lesions indicating previous invasion of the blood stream.

Summary and Conclusions

This case is noteworthy because of its resistance to the usual high dose of penicillin, its refractoriness to high doses of streptomycin, and its sensitivity to high massive doses of penicillin. It is also noteworthy in that previous penicillin therapy did not make it refractory to succeeding penicillin therapy. Also remarkable is that high doses of streptomycin therapy did not lessen its sensitivity to succeeding penicillin usage. It also must be pointed out that this case illustrates that penicillin and streptomycin are not synergistic in action, and one does not increase or lessen the effect of the other.

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TUBEROUS SCLEROSIS

IRIS FLETCHER NORSTRAND, M.D., Brooklyn, New York

(From the Long Island College Hospital)

AS SPACE does not permit a detailed discussion of the subject of tuberous sclerosis, the reader is referred to the literature, especially to the comprehensive article by Critchley.[1] Briefly, however, tuberous sclerosis (also called Bourneville's disease) is characterized by multiple tumors and malformations involving the skin, brain, retina, and viscera. Clinically, it is manifested by a facial rash (termed adenoma sebaceum), epileptic seizures, mental deficiency, and psychic changes. The term epiloia, which is becoming obsolete, has been used by psychiatrists to denote the abovementioned, full-blown symptom-complex. Various abortive forms of the disease have been described, however, in which there is only adenoma sebaceum, adenoma sebaceum with epilepsy but without mental deterioration, and visceral tumors without other symptoms. The disease is sometimes both familial and hereditary and has been traced through several generations.

Pathologically, it is characterized by numerous gliomatous tumors throughout the central nervous system (especially in the cortex and beneath the surfaces of the third and lateral ventricles), retinal tumors (particularly the so-called phakomata or flat, oval tumors), rhabdomyomas of the heart, embryonal mixed tumors of the kidney, and occasionally by cystic changes in the lungs and bones. X-ray of the skull frequently reveals rounded opacities, or "brain stones," which probably represent hyperostosis of the inner table of the skull overlying tuberous nodules in the cerebral cortex. Neurologic examination is often entirely negative. Visual symptoms are unusual. Progressive visual failure is due either to the development of papilledema from an intraventricular tumor, to optic atrophy associated with a tumor growing at the nerve head, or to the development of a phakoma in the region of the macula.

Below is a case report, a follow-up of a case originally reported by Friedman.[2]

Case Report

On February 9, 1949, a thirty-one-year-old single woman, a clerical worker, was admitted to the neurology clinic of the Long Island College Hospital, complaining of impairment of vision in both eyes during the past four months. In addition, she had had rather severe, bitemporal and occipital headaches on and off for the past five years with recent increase in frequency and severity. For the past fifteen years, she had had brief Jacksonian seizures, characterized by momentary numbness beginning in the right side of the face and traveling down the right side of the neck and right upper extremity, with occasional twitching of the right side of the face. There was no nausea or vomiting. System review was otherwise negative.

Past History.—The patient is the oldest of three children. Birth, neonatal period, and early development were normal. At two years of age, when a typical facial adenoma sebaceum developed, a diagnosis of tuberous sclerosis was made. Except for the skin manifestations, there were no symptoms until she reached the age of seventeen, when she had her first convulsive seizure (predominantly right-sided) with loss of consciousness. Grand mal seizures occurred at frequent intervals over a one-year period but, except for an occasional brief right-sided Jacksonian episode (as described above), disappeared shortly after two courses of radiotherapy given in 1935. In 1935, at the age of eighteen, examination disclosed an elongated bulblike phakoma to the nasal side of the right optic disk. Both disks were normal at this time. Neurologic examination, x-ray of the skull, and all other studies were negative. Until recently, the patient had led an entirely normal and active life, having passed the physical examination for the WAC without anyone discovering her condition and having served twenty-seven months overseas as a sergeant in the army. At present, she is employed as a clerk in a large industrial organization. The family history is completely negative.

Physical Examination.—This disclosed an attractive, very intelligent and healthy-looking young woman of short stature (height 4 feet $10^1/_2$ inches). Blood pressure was 110/70, pulse rate 70 and regular. The facial adenoma sebaceum was hardly noticeable. (Patient had received diathermy treatment early in childhood so that the papules were faded and indistinct.) There were numerous elliptic areas of vitiligo over the trunk and extremities and a shagreen patch over the sacrum. Examination of the heart, lungs, and abdomen was negative. Neurologic examination was negative except for the funduscopic examination, which revealed blurring of the left optic disk and a large, granular, golden-colored, multiloculated phakoma three disk diameters to the nasal side of the nerve head in the right fundus. There was obliteration of the inferior retinal artery in the left fundus due to sclerosis near the nerve head. Visual acuity was 5/60 for the right eye and 6/21 plus 2 for the left eye. Visual fields were normal except for enlargement of the blind spot on the left.

X-ray of the skull revealed several rather large areas of discrete calcific deposits, apparently within the brain substance itself, in the region of the temporal lobe of the cerebral hemisphere bilaterally. X-rays of the chest and right femur were negative. Electroencephalograms taken two years ago at the New York Neurological Institute and one recently taken at the New York Post-Graduate Hospital were entirely normal.

The impression was tuberous sclerosis with possible intraventricular tumor. As patient would not consider any possible future operative intervention, it did not seem fair to subject her to the discomforts of pneumoencephalography.

Comment

This case is unusual for several reasons. First of all, the majority of patients with tuberous sclerosis are mentally defective and exhibit psychotic trends. In spite of the apparently extensive cerebral tubera, as suggested by the multiple areas of calcification in the recent roentgenogram of the skull, and the convulsive seizures, this patient is very intelligent and well-adjusted. There is no family history of any of the manifestations of tuberous sclerosis nor, as far as can be ascertained, any neuropathic deviation. Another point of interest is the slow evolution of the disease, with late onset of seizures at seventeen (convulsions usually commence in tuberous sclerosis before the second year) and the long period without grand mal attacks. Whether the radiation therapy was responsible for the long remission is problematic, as Critchley has described sudden remissions without any treatment. Lastly, in view of the obvious cerebral involvement, the most remarkable feature is the normal electroencephalogram.

7624 Tenth Avenue

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MULTIPLE MYELOMA

A Case Report of the Oldest Known Patient

Irving H. Parnes, M.D., and Milton J. Wilson, M.D., New York City

(From the Flower and Fifth Avenue and Metropolitan Hospitals)

After a complete review of the literature, the case of multiple myeloma reported herein was discovered to be the oldest case recorded by seven years.

Multiple myeloma is essentially a disease of later life, approximately 80 per cent of all cases occurring between the ages of forty and seventy, with the peak incidence at fifty-five. In this respect, it closely follows other malignant disease. Lichtenstein says that the incidence of the disease appears to fall off sharply in persons who are past sixty.[1] However, there is evidence to prove that chronologic age is not so important an etiologic factor in malignancy as anatomic and physiologic age. It is also agreed that there are not many people past ninety years of age. However, this disease must be thought of in older people with bone pains.

Case Report

Mrs. L. C., a ninety-two-year-old white widow, was admitted on September 4, 1947, for diagnosis and treatment of severe pain in the region of the right hip. Pain started about one year before admission, gradually becoming worse, except for a temporary remission two months before admission. The pain was dull and aching with occasional sharp stabbing pain superimposed on the dull ache. The pain in the hip was increased on motion of the thigh on the pelvis, and, therefore, the patient was confined to bed for several months before admission.

Past history included an operation for pelvic tumor over thirty years ago. There had been inconstant rheumatoid arthritis for many years involving various joints of the body at different times. Two minor operations had been performed on the bladder many years ago. A fracture of the left wrist six weeks before admission healed readily.

The patient presented no other complaints except for intermittent constipation relieved by laxatives. She had had six children, all alive and well, with menopause occurring about forty years previously. Patient had mild orthopnea and dyspnea and occasional effort angina.

The family history was entirely noncontributory.

Physical examination revealed an elderly, well-developed, well-nourished white women in no acute distress. Temperature was 98.6 F., pulse 78, respirations 22, and blood pressure 150/90. The heart was slightly enlarged to the left, with soft apical systolic murmur transmitted to the anterior axillary line. The lungs were clear to percussion and auscultation. There was no lymph node adenopathy. The thyroid was not palpable, nor was there any tumor of thyroid. Breasts were soft, well-developed with no tumor present.

Abdominal examination showed moderate generalized abdominal distention with no masses or tenderness. Liver was not enlarged or tender; spleen and kidneys were not palpable.

Examination of the extremities revealed pain on movement of right hip joint and voluntary spasm of the surrounding muscles. There was tenderness over the upper part of the right tibia and in the region of the right ilium.

Pelvic examination revealed senile vagina with a rather small mobile cervix; no tumor or masses were palpable.

The working diagnosis was metastatic bone tumor.

Laboratory data were as follows: hemoglobin 74 per cent, color index 0.9, red blood cells 3,850,000 per cu. mm., white blood cells 18,200 per cu. mm. with 52 per cent neutrophils, 50 per cent mature and 2 per cent immature, and 48 per cent lymphocytes. Urine was negative except for a trace of glucose on one examination. Special examination for Bence-Jones protein was negative. Blood smear revealed extensive and very rapid Rouleaux formation. Westergren blood sedimentation rate was 50 mm. in fifteen minutes, 120 mm. in sixty minutes. Blood alkaline phosphatase was 8.8 King-Armstrong units (within normal limits). Blood calcium was 11.5 mg. per cent, phosphorus 2.88 mg. per cent, total protein 10.43 Gm. per cent, albumin 3.30 Gm. per cent, and globulin 7.13 Gm. per cent, giving a reversed albumin-globulin ratio of 0.463.

X-ray examination of the lumbosacral spine and pelvis was made on admission. This showed a mottled demineralization of the upper thirds of the

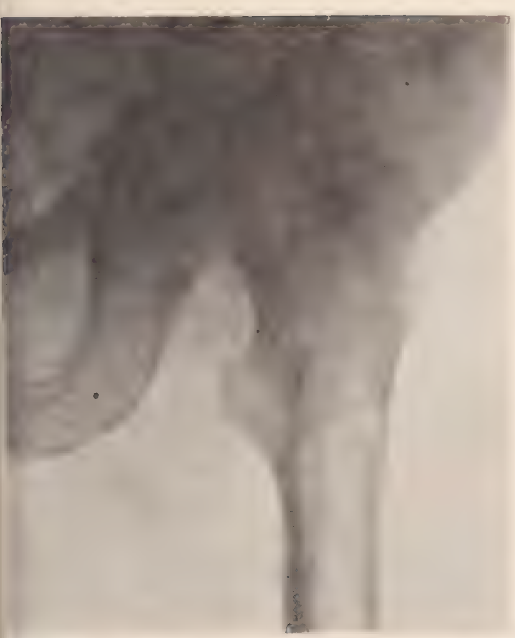

Fig. 1. X-ray of pelvis including upper third of
eft femur. Note diminished density of involved
ones, associated with absorption and replacement
f lime salts by tumor tissue. This may be mis-
aken for involvement of bone from metastatic
ancer.

emora and pelvis. There was also some demineral-
zation of the lumbar vertebrae and marked calcifi-
ation of the arch of the aorta. These findings were
nterpreted at the time as having the appearance of
etastatic foci. On September 13, 1948, after the
nitial laboratory tests, x-ray examination of the skull
nd ribs was made. This showed numerous small
reas of demineralization diffusely scattered through
he vault of the skull. Similar areas of deminerali-
ation were diffusely scattered through the spine
nd ribs with a number of pathologic rib fractures on
e right. These findings were interpreted as hav-
g the appearance of metastatic foci but with an
ppearance not unlike that of a multiple myeloma
Fig. 1).

Course in Hospital.—The patient continued to
mplain of pain in region of right hip and then in
est over various ribs. This required opiates for
lief. Inasmuch as a primary focus of cancer was
ot found and in view of the distribution of the bone
sions, the high globulin in blood, and very high
dimentation rate, multiple myeloma was postu-
ted as a diagnosis, and a bone marrow examination
as done. The marrow was slightly hypocellular
d typically senile in type, with a preponderance of
d neutrophils and decreased normoblasts. There
as a relative lymphocytosis. A moderate number
.6 per cent) of large "plasma cells" were seen. It
as the opinion of the clinical pathologists reading
e smears that these findings in conjunction with
ray evidence of bony rarefaction and a hyperglob-
inemia indicated the existence of a "plasma cell
yeloma."

Another confirmatory laboratory test, the electrophoretic pattern of the plasma, was typically that of multiple myeloma. There was a low albumin with a very high gamma globulin (myeloma substance traveling with the gamma globulin making it abnormally high).

The patient remained in the hospital sixty-eight days becoming progressively weaker until her death. Her temperature was normal or subnormal until the day before death. The patient received no treatment other than analgesics. Stilbamidine was considered but not thought advisable in this case.

Autopsy.—Autopsy was performed by Dr. H. Case, and results were as follows:

Gross Examination—Patient was a well-nourished, aged white female. No jaundice or edema was noted. In the skin of the thorax and abdomen anteriorly were noted many small telangietatic areas measuring from 2 to 3 mm. in diameter. Varicosities were noted in the right lower leg and above the ankles of the same leg a large patch of varicose eczema was noted.

The heart weighed 570 Gm. The left ventricle was hypertrophied. The valves were not unusual. Both coronary arteries showed marked arteriosclerosis with calcification but were patent. The lungs together weighed 800 Gm., and showed some hypostatic congestion in the lower lobes. The liver weighed 1,425 Gm. The capsule was smooth, and the cut surfaces were red and moderately firm.

Except for atrophy of gastric mucosa the entire alimentary tract did not appear unusual. The extrabilary tract was patent except the cystic duct which appeared constricted by surrounding fibrous adhesions. The distended gallbladder contained six calculi. The pancreas and adrenal glands were not unusual.

The right kidney weighed 150 Gm., the left 145 Gm. The capsules stripped easily. Several small, thin-walled cortical cysts filled with clear, watery fluid were noted in both kidneys. The pelvis, ureters, and bladder were clear.

None of the lymph nodes was noticeably enlarged.

Numerous pathologic fractures were noted in the ribs bilaterally and in the neck of the femur (the fracture of the femur was most likely done postmortem).

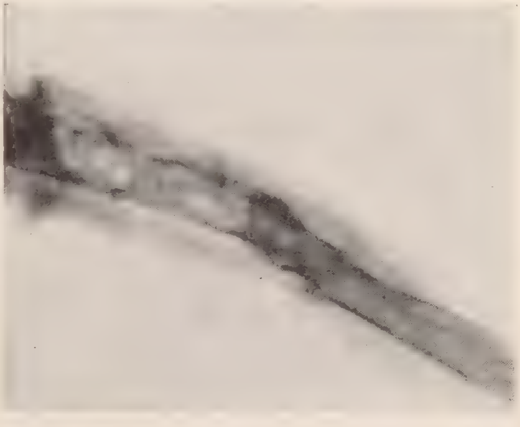

Fig. 2. X-ray of portion of rib removed at autopsy. Note pathologic fracture at the focus of myelomatous destruction.

At the sites of the fractures replacing the marrow spaces and invading the surrounding bone were partly circumscribed, soft, red-brown, gelatinous tumor nodules (Fig. 2).

The cranium was not opened.

Microscopic Examination.—Smears and sections through the tumor masses in the ribs and femur were stained with Wright's stain and Harris' hematoxylin and eosin. Replacing the normal marrow structure are thick patches of "myeloma" cells. The cells have eccentric nuclei with abundant basophilic cytoplasm. The chromatin of the nuclei is coarse and peripherally located (Figs. 3 and 4).

In the sinusoids of the spleen there were noted increased numbers of similar plasma cells. The trabecular and central arterioles showed hyaline necrosis of their media.

Scattered plasma cells were seen in the sinusoids of the medulla of the adrenal glands. No plasma cell infiltration was noted in other tissues. The kidneys showed moderate albuminous degeneration of the tubules and a moderate number of hyaline casts in the collecting tubules. No amyloid changes were noted in any of the above tissues.

The lungs showed marked emphysematous changes with chronic passive congestion. The myocardium showed numerous small areas of fibrosis.

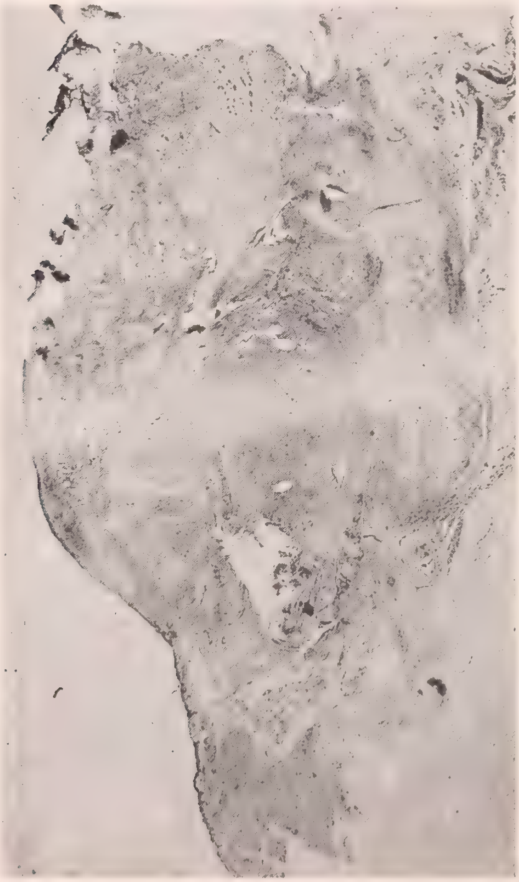

Fig. 3. Photomicrogram demonstrating lesion in rib. (20×)

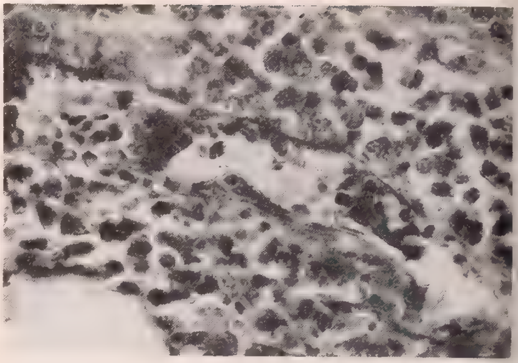

Fig. 4. Magnification of Fig. 3, demonstrating dense infiltration of bone marrow by typical myeloma cells. (430×)

Final Pathologic Diagnosis.—The final diagnosis was as follows:

1. Multiple myeloma of bone (plasma cell) with pathologic fractures of ribs and femur.
2. Plasma cell infiltration of spleen and adrenal glands.
3. Arteriosclerotic heart disease with left ventricular hypertrophy and myocardial fibrosis.
4. Generalized arteriosclerosis.
5. Pulmonary emphysema and congestion.
6. Cholelithiasis and chronic cholecystitis.
7. Postoperative abdominal adhesions.

Comment

The case presented was a very typical one, following very closely the pattern made by multiple myeloma. The initial complaint was pain, progressively more severe and incapacitating. The x-rays which showed involvement of skull, pelvis, femur lumbar vertebrae, and ribs, were not conclusive, the differential from metastatic malignancy to bone was not definitely established. The laboratory data, o high plasma globulin, very high sedimentation rate and excessive Rouleaux formation pointed toward a diagnosis of multiple myeloma, which was confirmed by the sternal marrow biopsy. The patient presented pathologic fractures of the ribs and lived about fifteen months after symptoms began. Ther was no Bence-Jones protein found in the urine There were extraskeletal myelomatous infiltration in the spleen and in the adrenals. There were no significant renal changes, nor was there any amyloidosis.

Summary

A case report of a ninety-two-year old whit woman with multiple myeloma, established clinicall and proved by autopsy, is discussed. The chie complaint was bone pain in the region of the hip an various ribs. The patient lived fifteen month after onset of symptoms. No treatment was give other than symptomatic therapy.

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VITAMIN B_{12} IN ADDISONIAN PERNICIOUS ANEMIA IN A LIVER-SENSITIVE PERSON

HERBERT BERGER, M.D., Tottenville, New York

(From the Medical Service of the Richmond Memorial Hospital and the Berger Clinic)

SINCE the discovery of liver and its extracts as a treatment for pernicious anemia many investigators have been attempting to isolate the active principle therein.[1] The discovery of vitamin B_{12} by West is one of the triumphs of medical research.[2] This new material has been amply studied and is efficacious in the treatment of the hematologic as well as the neurologic manifestations of this disease.[2-6] In this respect it differs markedly from folic acid which influences the blood picture but not the combined system disease. In fact, it seems highly probable that neurologic complications are enhanced by the use of this latter material.[7]

Vitamin B_{12} is similar to liver extract in its effects upon pernicious anemia. Since it is more expensive than comparable amounts of the crude material, there would be little indication for its use except in those individuals who are sensitive to the impurities in the extract.[6]

The following case report demonstrates the use of Vitamin B_{12} in such a patient.

Case Report

The patient was a sixty-six-year-old white woman who first became aware that she had pernicious anemia on November 4, 1946, at which time she had become progressively weaker and very pale. Red blood count was 1,450,000 with a hemoglobin of 38 per cent or 5.2 Gm. The red cells were macrocytic and hyperchromic. She was hospitalized at the Richmond Memorial and received five transfusions of 500 cc. each of citrated blood in addition to 15 units of a commercial pork liver extract every day. She made a rapid response and was discharged from he hospital in twenty days. She was then maintained on 15 units of liver extract per week for the next year.

At that time (November, 1947) she moved in with a daughter who lived in another locality, and the patient fell into careless habits, received liver extract nfrequently, and finally was found one morning disoriented, confused, and dyspneic with marked ankle and pulmonary edema. She was readmitted to the hospital in March, 1948, and under the influence of nercurial diuretics and digitalis the edema rapidly lisappeared. Blood count after the cardiac status vas again stabilized was 2,150,000 red cells with 51 per cent, or 8 Gm., of hemoglobin. The cells were till macrocytic, and treatment was instituted with blood transfusions followed by a pork liver extract.

After the first injection of liver extract both eyes welled shut, and there were large urticarial wheals ver the trunk. This was the same brand of liver sed previously. Other varieties of liver extract of ither beef or pork origin made by different manufacturers were tried, but she responded to each of hese injections with the marked edema of the eyes nd occasionally urticaria. A change to low potency ver extract produced exactly the same effect, so hat the patient refused further injections. Liver xtract by mouth was attempted, and it too produced nausea, vomiting, and a rash. Stomach extract produced exactly the same response. Therefore, starting April, 1948, treatment with parenteral and oral folic acid was attempted. She received 15 mg. once a week for six months parenterally and 3.33 mg. per os daily. The hematologic situation continued satisfactory with blood count over 4,000,000 on all occasions and the hemoglobin between 85 to 95 per cent (14 to 15 Gm.).

On October 1, 1948, she complained that she was unable to dress herself properly because she could not button her clothing. She had been tested repeatedly for combined posterolateral sclerosis, but none had been found to be present. At this time she had received 26 injections of folic acid of 15 mg. per injection at weekly intervals. On questioning she admitted some numbness and tingling in her toes. There was absence of vibratory sensation in all the fingers and toes and loss of position sense in the fingers, excepting the right index, and in all the toes. During the period since the last admission she had been carried on digitalis.

At this time some vitamin B_{12} was secured through the cooperation of Merck and Company, and folic acid was discontinued. Ten micrograms of vitamin B_{12} were administered once a week. At the onset of this treatment her count was 4,120,000 with 82 per cent hemoglobin, or 14 Gm. I could obtain only six ampules of this material. Five days after the first injection she was again able to dress herself and was able to thread a needle. The numbness had become less marked in both her hands and in her feet. Two weeks after the onset of this treatment, after the administration of 20 micrograms of B_{12}, the numbness in the fingers had entirely disappeared. The gait was better, and she had no further numbness or tingling in the toes and feet. However, vibratory sensation was still impaired in all except the great toes. Position sense was inaccurate in all toes. These findings gradually disappeared so that at the end of six weeks of treatment there were no subjective or objective evidence of combined system disease.

At this point, unfortunately, we ran out of vitamin B_{12}, and it was again necessary to continue treatment with pteryglglutamic (folic) acid in similar doses of 15 mg. per week. At the cessation of vitamin B_{12} treatment, the blood count was higher than at any time since the onset of disease. The patient had 4,820,000 red cells and 100 per cent hemoglobin (16 Gm.). Since the resumption of folic acid therapy, she again complains of numbness in her fingers and toes and is again experiencing difficulty in finer movements of the fingers. She tells me, "Those other injections worked better than these."

Conclusion

The experience with this one case adequately controlled by the patient where it was necessary to resort to folic acid therapy before and after treatment with vitamin B_{12} demonstrates that this material is effective in increasing the blood count and in the amelioration of the ravages of combined system disease. Vitamin B_{12} is particularly valuable in that it apparently contains antianemic and anticombined system sclerosis factors without containing an allergen for liver-sensitive patients.

Addendum.—Since these observations were originally made, some interesting factors about the relationship of B_{12} to folic acid have been made by Luhby.[8] This investigator finds that B_{12} is not efficacious in the treatment of the megaloblastic anemias of infancy unless minute amounts of folic acid are present. This suggests that the latter plays the role of a catalyst in this disease.

7440 Amboy Road

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LIVER ABSCESS RESULTING FROM BARIUM ENEMA IN A CASE OF CHRONIC ULCERATIVE COLITIS

Ivan Isaacs, M.D., Rudolph Nissen, M.D., and Bernard S. Epstein, M.D.,
New York City

(From the Thoracic Surgical Service and the Radiologic Service of the Jewish Hospital of Brooklyn)

THE occurrence of liver abscess with chronic nonspecific ulcerative colitis is a rare phenomenon. Rankin, Bargen, and Buie encountered one such case in a series of approximately 1,200 cases of chronic ulcerative colitis.[1] A review of 524 cases at the Jewish Hospital of Brooklyn disclosed three patients who had similar complications. The mechanism usually invoked for this condition is the passage of infected material through the portal veins into the liver. Bockus stated that pylephlebitic abscess of the liver is a rare but fatal complication of ulcerative colitis.[2] Rothenberg and Linder, in a review of single liver abscess, concluded that these usually are without proof of portal vein origin, while multiple liver abscesses arise through the portal veins or the bile ducts and commonly present pylephlebitis or portal vein thrombosis.[3] However, the presence of pylephlebitis is certainly not necessary to prove the portal origin of a liver abscess. In their review, which was from the same hospital from which the present report is made, one case in which multiple liver abscesses were found in a patient who had chronic ulcerative colitis was mentioned. We have since then encountered two similar cases. One was a man who had had chronic ulcerative colitis for twenty-five years and in whom liver abscesses were found at postmortem examination. The other patient, who will be reported in detail, was a twenty-five-year-old woman in whom a barium enema examination was followed immediately by passage of barium fluid into the portal veins and thence into the liver and omentum.

Case Report

R. G., a twenty-five-year-old housewife, was admitted because of chills, spiking temperature which reached 106 F. daily, prostration, and pain in the abdomen. The patient was known to have had chronic ulcerative colitis with diarrhea, melena, and fever for about four years. She had noted a fecal vaginal discharge, which had been found to be due to a fistulous opening in the posterior vaginal wall about 2 cm. above the introitus. An ileostomy to exclude the colon had been performed on March 15, 1946 (Dr. Nissen).

On October 31, 1946, three days before her second admission, a barium enema examination had been performed at a private office. Towards the end of the procedure, the patient became prostrated because of pain, vomited, and developed fever. A plain film taken just before the barium enema revealed a large mottled mass in the liver just beneath the dome of the diaphragm (Fig. 1). This represented an old echinococcus cyst of which the patient had been long aware.

A postevacuation film made a few minutes after the patient expelled the enema revealed linear streaks of barium passing towards the hilum of the liver and entering the hepatic veins (Fig. 2). Several similar streaks were visible in the immediate vicinity of the transverse colon. These shadows were not seen on the plain film made before the barium enema and were interpreted as barium passing from the transverse colon into the portal veins and entering the liver.

The patient grew progressively worse and did not respond to penicillin therapy. She became jaundiced on November 4, 1946. The icterus index was 29. A leukocytosis of 13,200 white blood cells with 86 per cent neutrophils was found with a pronounced shift to the left and toxic granulations. Two blood cultures were negative. Further treatment with streptomycin, sulfadiazine, and multiple blood transfusions in addition to the penicillin was ineffectual.

Radiographic examination of the abdomen thirteen days after admission revealed elevation and fixation of the right leaf of the diaphragm (Fig. 3). A fine reticular opacity could be demonstrated with-

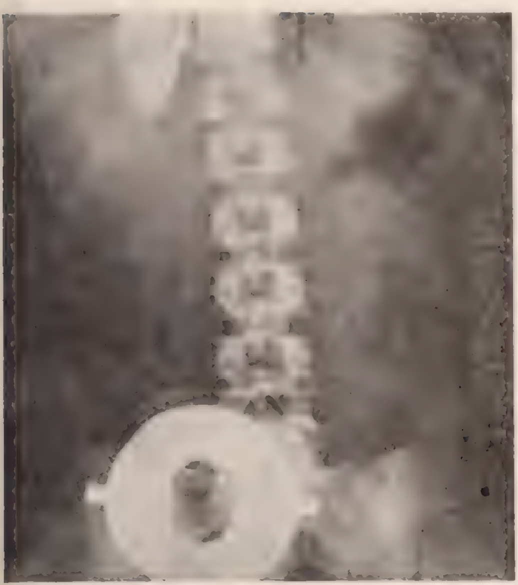

FIG. 1. Plain film preceding barium enema. Calcific shadow in right hypochondrium had been previously diagnosed as echinococcus cyst. Ileostomy bag shadow over lower abdomen.

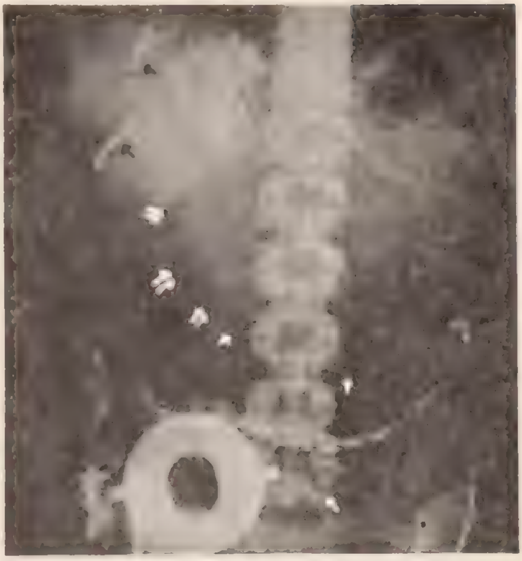

FIG. 2. Barium enema, postevacuation film. Several linear tracks of barium in lower abdomen (white arrows). Heavier linear and branching densities in liver area (black arrows). Fine reticulation faintly seen to right of upper lumbar spine (double white arrows). None of these densities was present on pre-enema film. Interpreted as barium fluid within portal venous channels and hepatic veins.

in the liver, considered to be due to barium in the hepatic veins. Examination of the chest showed infiltration in the base of the right lung. The probability of a subdiaphragmatic or hepatic abscess was considered likely.

At operation on November 20, 1946, the ninth right rib was removed, and a subphrenic abscess was encountered. When drained, it was found to communicate with an intrahepatic abscess about 5 cm. in diameter, which also was drained. Culture of the pus obtained showed Bacterium coli.

Following operation she continued to have fever, and thoracentesis six days later produced clear amber fluid which was sterile on culture. Her fever continued, and she began to expectorate a brownish sputum from which B. coli, Staphylococcus aureus, and hemolytic and nonhemolytic streptococci were cultured. On the sixteenth postoperative day the right pleural cavity was explored, and the lower portion of the right lung was found to be atelectatic. An abscess communicating with the subphrenic abscess was found in the inferior mediastinum. This was drained, and she gradually improved. She was discharged thirty-nine days later.

Eight months afterward she was readmitted because of drainage from the rectovaginal fistula. The terminal ileum and the colon down to the lower sigmoid were removed. At the same time a left ovarian cyst was excised. Pathologic examination of the bowel showed advanced nonspecific ulcerative colitis involving the entire specimen. She left the hospital one month later. Nine months thereafter, she developed obstruction of the ileum due to adhesions in the vicinity of the ileostomy, and a new permanent ileostomy was created.

Radiographic examination of the excised colon and mesentery revealed some small spotty barium shad-

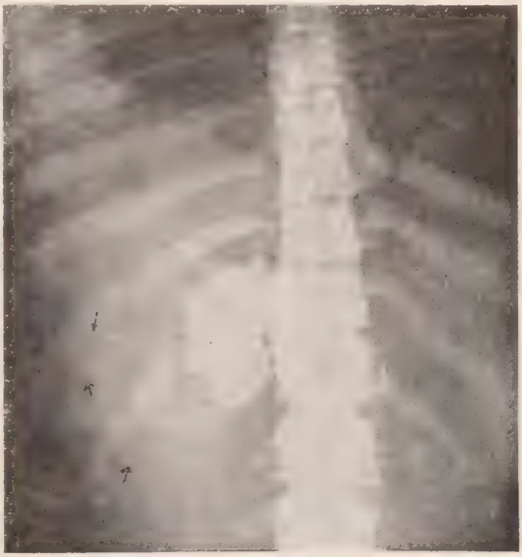

FIG. 3. Sixteen days after barium enema. Right leaf of diaphragm elevated and fixed with opacity of overlying lung base. Arrows indicate linear and reticular tracks of barium present within liver.

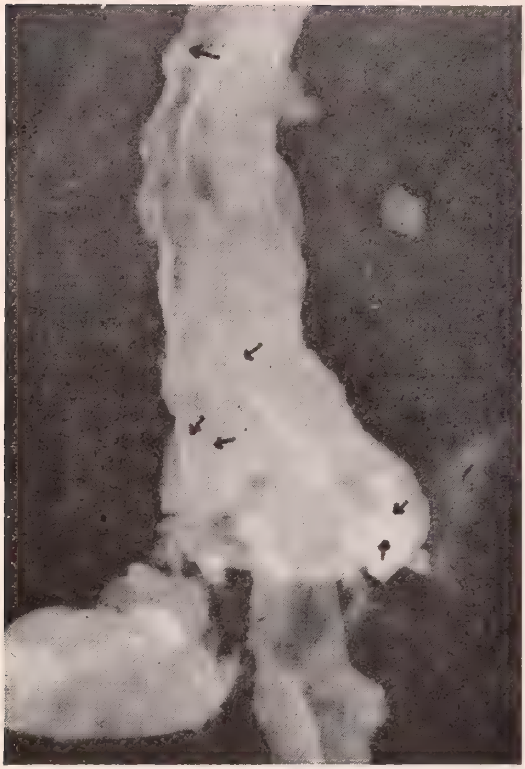

FIG. 4. Radiograph of resected colon and mesentery. Arrows indicate small spotty opacities representing barium deposits within vessels.

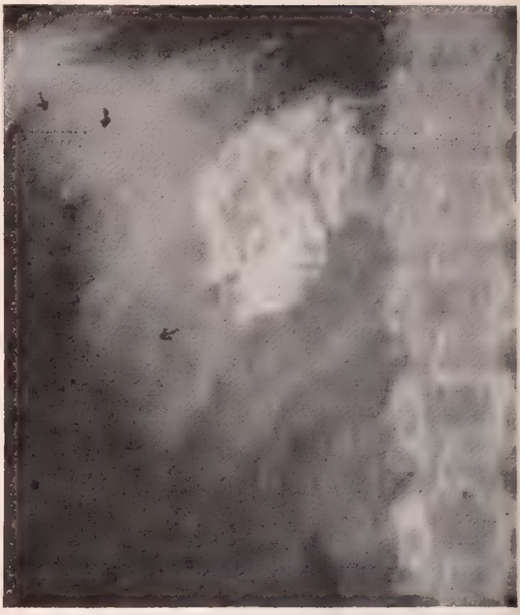

FIG. 5. Six months after barium enema. Barium shadows still clearly seen in liver, indicated by arrows. Shadow of old echinococcus cyst unchanged.

ows (Fig. 4). Re-examination of the abdomen showed linear barium shadows within the liver density, as seen on numerous previous examinations (FIG. 5).

Comment

The radiographic demonstration of the passage of barium from the lumen of the colon into the portal veins, the liver, and the mesentery is unique. This is an unfortunate and, so far as we know, singular experience which could not conceivably have been anticipated. In this instance there were no known variations from the usual technic, and the examination had been performed by a capable radiologist. It is our opinion that the complication occurred because of involvement of vessels, perhaps a weakening of the veins in the mucosa of the colon, something that one cannot verify, anticipate, or guard against.

From an academic point of view, the case has singular importance. It demonstrates that under certain circumstances material within the colon may enter the venous plexuses and pass into the portal circulation and its branches. Lansbury and Bargen have commented that the rarity of liver abscesses with chronic nonspecific ulcerative colitis is a reflection of the fortunate detoxifying and bactericidal powers of the liver.[4]

Summary

The case of a patient with ulcerative colitis in whom a barium enema examination was followed by entrance of barium into the liver and omentum through the portal veins is reported. The patient developed a subphrenic and mediastinal abscess arising from a solitary hepatic abscess. Extensive surgery, including drainage of the abscesses, resection of the entire colon down to the lower sigmoid, and the establishment of an ileostomy was rewarded with what is thus far (two years) an apparent cure.

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A medical man who makes experiments upon his patients soon finds them disposed to make an experiment upon him, by leaving him off.—Anonymous

NORMAL RESPIRATORY VARIATION OF THE T WAVE IN LEAD I OF THE ELECTROCARDIOGRAM

Mortimer J. Blumenthal, M.D., and Norman S. Blackman, M.D., New York City

(From the Cardiographic Laboratory of Mount Sinai Hospital)

A T-WAVE less than 1 mm. in voltage in lead I is usually considered to be abnormal. Occasionally, individuals without evidence of heart disease are found to have very low or isoelectric T waves in lead I. Moreover, the amplitude of complexes in lead I is quite insensitive to respiratory influence. It is our purpose to report a case in which T_1 was of low amplitude but varied with respiration.

Case Report

A twenty-six-year-old housewife was referred from the Consultation Service for evaluation of her cardiac status. Her chief complaint was midepigastric crampy pain of six months duration. Other complaints included "bloated abdominal feeling" and frequent belching. There were no complaints referable to the cardiovascular system. One episode of severe pain beneath the left breast occurred eight months previously. The pain did not radiate, nor was there any shortness of breath. Although the patient had been told she had had a murmur since the age of twelve, no history of rheumatic fever could be elicited.

Physical examination revealed a well-developed, well-nourished, somewhat apprehensive white woman in no acute distress. Examination of the head and neck was negative. The lungs were clear to percussion and auscultation. The heart size was within normal limits, and the rhythm was regular. The sounds were of normal intensity and a soft, grade II apical systolic murmur was audible. The blood pressure was 124/74. There was a well-healed right lower quadrant scar, but abdominal examination was otherwise negative.

Laboratory data were as follows: weight 107 pounds; height 59¹/₄ inches; hemoglobin 14.8 Gm.; white blood count 14,000 with 53 per cent polymorphonuclear leukocytes, 6 per cent nonsegmented leukocytes, 35 per cent lymphocytes, 2 per cent eosinophils, and 5 per cent monocytes; sedimentation rate 7 mm. per hour. Urinalysis was negative. The Kahn test was negative, and the stool examination for blood (benzidine) was also negative. The basal metabolic rate was 0. A gastrointestinal x-ray series and a gallbladder series were entirely normal. Fluoroscopy of the chest was entirely normal, the heart being of normal size and shape.

The routine electrocardiogram was carefully standardized and showed a normal sinus rhythm with a tendency to left deviation of the electrical axis. The T wave in lead I fluctuated in height from beat to beat but always remained of low voltage (less than 1 mm.). The unipolar extremity leads were not unusual except for an isoelectric T wave in aVL. The precordial chest leads were entirely normal (Fig. 1).

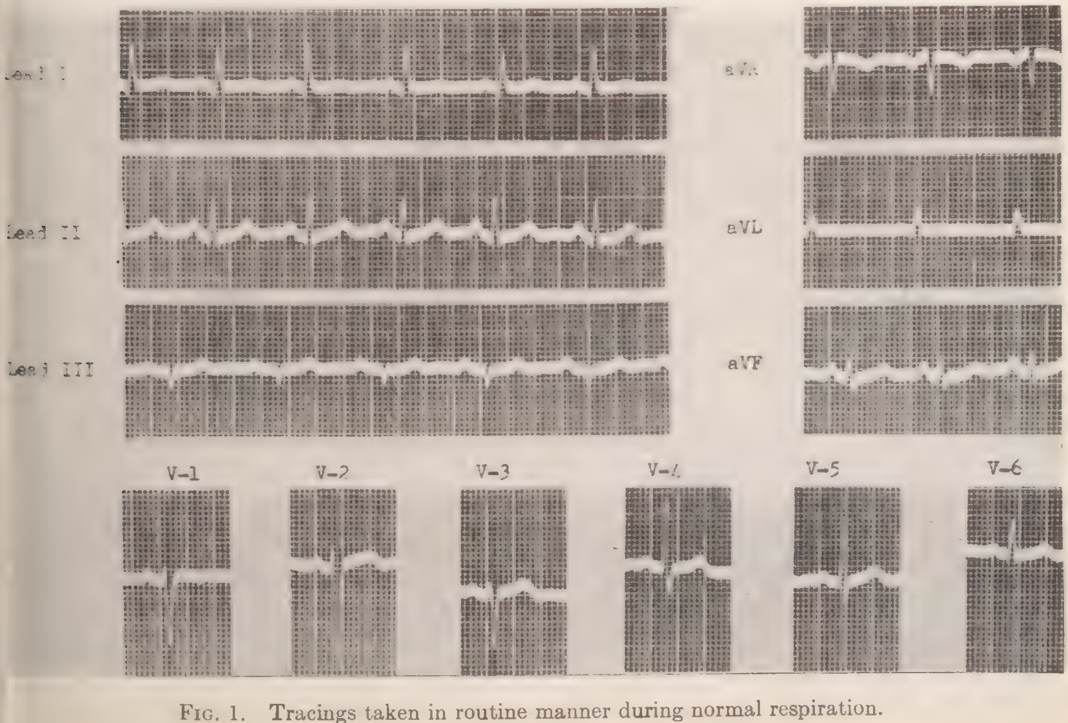

Fig. 1. Tracings taken in routine manner during normal respiration.

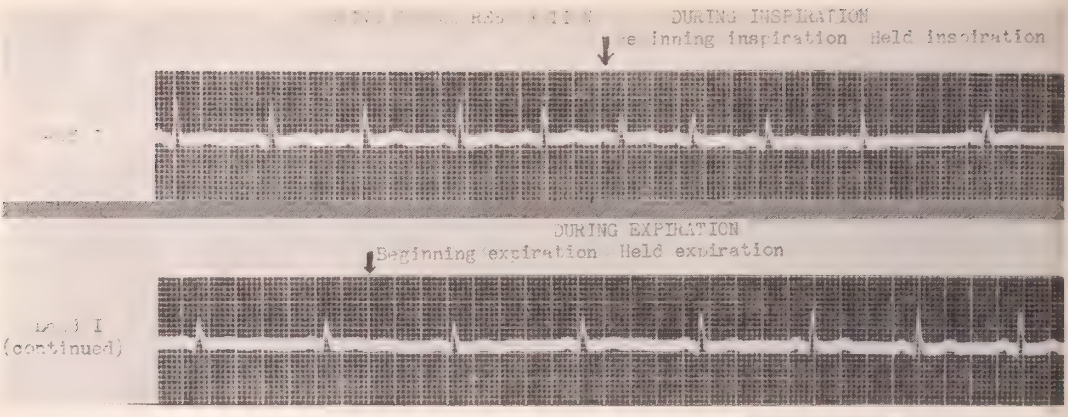
DURING INSPIRATION
Beginning inspiration Held inspiration
DURING EXPIRATION
Beginning expiration Held expiration
Lead I
(continued)

FIG. 2. The above strips represent a continuous tracing of Lead I during normal respiration, held inspiration, and held expiration.

Comment

As long ago as 1907, Krause and Nicolas noted the correlation of low T_1 and T_2 with myocardial damage.[1] It should be remembered that low voltage or diphasic T wave is often the precursor of a negative T wave which in the first lead has serious prognostic significance.[2] The criteria for low voltage of the T wave in the standard leads is given as a T wave of less than 1 mm. in amplitude.[3] Investigations of large numbers of normals reveal the rarity of low, flat, or inverted T_1.[4-8] Hall *et al.* quote an incidence of 0.15 per cent for diphasic or diphasic or negative T_1 in a series of 2,000 healthy persons.[9] Several other factors, in addition to pathologic involvement of the myocardium, are known to influence the height of the T wave, among which are drugs, tachycardia, posture, habitus, respiration, and nervous effects.[10-14]

Changes in posture often alter the T wave in lead III but less often in lead II and the precordial leads. The T wave in lead I is generally very resistant to postural effects.[14]

Habitus, by affecting the height of the diaphragm, will likewise affect the T wave by favoring vertical or horizontal positions of the heart.

The effects of emotion, including neurocirculatory asthenia, on the T wave have been described numerous times. It may occasionally cause lowering, flattening, or inversion of T_1, in addition to its more frequent effects on the RS-T segment and T wave of other leads.[11,12]

Respiration is well known to alter both QRS and T waves of the standard leads in the electrocardiogram. These changes, however, are confined mainly to leads II and III. The T wave in lead I has been distinguished for its seeming immunity from respiratory influence. A survey of the literature revealed only one case in which T_1 altered significantly with respiration.[16]

On the routine electrocardiogram of our case it was observed that T_1 fluctuated in height from moment to moment, ranging between diphasic to upright but of low voltage (Fig. 1). On deep inspiration the T_1 became lower and then diphasic with a concomitant slowing of the rate (Fig. 2). On held expiration the T wave became more upright and reached a height of 1 mm., the lower limit of normal, with a concomitant increase in heart rate. Such marked respiratory lability in amplitude of T_1 is strong evidence for the belief that the low amplitude in this case was not a reflection of myocardial involvement but of respiratory alteration of position, autonomic influence, or a combination of both. On changing from the lying to the standing posture it was noted that T_1 again became flat to diphasic, which confirmed our opinion of the functional nature of the T wave alterations.

As our patient's complaints were chiefly psychogenic in origin, she was assured that she had no organic pathology. The reassurance apparently relieved some of her anxieties, and she was discharge to her local doctor for further reassurance and psychotherapy.

Finally, it should be pointed out that a highl suggestible young woman, knowing that she ha had a "heart murmur" for many years, might easil have become a "cardiac neurotic" had her physicia misinterpreted her electrocardiographic recording as suggestive of heart disease.

Summary and Conclusions

1. A case of low amplitude T_1 in a patient with out evidence of heart disease is presented.
2. Marked variations in the amplitude of T with respiration were found.
3. It is suggested that, when a low or flat T_1 the only electrocardiographic deviation, the tracin should be taken during full inspiration and expiratio to evaluate the influence of respiration on the co plexes of the tracing.
4. Respiratory movements which cause co siderable fluctuation of the amplitude of T_1 rend the amplitude of T_1 itself unreliable as a guide evidence of myocardial involvement.
5. In order to avoid a mistaken diagnosis

heart disease, one should be aware that T_1 may be lowered or flattened in a healthy individual.

We wish to thank Dr. Arthur M. Master for his kind assistance in the preparation of this manuscript.

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PNEUMOCOCCUS MENINGITIS TREATED WITHOUT INTRATHECAL PENICILLIN

Abraham Malich, M.D., and M. Richard Altchek, M.D., New York City

(From the Gouverneur Hospital)

THE addition of penicillin to the sulfonamides has radically reduced the mortality rates in pneumococcus meningitis. Because Rammelkamp and Keefer, Herrell and his group, and others found penicillin to pass the blood-brain barrier in very minute concentrations, it was concluded that, for effective concentrations in the spinal fluid, intrathecal instillation was necessary.[1,2] Although intrathecal therapy is still generally accepted, there are indications that it is losing favor. There has been no uniformity as to dosage, frequency, and duration of intraspinal medication. Moreover, the introduction of penicillin into the subarachnoid space has occasionally been associated with various untoward effects, which are well described by Erickson *et al.* and Pilcher, Meacham, and Smith.[3,4] The senior author has always been of the opinion that intrathecal medication is rather limited and localized in effectiveness. It seems much more logical to maintain a high concentration of the active therapeutic agent in the meninges and nervous tissue rather than in the surrounding exudate. Recently, Schwemlein and his group, Boger, Baker, and Wilson and others have demonstrated consistent therapeutic levels in the spinal fluid following the administration of massive doses of penicillin either intravenously or intramuscularly.[5,6] These findings are the basis of our therapy in the following case.

Case Report

An unknown white man was admitted in coma on November 3, 1948. No history was obtainable. Physical examination revealed a well-developed patient, about sixty years of age, who could not be aroused. Temperature was 104 F., pulse 140, respiratory rate 36, and blood pressure 130/80. There was an extensive hematoma over the right eye and a jagged laceration over the right eyebrow. The right pupil was larger than the left, and both pupils reacted to light. The sclerae and conjunctivae were negative. Eyegrounds were essentially normal. The breath was not alcoholic, fruity, or urinous. Examination of the nose, ears, mouth, and throat revealed nothing significant. Trachea was in the midline. The lungs were normal on percussion and auscultation, and the heart revealed nothing but a regular tachycardia. There were no abnormal abdominal findings. There was marked scoliosis of the spine, and no outward signs of fracture were found. Except for some abrasions of the right leg, the skin was clean. Neurologically, the patient presented marked nuchal rigidity, no Kernig or Brudzinski reflexes, a flaccid paralysis, bilateral positive Babinski reflexes, absent abdominal and cremasteric reflexes, and hyperactive deep reflexes.

Laboratory Findings.—The red count was 4,100,000 with 13.5 Gm. of hemoglobin. The white count 19,200 with 86 per cent neutrophils showing a marked shift to the left, 12 per cent lymphocytes, and 2 per cent monocytes. The urine revealed only a faint trace of albumin. Kahn test was negative. The nonprotein nitrogen of the blood was 28 mg. per cent. Spinal puncture revealed an initial pressure of 300 mm. and a final pressure of 120 mm. The fluid was markedly turbid. The cells were all neutrophils, and a count could not be made because of marked clumping. Sugar was absent, protein was 364 mg., and chlorides were 660 mg. Smears revealed no organisms. Blood culture, taken on admission, and spinal fluid culture both yielded pneumococcus, type 21, thirty-eight hours after admission. X-rays of the skull revealed no fracture. Plates of the sinuses showed some clouding of the right frontal sinus, and x-rays of the chest were negative.

Therapy consisted of 1,000,000 units of penicillin G in aqueous solution by intramuscular route every two hours. Sulfadiazine was given as a 5 per cent solution of the sodium salt intravenously in the following doses: 5 Gm. on admission, 4 Gm. in four hours, and 2 Gm. every four hours until oral medication could be instituted. Adequate fluids were supplied, and the urine and blood were checked repeatedly.

Course.—Twenty-four hours after admission, the blood sulfa level was 6.4 mg. per cent. In order to enhance the action of the sulfonamides, 30 Gm. of urea were given by tube every four hours. This had to be discontinued because of the development of a dark, tarry-looking diarrhea.

Forty-eight hours after admission the patient was only mildly stuporous and responded to simple questions. Oral sulfa medication was now possible. Neurologic examination was negative except for slight nuchal rigidity. Spinal puncture at this time yielded a crystal-clear fluid. The pressure was normal; the cells numbered 400 of which 80 per cent were neutrophils and 20 per cent lymphocytes; protein was 140 mg.; sugar was 26 mg. and no organisms were found on smear or culture. Penicillin level of the spinal fluid was 0.16 Oxford unit per cc., and blood penicillin level was 3.5 Oxford units. Penicillin sensitivity tests of the isolated pneumococcus revealed that 0.0019 Oxford unit was required to sterilize a culture containing 1,100 organisms per cc.

The patient's temperature fell gradually to normal by the eighth day when a sudden rise in temperature to 102 F. occurred. This was found to be due to a thrombophlebitis of both arms as a result of intravenous medication. It responded rapidly to conservative treatment. Medication was reduced to 500,000 units of penicillin intramuscularly and 1.0 Gm. of sulfadiazine orally every four hours. The patient was asymptomatic thereafter. Spinal puncture performed on the thirteenth day before discontinuing medication yielded a crystal clear fluid with a cell count of 30, a protein content of 27 mg., and sugar of 43 mg. Penicillin level of the fluid at this time was less than 0.010 Oxford unit per cc. The patient was observed for one month thereafter and made an uneventful, uncomplicated recovery.

Comment

The outstanding features of this case are the rapid clearing of the spinal fluid and the prompt clinical improvement of the patient. The spinal fluid and blood penicillin levels of 0.16 and 3.5 Oxford units per cc. are both well above the in vitro sensitivity levels for the diplococcus pneumonia, ranging from 0.005 to 0.05 Oxford units per cc., as reported by Stollerman, Roston, and Toharsky, and also exceed the killing levels, ranging from 0.054 to 0.109 Oxford unit per cc., as determined by Eagle and Musselman.[7,8] With such penicillin concentrations the augmenting effect of urea on the sulfonamides, suggested by LaLonde and Gardner, and even the use of sulfonamides seem superfluous.[9] Despite the massive doses employed, therapeutic levels in the spinal fluid are unobtainable earlier than two to four hours after the onset of therapy. It might, therefore, be advisable in extremely ill patients to give an initial dose of 1,000,000 units of penicillin intravenously or, better still, an intrathecal dose of 10,000 to 20,000 units at the time of the initial diagnostic lumbar tap. Subsequent intrathecal therapy is unnecessary.

Successful treatment of pneumococcus meningitis without repeated intrathecal injections has been reported by Price and Hodges, White and his associates, and Lawson and Kelsey.[10–12] Recently Lowrey and Quilligan published a similar series.[13] In none of the aforementioned cases were massive doses of penicillin employed, and spinal fluid levels were not determined. The latter authors, using similar doses for all ages, gave as little as 120,000 to 160,000 units of penicillin daily to one group and 320,000 to 400,000 units to another group. There were no deaths in the higher dosage group, and the over-all mortality was 17 per cent. In the series reported by Dowling and his coworkers massive doses were given, similar to those employed by us (12,000,000 units daily).[14] Spinal fluid levels varied between 0.08 and 1.25 Oxford units per cc. Eight of their 21 cases received no sulfonamides. The mortality rate was 38 per cent as compared to 62 per cent in the group receiving multiple intrathecal injections. Eliminating the cases that died within twenty-four hours of initiation of therapy gave mortality rates of 13 and 57 per cent, respectively.

The marked extremes in penicillin dosage employed by these two groups of investigators raises the question of the significance of spinal fluid levels. While this matter demands further investigation, it seems quite logical to conclude that therapeutic levels in the spinal fluid indicate adequate concentrations of the antibiotic in the infected tissues. The advantages of systemic penicillin alone over the combined parenteral and multiple intraspinal injections are indicated in both series. Lowrey and Quilligan report no relapses and complications only one fifth as frequent. Dowling's group reports both a more rapid clearing of the spinal fluid and a much shorter febrile period.

We feel that, in the treatment of pneumococcus meningitis, massive doses of systemic penicillin have the following advantages over parenteral and multiple intrathecal injections: the untoward reactions of penicillin are avoided; there is no pleocytosis with predisposition to adhesions, spinal block, relapses, or other complications; there is no chance of introducing other infecting organisms; there is less annoyance and, at times, shock to the patient; the treatment is less burdensome to the hospital personnel; the spinal fluid clears much more rapidly and the temperature and meningeal signs subside much sooner; and, finally, from statistics so far available, the results are much better. Certainly they are no worse.

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CYSTOSARCOMA PHYLLOIDES WITH METASTASIS

CARL STECKLER, M.D., Richmond Hill, New York and MILTON LANDMAN, M.D., Bayside, New York

(From the Departments of Radiation Therapy and Pathology, Queens General Hospital)

METASTASIS from cystosarcoma phylloides is very uncommon. In Lee and Pack's collected series of 91 cases, one patient died from pulmonary metastases.[1,2] White reported a case at autopsy "showing extensive growth on the chest at the site of removal of the left breast, metastases in the right breast, in the anterior mediastinum, and in the lungs."[3] In Cooper and Ackerman's report, histologic examination of the axillary nodes following radical mastectomy in one case showed complete replacement by tumor tissue having the same appearance as that described in the original breast lesion.[4]

We are adding to the literature another case of cystosarcoma phylloides with metastasis and fatal outcome.

Case Report

M. B., a forty-nine-year-old white woman, was admitted on August 2, 1948, and died on September 2, 1948. The patient was first seen nineteen months ago by her local physician complaining of progressive enlargement of the right breast of three months duration. Examination revealed the right breast to be enlarged to about twice the size of the left breast. The superficial veins of the skin were dilated. The breast was hard; the nipple and skin were not retracted; the axillary nodes were not palpable. A clinical diagnosis of sarcoma of the breast was entertained. Accordingly, the patient entered a hospital where a simple mastectomy was performed. She made an uneventful recovery and was discharged.

The pathologic report at that time was as follows:

> *Gross findings:* The breast is huge, measuring 28 by 26 by 19 cm. The skin and nipple appear normal. On section the breast is largely converted into tumor consisting of whorls of fibromuscular tissue. Within the nodules, cyst formation is present. The cysts vary in size from two to six cms.
>
> *Microscopic findings:* Sections reveal comparatively normal but hyperplastic ducts around which there is marked proliferation of fibrous tissue. This tissue has new fibroblasts. The cyst walls are fibrotic and have a cuboidal epithelial lining.
>
> *Diagnosis:* Cystosarcoma phylloides.

The patient remained well until six weeks before admission to this Hospital when she began to complain of shortness of breath, at first on exertion, later increasing even to moderate discomfort at rest. She had an occasional nonproductive cough not associated with chest pain. A roentgenogram of the chest was reported as showing fluid in the right hemithorax.

Examination showed an obese female propped up in bed and quite dyspneic. The lips were cyanotic; the neck veins were distended. Temperature was 100 F., pulse 108, respirations 30, and blood pressure 152/96. The chest showed a healed right mastectomy scar; no nodules were seen or felt in the skin. There were no palpable nodes in the regional axilla. The left breast and axilla were normal. A definite inspiratory lag was present in the right hemithorax with diminished tactile fremitus and flatness on percussion. Breath sounds were absent. Examination of the left chest showed no abnormal findings. The heart size could not be determined. A regular sinus rhythm was present without murmurs. The abdomen was protuberant and obese. No abnormal masses were palpable. A two plus pitting edema of both legs was present.

Laboratory findings were as follows: hemoglobin 13 Gm.; blood count, sugar, and urea nitrogen within normal limits. Mazzini test was negative; urine normal. An electrocardiogram was interpreted as showing right axis shift with right heart strain. Chest x-ray on admission was reported as "dense opacity involving the entire right thorax with the exception of the right apex. The heart and mediastinum are displaced to the left. The findings would indicate a massive pleural effusion with a shift of the mediastinum to the left "(Fig. 1).

A clinical diagnosis of pleural effusion secondary to metastases from a sarcoma of the right breast was made.

Thoracentesis was attempted on many occasions, but dry taps resulted. The patient ran a febrile course with the highest temperature up to 101 F. Deep x-ray therapy was instituted to the right chest but was discontinued because of her poor condition. Her status remained unchanged in spite of supportive measures, and she expired on the thirty-second hospital day.

At autopsy the pertinent findings were as follows: "The right lung was displaced to the center of the chest. Between the right lung and the visceral pleura was a very large mass weighing 5 Kg. (12 pounds) and measuring 35 by 28 by 25 cm. (Fig. 2). This mass did not extend into the pleura or chest

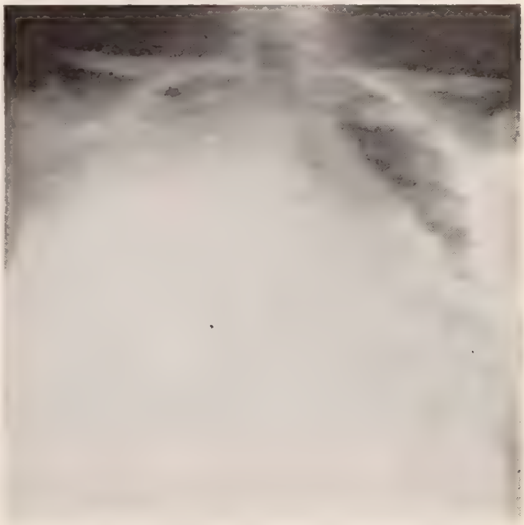

FIG. 1. Roentgenogram of chest taken on admission.

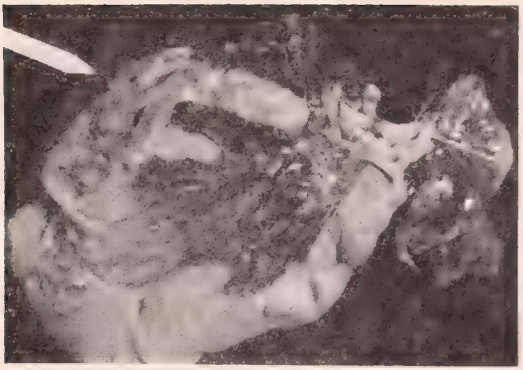

FIG. 2. Anterior surface of both lungs. Arrow shows right lung surrounded by large tumor mass.

wall. The surface of the mass itself was smooth, gelatinous, slippery, and translucent. It was grayish-brown in color and felt rubbery, with some areas being firmer than others. Cut sections of the mass gave a remarkably homogeneous bulging myxomatous appearance with many firm hemorrhagic necrotic areas. The cut surface gave little yield to scraping with a knife.

Histopathologic findings included the following:

(1) Breast tumor—Original surgical specimen is shown in Fig. 3. The stromal tissue showed a variable picture with spindle cells and large irregular polyhedral and stellate cell elements varying markedly in size in different locations. Imbedded in this stroma were isolated and somewhat dilated or slitlike spaces lined by epithelium showing proliferation but no marked cytologic variation or irregularity. An occasional giant cell was seen in the stroma.

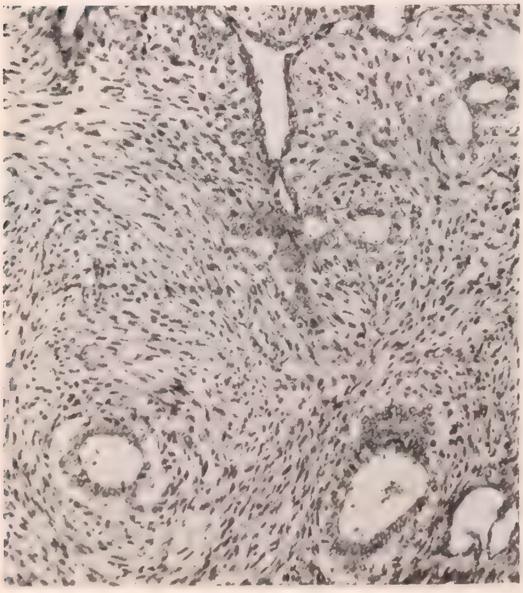

FIG. 3. Photomicrograph of original surgical specimen showing slitlike spaces lined by well-differentiated epithelial cells. Stromal tissue shows spindle cells and irregular cell elements varying in size.

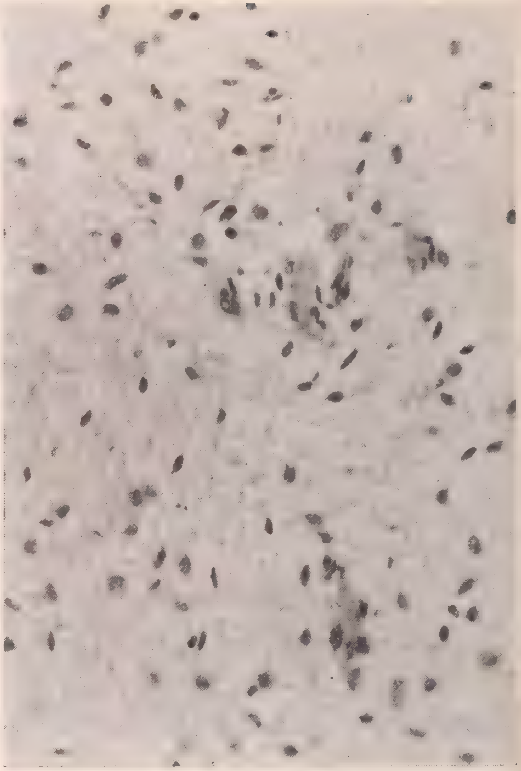

FIG. 4. Photomicrograph showing edematous stroma with large spindle cells and occasional stellate fibroblastic elements. No invasion of pulmonary parenchyma and no normal or distorted epithelial tissue or glandular spaces can be identified.

(2) Chest tumor—The sections showed an edematous stroma with large spindle cells and occasional stellate fibroblastic elements (Fig. 4). It was noteworthy that the stromal cellular components showed a remarkably even spacing with a uniform amount of intervening matrix throughout. There was a capillary vascularity of considerable uniformity throughout this stroma. The cells were more compact and closely spaced and less hypertrophied near the larger blood vessels adjacent to the areas of necrosis. The necrotic areas showed a varying degree of preservation of cell elements in altered outline. The cells were, in general, uniform throughout cytologically with no giant cells or marked variation in contour, chromatin content, size, or shape. Throughout multiple sections, no invasion of underlying pulmonary parenchyma could be made out, and no normal or distorted epithelial tissue or glandular spaces could be identified.

Final anatomicopathologic diagnosis was (1) cystosarcoma phylloides of the right breast and (2) massive myxomatous fibrosarcoma in right extrapulmonary, subpleural space, probably secondary to (1).

Comments

Most cystosarcomata of the breast are clinically benign. Physical examination discloses a large massive breast without retraction of the nipple or adherence of the skin. The axillary glands are usually not involved. However, some of these tumors show malignant tendencies and metastasize. Secondary lesions frequently take the form of pure sarcomata so that epithelial elements may be scanty or absent. In our case, the metastatic chest tumor appeared as a myxomatous fibrosarcoma with no evidence of epithelial elements on multiple section.

It is noteworthy that the metastatic tumor was described as being in the right extrapulmonary, subpleural space without extension into the lung, pleura, or chest wall, therefore demonstrating a true metastasis and not one originating as a direct extension from the original lesion.

Radiographically, the chest tumor simulated massive pleural effusion. The differentiation between the two conditions may be extremely difficult.

Summary

1. A case of cystosarcoma phylloides of the right breast, treated by a simple mastectomy, is presented.
2. A true metastatic tumor in the right extrapulmonary, subpleural space occurred nineteen months later.
3. Histologic structure of the secondary tumor was reported as myxofibrosarcoma without epithelial elements.
4. Similarity of the solid tumor on chest x-ray to massive pleural effusion is noted.

115-20 Myrtle Avenue
224-06 64 Avenue

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STRANGULATION OF THE OMENTUM

Lionel Klein, M.D., Brooklyn, New York

(*From the Surgical Service of Greenpoint Hospital*)

REPORTS of cases of torsion of the omentum, both an idiopathic type or type for which no apparent cause can be demonstrated and those secondary to an intra-abdominal pathologic state or external hernial sac, have appeared in the literature. Primary torsion while not frequently encountered is by no means rare. Incarceration and strangulation of the omentum in an external hernial sac is of course a common finding. That the omentum may become trapped and strangulate in the foramen of Winslow is perhaps not so well appreciated. The following is a case of this type occurring in the absence of any demonstrable upper abdominal inflammation or other lesion.

Case Report

The patient, a thirty-four-year-old white housewife, was admitted to the surgical service of the Greenpoint Hospital at 9:30 P.M. on November 17, 1944, with the chief complaint of abdominal pain of thirty hours duration.

The patient stated that the onset of pain was in the epigastrium thirty hours before admission and persisted, "radiated around and under the ribs to the back." There was no nausea and no vomiting, and the pain was at first cramplike in nature. The patient saw her family physician on November 16, who diagnosed "ptomaine poisoning" and prescribed medication. Next morning the pain was diffusely located on the right side in the region of the umbilicus; it was described as steady and like "a stitch." The patient stated that it did not bother her much when she lay still but became severe on coughing or straining. She became nauseated about ten hours before admission and vomited once. No anorexia was present, however, and she was able to eat immediately after vomiting. She was again seen by her family physician, several hours later, who diagnosed acute appendicitis and referred her to the hospital.

Two previous attacks of epigastric pain in the past year had been noted, but both subsided readily and spontaneously. Neither was as severe in nature as the present illness.

Gynecologic History.—Heavy vaginal discharge had been present for the past year and became worse at periods. It had increased in intensity in the past few months. There had been no increase or change in character of the discharge noted in the past few days however. The remainder of the history was noncontributory.

Physical Examination and Subsequent Course.—Findings at examination on admission were as follows: temperature 100 F., pulse 96, and respirations 22. The patient appeared acutely ill but was alert and cooperative. She complained of periumbilical pain.

The abdomen was soft throughout and not distended. Tenderness was present in the right upper quadrant and right periumbilical area with marked rebound tenderness. No spasm of anterior abdominal wall was noted, but marked spasm of muscles of the right loin with tenderness in this area was present. There was suggestion of a mass in the right upper quadrant, but this could not definitely be made out.

Digital rectal examination was negative. On pelvic examination the uterus was found to be retroverted and not tender; there was no pain on motion, and adnexae were not palpable. Marked mucopurulent vaginal discharge with excoriation of the external genitalia was present. The remainder of physical examination was essentially negative.

Although retrocecal appendix had to be ruled out, this case was not typical of appendicitis. Gallbladder and renal lesions also had to be considered. The impression was that the patient should be observed further before surgery.

Nothing was given by mouth, but sodium luminal, gr. İİ as necessary for pain, and ice cap to the abdomen were advised.

Results of laboratory examinations on admission were as follows: white blood count 10,800, polymorphonuclears 56 per cent, nonsegmented 10 per cent, lymphocytes 30 per cent, and eosinophils 4 per cent. Wintrobe sedimentation rate was 10 mm. per hour, and catheterized urine showed occasional white blood cells and bacteria.

On November 18, 1944, the laboratory examination showed white blood count 9,600, polymorphonuclears 75 per cent, nonsegmented 2 per cent, lymphocytes 22 per cent, monocytes 1 per cent, and blood serology negative. Catheterized urine showed heavy traces of albumin, many white blood cells, and bacteria. X-ray of the chest was negative for pathology; x-ray of the abdomen showed the colon in marked stasis and somewhat distended in the sigmoid region. The kidneys were not visualized. Psoas muscle borders were well outlined. No stones were seen.

Examination on November 18, 1944, revealed marked tenderness in the right flank and tenderness with rebound in the right upper quadrant and some tenderness over the right lower quadrant. Some spasticity was present. Exploratory laparotomy without further delay was felt to be indicated.

Operation.—The patient was taken to the operating room on November 18, 1944, twenty hours after admission. Spinal procaine anesthesia, 150 mg., was given, and a right rectus incision, $3^1/_2$ inches above and below the level of umbilicus, was made.

No free fluid was noted in the peritoneal cavity. The appendix contained several fecaliths but was otherwise grossly normal. The uterus was second degree retroverted but was otherwise negative. Tubes and ovaries were normal to palpation. The stomach, duodenum, pancreas, gallbladder, and ducts were normal to palpation and visual inspection. A portion of gangrenous omentum about 5 cm. by 3 cm. was dislodged in the right upper quadrant, apparently from the foramen of Winslow. Internal hernia or mesenteric tear could not be found, even on careful search. The bowel was not distended, and there was no grossly evident peritonitis.

The gangrenous omentum was clamped, cut, and tied serially with suture ligatures of plain number 1 catgut. The appendix was freed to the base by clamping, cutting, and tying mesoappendix. The base was crushed and doubly ligated with chromic number 1 catgut. The appendix was removed with a phenol knife, and the stump was phenolized and alcoholized. Abdominal closure was accomplished in layers without drainage.

Postoperative Course.—Temperature ranged from 101.6 to 98.6 F. and pulse from 108 to 76 until six days postoperatively when both fell to normal.

Postoperative course was marked by some distention and occasional vomiting until the fifth postoperative day. This was attributed to paralytic ileus and was easily controlled by the usual means. The patient was allowed out of bed on the ninth postoperative day and was discharged to the outpatient department on November 30, 1944, on the twelfth postoperative day, for follow-up and treatment of gynecologic condition.

Pathologic Report.—Specimen consists of a curved appendix measuring 7 cm. in length and 0.5 cm. in greatest diameter. The appendiceal surface is smooth, gray, and translucent. Cut section reveals a thin wall; the wide lumen is filled with brown fecal material. In addition, an irregular mass of fatty tissue measuring 3.5 by 1.5 by 1.5 cm. is delivered. Cut section reveals a reddish-brown colon and in areas a granular appearance.

The microscopic diagnosis was (1) tissue from omentum with hemorrhages and acute exudative (fibrinopurulent) inflammation and (2) appendix with appendicitis acute, mild, and periappendicitis.

Follow-up.—Follow-up in the surgical and gynecologic clinics for a three and one-half month period showed uneventful convalescence from surgery with no recurrence of symptoms.

Comment

Although the pathologist reported "appendicitis, acute, mild and periappendicitis" in the specimen, it is felt that this was not the primary lesion present in this case, nor was it in any way responsible for the occurrence of the omental lesion. Possibly the mild appendiceal inflammatory reaction reported by the pathologist could be accounted for by the trauma incident to manual exploration of the abdomen and pelvis and that due to appendectomy. A mild generalized chemical peritonitis may also have been secondary to the strangulated omentum.

While preoperative diagnosis of this condition was perhaps too much to hope for, there were several features in the patient's history and among the physical findings that in retrospect were significant of some such lesion.

The cramplike pain at the onset with radiation to the back, as well as the absence of pain except on exertion or straining, is readily understood when the nature of the pathology is appreciated.

The complete absence of anorexia throughout the episode and the fact that the patient was nauseated for only a short time and vomited only once in thirty hours mitigated against involvement of the gastrointestinal tract in the disease process.

Muscle spasm and tenderness of the right loin spoke for a kidney lesion, but the history and urinary findings did not support that diagnosis.

The mechanism responsible for the incarceration of the omentum in the foramen of Winslow was never fully demonstrated. Although the lesse peritoneal sac was not exposed and inspected a operation, it is felt to be reasonably certain that no disease process that would cause the omentum to migrate into the foramen existed therein, since pal pation of this entire area was completely negative The occurrence of an accidental incarceration o omentum that had aimlessly wandered into th lesser peritoneal sac and its subsequent strangulatio probably is the most logical explanation.

85 Maujer Stree

SENSITIVITY TO SESAME SEED AND SESAME OIL

LEO RUBENSTEIN, M.D., New York City

SESAME oil is one of the oldest known vegetable oils, variously called benne oil, til oil, teel oil, gingili oil, and gingelly oil. Since it has been considered to be inert and innocuous, it has seemed an ideal oil for use in intramuscular injection.

Studies of the chemical, biologic, and physical properties of various oils used for intramuscular injection have been made. Brown *et al.* found no sensitivity was produced by sesame oil by a technic where cottonseed oil and peanut oil caused sensitivity.[1]

Conrad *et al.* reported a case of invasive tumors of the arm caused by sesame oil injections, composed of a mixture of sesame oil and estrogen.[2] The tumors varied in size from 0.5 to 4 or 5 cm. The observed reaction was a foreign body reaction, by gross and microscopic study, and there was no question of possible allergy to the sesame oil.

Sesame oil is used commercially in the manufacture of biscuits and confectioneries, including French and Italian bread, various pastries, Turkish candy, halvah products, ordinary box candy mixtures, and pretzel sticks (particularly celery pretzels). It is used in the Near East, India, the Southern States and Mexico for cooking and for blending with other edible oils. Known to Ali Baba and the Forty Thieves, it is as ancient as the history and folklore of perfume and ointment making. A modern use is as one of the ingredients of aerosol insecticides.

Its most important use in medicine and pharmacy is as a vehicle for various injectable substances, such as the hormones and penicillin mixtures. A minor use is as an iodized oil in bronchography and myelography. The bases of its wide use are its ideal physical and chemical properties and its low antigenicity.

Case Report

The patient, L. S., a white man, was thirty-one years old when first seen on February 24, 1946. There was sudden onset of a feeling of tightness in the throat, nausea, vomiting, weakness, and a generalized intensely red skin eruption one-half hour after ingestion of a variety of hors d'oeuvres and confections including halvah. Symptoms were not relieved by initial trial injection of 5 minims of epinephrine subcutaneously. A subsequent injection of epinephrine, 5 minims, and atropine sulfate, $^1/_{100}$ grain, gave relief in twenty minutes. One and one-half hours after onset, the redness of the skin and of the bulbar conjunctivae began to fade, and the patient felt well. Usual color of skin and of bulbar conjunctivae returned by two and one-half hours after onset. The blood pressure remained normal throughout, and the pulse rate was about 100.

He was seen again on October 30, 1946, one hour after the sudden appearance of similar symptoms, including extreme lassitude and sluggishness of mental processes, after sampling a piece of halvah. He felt powerless to prevent impending collapse. In spite of his poor condition, he refused an injection of epinephrine. Fifty milligrams of Benadryl orally gave no immediate relief. A second 50-mg. dose of Benadryl, given twenty-five minutes later, also had no effect. Three and one-half hours after the onset of the attack, the patient looked entirely normal and had no complaints. Blood pressure remained about 122/74. Pulse rate went down from 112 to 86.

After the second attack it became apparent that the causative agent might have been a constituent of the halvah, and he was warned not to eat it. Halvah is a confection made from sesame seed and oil, corn syrup, dextrose, egg albumin, vanillin, chocolate, and almonds and other nuts. It usually is sold in the fall and winter. During the war years connoisseurs noticed that the flavor was different from usual. Sesame seeds were not obtainable, and peanuts and peanut oil were substituted. During this period the patient could eat halvah with no ill effects.

The patient was warned against all substances containing sesame seed or sesame oil. However, at 8:00 P.M., December 20, 1946, while playing cards, he absent-mindedly started to eat a piece of paper-wrapped candy. After one bite he realized that he was going to have an attack. He soon felt a discomfort in the roof of the mouth and then a tightness in the throat, and he began to feel weak and to vomit.

Seen at 8:30 P.M., a half hour after onset, the patient was perspiring profusely, with a weak pulse of 120. Blood pressure was 70/50. The heart sounds were poor. There was a generalized deep erythema, including intense redness of the conjunctivae, and he complained of tightness in the chest. This was the first time that the patient ever appeared in shock. Seven minims of epinephrine subcutaneously relieved the tightness in the chest. Blood pressure rose to 140/84, and the pulse rate went down to 96. The quality of the pulse became better, and the heart sounds became stronger. Thereafter the blood pressure remained about 130/70, and the pulse ranged from 86 to 96 at twenty-minute intervals.

Examination of the suspected causative agent, the candy which he had eaten, showed it to be "Honee-Seed," easily recognizable as a sesame-containing substance in a sticky base. The wrapper indicated plainly that it was made by a halvah company. The patient remembered that this particular candy had been eaten at two other times when he had had relatively mild attacks.

It now seemed more certain that the causative agent was sesame seed and sesame oil, and attempts were made, therefore, to secure objective proof. The patient was referred to Dr. Joseph Harkavy, of New York, for investigation from the point of view of allergy. Sensitivity to many inhalants and foods, including chocolate, tobacco, pyrethrum, and dust, was found. An extract of sesame was prepared from a sample of sesame seed. After intradermal injection, an immediate local reaction occurred—a red patch the size of a half-dollar with pseudopods extending up the forearm. Epinephrine was given locally to control the reaction, and a generalized reaction was prevented. A control test first performed on himself by Dr. Harkavy was negative.

On March 17, 1947, two days after the strongly positive skin test, the patient had another constitutional reaction. Sesame seed was looked for, and it was found in the Italian-French bread which the patient had had for dinner one and one-half hours previously. He had been warned about the presence of sesame in rolls and in bread, but since he had eaten Italian-French bread for years without discomfort he paid no attention to the characteristic seeds present on the crust. Later investigation indicated that the bakery had not used sesame seed during the war years and had just begun putting it into bread again.

Thereafter the patient tried diligently to avoid sesame products and succeeded in remaining well until August 20, 1948, a period of seventeen months. Two hours after eating a coffee ring he had a mild attack, relieved in about twenty minutes by Isuprel, 20 mg. sublingually, and Neoantergan, 50 mg. orally.

On October 20, 1948, about one-half hour after eating a piece of Danish pastry, he had a severe constitutional reaction which was not relieved by the Isuprel and Neoantergan which he now carried ready for emergency use. The outstanding symptoms were severe constriction of the throat and shock with persistent low blood pressure and signs and symptoms suggesting edema of the glottis. Epinephrine, 5 minims subcutaneously, relieved the symptoms in three-quarters of an hour.

The most recent attack, January 3, 1949, occurred one-half hour after eating a piece of chocolate candy. Slight constriction in the throat and generalized redness were relieved without medication.

Summary

A case of sensitivity to sesame seed and sesame oil is presented. Outstanding in the constitutional reaction are the picture of shock and the symptoms of edema of the glottis; intense erythema and itching of the skin and conjunctivae are also prominent.

Thus far no cases of this type of sensitivity have been reported. Usually epinephrine subcutaneously is necessary in treatment. In one mild attack the epinephrine-like substance Isuprel sublingually was effective. The antihistamine preparations used were of questionable value.

Because sesame oil is widely used in medical and pharmaceutical preparations, in addition to its commercial applications, it is important to know that this type of sensitivity exists.

2488 Grand Concourse

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PREPARATION OF SPECIAL EDUCATION TEACHERS

The preparation of special education teachers has become an accepted responsibility of teacher-education institutions, according to a joint survey by the U.S. office of Education and the National Society for Crippled Children and Adults.

Reported in a recent issue of *The Crippled Child*, the National Society's magazine, the survey cautions, however, that there is still a critical need, not only for more teachers, but for greater study and coordination by educational authorities and institutions. It is estimated that there are four million children in this country, who, because their educational requirements are different from the average child's, need teachers especially prepared to cope with these problems.

Children who fall into the special education category include the blind or those with partial sight, the deaf or those with defective hearing, the crippled, the cerebral palsied, the epileptics, children with speech handicaps, emotionally maladjusted children, and those either mentally deficient or superior.

The survey showed that 175 colleges and universities now offer courses to help prepare qualified teaching personnel for special education. Comparison of this with earlier surveys indicates that the work is progressing. In 1929, only 43 institutions in the U.S. and Canada offered such courses. In 1931, there were 71 listed as offering special education courses, as compared with 101 in 1936.

According to the study, greatest emphasis is being placed on preparing teachers for speech correction, with education for the acoustically handicapped and the mentally deficient ranking next. It was found that well-rounded programs for preparing special education teachers are found in the eastern and north central states, with scattered centers in other areas of the country.

Special education does not follow normal patterns of classroom instruction. It is individualistic in scope, starting at an early age, either in nursery school or in preschool, and continuing to the point where the individual is given counseling and on-the-job training. It is educational for his particular needs, from early childhood until he becomes independent.

Teachers of exceptional children, the survey indicates, are rapidly becoming a more and more select group, well-qualified for a special field of instruction, and, at the same time, capable of meeting regular classroom problems. Such teachers today must possess a knowledge of education outside their special field and must be trained in child development and in teaching methods used with ordinary children.

Despite this fact, there are still certain areas that demand immediate action. One important need in the field of special education today is the training of administrative and supervisory personnel capable of developing and carrying out these programs.

HODGKIN'S DISEASE OF THE LUNG

Hyman E. Bass, M.D., New York City, and Harry B. Reibstein, M.D., Brooklyn, New York

(From the Department of Thoracic Diseases, Beth-El Hospital)

Hodgkin's disease as a clinical entity involving the reticuloendothelial system and manifesting itself in lymph gland enlargement in the cervical and mediastinal regions is familiar to every clinician. Its systemic manifestations and modes of spread to other organs need no repetition. Occasionally, however, this disease is seen in isolated organs such as the spleen, gastrointestinal tract, etc., so that its systemic character is not apparent and diagnosis becomes difficult.[1,2] When confined to the lung and in the absence of lymphadenopathy, the clinician usually considers other pulmonary diseases which are more commonly seen. In such instances, the diagnosis is often made accidentally.

Case Report

The patient, a white woman, age sixty-five, was admitted to the Beth-El Hospital on December 3, 1948. Her family history was irrelevant. Her illness began in December, 1947, when she developed a "nervous stomach." She noted a burning sensation in the midepigastrium which radiated up to the sternum. She had frequent episodes of vomiting not related to meals. X-ray examination of the gastrointestinal tract in April, 1948, did not reveal any evidence of organic disease.

In August, 1948, she had a remission of her symptoms which lasted for several months, but in October, 1948, they returned with increased severity. She lost about 45 pounds in weight and was finally admitted to the hospital.

On admission, physical examination revealed a pale female in no distress. Blood pressure was 136/64, pulse rate 80, and temperature 100.4 F. A systolic murmur was heard at the cardiac apex and at the second left anterior interspace. No abnormal findings were noted in the lungs. The liver and spleen were not palpable. There was a hypertrophic arthritis of the fingers. The sedimentation rate was 34 mm. A complete blood count revealed a moderate secondary anemia. The remainder of the laboratory findings were noncontributory. X-rays of the skull, spine, and long bones were within normal limits. A barium enema study failed to show any organic pathology. X-ray of the chest revealed a hemispheric homogenous density in the upper left lung field in close proximity to the upper hilar region (Fig. 1). The remainder of the lung fields was normal. A left lateral view showed this density to be situated anteriorly just below the anterior chest wall (Fig. 2). The mass was well circumscribed and appeared to have a pedicle in its posterior aspect.

The appearance of the pulmonary density suggested an anterior mediastinal tumor, probably a dermoid or teratoma. Bronchoscopy did not reveal any evidence of intrabronchial pathology; gelfoam smears of both bronchi did not show any neoplastic cells. A needle biopsy of the pulmonary density was attempted, but insufficient tissue was obtained for diagnosis. The temperature, which had been normal, now began to show occasional rises to 101 or 102 F. The secondary anemia became marked, the hemoglobin falling to 54 per cent, the red cell count to 2,500,000. The patient's condition became progressively worse, and it was felt that an exploratory thoracotomy should be performed.

Exploratory thoracotomy was performed on February 4, 1949, by Dr. Harold Neuhof. A hard infiltrating mass, 4 to 5 cm. in diameter, was found in the left upper lobe. The mass appeared to be an integral part of the lung substance and had the gross characteristics of a neoplasm. A biopsy was taken from the mass and the wound closed.

Microscopic examination revealed the following (Fig. 3): The alveolar architecture of the lung is completely distorted. Small alveolar spaces lined by cuboidal cells are occasionally seen involved by a pleomorphic cellular lesion in which occasional strands of hyalinized collagen are found. The cellular infiltration is formed chiefly by lymphocytes and plasma cells and large irregular cells which contain single or occasionally multiple nuclei. The nuclei of these cells are hyperchromatic and present a lobulated appearance with large prominent nucleoli. The cytoplasm is faintly eosinophilic. Occasional eosinophils are found throughout the section. The diagnosis was Hodgkin's granuloma of lung.

Discussion

The parenchymal lesions of the lung in Hodgkin's disease are of much more frequent occurrence than is generally recognized.[3] Jackson and Parker reported roentgenographic evidence of pulmon-

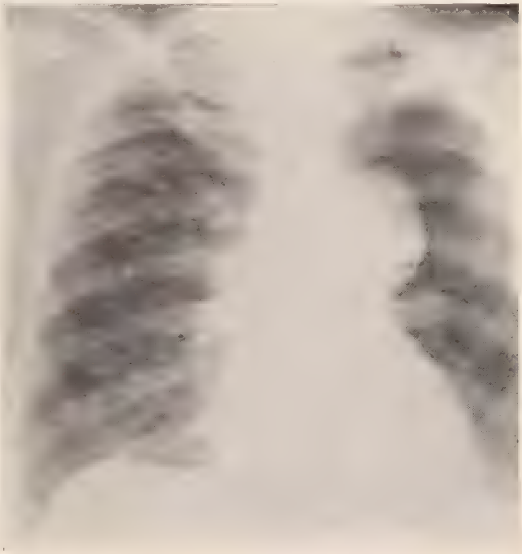

Fig. 1. Hemispheric density in upper left hilar region.

ary lesions in 14 per cent of cases and more frequently (41 per cent) at autopsy.[2] These investigators pointed out, however, that only ten cases have been reported in the literature in which the pathologic picture was apparently primary in the lung or bronchi and that such cases are extremely rare.

Wolpaw and others studied 55 cases of Hodgkin's disease by autopsy or biopsy in which 35 cases, or 63 per cent, showed intrathoracic involvement.[4] Of these 35 cases, 40 per cent involved the lung parenchyma and constituted the second most common type of intrathoracic Hodgkin's disease, the mediastinal type being the most frequent. The authors emphasize that pulmonary lesions may be produced by direct invasion of the lung across the mediastinal pleura from mediastinal nodes, by extension along the peribronchial and perivascular lymphatics, or by extension into the alveoli producing a granulomatous consolidation of the lung. To this must be added hematogenous dissemination producing miliary or nodular densities. Finally, the presence of lymphoid tissue in the lung at the points of bronchial branching and points of division of the bronchial arteries and veins raises the rare possibility of Hodgkin's disease originating in such lymphoid collections.

The symptoms in pulmonary Hodgkin's disease have no set pattern and may be absent. Some patients may complain of dyspnea, cough, chest pain, or fever. Hemoptysis is rare unless associated with tuberculosis. Other pulmonary manifestations may be seen, depending upon the type of pulmonary involvement. Pleural effusion is not unusual.[5] Twenty per cent of patients showing pulmonary involvement have pleurisy with effusion. This effusion is rarely bloody.[2] Extension of Hodgkin's tissue into a bronchus may result in a picture of atelectasis and simulate bronchogenic carcinoma. In such a case, bronchoscopy and biopsy have established the diagnosis. Cavitation may occur and resemble lung abscess, tuberculosis, or fungus disease. Bilateral peribronchial dissemination with or without obvious hilar enlargement resembling sarcoidosis has been described.[4] Nodular or miliary densities can suggest metastatic carcinoma.

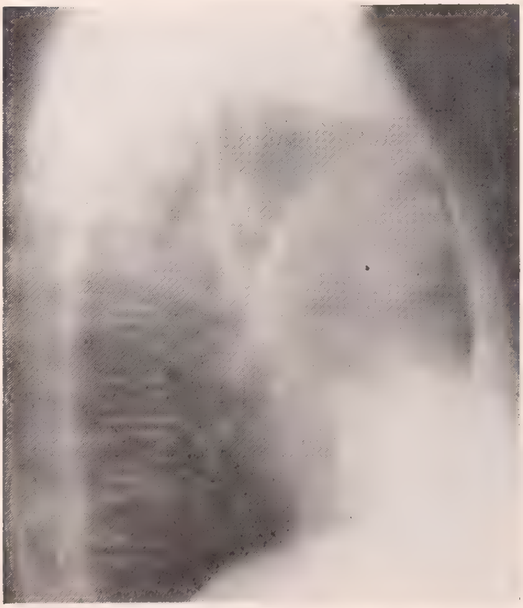

Fig. 2. Left lateral view showing density situated anteriorly.

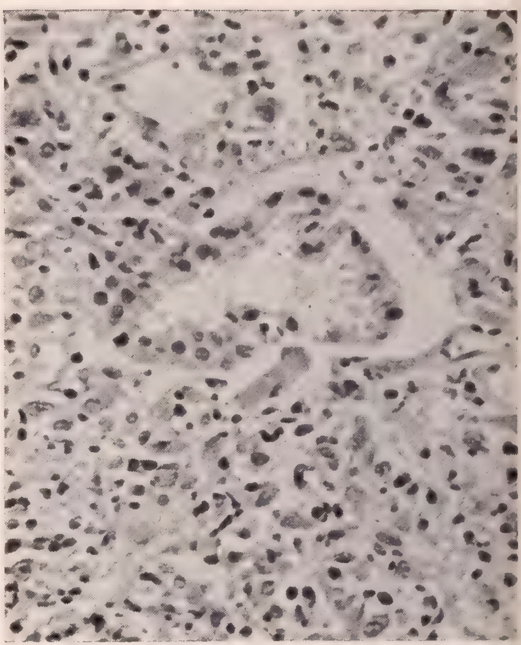

Fig. 3. Microscopic section showing pleomorphic cellular infiltration. Hodgkin's granuloma of the lung.

In summary, Hodgkin's disease of the lung was accidentally found following exploratory thoracotomy in a patient with an infiltrating neoplasm of the lung, who showed no lymphadenopathy, sphenomegaly, or other evidence of lymphomatous dissemination.

Addendum: At the time of publication the patient is receiving radiation therapy. She has shown clinical improvement, but repeated chest x-rays have not shown any change in the pulmonary density.

266 West End Avenue
1263 Eastern Parkway

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WHO'S WHO
in the
State Society's Office Staff

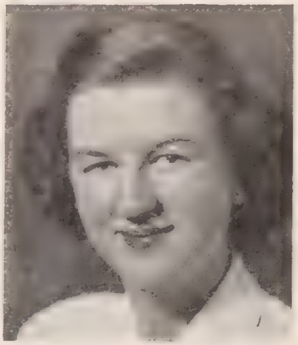
For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the Journal *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MISS NANCY AARTDINA VAN DEN HOEK joined the staff early in 1946 and worked with the *Directory* department until last fall, when she was assigned to the accounting office. For the *Directory*, Miss van den Hoek was in charge of the compilation of information about hospitals and medical societies, verifying each doctor's appointments and memberships, and handling correspondence in regard to these. As an accounting clerk, she processes all incoming bills for recording on the books of the Society and for payment, and types all financial reports for various Society officers. A graduate of Finch Junior College, New York City, Miss van den Hoek was formerly a laboratory technician at the Lederle Laboratories in Pearl River.

Now a resident of Ramsey, New Jersey, she has traveled extensively in the United States and Europe. Her father was the late Aart Marius van den Hoek, internationally known horticulturist and director of the horticultural program at Rockefeller Center.

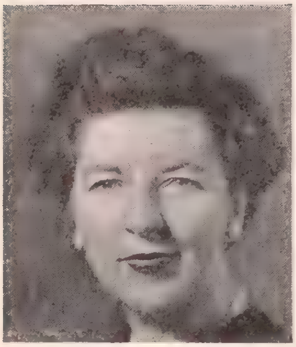
MISS GERTRUDE EDITH NICHOLS has worked in the *Directory* department since she joined the staff in the spring of 1946. She now supervises the compilation of material in regard to the hospitals and medical societies which are included in the *Directory*. This work includes correspondence with all hospitals in the State, of which 350 are listed, obtaining their staff listings for verifying each doctor's appointment as indicated. Societies which must be checked for lists of members and then verified against each doctor's copy card include 81 national societies, 52 local, 19 American Boards, and seven American Colleges.

Born in Long Island City, Miss Nichols now lives in Little Neck with her family. She is a graduate of the Bayside High School and has studied at New York University. She is active in church work, having served as president of the young people's fellowship and as a member of the choir.



MRS. EVELYN DE MARCO is the supervisor of copy for the *Directory* and as such has charge of a staff who are working to be sure that accurate information is given for each physician listed. This entails address changes, adding new information to the copy cards, and checking all new copy before the card is filed. Information in regard to each doctor must be arranged in its proper sequence: doctor's name, address, office hours, telephone, medical school, special honors (Diplomates, Fellows), workmen's compensation rating, societies, and hospital appointments. Approximately 27,500 copy cards are handled for each edition of the *Directory*.

A native of New York City, Mrs. De Marco is a graduate of the George Washington High School. Interested in music, she has taken voice lessons with private instructors for several years. During the war she was employed by the United States Maritime Commission.

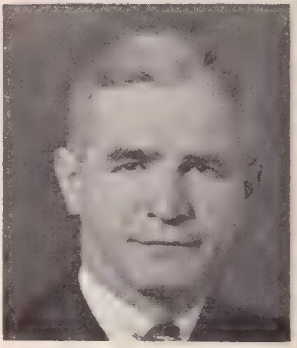


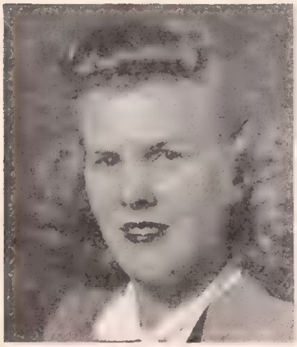
MRS. LOIS L. WARD, who joined the staff in September, 1946, is with the *Directory* department and also serves as alternate switchboard operator. In addition, she works with the membership department in checking address changes and corrections for doctors. Much careful work is necessary to keep the files up to date in regard to the numerous changes of address which are submitted. The process involves checking several cards and making new address stencils for mailings.

Born in Maryland, Mrs. Ward was graduated from Mount Ida School in Newton, Massachusetts, and now resides in New York City. At one time she was a student nurse and during World War II served as a volunteer worker with the American Red Cross and as an air raid warden. Mrs. Ward is particularly interested in the theater, and her daughter, Jane Janvier, has appeared in several Broadway shows, including "Bloomer Girl" and "The Merry Widow."

THOMAS E. WALSH is with the Public Relations Bureau as Director of the Speakers Service, liaison officer for the Woman's Auxiliary, and field representative for the metropolitan area. His work with the Speakers Service involves arranging for speakers on nonmedical subjects to talk before State-wide groups and on radio and television programs and to assist doctors in the preparation of material for public talks. In his work with the Woman's Auxiliary, he aids in the preparation of *The Distaff*, Auxiliary publication.

A native of New York City, Mr. Walsh received his B.A. degree from Fordham University and his L.L.B. from St. John's University. He is a member of the New York and Federal Bars. During the war he was Field Director for the American Red Cross in Europe. He is a member of the New York County Lawyers' Association, the Conference of Medical Society Executives, the Society of Medical Jurispurdence, and the Veterans of Foreign Wars. He lives in Congers with his wife and son, Thomas E., II, who will be two in May.





MRS. DORIS ARMAND is the supervisor of media work for the *Directory* and has been on the staff since the fall of 1946. Approximately 105,000 media cards are written for each issue of the *Directory*, a task requiring careful and accurate work. A media card is written for each hospital appointment and society membership which doctors have indicated on their copy cards. These media cards are then punched and sorted by a key punch system and checked against the lists submitted by hospitals and societies. Discrepancies are then verified by further correspondence with the hospital and societies.

Born in New York City, Mrs. Armand was graduated from the Mount Vernon High School and Sherman's Business School. Before joining the headquarters staff she was with General Electric. She commutes daily from Dumont, New Jersey, where she resides with her husband, an architect.

THOMAS E. ALEXANDER joined the headquarters staff in 1947 as accountant and last year was appointed office manager. The Medical Society of the State of New York has developed into a large organization with a correspondingly large financial structure. This involves detailed supervision of bank account deposits, dues receipts, inventories, salaries of the staff, and numerous other items. For this activity the services of an expert accountant are required, and Mr. Alexander has had ample training in this field during his previous associations with the Recording and Statistical Corporation, Vick Chemical Company, and Franklin Simon.

Born in the Bronx and a graduate of Alexander Hamilton High School, Brooklyn, and Pace School of Accountancy and Business, New York City, Mr. Alexander now resides in Franklin Square, Nassau County, with his wife and four children—Wendy, twelve, David, eleven, Judy, eight, and Tommy, three. He is secretary-treasurer of his church and interested in fishing and stamp collecting.

NECROLOGY

Titus Bull, M.D., of New York City, died on December 4, 1949, at his home following a long illness, at the age of seventy-eight. Dr. Bull was graduated from the Bellevue Medical College in 1894 and practiced in New York City until 1927, when he founded the James H. Hyslop Foundation to investigate psychoses and neuroses. He retired in 1942. The author of a number of books on psychology and psychiatry, Dr. Bull was formerly a member of the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

James Edgar Crossman, M.D., of Canisteo, died on November 29, 1949, at Bethesda Hospital in North Hornell, following an illness of several months. He was sixty-eight. Dr. Crossman was graduated from the Syracuse University College of Medicine in 1910. He was a member of the staff of the Bethesda Hospital and was formerly health officer of Canisteo and Steuben County coroner. Dr. Crossman was a member of the Steuben County and New York State Medical Societies and the American Medical Association.

Lawrence Vance Hanlon, M.D., of Brooklyn, died on November 12, 1949, at the age of fifty-three. Dr. Hanlon was graduated from the Long Island College Hospital in 1923. He was attending physician at the Kingston Avenue Hospital, attending pediatrician at the Methodist Hospital, and consulting pediatrician at the Lutheran Hospital, all in Brooklyn. A Licentiate of the American Board of Pediatrics, Dr. Hanlon was a member of the American Academy of Pediatrics, the Brooklyn Academy of Pediatrics, the Kings County and New York State Medical Societies, and the American Medical Association.

Edward Charles Koenig, M.D., of Buffalo, died on December 19, 1949, at the Buffalo General Hospital at the age of seventy-two. Dr. Koenig was graduated from the University of Buffalo School of Medicine in 1904 and interned at the Buffalo General Hospital. He then started his practice in Tonawanda, where he remained until 1913 when he went abroad to Berlin and Vienna to study radiology. Upon his return, he became head of the x-ray department at Buffalo General Hospital. During World War I, Dr. Koenig was commissioned a captain in the U. S. Army Medical Corps and was stationed at the Rockefeller Institute Base Hospital in New York City.

Dr. Koenig was roentgenologist at Buffalo General Hospital and consultant in x-ray at Children's Hospital. He was a Diplomate of the American Board of Radiology, a Fellow of the American College of Physicians, and a Fellow of the American College of Radiology. Dr. Koenig was a member of the American Roentgen Ray Society, the Radiological Society of North America, the Buffalo Academy of Medicine, the Buffalo Radiological Society, the Erie County and New York State Medical Societies, and the American Medical Association.

Howard Sheffield Jeck, M.D., of New York City, died on December 29, 1949, at the New York Hospital at the age of sixty-six. Dr. Jeck received his medical degree from the Vanderbilt Medical School in 1909. He was consulting surgeon in the department of urology at Bellevue Hospital from 1913 to 1946 and was director of the urological division there from 1938 to 1946. Dr. Jeck was associate professor of clinical surgery in the department of urology of Cornell University Medical College and professor of urology at New York Polyclinic Medical School. He was consulting urologist at St. John's Hospital, Brooklyn; Rockland State Hospital, Orangeburg; Good Samaritan Hospital, Suffern; Nyack, Dobbs Ferry, and Tarrytown Hospitals, and Norwalk Hospital in Norwalk, Connecticut.

Dr. Jeck was a Diplomate of the American Board of Urology and a Fellow of the American College of Surgeons. He was a member of the American Genito-Urinary Surgical Society, the American Urological Society, the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

Herman Franklin McChesney, M.D., of Forest Hills, died on December 25 at his home after a brief illness, at the age of seventy-three. Dr. McChesney was graduated from the College of Physicians and Surgeons, Columbia University, in 1902. He was consulting surgeon at the Adelphi Hospital in Brooklyn, and was a member of the Brooklyn Surgical Society, the Queens County and New York State Medical Societies, and the American Medical Association.

Nathan Davis McDowell, M.D., of Rochester, died on December 26, 1949, at the age of seventy-seven. Dr. McDowell received his medical degree from the Bellevue Medical College in 1897. He was consulting otologist at Rochester General Hospital and consulting laryngologist at Iola Sanatorium in Rochester. Dr. McDowell was a Diplomate of the American Board of Otolaryngology, and a member of the American Academy of Ophthalmology and Otolaryngology, the Rochester Academy of Medicine, the Rochester Pathological Society, the Monroe County and New York State Medical Societies, and the American Medical Association.

Harry Ahrend Meyer, M.D., of New York City, died on January 2 at his home in Brooklyn at the age of sixty-seven. Dr. Meyer was graduated from the College of Physicians and Surgeons, Columbia University, in 1905 and had practiced in Greenwich Village for forty-four years. He had been attending physician at the Manhattan General Hospital and was a member of the New York County and State Medical Societies and the American Medical Association.

Floyd Hazard Moore, M.D., of Herkimer, died on December 12, 1949, at his winter home in St. Petersburg, Florida, at the age of fifty-nine. Dr. Moore was graduated from the Albany Medical College in

1912 and interned at the Methodist Hospital in Brooklyn. He then became surgeon for the dam construction project at Hinckley, caring for approximately one thousand accident cases in two years, in addition to his practice. When the project was completed, Dr. Moore did postgraduate work at the New York Post-Graduate Medical School and Hospital and then opened his practice in Herkimer in 1915. During World War I, Dr. Moore was commissioned as an officer in the Army Medical Corps and was the first man from Herkimer to go overseas with the A.E.F. He was attached to the British medical service and was stationed at Aylesbury Military Hospital in England. Dr. Moore was a member of the staff of the Herkimer Memorial Hospital and belonged to the Herkimer County and New York State Medical Societies and the American Medical Association.

Joseph Maurice Morse, M.D., of Brooklyn, died on December 28 after a long illness, at the age of fifty-seven. Dr. Morse was graduated from the University and Bellevue Medical College in 1914 and opened his practice in Brooklyn. He was an associate surgeon at the Beth Moses Division of the Maimonides Hospital of Brooklyn and had formerly served on the medical staffs of Brooklyn Thoracic and Cumberland Hospitals. A Fellow of the International College of Surgeons, Dr. Morse was a member of the Brooklyn Thoracic Society, the Kings County and New York State Medical Societies, and the American Medical Association.

Marian Staats Newcomer, M.D., of New York City, died on December 29 at the New York Hospital at the age of sixty. Dr. Newcomer received her medical degree from the Syracuse University College of Medicine in 1918. She had served as lecturer and consultant at Cathedral High School for Girls, Manhattanville College of the Sacred Heart, and the Duchesne Residence School. Dr. Newcomer founded the Mater Christi Guild, a Catholic guidance center for the assistance of young people in family difficulties. She devoted her private practice to medical assistance of the indigent. Her book, *Bewildered Patient*, published in 1936, received excellent reviews. Dr. Newcomer was a member of the New York County and State Medical Societies and the American Medical Association.

James Francis Roohan, M.D., of Saratoga Springs, died on December 7, 1949, at the age of sixty-one. Dr. Roohan was graduated from the Long Island College Hospital in 1912. He was a member of the Saratoga County and New York State Medical Societies and the American Medical Association.

Emanuel Roth, M.D., of Flushing, died on October 16, 1949, at the age of forty-nine. Dr. Roth received his medical degree from the Virginia Medical College in 1927. He was a member of the Queens County and New York State Medical Societies and the American Medical Association.

Alfred W. Smallman, M.D., of Ellicottville, died on December 28, 1949, at the age of eighty-eight. Dr. Smallman was graduated from the University of Buffalo School of Medicine in 1888 and had practiced medicine for sixty-one years. He was the oldest practicing physician in Cattaraugus County, and had served as former mayor of Ellicottville. Dr. Smallman was a member of the Cattaraugus County and New York State Medical Societies and the American Medical Association.

David Charles Throop, M.D., of Rochester, died on December 10, 1949, at the age of eighty-nine. Dr. Throop received his medical degree from the Medical School of Trinity College, Toronto, Canada, in 1885, and then opened his practice in Rochester, where he had been for over sixty years. Dr. Throop was formerly a member of the Monroe County and New York State Medical Societies and the American Medical Association.

Isidor S. Tunick, M.D., of New York City, died on December 22, 1949, after a long illness, at the age of sixty-nine. Dr. Tunick was graduated from the College of Physicians and Surgeons, Columbia University, in 1903. He had been associated with the Hospital for Joint Diseases since its founding and in 1925 established there a clinic for the treatment of diseases of the blood vessels. He contributed to the research on the causes and treatment of varicose veins and wrote in this field for various medical journals.

A Diplomate of the American Board of Orthopaedic Surgery, Dr. Tunick was a Fellow of the International College of Surgeons and a member of the American Academy of Orthopedics, the New New York County and State Medical Societies, and the American Medical Association.

Edward M. Welles, Jr., M.D., of Troy, died on January 1, 1950, at his home at the age of sixty-seven. Dr. Welles was graduated from the Cornell University Medical College in 1907 and did postgraduate work in Vienna. He was a colonel in the U. S. Army Medical Corps and received the Distinguished Service Medal for services in World War I. Dr. Welles was attending ophthalmologist at the Samaritan Hospital and at the Leonard Hospital, both in Troy. A Fellow of the American College of Surgeons, he was a member of the Rensselaer County and New York State Medical Societies and the American Medical Association.

MAY 8 TO 12, 1950—DATES TO REMEMBER!

HOSPITAL NEWS

Approved List of Hospitals Announced

The annual list of approved hospitals in the United States and Canada has been announced by the American College of Surgeons, the result of the thirty-second annual survey conducted by the College under its Hospital Standardization Program. The list was officially released at the annual meeting of the Board of Regents of the College, held in December. The listing indicates hospitals of 25 beds and over which have complied satisfactorily with the fundamental requirements that assure the best care of the sick and injured.

The survey list of 1949 included 3,998 hospitals of twenty-five beds or more, of which 3,284, or 82 per cent, were on the approved list. Of the number approved as meeting the minimum standards, 2,981, or 74.5 per cent of the total surveyed, were fully approved, while 303, or 7.5 per cent of those surveyed, won provisional approval.

Only eighty-nine hospitals qualified for approval after the first survey in 1918, according to Dr. Malcolm T. MacEachern, director of the College, who declared that "probably half a century ago not one hospital could have met the standards for hospitals as it is interpreted today, even with allowances for the many scientific and technical developments that have occurred in the meantime."

Every hospital is reconsidered for approval each year. A point-rating system, by means of which every kind of service is separately evaluated, is employed in the surveys. At the end of 1948 the approved list total was 3,150.

Hospitals are among the chief sufferers from the upward trend in costs, Dr. MacEachern said. More than thirty different classifications of personnel, he pointed out, work in the hospital of 1950, whereas departmentalization was limited in 1900. Payroll costs, he added, have more than doubled in the last few years.

The fundamental principles for approval of a hospital by the College, summarized briefly, are:

1. Modern physical plant, assuring the patient safety, comfort, and efficient care.
2. Clearly defined organization, duties, responsibilities, and relations.
3. Carefully selected governing board with complete and supreme authority.
4. Competent chief executive officer or administrator, well trained in all phases of hospital administration, with authority and responsibility to interpret and carry out the policies of the hospital as authorized by the governing board.
5. Adequate and efficient personnel, properly organized and competently supervised.
6. Organized medical staff of ethical, competent physicians and surgeons.
7. Adequate diagnostic and therapeutic facilities under competent medical supervision.
8. Accurate, complete medical records, readily accessible for research and follow-up.
9. Regular group conferences of the administrative staff and of the medical staff for reviewing activities and results so as to maintain a high plane of scientific efficiency.
10. A humanitarian spirit—the primary consideration being the best care of the patient.

Hospital Construction Programs Continue

Continuing their efforts to increase hospital facilities by the construction of new buildings and additions to existing structures, by the opening of new and improved services, and by the development of new units, hospitals all over New York State are engaged in this forward-looking movement.

Among recent plans announced are:

New York Infirmary, New York City—A building fund campaign is now under way by the New York Infirmary to complete the fund for construction of a new, 11-story hospital building on the present Infirmary site, 321 East 15th Street, which will double the present capacity and provide 215 general care beds. Total cost of the new hospital is estimated at $4,050,000. Incorporated in 1854, the New York Infirmary was founded by Dr. Elizabeth Blackwell, America's first woman physician. In the past ninety-five years, a total of 253,212 patients have been cared for.

Bellevue Hospital, New York City—A new clinic for ambulatory patients, offering the newest in diagnostic and general medical care, was opened at Bellevue Hospital on January 10, with a ceremony in which Dr. Marcus D. Kogel, City Commissioner of Hospitals; Dr. William F. Jacobs, medical superintendent of Bellevue, and Dr. Robert Boggs, dean of the New York University Post-Graduate Medical School, participated. Situated on the fifth floor of Bellevue's outpatient department, the clinic includes sixty-seven examination rooms, laboratories, and operating rooms, all newly decorated and equipped. It will be staffed by 250 physicians and surgeons who are members of the faculty of the Post-Graduate Medical School of the New York University-Bellevue Medical Center.

Shepard Relief Hospital, Montour Falls—Preliminary plans for a new fireproof addition to the Shepard Relief Hospital, Schuyler County's community hospital, have been announced by Mr. Hathaway Turner, president of the board of directors. The project will include replacement of the present wooden structure of the south wing with modern fireproof construction, enlarging of several rooms, new facilities, and additional fire escapes.

Irvington House, Irvington—A hospital unit has been added to the school and sanatorium facilities at Irvington House, Irvington, for children who are suffering from rheumatic heart disease. Before the new unit was established, Irvington House had educated, rehabilitated, and housed children referred by hospitals in New York City and Westchester County. Patients may now be accepted directly from doctors, according to the announcement made. The Hospital unit will increase the institution's capacity by 20 per cent and will have an annual operating budget of $75,000.

Lebanon Bronx Hospital, the Bronx—Merger of the 240-bed Lebanon Hospital and the 320-bed Bronx Hospital was announced in December. The unification is the first step in a $5,000,000 development and expansion program "to provide the growing Bronx community with a far-reaching and comprehensive medical center for care, training, and research," directors of the two hospitals said. The new institution will be known as the Lebanon Bronx Hospital. It will expand soon on a site adjoining Lebanon Hospital. A new outpatient department, to be housed in what eventually will be a medical services building, is planned.

Doctors Selected for Hospital Study

A COMMITTEE of twelve physicians has been appointed by Dr. Marcus D. Kogel, New York City Commissioner of Hospitals, "to evaluate the modernization and construction program of the Department of Hospitals and to make appropriate recommendations." The group, which will be headed by Dr. Kogel, was named at the request of Mayor O'Dwyer.

The scope of the new committee was outlined as follows in the Mayor's instructions to Dr. Kogel:

1. To determine particularly whether sufficient emphasis has been placed on adequate facilities for the care of patients on an ambulatory basis and whether any possibility has been overlooked to save the construction of unnecessary new beds.

2. To advise on the order of priority of the projects approved for development, particularly on the priorities for alterations and reconstruction of existing facilities as opposed to new hospitals at new locations.

3. To determine the total needs of the Department of Hospitals in the form of hospitals, related facilities, and service, and to recommend the manner in which these needs are to be accomplished.

Members of the group are: Dr. George Baehr, director of clinical research, Mount Sinai Hospital; Dr. Edward M. Bernecker, administrator of hospital services, New York University–Bellevue Medical Center and a former Hospitals Commissioner; Dr. John J. Bourke, executive director of the State Joint Hospital Survey and Planning Commission; Dr. Clarence de la Chapelle, associate dean of the New York University Post-Graduate Medical School; Dr. H. A. Holle, regional medical director of the Federal Security Agency.

Also Dr. Harry S. Mustard, former City Health Commissioner; Dr. John B. Pastore, executive director of the Hospital Council of Greater New York; Dr. Elaine P. Ralli, associate professor of medicine at the New York University College of Medicine; Dr. Willard C. Rappleye, dean of the College of Physicians and Surgeons, Columbia University, and a former Hospitals Commissioner, and Dr. Thomas M. Rivers, physician-in-chief to the Hospital at the Rockefeller Institute for Medical Research and a member of the Board of Health.

New York City Hospitals Set Record for Patients in 1949

MUNICIPAL hospitals, carrying their greatest patient load in history, were able to treat every person requiring emergency care during 1949, Dr. Marcus D. Kogel, New York City Commissioner of Hospitals, said in releasing his annual report.

Dr. Kogel said the hospitals were able to "hold the line" principally because of the home care program begun last year. At the end of the year, the program was caring for 1,001 patients.

The annual report reviews the reorganization of the department which started a year ago, following recommendations of the Mayor's division of analysis of the Bureau of the Budget. It states that 7,213,139 patient-days care were provided in 1949, compared with 7,110,787 in 1948. Clinic or outpatient visits were 2,065,581 last year, compared with 1,822,992 in 1948.

Commissioner Kogel said the twin problems of overcrowding and obsolescence had been met with a four-part program of home care, rehabilitation, expansion of outpatient facilities, and by relieving x-ray and laboratory bottlenecks.

He reported that the home care program permitted hospitals to maintain 100.9 per cent occupancy, compared with 99.2 in 1948. This program provided 186,000 days of care for a total of 2,500 patients during the year. They received 12,000 home visits by physicians, 28,000 nurses' visits, 3,500 by medical social workers, 5,400 by physiotherapists, more than 200 by occupational therapists, and 57,000 hours of housekeeping service, the report stated. Cost of the program was estimated at $2.66 a patient a day, or about one fourth the cost of general care in municpal hospital wards.

NEWS NOTES

Dr. Julien Priver, assistant director of Mount Sinai Hospital, New York City, since 1946, has been appointed associate director of the hospital, according to an announcement from Mr. Alfred L. Rose, president. A major in the Army Medical Corps during World War II, in which he served with the Sixth Infantry Division in the Pacific and with the occupation forces in Korea, Dr. Priver was formerly resident in hospital administration at the Hospital for Joint Diseases in New York City.

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A program of postgraduate instruction, arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the New York State

Health Department, was presented at a staff meeting of the Rome and Murphy Memorial Hospital, held January 17 at the Elks Club in Rome. Dr. R. Plato Schwartz, associate professor of orthopedic surgery, Strong Memorial Hospital, Rochester, spoke on "Preventive Orthopedics: Common Defects with Good Prognosis Under Medical Care."

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At the annual meeting of the medical board of the Peekskill Hospital, Dr. Hyman Millman of Mohegan Lake was elected president. Other officers chosen were Dr. Frederick Rauch, Mohegan, vice-president, and Dr. John McCurty, Peekskill, secretary-treasurer.

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Dr. Carl C. Weidemann of New York City, formerly of Berlin, Germany, has been engaged as house physician by the Dobbs Ferry Hospital. Dr. Weidemann succeeds Dr. Sterne Bonnefil, who resigned to accept a position at the Horace Harding Hospital in Queens.

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Annual Christmas gift of the Schenectady County Medical Society to the student and staff nurses at Ellis Hospital, Schenectady, is a year's program of music for the nurses' dining room, Dr. James E. Fish, hospital director, has announced.

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Dr. Charles W. Mueller, of Brooklyn, was elected president of the medical board of St. John's Episcopal Hospital, succeeding Dr. Charles Edward Hamilton. Other physicians elected to the board are: Dr. Louis A. Koch, vice-president; Dr. Joseph M. Jabbour, secretary, and Dr. Frederick T. Bond, treasurer. Dr. Carl H. Greene was elected as a member-at-large to the executive committee.

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Dr. Herbert K. Ensworth was elected president of the medical staff of the Tompkins County Memorial Hospital, Ithaca, at a meeting December 5 at the hospital. Others elected include: Dr. G. Alex Galvin, vice-president; Dr. Mary B. Spahr, treasurer, and Dr. Dale B. Pritchard, secretary.

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Two million-volt x-rays will be loosed by New York City in the battle against cancer with the installation of one of the world's most powerful x-ray machines in the new Francis Delafield Hospital, now nearing completion on 163rd Street, New York City. Announcement that the machine had been ordered and is being built was made by Dr. Marcus D. Kogel, City Commissioner of Hospitals. The new high voltage unit will permit the physician accurately to concentrate many times the intensity of radiation hitherto possible on the exact location of a deep-seated cancer.

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Appointments to the medical staff of the new Veterans Administration Hospital in Buffalo have been announced by the Veterans Administration, following recommendations made by the Dean's Committee of the University of Buffalo School of Medicine. Dr. Joseph T. Aquilina, formerly at the VA Hospital in Batavia, has been appointed as assistant chief of medical services; Dr. James D. MacCallum, instructor in surgery at the University of Buffalo School of Medicine, has been appointed chief of the surgical service; Dr. William M. Chardack, formerly at the VA Hospital at Castle Point, is acting assistant chief of surgery, and Dr. Bruno G. Schutkeker, chief of neuropsychiatry at the VA's Buffalo regional office since 1947, has been appointed chief of neuropsychiatry.

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Dr. Isaac N. Wolfson will be director of the Newark State School, effective February 1, according to an announcement from Dr. Frederick MacCurdy, State Commissioner of Mental Hygiene. The school, one of six State institutions for mental defectives, is located in the village of Newark, in Wayne County. Since 1943 Dr. Wolfson has been assistant director of Manhattan State Hospital on Ward's Island, where for the past four years he has been in charge of the resident program for postgraduate students of Columbia University's Psychoanalytic Clinic for Training and Research.

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The New York Hospital-Westchester Division, in White Plains, has announced the receipt of an initial gift of $5,500 to establish the Katherine F. Hearn Scholarship for nurses for mental cases, according to Dr. James H. Wall, medical director, who explained that the gift was in honor of the hospital's former director of nurses.

TREATMENT OF RADIATION SICKNESS

To combat the undesirable after-effects so frequently associated with radiation therapy, a group at the Mayo Clinic proposes the administration of a new drug, dramamine, in such cases. They base their recommendation on the striking similarity between radiation and motion sickness, for which the drug has been found so effective, namely, anorexia, nausea, vomiting, and malaise. Exposure of the thoracic and abdominal regions will often produce these symptoms, while that of the extremities is free. These observers found that maximal effectiveness obtained when 100 mg. of dramamine was given from one-half to one hour before treatment and repeated in one and one-half and three hours. In severe cases intravenous injections of pyridoxine gave even better results. The drug was used in 82 patients, and a control series of 23 cases served as a comparison with confirmatory results.—*Proceedings of the Staff Meetings of Mayo Clinic, September 14, 1949.*

MEDICAL NEWS

New York State Gets Largest Grant for Mental Cases

THE largest sum allocated to any of the fifty-two states and territories under the National Mental Health Act this year went to New York, according to an announcement from the regional office of the Federal Security Agency.

The money is distributed on a formula based primarily on population, with a slight advantage given to rural areas because it costs more to operate mental health services there, officials explained.

In the battle against what the United States Public Health Service calls America's No. 1 public health problem—mental illness—New York received from the Federal government $283,400 of the $3,550,000 appropriated by Congress last year.

This money was aimed specifically at the development of community mental health services. Other funds for the training of professional personnel and for research into the nature of mental illness were distributed also by the National Institute of Mental Health, part of the U.S. Public Health Service.

The law stipulates that the money must not be used for the care and treatment of the mentally ill occupying beds in mental hospitals and institutions. It must be solely for preventive measures.

New York is part of Region II on the Federal Security Agency map. Other states in this region include Pennsylvania, which under the act received $236,000; New Jersey, $99,500, and Delaware, $20,000. The lowest allocation to any state is $20,000. Each state must match the Federal dollar with fifty cents.

Most of the money spent in this region went for expansion and improvement of existing clinical services, rather than for setting up new services, according to Dr. Robert H. Dysinger, mental health consultant for this region.

Death Statistics Show New Low Record

NEW York State's constant drive to save the lives of its mothers and babies paid off in October, 1949, in the form of an all-time low record for both infant and maternal mortality, the State Department of Health has announced.

Only 24 deaths of infants under one year, per 1,000 live births, were recorded for the month. In 1948 the October rate was 25 infant deaths per 1,000 live births while the average for the month for the period 1944–1948 was 29.

The drop in maternal mortality is even more startling, the Department said. The record-breaking figure was three mothers lost per 10,000 live and stillbirths. The rate for October, 1948, was eight maternal deaths and the 1944–1948 average is 11. The reduction is particularly striking, the Department pointed out, because ten years ago the rate was 10 times greater than the current rate.

The latest Department report shows that October births continued to outnumber deaths from all causes practically two to one. Births for the month totaled 25,682, compared with 12,690 deaths. Comparative figures for October, 1948, are: births, 26,181; deaths, 12,616.

Another first was scored by whooping cough. October passed *without a death* from this disease, a record for this particular month. Two whooping cough deaths were recorded in October, 1948, and the five-year average is four.

A new all-time low record was set by diarrhea and enteritis with 11 deaths of children under two years. Comparative figures are: October, 1948, 13; five-year average, 37.

There were never fewer deaths in any month on record from tuberculosis, which claimed only 312 lives last October. This record low figure is compared with 398 deaths a year ago and with a five-year average of 450 deaths. The current tuberculosis death rate of 24.9 per 100,000 population for the month showed a drop of 23 per cent from 1948.

Diseases for which reports were less favorable in October were nephritis, cancer, and cirrhosis of the liver. Nephritis rose from 417 deaths in October, 1948, to 466 last October, an increase of 10 per cent in the death rate. Cancer claimed 2,270 lives in the State last October, compared with 2,191 the year before and the rate, 181.1 per 100,000 population was second only to 193.1 for October, 1947. A total of 217 persons died from cirrhosis of the liver during October, 1948. The figure for the preceding October was 203. The current rate of 17.3 was higher than ever before, the Department reported.

Research Grants Awarded

RESEARCH grants for special studies and investigations in several fields of disease and health have been announced recently by several associations and foundations. These include:

American Heart Association—Research awards totaling $140,000 have been allocated by the American Heart Association to 34 investigators, according to an announcement by Mr. A. W. Robertson, chairman of the board. The awards are the first made out of funds contributed during the 1949 Heart campaign. Of the 34 scientists named in the awards, two receive five-year grants as established investigators engaged in independent research, while 32 will be research fellows chosen on a one-year basis to conduct research in hospital or medical school laboratories. Twelve of the awards represent renewals of research fellowships granted previously.

New York State recipients of the awards include: Alfred P. Fishman, Brooklyn, cardiovascular physiology, at Harvard Medical School; Lester C. Mark, New York City, cardiac arrhythmias, at New York University; Leonard S. Sommer, New

York City, cardiovascular physiology, at Columbia University; Abraham G. White, New York City, congestive heart failure, at Montefiore Hospital, New York City; Joseph E. Kalbacher, New York City, rheumatic fever, at Irvington House, Irvington, and Kathleen E. Roberts, Syracuse, physiology, at Cornell University Medical College.

National Foundation for Infantile Paralysis—Twenty-nine grants for poliomyelitis studies, aggregating $849,738, have been announced by Mr. Basil O'Connor, president of the National Foundation for Infantile Paralysis. The grants are to be financed by March of Dime funds.

Included in the grants is an award of $19,332 to New York University to establish a center of information on appliances for physically handicapped persons. Dr. Howard A. Rusk, chairman of the department of rehabilitation and physical medicine, will be in charge.

National Vitamin Foundation—Eight new grants for research on problems of human nutrition have been announced by Dr. E. Gifford Upjohn, president of the National Vitamin Foundation. The grants, which went into effect on January 1, 1950, include the following: Dr. Elaine P. Ralli, New York University College of Medicine, $3,605 for continuation of studies on the relation of certain of the B vitamins, particularly pantothenic acid, to the functions of the adrenal glands and of the pituitary gland, and Dr. Heinrich Waelsch, New York State Psychiatric Institute, $5,000 for continuation of studies on glutamic acid and glutamine metabolism.

Sharp and Dohme—Three new Sharp and Dohme research grants have been announced, including a grant to Dr. J. Hamilton Crawford, Long Island College Hospital, for the clinical evaluation of preparations employed in the field of internal medicine.

Fellowships Conferred by American College of Surgeons

NINE hundred and twenty-one initiates were received into fellowship and eight honorary fellowships were conferred by the American College of Surgeons at the Convocation held October 21 at the closing session of the annual Clinical Congress in Chicago. The fellowships were conferred by Dr. Frederick A. Coller of Ann Arbor, Michigan, president of the College.

Fellowships conferred on New York State doctors included:

From New York City: Drs. Howard A. Agatston, Lionel S. Auster, Richard J. Bellucci, Francis A. Beneventi, Samuel M. Bloom, Robert J. Booher, Martin Clyman, Frank H. Constantine, John A. Cooke, Jr., Edward P. Danforth, Paul J. Devlin, James A. Dingwall, William A. Epstein, Lawrence Essensen, Joseph H. Farrow, Walter W. Fischer, Sidney T. Friedman, Dan M. Gordon, Maurice S. Harte, Florada Hughes Howard, Sidney Kahn, Ivan Kempner, Barnard Klieger, C. Austin Kosik, Frank LaGattuta, Louis Lahn, Gerson J. Lesnick, Arthur Linksz, Jack V. Lisman, Rolfe D. Long, Edmund F. Longworth, Herman J. Lukeman.

Bernard Maisel, David N. Marks, Robert McClanahan, Ira A. McCown, Charles J. Miller, Arthur Minsky, Lester A. Mount, R. Sterling Mueller, Equinn W. Munnell, Max B. Nathanson, Charles Ney, Norman Pleshette, Heino Provet, Bronson S. Ray, Hunter H. Romaine, James Alan Rosen, Leonard R. Rubin, Morris Rubin, Andrew Schildhaus, Edward Schneider, Leonard V. Smiley, Perrin B. Snyder, Edward F. Stanton, Leon D. Star, Selig Strax, Charles H. Thom, Irving James Thorne, Jacob H. Turkell, J. Charles Washburn, Willet F. Whitmore, Jr., Frederick A. Wurzbach, Jr., and Leon Zussman.

From Brooklyn: Drs. Howard R. Bancks, Theodore Barnett, Edwin N. Beery, William J. Fusaro, Martin Z. Glynn, Theodore H. Grundfast, Thomas W. Hynes, Sidney Lipton, Raymond K. J. Luomanen, Edgar O. Martinson, Stephen M. McCoy, Morris Sarrel, Ralph M. Schwartz, Donald E. Swift, Carl H. Tafeen, Francis J. Tarsney, Mauro A. Tumolo, Florence Wilson, and I. Charles Zuckerman.

Also: Drs. John Ambrusko, H. Robert Oehler, Jess Stubenbord, and Floyd M. Zaepfel, all of Buffalo; Drs. Daniel Burdick, Paul M. Cramer, William G. Peacher, and Donald B. Sanford, all of Syracuse; Drs. Mark Daniel, I. Harvey Schotter, and Louis L. Spivack, Bronx; Drs. Joseph A. Coyle, Philip W. Fenney, Albert H. Levy, and Nello Nepola, Staten Island; Drs. Floyd H. Densmore, Walter A. Fenstermacher, and Robert R. White, Rochester; Drs. Nicholas J. DeJulio and Robert Lateiner, New Rochelle.

Also: Drs. Henry C. Engster and William B. D. Van Auken, Troy; Drs. James H. Flynn and John W. Ghormley, Albany; Drs. Allan S. Graham and Russell H. Hooker, Pleasantville; Drs. Samuel E. Haskel and Gerard C. Maglio, White Plains; Drs. William F. Murray and Stuart T. Ross, Hempstead; Drs. Anthony V. Sisca and J. Lincoln Slabey, Rye; Dr. John J. Carroll, Lockport; Dr. Stephen Chasko, Jamaica; Dr. Louis A. D'Alecy, Stapleton; Dr. Peter A. Miceli, Kew Gardens.

Also: Dr. Sidney N. Miller, Poughkeepsie; Dr. Alfred S. Moscarella, Spring Valley; Dr. John C. Petrone, Suffern; Dr. Philip J. Reilly, Elmira; Dr. Edward F. Rohmer, Bedford; Dr. Philip T. Schlesinger, Glens Falls; Dr. Louis Sklarow, Gowanda; Dr. J. Manning Touhey, Endicott; Dr. Norman M. Weinrod, Mount Vernon, and Dr. Herbert J. Wright, Jr., Schenectady.

MEDICALLY SPEAKING—

James Alexander Miller Fellowship for Research in Tuberculosis—The New York Tuberculosis and Health Association announces that a fellowship will be available from July 1, 1950, to June 30, 1951. The fellowship is designed to support a qualified medical investigator who will devote full time to a research project with a definite bearing on tuberculosis. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the pursuit of the work. It is preferred that such laboratory or clinic be located in New York City. The stipend will be $5,000.

Application forms will be supplied on request to the New York Tuberculosis and Health Association, 386 Fourth Avenue, New York 16, and must be submitted in duplicate not later than March 1, 1950. Announcement of the award will be made in April, 1950.

Brooklyn Dermatological Society—At the last regular meeting of the Brooklyn Dermatological Society, the following officers were elected: Dr. Irving N. Holtzman, president; Dr. Moses Silverman, vice-president, and Dr. Samuel I. Greenberg, secretary-treasurer.

Last year marked the twenty-fifth anniversary of the founding of the Society, and of the original founders Drs. Gauvain, Graham, Persky, Skeer, and Walzer are still active members.

Rosenstock Memorial Foundation Announces Fellowship Plan for 1951—The Rosenstock Memorial Foundation, Inc., a philanthropic foundation for the purpose of fostering individual medical research without regard to race, color, creed, or sex, in accordance with its announcement of September 15, 1949, announces the award of fellowships in research to Dr. Marvin F. Levitt, of Mt. Sinai Hospital, and Dr. Johnson C. S. Chu, of N.Y.U.-Bellevue Medical Center.

The Rosenstock Foundation will offer for 1951 two fellowships in the amount of $3,000 for one year for the support of individual medical research to be conducted in a hospital in greater New York with medical school affiliations. Fellowships may be granted either for full-time or part-time medical research.

Fellowships will be limited to those who apply within three years of the completion of internship or residency, and applications must be endorsed by the director of the hospital where it is proposed that the research will be conducted.

Applications may be made in any form that the applicant may desire, outlining the nature of the work to be undertaken and the qualifications of the applicant. After endorsement by the director of the hospital, the application should be forwarded to the Foundation, at 42-16 West Street, Long Island City 1, New York.

National Gastroenterological Association 1950 Award Contest—The National Gastroenterological Association recently announced its Annual Cash Prize Award Contest for 1950. One hundred dollars and a certificate of merit will be given for the best unpublished contribution on gastroenterology or allied subjects. Certificates will also be awarded those physicians whose contributions are deemed worthy.

Contestants residing in the United States must be members of the American Medical Association. Those residing in foreign countries must be members of a similar organization in their own country. The winning contribution will be selected by a board of impartial judges, and the award is to be made at the annual convention banquet of the National Gastroenterological Association in October of 1950.

Certificates awarded to other physicians will be mailed to them. The decision of the judges will be final. The association reserves the exclusive right of publishing the winning contribution, and those receiving certificates of merit, in its official publication, *The Review of Gastroenterology*.

All entries for the 1950 prize should be limited to 5,000 words, be typewritten in English, prepared in manuscript form, submitted in five copies accompanied by an entry letter, and must be received not later than June 1, 1950. Entries should be addressed to the National Gastroenterological Association, 1819 Broadway, New York 23.

Dr. Hawley Resigns—Dr. Paul R. Hawley has resigned as chief executive officer of the Blue Cross and Blue Shield Commissions. He will become director of the American College of Surgeons on March 1.

Dr. Hawley, who will retain the presidency of the Blue Cross Health Service, Inc., national insurance company, succeeds Dr. Malcolm T. MacEachern as director of the College of Surgeons.

American Heart Journal Announces New Staff—Dr. Jonathan C. Meakins, formerly professor of medicine at McGill University, Montreal, became editor of the *American Heart Journal* effective January 1. Among a group of physicians from all over the United States, Canada, and Mexico, Drs. Arthur C. DeGraff and Robert L. Levy of New York were named to the editorial board. It has further been announced that under the new editorial management the presentation of clinical papers, rather than the scientific and research papers of the past, will be the primary function of the *Journal*.

Essay Award—The American Society for the Study of Sterility is offering an annual award of $1,000, known as the Ortho Award, for an essay on the result of some clinical or laboratory research pertinent to the field of sterility. Competition is open to those who are in clinical practice as well as to individuals whose work is restricted to research in basic fields or full-time teaching positions. The prize essay will appear on the program of the forthcoming meeting of the American Society for the Study of Sterility, which is to be held at the Sir Francis Drake Hotel in San Francisco on June 24 and 25, 1950.

Full particulars may be obtained from the Secretary, Dr. Walter W. Williams, 20 Magnolia Terrace, Springfield, Massachusetts. Essays must be sent to Dr. Williams by April 1, 1950.

American Board of Ophthalmology Examinations Announced—Candidates for the certificate of the American Board of Ophthalmology are accepted for examination on the evidence of a Written Qualifying Test. These Tests are held annually in various parts of the United States. Applications are now being accepted for the 1951 Written Test. They will be considered in order of receipt until the quota is filled. Applications may be obtained by writing to the American Board of Ophthalmology, 56 Ivie Road, Cape Cottage, Maine.

Two Million Dollars Pledged for Memorial Cancer Center—A donation of $2,000,000 toward a new $5,250,000 construction and teaching program at Memorial Cancer Center by John D. Rockefeller, Jr., was announced recently by Mr. Reginald G. Coombe, president of the Center board of managers. The gift was conditional on the Center's raising an equal amount. An intensive effort in this direction has already been begun, Mr. Coombe added, and the board of managers hopes to raise the balance by private contributions without resorting to a public campaign.

The $4,000,000, added to $1,250,000 already in hand, Mr. Coombe said, would complete the sum needed for the new program. This includes the erection of a new clinic building, a children's wing, new operating rooms, a recovery ward, a physiology laboratory, and other expanded technical facilities.

The Center, in addition, plans to set aside about $2,000,000 for salaries of research and clinical staffs.

Albany Medical College Gives Course for Doctors—Albany Medical College is offering a series of courses for physicians in Albany and surrounding counties who want to keep abreast of the latest medical thinking. The first course, dealing with heart disease in lectures, panel discussions, and case presentations, is sponsored by the College and the New York State Department of Health. Programs are held at 2 P.M. every Thursday afternoon. February 2 will mark the fifth meeting of this first course which will be presented for the two following Thursdays.

Although there was no charge for this first course, it may be necessary to charge a fee for later ones, Dr. R. C. Cunningham, dean of the Medical College, has stated. Advance registration will be required for all these courses.

Centenarian Honored—Dr. Grosvenor S. Farmer, born January 6, 1850, celebrated his 100th birthday at an anniversary banquet given in his honor by the Black River Valley Club, Watertown. Nearly 250 close friends and special guests attended, among them the president of St. Lawrence University, from which Dr. Farmer graduated in 1871. Dr. Farmer, oldest physician in New York State, also received congratulatory messages from President Truman and Governor Dewey.

Dr. Farmer received his medical degree from the New York Homeopathic Medical College in 1874 and is an honorary member of the staff of the House of the Good Samaritan, Watertown. He is a member of the American Medical Association and the New York State and Jefferson County Medical Societies.

Residency Training Requirements of American Board of Obstetrics and Gynecology—The American Board of Obstetrics and Gynecology has not made nor is it contemplating any changes in its residency training requirements, despite rumors of an increase in training years. Eligibility requirements remain the same, namely, three years of acceptable formal training, followed by at least two years of post-training practice in the specialty.

Hospitals are inspected and approved for training jointly by the Council on Medical Education and Hospitals of the American Medical Association and this Board. Approvals are granted for training periods of one, two, and three years, depending on the available facilities and the findings of the survey inspections.

This Board has no objection to residency services being arranged by hospitals for periods longer than three years, unless this dilutes the candidate's clinical training opportunities too much during the first three years. However, the Board does not accept a fourth year, or more, of residency training as a substitute for any part of the required two years of post-training practice.

The importance of post-training practice in the specialty is emphasized as an opportunity for maturing of the candidate and for colleague appraisal of a man's ability when working on his own responsibility in his chosen community. The only exception to this ruling is in the case of men advancing from their training into full-time teaching positions. These men then must complete at least two years in such positions.

Copies of the Bulletin of this Board, outlining the above requirements in more detail, are available to hospital administrators or to candidates, upon application to Paul Titus, M.D., Secretary, American Board of Obstetrics and Gynecology, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

Federal Taxation—In a bulletin issued by the Washington office of the American Medical Association the statement is made that in 1948 the Federal government was taking 74 per cent of the total taxes collected, leaving only 26 per cent for local and state governments. Of the more than forty billions of dollars collected in 1948, five and one-half billions were returned to the states. In New York State the tax paid to Washington was $7,975,513,716, and the amount returned was $432,941,740, or approximately $5^1/_2$ per cent, the largest collection and the lowest return except for Delaware (3 per cent).

Symposium and Exhibit on Inhalational Therapy—A Symposium and Exhibit on Inhalational Therapy was presented on December 9 under the joint auspices of the New York Academy of Medicine Committee on Public Health Relations and the New York Association of Oxygen and Ambulance Services, Inc. Speakers were as follows: Dr. Morris Block, Bellevue Hospital, on "Pneumonia"; Dr. Hylan A. Bickerman, Goldwater Memorial Hospital, on "Pulmonary Edema"; and Dr. Chesmore Eastlake, Jr., Columbia-Presbyterian Medical Center, on "Aerosol Therapy in Bronchiectasis, Lung Abscess, and Sinusitis."

Public Health Service Grants and Grants by Damon Runyon Memorial Fund—The U.S. Public Health Service has announced 92 Federal grants totaling $907,212 to aid cancer research.

Several of the awards will aid scientific investigation of the relation between cancer and hormones, the glandular secretions which regulate body growth and vital functions. At Memorial Hospital in New York, Drs. R. W. Rawson and H. J. Tagnon plan to study the possibility that diseased livers cause reduced activity of estrogen, a female sex hormone. Previous research has shown that estrogen abnormalities can cause cancer in mice.

Additional Public Health Service grants totaling $835,770 for medical and allied research projects at non-Federal institutions were made in December by the National Institutes of Health following recommendation by the National Advisory Health Council and approval by Surgeon General Leonard A. Scheele of the Public Health Service. A total of 105 projects will be supported at 61 institutions located in 29 states, the District of Columbia, and three foreign countries. Of these grants twenty have been assigned to individuals and institutions in the State of New York, totaling over $200,000.

The Damon Runyon Memorial Fund recently presented checks totaling $101,000 to eight institutions to support cancer research. Grants went to the following universities and hospitals in New York State: New York University-Bellevue Medical Center, University of Rochester School of Medicine, Harlem Hospital, New York City, and Jewish Hospital, Brooklyn.

N.Y.U.-Bellevue Growth Reported—Nineteen hospitals in four states are associated with the New York University-Bellevue Medical Center, it was disclosed with the publication of a report on the Center's first full year of operation.

The 64-page report, submitted to the Center's board of trustees by Winthrop Rockefeller, chairman, said that 1,200 physicians and scientists associated with the Center were conducting a million-dollar-a-year research program.

New hospitals associating themselves with the Center last year included St. Vincent's, Bridgeport, Connecticut; Easton Hospital, Easton, Pennsylvania, and the proposed Rural Medical Center in Hunterdon County, New Jersey. Two in New York City, Willard Parker and Gouverneur, also became affiliated last year.

During the period covered by the report, Mr. Rockefeller noted, work had started on construction of the university section of the Center on an 11-acre site on the East River just north of Bellevue Hospital.

MEETINGS

Past

New York Academy of Medicine

A Symposium on Inhalational Therapy, consisting of exhibits, demonstrations, motion pictures, and lectures, was held December 5 to 10, 1949, at the New York Academy of Medicine, New York City. The event was sponsored by the Committee on Public Health Relations of the Academy in cooperation with the New York Association of Oxygen and Ambulance Services.

Saranac Lake Medical Society

Dr. Frank H. Gardner, instructor in medicine at the Harvard Medical School, spoke on "Diagnosis and Treatment of the Hemolytic Anemias" at the meeting of the Saranac Lake Medical Society held December 7 at the Saranac Laboratory. Dr. Carl G. Merkel, vice-president, introduced the speaker.

New York Society for Medical History

At a dinner meeting in New York City on December 8, the New York Society for Medical History commemorated the birth of Hippocrates, 2,400 years ago. Dr. Robert Chambers, professor emeritus of biology, New York University, spoke on "Ancient Medical Practice."

Metropolitan New York Chapter, Association of Military Surgeons

On January 6, a joint meeting of the New York Academy of Medicine and the Association of Military Surgeons of the United States, Metropolitan New York Chapter, was held at the Academy. The scientific program consisted of an address by Dr. Warren P. Dearing, Deputy Surgeon General, on "Civilian Health, A Joint Responsibility," and one by Ralph Wykoff, Ph.D., of the National Institutes of Health, Bethesda, Maryland, on "Recent Advances in Electronic Microscopy."

Geneva Academy of Medicine

A program of postgraduate instruction, arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the State Department of Health, was held for the Geneva Academy of Medicine and the Geneva Dental Society on January 16. Dr. Edward G. Schweinberger, associate plastic surgeon, St. Joseph's Hospital, Syracuse, spoke on "Cleft Palate and Hare Lip."

Future

American Society for Surgery of the Hand

The fifth annual meeting of the American Society for Surgery of the Hand will be held Friday, February 10, at 9:00 A.M., at the New York Academy of Medicine, New York City. Morning and afternoon sessions will be held.

Speakers and topics for the morning meeting will be:

Dr. Julian M. Bruner, Des Moines, Iowa—"Safety Factors in Tourniquet Hemostasis."

Dr. Michael L. Mason, Chicago, Illinois; Dr. Henry C. Marble, Boston, Massachusetts, and Dr. Arthur Purdy Stout, New York City—"Tumors of the Hand."

Dr. Joseph H. Boyes, Los Angeles, California—"The Motor Branch of the Ulnar Nerve."

Dr. Sterling Bunnell, San Francisco, California—"Dynamic Splinting," a motion picture.

Dr. Erik Moberg, Goteborg, Sweden—"Brachial Block Anesthesia with Xylocain."

At 12:30 P.M. a luncheon will be served for members and guests. Participating in the afternoon session will be:

Dr. Harry L. Shapiro, professor of anthropology, Columbia University—"Phylogeny of the Hand."

Dr. Emanuel Kaplan, New York City—"Embryologic Development of the Hand and Its Relation to Function."

Dr. Arthur J. Barsky, New York City—"Congenital Anomalies of the Hand."

Dr. William H. Frackelton, Milwaukee, Wisconsin—"Joint Arthrodesis to Increase Hand Function" and "Antecubital Donor Skin Grafts."

Dr. Raymond M. Curtis, Baltimore, Maryland—"An Experimental Study of the Tensile Strength of Tendon Repair."

Dr. Vernon Luck, Los Angeles, California—"Treatment of Dupuytren's Contracture by Subcutaneous Fasciotomy," a motion picture.

American Academy of Orthopaedic Surgeons

The seventeenth annual assembly of the American Academy of Orthopaedic Surgeons will be held at the Waldorf Astoria Hotel, New York City, from February 11 through February 16. The first day, Saturday, February 11, will be devoted to an audiovisual education program, consisting of a number of movies demonstrating various bone and joint operations and allied subjects.

On the second and third days, February 12 and 13, instructional courses in various fields within the realm of orthopedic surgery will be given. The scientific program begins on Monday afternoon, February 13, and continues through Thursday, February 16. About 1,500 orthopedic surgeons, members and guests of the American Academy, are expected to attend.

American College of Chest Physicians, New York State Chapter

The annual meeting of the New York State Chapter of the American College of Chest Physicians will be held at the Hotel New Yorker, New York City, on Thursday, February 16, with Dr. Joseph J. Witt, president of the Chapter, serving as chairman.

Speakers at the morning session, which will begin at 9:30 A.M. with Dr. David Ulmar as moderator, include:

Dr. Martin M. Maliner, assistant professor of pediatrics, New York University-Bellevue Medical Center—"Fluoroscopic Anatomy of the Heart."

Dr. Hyman Alexander, assistant clinical professor of medicine, New York University College of Medicine—"Cardiac Pathology as Discovered on Routine Mass Chest X-ray Surveys."

Dr. George Porter Robb, associate clinical professor of radiology, New York University Post-Graduate Medical School—"Angiocardiography in the Demonstration of Cardiovascular Anatomy and Pathology."

Discussion will be opened by Dr. Henry K. Taylor, assistant professor of clinical roentgenology, New York University College of Medicine, and Dr. Robert McGrath, assistant clinical professor of medicine, New York University Post-Graduate Medical School.

Guest speaker at the luncheon will be Dr. Herbert R. Edwards, executive director of the New York Tuberculosis and Health Association, whose topic will be, "The Significance of Tuberculosis Today."

Dr. Edgar Mayer will be moderator for the afternoon session, which will begin at 2:00 P.M. The following will participate:

Drs. A. G. Cranch and T. W. Nale, medical toxicology department, Union Carbide Company—"Respiratory Effects of Volatile Substances."

Dr. Leonard Greenburg, director, division of industrial hygiene, New York State Department of Labor—"Dust Inhalation in Relation to Pulmonary Disease."

Dr. Richard L. Riley, associate professor of industrial medicine, New York University Post-Graduate Medical School—"Alterations in Pulmonary Physiology Produced by Inhalation of Harmful Substances."

Discussion will be opened by Dr. L. J. Goldwater, professor of industrial hygiene, Columbia University School of Public Health.

At the dinner, Dr. Joseph Charles Placak, president of the American College of Physicians, will be guest speaker.

Utica Academy of Medicine

Dr. Laurence Miscall, assistant professor of clinical surgery, Cornell University Medical College, will speak on "Chest Trauma" at the meeting of the Utica Academy of Medicine to be held Thursday night, February 16, at 8:00 P.M. at the Hotel Utica in Utica. The program is postgraduate instruction arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York in cooperation with the State Department of Health.

Congress on Industrial Health

The tenth annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association, will be held Monday and Tuesday, February 20 and 21, at the Hotel Roosevelt in New York City.

American Academy of General Practice

The 1950 scientific assembly of the American Academy of General Practice will be held from February 20 through February 23, with headquarters at the Kiel Auditorium, St. Louis, Missouri. A program of scientific papers and technical and scientific exhibits has been arranged. Chairman of the local arrangements committee is Dr. Robert C. McElvain of St. Louis.

COUNTY NEWS

Albany County

At the November 16 meeting of the Albany County Medical Society Dr. Joe Vincent Meigs of the Massachusetts General Hospital and Harvard Medical School spoke on "Carcinoma of the Cervix Uteri." The discussion was opened by Dr. Arthur Wallingford and continued by Drs. Lyle Sutton and Edward McDonald.

The annual meeting of the Albany County Medical Society was held on December 14, and the following officers were elected: Dr. Thomas J. O'Donnell, president, and Dr. James W. Bucci, president-elect. Dr. Albert Vander Veer and Dr. Frances E. Vosburgh were re-elected to the offices of secretary and treasurer, respectively.

On December 3 a dinner dance was held at the Colonie Country Club in honor of the new and past officers of the Society. Dr. John Marra was head of the arrangements committee

Allegany County

"Electrocardiography" was the subject of a lecture in postgraduate instruction presented by Dr. Eugene J. Lippschutz at the January 12 meeting of the Allegany County Medical Society. Dr. Lippschutz is an instructor in medicine at the University of Buffalo School of Medicine. This program was arranged by the Medical Society of the State of New York with the cooperation of the New York State Department of Health.

Bronx County

A regular meeting of the Bronx County Medical Society was held at the Concourse Plaza Hotel on December 21. Speaker at the scientific session was Dr. Thomas P. Magill. His topic was "Our Present Knowledge of Virus Diseases."

Broome County

Dr. Leonard J. Flanagan was re-elected as president of the Broome County Medical Society at the annual meeting of the Society on December 14. Dr. Flanagan will serve his second term as president. Also elected were Dr. B. L. Matthews, vice-president; Dr. Raymond S. McKeeby, secretary, and Dr. Martin Weiss, treasurer. The doctors also heard an address by Dr. Stuart M. Blakely of Binghamton, who discussed his impressions of hospitals he visited in Italy, France, and Great Britain during a recent trip.

Chautauqua County

Dr. S. R. Patti of Dunkirk has succeeded Dr. William L. King of Jamestown as president of the Chautauqua County Medical Society. Election of officers was held at the December 21 meeting of the Society. Speaker at the meeting was Dr. Bernard Norcross of Buffalo.

Chemung County

New officers of the Chemung County Medical Society are as follows: Dr. A. H. Hillman, president; Dr. J. A. Mark, treasurer; Dr. C. H. Kosmaler, vice-president, and Dr. J. J. McConnell, secretary. Election of officers was held at the annual meeting on December 1.

After the business meeting a Medical-Dental dinner was held, and Dr. Harold Hillenbrand, secretary of the American Dental Association, spoke on the British health plan based on his observations during a recent visit to Britain.

Chenango County

"Recognition and Management of Psychiatric Problems in General Practice" was the subject of a lecture in postgraduate instruction presented by Dr. Leslie A. Osborn at the December 13 meeting of the Chenango County Medical Society. Dr. Osborn is professor of psychiatry at the University of Buffalo School of Medicine. The program was arranged by the Council Committee on Public Health and Education of the New York State Medical Society with the cooperation of the New York State Department of Health.

Clinton County

The December 15 and January 19 meetings of the Clinton County Medical Societies comprised programs of postgraduate instruction arranged by the State Medical Society with the cooperation of the State Department of Health. Dr. William E. Studdiford, New York University College of Medicine, spoke on "Early Diagnosis of Carcinoma of the Cervix" at the December meeting, and Dr. Leon G. Berman, Syracuse University College of Medicine, spoke on "Diagnosis and Treatment of the Acute Abdomen" at the January meeting.

The annual meeting of the Clinton County Medical Society was held on November 15. The following officers were elected for 1950: Dr. Leonard J. Schiff, president; Dr. G. C. deGrandpre, vice-president; Dr. I. Robert Wood, secretary, and Dr. K. M. Clough, treasurer.

Cortland County

Dr. Warren J. Pashley was elected president of the Cortland County Medical Society to succeed Dr. Robert H. Kern, retiring president, at the meeting of the Society on December 16. Also elected were Dr. Hugh Frail, vice-president; Dr. John Eckel, secretary, and Dr. William E. Mosher, treasurer.

Delaware County

At the annual meeting of the Delaware County Medical Society held on December 13 at the Delhi Inn, Dr. Sidney Solomon was elected president, Dr. Robert V. Schatken, vice-president, and Dr. Sheldon Edgerton, secretary-treasurer. Also taken up at this meeting were final plans for the inauguration of a county-wide system of cancer and tumor detection clinics.

Dutchess County

Dr. Lloyd Tyson, assistant physician at Presbyterian Hospital, spoke on "Rheumatoid Arthritis" at the November 9 meeting of the Dutchess County Medical Society. At the December 14 meeting, "Psychiatry" was the subject of a talk given by Dr. Carl Binger of the Cornell University Medical School.

The scientific program of the January 11 meeting of the Society consisted of case presentations by the St. Francis Hospital staff, discussed by the Vassar Brothers Hospital staff. On January 25, a dinner dance was held at the Nelson House for the members of the Dutchess County Medical Society, the Woman's Auxiliary, and guests.

Erie County

New officers of the Erie County Medical Society, as elected at the meeting on December 20, are as follows: Dr. Stephen A. Graczyk, president; Dr. Elmer T. McGroder, first vice-president; Dr. Samuel Sanes, second vice-president; Dr. Mary J. Kazmierczak, secretary, and Dr. Walter Scott Walls, treasurer.

Fulton County

The annual dinner meeting of the Fulton County Medical Society was held on December 14 at the Hotel Johnstown. Dr. John H. Larrabee was elected president. Other officers named were: Dr. John S. Clemans, vice-president; Dr. Robert Warner, secretary, and Dr. William H. Raymond, treasurer. The speaker of the evening was Dr. Albert Goodwin of Gloversville. Dr. Goodwin spoke on "Relation of Blood Cell Size to the Diagnosis of Various Diseases."

Genesee County

Dr. Richard F. Davis was named president of the Genesee County Medical Society at the meeting of the Society held on December 14. Vice-president named was Dr. Joseph Diasio, and secretary-treasurer, Dr. Lawlor F. Quinlan.

Herkimer County

The following officers were elected at the annual meeting of the Herkimer County Medical Society on December 14: Dr. Ernest Enzien, Frankfort, president; Dr. W. J. MacDonald, Mohawk, first vice-president; Dr. Harold T. Golden, Herkimer, second vice-president, and Dr. Oscar J. Muller and Dr. Robert C. Ashley, both of Little Falls, third vice-president and secretary-treasurer, respectively.

Jefferson County

Election of officers was held at the November 15 meeting of the Jefferson County Medical Society, and the following physicians were chosen: Dr. Carl B. Alden, Adams, president; Dr. George F. Bock, Watertown, vice-president; Dr. Charles A. Prudhon, Watertown, secretary, and Dr. Lawrence E. Henderson, Watertown, treasurer. The scientific program was a lecture in postgraduate instruction arranged by the Medical Society of the State of New York with the cooperation of the New York State Department of Health. Dr. Henry Keutmann, University of Rochester School of Medicine and Dentistry, spoke on "Some Practical Considerations of Pituitary, Adrenal, and Gonad Interrelationships."

The scientific programs of the December 20 and January 17 meetings were also devoted to lectures

[Continued on page 362]

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in postgraduate instruction. Speakers were as follows: December 20—Dr. Louis C. Kress, Roswell Park Memorial Institute, on "Appreciation of the Value of a Cancer Center"; January 17—Dr. James J. Smith, New York University College of Medicine, on "Alcoholism as a Medical Problem."

Kings County

At the stated meeting of the Kings County Medical Society on November 15, members heard a talk by Dr. Henry W. Cave, College of Physicians and Surgeons, Columbia University, on "Diseases of the Lower Intestinal Tract."

Dr. Paul Dudley White, Harvard University Medical School, spoke on "Sympathectomy for Hypertension: An Experience with Private Patients," at the December 20 meeting of the Society. Also held was election of officers for 1950. The following were named: Dr. Charles W. Mueller, president; Dr. Samuel Lubin, president-elect; Dr. William Dock, vice-president; Dr. Charles H. Loughran, secretary, and Dr. Harry Mandelbaum, treasurer.

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The Physicians Guild of Kings County held a regular meeting on January 10 at the Columbus Club. Guest speakers were Mr. Louis H. Pink and Dr. Joseph A. Gerber, who discussed voluntary health insurance.

Madison County

Dr. Lee S. Preston was chosen president of the Madison County Medical Society at a meeting of the Society on October 21. Also named were Dr. Edward G. Hixson, vice-president; Dr. Francis Pfaff, secretary, and Dr. Frederick Rommel, treasurer.

Monroe County

The following officers for the year 1950 were elected at the 129th annual meeting of the Monroe County Medical Society on December 20: Dr. John L. Norris, president; Dr. Joseph A. Lane, vice-president; Dr. Christopher Parnall, secretary, and Dr. R. Edward Delbridge, treasurer. Dr. Floyd S. Winslow gave a talk on "The Medical Legal Witness." Dr. W. P. Anderton, secretary of the State Society, Dr. E. T. Wentworth, chairman of the Board of Trustees, and Mr. John E. Weinrich, field representative of the Public Relations Bureau of the State Society, were guests of honor at the dinner preceding the meeting.

Montgomery Countrry

Members of the Montgomery County Medical Society elected the following slate of officers for the year 1950 at their annual meeting on December 13: Dr. Adam A. Kindar, president; Dr. Walter Dreyfus, vice-president; Dr. Julius Schiller, secretary, and Dr. Harry Lebman, treasurer.

Nassau County

Dr. Harry Gold, professor of clinical pharmacology at Cornell University Medical College, was the featured speaker at the November 29 meeting of the Nassau County Medical Society. Dr. Gold's topic was "Management of Congestive Heart Failure." This was a program of postgraduate instruction arranged by the Medical Society of the State of New York in cooperation with the New York State Department of Health.

The annual dinner dance of the County Medical Society was held at the Garden City Hotel on December 10.

Niagara County

The regular monthly meeting of the Niagara County Medical Society was held on November 8 at Liddell's in Lewistown. Mr. William F. Martin, counsel to the Medical Society of the State of New York, delivered an address on "Causes of Malpractice and Their Prevention."

The annual meeting of the County Society was held on December 13 at which time the following officers were elected: Dr. Ernest M. G. Rieger, North Tonawanda, president; Dr. Wilfred M. Anna, Lockport, vice-president; Dr. C. M. Dake, Niagara Falls, secretary, and Dr. Frederick A. Lowe, Niagara, treasurer. Dr. Julius Markovitz of North Tonawanda was named president-elect for 1951. Among the guests of honor at the dinner preceding the meeting was Dr. Carlton Wertz, Buffalo, president-elect of the State Society.

A panel discussion on "Estate Conservation," led by Mr. Howard Gray, vice-president of the Power City Trust Company of Niagara Falls, was the feature of the program of the January 10 meeting of the Niagara County Medical Society held at the Samovar Restaurant.

Oneida County

A program of postgraduate instruction was presented at a meeting of the Utica Academy of Medicine on January 19 at the Hotel Utica. Dr. George F. McInnes, Memorial Hospital, New York City, spoke on "Fluid and Electrolyte Balance." This lecture was arranged by the State Medical Society in cooperation with the State Department of Health.

Onondaga County

Dr. Carlton F. Potter was named to head the Onondaga County Medical Society at its annual meeting on December 6. Elected as vice-president was Dr. W. E. Pelow. Drs. Irving L. Ershler and A. Carl Hoffman were re-elected to the offices of secretary and treasurer, respectively.

Ontario County

Election of officers was held during the business session of the annual meeting of the Ontario County Medical Society on December 13 at Clifton Springs Sanitarium. President for the year 1950 is Dr. Claude C. Williamson, Gorham, succeeding Dr. Robert Doran of Geneva. Dr. Henry Abbott of Geneva was named president-elect, and Dr. Carl B. Smith, Victor, was re-elected secretary-treasurer. Following the business session, dinner was served, and the scientific session consisted of the following addresses: "Report of a Case of Idiopathic Fibrosis," by Dr. R. E. Smith; "The Prevention of Diabetes," by Dr. B. A. Watson, and "Clinical-Pathological Conference," by Drs. R. W. Brand and S. A. Munford. Speakers were all members of the staff of Clifton Springs Sanitarium.

A lecture in postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health is scheduled for the February 20 meeting of the Geneva Academy of Medicine. Speaker will be Dr. Charles Ragan, assistant professor of medicine, College of Physicians and Surgeons, Columbia University. Dr. Ragan's topic will be "Clinical Aspects with the Use of

[Continued on page 364]

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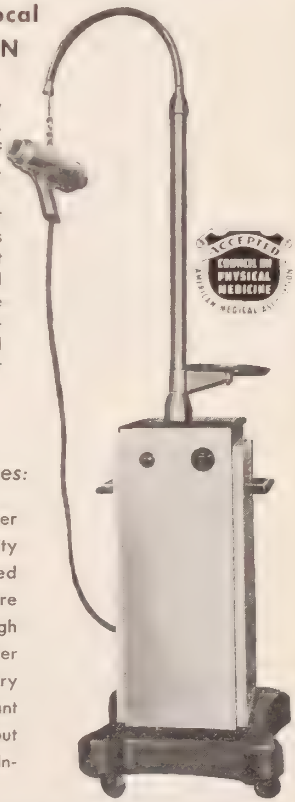

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Cortisone, ACTH, and Other Steroids in Rheumatic Disease." The meeting will be held at 8:30 P.M. at the Bellhurst, Geneva.

Orange County

The program of a Teaching Day, arranged for the Orange County Medical Society by the New York State Medical Society in conjunction with the New York State Department of Health, held on November 3, opened at 3:00 P.M. with a film, "The Problem of Early Diagnosis," followed by two talks: "Cutaneous Cancer," by Dr. Jack Wolf, New York University Medical School, and "The Rational of the Approach to Radical Surgery for Cancer of the Bladder and Prostate," by Dr. Victor F. Marshall, Cornell University Medical College. Two additional talks were presented at the evening session, as follows: "Cancer of the Head and Neck," by Dr. William J. Hoffman, New York Post-Graduate Hospital, and "Cytologic Diagnosis of Cancer," by Dr. John F. Seybolt, Cornell University Medical College.

The 143rd annual meeting of the Orange County Medical Society was held on December 13 at which time Dr. Nathaniel T. Keys, Goshen, was elected president, Dr. Stiles I. Ezell of Middletown, vice-president, and Dr. Earl C. Waterbury of Newburgh, secretary-treasurer.

Oswego County

On November 9, a joint dinner meeting of the Oswego County Medical Society with the Woman's Auxiliary to the Society was held at the Hotel Pontiac. Mrs. Thomas E. Bullard of Schuylerville was the guest speaker on the topic, "Fifty Years a Doctor's Wife."

The following officers were elected at the annual meeting of the Oswego County Medical Society on December 20: Dr. Umbert Cimildoro of Oswego, president, to succeed Dr. Emerson J. Dillon of Phoenix; Dr. C. C. Mead of Fulton, vice-president, and Dr. Milton W. Kogan of Oswego, secretary-treasurer.

Otsego County

Dr. Harrie V. Frink of Richfield Springs was named president of the Otsego County Medical Society at its annual meeting held on December 14 at the Sportsman's Tavern, Fly Creek.

Queens County

On November 29 the Queens County Medical Society held its annual meeting and elected the following officers for 1950: Dr. Ezra A. Wolff, president; Dr. Henry Fineberg, president-elect; Dr. William Benenson, secretary; Dr. Ernani D'Angelo, assistant secretary; Dr. Carl Krenz, treasurer, and Dr. John E. Lowry, assistant treasurer.

Rensselaer County

Dr. A. Wilbur Duryee, New York Post-Graduate Hospital, gave a lecture on "The Management of Peripheral Vascular Disease" at the meeting of the Rensselaer County Medical Society on November 15. The evening's program was arranged by the Medical Society of the State of New York with the cooperation of the New York State Department of Health.

The annual dinner meeting of the County Society was held on December 14 at the Troy Club. The principal speaker, purported to be Dr. Kurt Kohler, professor of internal medicine of Prague University, was in reality William Stanley Sims, professional humorist and lecturer.

Richmond County

Recent meetings of the Richmond County Medical Society held on November 9 and December 14 featured the following speakers: On November 9, Drs. Thomas I. Hoen and John R. Cobb presented a symposium on "Low Back Pain," and on December 14, Dr. A. W. Martin Marino, past president of the Kings County Medical Society, spoke on "Proctology for the General Practitioner."

Rockland County

Dr. A. J. Maged of Suffern was elected president of the Rockland County Medical Society at a meeting on December 7. Serving with Dr. Maged will be Dr. Abraham Schechner, of Nyack, vice-president; Dr. Marjorie Hopper, Nyack, treasurer, and Dr. R. L. Yeager, secretary. Dr. Frank Ciancimino of Nyack discussed his recent attendance at the World Medical Association meeting in London.

St. Lawrence County

Members of the St. Lawrence County Medical Society met on November 10 to choose their officers for the coming year. The following were named: Dr. Aaron D. Burr, Gouverneur, president; Dr. John Stauffer, Canton, vice-president, and Dr. L. McNulty, Potsdam, secretary-treasurer. Principal speaker at the meeting was Dr. George H.

[Continued on page 366]

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[Continued from page 364]

Reifenstein of Syracuse. Following the business session members of the Society and the Woman's Auxiliary attended a dinner at the Albion Hotel.

Schenectady County

New president of the Schenectady County Medical Society, Dr. William M. Mallia, was chosen at the Society's annual dinner meeting on December 1. Other new officers are Dr. Harry Miller, vice-president, and Dr. Carl F. Runge, treasurer. Dr. Ralph E. Isabella was re-elected secretary.

A regular meeting of the Schenectady County Medical Society was held on January 3 at the Hotel Van Curler. Dr. John S. Lockwood, professor of surgery, College of Physicians and Surgeons, Columbia University, spoke on "Surgery of the Pancreas."

Schoharie County

The Schoharie County Medical Society sponsored a series of six postgraduate education meetings during the months of November and December. This instruction was arranged by the Medical Society of the State of New York with the cooperation of the New York State Department of Health. The programs, including speakers and topics, were as follows:

November 15—Dr. Edward F. Hartung, New York Post-Graduate Medical School and Hospital, "Diagnosis and Treatment of Back Pain from the General Practitioner's Point of View."

November 22—Dr. David Lehr, New York Medical College, Flower and Fifth Avenue Hospitals, "Recent Advances in the Chemotherapy of Bacterial Infections."

November 29—Dr. James M. Blake, Schenectady County Tuberculosis Hospital, "Diagnosis of Tuberculosis."

December 6—Dr. David Goldblatt, New York Post-graduate Medical School, "Treatment of Burns and Hand Infections."

December 13—Dr. Frederick Wetherell, Syracuse University College of Medicine, "Goiter—Its Management."

December 20—Dr. W. W. Street, Syracuse University College of Medicine, "Clinical Diagnosis and Treatment of Cardiac Arrhythmias."

• • •

Election of officers of the Schoharie County Medical Society, held on October 11 at the Hotel Augustan in Cobleskill, resulted in the following physicians being named: Dr. Franz Konta, Richmondville, president; Dr. Earl H. Eaton, Cobleskill, vice-president; Dr. Duncan L. Best, Middleburg, treasurer, and Dr. Donald R. Lyon, also of Middleburg, secretary. Following the meeting the members attended a dinner with the members of the Woman's Auxiliary.

Seneca County

On October 20 the Seneca County Medical Society held its annual meeting. Election of the following officers took place: Dr. Kenneth Keill, president; Dr. Saul Towers, vice-president, and Dr. Bruno Riemer, secretary-treasurer. The scientific session on "Psychiatric Problems in General Practice" was conducted by members of the staff of Willard State Hospital.

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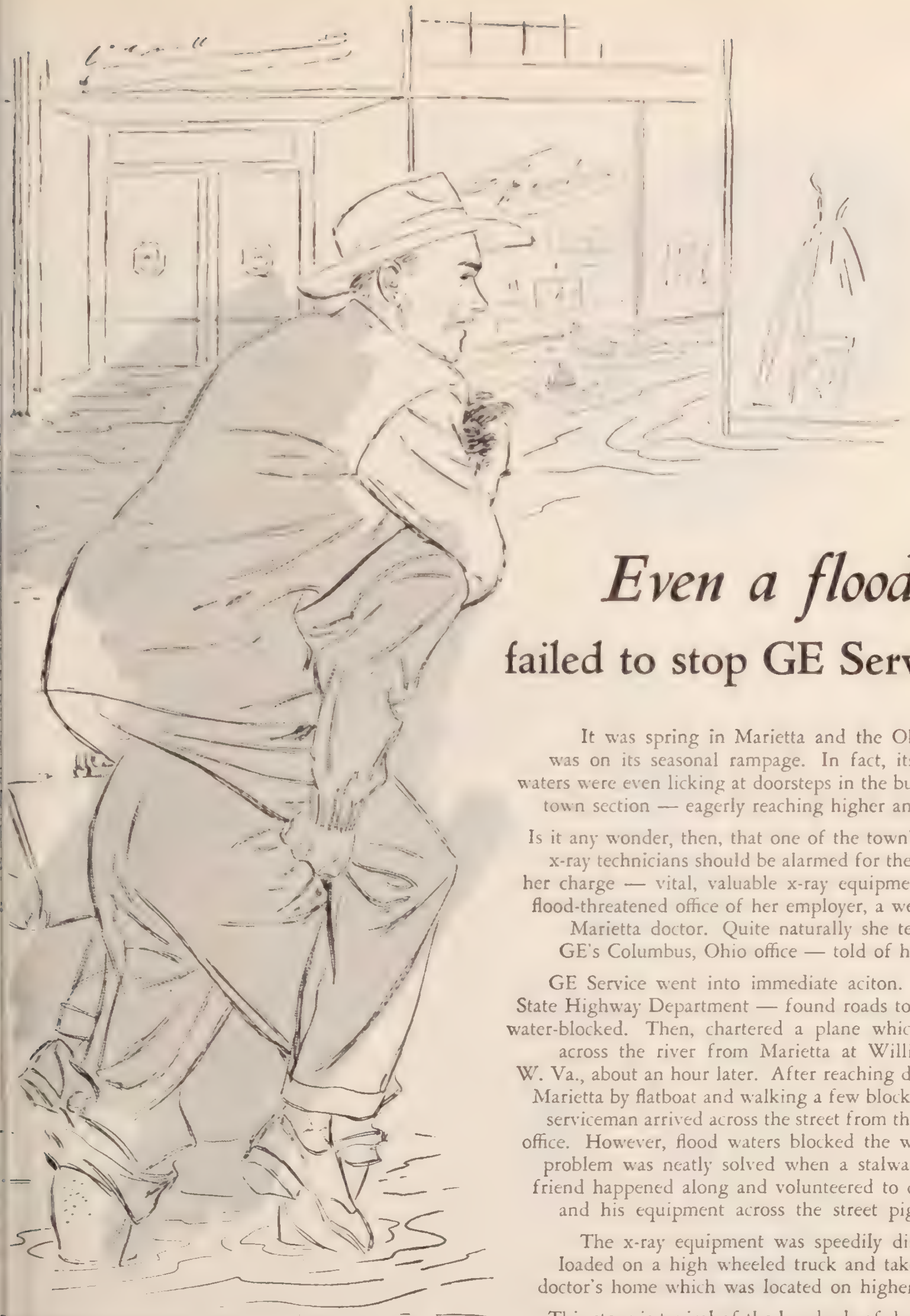

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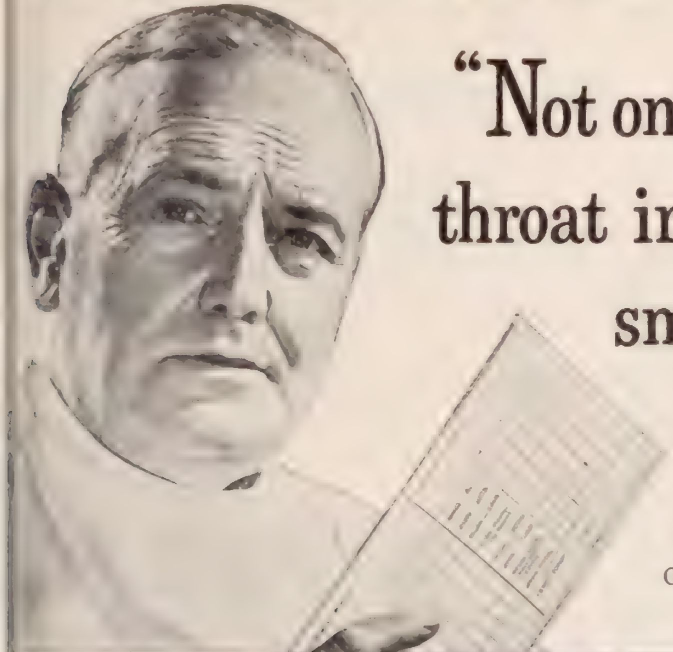

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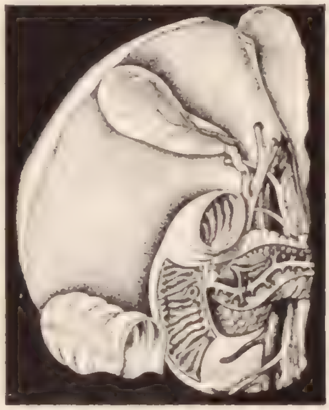
from the liver parenchyma



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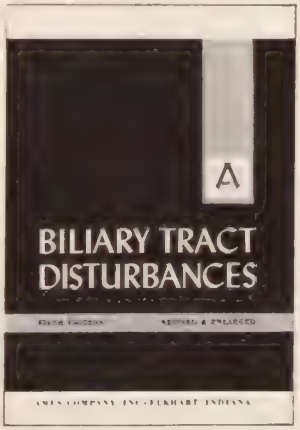

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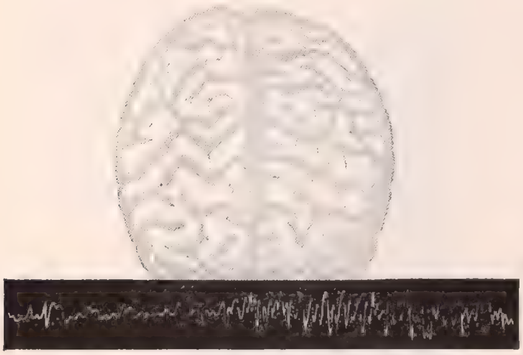

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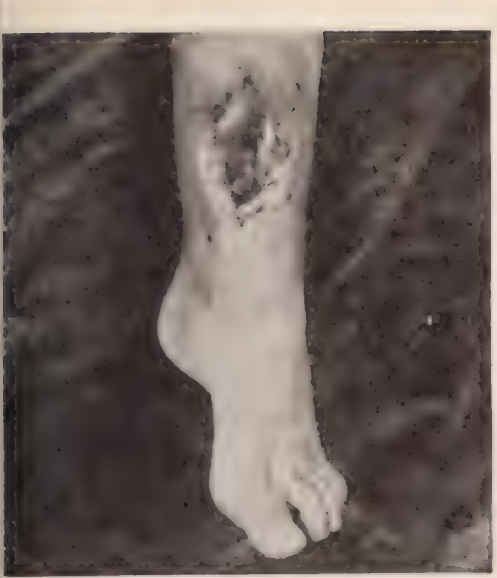

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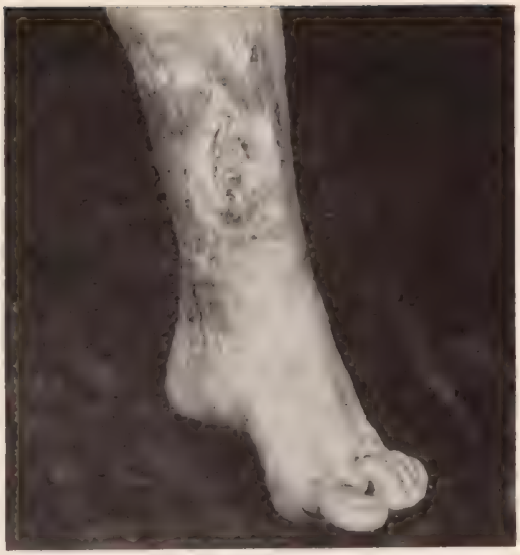

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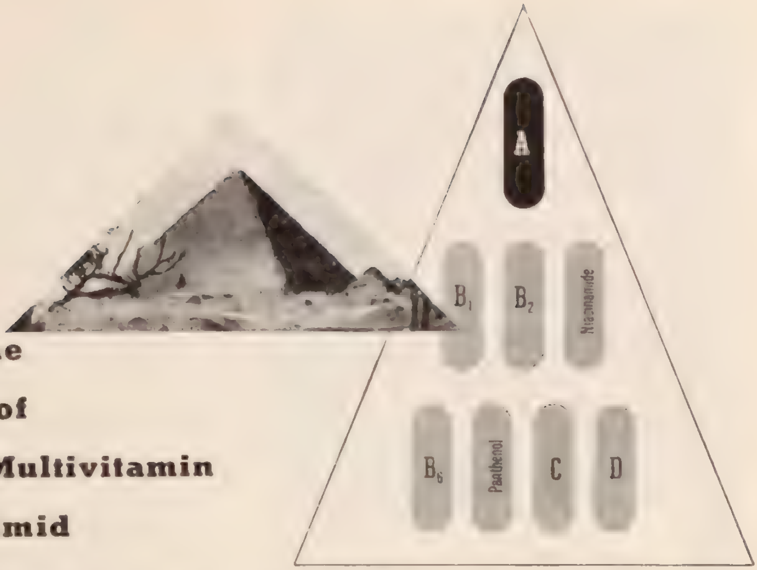

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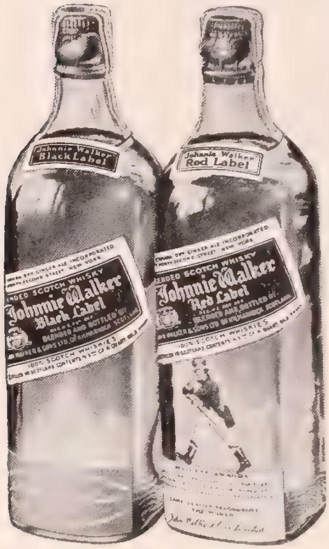

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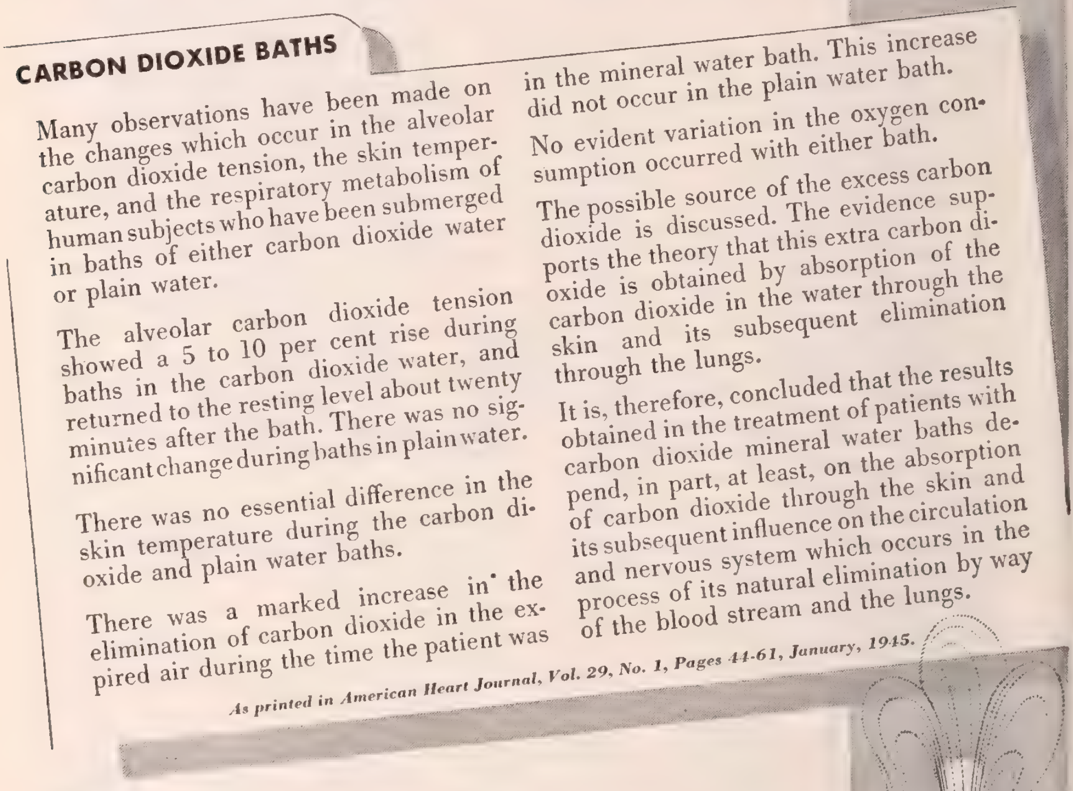

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As printed in American Heart Journal, Vol. 29, No. 1, Pages 44-61, January, 1945.

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Please send me sufficient *RAYSAL-SUCCINATE* Tablets for a clinical trial.

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a new

vasodilator

A new peripheral vasodilator, Roniacol Tartrate offers clinically valuable advantages. Its action is more prolonged than that of nicotinic acid yet there is less likelihood of severe flushing or side reactions. Roniacol Tartrate does not produce tolerance. It can therefore be given for long periods of time—a significant factor in the treatment of peripheral vascular diseases. Available in scored 50-mg tablets.

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Roniacol Tartrate

tablets

brand of beta-pyridyl carbinol tartrate

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T.M.—Roniacol

curd tension of
Similac — 0 grams
truly a fluid food

whenever
possible . . .

BREAST FEEDING

as long as
possible . . .

or

SIMILAC

so similar to human breast milk
that

*there is no
closer
equivalent**

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- * Similac fat has been so altered
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that

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curd tension of
breast milk — 0 grams
truly a fluid food

curd tension of
a powdered milk
especially prepared
for infant feeding —
12 grams

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Ramses
VAGINAL JELLY

NOW.. ADDED CONVENIENCE FOR THE PATIENT

The "RAMSES"* Tuk-A-Way† Kit provides added convenience for the patient, for she will find, neatly assembled in this colorful, washable plastic kit, all the units required for optimum protection against conception: a "RAMSES" Flexible Cushioned Diaphragm of the prescribed size; a "RAMSES" Diaphragm Introducer of corresponding size; and a regular-size tube of "RAMSES" Vaginal Jelly.‡

The Tuk-A-Way Kit packs inconspicuously in the corner of a traveling bag or dresser drawer. It is available to patients through all pharmacies.

*The word "RAMSES" is a registered trademark of Julius Schmid, Inc. "RAMSES" Vaginal Jelly is accepted by the Council on Pharmacy and Chemistry of the American Medical Association. The "RAMSES" Diaphragm and Diaphragm Introducer are accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association.

†Trademark of Julius Schmid, Inc. ‡Active Ingredients: Dodecaethyleneglycol Monolaurate 5%; Boric Acid 1%; Alcohol 5%.

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quality first since 1883

by every clinical criterion a **better,** more **rational** cough therapy

In Robitussin 'Robins', *glyceryl guaiacolate* (reported to exert the most intense and prolonged action of all expectorants[1,4]) has been united with the adrenergic stimulant, *desoxyephedrine* (to relax bronchioles[3] and improve the patient's mood and sense of well-being[2]), in an aromatic, syrupy vehicle. Thus, in welcome contrast to the older empirical approach, Robitussin is highly rational and effective, yet non-toxic and non-narcotic. It helps make expectoration easier and freer—and eases dry, irritating cough.

INDICATIONS: Acute head and chest colds, bronchitis laryngitis, tracheitis, pharyngitis, pertussis, influenza, measles, etc.; also helpful as a palliative of harmful cough in tuberculosis chronic paranasal sinusitis, tobacco cough.

COMPOSITION: In each 5 cc. (1 teaspoonful) of palatable aromatic syrup: glyceryl guaiacolate, 100 mg., and desoxyephedrine hydrochloride, 1 mg.

DOSAGE: *Children:* One half to one teaspoonful according to age, three or more times daily. *Adults:* One or two teaspoonfuls as necessary, every two or three hours.

REFERENCES:
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2. Foltz, E. E. et al.: J. Lab. & Clin. Med., 28:603, 1943.
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4. Perry, W. F. and Boyd, E. M.: J. Pharmacol. Exper. Therap., 73:65, 1941.

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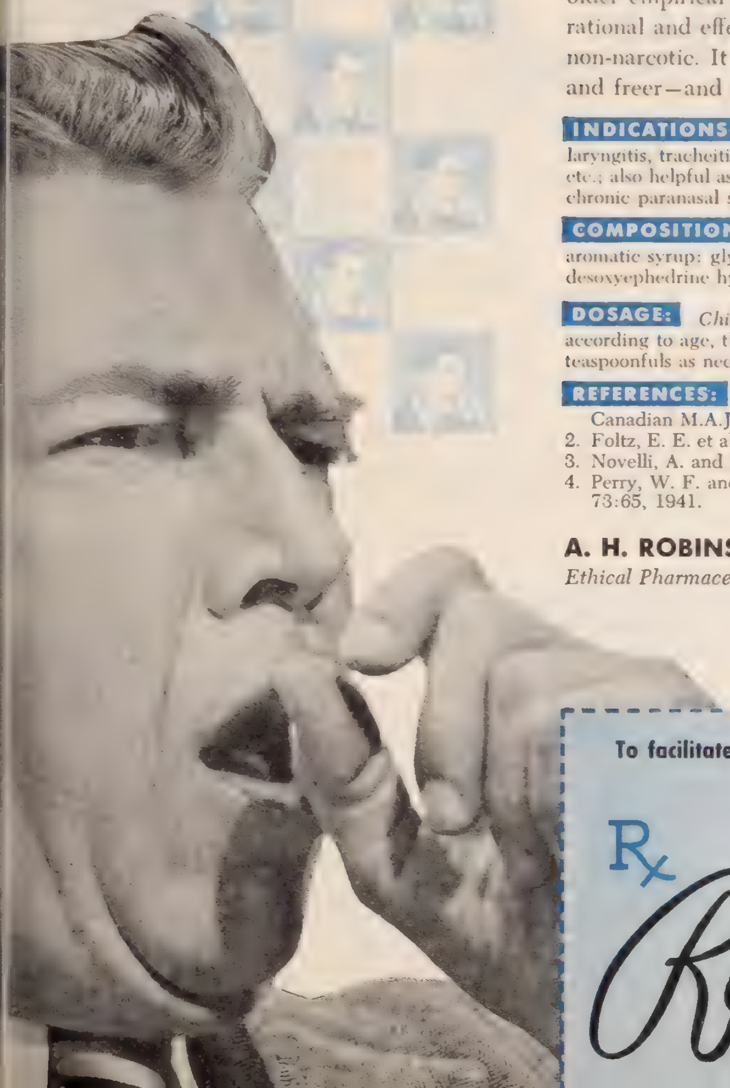

To facilitate productive cough
. . . to minimize harmful cough

℞ *Robitussin*®

Robins

menopausal syndrome therapy
F. Netter M.D.

A decline of ovarian function with consequent decrease in production of estrogenic hormone is now generally recognized as the basic cause of menopausal syndrome. The consequent upset of endocrine balance results in such distressing symptoms as hot flashes, nervousness, restlessness, insomnia, headache, etc.

Estradiol Benzoate Armour
Ethinylarmour (Ethinyl Estradiol) Armour

Estradiol Benzoate Armour in purified sesame oil for intramuscular injection contains the true follicular hormone, alpha estradiol. This preparation makes possible direct replacement of the deficient hormone and appears to be the most logical form of therapy in this troublesome menopausal syndrome. Ethinylarmour, in tablet form, is the most potent estrogen available for oral use, has the added advantage of a minimal incidence of side reactions. Estradiol Benzoate Armour and Ethinylarmour have important clinical application in primary and secondary hypogonadism, sexual infantilism, certain cases of amenorrhea, oligomenorrhea, dysmenorrhea, and juvenile vaginitis.

Have confidence in the preparation
you prescribe — specify "ARMOUR"

ARMOUR
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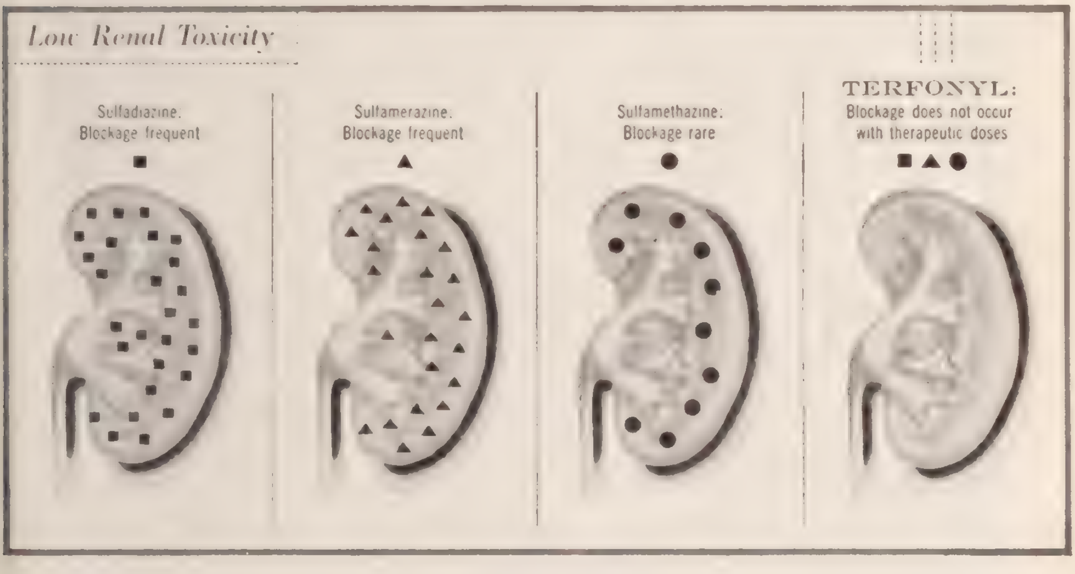
TERFONYL

Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFE SULFONAMIDE THERAPY


Low Renal Toxicity
Sulfadiazine: Blockage frequent
■
Sulfamerazine: Blockage frequent
▲
Sulfamethazine: Blockage rare
●
TERFONYL: Blockage does not occur with therapeutic doses
■▲●

With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated. Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone.* The solubility of Terfonyl is an important safety factor.

Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets, 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint and gallon bottles

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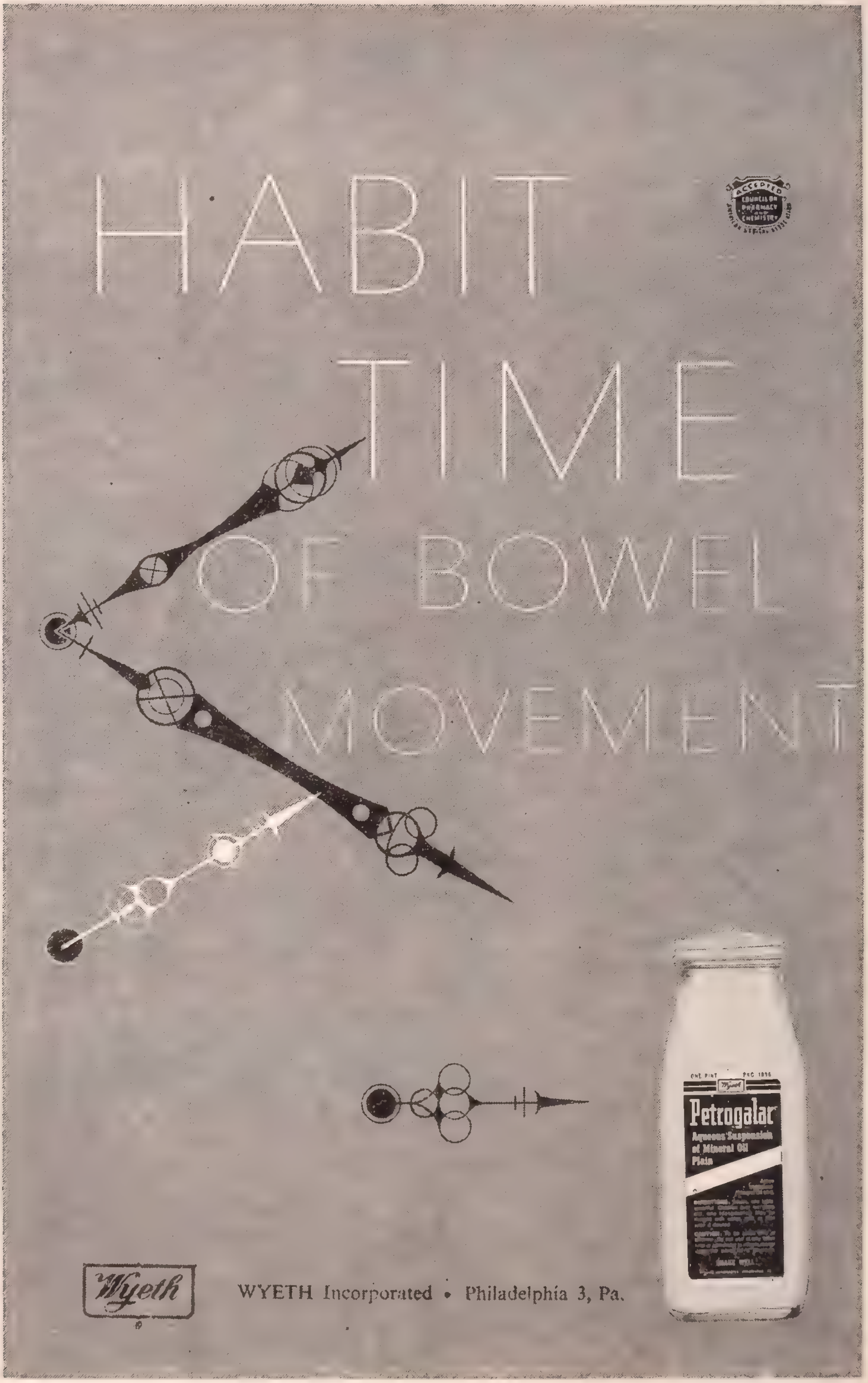
'TERFONYL' IS A TRADEMARK OF E. R. SQUIBB & SONS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ACCEPTED
COUNCIL ON PHARMACY AND CHEMISTRY
ONE PINT
Wyeth
Petrogalar
Aqueous Suspension of Mineral Oil Plain
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A name to remember in Estrogen Therapy

SEStramin

(PATCH)

Representing Sodium Estrone Sulfate + B Complex, C & D

FEELING OF FITNESS increased by the *two-fold* lift of estrogen sufficiency and B Complex sufficiency. Patient treated as a whole, not as a part.

ORAL THERAPY restores and maintains the desired estrogen balance. Preferred by many patients especially those who fear the needle. Levels "peaks-and-valleys" between injections.

BALANCED FORMULA provides balanced therapy.

NO UNTOWARD SIDE EFFECTS naturally occurring, water soluble; orally active estrogens better tolerated than synthetics.

USES FOR SEStramin—during menopause to restore and maintain feeling of fitness. For amenorrhea and dysmenorrhea due to ovarian failure or insufficiency. During surgical menopause following hysterectomy.

For suppression of lactation.

AVAILABLE in TWO STRENGTHS:

SEStramin 10M (light green tablets)

Conjugated estrogens equivalent to oral activity of
Sodium Estrone Sulfate..........1.25 mg.

SEStramin 5M (light tan tablets)

Conjugated estrogens equivalent to oral activity of
Sodium Estrone Sulfate.........0.625 mg.

In addition both formulae contain:

Brewers' yeast	100 mg.
Thiamine hydrochloride	3 mg.
Riboflavin	2 mg.
Niacinamide	10 mg.
Pyridoxine hydrochloride	1 mg.
Calcium pantothenate	5 mg.
Ascorbic acid (Vitamin C)	25 mg.
Vitamin D	500 I.U.

SUPPLIED: Bottles of 20, 100, and 500 SEStramin tablets.

The E. L. PATCH COMPANY • Stoneham, Mass.

in rheumatic affections...

how can Pabalate provide
better salicylate therapy
than pure salicylate itself

THE SUCCESS of salicylate therapy in rheumatic affectio has been shown by authoritative reports[3,6] to depend largely the maintenance of really adequate blood levels . . . frequently a difficult achievement under usual salicylate administration. Pabalate supplies not only salicylate, but also a "booster" in the form of the antirheumatic para-aminobenzoic acid,[7] whi acts to *increase* blood levels of salicylate.[1,2,4,5] In turn, the salicylate increases the blood concentration of the para-aminobenzoic acid.[2] Enteric coating helps Pabalate prev gastric irritation, insures optimal toleration.

Successful clinical results, contingent on adequate blood level can thus be achieved better, more dependably, with Pabalate the "new word for salicylate" in therapy of rheumatic affection

A. H. ROBINS COMPANY, INC. • RICHMOND 20, VA.
Ethical Pharmaceuticals of Merit since 1878

higher salicylate blood levels for better antirheumatic ther

INDICATIONS: *Pabalate Tablets*—for adult patients with rheumatoid arthritis, acute rheumatic fever, fibrositis, gout and osteo-arthritis. *Liquid Pabalate*—for treatment of acute rheumatic fever or other rheumatic diseases in children and as a replacement for tablet salicylate medication; or for adults who prefer a liquid dosage form.

DOSAGE: Average adult dose: two tablets or teaspoonfuls, three or four times daily. Dosage should be adjusted upward if necessary. For children, dosage is proportional to age and severity of condition.

FORMULA: Each enteric-coated tablet or each teaspoonful contains Sodium Salicylate, U.S.P. (5 grs.) 0.3 Gm.; Para-aminobenzoic Acid (as the sodium salt) (5 grs.) 0.3 Gm.

SUPPLIED: Pabalate Tablets in bottles of 100 and 500. Liquid Pabalate in bottles of 1 pint.

REFERENCES:

1. Belisle, M.: Union Med. Canada, 77:392, 1948
2. Dry, T. J. et al.: Proc. Staff Meetings Mayo Clinic, 21:497, 1946
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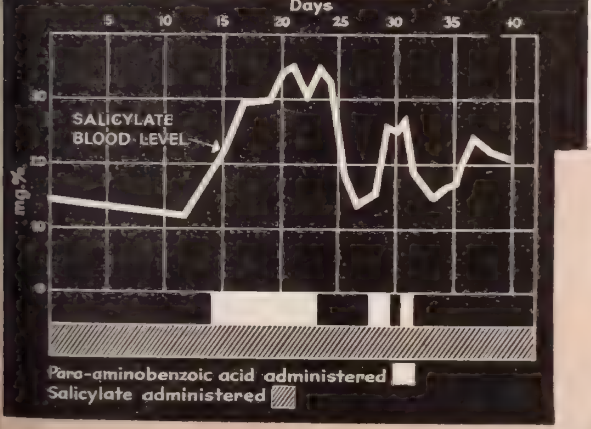
6. Reid, J.: Quart. J. Med., 17:139, 1948
7. Rosenblum, H. and Fraser, L. E.: Proc. Soc. Exper. Biol. and Med., 65:178, 1947

ara-aminobenzoic acid increases
lood levels of concurrently adminis-
ered salicylate.[2]


Days
5
10
15
20
25
30
35
40
30
20
10
0
mg.%
SALICYLATE BLOOD LEVEL
Para-aminobenzoic acid administered □
Salicylate administered ▨

For treatment of rheumatic affections

Pabalate®

Robins

A pilot for the past four years

Charles Myers, an above knee amputee, wore his first Hanger Limb over eight years ago. "During that time I was in Central America, Mexico, and Canada. In Central America I worked on air route surveys under jungle conditions. I found that my Hanger Limb stood up well." The sturdiness and dependability of the Hanger Limb allows wearers to return to normal life. Many, such as Mr. Myers, find they can continue their unusual occupations.

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Inner border heel wedge and outer border sole wedge extended in back of the 5th metatarsal.

When proper shoes, with or without alterations, are indicated you can recommend Pediformes with confidence.

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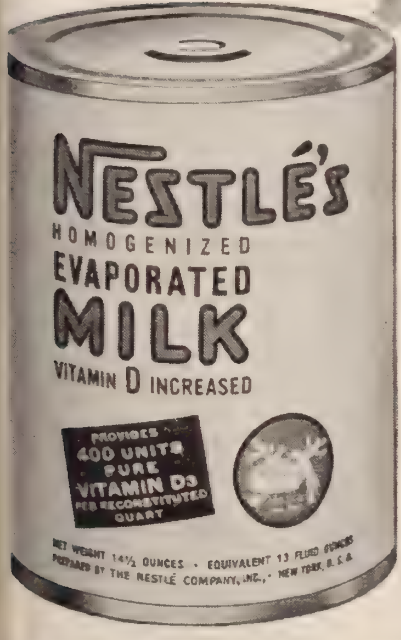
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VITAMIN D INCREASED
PROVIDES 400 UNITS PURE VITAMIN D3 PER RECONSTITUTED QUART
NET WEIGHT 14½ OUNCES · EQUIVALENT 13 FLUID OUNCES
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From herd inspection to examination of the filled cans, careful controls at every step of production assure you that Nestlé's milk is of good quality, uniform in composition, safe for even the tiniest baby.

Antirachitic protection is assured by the addition of 400 U.S.P. units of genuine vitamin D_3 to each pint of Nestlé's milk—the first evaporated milk so fortified.

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EATON LABORATORIES, INC., NORWICH, N. Y.

*Bigler, J.: Chicago M. Soc. Bull. 50:269, 1947 • Coakley, W. A. et al.: Plast. & Reconstruct. Surg. 3:667 (Nov.) 1948 • Curtis, L.: Surg. Clin. N. A. 1466 (Dec.) 1947 • Downing, J. et al.: J. A. M. A. 133:299, 1947 • Johnson, H.: Arch. Dermat. & Syph. 57:348, 1948 • Mays, J.: J. M. A. Georgia 36:263, 1947 • McCollough, N.: Indust. Med. 16:128, 1947 • Mills, J. et al.: Plast. & Reconstruct. Surg. 3:245, 1948 • Ryan, T.: U. S. Nav. M. Bull. 47:991, 1947 • Shipley, E. et al.: Surg., Gynec. & Obst. 84:366, 1947 • Snyder, M. et al.: Mil. Surgeon 97:380, 1945.

For mixed infections

FURACIN
SOLUBLE DRESSING
(BRAND OF NITROFURAZONE)
CONTAINS 0.2% NITROFURAZONE (5-NITRO-2-FURALDEHYDE SEMICARBAZONE) IN A WATER SOLUBLE BASE.
CAUTION: TO BE DISPENSED ONLY BY OR ON THE PRESCRIPTION OF A PHYSICIAN
DESCRIPTION OF PRODUCT AND USES AVAILABLE TO PHYSICIANS ON REQUEST.
AN ANTIBACTERIAL PREPARATION FOR TOPICAL APPLICATION
EATON LABORATORIES Inc.
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ONE POUND AVOIR.
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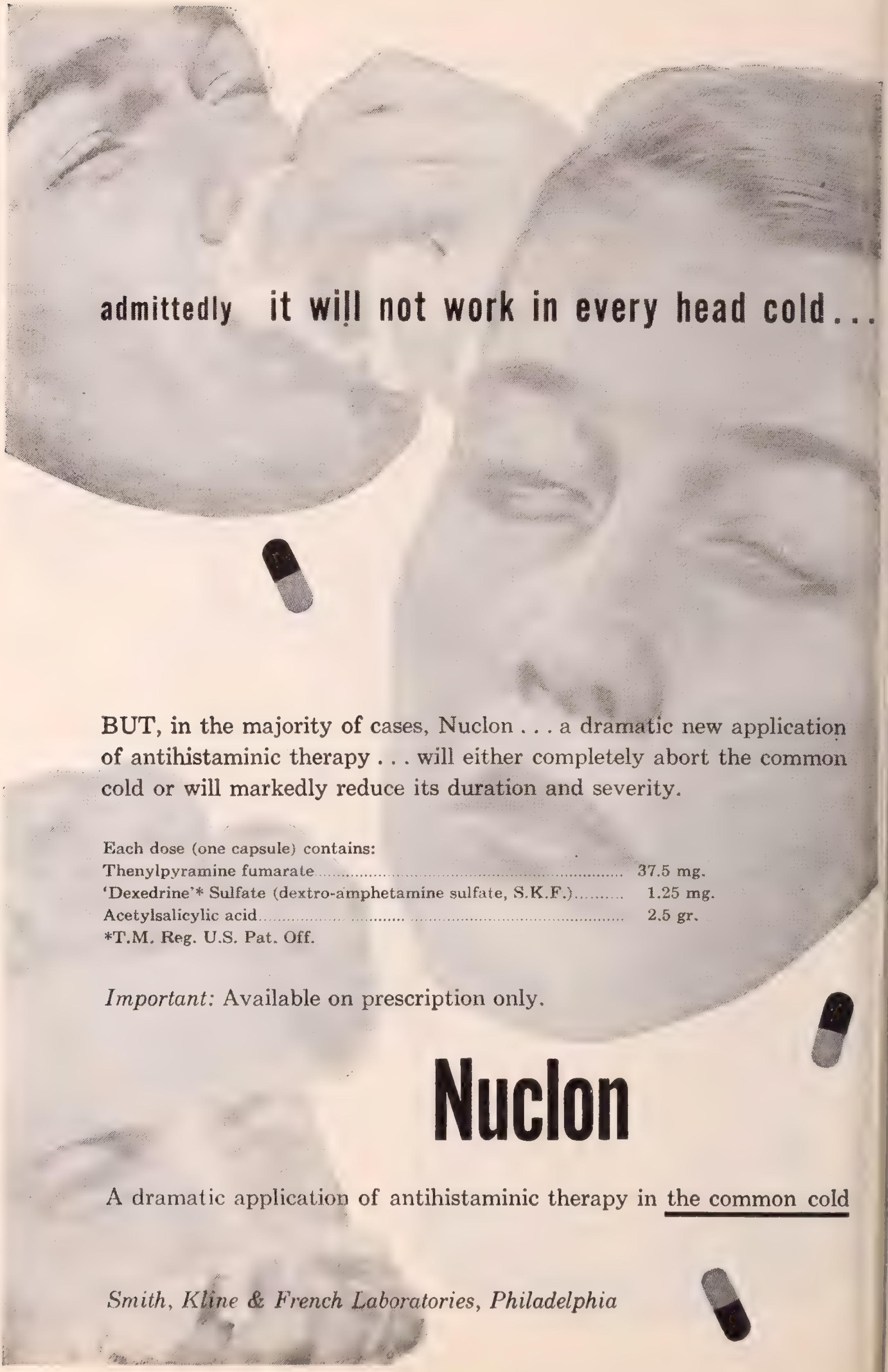

admittedly it will not work in every head cold...

BUT, in the majority of cases, Nuclon . . . a dramatic new application of antihistaminic therapy . . . will either completely abort the common cold or will markedly reduce its duration and severity.

Each dose (one capsule) contains:

Thenylpyramine fumarate	37.5 mg.
'Dexedrine'* Sulfate (dextro-amphetamine sulfate, S.K.F.)	1.25 mg.
Acetylsalicylic acid	2.5 gr.

*T.M. Reg. U.S. Pat. Off.

Important: Available on prescription only.

Nuclon

A dramatic application of antihistaminic therapy in the common cold

Smith, Kline & French Laboratories, Philadelphia

"The . . . estrogen preferred by us is 'Premarin,' a mixture of conjugated estrogens, the principal one of which is estrone sulfate."

Hamblen, E. C.: North Carolina M. J. 7:533 (Oct.) 1946.

In treating the menopausal syndrome with "Premarin," Perloff* reports that "Ninety-five and eight-tenths per cent of patients treated with 3.75 mg. or less daily obtained complete relief of symptoms"; also, "General tonic effects were noteworthy and the greatest percentage of patients who expressed clear-cut preferences for any drug designated 'Premarin.' "

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*Perloff, W. H.: Am. J. Obst. & Gynec. 58: 684 (Oct.) 1949.

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Edrisal is remarkably effective. This is because it is the only analgesic preparation that contains 'Benzedrine' Sulfate, the rational anti-depressant. Edrisal, therefore, not only relieves the pain itself but also—by lifting your patient's mood—lessens his concern with his pain. Best results are usually obtained with a dosage of *two* Edrisal Tablets—repeated every three hours, if necessary.

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Each Edrisal tablet contains Benzedrine* Sulfate (racemic amphetamine sulfate, S.K.F.), 2.5 mg.; acetylsalicylic acid, 2.5 gr.; and phenacetin, 2.5 gr. Available on prescription only.*

Edrisal

its dual action relieves pain, lifts mood

**'Benzedrine' and 'Edrisal' T.M. Reg. U.S. Pat. Off.*

for effective treatment of

hypertension

THE TREND

VERUTAL

tablets (**RAND**)
containing
VERATRUM VIRIDE

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PROLONGED VASODILITATION
Veratrum Viride
100 mg.

CAPILLARY PROTECTION
Rutin
10 mg.

THERAPEUTIC SAFETY
Mannitol Hexanitrate
½ gr.

MILD SEDATION
Phenobarbital
¼ gr.

VERUTAL TABLETS (Rand) combine FOUR therapeutically effective drugs in a NEW FORMULA for the treatment of ESSENTIAL HYPERTENSION.

EACH VERUTAL TABLET CONTAINS:

Veratrum Viride	*100 mg.*
Mannitol Hexanitrate	*½ gr.*
Rutin	*10 mg.*
Phenobarbital	*¼ gr.*

PROFESSIONAL SAMPLES AND LITERATURE UPON REQUEST

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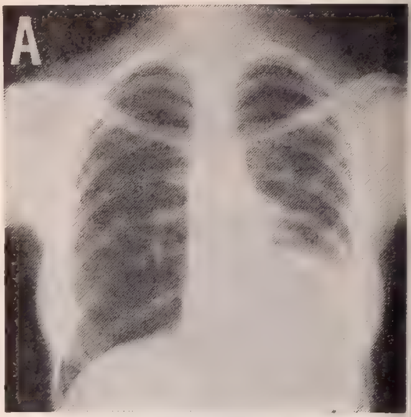
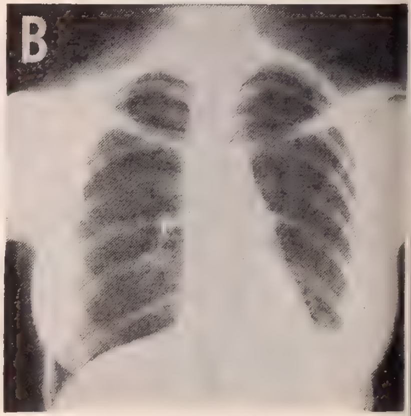
Effective Chemotherapy in
TUBERCULOSIS

Streptomycin or Dihydrostreptomycin, used alone or in combination with para-aminosalicylic acid, is recognized as a valuable and, in some instances, an essential adjuvant in the treatment of selected types and stages of tuberculosis.

Para-aminosalicylic acid is capable of inhibiting or significantly delaying the emergence of bacterial resistance to streptomycin or dihydrostreptomycin.

These drugs are not to be regarded as substitutes for traditional therapeutic methods. Rather, they serve best when properly integrated with bed rest and, where necessary, collapse measures or other forms of surgery.





A. Before Treatment
(9 days prior to Dihydrostreptomycin therapy) Diffuse lobular tuberculous pneumonia, lower half of left lung; thin-walled cavity above hilus (3 x 3.5 cm.).

B. After 3 Mos. Treatment
(2 days after discontinuance of Dihydrostreptomycin) Considerable clearing of acute exudative process in the diseased lung; cavity smaller and wall thinner.

Detailed literature on the subject of chemotherapy in tuberculosis will be supplied upon request.

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low cost...

twice as potent as ingested methyltestosterone

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Metandren Linguets are specially prepared to facilitate absorption of methyltestosterone through the oral mucosa. Numerous reports indicate that in the average case, dosage with the Metandren Linguets need be only half that with ingested tablets of methyltestosterone.

Therefore, Metandren Linguets have been called "the most economical and also efficient way of administering testosterone."[1]

[1] Lisser, H.: Calif. & West. Med. 64: 177, 1946

- Metandren Linguets, 5 mg. (white), scored; 10 mg. (yellow), scored – in bottles of 30, 100 and 500

PERANDREN is the pioneer brand of testosterone propionate, the most potent injectable androgen.

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'Dexedrine'
plus essential
B vitamins

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Theptine

A *new* and strikingly effective

anti-depressant and

restorative elixir

indications: Theptine is an ideal preparation for those patients in whom mental depression and nutritional inadequacy manifest themselves as apathy, lethargy and physical debility.

formula: Theptine combines, in a light and pleasing elixir, the unique anti-depressant effect of 'Dexedrine'* Sulfate and the nutritional action of thiamine, niacin and riboflavin.

dosage: Theptine assures patient acceptance by virtue of its pleasant flavor and pleasing color. The usual dosage is one teaspoonful (5 cc.) three times a day, *after* meals.

Each 5 cc. contains:
'Dexedrine'* Sulfate, 2.5 mg.;
thiamine hydrochloride, 5.0 mg.;
riboflavin, 0.45 mg.; niacin, 6.7 mg.

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

An Innovation!

RHINALGAN*

Long-lasting nasal decongestant with no systemic effect (Pressor or Respiratory) in

DOHONY SPRAY-O-MIZER*

(Combination Spray and Dropper)

Clinical and laboratory tests have proven:

NO rise in bloodpressure
NO rapid pulse
NO wakefulness, restlessness or nervousness
NO smarting or stinging
NO secondary vasodilation . . .
follow the local use of RHINALGAN

*Trade Mark—Pat. Pend.

RHINALGAN
Desoxyephedrine Saccharinate 0.50
in an isotonic aqueous solution
with 0.02% Laurylammonium saccharin
Flavored
Contents
DOHO C
NE

Pleasant

Efficient

Non-toxic

Bactericidal

FORMULA: Desoxyephedrine Saccharinate 0.50% w/v in an isotonic aqueous solution with 0.02% Laurylammonium saccharin. Flavored. pH 6.4.

SUPPLIED: 30 grams (1 fl oz.) in Dohony Spray-O-Mizer (Combination Spray and Dropper). Also *for Doctor's office and Hospital use—in Pint bottles.*

FOR TOPICAL APPLICATION — INDICATIONS include: common cold, allergic and hypertrophic rhinitis, sinus infections; for pre and post-operative shrinkage of nasal mucosa; as a diagnostic aid in office procedures. ESPECIALLY SUITABLE FOR INFANTS AND CHILDREN.

Substantiating data being sent you.

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TO MINIMIZE THE ELEMENT OF CHANCE

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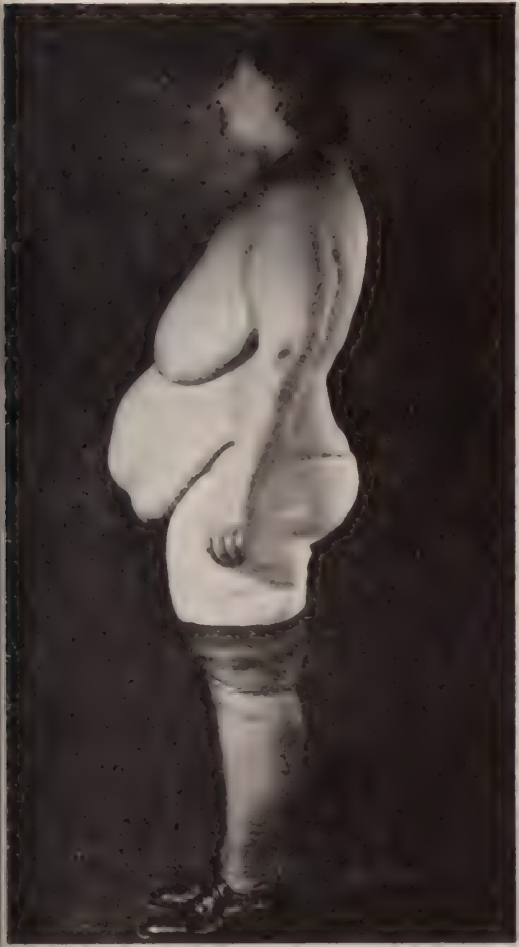
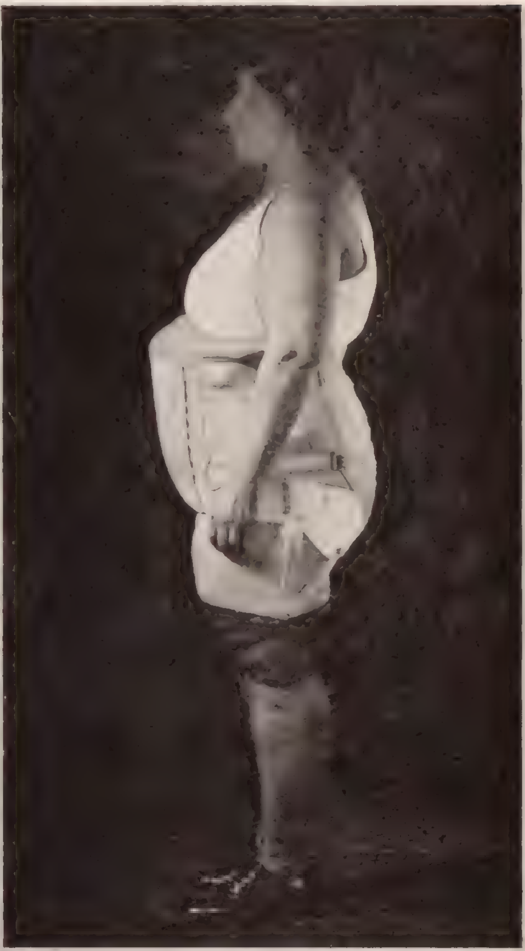


● Photograph of patient,
51 years old. Weight — 226 lbs.;
height — 5 ft. 5 in.

Patient was operated four years ago for fibroid tumors of the uterus when weighing 240 lbs. Complete disruption of the wound occurred on the fourth day. Pneumonia followed, requiring a six month's stay in the hospital.



● Photograph of patient after application of support.

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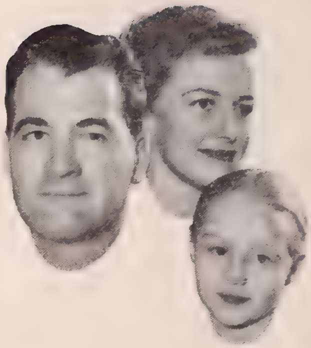

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VOLUME 50 FEBRUARY 15, 1950 NUMBER 4

Editorials

The A.M.A. Dues, III—The Battle

In previous editorials we have shown the necessity for ample funds to prevent the dissolution of the medical profession and its institutions.[1,2] Many of our members may question our attitude, may indeed feel that no threat exists, that no battle is necessary. Such an amblyopic view would be a tribute to the subtlety of the propaganda of the aggressor. Doctors are busy people. In New Zealand, Australia, and Great Britain they were too busy to be cohesive. They were oblivious to the ancient technic of Fabius, as were most of the other citizen-taxpayers. Result: Nationalization of essential services, among them medicine and its institutions.

It can happen here. We can have the Poorhouse State here, too.[3] Since medicine is the principal point of attack, doctors will be wise to scrutinize the daily press and magazine articles appearing for the public, which are openly or overtly critical of medicine. We do not infer that medicine is beyond *legitimate* criticism; on the contrary, constructive criticism, based on provable facts, is to be welcomed. But there is a point, difficult to define exactly, *where criticism becomes attack*. Careful chronologic examination of pertinent data before and since 1930 will disclose the changing character of the stridor and the progressive increase in volume. In more recent years public hearings, for example on the various Federal bills calling for national compulsory health insurance, have provided a sounding board for the aggressor to organize the forces of discontent, to convert the impact of what might have been useful and constructive criticism of medicine and doctors for the public benefit into a subtle type of guerilla warfare, directed now here now there, a show of force following the revolutionary technic well understood in the socialist Poorhouse States of Europe. So scattered have the assaults been upon a busy profession as in many instances to escape notice!

Apparent apathy of the public at large to the present terrifying policy of public spending provides the aggressor group of tacticians with so far nearly inexhaustible funds for carrying on their corrosive battle.

> Socialism's secret weapon is money. Governments formerly gained power by the sword and swelled their coffers by conquest and tribute. That method is still used, but chiefly against foreigners. Modern governments obtain power over their own people in a more subtle fashion. They tax away the earnings of their people, and then dole some of it back to them in subsidies, gifts, grants-in-aid, and the award of huge government contracts. By this process they become the masters of men and cease to be their servants. The historic relationship is reversed. Instead of government coming to the people for its support, the people come to the government for their support. Hitler put all groups in Germany in pawn to him via the money route. In the face of the granting or withholding of public money, opposition died away. People began to keep their mouths shut—businessmen first, but finally editors, educators, and ministers. He thus united both conservatives and radicals behind him. This is a very important point.[4]

If the forces of aggression press battle upon the medical profession they will get it, even upon the unequal terms of *the millions which the profession can raise by taxing themselves as against the billions that can be marshalled against our campaign of public education by general taxation of the public, the poor, the working man and woman, the doctor, the lawyer, the employed veteran, the business man, the corporation, the civil servant, the members of the armed forces, the vanishing rich, and the chimerical "selfish interests."*

Every doctor is being lawfully taxed, some few lawfully surtaxed along with the rest of the people to furnish propaganda weapons for the aggressor.

What doctor who honestly disagrees with the proponents of socialism for this country, and is now being taxed to promote it, can withhold his approval of the $25 dues of the American Medical Association? What doctor who believes in his profession and that profession's struggle to provide the self-respecting American people with self-respecting medical care of the highest quality can fail to pay his dues gladly and promptly?

The battle is joined. Do your part.

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[1] New York State J. of Med., **50:** 163 (Jan. 15) 1950.

[2] *Ibid.* **50:** 274 (Feb. 1) 1950.

[3] Acknowledgments to the New York *Daily News, Saturday Evening Post, et al.*

[4] Pettingill, Samuel: The Grand Strategy of Freedom, an address, Chicago, Illinois, October 12, 1949.

The New York State Hospital Study

A pattern for hospital care, the result of exhaustive study on the major aspects of hospital care in New York State under the direction of Dr. Eli Ginzberg, associate professor of economics in the Graduate School of Business of Columbia University, presents a scholarly and comprehensive survey and evaluation of the economic status of the voluntary general hospitals of the State. Dr. Ginzberg and his numerous staff associates are to be congratulated upon a well planned and skillfully executed presentation which we recommend to the attention and careful perusal of every doctor of medicine in the Empire State.

Its more than thirty pages of specific findings and recommendations covering all the major questions of hospital care as they affect the patient, the doctor, the hospital, government, and the community at large should be comprehended by every practicing physician. In view of the fact that, increasingly, modern high quality medical practice tends to be centered in and about the hospital, it is highly necessary that physicians should come to regard the overall character of the hospital as a function of the community and the State. In general, it seems likely that doctors are too close to their professional preoccupations in their hospitals to comprehend them as complex organisms with vast ramifications into the social, economic, and industrial life of the community, the state and the nation. They are no longer the simple workshops of a profession, limited in its technology as in the nineteenth century, or the refuge of the sick poor, or quarantine stations for those with the menace of communicable disease.

To comprehend the modern hospital in all its vast relationships to the life and needs of the people in sickness and in health, one must study the final report of the New York State hospital study in relation to the developing picture of a progressive civilization of infinite ingenuity and as yet no finite imitations. This study is a *must* for the medical profession, for their future part in the vast picture can be either to lead or be led, to develop the essential qualities of medical statesmanship, or, alternatively, to retrogress to the status of technicians, admirably skilled, but lacking the genius to forecast and project sympathetically and correctly the requirements of human beings who are themselves enmeshed in a progression of world events by which they are appalled, frightened, and bemused.

If the JOURNAL has aroused your curiosity concerning Dr. Ginzberg's book, read it. No one can perform that function for you. When you have finished, you will certainly know the facts of hospital care in the State, what can be done to better it in the public interest, and what part you can play in shaping the nature of medical practice as it relates to hospitals, insurance, and the role of government in its development.

Current Editorial Comment

Summary. There seems to be little doubt hat the past year of 1949 has left American medicine in a better tactical situation than t has enjoyed since the days of World War II. Through the campaign of public education it has on the whole made friends. Its first assessment of $25 and its 1949 decision to collect dues of $25 a year per member seem to have impressed both the public and the majority of the profession that it means business. It is concrete evidence of the intent of the A.M.A. to exert a posiive leadership with no if's, and's, or but's!

During the year also, "investigations" of possible infractions of the antitrust laws gave evidence of the intent of the current administration to carry its Fabian tactics to a point where, in 1950, large associations of all kinds could be harried and some fragmented by the courts.

In New Zealand and Australia governments in power and committed to a program of nationalization of essential services or ocialism were unceremoniously given the bum's rush by the dissatisfied customers, if we remember correctly the sporting terms appropriate to such events. Great Britain, also another victim of the Fabian socialists, ommenced to find the impossible burden of debt and mismanagement austerely irksome and resorted to devaluation and more austerity.

Congressmen returning from tours of inspection of the workings of nationalization of essential services abroad either praise with faint damn's or speak with the voice of the turtle.

Opposition to compulsory health insurance here developed from a new quarter when the American Legion unequivocally stated its position in a speech by its National Commander before the interim session of the A.M.A. in Washington, D.C., in December. Said the *Daily News* in part,[1]

> It was the bugaboo of socialism that turned many older doctors against the original Truman health insurance plan. But a more dispassionate conclusion has convinced the younger medics that even the status quo is better than a British-type experiment. A minority—but a thinking and vocal minority—of the A.M.A., consisting chiefly of those doctors who have received their M.D. shingles within the last ten years, figure it this way:
>
> No national health insurance scheme has ever worked in any country unless it derived from a gradual process. First, there must be local health insurance programs. Then state-

---

[1] December 16, 1949.

wide programs, and eventually national programs. This group went along on the $25 dues proposition by the A.M.A. without protest, on the understanding that part of the fund collected would be put to use in setting up a free enterprise, rather than a government-operated, health insurance program.

Eventually, according to their reasoning, a doctor-operated program would be in force, kowtowing to nobody in the government except for the usual rules regarding medical practices, and everybody would be happy. The bigger the system gets, the lower the cost, and the more people who can subscribe to it.

If the Democratic strategists can convince this younger group of doctors, it feels it has a fair chance of getting some legislation on the books—legislation labeled "Fair Deal."

Failing this, and remembering just how strong the opposition is, the whole problem, they feel, might make a juicy campaign issue in the Congressional races of late 1950. Or, like repeal of the Taft-Hartley Act or enactment of the Brannan plan, it could become perennial campaign bait, for use in 1952, when the chips are down for the White House prize.

The year 1949 ended with a significant trend toward higher prices in almost everything except, possibly, the costs of professional medical services.

Eating is the spur to industry. Could we live without eating, all the world would be idle.—Anonymous

---

Nationalization of Professional Schools. A recent pronouncement by Dr. James E. Buckley, president of the Oregon State Medical Society, circulated by the Committee on Constitutional Government, is deserving of the attention of the medical profession. Recent statements by certain Senators and Representatives sponsoring the Administration's omnibus national health bill might lull doctors into a false sense of security. As a matter of fact the present aim seems to be to enact the program piecemeal, one section at a time.

An example of this new approach is the so-called Emergency Professional Health Training Act of 1949 (Senate Bill, 1453, and House Bill, 5940) which lays the groundwork for complete nationalization of medical and other professional schools, according to Dr. Buckley. S. 1453 maps out a system of Federal grants-in-aid, including the following significant statement (Section 373a): "The Surgeon General, after obtaining the advice and recommendations, shall make such grants in the order of the estimated importance . . . . ." The council referred to is merely advisory, so all power is vested in one man, the Surgeon General, who would estimate needs and authorize funds.

Of even greater significance is the parade of weakness this bill would require on the part of medical schools. Each school would compete with the others trying to "show proof of need" in the political scramble for Federal funds. It is unfortunate that testimony at Congressional hearings has emphasized the financial inadequacy of many of our medical schools rather than their strength. Probably this was done in good faith, yet it follows closely the policy of the socializers in accumulating admissions of weakness which will discredit our free institutions.

Sponsors of S. 1453 have told Congress that their bill not only would serve the country's medical schools but would relieve the "acute shortage" of doctors. A statistical analysis has shown however, as quoted by Dr. Buckley, that, while during the years 1940–1948 the general population increased 12 per cent, the physician population increased 14 per cent, a relative increase of more than 16 per cent.

Among the bounties of S. 1453 are Federal funds for scholarships. Although seemingly innocent, they open the door to political pressure on admission committees and constitute other hazards.

We are prompted to present these extended comments from Dr. Buckley's address, because we are impressed by the seriousness of the situation and believe that every state must use its powers to combat this invasion of such socialistic schemes in our free enterprise system. This is a matter not only for the medical profession, whose voice is only that of the minority, but for the general public. For we are on the brink of a socializing avalanche and in this connection attention should be called to John T. Flynn's recently published book, *The Road Ahead.* This is a well-documented treatise which leaves no room for doubt as to the inevitable destination of our present course. About this book we shall be pleased to present a more extended comment at a later date.

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bibliography: (1) Donovan, M. A.: New York State J. Med. *45*:1756, 1945. (2) Reaser, P. B., and Burch, C. E.: Proc. Soc. Exper. Biol. & Med. *63*:543, 1946. (3) Griggs, D. E., and Johns, V. J.: California Med. *69*:133, 1948. (4) Chapman, D. W., and Schaffer, C. F.: Arch. Int. Med. *79*:449, 1947. (5) Modell, W.; Gold, H., and Clarke, D. A.: J. Pharmacol. & Exper. Therap. *84*:284, 1945. (6) Finkelstein, M. B., and Smyth, C. J.: J. Michigan M. Soc. *45*:1618, 1946. (7) Gold, H., and others: Am. J. Med. *3*:665, 1947.

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Scientific Articles

PARTIAL NEPHRECTOMY

Philip R. Roen, M.D., F.A.C.S., New York City

THE modern-day urologist must have the aim of conserving functioning renal tissue foremost. Where the urologic surgeon of a decade or two ago performed nephrectomy without a second thought, his present-day counterpart hesitates a long time before removing such a vital organ unless such a course is absolutely essential. Moreover, he will seek alternative surgical methods or even medical management in the attempt to preserve renal parenchyma. In this respect, for example, the diagnosis of hydronephrosis no longer immediately conjures up the term nephrectomy; an attempt is first made to overcome the obstructive lesion which causes the hydronephrosis, and such surgical procedures as plastic operations upon the ureteropelvic junction to overcome stenoses, strictures, or extrinsic pressure bands at this site are an everyday occurrence.

Dedicated to this same aim of conservation of renal tissue is a surgical procedure which, unfortunately, is not employed often enough by the urologist and, perhaps, is even unknown to the general surgeon who may occasionally have to deal operatively with a renal problem. This method is variously known as calyceal resection, heminephrectomy, partial resection of the kidney, or, preferably, partial nephrectomy. The internist certainly should be cognizant of the fact that it is possible to remove a diseased portion of a kidney and still retain the greater part of a vitally functioning organ; many a physician may fear to subject a patient to surgery because of the thought of sacrifice of a functioning kidney. Although partial nephrectomy is far from being a new procedure, it deserves wider recognition and use, and it is to this end that this method is again presented in order to reacquaint the urologist, the general surgeon, and the medical practitioner with a standard, although frequently neglected, operative procedure.

Indications for Partial Nephrectomy

Removal of a section of a kidney is ideally indicated where that segment or pole is destroyed by calculus or infection (nontuberculous) and where the remainder of the kidney is anatomically and functionally normal. In other words, partial resection is warranted where localized renal destruction is present. Such a situation exists where there is a localized hydronephrosis; where there is a calculus limited to a calyx or to a renal pole and is embedded in diseased tissue; where a solitary cyst or benign tumor is present at either

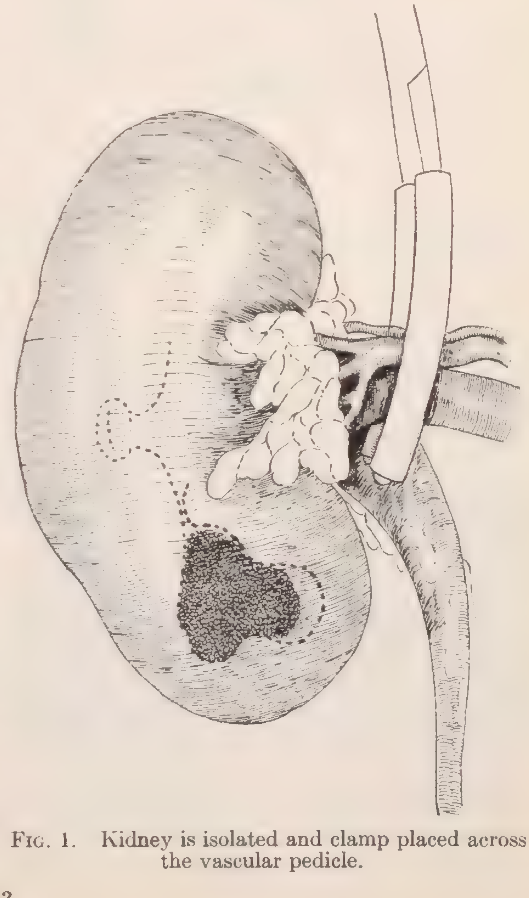

Fig. 1. Kidney is isolated and clamp placed across the vascular pedicle.

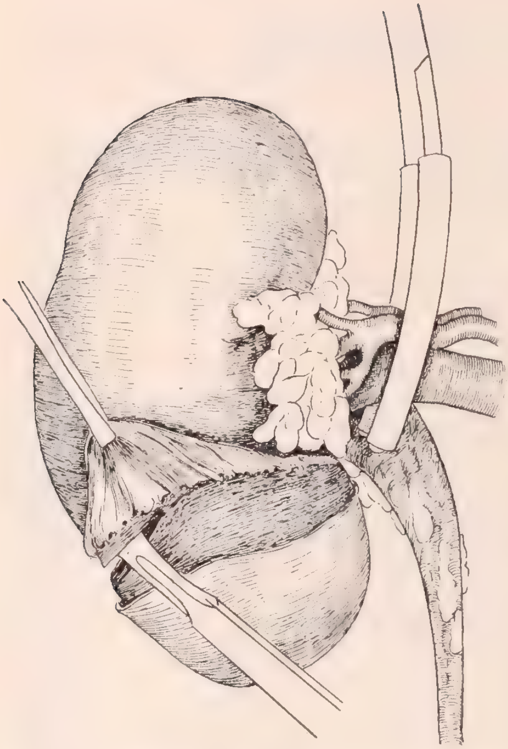

FIG. 2. Diseased segment of the kidney is resected with a scalpel.

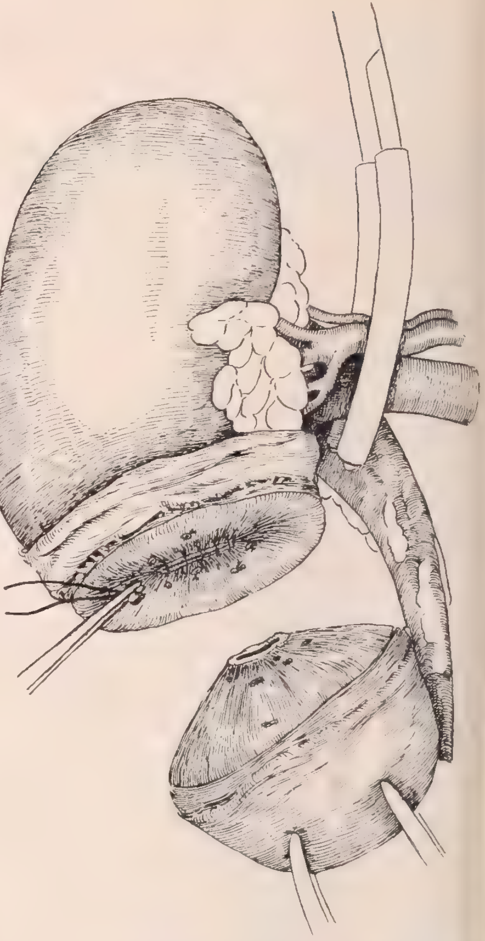

FIG. 3. Individual bleeding vessels are tied, and the pelvis is sutured.

pole; in some cases where a renal carbuncle is confined to the upper or lower renal segment; where tumor is present in a sole remaining kidney, or where the contralateral kidney is markedly reduced in its functional capacity. Resection of the kidney has also been applied to cases of renal infarct and renal urinary fistula. Partial nephrectomy is employed in cases of double kidney where one segment is diseased or destroyed, and has even been advocated in tuberculous infection of one segment of such a double kidney where there is complete duplication of the pelvis and ureter.

In cases which are properly selected then, partial nephrectomy becomes the procedure of choice in management of a problem of renal disease and, with proper precautions, is neither exceptionally dangerous nor difficult. It is ideally suited, as illustrated in the cases described below, to the patient with renal stones confined to a calyx or a group of calyces which are diseased, as evidenced by calyceal dilatation and infundibular constriction. Removal of such a pathologic calyceal area greatly reduces the possibility of recurrent stone formation. In fact, where the surgeon attempts to remove only th calculus, he takes a great risk of leaving a smal fragment behind, since most of these stones ar friable, and, in addition, he fails to remove th underlying cause of the stone, namely, the are of diseased renal tissue. This is in line with th statement by Randall that "the occurrence o renal calculus in man is essentially only a symp tom of some underlying pathologic condition of renal papilla." Moreover, where the disease tissue is removed by partial nephrectomy, th infection which so frequently accompanies th presence of calculus invariably clears up after th operation.

The operation itself carries with it no enhance risk or even morbidity; the use of absorbabl hemostatic agents, such as oxidized cellulos gauze or cotton and fibrin gels, obviates any ser

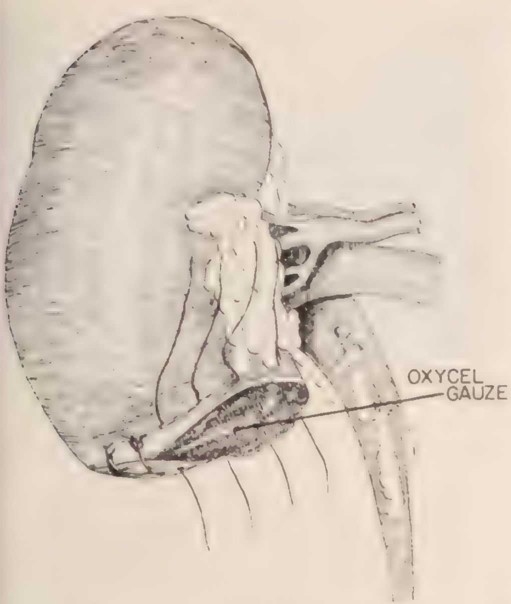

FIG. 4. The edges of capsule are approximated over a section of oxidized cellulose gauze.

ous primary or secondary bleeding from the sutured section of the kidney. The recent introduction of these agents has considerably increased the safety of this operation and has made the possibility of delayed hemorrhage from the site of kidney resection remote indeed. Complete healing is prompt, and, subsequent to operation, the remaining portion of resected kidney is observed to have satisfactory function, apparently sufficient to maintain life should it become necessary to remove the opposite kidney because of disease or injury.

Technic of Partial Nephrectomy

The kidney should be liberated completely, the vascular pedicle exposed, and the kidney brought up into the wound. It is exceedingly important that the pedicle be freed and readily accessible, for it is necessary to compress the blood vessels for a time in order to prevent excessive loss of blood from the incised end of the kidney.

After complete mobilization of the kidney, the line of incision is decided upon and the capsule of the diseased portion is stripped back toward the middle of the kidney after a rubber-shod clamp is placed across the vascular pedicle (Fig. 1). (One must be careful *not* to clamp the vessels with such force as to injure them.) The diseased portion of kidney is then removed by an incision through the parenchyma in such a fashion as to produce a wedge-shaped section so that later closure is facilitated (Fig. 2). Individual large spurting vessels which are seen across the cut section should be clamped and tied or suture-ligated (Fig. 3). The edges of the pelvic mucosal layer, where possible, should be approximated with a fine plain gut suture. The edges of the renal parenchyma are then brought together over a small section of oxidized cellulose gauze with sutures which pass through the capsule, the latter having been rolled back across the freshly cut edges (Fig. 4). The clamp is removed to note whether complete hemostasis has been secured. The kidney is fixed by sutures into good position

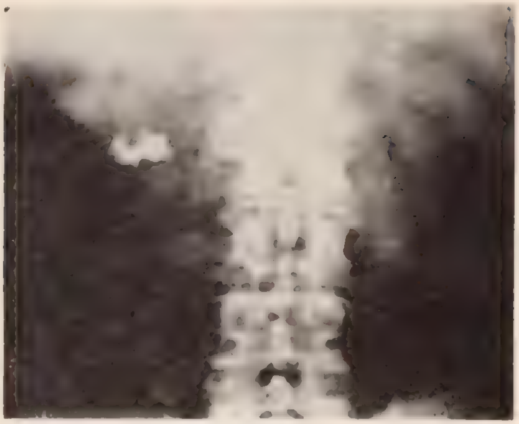

FIG. 5. Branched calculus, upper segment right kidney (Case 1).

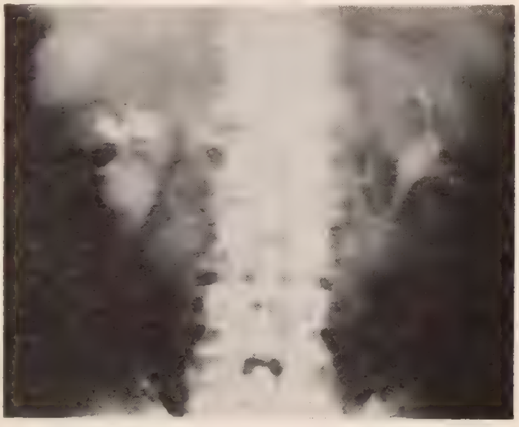

FIG. 6. Intravenous urogram disclosing calculus present at upper pole of well-functioning right kidney (Case 1).

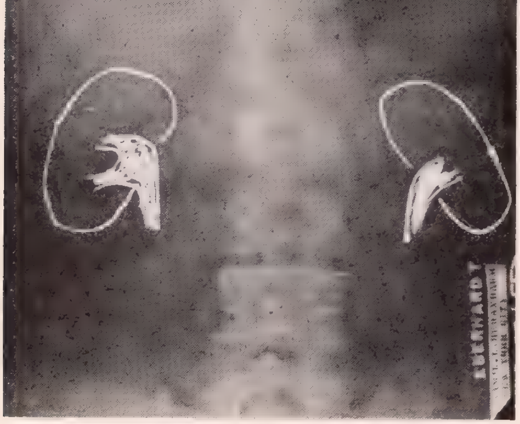

FIG. 7. Postoperative intravenous urogram showing absence of stone with retention of most of the functioning right renal tissue (Case 1). (Retouched)

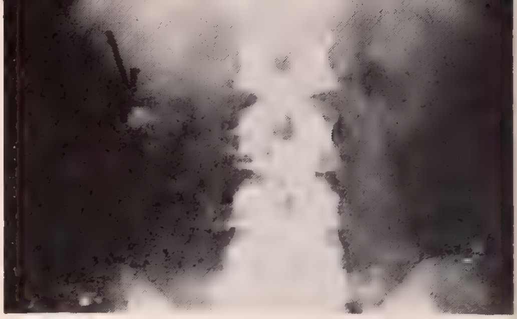

FIG. 8. Arrow points to cluster of stones in right kidney (Case 2).

in order to provide proper drainage. A drain is placed down to the kidney, brought out posteriorly, and the flank wound closed in layers in the usual fashion. In summary, the steps of this technic are as follows:

1. Complete mobilization of the kidney and clearing of the vascular pedicle for temporary clamping.
2. Stripping the capsule from the portion of the kidney to be removed; this capsule is used later in closure.
3. Incision beyond the diseased area into healthy tissue.
4. Hemostasis which includes tying individual "spurters" and the use of an absorbable hemostatic agent in approximation of the kidney wound.
5. Fixation of the kidney to insure proper drainage—"nephropexy."

Case Reports

Case 1—Partial Nephrectomy for Calculus and Caliectasis (*Upper Pole*).—A sixty-four-year-old bank employe complained of pain in the right flank of five years duration. Physical examination disclosed considerable right renal percussion tenderness. Urinalysis showed many red blood cells and occasional white blood cells. Blood urea nitrogen was 9.5 mg. per cent. Urine culture was negative. Blood count was normal. Intravenous urography disclosed an irregularly shaped calculus in a dilated calyx at the upper pole of the right kidney (Figs. 5 and 6). Renal function was normal. The past history was noncontributory.

Operation consisted of partial nephrectomy according to the technic described, using a portion of oxidized cellulose gauze for hemostasis in suturing the edges of the resected pole. Approximately one third of the kidney was removed with the contained stone. Analysis of the calculus showed it to be composed of calcium carbonate and magnesium ammonium phosphate. Pathologic diagnosis of the resected portion of kidney was as follows: "Chronic pyelonephritis with dilatation of calyces of kidney." Description of the section included the following: "The pelvic portion of the specimen consists of what seems to be a major calyx with five subsidiary minor calyces. The calyx is dilated up to 2 cm. in greatest diameter and has a much narrower infundibulum."

Postoperatively, the patient developed a bronchopneumonia which was successfully treated with penicillin. Wound healing was per primam without urinary drainage from the wound. Three months after operation, intravenous urography disclosed a normally functioning right kidney with no

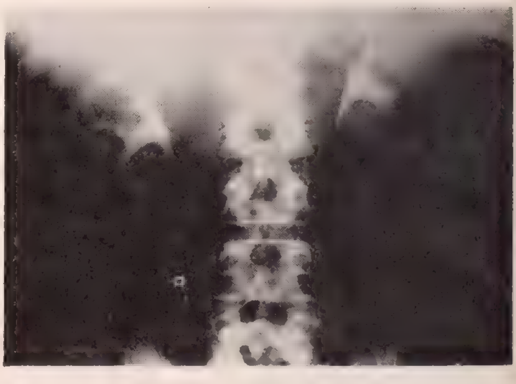

FIG. 9. Intravenous urogram showing excellent function of right kidney. Note calculi in lowermost calyx (Case 2).

operation, the patient remains free of recurrent urinary stone formation, and the urine is negative on analysis.

Case 2—Lower Pole Renal Calculi Treated by Partial Resection of the Kidney.—A forty-year-old typist had been operated on some four months earlier for right renal calculi; the stones were present in a cluster at the lower pole, and nephrolithotomy was done. Not all of the stones were removed at operation, however. The patient continued to have right flank pain and pyuria with a positive urine culture. X-ray showed several small calculi in a cluster at the lower pole of the right kidney contained in a dilated calyx (Figs. 8 and 9).

Resection of the lower pole was performed; the surgical procedure was rather difficult because of pronounced adhesions resulting from the previous operation. A rib resection was performed for easier access to the kidney. After clamping of the renal pedicle, the lower portion of the kidney was removed, and the cut edges were approximated over a section of oxidized cellulose gauze. All bleeding was easily controlled. The kidney was fixed high in position with sutures through the quadratus lumborum. The resected portion of kidney measured 6 by 3.5 by 2.5 cm.; the pathologic diagnosis was "chronic pyelonephritis." The calculi were composed of calcium oxalate on analysis. The postoperative course was uneventful. Later urine cultures showed specimens of urine from the right kidney to be negative. Follow-up urographic studies revealed good function and drainage of the remaining two thirds of the right kidney (Figs. 10 and 11). There has been no further calculus formation.

Comment

Illustrated above are two cases of partial nephrectomy, one at the upper pole and one at the lower pole. The second case indicates that resection of a portion of the kidney can be done even after previous renal surgery; it also would appear to indicate that this procedure succeeded in removing all the calculi where previous nephrolithotomy failed.

As seen from the cases cited, removal of a segment of the kidney from either the upper or lower pole is feasible. Although theoretically possible, this procedure has not to my knowledge been employed for a diseased calyx or renal segment in the midkidney area; personally, I have not seen any case where this surgical method would be suitable for midrenal disease, probably because, almost always, those calyces which are situated in the midkidney area drain well and, consequently, do not become diseased as a result of obstruction and stagnation of urine.

Partial nephrectomy may be considered simultaneously as a "radical" and a "conservative" operation. It is radical in the sense that it is a "bigger" operative procedure than, for example, the simple removal of stones, for, in removing a considerable portion of renal tissue, a longer and more technical operation is performed. On the other hand, it is a more conservative procedure because it may obviate subsequent surgery by removing a diseased section of kidney; it is conservative in that one may remove as much as one half a kidney (where one might ordinarily perform nephrectomy) and still leave a segment of kidney large enough to sustain life. Thus the "radical" operation in the long run is actually seen to be a conservative surgical method.

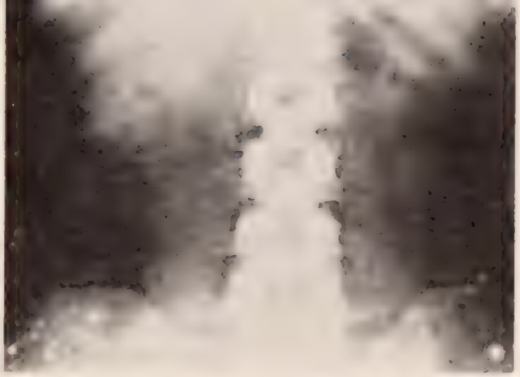

FIG. 10. Postoperative plain film of abdomen showing absence of calculi in right kidney (Case 2).

Summary

Partial nephrectomy is applicable to a number of renal pathologic conditions but is particularly

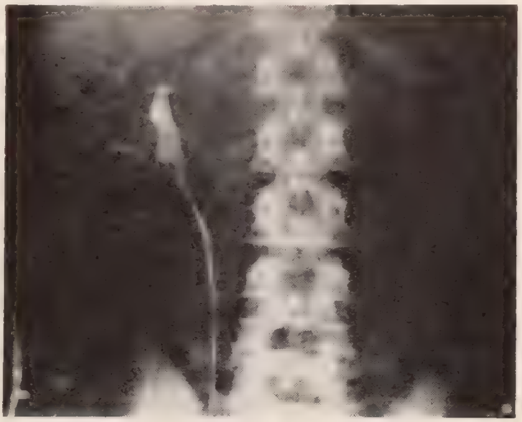

FIG. 11. Postoperative retrograde pyelogram (Case 2). Note deformity of lower portion of pelvis due to partial nephrectomy.

surgical procedure it is far from formidable and requires only the customary meticulous surgical skill; a technic for this procedure is described and depicted, wherein a hemostatic agent, oxidized cellulose gauze, is used for hemostasis in approximation of the cut wound edges of the kidney. Two illustrative cases of renal calculi where partial nephrectomy was performed are cited, one case having had previous operation for calculus; in each case the segment of kidney removed was diseased both clinically and as indicated by the

renal tissue on the resected side is left to support life, should the contralateral kidney have to be removed at some later date. Diseased renal tissue may often be removed by partial resection of the kidney without resorting to total nephrectomy, thus conserving functioning tissue.

Partial resection of the kidney is an excellent surgical procedure which deserves more frequent and widespread usage.

77 Park Avenue

BASE OF REFERENCE

"Nobody ever reaches truly illuminating and fruitful generalizations concerning vital phenomena who has not himself experimented and tilled, in hospital, operating theater and laboratory, the fetid and palpitating soil of life." —Claude Bernard

It may be said that all scientific data, no matter how precisely measured any given time, are provisional and approximate. Any accumulation of fact or abstract assembly of natural phenomena is subject to criticism, enlarged explanation, or shift of emphasis by simply investigating the base of reference upon which factual results have been given intelligible form. This is particularly true in interpreting statistical data. From one point of view, or base of reference, a given aggregation of observed occurrences may appear to possess a certain significance but when subjected to another base of reference may be perceived as having different significance or greater or less meaning.

For example, Morgan has shown that mass radiography in the detection of cancer of the stomach has a 12 to 15 per cent error when compared to conventional x-ray examination. Using this margin of error as a base of reference, many radiologists have rejected the mass method. Comprehensive examination by means of roentgenoscopy and roentgenography is, without further consideration, cited as preferable. However, when the base of reference of population coverage and the discovery of hidden cases of cancer is utilized, it becomes clear that judgments based on per cent of error alone are misleading. Mass radiography can reach ten times more persons than conventional methods can reach with the same expenditure of time and professional effort. Morgan estimates that the number of new cases of cancer of the stomach, in persons over forty years of age, discovered by conventional methods, would be 600 for every 100,000 persons examined. Mass radiography, even with a 12 per cent error, would detect 528 cases. However, with the same time and effort, conventional methods would permit the examination of merely 10,000 persons and the detection of only 60 cases. By means of mass radiography, therefore, 468 additional cases, many of them operable, would be found early enough for successful treatment. Clearly, then, the condemnation of mass radiography from one base of reference alone obscures the essential issue of finding as many hidden cases of cancer of the stomach as possible within the entire population in a limited time and with a minimum of personnel and equipment. Indeed, examined from the proper base of reference, it can be seen that mass radiography will permit us to arrive at a practical estimate of the extent of the problem and save thousands of lives.

Another example is provided by statistics concerning our aging population. From one base of reference we discover that in *absolute numbers* aged persons among us have almost quadrupled in the last fifty years. From another base of reference we observe that the *proportion* of elders to the remainder of the population has merely doubled. It is, of course, of value to know that in 1950 there will be 11,000,000 aged persons as compared to 3,000,000 in 1900; but in terms of social and interpersonal relationships it is more illuminating to be aware that the proportion of elderly dependents to younger persons who will be economically responsible for them will be 7.6 per cent in 1950 as compared to 4.1 per cent in 1900. The base of reference of *absolute numbers* alone permits no insight into the social significance of care of the aged, whereas the base of reference of *proportion* presents a balanced picture of the real problem.

Quantitative methods used in pure science and in epidemiology are becoming more common in clinical investigations and public health studies. Statistically, in more elaborate studies, it is essential to provide for random samples, proper controls, precise methods of analysis of data and evaluation of results. In any study, no matter how simple—even in a series of case reports—summaries, conclusions, and hypotheses must be related to proper bases of reference to avoid ambiguity and misinterpretation.

Herman E. Hilleboe, M.D.
Commissioner, New York State
Department of Health

—Health News, July, 1947

BLOOD AND URINE LEVELS ACHIEVED IN INTRAVENOUS ADMINISTRATION OF AUREOMYCIN

A. Rottino, M.D., William E. Philip, M.D., New York City, and Murray Sanders, M.D., Coral Gables, Florida

(From St. Vincent's Hospital and the University of Miami Medical Research Unit, Veterans Administration Hospital, Coral Gables, Florida)

IN RECENT months a new antibiotic, aureomycin, has been found useful against a variety of gram-positive and gram-negative bacteria as well as rickettsiae and the lymphogranuloma-psittacosis group and, even possibly, trichophyton.[1] The accepted route of administration of this substance is per os. While the gastrointestinal tract is, in many instances, quite satisfactory as a portal of administration, there are also frequent occasions when it is desirable or imperative to use a parenteral route. A route other than oral is desirable when a patient is vomiting, when fulminating disease has placed the patient in a comatose or semicomatose condition, or when oral administration of the antibiotic has produced gastric irritation and the patient is reluctant to continue such a regime. Since, on the basis of previous experience, we knew that the amount of antibiotic which could be administered by intramuscular injection was rigidly limited by pain, the intravenous route became the logical subject of study.[2,3,*]

Adult patients in whom a diagnosis of Hodgkin's disease had been made were selected for the initial trials for two reasons. This lymphoma is characterized by a most discouraging prognosis and is of unknown etiology. Since the possibility of a contributory infectious factor in Hodgkin's disease has not been precluded, a trial with a substance having a great range of therapeutic activity appeared desirable.

It can be categorically stated at the outset that aueromycin was found to have no beneficial effect on the lymphoma group studied. However, as a result of this therapeutic attempt, useful information has been obtained regarding the intravenous use of the antibiotic under investigation. The application of such information to other disease entities suggests the possibility that intravenous use of aureomycin may be the method of choice. It is, therefore, desired to present briefly data concerning this route of administration.

The following groups of patients in chronologic order were given intravenous aureomycin.

Group I: Two patients in the terminal stages of Hodgkin's disease received an initial, empiric dose of 320 mg. of aureomycin dissolved in 5 per cent glucose and saline. This dose was continued for eight days.

Group II: Four patients (two Hodgkin's disease, one lymphosarcoma, and one acute leukemia) were then treated with 2 Gm. of the antibiotic daily. Administration of aureomycin was in 1-Gm. doses twice a day, each gram being dissolved in 1 L. of 5 per cent glucose-saline, the infusion being administered with rapidity. In three of the four patients, the schedule was maintained for seven days. In the fourth individual, treatment was discontinued on the fourth day because of persistent vomiting and weakness.

Group III: Two patients, with diagnoses of Hodgkin's disease and chronic lymphopathia venereum, were treated with single 1-Gm. doses of aureomycin dissolved in 500 ml. of Hartman's solution and given rapidly over a fifteen-minute period.

Group IV: One patient from Group I was retreated with 500 mg. in Hartman's solution three times a day for five days and with 1 Gm. three times a day on the sixth day. Another patient with Hodgkin's disease was given progressively increasing doses of aureomycin beginning with $^1/_2$ Gm. on the first day and ending with 4 Gm. on the fifth day. In this instance, leucine was used as a buffer.

Complications

Nausea and vomiting of a moderate or mild degree have been encountered in those patients receiving rapid aureomycin infusions of 1 Gm. at a single dose or daily doses of 1.5 Gm. (0.5 Gm. three times a day). In only one of the ten patients mentioned above were vomiting and the ensuing weakness of sufficient magnitude to cause discontinuance of therapy. Three of the four patients in Group II were aware of a bitter unpleasant taste and dryness of the mouth during and following the infusions.

The most favorable results as regards untoward effects related to massive dosage were obtained with the last patient in Group IV who received aureomycin with leucine as a buffer in doses of $^1/_2$ to 4 Gm. daily. At no time during the course

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[*] A similar study of intravenous aureomycin administration has been carried out simultaneously at the Harlem Hospital in New York City by Dr. Louis T. Wright and his coworkers. Dr. Wright, with whom the details of this study were discussed, states his findings are in complete agreement with the present report.

enced, even on the last day when 4 Gm. were infused.

The most annoying single complication was the phlebitis which occurred when therapy was maintained. In general, the phlebitis was characterized by erythema and tenderness at the infusion site, often for several centimeters along the course of the vein proximal to the infusion site. This was marked in the Group II patients receiving 2 Gm. daily of the antibiotic in glucose-saline. In those patients, after a twenty-four-hour period, the vein was indurated and tender. On several occasions infiltration of the solution into the subcutaneous tissues occurred and was accompanied by erythema and a burning sensation. Absorption of this infiltrate took place without incident, however, and no ill effects were noted. As the study progressed, it was possible to reduce the degree and extent of phlebitis. (See section on Suggested Schedule for Prolonged Intravenous Therapy.)

It is of interest that the last patient who received the largest doses of antibiotic buffered with leucine experienced the least discomfort of all patients in the study. Although a mild sclerosis of the veins did occur in this patient, experience with additional patients since the present study was concluded makes it apparent that the buffering effect of the leucine minimizes the danger and discomfort of phlebitis when aureomycin is used intravenously.*

Laboratory Findings

Those patients receiving more than one day of therapy were followed with daily urinalysis, complete blood counts on alternate days, daily carbon dioxide combining power, and blood urea determinations. No gross or microscopic abnormalities were noted in the urine, and the pH varied from patient to patient and from day to day in the same patient. The carbon dioxide combining powers showed a transient reduction of 5 to 10 volumes per cent, most marked immediately after completion of the daily infusions. Alterations in the blood picture were minimal and were confined to a slight increase in the total white count and in the percentage of polymorphonuclear leukocytes. Blood urea nitrogen values showed no deviation from the normal. In the case of the one patient who received $1^1/_2$ Gm. of aureomycin daily for five days, three electrocardiograms taken on alternate days did not reveal any abnormalities or changes during therapy.

OUS AUREOMYCIN WITH HARTMAN'S SOLUTION AS DILUENT*

Day of Therapy	Time of 500-mg. Infusions	Blood Concentration	Time	Urine Concentration	Time
1	12:30 P.M.	4	3:00 P.M.	400	2:30 P.M.
	3:30	10	5:00	200	3:30
	6:00			800	4:30
				800	5:15
				400	6:15
				200	7:15
				200	8:15
				100	9:15
				200	11:15
				400	1:15 A.M
				400	3:15
				200	5:15
				400	8:15
2	9:30 A.M.	2	9:30 A.M.		
	1:00 P.M.	8	1:00 P.M.		
	7:30	10	7:30		
3	11:30 A.M.	8	11:30 A.M.		
	3:00 P.M.	5	3:00 P.M.		
		10	8:00		
4	9:30 A.M.	1	9:30 A.M.		
	2:00 P.M.	8	2:00 P.M.		
	6:00	10	6:00		
5	*Therapy Withheld*				
6	10:30 A.M.	0.2	10:30 A.M.		
	2:30 P.M.	10	2:00 P.M.		
	6:30	20	5:00		
7	Continuous	4	10:30 A.M.		
	3-Gm.	20	2:00 P.M.		
	infusion	20	5:00		
8	None	5	11:00 A.M.		

* All concentrations expressed as micrograms per ml.

Blood Levels of Urinary Excretion of Aureomycin

Blood and urine studies were obtained in three patients in an effort to determine the concentrations achieved and their duration.[4] The first of these patients studied was the Hodgkin's patient re-treated with 500 mg. of aureomycin three times daily. Following the first infusion the levels varied from 4 to 10 micrograms, and following the second daily infusion, the levels ranged from 10 to 20 micrograms per ml. (Table 1). Those levels, obtained each day before any infusions were begun and after an interval of from fourteen to fifteen hours following the completion of the infusions of the previous day, ranged from 1 to 5 micrograms per ml., with the exception of one unexplained value of 80 micrograms. On the sixth day an initial level of 0.2 micrograms was present after a thirty-eight-hour interval without therapy A sustained level of 20 micrograms was found with a 3-Gm. infusion given over a fourteen-hour period; eleven hours after the completion of this infusion a level of 5 micrograms was present. Serial urine assays done on the first day would indicate that the peak of the urine concentration coincides with that of the blood. A concentration of 400 micrograms was present fourteen hours after the completion of the third daily infusion.

A second series of blood and urine studies was done in a case of chronic lymphopathia venereum (Fig. 1). It is evident that a rapid rise and a more gradual fall of the blood level occurs, but a con-

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* The leucine buffer was obtained from the Pharmacology Department of the Lederle Laboratories and was the direct result of the efforts of B. K. Harned and his associates to obtain a diluent which would permit the use of aureomycin intravenously without producing a phlebitis.

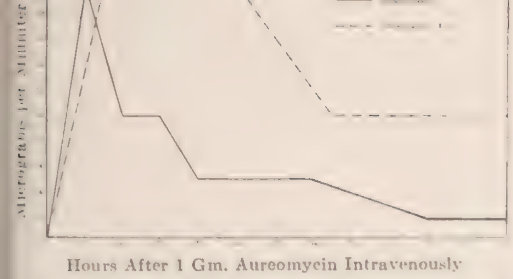

FIG. 1. Rate of aureomycin absorption in the lood and its excretion in the urine following a ingle injection of 1 Gm. intravenously.

entration of 5 micrograms or over was mainained for a period of fourteen hours. At the end f a twenty-four-hour period a level of 2 microrams was detected. This pattern is similar to hat found in a second patient in whom a 20-nicrogram level was present thirty minutes after eceiving 1 Gm. intravenously, and at the end of a wenty-hour period a level of 2 micrograms was resent. In both patients the peak of the urine oncentration was obtained shortly after that of he blood, and a level no lower than 80 to 100 nicrograms was maintained during the period of bservation. Approximately 25 per cent of the lose administered intravenously was recovered n the urine of the first case studied.

Suggested Schedule for Prolonged Intraenous Therapy

As data from the present studies were accumuated, it became evident that the intravenous oute provided an excellent means for quickly obaining a high level of aureomycin in the blood. Furthermore, the blood titer fell relatively slowly o that antibiotic concentrations of therapeutic ignificance were easily maintained.

On the basis of the above individual reactions to arge doses of intravenous aureomycin, a new group of adult patients were treated with 500 mg. f aureomycin administered by vein twice daily n an attempt to find an effective therapeutic schedule which could be maintained for some ime.

Eight patients suffering from several chronic diseases were treated for periods varying from seven to twenty-one days. Specific clinical data will be published at a later date, since we do not wish to draw therapeutic conclusions on a small series of varied cases. However it is of interest here that in no instances were nausea, vomiting, r other objective or subjective reactions noted.

For individual cases the intravenous treatment and three received aureomycin for seven days; patients three and four for ten days; patients five and six for twelve days; patient number seven for fourteen days, and patient number eight for twenty-one days.

Since the leucine buffer was not available during this phase of the work, the aureomycin was given in Hartman's solution. For future reference one point of technic may be mentioned. Aureomycin activity is reduced as pH of the diluent is increased, and the longer the antibiotic is exposed to an alkaline environment, the greater is the loss of activity. For example, Harned and his associates have shown that at pH 8.5 at 25 C., aureomycin loses 12 per cent of its activity in thirty minutes and 20 per cent in one hour.[5] Therefore, to avoid loss of potency the contents of each 50-mg. vial of aureomycin hydrochloride were dissolved in two to three cc. of sterile distilled water, and the ten vials, i.e., 500 mg., were pooled in 250 cc. distilled water in an intravenous infusion bottle. When all preparations for administering the medication had been concluded, a 10-cc. vial of Hartman's solution concentrate was added to the aureomycin in distilled water. Since sodium lactate concentrates intended for a 1:25 dilution to make Hartman's solution are available, this method of administering aureomycin is a convenient one. Once the sodium lactate was added, the infusion was given as rapidly as possible and usually was completed within fifteen to twenty minutes.

In view of the problem of phlebitis in intravenous work with aureomycin, the veins were carefully observed during sustained therapy with the antibiotic. As in the earlier cases phelibitis was encountered, but this has not been a serious complication in the cases receiving aureomycin over a prolonged period. The explanation may be as follows: The group of patients under discussion were the latest ones in the study, and on the basis of past experiences a great deal of care was taken in giving the infusions. In addition to having sharp needles and attaching the intravenous infusion only after the needle was clearly in the lumen of the vein, the basic fundamentals of intravenous therapy were closely followed. Thus, the first infusions were given in the most distal portions of veins, subsequent injections being given proximally. Furthermore, alternate arms were used for each injection. It should be clearly stated that phlebitis did occur, but it appears to be a more transient and less bothersome complication in this group than has been previously noted. As an example, the patient who received two 500-mg. intravenous injections of aureomycin daily for twenty-one days has con-

Summary

Technics of intravenous administration of aureomycin in varying dosages up to 4 Gm. daily are described in ten adult patients. Toxic effects, such as anorexia, nausea, vomiting, unpleasant taste, dryness of the mouth, lassitude, and localized phlebitis, have been encountered when single doses of 1 Gm. or a twenty-four-hour dose of at least $1^1/_2$ Gm. were given. In only one instance was the general reaction sufficiently severe to cause cessation of treatment.

No signs of renal disturbances were noted.

The lack of side-reactions in eight additional adult patients, receiving 500 mg. intravenously twice daily for periods of seven to thirty-one

intravenous aureomycin therapy.

Data indicative of prolonged blood and urin concentration are presented.

No immediate or delayed beneficial effects (aureomycin therapy on the lymphoma group wer observed.

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DYSFUNCTIONAL UTERINE BLEEDING: HORMONE TREATMENT

For the patient who has been flowing more than seven days, even for months, at the time the diagnosis of dysfunctional uterine bleeding is made 25 mg. of progesterone is injected intragluteally daily for five days during which the flow will slacken or cease. Two to four days after the last injection of this progesterone series a menstruation, often profuse, will ensue, ending in less than six days. The patient should be warned that the induced menstruation is the necessary evil of this efficient treatment. Normal cycles are likely to follow, for a time at least, but to make more certain of this result it is well to repeat the progesterone series at least once, starting eighteen to twenty-one days from the onset of the induced menstruation. Should irregular bleeding persist between progesterone-induced periods it is certain that some pathologic condition besides an abnormally functioning endometrium is inside the uterus. In other words, the failure of progesterone to be immediately therapeutic, when given as described, points to an incorrect diagnosis and the necessity of investigation under anesthesia at once.

For the patient whose cycles are of normal length but whose bleeding is profuse, or continues up to eight days, and who often has premenstrual staining as well, the simplest therapy is the oral administration of estrogen starting with the onset, or during th first two days, of the period. Estrone sulfate, i divided doses totaling 10 mg. daily, is taken fo twenty-five days. To reduce expense, stilbestrol i daily doses of 5 mg., 10 mg., or even 25 mg. may b taken, on retiring, instead of estrone sulfate. Bot of them may cause malaise in some women; i others a sense of well-being is produced. The occu rence of bleeding between the sixth day and the en of estrogen treatment indicates the presence of som undiagnosed condition within the uterus. Two t six days after the cessation of medication uterin bleeding will begin. Although not profuse, it occa sionally lasts up to eight days. Thereafter, norma catamenia may or may not ensue. Should excessiv flow again appear early in a cycle, the estroge treatment may be started at once and continue again for twenty-five days.

For this type of abnormal bleeding the proges terone series also has a place. If elected, it shoul be started between the eighteenth and twenty-firs days of the cycle. Although in some women the en suing catamenia may be profuse, it will not last s long. Moreover, there is a greater chance tha normal catamenia will follow than after the estroge treatment.—*George Van S. Smith, M.D., New Eng land Journal of Medicine, September 15, 1949*

THE "L. E." CELL IN THE BONE MARROW IN DISSEMINATED LUPUS ERYTHEMATOSUS

Melvin H. Stich, M.D., Brooklyn, New York

(From the Jewish Hospital of Brooklyn)

In January, 1948, Hargraves, Richmond, and Morton reported a new blood cell, the "L. E." cell, which they had found in a number of cases of acute disseminated lupus erythematosus.[1] After one glance at their illustrations, this author took out for comparison an unusual sternal marrow slide which had been in his possession since he had obtained it from a case of acute disseminated lupus erythematosus in April, 1946, later proved pathologically. The slide had been studied by many of the leading hematologists and pathologists of the New York City area, none of whom had ever seen a similar cytologic picture.

The cells seen in Figs. 1, 2, and 3 seem to be identical to those described by Hargraves and his associates. The inclusion-like bodies seen in the cytoplasm appear in approximately 30 per cent of the mature polymorphonuclear neutrophils and eosinophils of the sternal marrow. They are not found in immature polynuclears, other marrow cells, or in cells of the peripheral blood. Marked toxic granulations are present in most of the other marrow and peripheral neutrophils.

The inclusion-like bodies are uniformly circular or nearly circular in shape. They range in size from small masses occupying about one third of the cytoplasm to large masses filling practically the entire cell. The larger ones compress the nucleus to a thin marginal comma-like appearance, and in occasional cases seem to have actually extruded all or part of the nucleus from the cell. In other instances, extremely large bodies have broken through a segment of the cell membrane and are partly outside the cell boundaries.

The smaller of these bodies take Wright's stain deeply, similar to the nuclear chromatin material. The larger the mass, the paler and more eosinophilic are its staining characteristics until the very large ones are a very pale hyaline pink in color. This variable staining is apparent in the group of cells in Fig. 3.

The origin of these peculiar bodies is somewhat questionable. The staining characteristics de-

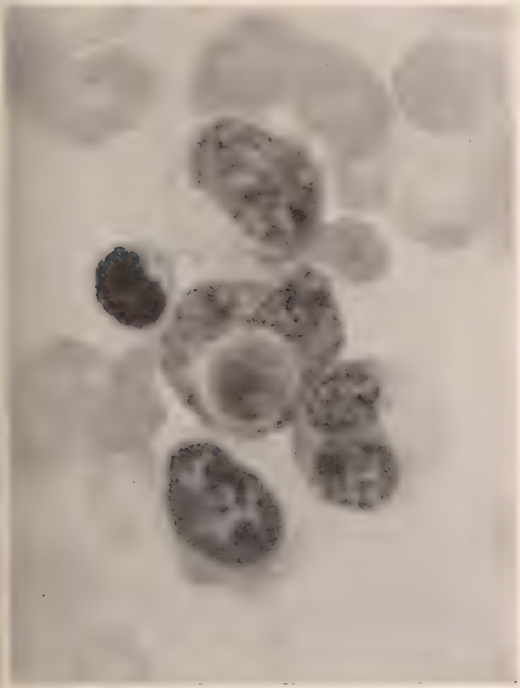

Fig. 1.

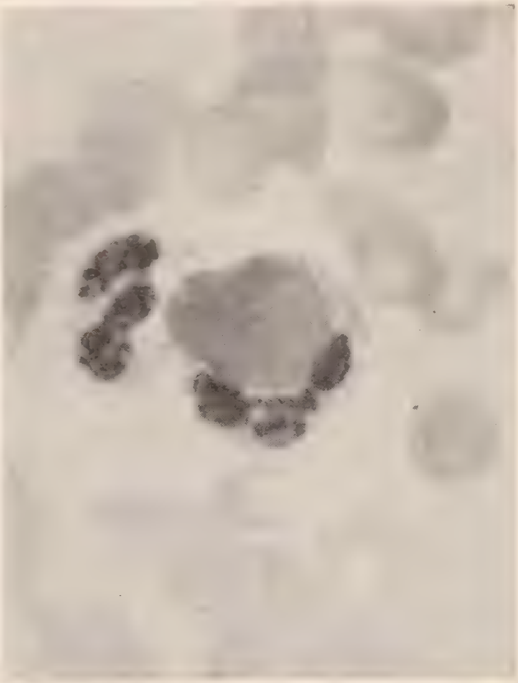

Fig. 2.

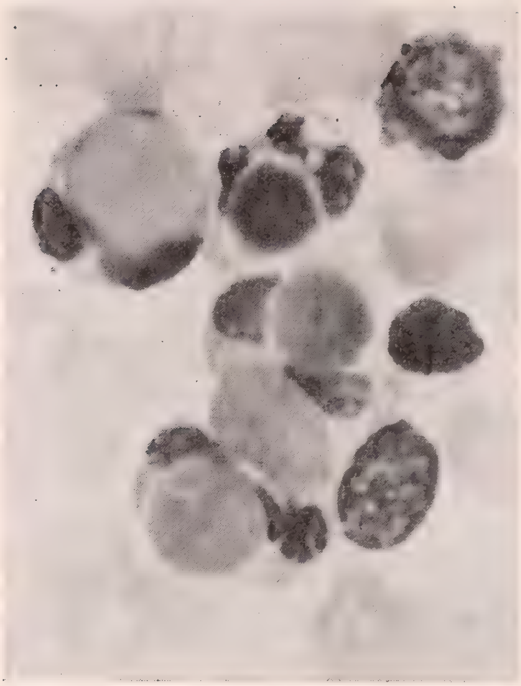

FIG. 3.

scribed above have led this author to believe that they are toxic degenerative products of the nuclear chromatin.

Since the appearance of the paper of Hargraves *et al.*, this author has had the opportunity to study carefully sternal marrow aspirations from nine additional cases of acute disseminated lupus erythematosus with the hope of finding similar cells, but not even the least tendency to such a cytologic picture has been observed. Various colleagues have also been on the lookout for these cells in proved or suspected cases of disseminated lupus erythematosus and in other of the so-called collagen diseases also without results.

Summary

An unusual inclusion-like mass was found in the cytoplasm of approximately 30 per cent of the mature polymorphonuclear cells of the sternal marrow of a case of acute disseminated lupus erythematosus. Its origin and its specific relationship to this disease await further observations.

2809 AVENUE L

Reference

1. Hargraves, M. M., Richmond, H., and Morton, R.: Proc. Staff Meet., Mayo Clin. 23: 25 (Jan. 21), 1948.

A DOCTOR'S DILEMMA

I

Do you know that
For heterophoralgia
Or myel-neuralgia
There is nothing that is later
Than Hexo-Amino-Beta,
Do you know that?

II

Do you know that
The rinds of ribes or ritamins
Take care of excess vitamins?
If a patient's much too lustful,
This stuff makes him more trustful.
Do you know that?

III

Do you know that
For rural pleurodynia
Or dermatographia linear,
The ester phase of Phenazone
Is best when used with Cortocone.
Do you know that?

IV

Do you know that
In osteo-chondritis
Or mild thrombo-phlebitis,
Strepto-tyro-peni-thricin
Is becoming more enticin',
Do you know that?

V

Can you guess how I came by this wonderful knowledge
That never was gleaned from the wards or from college?
The Journal of Surgeons, the Clinics of Medicine
And Procedures from Mayo are equally reticen'.
You can't find it either in Endocrinology
Or even the Archives on Symptomatology.
If you look, as I did, at a patient's request,
You'll find all this data in Reader's Digest.

JOSEPH H. WERK, M.D.
Port Jefferson

—*Bulletin of the Suffolk County Medical Society*

ELUSIVE MENTAL CASES: SLIGHT PARANOIA

B. Liber, M.D., F.A.P.A., New York City

(From the Mental Hygiene Clinic, New York Polyclinic Hospital)

In physical conditions, hypertension can be either a symptom of a more or less definite organic disease or, perhaps, when its origin is unknown, an "essential" or "idiopathic" illness by itself. In mental troubles, paranoia is often one of the signs of a well-known disorder, but it might also be an independent or, as far as we are aware, an apparently independent entity.

While some paranoiacs, suspicious and afraid as they are, may harbor horrible thoughts of hatred and revenge and may be ready to commit crimes—which they sometimes do—others may, on the contrary, have visions of ethereal beatitude and live in a happy universe of their own creation, filled with love or opulence.

At the age of eight the author met one of those lucky and prosperous unfortunates, known to an entire quarter of our town, who advertised to all and sundry his possession of millions. He walked leisurely through the streets, his so-called clothes in tatters and usually too short, because he was so tall and thin. Blue and shivering on wintry days, a violin and a bow in his hands, an eternal grin on his face, and a graying beard, he sang and played as he went. In spite of his affluence he accepted the gratuities that the passersby dropped into his yawning pocket. In his mind each coin surely added enough money to make the total reach astronomic figures.

We children had caught his weak point. On our way home from school, it was easy to irritate him and to make him change his joyful mood, by hopping around in a circle and chanting in chorus, "Nastassiou, you have no money." Then he would become deeply offended and would start running after us, threatening us with his instrument—always unsuccessfully, of course.

Boruch, another such harmless millionaire whom I saw some years ago, forever in litigation with the administration in Washington, was sure that soon he would get "what was coming to him," and thus he was cheerful in anticipation.

Mike, the Italian barber who was always on the go, hurrying to shave the Mayor of New York City or the President of the United States, showed me once confidentially his check for ten million dollars, signed by two of his "friends." It was too bad that neither the teller nor the bank manager ever had enough paper money to cash it. Or was there a conspiracy afoot to hold back "his property," he growled, as his anger dangerously welled up in the presence of the clerk?

Such patients, of course, are advanced, have no self-criticism, and are often deteriorated and disintegrated.

There are, however, many milder paranoia cases, either gently lulled by halcyon thoughts or painfully wary, suspicious, and scared, but with sufficient insight to avoid making themselves ridiculous. Indeed, they are often difficult to detect, bordering on the normal as they do.

Case Reports

Case 1.—A woman suffered from tachycardia and from all the symptoms connected with it, at home and in the presence of her husband. However, this disappeared tracelessly when she was away visiting, shopping, traveling, or in the doctor's office. Under ordinary circumstances no one would call her ill, and she was extremely careful to conceal her ideas regarding her husband. Only to a psychiatrist who had won her absolute confidence did she reveal her fear, nay, her certainty, that her spouse had laid down precise plans how to get rid of her. Once, however, she made a discovery that was of great help to her. She found new powers within herself. She was positively convinced that he could be made innocuous by a spell in her possession, provided she emanated it incessantly.

Since then her felicitous feeling of safety thwarted any frightening distrust that might have arisen in her relationship with him. Her pulse count continued high, but she was always pleasantly smiling. She had found the antidote. It was like in Anatole France's comedy of the man who was tired of his wife's loquacity and begged his surgeon to make her mute. As that apparently could not be done, the next best thing was performed: the complaining husband was rendered deaf, and he lived in peace ever after.

Case 2.—In his younger days, a man thought he was affected with gonorrhea, a disease about which he had read. His physician and several others assured him that there was no sign of it and that he was in good health from the venereal point of view and from all other aspects. Neurotics are not so easily satisfied, and any secretion strengthens their belief that either the doctor does not know or would not tell them the truth. This patient had a superior and sardonic chuckle of contempt and continued to seek treatment. Somebody did give it to him unnecessarily, but, when he was declared cured, he was skeptical.

Years passed. He worked and lived a decent life. He was in the Army, went to war and returned, but his deep, irrefutable conviction that he had remained unhealed persisted and interfered with his getting married. He finally was so much in love with a girl that he succumbed. Of course, even then he did not rest until he was re-examined by half a dozen medical men, whose words that he was well he only took because of his sexual needs. But no sooner did he settle down than he began to annoy his young wife with questions leading to various apprehensions. He dragged her to all kinds of practitioners—not to psychiatrists—and communicated to her the fears which had baffled him. But during those several consultations one of the doctors, tired of his endless objections, happened to drop inadvertently a remark about a sort of magic immunity prevailing in the vagina which interferes with infection. The physician, certainly quite dubious about his own statement, saw at once its unhoped for excellent effect. From then on the patient—if he could be called such—stopped being perplexed, ignored his guilt-feeling, and discontinued visiting the doctors. He was now sure that "nature takes care of the trouble," and that no evil can result.

Just as in the past he had been penetrated by the imaginary idea that he was a dangerous individual scattering disease, so now he was dominated by the delusion that a preventive neutralizer was miraculously active in his wife.

Case 3.—A childless woman, filled with thoughts of inborn and instinctive supernatural powers, always domineered her husband, a man of fifty. He ate what she gave him, and she overfed him until he was quite overweight. When he complained of headache and dizziness, she took him to a doctor, who found both a cardiac condition and a tension of 200 over 130. A regimen was ordered. But this lady went one better, made the diet much stricter, and kept him in bed. The husband was bored and constantly asked for permission to take a walk, to no avail.

A year later, when the doctor re-examined him, the man had lost so much flesh that now he was forty pounds under his normal weight, but his heart was the same and his blood pressure was higher—250 over 140. As he continued to be submissive, she enjoyed playing with his weight and pressure, much as a cat would torment a mouse. Her answer to all the doctor's remonstrances was that she knew what she was doing, that she had her own formula by which she kept her husband alive. Of course, she claimed to love him—whatever her subconscious feelings for him. She felt important and was content with her "knowledge" and "usefulness." No one suspected her mental disorder.

Case 4.—An optometrist, in whose case the diagnosis of schizoidism or semiadjusted schizophrenia was easy to make, practiced normally and did his work quite well. Any experienced observer would have noticed at once his diffident behavior, his failure to put forth his palm unhesitatingly and to look into an interlocutor's eyes frankly. When a hand was stretched out to him and he could not dodge it, he offered the tips of two or three fingers reluctantly and without warmth. He spoke little, no more than absolutely necessary, in a hardly audible voice and dismissed everyone as quickly as possible.

He had no social life, no home life. For years he had gone nowhere except to a restaurant. His wife had left him long ago and he did not regret it. In his youth he had enjoyed no games or sports. He had had a hard time finishing his studies, interrupting them again and again.

His paranoid thoughts consisted of first, a generous dream to invent an apparatus by which the blind whose cerebral functions were intact could be made to see, and second, a fortune for which he was waiting and which would be an inheritance from a European moneyed relative, to be devoted to his altruistic job.

In the rear of his store and office was his bench for the mechanical work related to his invention.

Case 5.—A girl with wavy blond hair and wide blue eyes had the habit of smiling or laughing out loudly at unexpected moments. She undoubtedly heard pleasant voices, probably originating from astral spaces, as she could not identify them. Being always dressed in loose, wide, and white or creamy robes, she herself gave the impression of a floating light. Her words, her manners, her distant glances, and her general sweetness were agreeable beyond expression and seemed to stem from distant realms. Save for the fact that, in spite of a norma hearing, often a question had to be repeated two or three times before she became aware of it, she spoke reasonably and rationally. Apparently interested in philosophy, she attended a course at college, bu sometimes remained for several minutes in a sort o ecstasy in an unchanged position at the end of the hour, after the professor had left the room and th class had been dismissed.

She lived, transfigured, in her own world—and i was a beautiful world. But she attended to he business efficiently if slowly.

65 West 95th Stree

MAY 8 TO 12, 1950—DATES TO REMEMBER!

ABDOMINAL DISTENTION

Treatment with Stigminene Bromide, A New Cholinergic Drug*

James C. Whitaker, M.D., and Louis T. Wright, M.D., New York City

(*From the Department of Surgery, Harlem Hospital*)

Abdominal distention is a frequent and often serious complication following abdominal surgery. It has been stressed that gentle handling of the gut would obviate its development and that rough surgery is a contributing and aggravating factor, but even with the gentlest handling of the viscera severe distention frequently develops. Any type of peritoneal irritation can be the causative factor. Inflammatory conditions of or adjacent to the intestines may cause ileus paralyticus of various degrees, due to sympathetic nerve stimulation. In individuals who are emotionally unstable or who have phobias connected with surgery, slight injury to the peritoneum may cause marked loss of intestinal tone. This is seen in cases of simple herniorrhaphy. Operations in other areas of the body may cause reflex ileus, as in thoracic surgery, but it is very unlikely that the causative factors will ever be eliminated. Therefore, further research should be instituted toward nullifying causative factors rather than toward the treatment of the condition once it has developed.

Many agents for the prevention and treatment of paralytic ileus have been used. The application of heat to the abdomen is a common procedure. Cathartics are occasionally used, but the tendency is away from them. Intubation is now used extensively, both prophylactically and as a therapeutic measure. The mechanical devices such as Levin, Miller-Abbott, and Cantor tubes with Wangensteen apparatus are familiar. They are directed toward removing the accumulated fluid from the gastrointestinal tract. A physiologic approach to the problem is represented by the use of various drugs that have as their objective the maintenance of tone and peristaltic activity of the intestinal musculature. It can be stated, in general, that the preservation of muscle tone in the gastrointestinal tract and the initiation of peristaltic movements are properties of the parasympathetic division of the autonomic nervous system. Stimulation transmitted through the sympathetic division results in lessened tone and peristalsis. This applies also to the urinary bladder. Other effects of excitation of the parasympathetic nerves which would be undesirable in treating paralytic ileus are salivation, mucus secretion, sweating, lacrimation, myosis, bradycardia, constriction of the coronary vessels, constriction of the bronchial musculature, and uterine contraction.

When a nerve belonging to the autonomic nervous system is stimulated, a chemical substance called a mediator is produced at its peripheral end. In the sympathetic division, the mediator has all the properties of epinephrine and is called sympathin. If the nerve is of parasympathetic origin, the mediator produced is chemically identical with acetylcholine. Drugs which produce effects similar to those produced by parasympathetic stimulation are called cholinergic drugs.

There is, in the tissues and humors of the body, an enzyme called cholinesterase which has the property of hydrolyzing acetylcholine. Cholinergic drugs act by neutralizing cholinesterase at the neuromuscular junction, thereby permitting the action of acetylcholine. Different drugs vary in the intensity with which they affect the various organs supplied by the parasympathetic nerves. For the prevention of or treatment for intestinal and bladder atony the ideal drug would be one that has the greatest effect upon the gastrointestinal tract and bladder and the least effect upon other organs supplied by the parasympathetic nerves.

A number of cholinergic drugs have been tried and discarded because of toxic side-effects. For the past two years extensive experimental work has been done using stigminene bromide, which has the structural formula shown in Fig. 1. The animals used were mice, rats, guinea pigs, cats, and dogs. Symptoms of toxicity produced were excitation, salivation, defecation, lacrimation, fibrillation, labored breathing, and convulsions followed by death. These results are qualita-

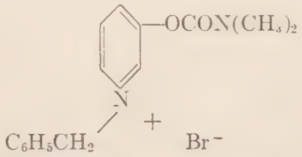

Fig. 1. Structural formula of stigminene bromide (1-benzyl-3-dimethylcarbamyloxy-pyridinium bromide).

Presented at a meeting of the Harlem Surgical Society, New York City, December 1, 1948.

* Supplies of stigminene bromide were generously furnished by William R. Warner & Co., Inc., New York City.

tively similar to those produced by excessive stimulation of the parasympathetic nerves, thus establishing stigminene bromide as a cholinergic drug. In comparison with neostigmine methylsulfate in the experimental animals stigminene bromide was found to be less toxic.[1] Although a larger dose of stigminene bromide was required to produce an effect upon the gastrointestinal tract comparable to that of neostigmine methylsulfate, even in the larger dose the effects upon other parts of the animals were strikingly less. Stigminene bromide thus has a more selective action upon the intestines and was decided upon as the cholinergic agent to be used in our clinical studies based on laboratory reports of comparative pharmacology and chemotherapy, a condensation of which appears below.

Physiologic reactions on dogs were determined with the usual laboratory technics as shown in Table 1.

TABLE 1.—PHYSIOLOGIC REACTIONS OF DOGS TO TWO CHOLINERGIC DRUGS

	Neostigmine Methylsulfate, 0.2 Mg./Kg.	Stigminene Bromide, 0.2 Mg./Kg.
Muscular fibrillation, tremors	Marked	None
Pulse and carotid blood pressure	Decreased heart rate with strong reactions	None or decreased heart rate with moderate reactions
Salivation	Marked increase	Moderate or none
Lacrimation	Marked	Moderate or none
Mortality on anesthesized dogs	0.35 Mg./Kg.	3.0 Mg./Kg.

In the anesthetized animal stigminene bromide had a relatively more select effect on intestinal peristalsis than neostigmine methylsulfate in comparison to other cholinergic actions.

On isolated guinea pig intestine the toxicity of stigminene bromide is well within the range of the most effective neostigmine derivatives, and changes in the circulation are also similar to those of neostigmine (and derivatives), with a lesser toxic effect on intestinal peristalsis of the intact animal.

The clinical study of stigminene bromide was begun in April and ended in November, 1948. It has as its purpose the evaluation of the drug as a preventive measure against paralytic ileus and as a therapeutic measure for established abdominal distention. It was used on 100 cases on the surgical service. There were 83 abdominal, seven genitourinary, two thoracic, and two gynecologic operations. Six cases had no operation. Table 2 shows the cases tabulated.

It can be seen that almost all types of abdominal surgery are represented as well as all degrees of seriousness. In analyzing the results, two cases were omitted because they developed mechanical ileus. Of the remaining 92 cases, 54 were treated prophylactically and 38 for established distention. Of the 54 cases treated prophylactically, 44 (81.5 per cent) did not develop any distention, eight developed mild distention, and one case of liver cirrhosis with ascites in which a Crosby button had been inserted developed severe distention. In those cases with mild distention, two lasted for four hours, four for eight hours, one for twelve hours, one for twenty-four hours, and none more than twenty-four hours. The one case of moderate distention had subsided in four hours and the severe case in twelve hours.

Of the cases of established distention four had mild distention, 16 moderate distention, and 18 severe distention. In the mild cases two had subsided in four hours, and two, both cholecystectomies, lasted twenty-four hours. In the 16 moderate cases, three had subsided in four hours, two in eight hours, nine in twelve hours, and two in twenty-four hours. None lasted over twenty-

TABLE 2.—STIGMINENE BROMIDE IN MAJOR SURGERY

Operations	Number
Abdominal	
Cholecystectomy	7
Cholecysteotomy and choledochostomy	1
Cholecystectomy, appendectomy, and salpingectomy	1
Choledochostomy	1
Cholecystitis	1
Cholecystojejunostomy	3
Iliostomy	1
Colostomy	1
Transverse colostomy	1
Exploratory laparotomy	2
Laparotomy with lysis of adhesions	10
Laparotomy with repair of jejunum	1
Repair of liver laceration	2
Laparotomy for biopsy of carcinomatous tissue	2
Simple appendectomy	12
Appendectomy and exploration	1
Appendectomy and drainage	1
Appendectomy and repair of fistula	1
Herniorrhaphy	16
Herniorrhaphy and appendectomy	1
Moschcowitz repair, rectal prolapse	1
Gastroenterostomy	1
Gastroenterostomy and vagotomy	1
Ruptured gastric ulcer	2
Abdominal evisceration repair	1
Insertion of Crosby button	2
Abdominoperineal resection	1
Abdominoperineal resection and hysterectomy	1
Resection of sigmoid	1
Resection of ileum	1
Abdominal exploration of stab wound	4
Bullet wound of small bowel, repair	1
Genitourinary and urologic	
Nephrectomy	3
Nephropexy	2
Prostatectomy	1
Ureterosigmoidostomy	1
Stab wound of bladder, repair	1
Gynecologic	
Myomectomy	1
Salpingo-oöphorectomy	1
Thoracic	
Thoracotomy, stab wound of heart	2
Nonoperative cases	
Abscess due to rupture of diverticulum	1
Generalized abdominal carcinomatosis	1
Ulcerative colitis	1
Spine fracture with cord injury	3

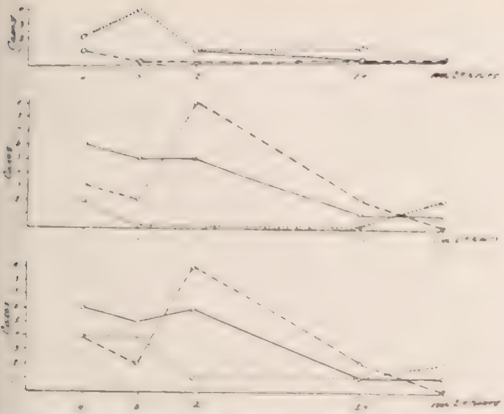

FIG. 2. Incidence and distribution of abdominal distention following postoperative use of stigminene bromide in 92 cases: *Top*—After prophylactic use; *Center*—In established distention; *Bottom*—Combined total after prophylactic use and in established distention. (Key is as follows: mild— . . . . ; moderate— - - - - - - -; severe— ———).

four hours. In the 18 severe cases six subsided in four hours, five in eight hours, five in twelve hours, one in twenty-four hours, and one lasted more than twenty-four hours. In the two groups then, of 92 cases in which stigminene bromide was used, there were 58 cases of abdominal distention. Of these 14 subsided in four hours, 11 in eight hours, 16 in twelve hours, and 4 in twenty-four hours. Only three cases, all with established distention, lasted over twenty-four hours.

In the six nonoperative cases, one had mild, two moderate, and three severe distention. Three were cases of spine fractures with cord injury, none of which was helped. One patient with generalized abdominal carcinomatosis failed to respond to treatment. One with an abscess from a ruptured diverticulum which broke into the rectum subsided in two days.

Figure 2 represents graphically the duration of distention in cases where stigminene was used prophylactically, where used in established distention, and the combined groups.

Stigminene bromide was given intramuscularly in all cases. In two cases a 0.25-mg. dosage was used, one receiving 2 and one 11 injections. In one instance a 1.0-mg. dosage was used. In all other cases a 0.5-mg. dosage was used. Doses were given usually at three, four, and six-hour intervals in courses of 6 injections, repeated if indicated. The minimum number of doses was one, the maximum number 22. It did not appear to make any difference which hour intervals were used. The results were similar in each group. Nor did it appear to change the results whether or not the medication was started immediately after operation or several hours later. There was no preoperative medication with stigminene in any case.

No case of bladder atony developed in 87 (94.6 per cent) of the 92 operative cases. In two cases the patients were catheterized once, one of which was done for urine culture. Two cases were catheterized more than once, both in cases with urinary tract operation. One case, also a urinary tract operation, had a retention catheter. Except for the urinary tract operations and the catheterization for culture, only one case developed urinary retention, requiring a single catheterization. One operative case in which stigminene had not been used developed bladder distention. Voluntary micturition followed 2 doses of 1 mg. given one hour apart. One spine case had been incontinent from the time of injury. One case, umbilical herniorrhaphy, was incontinent following operation before stigminene was given. One case, a cholecystectomy, developed incontinence for one day after medication was stopped. None of these cases of incontinence can be attributed to stigminene bromide.

In a study of the side-effects no case was observed with lacrimation or salivation. No alteration of the pulse curve was noted in any case. Respiratory depression or difficulty did not occur, and no muscular twitchings were evident. Only 13 of the 100 cases complained of nausea, and in 12 cases vomiting occurred, an incidence no higher than ordinarily seen in any group of major operative cases. All were mild except one case of continuous vomiting following dietary indiscretion. Mild sweating occurred in eight cases, a usual incidence of this symptom. In no case was there evidence of any toxic effect attributable to stigminene.

At the beginning of this study no case involving an operation on the gastrointestinal tract, including appendectomy, was used until considerable experience in the use of stigminene bromide had been obtained. Later such cases were included, using a smaller dosage to start. In 33 of these, there was not a single case that showed any deleterious effect of the drug, although some operations were of major proportions.

Mechanical obstruction of the gastrointestinal tract is a contraindication to the use of stigminene for obvious reasons. Asthma is also a contraindication because of the constriction of the bronchial musculature induced by vagal stimulation. In the same light any case having respiratory difficulty or pulmonary pathology should be treated with extreme caution. This caution applies to bradycardia and to heart block.

Laboratory experiments have shown that the specific antidote for the cholinergic effects of stigminene is atropine. Although no voluntary muscular twitchings have been observed in laboratory animals or in this series, should such symptoms occur, curare would be the antidote of choice.

Several interesting observations were noted in the present study. A patient with a ruptured jejunum developed postoperative abdominal distention and delirium tremens which lasted for several days. Stigminene was administered for the relief of the distention. As a surprising side-effect, the delirium tremens, which had been resistant to every form of therapy used, subsided following the administration of the drug. After the drug was stopped, the delirium tremens recurred. It again subsided when stigminene was given. Following this, two injured patients requiring no operation developed this condition and were successfully treated with stigminene after other forms of therapy had failed. A fourth patient on the medical service reacted in a similar manner. Two other patients, one a psychopath in the manic state and one a patient with status epilepticus, were given stigminene with satisfactory results. It appears that this cholinergic drug has a central as well as peripheral effect. No attempt is made here to explain the results obtained. This experimental observation has been noted, however: that acetylcholine is not only produced at the neuromuscular junction of the parasympathetic nerves but also at the synapses in the ganglia of this system. From the results observed, it seems that there is a definite indication for a study of the effects of stigminene in the treatment of certain functional central nervous system disorders.

Summary

Stigminene bromide has been used in 100 cases for the prevention and treatment of abdominal distention. The results have been analyzed. It was shown that, both prophylactically and therapeutically, this drug is highly satisfactory with no deleterious effect in the doses used and should establish itself as an outstanding cholinergic agent with very selective action upon the gastro-intestinal and bladder musculature.

Reference

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ANTIBIOTIC DRUG GIVES FAST RELIEF FROM TYPHOID FEVER

Treatment of typhoid fever with the relatively new antibiotic drug, chloromycetin, is so effective that patients generally are clear of fever three or four days after the drug is first administered, according to an article in the of the *J.A.M.A.*

"Continued experience reveals that fever disappears during the first three or four days of treatment," Drs. Joseph E. Smadel and Charles A. Bailey of the Army Medical Department Research and Graduate School, Washington, D.C., and Dr. Theodore E. Woodward of the University of Maryland, Baltimore, say.

"Our early observations brought out that relapses of typhoid were common in treated patients. In order to eliminate such occurrences, we have prolonged the course of treatment.

"Analysis of the results obtained in 44 patients with typhoid who received chloramphenicol (chloromycetin) under our observation has indicated a striking relation between the duration of chemotherapy and the incidence of relapses.

"A clinical relapse occurred in seven of the
patients whose initial course of drug was given f
eight days or less. None of the members of anoth
group of 19 patients suffered relapses; this grou
was comparable to the first in essentially all r
spects, except that treatment was continued for ni
to fourteen days.

"A third group consisting of 12 patients w
treated for fourteen to twenty-three days; relaps
did not occur among these patients. All patients
the first group who had relapses responded sat
factorily when chloramphenicol treatment was aga
instituted.

"These results warrant the following conclusio
Chloramphenicol should be administered in a
quate amounts for more than eight days to patie
acutely ill with typhoid if relapses of the disease
to be avoided. There appears to be little advanta
in continuing treatment for more than fourte
days."—*Journal of the American Medical Asso*
ation, September 10, 1949

THE FAILURE OF VITAMIN E TO ALLEVIATE THE SIGNS AND SYMPTOMS OF CONGESTIVE HEART FAILURE

HERBERT BERGER, M.D., Staten Island, New York

(From the Medical Service of the Richmond Memorial Hospital)

LATE in 1946, reports appeared in the scientific and the lay press indicating that vitamin E was of value in the treatment of various types of heart disease.[1,2] Therefore, in July of 1946, a communication was addressed to Dr. E. V. Shute for further information. The following is his reply, which I quote:

> Vitamin E is good for coronaries, rheumatics, anginas, and irregularities. It is less good for sclerotics and hypertensives. We have been giving 300 to 400 mg. of Ephynal (Hoffmann-La-Roche) per day until the patient is under control, roughly two to four weeks. After that a small continuing dose is given. It should not be given in conjunction with iron. If the patient is digitalized, the digitalis may be continued until the E takes hold.

Since this note contained so little scientific information, the material was not used at the Richmond Memorial Hospital, despite an increasing pressure from patients, their relatives, and the endorsements of local pharmacists who testified that the material was in great demand. So much furor was aroused by lay publications, which included such national magazines as *Time* and *Coronet*, that the *Journal of the American Medical Association* was moved to editorialize against "the overenthusiastic reception of a drug which had already been investigated by many competent clinicians and found wanting. None of the known pharmacologic actions of vitamin E lead one to suspect a vasodilator action, a myotonic effect, or the ability to repair damaged heart muscle in human beings."[3]

Further reports followed rapidly from the original group enthusiastically supporting the early hopes for this therapeutic modality in thrombocytopenic purpura, rheumatic fever, chorea, angina pectoris, coronary thrombosis, hypertension, renal colic, auricular fibrillation, ectopic beats (type not noted), bradycardia, various electrocardiographic abnormalities such as prolonged PR interval, depressed ST segments, and abnormal T waves, varicose ulcers, varicose eczema, Buerger's disease, leukoplakia vulvae, myocardial fibrosis, and cerebral and femoral thrombosis.[4–8] More recently it has been recommended for thrombophlebitis, phlebothrombosis, and delayed lactation, and prophylactically against thrombosis following operations or parturition, arteriosclerotic gangrene, and frostbite.[9]

Of particular significance is the report of May, 1947, in which a summary of a series of 126 unselected cases of cardiovascular disease showed a mortality in nine cases, an incidence of 7 per cent.[8]

During this period investigators elsewhere have reported their experiences in treating a similar roster of diseases with the same medicament.[10–14] Their results were uniformly poor.

Since most of the observations reported thus far were on patients with angina pectoris, a notoriously difficult syndrome to work with experimentally (as one is at the mercy of subjective reports of the patient), 12 cases of compensated heart failure due to a variety of causes were studied by objective means.

Baer *et al.* included three somewhat similar cases in his paper.[12]

Method

The patients who were studied in this report all had been in congestive failure either in the hospital or in their homes and had been brought to, and maintained at, a dry weight with mercurials, salt-poor diet, and, in most instances, with digitalis.[15] All of the patients required mercurial diuretics in the dosage indicated in Table 1 in order to maintain a dry weight (according to Gold *et al.*—that is, the weight that cannot be reduced by the administration of further doses of mercurials).[15] The period of observations before the onset of the experiment varied from two to six months. The salt-poor diet indicated a regime in which the sodium intake was not more than 2 Gm. per day. All patients were permitted fluids ad lib. Where digitalis was used, digitoxin was administered in the dosages indicated in an effort to keep the ventricular rate below 80. Most of the patients were ambulant for the period of observation, during which there were no changes in diet, occupation, or medication other than the introduction of alpha-tocopherol as Ephynal Acetate, 100 mg. four times daily, and the interdiction of the mercurial diuretic.

In each instance, after the diuretic was discontinued, the weight rose as demonstrated in Table 1. The experiment was continued until further clinical evidence of failure (pitting edema

TABLE 1.—WEIGHT INCREASE AFTER WITHDRAWAL OF DIURETICS

Patient	J. O'M.	M. O.	S. P.	F. J.	A. M.	E. W.	J. R.	F. D.	A. J.	V. S.	K. S.	A. D. M.
Age	54	66	75	63	47	72	36	40	40	64	71	69
Sex	F	F	F	M	M	F	F	F	M	F	F	F
Diagnosis	Hypertension	Arteriosclerotic heart disease; auricular fibrillation	Arteriosclerotic heart disease; paroxysmal auricular tachycardia	Arteriosclerotic heart disease	Rheumatic heart disease; auricular fibrillation	Arteriosclerotic heart disease; auricular fibrillation	Rheumatic heart disease; mitral insufficiency; mitral stenosis; auricular fibrillation	Rheumatic heart disease; mitral insufficiency; mitral stenosis; aortic insufficiency	Rheumatic heart disease; mitral stenosis; auricular fibrillation	Hypertension; regular sinus rhythm	Hypertension; regular sinus rhythm	Arteriosclerotic heart disease; post-coronary occlusion
Last bout of congestive failure (months)	4	3½	14	18	7	4½	7	5	5	11	6	8
Mercurial diuretics:												
Amount in cc.	2	2	2	2	2	2	2	2	1†	2	2	2
Injections per week	2	3	1	2	4	3	2	3	7	1	2	1
Digitoxin, daily in mg.*	2	1	2	2	2	5	2	2	1	1	15	2
Diet, daily sodium intake (Gm.)	2	2	2	2	2	2	2	2	2	2	2	2
Length of time on this regime (months)	3½	3	6	6	5	3½	4½	4	4	7	5	4
Vitamin E as alpha-tocopherol (daily dose in mg.)	400	400	400	400	400	400	400	400	400	400	400	400
Dry weight	154	116	109	115	160	148	136	178‡	154	167	158	142
First withdrawal of mercurials:												
Weight at onset of clinical edema	167	131	118	125	173	160	147	197	169	180	171	153
Time in days to produce clinical edema**	17	17	21	14	7	10	14	15	5	20	14	17
Number of daily doses of mercurial diuretic to regain dry weight	5	4	3	4	8	3	4	4	9	3	4	3
Number of days of alpha-tocopherol prior to second experiment	31	35	38	32	29	27	32	34	28	35	30	34
Second withdrawal of mercurials:												
Weight at onset of clinical edema	169	130	120	126	173	161	149	197	188	178	170	153
Number of days to produce clinical edema	17	15	22	15	7	12	14	14	5	21	14	17

* Whether or not digitalis is absolutely necessary in the nonfibrillators is the subject of a separate study.

** Patients were not seen every day so there may be an error here of one to two days.

† Leg cramps appeared on more than 1 cc.

‡ On low calorie diet for weight reduction.

of the dependent parts, rales in the lungs, or hepatomegaly) appeared. At this point daily mercurials were reinstituted in dosages of 2 cc. ntramuscularly until the weight at the beginning of the experiment was reobtained.

In order to check on the accuracy of this experiment, the patients were maintained on mercurial diuretics for a period of two weeks during which ime the vitamin E was also administered. This was done to answer the possible criticism that the body had not been fully saturated with the tocopherol prior to the removal of the mercurial in the irst run. The diuretic was again removed, this time with the substitution of a placebo in the form of 5 per cent glucose (since the patients eared the cessation of the injections which, they had learned by the previous experiment, were necessary to their well-being). In the second instance the weight curves rose practically in the ame manner in each case as in the first experiment.

Conclusion

Vitamin E in this small but adequately controlled experiment, in which each patient served as his own control, had no beneficial effect in congestive failure.

7440 Amboy Road

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ANESTHETIC PRACTICE IN PROLONGED SURGERY

George Wallace, M.D., New York City

(From the Veterans Administration Hospital, Bronx)

THE advances made by surgery in the last few years have been paralleled by advances in the practice of anesthesiology. Particularly has this been true where new surgical technics have proved to be time-consuming and have necessitated the maintenance of the patient under the influence of an anesthetic agent for periods of time that not so long ago would have been judged hazardous. Also, in many instances, a new development in anesthesiology has permitted an entirely new surgical approach. An outstanding example of this is the present mode of control of pulmonary dynamics which now permits the thoracic surgeon to work so long and meticulously within the thoracic cage.

At this hospital, during the past two years, our experience with prolonged surgery and its attendant problems has included over 600 cases, each of which has lasted a minimum of five hours. Our longest case was one that lasted twelve and one-half hours, and there have been many closely approaching that time. An approximate division into the types of surgical intervention that these cases have included is as follows:

Intracranial surgery	42%
Intrathoracic surgery	31%
Intra-abdominal surgery	21%
Miscellaneous (including radical head and neck procedures, urologic procedures, and a few orthopedic procedures)	6%

From this experience, it has been concluded that prolonged surgery and attendant prolonged anesthesia will produce usually predictable disturbances in the patient's physiologic status. Furthermore, these disturbances will occur with greater or lesser frequency depending upon the prophylactic and therapeutic measures taken to maintain the normal physiologic state. These measures constitute true advances in the practice of anesthesiology, as pertains particularly to prolonged surgery.

In any proposed prolonged surgical procedure, the matter of choice of anesthesia is of prime importance. Should the patient be anesthetized with an inhalation agent, should spinal anesthesia be used, would a regional nerve block be more appropriate, or would some combination be most useful? Many other factors enter into this decision, and a discussion of those factors is not within the realm of this paper. It should be emphasized, however, that, once the decision is made, the procedure must be planned and executed with the utmost attention to details.

Should the patient be given a general anesthetic agent, it is imperative that the proper airway be established and insured. This is best accomplished by the use of an endotracheal tube, whose diameter is the largest possible, and to which there is attached an inflatable cuff. This mechanism guarantees adequate pulmonary exchange and control. The tube is then connected to the closed system of an anesthesia machine.

With the closed system, the proper elimination of the patients's carbon dioxide is of great concern. This is best accomplished by frequently changing the interposed canister, containing the soda lime, and with constant observation for any evidence of carbon dioxide excess.

The closed system of inhalation anesthesia gives rise to yet another problem, particularly more evident during hot weather, namely, that of heat retention and its sequelae. This problem has been dealt with by enclosing the canisters in ice containers.[1] In this way, the patient's inspired air is cooled. In some instances, an ice trap has been interposed within the breathing cycle in the inspiratory phase. Undoubtedly, in the future, there will be devised a complete air-conditioning unit which will control not only the temperature of the patient's inspired air but the humidity as well.

If it has been decided that spinal anesthesia is the method of choice, the continuous technic is employed. The use of the malleable needle has been discarded and replaced by the catheter technic.[2] The catheter is less likely to be dislodged and so permits for a constant and more secure entrance of the drug into the spinal canal. Also it permits, where indicated, segmental anesthesia, that is, anesthesia for just the operative site. It has been found that spinal technics are usually applicable to procedures in the lower abdomen or perineum, particularly urologic procedures. This is so because the level of anesthesia may be maintained at a point where the patient's cardiovascular compensatory mechanisms are less likely to be disturbed. It is advisa-

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ble to induce a light degree of hypnosis in patients undergoing a prolonged surgical intervention under either spinal or regional anesthesia. For this, either an intravenous agent, such as pentothal, or an inhalation agent may be used as a complement. This combination has frequently proved to be very satisfactory in a procedure such as total cystectomy with ureteral implants. These operations are necessarily long, and incidentally total 20 in the present series.

In prolonged intracranial surgery, the problems are mainly those of airway, adequate oxygenation, heat and carbon dioxide elimination, and the avoidance of increased intracranial pressure. To satisfy this last requirement, a patent airway is insured by means of an endotracheal tube to eliminate respiratory obstruction. Adequate oxygenation and the avoidance of drugs prone to increase intracranial pressure constitute further proper safeguards.

Intrathoracic surgery, however, poses additional problems to those encountered in other lengthy operations, namely, pulmonary control and reflex mechanisms. To avoid pulmonary decompensation when the pleura is widely opened, two types of maneuvers are possible. One is artificial respiration or "controlled respiration," wherein the anesthetist takes over full control of pulmonary movements.[3] The second may be called "compensated respiration."[4] By use of this maneuver, spontaneous respirations are maintained, but the anesthetist offers some assistance by increasing bag pressure on inspiration. The matter of pulmonary control becomes apparent particularly when the operation is a prolonged one. One patient in this series had been kept in a state of controlled respiration for a period of nine and one-half hours. Constant and careful observation of the variations in vascular responses is the best guide for determining the efficiency of pulmonary control. It is important that the collapsed lung be periodically reinflated as a prophylactic measure against postoperative atelectasis. A lung that has been collapsed for a long period of time is re-expanded with difficulty.

To control disturbances of a reflex nature, several measures have been adopted. These mechanisms tend to arise when the surgeon is working on highly reflexogenic areas, such as the intrathoracic structures. Procaine is used both prophylactically and therapeutically. It is a most potent agent in the amelioration of many of the reflex changes that had heretofore been so disastrous to the patient. It is administered both intravenously and topically. As recommended by Burstein, 100 mg. in 5 to 10 cc. is the usual intravenous dose, repeated as needed.[5] It is also given in a 0.1 per cent continuous drip as suggested by Tovell.[6] Topically, the operator applies solutions varying from 1 to 5 per cent by means of pledgets to the area, such as the pericardium or the hilum of the lung.

Another aid in the management of these cases is the direct writing electrocardiograph. This instrument has been found to be extremely valuable, and frequently the clinical impression of the patient's cardiac rhythm has been found to be in error, as demonstrated by the instantaneous recording machine. It has been suggested that this apparatus will eventually become standard equipment for all anesthetic procedures.

All protracted surgical interventions usually entail considerable body fluid and electrolyte loss. This loss, however, may not be immediately apparent. These eventualities are anticipated preoperatively, and adequate amounts of blood are kept on hand in the operating room and in the blood bank. The patients in this series have been given quantities of blood varying from 1,000 to 5,500 cc. Two infusions are routinely started before surgery using large bore needles (15 gauge). These infusions are usually placed in the leg veins so that, should it be necessary to have recourse to the vein again, the anesthetist is less likely to disturb the operative field by his maneuvers. Blood and fluids are replaced as they are lost, and it is emphasized that in a prolonged case the patient should never be allowed to suffer any lack of these constituents.

Frequently, the preanesthetic medication will have worn off before the completion of the operation. The dosages of the premedicant drugs can be repeated when indicated. When this is done, the route of administration is by vein, and the secondary doses are somewhat smaller.

When inhalation anesthesia is used, one inhalant drug has not been found to be more useful than another. The mode of administration of these agents has always been of major significance.

The patient's position on the operating table has been a consideration of no little concern in these cases. Severe neuromuscular sequelae have been known to occur from poor positioning, as Slocum has recently emphasized.[7]

A distinct advance has been made in the positioning of patients in the lateral decubitus. A specially built mattress has been adapted which allows the under arm, the one usually involved by pressure, to remain relatively free of the weight of the body.[8] In the supine position, pressure on, or stretch of, the brachial plexus is avoided by not extending the arms beyond 90 degrees.[9] In the lithotomy position, the limbs are padded adequately so as to avoid pressure on the peripheral nerves. In the prone position, adequate chest and diaphragmatic expansion are secured by placing supports on the side of the thoracic cage and beneath the iliac crests.

The question of postoperative complications following prolonged surgery is an important one.[10] It might well be assumed that, with an increase in the time required to perform the surgical procedure, there would be a proportionate increase in the incidence of postoperative complications. However, this has not been observed in this series. Although not supported by actual statistics, the impression is that the incidence of complications in this series, other than pure surgical sequelae, has not been any greater than that reported in similar numbers of cases lasting shorter periods of time.

An additional prophylactic measure against postoperative complications is the frequent and thorough use of tracheal suction throughout the operation, assuming of course that sufficient secretions accumulate to warrant suction. At the termination of surgery, tracheal toilet is again performed, and this time bronchoscopic suction as well may be used to insure a clean tracheobronchial tree.

It is doubtful whether carbon dioxide has any place as a respiratory stimulant at the termination of a surgical procedure. If the patient has been treated properly during the course of anesthesia, there should be no need for respiratory stimulation when anesthesia is terminated. Furthermore, toxic levels of carbon dioxide are too readily achieved via accumulation from normal metabolic processes without giving the gas purposefully.

Still another prophylactic measure is the use of postoperative intercostal block following abdominal operations. By so anesthetizing the operative site for a period of twenty-four to seventy-two hours, splinting of the chest is avoided, and thus breathing exercises and early ambulation are facilitated. These measures constitute part of the so-called postoperative "stir-up" regime which has been of great value and is one of the few procedures routinely practiced.

All patients undergoing prolonged surgery are placed in the recovery ward for at least forty-eight hours postoperatively. This ward permits the surgical team, with the assistance of specially trained nurses, to care for any emergency that might arise during this period, with maximum efficiency.

In summation, it may be said that prolonged surgery, with its concomitant prolonged anesthetic procedures, will undoubtedly disturb the patient's normal physiologic status. However, such disturbances can certainly be kept to a minimum by virtue of the proper practice of anesthesiology. Furthermore, it is felt that prolonged surgical intervention is no longer fraught with the extreme dangers and dire consequences that not so long ago were the rule rather than the exception.

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CHICAGO TRIBUNE ASKS: "WHO'S A MONOPOLIST?"

Many newspapers have carried editorials criticizing the U.S. Department of Justice for its interference in the medical profession's fight against compulsory health insurance.

The following editorial, appearing in the October 11 issue of the *Tribune*, is typical of the sentiment expressed by many of the country's leading newspapers:

"On orders of Atty. Gen. McGrath, F.B.I. agents are examining the records of the American Medical Association. . . . .

"The same department of justice that is looking for evidence of a doctors' monopoly is wholly unconcerned about the demonstrated monopoly of labor in the steel and coal industries. John L. Lewis and Philip Murray have called strikes which have made more than a million men idle. Steel mills and coal mines are closed. If the strikes continue, most of the nation's industry will be paralyzed. Mr. Truman refuses to use the Taft-Hartley law to limit the damage done by these strikes, but he doesn't hesitate a moment to toss the whole statute book at the doctors who have never closed down any industry.

"Lewis and Murray cannot be charged with monopolistic practices because unions are exempt from prosecution under the antitrust laws. If the members of the A.M.A. were organized in a labor union and affiliated with the AFL or CIO they could run out of business all prepaid medical care plans which did not pay tribute to the A.M.A."—*Secretary's Letter, A.M.A., October 17, 1949*

NEUROCIRCULATORY ASTHENIA

A. Mishkin, M.D., Watertown, New York

From the Mercy Hospital)

ALTHOUGH the syndrome of neurocirculatory asthenia, irritable heart or effort synrome, is well known and although the etiology, ymptomatology, and treatment of this sympom complex are definitely established, it is eemed advisable to impress this condition furier upon the minds of the medical profession. ince those afflicted come first to their family docor for aid, this article is directed chiefly toward ie general practitioner. Too often these paents are told that they have an "enlarged eart," or a "leak," or an "irregular heart," nd, because of their underlying psychoneurotic ersonality, their condition is made worse, and ey become typical "cardiac cripples." All their omplaints are then aggravated, and they become seless members of society. Because they do not btain relief, they wander from one doctor to nother until they are fortunate enough to come o one who understands their condition and who, y a proper psychotherapeutic approach, reeves them of their complaints.

Neurocirculatory asthenia is a functional type f heart disease without any demonstrable strucural changes in that organ. Da Costa decribed this syndrome during the Civil War mong the soldiers,[1] and since that time many thers have drawn attention to the common ocurrence of this condition among civilians as ell. Neurocirculatory asthenia always occurs n individuals who display psychoneurotic tendncies—people who are hypersensitive, aprehensive, and emotionally unstable. It is nost likely to manifest itself during times of tress, such as wars, financial upsets, or domestic pheavals. The incidence is said to be quite igh, the average figure being about 10 per cent of ivilians and even greater among soldiers. t occurs slightly more often among women nd usually appears between the age period of wenty to forty. Heredity is important only in o far as the constitutional inadequacy of the ndividual is concerned. Environment, tobacco, lcohol, tea, coffee, fatigue, malnutrition, and inection all may play some part in initiating an ttack.

The chief manifestations of neurocirculatory sthenia are unusual fatigability, excessive flushng and sweating, palpitation, dyspnea, and preordial pain. These symptoms are characterisically induced by effort, mental or physical, and re excessive in proportion to the amount of efort. Other symptoms are insomnia, dizziness, faintness, tremulousness, pallor, cold clammy hands, difficulty in swallowing, and irregular heart rate. These are of variable degree and are indicative of an unstable vasomotor system.

Typically, the patient is nervous, restless, anxious, and apprehensive. The face is flushed, the skin cold and moist, and the fingers tremulous. The examination of the heart is essentially negative and at the most may reveal a mild tachycardia, a strong forceful apical beat, an occasional soft systolic murmur, or premature beat. Although much emphasis was placed in the past upon the smallness of the heart in cases of neurocirculatory asthenia, Carlotti has recently shown quite conclusively that the size of the heart in such individuals is absolutely normal.[2] Electrocardiographic studies have been normal as illustrated by White and others.[3] Functional exercise tests are likewise normal except that the blood pressure and pulse rate take a little longer to return to the base line after effort.

The diagnosis is fairly simple. The cardinal symptoms of palpitation, respiratory distress, precordial pain, and easy fatigability in an emotionally unstable individual who shows no clinical or laboratory evidence of heart disease should make the diagnosis of neurocirculatory asthenia quite obvious. The palpitation is a subjective consciousness of the heart beat. The patient complains of inability to sleep because of hearing the heart beat, particularly when lying on the left side. Such an individual is conscious of the pulsations of the neck and abdomen and is constantly taking the pulse. The respiratory distress is neither true dyspnea nor orthopnea but is a form of sighing respiration seen in a neurotic individual. The precordial pain is variable in nature and site. It is usually dull or stabbing in the region of the left breast, may last for several seconds or hours, and does not radiate, as a rule. It is rarely substernal as in true coronary disease. An important diagnostic point is the presence of localized pressure tenderness over a rib or the sternum which is similar to the spontaneous pain of which the patient complains. The fatigability is much out of proportion to the effort expended, and the patient fears to do even the ordinary routine exercise because of the resulting exhaustion.

The prognosis for life is excellent, but the future of the patient relative to his symptomatology is uncertain and guarded. Much depends upon a proper psychotherapeutic approach. However, because of the innate constitutional inadequacy and because of the constant presence of various psychic disturbances based on social misfortunes and maladjustments, the beneficial results are rarely permanent. Neurocirculatory asthenia is a cyclic disease, with its remissions and exacerbations, and the patient needs constant reassurance that there is nothing wrong. The forbearance of the physician and of the patient are at times taxed to the utmost, but perseverance and understanding are the keynotes of success.

No greater injustice can be made than to err in the diagnosis of such a functional disturbance as neurocirculatory asthenia. The physician must be cognizant of such a syndrome and must not intimate even to the slightest degree the existence of any heart abnormality. These patients must be informed with the greatest emphasis that they have no heart disease and that all their symptoms are on a "nervous" basis. To inform them of the presence of an unimportant murmur or skipped beat is simply to feed a diseased mind with additional fears. To the lay person the existence of such physical signs means heart disease, and in such an individual heart disease means death, no matter how much reassurance is given that these signs frequently occur in normal persons. They must be told that there is nothing organically wrong with them and that they can do anything they please without limitation. They must be convinced that they have nothing to fear, and every attempt should be made to remove all psychic disturbances. It goes without question that all other factors must be corrected: anemia, avitaminosis, malnutrition, and so on.

Case Reports

Case 1.—A young boy, aged sixteen, was first seen in October, 1948, at which time he complained of pain over his left chest, difficulty in breathing, and palpitation. He was extremely apprehensive, perspired profusely, and was afraid to move. Physical examination was negative except for a tachycardia of 110 beats per minute. Complete cardiologic workup, including x-ray and electrocardiogram, was absolutely normal. Further history revealed that the boy had seen his father die suddenly two years previously of an acute coronary thrombosis and had developed cardiac symptoms from that time on. A physician had told him that he had an enlarged heart with a rapid rate and had advised him to limit his activities. The patient, who had always been a "nervous" child, became a typical cardiac neurotic. After much reassurance and persuasion that there was nothing wrong with him and that he could run and play as much as his friends, he overcame most of his symptoms and at present is leading a fairly normal life.

Case 2.—A white woman, aged forty, was first seen by me in January, 1949, at which time she complained of precordial pain, difficulty in breathing, and easy fatigability. Examination was negative except for a chronic generalized atopic dermatitis of many years duration, which had never responded adequately to any therapy. Her respiration was of the sighing type, and no real dyspnea was present. Not only did she react mentally and physically to a chronic skin disorder but likewise to a bad marital state, her husband being an alcoholic. In spite of an attempt to assure her that there was no organic disease of the heart, the patient was skeptic of the diagnosis and never returned for treatment which would have been psychotherapeutic in nature.

Case 3.—A young white woman, aged twenty-nine, was examined by me in November, 1947, because of palpitation, shortness of breath, a feeling of exhaustion even at rest, coldness, diarrhea, and nervousness. She readily admitted that these spells came on after some emotional upset. When first seen by me, she was lying in bed because her previous physician had told her that she had a very bad heart and had restricted her activities completely. Physical examination was negative except for a low-pitched, short systolic murmur at the apex, and a hypotension of 90/50. There was no evidence of organic heart disease. When she was advised of this and certain marital problems were rectified, the patient made a good recovery and has remained well ever since.

Summary

Neurocirculatory asthenia is a common type of cardiac neurosis. Diagnosis and management are described. Three cases are presented. If correctly diagnosed, this condition can be adequately treated along psychotherapeutic lines, by most general practitioners.

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COURT KNOCKS OUT FREE MEDICINE LAW

Doctors in the U.S. were heartened recently by the news that Australia's highest court declared invalid a law that gives certain medicines free to the public. The court voted 4 to 2 against the act which the doctors have been fighting for five years.

The physicians have been opposing the act, according to news stories, because only a limited lis of free drugs was made available, the doctors contending that this hindered treatment.—*Secretary' Letter, A.M.A., October 17, 1949*

VAGINAL DELIVERY WITH PUDENDAL BLOCK

Jerome Schwartz, M.D., and Murray L. Brandt, M.D., Bronx, New York

(From the Department of Obstetrics and Gynecology, Fordham Hospital)

THE purpose of this paper is to present a review of 1,268 obstetric vaginal deliveries utilizing pudendal block anesthesia. The deliveries occurred during the period of August 1, 1947, to January 1, 1949, on the obstetric wards of Fordham Hospital.

Material

Over the period of time covered in our series there were 1,647 deliveries, 1,073 multipara and 574 primipara, with the delivery of 1,661 infants.

All the vaginal deliveries were performed either by the obstetric residents or interns under the supervision of the residents. The cases are unselected as to age, parity, duration of labor, or duration of gestation.

Technic

During the first stage of labor, Demerol and scopolamine were used as necessary to obtain obstetric analgesia. When the patient was ready for delivery—full dilatation in the multipara and a moderate amount of caput in the primipara—pudendal block was administered. Pudendal block was the anesthesia of choice in all cases of vaginal delivery if no procedures more formidable than an outlet forceps and/or a repair of an episiotomy were contemplated.

At the time of delivery, the patient was placed in the lithotomy position. The abdomen up to the umbilicus, the thighs, vulva, and perineum were thoroughly scrubbed with green soap, rinsed with sterile water, and sprayed with tincture of zephiran. The patient was then catheterized. With the middle and index fingers of the right hand in the vagina, the right ischial tuberosity was palpated with the right thumb. At a point just medial to the tuberosity, halfway between the posterior fourchette and anus, a 10-cm., 20-gauge needle attached to a 10-cc. Luer Lok syringe was introduced and guided with the fingers in the vagina to a point just under and beyond the ischial spine where 5 cc. of 1 per cent procaine solution was deposited, blocking the internal pudendal nerve. The needle was incompletely withdrawn and then directed laterally until it impinged against the ischial tuberosity. The needle was withdrawn 1 cm., and another 5 cc. of solution was deposited in this area to anesthetize the perineal branches of the posterior femoral cutaneous nerve. The needle was again withdrawn until the point was just beneath the skin and was now directed up to the mons veneris superficially beneath the skin of the labium majus, and about 5 cc. of solution was deposited as the needle was slowly withdrawn incompletely. An additional 5 cc. of solution was then injected in radial fashion toward the vagina and anus. However, this step was only performed on the side of the episiotomy in order to reinforce the anesthesia of that side. The left side was blocked in a similar manner, and a total of 40 to 50 cc. of 1 per cent procaine was utilized for both sides.

By adhering closely to this routine, good anesthesia of the pelvic floor ensued in four to seven minutes, and the vulva relaxed. The anesthesia lasted for twenty-five to thirty-five minutes and was satisfactory for episiotomy, perineorrhaphy, spontaneous vertex delivery, assisted breech extraction, low outlet forceps, and low forceps to the aftercoming head.

Results

The total number of deliveries for this period was 1,647—1,073 multipara and 574 primipara—with the delivery of 1,661 children. The types of deliveries are recorded in Table 1. Of this number, 1,268 were delivered with the aid of pudendal block, with the types recorded in Table 2.

TABLE 1.—Total Number of Deliveries

	Number	Per Cent
Spontaneous	1,268	76.9
Forceps		
Low	264	19.3
Mid	19	
High	1	
Cesarean section	18	1.1
Breech extraction	59	4.5

TABLE 2.—Deliveries Accomplished Under Pudendal Block

	Number		Per Cent
Spontaneous	63	960	74.9
With first degree laceration	145		
With second degree laceration	28		
With episiotomies	724		
Outlet forceps	264		21.8
Assisted breech extractions	44		3.3

There were 11 cases classed as complete anesthetic failures for a total of 1.3 per cent. All 11 cases (ten primipara, one multipara) occurred where low outlet forceps was attempted, and either because the patient complained of too much pain or squirmed about too much on the table, open drop ether had to be given to complete the forceps delivery. Not all of the failures are directly attributable to the technic since anesthesia of the pelvic floor was obtained. Some of these patients were very apprehensive, and when this was combined with the excitement induced by scopolamine, the patients would not relax sufficiently for the procedure to be accomplished.

In those cases when the episiotomy was being repaired at a time when the pudendal block was subsiding, the patients would complain of a sticking sensation as the needle pierced the skin. A few drops of anesthetic locally at the site of the suture line would permit completion of the repair without the patient being aware of it.

There were no maternal deaths in the 1,268 cases delivered under pudendal block. There was one maternal death during the entire one and one-half years covered by this series (an undelivered primipara with eclampsia and massive subarachnoid hemorrhage). There were no local infections of the perineum in the entire series, and all episiotomy wounds healed by primary intention.

Pudendal block was found to be particularly effective in the assisted breech extractions, since uterine contractions and the patients' ability to bear down are not affected in any way, although anesthesia of the pelvic floor ensues. Thus we were able to control the extraction of the child by instructing the patient when to bear down and when to relax. Piper forceps on the aftercoming head were utilized once for the entire group of 59 breech deliveries, the Wiegand-Martin maneuver being sufficient to deliver the aftercoming head.

Fetal Mortality

In computing the gross total mortality, all stillbirths and neonatal deaths occurring from the twenty-eighth week of pregnancy to term were included. Of the 1,661 children delivered, there were 41 stillbirths and 20 neonatal deaths, a gross fetal mortality of 3.67 per cent. If the antepartum stillbirths, babies with malformations incompatible with life, and nonviable prematures (less than 1,500 Gm.) are deducted from this number, the corrected fetal mortality was 0.96 per cent (16 cases).

The causes for the antepartum stillbirths are enumerated in Table 3. The neonatal deaths and causes are listed in Table 4. In no case could the demise of an infant be attributed to the pudendal block.

TABLE 3.—Causes of Antepartum Stillbirths

Cause	Number
Anoxia	
Abruptio placenta	7
Prolapsed cord	5
Erythroblastosis	1
Syphilis	6
Congenital malformations	2
Maternal toxemia	8
Maternal hyperpyrexia	
Acute trichinosis	1
Pneumonia	1
Undetermined	10

TABLE 4.—Neonatal Deaths and Their Causes

Cause	Number
Prematurity	12
Erythroblastosis	1
Intracranial hemorrhage	2
Congenital anomalies	2
Undetermined	2
Adrenal hemorrhage	1

Summary and Conclusions

1. A review of 1,268 cases of vaginal delivery using pudendal block is presented.
2. The cases are completely unselected.
3. The technic has been discussed fully. It is easy to perform and easy to teach to others.
4. There were 1.3 per cent failures which were not entirely attributable to the technic.
5. There were no maternal or fetal deaths utilizing this type anesthesia.
6. Pudendal block is a safe procedure and can be used for episiotomy, perineorrhaphy, spontaneous vertex delivery, assisted breech extraction, low outlet forceps, and low forceps to the aftercoming head.

OVERWEIGHT PLAYS IMPORTANT ROLE IN BONE AND JOINT DISORDERS

Overweight plays an important role in bone and joint disorders and is an adverse influence in arthritis. "Most orthopedists say that even 10 or 15 pounds of unnecessary fat may be a direct cause of bone and joint disorders and diseases," Dr. Philip Lewin of Northwestern University Medical School wrote in the November issue of *Hygeia*.

Overweight is a cause of flat feet, back disorders, and minor strains on the hip joints, and it complicates treatment of sprains, fractures, and dislocations, Dr. Lewin pointed out. "Whether arthritis is caused by infection, injury, or metabolic disturbances, overweight adds insult to injury," he said. "Nearly all doctors, in treating arthritis in overweight people, try to reduce their weight. Many of these patients find that merely losing a few pounds gives them more relief from pain than they have experienced in years."

Case Reports

DERMOEPIDERMAL TYPE OF SPOROTRICHOSIS

Kurt Loewenthal, M.D., Freeport, New York, Jesse A. Tolmach, M.D., and Francees Karpluk, B.A., New York City

(From the New York Skin and Cancer Unit, New York University-Bellevue Medical Center)

In 1945, Leiby, Sulzberger, and Baer suggested that the sparsity of reports on sporotrichosis was due to the fact that the atypical forms may be overlooked.[1] The authors found only 26 reported cases of proved or presumptive sporotrichosis seen in New York State since Schenck's classic publication in 1898.[2] They added two cases to this list. To the best of our knowledge no further instances in New York State have been reported since.

We wish to record an observation of our own which seems to confirm the suggestion of Leiby and coauthors. The resemblance in this instance to chronic granulomas other than sporotrichosis was striking and presented an interesting differential diagnostic problem.

Case Report

J. G., a fifty-five-year-old man, who worked in Brooklyn as a piano mover, accidentally scraped the back of his left hand on a brick stoop in January, 1948. He covered the bleeding abrasion with his handkerchief and treated the injured hand with soaks of boric acid solution and various other home remedies, including repeated cupping. About three months later, while the result of the injury was still noticeable, the patient accidentally squeezed the injured left hand again. He believed that, after this second accident, lesions started to spread over the entire back of the hand. In July, 1948, he attended a skin clinic where a biopsy was performed. Their microscopic examination of the skin was reported as follows:

> The epidermis is slightly hyperplastic and shows areas of ulceration. The corium and subcutaneous tissue are edematous and contain an inflammatory infiltration. There are many new blood vessels. There is no evidence of tuberculosis, syphilis, malignancy, etc.

The patient was first seen by us on August 16, 1948. A round lesion, about 10 cm. in diameter, was found on the back of the left hand. The margin was configurated and infiltrated, and the center appeared granulomatous. Microscopic and cultural examinations for fungi and a blood test for syphilis were negative. The patient discontinued attendance at the clinic from August, 1948, until January ,1949, because of intercurrent jaundice. On January 19, 1949, we noted that the old lesion had almost subsided forming a reticulated and atrophic scar. At the periphery of the scar new plaques had appeared which presented replicas of the primary patch, namely, sharply marginated, round or oval granulomatous plaques with a verrucous surface and clearing in the center (Fig. 1). The surface contained some crusts, and upon moderate pressure pus exuded from the crevices of the verrucous surface. The lesions were relatively painless. There was no evidence of lymphangitis.

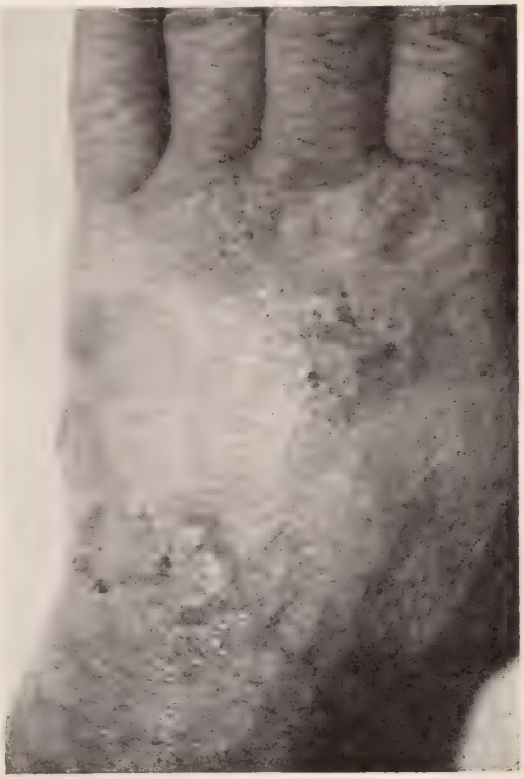

Fig. 1. Lesions on the back of the left hand on January 19, 1949, consisting of sharply marginated plaques with a verrucous surface and clearing in the center.

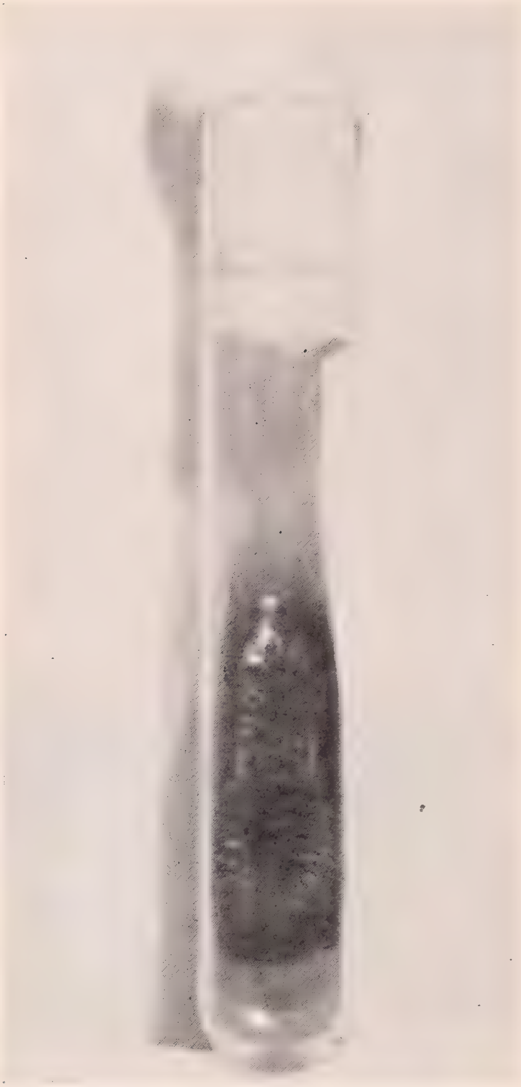

FIG. 2. Fully developed colony of S. schencki on dextrose-peptone agar. The surface of the colony is membranous, moist, and wrinkled.

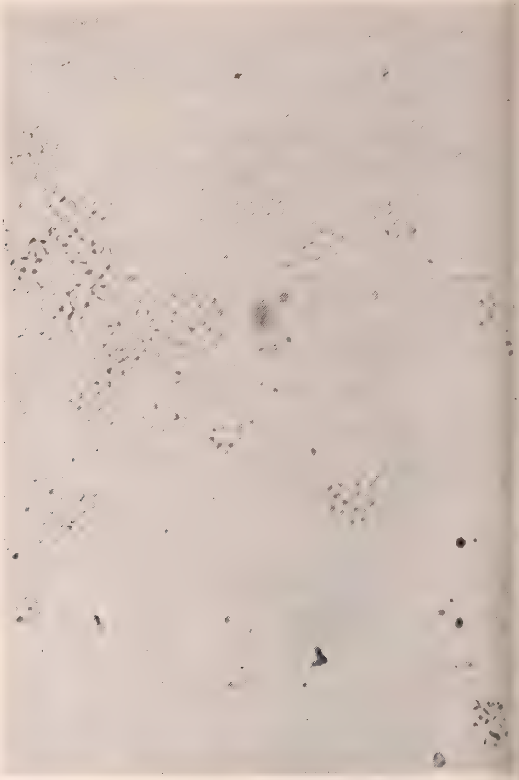

FIG. 3. Culture mount of S. schencki. The delicate mycelium shows branching hyphae with conidia along their course and in terminal clusters on conidiophores.

Regional or generalized lymphadenopathy were not present.

The clinical picture resembled that seen in verrucous tuberculosis, serpiginous syphilid, cutaneous North American blastomycosis, or vegetating halogen dermatitis. Further investigation proceeded along these lines. Direct smears from the pus were negative for fungi and acid-fast bacilli. The Mantoux test, employing concentrations of old tuberculin 1:1,000,000, 1:100,000, and 1:10,000, was negative. Animal inoculations were not performed since concurrent cultural methods revealed the true nature of the lesions. X-ray examination of the lungs showed a slight hilar thickening; the lung fields were clear. X-ray examination of the lef hand showed no abnormality except changes in th terminal phalanges suggestive of possible endocrin disturbance. Two biopsies failed to demonstrat evidence of tuberculosis or deep fungous infection.

Microscopic examination by Dr. Else Barthel wa reported as follows:

> Section shows an acanthotic epidermis covere in part by a parakeratotic scale and in the rest o the section by a nonparakeratotic scale with som underlying abscesses. The hair follicle projections extend deeply into the corium where the contain cysts and are filled with pyogenic exudate The corium is filled with an edematous mesh mor or less heavily laden with islands of cellular exudate sharply limited at the base which is just abov the coil glands. The cellular exudate is composed of numerous polymorphonuclear neutrophils, some plasma cells, and pale-staining cells o various sizes. The blood vessels are all surrounded by collars of the same exudate to lesser degree and many of them show thickene walls. Just under the epidermis are severa small miliary abscesses. The blood vessels sho proliferation of the connective tissue even in th upper corium. Occasionally, just under th epidermis there are pools of edema.

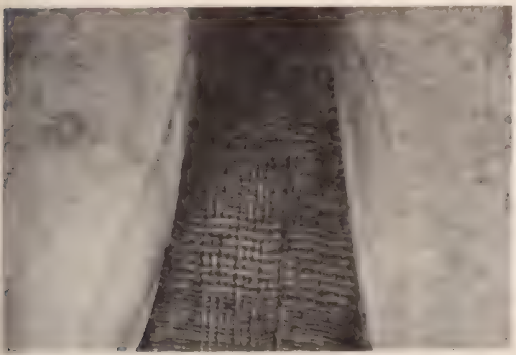

FIG. 4. Intradermal sporotrichin test seven days after injection in right forearm. The reaction is vesicopustular in character. The control injections in the left forearm of trichophytin and saline are negative.

A blood count showed 4,300,000 red blood cells, 86 per cent hemoglobin, 6,000 leukocytes with 68 per cent neutrophils, 9 per cent eosinophils, 21 per cent lymphocytes, and 2 per cent monocytes. Three weeks later, the white cell count showed 13 per cent eosinophils; otherwise there was no marked change. The urine showed traces of sugar and protein, many red and white blood cells, and very many bacteria. The chemical examination of the blood revealed urea nitrogen 17.5 mg. per cent (normal 10 to 15), true glucose 175 mg. per cent (normal 60 to 100), total cholesterol 210 mg. per cent (normal), esters 115 mg. per cent (normal), and traces of bromides (normal). The blood sedimentation rate was 23 mm. after one hour (normal 10 mm.).

On February 4, 1949, the mycologic and bacteriologic examination of the lesions was repeated. This time material was obtained by curettage from a deeper portion of the granulomatous border. Direct microscopic examination of stained slides showed staphylococci but no acid-fast bacilli; slides prepared with 10 per cent sodium hydroxide failed to reveal fungous elements. Material inoculated upon blood agar and thioglycollate, incubated at 37 C., revealed the presence of numerous colonies of Staphylococcus aureus and of white hemolytic staphylococci. Material inoculated on dextrose-peptone agar slants, kept at room temperature, after five days developed many whitish fungous colonies. With increasing age and growth the color of the colonies changed to creamy and black and the surface became membranous, moist, and wrinkled (Fig. 2). Culture mounts showed delicate branching and septate mycelium with round to pear-shaped conidia along the course of the hyphae or arranged in terminal groups on conidiophores (Fig. 3). The fungus was classified as Sporotrichum schencki.

An intradermal test with a Sporotrichum antigen was performed on March 14, 1949.* Neutral buffered saline solution and Trichophytin (Lederle) 1:30 were used as controls. One-tenth cubic centimeter of each was injected intracutaneously in the skin of the flexor surface of the right and left forearm. The reactions on the skin were measured at intervals of ten minutes for thirty minutes, after four days, and after seven days. Results obtained are shown in Table 1. The reaction to the sporotrichum antigen was vesicopustular in character four and seven days after injection (Fig. 4). For further control, three persons, apparently free from sporotrichosis, were also tested with the sporotrichum antigen; they did not develop an immediate wheal, nor did they show any late reaction within an observation period of seven days.

Discussion

The absence of or the difficulty in detecting fungous elements in tissue sections and exudates, if a deep mycosis is suspected, ought to suggest sporotrichosis. All other deep mycoses, including North or South American blastomycosis, coccidioidomycosis, actinomycosis, etc., reveal easily detectable fungous elements in direct microscopic examination of tissue and exudate. The diagnosis of sporotrichosis in this instance, as usual, was based on cultural demonstration of S. schencki, the gross and microscopic features of which are diagnostic. The strongly positive reaction to a sporotrichum antigen was additional evidence.

The fungus may have gained entrance to the skin of the left hand at the time of the injury in January, 1948. The source of infection is commonly a plant or plant material containing the fungus. Infection by means of brick material is most unusual, since, to our knowledge, it has not been recorded. However, the possibility must be considered that inoculation of fungous material into the abraded skin took place shortly after the accident from some other source. It is noteworthy that the infection remained localized and no invasion of the lymph apparatus set in, although the patient injured the still ailing hand a second time three months after the first accident. The classic sporotrichotic lymphangitis with subcutaneous nodules along the affected lymph vessels was absent.

It is known that sporotrichosis presents a variety of clinical manifestations. The following types, based on Gougerot's classification, are generally recognized:

1. A lymphangitic type, characterized by a sporotrichotic "chancre" at the site of inoculation followed by ascending lymphangitis and secondary nodules along the course of the affected lymph vessels.

TABLE 1.—RESULTS OF INTRADERMAL TESTS

	Trichophytin	Sporotrichin	Saline
Upon injection	0.9 by 0.9 cm.	1.0 by 1.0 cm.	1.0 by 0.9 cm.
After 10 minutes	1.0 by 1.2	1.5 by 1.6	0.1 by 1.0
After 20 minutes	1.0 by 1.2	1.7 by 1.7	1.0 by 0.1
After 30 minutes	1.1 by 1.1	1.7 by 1.7	0.9 by 0.9
After 4 days	0.3 by 0.3	1.0 by 1.0	0
After 7 days	0	0.9 by 0.9	0

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* The antigen had been obtained from the Biological Division of the Duke Hospital, Durham, North Carolina.

2. A disseminated type, characterized by subcutaneous nodules and no evidence of a primary lesion. The nodules may or may not ulcerate.
3. A dermoepidermal type which shows a preponderant infection of the superficial layers of the skin.
4. Sporotrichosis of the mucous membranes, either as a manifestation of the disseminated type or as a primary disease.
5. A systemic type, involving bones, muscles, joints, and viscera, including lungs.[3]

It is generally agreed that the lymphangitic type is the most common form of sporotrichosis in this country. Among the 28 cases in New York State, compiled by Leiby and coauthors, 21 presented the lymphangitic type, one visceral, two disseminated, and four the dermoepidermal type.[1] However, mycologic evidence was found only once among the latter.

The case reported in this paper conforms to the dermoepidermal type. The primary lesion in this form is commonly considered to be a subcutaneous node from which an involvement of the overlying structures takes place. A variety of clinical manifestations may be produced which may simulate serpiginous syphilid, tuberculosis cutis verrucosa, blastomycosis, chromoblastomycosis, fungating halogen dermatitis, or epithelioma.

While we were unable to observe the primary subcutaneous node, we can confirm the resemblance of the well-established dermal lesion to any of the chronic granulomas. There was no indication of a systemic spread of the infection. The patient remained ambulatory and continued his occupation. The lungs were free from signs of a mycotic infection; the bones of the left hand, in close proximity to the skin lesion, were not affected. The patient had mild diabetes which preceded the mycotic infection by at least nine years. Two blood counts showed a normal total number of leukocytes.

The eosinophilia of 9 and 13 per cent, respectively, is an interesting finding. Eosinophilia has been mentioned in relation to deep mycoses only in connection with coccidioidomycosis.[4] It is, however, not certain as to whether the eosinophilia in this case was related to the fungous infection.

The histologic findings of two biopsies were suggestive of a granulomatous process, in general, but not indicative of sporotrichosis. Asteroid bodies in tissue as described by Splendore in 1908 apparently have not been fully evaluated, since they are rarely mentioned in standard textbooks and current pertinent literature.[5] Most pathologists believe that the histologic picture in sporotrichosis is not specific. If, however, a deep mycosis is suspected and fungous elements are not demonstrable in skin sections, the possibility of sporotrichosis should be strongly considered and further cultural tests performed.

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ABNORMAL CHILDREN RATE HIGH IN MATERNAL GERMAN MEASLES

A high ratio of congenital defects in children of mothers who suffered from rubella (German measles) during early stages of pregnancy is reported in a study made by Drs. Stuart Abel and Theodore R. Van Dellen of Chicago. The two physicians, associated with the Northwestern University Medical School, set forth their findings in an article in the August 13 *Journal of the American Medical Association.*

They made a request through a syndicated health column for reports from mothers who had rubella during pregnancy. The mothers were asked to indicate the period of gestation in which the ailment appeared and the outcome relative to the child. Eighty-two replies were received, covering 84 children (there were two sets of twins).

In 54 instances, the disease occurred in the first three months of pregnancy. The results were 44 abnormal children, including 18 with multiple defects; three stillbirths, and seven normal. In 19 cases where the disease appeared in the second three-months' period, there were eight abnormal children, including one with multiple defects, and eleven normal. Eight children were born to mothers who were affected by the disease in the last three months of their pregnancy. The one abnormality was attributed to other factors. The period of the disease was not known in three instances.

The principal defects noted were: congenital heart disease, 19; congenital cataracts, 17; deafness, 14; mental deficiency, 7; malformed teeth, 5.

The authors point out that their method of collecting data has drawbacks and limitations. Nevertheless, they express the opinion that "the high percentage (87) of abnormalities in children whose mothers had rubella the first trimester is significant of a correlation between congenital defects and maternal rubella."

OCCURRENCE OF ACUTE IRIDOCYCLITIS IN PATIENT HAVING CHRONIC SIMPLE GLAUCOMA

VICTOR GOODSIDE, M.D., New York City

(From the Department of Ophthalmology, Fordham Hospital)

THE present case is one of coincidental occurrence of acute iridocyclitis and chronic simple glaucoma. The simultaneous appearance of ocular hypertension and uveitis, when there is cause and effect relationship between them, is of very frequent occurrence. When there is no such relationship, the accidental association of the two conditions must be rare, in view of their known incidence. Posner has reported the incidence of primary glaucoma in 12,000 cases as 3.1 per cent and that of iridocyclitis as 0.9 per cent, giving a total expected frequency of 0.028 per cent.[1] He reported two such cases. Chandler reported his experience with a single such case.[2]

Case Report

A forty-eight-year-old woman complained on August 9, 1948, of pain, redness, and defective vision in the right eye for a period of five weeks. Questioning elicited the further complaint of transient appearance of colored halos about lights on leaving movies and occasionally at other times for about two years. Past history was otherwise negative except for a dental abscess at the age of sixteen which had been incised externally.

General physical examination was negative except for chronically hypertrophied tonsils with yellowish concretions filling the crypts. Laboratory findings, including x-rays of chest and sinuses and blood Wassermann, were negative. On initial ocular examination the right eye presented the typical findings of acute iridocyclitis: ciliary injection, innumerable keratic deposits, a heavy aqueous flare, a small irregular pupil bound to the anterior lens capsule by posterior synechiae. The left eye was entirely normal except as to tonometric examination. Intraocular tension in the right eye was 22 mm. and in the left 50 mm. (Schiotz). Treatment in the right eye was cautiously instituted, first with 2 per cent paredrine hydrobromide and then with 2 per cent homatropine, and produced amelioration of symptoms without elevation of intraocular tension. Atropine sulfate, 1 per cent, was thereupon instilled in the right eye and pilocarpine, 2 per cent, in the left eye.

The following day the acute iridocyclitis in the right eye was improved, and intraocular tension was normal in both eyes: 25 in the right eye and 22 in the left eye. Posterior synechiae in the superior temporal quadrant of the right pupil were now broken by instillation of 10 per cent neosynephrine without further rise in tension. Treatment thereafter continued with 1 per cent atropine sulfate three times daily in the right eye, and 2 per cent pilocarpine three times daily in the left eye.

Three days later, on August 13, 1948, the pupil of the right eye was widely dilated, the globe was white, and no evidence of the recent iritis could be observed except for a few pigment deposits on the anterior lens capsule at 10 o'clock. The left pupil was miotic. Intraocular tension was 28 mm. in the right eye and 23 mm. in the left (Schiotz). Atropine was discontinued in the right eye; pilocarpine was continued in the left.

On August 27, intraocular tension in the right eye was for the first time elevated: 35 mm. in the right, 20 mm. in the left (Schiotz). Pilocarpine was begun in the right eye, and two days later tensions were 27 mm. in the right eye and 20 mm. in the left eye.

On September 10, tensions were down to 20 in the right, 23 in the left. Corrected visual acuity was 20/20 in each eye with small plus cylinders. Peripheral and central fields were entirely normal. On November 9, pilocarpine was discontinued for two days for test purposes, and tensions promptly rose to 42 and 31 mm. in the right and left eyes, respectively. With instillation of pilocarpine tensions readily returned to normal and have remained so to the present time.

Comment

A coincidental appearance of the two conditions, acute iridocyclitis and primary glaucoma, should be kept in mind when attempting to rationalize some of the vagaries of an occasional case of so-called secondary glaucoma, both as to course and response to therapy. In the present case atropine was used successfully during the inflammatory phase, and this agrees with Chandler's experience with his single case in which he used atropine for the duration of the inflammation and then resumed miotics.

If, in the present case, the chronic simple glaucoma in the left eye had not yet exhibited itself by elevated tension, the postinflammatory ocular hypertension in the right eye would have been an unexpected development and, in addition, not readily explicable. For this reason, it is suggested that provocative tests in the apparently uninvolved fellow eyes be performed.

The question of whether ocular hypertension in the right eye was present before the intercurrence of the acute iridocyclitis must be left unanswered. The inflammation, by its depressing action on ciliary secretion, may well have produced lowering of a previously elevated tension. It is well to remember also that the postinflammatory hypertension did not appear until inflammatory activity had subsided.

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Presented at a meeting of the New York Society for Clinical Ophthalmology, February 7, 1949.

PERFORATION OF A HIATUS HERNIA

Jerome Pincus, M.D., and Irving A. Zimmerman, M.D., New York City

(From the Department of Medicine, Second Division, Goldwater Memorial Hospital)

A GREAT deal has been published recently on hiatus hernia, especially in regard to etiology, relationship to cardiac symptoms, frequency, and complications.[1-6] The case reported here illustrates many of these interesting features of a fairly common disease in the later decades of life but is being cited specifically because of the complication, namely, perforation of the hiatus hernia, which was the direct cause of the patient's death. Complications from hiatus hernia are rare, and, to the best of our knowledge, perforation has not been reported heretofore.[6]

Case Report

This was the first Goldwater Memorial Hospital admission of a sixty-five-year-old white, male, bricklayer, who was admitted in September, 1949, from another hospital with the complaint of epigastric pain and difficulty in swallowing. His present illness began in 1937 with the onset of shortness of breath and precordial pain which was interpreted as due to a coronary thrombosis. He was readmitted to that hospital on three other occasions because of continuous epigastric pain, dysphagia, occasional vomiting, and loss of some 30 pounds during a three-year period. At that time, the patient was able to swallow only fluids and small bits of well-chewed food. The epigastric pain was relieved at night by the sitting position. Because of a demonstrated stricture, the patient was esophagoscoped and dilated a number of times. This afforded him some improvement, but he still could not swallow solid foods.

Past and family histories were noncontributory. The patient repeatedly denied the ingestion of lye, ammonia, and similar substances.

On admission, the patient appeared well-developed but poorly nourished, not acutely ill, cyanotic, orthopneic, or dyspneic. Examination of the head, eyes, ears, nose, throat, and neck was within normal limits. The heart was not enlarged, the rate 64, the rhythm regular, and no murmurs were heard. Blood pressure was 160/90. Lung fields were clear to percussion and auscultation. Slight tenderness was present in the midepigastric region on deep palpation; the liver, spleen, and kidneys were not palpable. The extremities were free of edema, clubbing, and cyanosis, and the neurologic examination was not remarkable.

Hemogram revealed a red cell count of 4,790,000 with a hemoglobin of 14 Gm. The white count was 6,600 with a normal differential. Urine analysis was entirely negative. Blood urea nitrogen and sugar were within normal limits, and the serology was negative. An electrocardiogram revealed a Q_1 and Q_4 three mm. in depth and a left axis deviation; there were no T wave changes. A chest plate and kymogram showed a normal-sized heart and clear lung fields. Barium studies of the gastrointestinal tract showed a narrowing of the lower third of the esophagus, a hiatus hernia of the cardiac end of the stomach, a duodenal ulcer, and a diverticulum of the descending portion of the duodenum (Fig. 1).

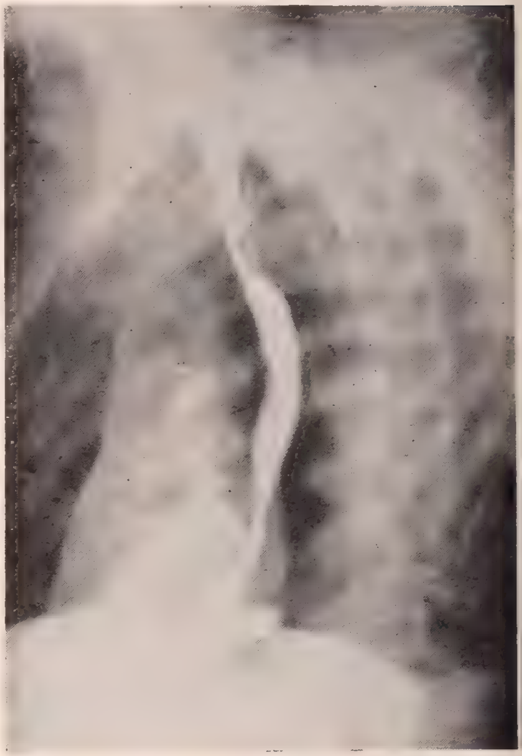

Fig. 1. Barium study of the gastrointestinal tract showing hiatus hernia of the cardiac end of the stomach and stenosis of the esophagus.

The patient was placed on a bland diet with antacids and antispasmodics, supplemented by vitamins. By January, 1942, he could swallow only liquids, and x-ray studies revealed further narrowing of the esophagus. Esophagoscopy revealed a stricture 31 cm. from the upper teeth, allowing the passage of a number 10 bougie. From February to July of 1942, the patient was esophagoscoped at regular intervals until a number 24 bougie could be passed. He was then able to swallow well-mashed food with a moderate amount of discomfort.

During the next year, the patient got along fairly well except for occasional epigastric pain radiating to the chest and back. Serial gastrointestinal studies taken over a period of years revealed the constant findings mentioned above and six-hour gastric retention. In September of 1943, he was again esophagoscoped twice, each time a number 24 bougie being easily passed. The following year was uneventfu except for a solitary episode of coffee-ground vomiting. The dysphagia and epigastric pain continued to increase in severity.

By early 1945, the patient could only take fluids by mouth and had repeated episodes of epigastric

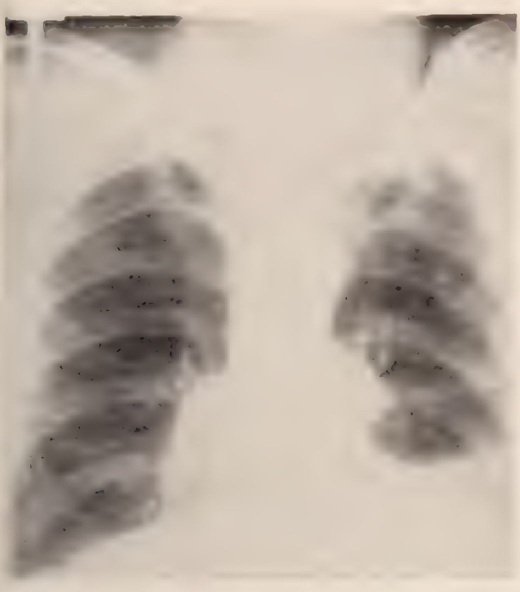

FIG. 2. Chest x-ray showing apparent bilateral basal pneumonia.

pain and vomiting, which subsided on sedation and bed rest. Surgery was advised on consultation, but the patient refused. He had lost approximately 20 pounds in the preceding three years; his serum protein level was 5.1 Gm., and he had developed a secondary anemia with a red blood cell count of 3,480,000 and a hemoglobin of 8.1 Gm.

However, he was getting along fairly well on his fluid diet of milk, cream, and eggs with vitamin supplements. A cardiac re-evaluation at this time was essentially negative and unchanged from his admission findings.

The final episode began on August 18, 1947, when the patient began to regurgitate practically everything he swallowed some twenty seconds after ingestion. He obtained some relief with atropine. However, a few days later, regurgitation was again manifest, and under fluoroscopy no barium passed the proximal end of the esophageal stricture. In preparation for a gastrostomy, the administration of intravenous protein hydrolysates and 10 per cent glucose in saline was begun.

That evening, the patient began to complain of severe pain in his chest and epigastrium, radiating posteriorly and greatly intensified by movement in any direction from a sitting posture. Temperature was 98 F., pulse 82, respirations 22, and blood pressure 90/70 (previous readings ranged from 130/80 to 170/90). His breathing was shallow, but he was not cyanotic. There was dullness and diminished breath sounds at both lung bases. The heart rate was 82 with an occasional extrasystole. There was splinting and tenderness in the epigastric area. The white blood count was 22,500 with 87 per cent polymorphonuclear leukocytes (10 per cent of which were band forms). Urine showed 2 plus albumin and a few hyaline and granular casts microscopically. X-rays revealed no free air under the diaphragm, but the chest plate showed what appeared to be bilateral basal pneumonia, more marked on the left (Fig. 2). Penicillin therapy and oxygen by mask were instituted and Demerol given for pain. Some six hours later his condition grew worse, the pain was unchanged in intensity or character, blood pressure was unobtainable, the pulse barely perceptible and irregular with a rate of 102, respirations 44, and temperature 101 F. The lung and abdominal findings were unchanged. Five hundred cubic centimeters of whole blood and 1,000 cc. of plasma were administered, but the patient expired twenty-three hours after the onset of this acute episode.

Autopsy.—The body was that of a well-developed and poorly nourished, sixty-five-year-old white male without any gross external abnormalities. The brain, which weighed 1,430 Gm., appeared grossly normal with minimal amounts of arteriosclerosis of the vessels. The neck, pharynx, thyroid, and parathyroids were not remarkable.

On opening the pleural cavities, 3,000 cc. of muddy, brownish-red fluid and what appeared to be floating food particles were found in each side. There were no adhesions present between the chest wall and the lungs. The right lung, which weighed 450 Gm., was moderately atelectatic in all except the upper lobes. The visceral and parietal pleura were covered with a fibrinous exudate and shreds of food particles. The left lung, whose weight was 360 Gm., showed similar findings. Microscopic sections bore out the findings of atelectasis without any evidence of pneumonic infiltration. The bronchi and bronchioles showed a moderate amount of mucopurulent exudate but no evidence of food particles. The mediastinum showed a diffuse fibrinous exudate and a very pronounced injection with some induration of mediastinal areolar tissue. The pleural surfaces of the diaphragm showed a similar picture.

The heart weighed 330 Gm. and was normal in size, shape, and position. The parietal pericardium on its mediastinal aspect was somewhat congested and thickened but was otherwise normal. All valves were within normal limits, but there was some dilatation of both ventricles. The foramen ovale was covered by a very thin sheet of fibrous tissue which was fenestrated about its margin in six places. Except for atherosclerotic narrowing of the left anterior descending branch of the coronary vessel, the remainder of the heart was within normal limits.

In the abdomen, the viscera were found to be in normal relationship to each other. The liver, gallbladder, and biliary passages were normal. The pharynx and upper two thirds of the esophagus were normal except for some barium which was present within the lumen. The lower end of the esophagus and the cardiac portion of the stomach were contained within the thorax above the diaphragm. The tissues surrounding the lower end of the esophagus were necrotic and showed evidence of inflammatory reaction. On opening the esophagus lengthwise, there was an area of stricture at the lower third near the cardiac end of the stomach which allowed the passage of only a very thin metal probe. There was no evidence of a mass or ulceration of the mucosa except for the fibrosis and constriction present. Distal to the stricture there was a perforation into the mediastinum which measured about 0.5 cm. in diameter, the edges of which were necrotic. The stomach appeared normal except that the pylorus was markedly hypertrophied with some degree of stenosis.

Just distal to the pylorus there was a large ulcer measuring 1.2 cm. in diameter and 0.5 cm. in depth. The edges were not necrotic, nor was there any evi-

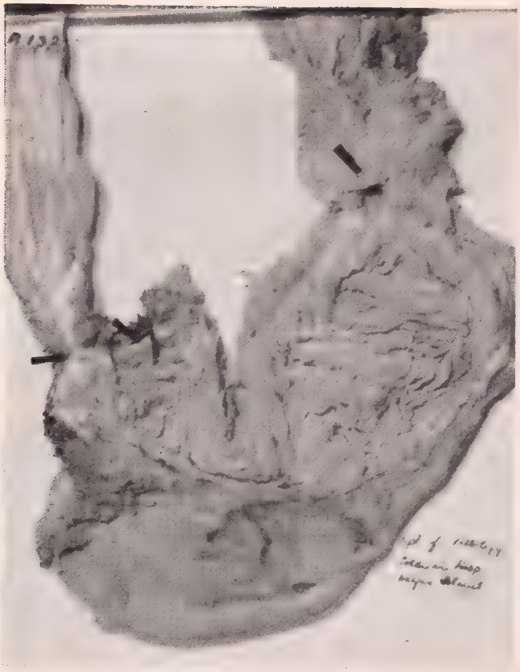

FIG. 3. Autopsy specimen showing esophageal stenosis, area of perforation, and duodenal ulcer (black arrows).

dence of an acute inflammatory process; there existed a good deal of fibrosis, however, both in the wall of the duodenum and in the periduodenal tissues. The duodenum distal to the ulcer was somewhat dilated. There were no duodenal diverticuli. Figure 3 shows the esophageal stenosis, the area of perforation, and the duodenal ulcer.

The remainder of the gastrointestinal tract, as well as the other organs of the abdomen and pelvis, revealed no abnormalities except for hypertrophy of the prostate.

Comment

Except for the mode of excitus, this case fits in well with a large group described by Benedict.[4] In the group there were 45 benign esophageal strictures in men and women over the age of fifty, 17 cases accompanied by hiatus hernia and 15 accompanied by duodenal ulcer, all having esophagitis. This seems to be more than coincidence when one third of the strictures had accompanying hernia or ulcer. He does not state how many had both, however, as in the case reported above.

It is possible that a paraesophageal hernia may press on the esophagus causing esophagitis with stricture, especially since we know that hernia is common after the age of fifty and it is hard to imagine a patient having an esophageal stricture for many years without symptoms.[5]

It should be noted that in this case the hernia was always present and demonstrable by x-ray, even though the esophagus was not shortened when measured at necropsy. This might have been due to inflammatory changes in the serosa or to the constant vagus effect. Experiments have shown that stimulation of the vagus, irritation of the peritoneum, distention of the gallbladder, and stretching of the stomach wall cause shortening of the esophagus in anesthesized dogs.[1] This reflex was abolished by the administration of atropine. Perhaps this explains why the hernia in this patient was always present with an esophagus of normal length. The fact that he had a chronic duodenal ulcer is highly indicative of excess gastric vagal activity with consequent shortening of the esophagus. The etiology of the esophageal stenosis, in the absence of the history of the ingestion of a sclerosing agent, is highly speculative.

The fact that the patient was treated for coronary thrombosis prior to the discovery of his hiatus hernia is not unusual in view of the similarity of symptoms in both conditions. Jones reviewed 128 cases of hiatus hernia and found symptoms of substernal pain, shoulder pain, palpitations, and dyspnea, all of which may be present in patients suffering from coronary artery disease.[2] The pain is probably mediated over visceral afferent fibers supplying the esophagus and the cardiac end of the stomach with overflow of the lower cervical and thoracic segments.

Rupture of the esophagus in patients with duodenal ulcer and esophagitis has been reported.[7] Stricture of the esophagus with perforation below the constricted site secondary to strong retrostaltic movements from the stomach with increasing pressure has also been reported.[8] However, we could find no mention in the literature of a perforation of a hiatus hernia. The final episode in this case, with effusion of stomach contents into the pleural spaces and subsequent inflammatory reaction, appeared as bilateral pneumonia with effusion on x-ray.

Summary

A case of a disease triad, namely, esophageal stricture, hiatus hernia, and duodenal ulcer, noted to be more than coincidental, is presented. The mode of death, perforation of the hiatus hernia, to the best of our knowledge has not been previously reported. Some of the clinical features are discussed with reference to the literature.

115 EAST 72ND STREET

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"A man should address another in the language which the latter understands. He should not use a literary form of speech to an uneducated person, and uncouth language to the learned."—*The Talmud*

LITHIUM CHLORIDE INTOXICATION

IRVING GREENFIELD, M.D., F.A.C.P., Woodmere, New York, MAX ZUGER, M.D., ROSS M. BLEAK, M.D., and SANDRA F. BAKAL, M.D., Brooklyn, New York

From the Kings County Hospital)

IN THIS paper two cases of lithium intoxication will be recorded. The diagnosis of lithium intoxication in the second case was a retrospective presumptive diagnosis. In both cases Westsal was used as a salt substitute in flavoring the food of patients with hypertension who were on a low sodium regime. Westsal is an aqueous solution containing 25 per cent lithium chloride, 0.2 per cent citric acid, and 0.01 per cent potassium iodide. It was supplied in bottles containing 2.3 ounces of the aqueous solution.

Case Reports

Case 1.—A fifty-six-year-old white man with hypertension was on a low sodium regime to which Westsal was added as a salt substitute. He consumed one bottle of the solution weekly for a period of seven weeks. The average daily ingestion of lithium chloride during this interval was 2.5 Gm. Toward the end of the sixth week he complained of a "fluttery" feeling in the abdomen and a bloating sensation in the epigastrium. His gait was somewhat unsteady. The patient discontinued the Westsal, and his symptoms subsided.

After a lapse of one month he resumed its use and for two and one-half months consumed at the rate of two bottles per week or an average daily intake of 5 Gm. of lithium chloride. Within a month, he complained of nervousness, tremor, loss of appetite, weight loss, nausea, and blurring of vision which was not corrected with new glasses. A sensation of gas in his stomach and constipation were noted. In addition, he was beset with many fears because of a sense of insecurity and a loss of self-confidence. He would awaken in the morning complaining of weakness and difficulty in keeping his head up. He seemed to stagger while walking. His weakness was muscular so that his greatest difficulty came in attempting to walk up steps. At times it was necessary for him to hold on to a railing so as to pull himself up a stairway step by step. He slept fitfully. On occasion he would awaken in the predawn hours and start to dress in preparation for the chores of the day. When told that the hour was too early, he returned to bed partly dressed. On a few mornings he put a shoe on one foot and a slipper on the other foot without realizing it. His memory was impaired, and he had difficulty saying what was on his mind, shrugging it off with a "never mind." He appeared drowsy and could fall asleep wherever he was seated, regardless of the time of the day. The tremor of his upper extremities grew worse so as to interfere with the use of eating utensils.

During the tenth week, he became increasingly restless. The day before admission to the hospital his restlessness was so acute that sedation was indicated. He became irrational, refused to stay in bed, and walked about his room all day repeating, "I'm so tired, my legs, I must have the grippe, if I could only sleep." That night he became delirious and could not be controlled in spite of adequate dosage of narcotics. He was admitted to the Kings County Psychiatric Hospital at about 4:00 A.M. He was in a delirious state. His restlessness was controlled only by the use of mechanical restraints. He did not respond to questions but would grunt following stimulation. Incessant purposeless movements of the extremities and turning his head from side to side seemed most outstanding.

The pertinent findings on physical examination included bilateral decrease in the deep tendon reflexes. The abdominal reflexes were absent. There were no pathologic reflexes. The systolic blood pressure in millimeters of mercury was 160 and the diastolic 100.

Laboratory data were as follows: hemoglobin 13.6 Gm., red blood cells 4,390,000, white blood cells 24,500, with 90 per cent polymorphonuclear leukocytes and a marked shift to the left. The specific gravity of the urine was normal. There was no reduction with Fehling's solution. Albumin, graded 3 plus, was present. Pus cells were present in the sediment. The blood urea nitrogen was 75 mg. per cent. Lumbar puncture yielded a fluid which was clear, of normal composition, and under normal pressure. Other laboratory tests which included a cytology of the spinal fluid, agglutination tests for typhoid, paratyphoid, Brucella abortus, and Proteus OX 19, the glucose tolerance test, the blood and spinal fluid Wassermann, and chest x-ray were normal.

The patient remained in delirious state for two days. He then lapsed into and remained in coma for eight days. During the latter interval, he responded only to pain stimuli. On the fourth hospital day, he developed Cheyne-Stoke's breathing, and had an elevation of temperature to 101 F. A bedside chest x-ray revealed areas of bronchopneumonic consolidation in the lower left lung field. The leukocyte count was 32,000, and the smear contained 90 per cent polymorphonuclear leukocytes. His fever ranged from 101 to 103 F.

On the ninth day of hospitalization he was improved, and on the tenth hospital day he recognized his family and began to talk, although his thoughts were rambling and related to the past. Soon after that he became perfectly clear. He had little memory of his recent condition. He became afebrile. The blood urea nitrogen was 34 mg. per cent. The leukocyte count was 16,000, and the smear contained 80 per cent polymorphonuclear leukocytes. On the eighteenth day of hospitalization, the lithium in the urine was too small for accurate quantitative determination. The blood lithium level was 0.2 mg. per cent, and the blood sodium was 328 mg. per cent.

The patient was discharged from the hospital three and one-half weeks after his admission without sequelae.

Comment.—This was a white man whose hypertension responded well to a diet containing 200 mg. of sodium. Westsal was added to the food as a salt substitute. His average daily consumption of lithium chloride was 2.5 Gm. Within five weeks he developed classic symptoms of mild lithium intoxication. After discontinuing its use, the symptoms subsided, and recovery was complete. He then resumed the use of the salt substitute and consumed two bottles of the aqueous solution daily. During this interval his average daily intake was 5 Gm. of lithium chloride. The outstanding features of this period of intoxication were his progressive weakness, almost to the point of prostration, and the mental symptoms, starting with insomnia, then restlessness, irritability, drowsiness, delirium, and coma. It was unusual to have a period of coma last eight days and be followed by recovery. The outstanding feature of the recovery interval was his loss of fear and reestablishment of self-confidence. During the period of convalescence his blood pressure was 150/90.

Case 2.—A seventy-year-old white woman was on a low sodium regime for the management of hypertension and responded well to the diet. Westsal was added to the foods as seasoning, and she was instructed to use it as desired. She consumed one 2.3-ounce bottle weekly for five weeks. Following the completion of the second bottle of the salt substitute, she complained of headache and pains in her lower extremities. Her gait was somewhat unsteady, and she noted some epigastric fullness which was present independent of meals. The bowels were normal. Dietary restrictions were increased, but she continued to use the Westsal. Within four weeks, there was loss of appetite and a feeling of general weakness. Tremor of the upper extremities was so marked that she had difficulty in using her feeding utensils. Nausea, loss of memory, and blurring of vision were noted. Suddenly, extreme restlessness, disorientation, and agitation with insomnia appeared. In the absence of localizing signs, no positive diagnosis was made, but the neurologist suspected thromboses of cerebral vessels. At this time the patient was restricted to a basic regime consisting of 300 Gm. of rice, unlimited amounts of fruit, and 2 L. of liquid.

The restlessness and agitation subsided, and after two days the patient slept at intervals. The profound weakness, loss of appetite, and the inability to walk because of lack of muscular coordination persisted for one week. Gradually, there was return to a normal status so that at the end of three weeks she had made a complete recovery. Lithium determinations were not made.

Comment.—A seventy-year-old white woman under treatment because of hypertension was placed on a diet containing 200 mg. of sodium. The average daily intake of the lithium chloride for a period of two weeks was 2.5 Gm. At the end of that interval the mild evidences of intoxication were present. It was suspected, with the onset of these new symptoms, that she was not adhering to her diet in spite of the fact that there was no return of her blood pressure to the pretherapy level and more rigid dietary restrictions were enforced. Finally, the patient was returned to the basic regime, and the salt substitute was eliminated. Recovery started promptly and was complete within three weeks. Her diet was then gradually increased. The salt substitute was not added.

Discussion

In 1863, Garrod first used lithium in the treatment of gout.[1] Soon thereafter, Blake observed that lithium could be lethal to rabbits.[2] Good recorded toxic symptoms in cats following the oral, as well as the intramuscular, administration of this alkali.[2] He noted that within a few hours after the ingestion of lithium chloride some of his experimental animals developed nausea, vomiting, and diarrhea. Others, had weakness tremors, stiffness of the extremities, and inability to use the hind limbs. Some of the animals died. Krumhoff studied the effects of lithium experimentally and observed vomiting and diarrhea following its subcutaneous administration.[3] He concluded that, after prolonged ingestion of lithium, animals died with gastroenteritis.

In spite of the fact that lithium is widely distributed in nature, the literature until the past decade has been sparse, and only a few observers published data concerning its toxicity. Among the first observations of the noxious effects of lithium on humans is that of Koplinski, who recorded the toxic effects of effervescent lithium citrate on two patients.[4] One developed generalized prostration, muscular weakness, and tremors of the hands; the other developed unilateral tremor, weakness, unsteadiness, and mental depression. Complete recovery followed withdrawal of the medication.

Within the past few years lithium chloride has been employed as a salt substitute in the medical management of problems where the restriction of sodium chloride intake was desirable. In view of the toxic effects of this alkali on the experimental animals, it was only to have been anticipated that toxic manifestations were to make their appearance in humans. In 1949, Waldron reported his observations in two patients who were taking Westsal.[5] The first patient had a labile type of hypertension and maintained an average lithium chloride intake of 1.1 Gm. daily for a period of five and one-half months. Her toxic symptoms made their appearance within three months, and recovery was complete six weeks after discontinuing the use of the salt substitute. The second case was an eighty-one-year-old woman with congestive heart failure. She ingested an average of 0.55 Gm. of lithium chloride daily for a period of four and one-half months before she manifested evidences of intoxication. Complete recovery resulted within seven days after discontinuing the aqueous salt substitute.

More recently, Page and his coworkers and Hanlon and his coworkers published protocols indicating the noxious effects of lithium chloride when used in conjunction with a low sodium diet.[6,7] The former observers are of the opinion that patients on low diets exhibit an increased susceptibility to the toxic effects of lithium.

Acknowledgment is made to Dr. Sam Parker, director of Kings County Psychiatric Hospital, for permission to publish this case report and to Dr. William Dock, Director of Medicine, Kings County Hospital, Long Island College Division, for his cooperation in making the lithium determinations possible.

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TULAREMIC PNEUMONIA DIAGNOSED BY STREPTOMYCIN RESPONSE

Harold Marcus, M.D., Brooklyn, New York, and Esterino E. Santemma, M.D., Hempstead, New York

(*From the Medical Service of Meadowbrook Hospital*)

Tularemia, once considered a truly American disease, is now known to be prevalent in Europe, Asia, and North Africa as well. In the United States the largest number of cases have been reported from Illinois, Ohio, and Missouri. The incidence is related to the vector predominating. Thus, tularemia due to rabbit handling occurs most frequently during the hunting season, November and December east of the Mississippi, and all year round in the West. Cases due to biting flies are prevalent from June to September. Those due to tick bites occur more commonly between January and October in the South and East, and between March and August in the North and West. Cases reported from New York State in the past were most often transmitted through infected rabbits.[1] Those occurring in Massachusetts, Arkansas and Missouri, and Tennessee were mostly tickborne.[2-4]

The increasing importance of tickborne infection and the recognition of inhalation as a factor in the spread of tularemia has prompted us to report the following case.

Case Report

J. L., a forty-three-year-old Negro veterinarian's assistant, was admitted to Meadowbrook Hospital on November 29, 1947, with a history of onset one week earlier with chills, fever, generalized aches, headache, abdominal distress, and diarrhea. Four days later he was seen by his physician because of left flank pain and continued fever. Penicillin and sulfadiazine were given in adequate dosage. For two to three days prior to admission, while on this medication, there was a moderate cough, productive of a slight amount of brownish sputum, and diarrhea two to three times daily. The past history and family history were not contributory. The patient took care of dogs and cats exclusively while working. A duty frequently performed was the deticking of dogs, many of whom had been brought from other states by persons employed in Long Island war plants. Forceps were used for this procedure, and the patient was never aware of having been bitten by a tick. A systemic review was negative.

Physical Examination.—The patient appeared acutely ill, was breathing rapidly, and was confused and disoriented. There was no evidence of rash, insect bite, or ulcer. The head and neck were grossly normal except for scleral and conjunctival injection. Eyeground examination was negative, and the pupils reacted normally. The tongue was dry and furred, the pharynx injected. In the chest there were dullness and marked diminution of breath sounds and tactile fremitus over the lower half of the right lung field and axilla. No rales were heard. Heart examination was negative. The abdomen was slightly distended. No masses or organs were palpated. The genitalia and extremities were normal, and the reflexes were physiologic. There were no palpable lymph nodes in the neck or axillae. Pea-sized nodes were present bilaterally in the inguinal region. These remained unchanged during the illness. The temperature was 106 F. rectally, the pulse 108, and the respirations 32. The blood pressure was 110/60. The admission diagnosis was lobar pneumonia of the right middle and lower lobes.

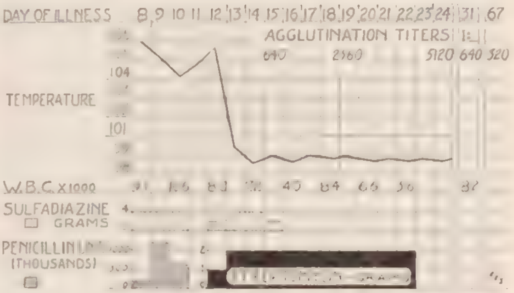

Fig. 1. Tularemic pneumonia with dramatic streptomycin response.

(*Erratum:* Dosages of sulfadiazine should be 6 Gm. daily instead of 4 Gm. as indicated)

Laboratory Data.—The total white blood cell count was 9,150 with 55 per cent polymorphonuclear leukocytes and 45 per cent lymphocytes. The sedimentation rate (Westergren) was 21. A stool culture was negative for pathogens. Subsequent white blood cell counts ranged from 4,000 to 10,000 with relative lymphocytosis. Urinalyses were negative, and a sputum examination revealed the presence of hemolytic Staphylococcus aureus and alpha streptococcus. Agglutination tests for typhoid, paratyphoid A and B, Brucella abortus, and Proteus OX 19 were negative.

Course.—The patient was kept on full therapeutic doses of penicillin and sulfadiazine for three days during which the temperature remained between 104 and 106 F. (Fig. 1). Therapy was stopped for one day, but there was no change in the clinical picture. Accordingly, it was decided to substitute streptomycin for penicillin.

Figure 1 depicts the dramatic response. The temperature receded by crisis to normal in thirty-six hours. However, the blood pressure fell to 94/78, and the skin became cold and clammy. Adrenal cortical extract was given in 5-cc. doses intramuscularly twice in two hours, and this was followed two hours later by an intravenous dose of 10 cc. A transfusion of 500 cc. of citrated blood was also given, and there resulted a prompt return of the blood pressure to normal levels. Despite a normal temperature, however, disorientation continued for two more days. On the eighth hospital day agglutination tests for leptospirosis were negative, while those for tularemia were positive in a dilution of 1:640. From here on improvement was rapid. The rise and fall of titers is shown in Fig. 1. The total dose of streptomycin was 23 Gm. during a period of eleven and one-half days. The pneumonic findings gradually disappeared, and an x-ray study of the lungs on the twenty-fourth hospital

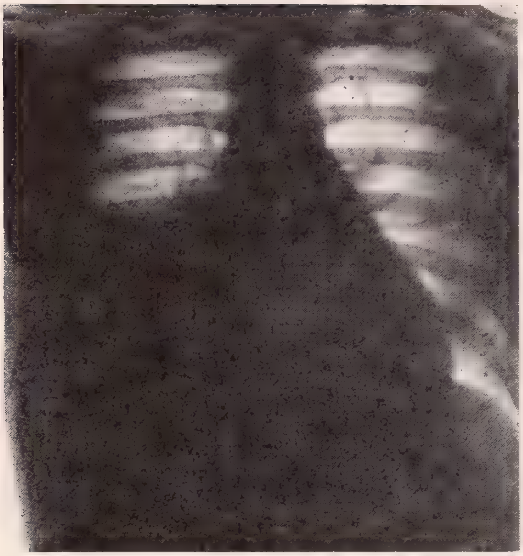

FIG. 2. Roentgenogram of the chest taken on tenth day.

day showed only residual haziness of the inner right lower lung field (Figs. 2 and 3).

Comment

Probably the best key to the diagnosis of any disease is the awareness of its possible presence. Foshay stated that tularemia should be suspected whenever unexplained fever and atypical pneumonia developed during the hunting season or during the greatest period of activity of ticks and bloodsucking flies.[5] With the claimed specificity of the intradermal test, tularemia may be diagnosed as early as the third or fourth day of the disease. This test is presumably never positive in other diseases. Absolute diagnosis may be established by culturing the organism directly from blood, sputum, or tissue juices. Such a procedure is not without its dangers because of the known pathogenicity of the organism. Serologic diagnosis depends upon the demonstration of rising titers of the specific agglutinins. However, these do not appear until the end of the second week of the disease. There remains the sudden dramatic response to streptomycin, particularly after the failure of penicillin and sulfadiazine; this alone should suggest the diagnosis. It was in just this manner that our case was at first diagnosed presumptively.

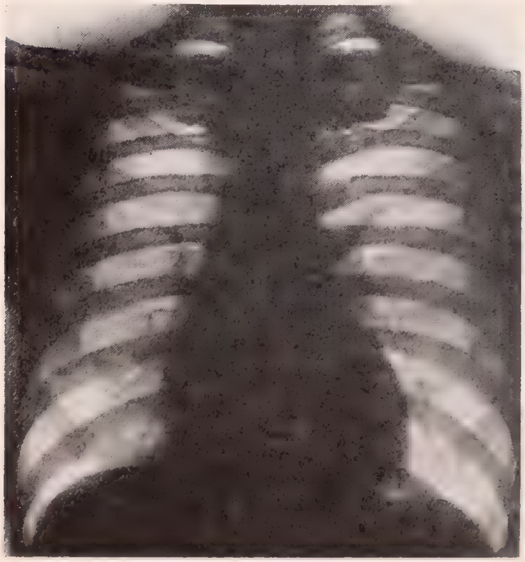

FIG. 3. Roentgenogram taken on thirty-first day showing only residual haziness of the inner right lower lung field.

The mode of transmission of tularemia of the cryptogenic variety is an intriguing problem. Johnson states that "the occasional occurrence of tularemic pneumonia in man with no evident portal of entry and no history of contact with wild rabbits warrants attention to the possibility of infection from dogs."[6] He showed that stray dogs in Montgomery County, Alabama, frequently showed agglutinations of from 1:40 to 1:80 with Pasteurella tularensis antigen and suggested that the persistence of the organisms for as long as twenty-five days in the nasopharynx of the infected dog offered a possible means of transmitting the infection to man. An effort was made in our case to determine whether the dog was the vector, since our patient deticked many animals, some of whom were used for rabbit hunting. Seven of the latter, however, showed negative tularemia agglutination tests. It would seem that inhalation could represent a likely mode of infection in view of the clinical manifestations. If this were so, the source could be the nasopharynx of the dog or tick droppings on the surface of the dog's body. In this connection it might be mentioned that tularemia is an occupational disease among sheepshearers and is usually manifested by pulmonary symptomatology. Winter, Farrand, and Herman, in reporting four such cases, considered tick droppings as a probable source.[7] Richards, in a report of a similar nature, felt that his cases were probably of inhalational origin.[8] Finally, Reimann considers the pathogenesis of primary pulmonic tularemia to be similar to that of plague, namely, inhalational.[9] Unfortunately, we were unable to check ticks as a source of the infection. Therefore, our case must be classified with those whose mode of transmission is unknown.

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SPONTANEOUS RUPTURE OF THE UTERUS DURING PREGNANCY

Benjamin Rabbiner, M.D., F.A.C.S., Brooklyn, New York

From the Department of Obstetrics, Maimonides Hospital)

SPONTANEOUS rupture of the uterus during pregnancy, not following a previous cesarean ection and before the onset of labor, is one of the most unusual accidents of obstetrics, especially when occurring at term after an apparently normal pregnancy and with no history of prior trauma to he uterus. A review of pertinent papers from the ohns Hopkins Hospital, the New York Lying-In Hospital, St. Luke's Hospital in Cleveland, the University Hospital in Cleveland, the Boston Lying-n, and the New York Woman's Hospital reveal only seven cases of this catastrophe occurring in 351,531 deliveries. It is generally accepted that a healthy uterus will tear only under the stress of a iolent indirect injury or through a weak pre-existing car. The site of rupture in labor is usually in the ower uterine segment, except in those cases rupturng through a previous cesarean scar, whereas in upture during pregnancy the tear occurs in the undus as a result of pathology which compromises he integrity of the uterine musculature. This is explained by the thinning during labor of the lower uterine segment held by the cardinal and uterosacral ligaments in response to the contraction of the undus. It is generally agreed that the symptoms of rupture of an extrauterine pregnancy and an inrauterine pregnancy are similar, except that shock s more pronounced in the latter. DeLee states that pain in the abdomen is the rule, and labor pains may occur when rupture is incomplete and may expel the child and placenta as well. Nausea, vomiting, hiccup, and other signs of peritoneal irritations are commonly present. The early symptoms in the case herein reported resembled a mild gastrointestinal upset and were treated as such for one day. The proper treatment is always by laparotomy with simultaneous transfusions. Generally, the mortality varies directly with the length of time elapsing between rupture and operative intervention. Hysterectomy may be expected to yield better results than any other type of operative procedure, except in selected cases.

Case Report

The patient was a thirty-one-year-old, white, gravida IV, Para 2 housewife whose first pregnancy was terminated by abortion and whose second and third pregnancies were breech deliveries. At the time she was first seen she was thirty-six weeks pregnant, and her antepartum course, under the care of her family physician, was uneventful.

On the early morning of the day of admission, with no history of any prior injury or trauma, she was seized with severe abdominal cramps and pain in the paraumbilical and epigastric regions radiating to the right shoulder, accompanied by nausea and vomiting. A diagnosis of gastrointestinal upset was made, and the patient was given some oral medication without relief by her family physician.

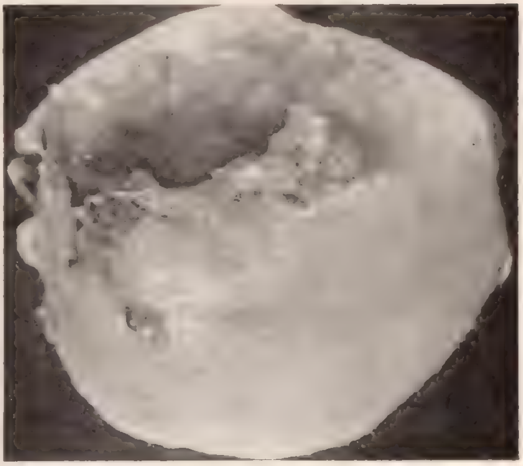

FIG 1. Uterus showing site of rupture.

When seen later in the evening of the same day, approximately twelve hours later, she complained of continued pain and some vaginal bleeding. On admission to the hospital, examination revealed an acutely ill patient. She was pale and her skin cold and clammy. She was restless and apprehensive with fear of impending disaster. Temperature was 97.6 F., pulse 110, and blood pressure 80/30. Examination showed spasm of the rectimuscles, more marked in the upper abdomen. There was tenderness on moderate palpation in the epigastrium and both flanks. Vaginal examination confirmed the moderate bleeding. The cervix admitted the fingertip. The presenting part was not in the true pelvis. Speculum examination added no additional information.

A diagnosis of ablatio placenta was made. She was treated for shock, receiving morphine sedation, 500 cc. of whole blood, and 1,000 cc. of 5 per cent glucose in saline in the next eight hours. Her general condition improved, and blood pressure rose to 120/80. Abdominal findings persisted as previously described. Laboratory findings were red blood cells 3,300,000, hemoglobin 8 gm., and white blood cells 13,000. Routine urinalysis was negative.

Under local infiltration anesthesia, the abdomen was opened. The intact amniotic sac with the baby in it presented in the incision. The membranes were ruptured, and a stillborn baby weighing 7 pounds 3 ounces was extracted. The cord was clamped and cut. Inspection revealed the abdomen to be full of a large amount of blood clot and some fresh blood. The placenta was outside of the uterus and lying in the left lumbar gutter. The uterus was contracted and anemic. It was in the deep pelvis. There was a large tear through the fundus. The lower uterine segment was not involved. A supravaginal hysterectomy was performed under local and block anesthesia.

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Convalescence was stormy for the first three days but following this was uneventful, and the patient left the hospital on the twelfth postoperative day. During the operative and postoperative period, she was treated with antibiotics and received two additional transfusions of 500 cc. each of whole blood.

Pathologic report was as follows:

> *Gross specimen* consists of a supracervically amputated uterus with adnexa. Placenta was received separately. The uterus measures 12 by 11.5 by 9 cm. At the posterior superior portion of the fundus on the right side, from the tubo-ovarian ligament for a distance of 9.5 cm. on toward and slightly to the left of the midline, there is an irregular jagged opening 4.5 cm. in width (Fig. 1). The margins of the posterior surface present a somewhat hemorrhagic appearance. When the uterus was opened along the anterior wall, the irregular jagged opening was noted to extend laterally and posteriorly 4 cm. beneath the surface of its posterior margin. The placenta bed is noted on the posterior surface. The placenta, received separately, measures 21 by 18 by 3 cm. There are no cotyledons missing. One half of the placenta was covered with clotted blood. The other presents the normal fleshy appearance on its surface as well as on cross section, while the former reveals a markedly hemorrhagic appearance on the cut surface.
>
> *Microscopically,* the endometrium presents marked decidual reaction areas. In the myometrium dilated veins with adherent clotted blood are noted. There are no essential myometrial changes in the region of the rupture. A considerable portion of the placenta reveals clotted blood on its surface and among the villi. The villi are also hemorrhagic.

Pathologic diagnosis was ruptured gravid uterus and placenta with hemorrhagic infarction.

358 New York Avenue

NEW YORK HOSPITALS RANK FIRST IN NUMBER OF ALCOHOLIC PATIENTS

New York hospitals treat nearly twice as many alcoholic patients as do those of any other state, a nation-wide survey of 6,276 American Medical Association registered hospitals shows.

The survey was recently completed by the A.M.A.'s Council on Medical Education and Hospitals as an initial step in the study of the problem of alcoholism, according to a report of the Council in the October 29 issue of the *Journal of the American Medical Association.*

An estimated 3,000,000 persons in the United States are excessive drinkers, and nearly one fourth this number are said to be chronically alcoholic, the report points out.

Statistics for 1947 of the 1,718 hospitals which reported that alcoholic patients are accepted for treatment reveal that hospitals in the State of New York admitted 12,175 such patients. California ranked second with 6,101 such admissions, Illinois third with 4,938, Michigan fourth with 4,225, and Pennsylvania fifth with 3,658.

New York also had the largest number of hospitals admitting alcoholic patients, 121. Texas, which ranked eighth in number of admissions for alcoholism had the second highest number of hospitals, 107. California ranked third in number of hospitals with 99, and Illinois, Pennsylvania, and Michigan followed with 85, 77, and 72.

Of the total of 1,718 hospitals treating alcoholism, 1,354 were general hospitals, 291 were nervous and mental institutions, and 73 appeared under other classifications.

On the basis of control, 787 were church or other nonprofit associations, 396 were under state, city, or county control, 330 were proprietary hospitals, and 202 were Federal hospitals.

"It is recognized that the excessive drinker creates both a social and a legal problem; yet it is the growing view that the alcoholic person with his associated disorders should be regarded primarily as a sick person," Dr. Fritjof Arestad, Chicago, associate secretary of the A.M.A. council, pointed out.

"While the medical approach emphasizes health needs, due consideration is also given to the educational, religious, social, economic, legal, psychologic and other factors involved in the problem of alcoholism.

"The Council on Medical Education and Hospitals recognizes the importance of improving the standards and facilities for the hospitalization and care o alcoholic patients.

"The present survey should be supplemented by further studies and planning aimed at establishmen of specific criteria for the more effective care and treatment of alcoholic patients. To reach this purpose will require the combined efforts of all who are interested in seeking a reasonable solution of th problem of alcoholism."

CYTOLOGIC AID IN THE DIAGNOSIS OF MEIGS' SYNDROME

Locke L. Mackenzie, M.D., and E. Lawrence Hecht, M.D., New York City

From the Department of Obstetrics and Gynecology, New York University-Bellevue Medical Center, Post-Graduate Medical School)

THE case herein reported is typical of adenocarcinoma of the ovary with metastasis to the lung and falls into the classification of Meigs' syndrome. Meigs originally described the syndrome of ascites and hydrothorax in 1936.[1] He then reported seven cases of benign fibromata of the ovary, removal of which resulted in complete recovery. Before it was accepted that benign fibromata of the ovary could cause ascites and hydrothorax, the presence of these signs presupposed a malignant lesion. Surgeons were reluctant to operate on such cases, since they considered the lesion malignant and believed such patients doomed to invalidism.

Since Meigs' original description, the syndrome of ascites and hydrothorax bearing his name has been applied to tumors of other than benign origin. In 1947, Calmenson, Dockerty, and Bianco included a case of granulosa cell tumor and another of a complex teratoma of the ovary as Meigs' syndrome.[2] Frankenthal reported a theca cell tumor of the ovary responsible for a Meigs' syndrome.[3] Rubin, Novak, and Squire reported 78 cases of ovarian fibromata and theca cell tumors, ascites, and hydrothorax (Meigs' syndrome) in 1945.[4] Mendel and Curtis in 1944 described a thecoma of the ovary with ascites and hydrothorax.[5] In 1945, Millet and Shell referred to Meigs' syndrome in a case of multilocular pseudomucinous cystadenoma of the ovary.[6] Anderon, reporting a malignant cystadenoma of the ovary in 1944, called it a Meigs' syndrome because hydrothorax and ascites were present.[7]

Any diagnostic procedure that is helpful in differentiating benign from malignant tumors of the ovary is an important contribution as far as therapy and prognosis are concerned. The case which is described in this paper is of particular interest because carcinomatous cells were identified in the chest fluid by slide spreads, although block sections from the same fluid were negative. As far as can be determined from the literature, it appears to be the first case of adenocarcinoma of the ovary in which tumor cells were found in smears from the chest fluid.

Case Report

The patient was a fifty-nine-year-old woman, gravida IV, Para 3, who was admitted to the New York Post-Graduate Hospital on February 25, 1947, complaining of frequency of urination of eight months duration, abdominal distention of seven weeks duration, and cough of five months duration. Her family history was essentially negative. She had had the usual childhood diseases. She started to menstruate at the age of twelve, was regular, bled for five days, had no intermenstrual bleeding, and no vaginal discharge. She had had her menopause three years previously. There had been no bleeding since that time.

Her present illness had had its onset eight months previously when she noticed frequency and urgency of urination. When she consulted her physician at this time, a small smooth ovarian cyst was palpated on the left. Arrangements were made to admit the patient to the Hospital, but she developed a nonproductive painless cough, and the operation was canceled temporarily. Immediately before her present admission she was re-examined, and her doctor noted that the ovarian cyst had now increased materially in size and was nodular and hard. Carcinoma of the ovary was suspected, and she was admitted with this diagnosis. She had no night sweats or fever. X-rays taken four months prior to admission revealed a bilateral pleural effusion, more pronounced on the right. Six weeks before her admission the patient noted abdominal enlargement which progressively increased, and she was told that she had fluid in her abdomen. There were no abdominal masses palpable. During the five months prior to admission her appetite had decreased, and she had lost 16 pounds in weight, dropping from 146 to 130 pounds. She developed a marked pallor, but there was no edema of the ankles, eyes, or fingers.

On admission to the hospital the physical examination revealed a chronically ill, white female with evidence of definite anemia. Chest examination showed flatness at both bases extending from the eighth thoracic vertebra to the base, absent fremitus, and absent breath sounds, all more pronounced on the left side. The abdomen was markedly enlarged, with shifting dullness, distended veins, and a fluid wave was obtained. No palpable masses were felt. Laboratory data were as follows: urine negative; there were 4,300,000 red blood cells, 12.6 Gm. of hemoglobin, 8,700 leukocytes with 84 per cent polymorphonuclears, 1 per cent eosinophils, 9 per cent lymphocytes, and 6 per cent monocytes. The sedimentation rate was 55 mm. in one hour. Urea nitrogen was 13 mg. per cent, chlorides 410 mg. per cent, glucose 75 mg. per cent, and carbon dioxide combining power 57 per cent. The diagnosis was carcinoma of the ovary with metastasis to the peritoneum and omentum and Meigs' syndrome.

A thoracentesis on February 27, 1947, obtained 200 cc. of blood-tinged fluid. This was sent to the pathologic laboratory where the material was made into a cell block and sectioned. Desquamated serosal cells were reported, but no tumor cells were found. Part of this same specimen of fluid was sent to the cytology laboratory where the material was spread on slides and stained according to the Papanicolaou technic. A background of debris and blood and many groups of small round cells showing variation in size, vacuolization, and anisokaryosis were seen. These cells were considered malignant. Some of them had a signet-ring morphology, and one atypical mitotic figure was seen. A diagnosis of adenocarcinoma was made. Examination of the vaginal smears taken on February 25, 1947, revealed a crowded menopausal type of smear with an occasional cornified cell. No malignant cells were noted in these smears. A chest plate taken at this time revealed considerable fluid at the left base. Culture of the chest fluid was negative.

A repeated abdominal paracentesis on March 3, 1947, still failed to show malignant cells in a tissue cell block. The patient was transfused on March 4 with 500 cc. of blood. The same day a laparotomy was performed through a left paramedian incision. Upon opening the peritoneal cavity 250 cc. of bloody fluid was removed by suction. A large, soft, mushy, nodular tumor of the left ovary with a long pedicle was found rising well out of the pelvis. Small implants were everywhere on the visceral and parietal peritoneum throughout the pelvis. A total abdominal hysterectomy and bilateral salpingo-oöphorectomy were performed. The pre- and post-operative diagnosis was carcinoma of the left ovary with generalized abdominal carcinomatosis.

The pathologic report follows: The uterus showed a senile endometrium. Examination of the right and left ovary showed a papillary cystadenocarcinoma. The tumor cells were small with eosinophilic cytoplasm and darkly staining nuclei. They were arranged in layers of different thickness around connective tissue stalks to form papillary projections. In some places they were arranged in irregular, glandular alveoli and here and there were collected in solid masses. There were numerous small microscopic cysts of different sizes lined by tumor cells. Large areas of necrosis were frequent. In the solid portion the tumor appeared to be essentially glandular in type. The diagnosis was (1) uterus showing senile endometrium, (2) papillary cystadenocarcinoma of both ovaries, (3) secondary adenocarcinoma of the right Fallopian tube, and (4) secondary adenocarcinoma of the omentum, following adenocarcinoma of the ovary.

The patient had an uneventful postoperative course, the temperature rising to 101.8 F. on the third postoperative day but returning to normal on the sixth postoperative day. Sutures and clips were removed on the fifth postoperative day. The wound healed by primary union. X-ray of the chest on the ninth postoperative day showed very little evidence of fluid at the left base. The patient was discharged on the eleventh postoperative day in satisfactory condition.

She was readmitted on September 29, 1947, with a mass in the region of the left chest. Since her previous admission she had been in excellent health and had gained 16 pounds. Two months prior to her readmission, she became conscious of a slight discomfort in the left chest and noted a small, nontender nodule in this area which increased in size. Physical examination revealed a bony, hard, fixed mass, $1^{1}/_{2}$ inches in diameter, in the posterior axillary line about the level of the ninth and tenth ribs. The overlying skin was freely movable. There were no palpable glands in the left axilla. Laboratory examination showed the urine negative; 4,090, 000 red blood cells, 13.2 Gm. of hemoglobin, 6,700 white blood cells, 74 polymorphonuclears, 22 lymphocytes, and 4 monocytes. X-ray examination of the chest showed a thickening of the pleura on the left side with fibrocalcific deposits in the hilum lymphatics. The impression was secondary adenocarcinoma of the left thoracic wall.

On October 1, 1947, the patient was operated on, and a tumor mass was removed from the left chest wall between the tenth and eleventh ribs. The mass was attached to the pleura but not to the ribs. Pathologic examination showed a firm mass of rubbery consistency, 4 by 2 by 2 cm., irregularly shaped, and covered on one side with a shiny membrane. Sections showed that the tissue consisted of epithelial cells arranged in small glandlike structures and in papillary structures separated by a thin fibrous tissue stroma. Numerous endothelial-lined spaces, most of which could be identified as blood vessels, were found to contain tumor cells. The pathologic diagnosis was secondary adenocarcinoma of the chest wall following adenocarcinoma of the ovary. The patient had a satisfactory postoperative course and was discharged on the fourth day, the wound having healed by primary union.

She remained in fairly good health for the ensuing eight months, after which time she developed marked ascites, dyspnea, and pain in the left and right chest. She also showed a progressive weight loss with cachexia and died in July, 1948, sixteen months after her first operation. The autopsy diagnosis was generalized carcinomatosis, secondary to a papillary cyst-adenocarcinoma of the ovary.

Comment

Of special interest in this case is the fact that it brings to the fore an additional aid in the diagnosis of malignancy of the female genital tract. Pathologic cell block examination of the chest fluid showed no abnormal cells on two examinations. However, spreads taken on slides and stained with the standard Papanicolaou technic revealed the presence of cancer cells. Numerous cases of Meigs' syndrome have been reported in the literature but none in which tumor cells were isolated in the chest fluid.[8]

In the case presented, the diagnosis of adenocarcinoma of the ovary from chest fluid was made not by the pathologist but by the cytologist. This method is not intended to supplant pathologic examination and diagnosis, but it is surely a most useful adjunct in the diagnosis of suspected malignancy. If used and interpreted properly by qualified cytologists, it may yield important information as far as prognosis is concerned. The comparative study of cells representative of different types of malignant neoplasms can often be carried out more advantageously in smears, where the cells are isolated and present themselves as complete and independent units, than in sections, in which they lose their individuality. The pathologist depends largely on the differences existing in various types of neoplastic tissues, while the cytologist pays more attention to criteria which are common to all malignant cells. This difference in viewpoint is particularly applicable to cases of Meigs' syndrome in which the ovarian tumor may be either *benign or malignant*. The prognosis differs completely if one can determine whether the chest fluid is only a transudate or whether it is part of a metastatic process from a primary malignant growth. In the past, pathologic block sections of chest fluid in such cases have provided little reliable information. Direct spreads stained by the standard Papanicolaou technic are likely to yield added useful information as in the case described.

We are indebted to Dr. Walter T. Dannreuther for permission to report this case.

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PREGNANCY ASSOCIATED WITH DOUBLE UTERUS AND DOUBLE CERVIX

NORMAN HERZIG, M.D., New York City

(*From the Obstetric Service of Harlem Hospital*)

THE recent occurrence of a pregnancy in a patient who has a double uterus, double cervix, and single vagina, terminated by extraperitoneal cesarean section, prompted a review of the literature concerning the association of pregnancy with double uterus. The exhaustive survey of Jarcho on malformations of the uterus and the studies of Smith and Taylor have covered the subject completely, so that a summary of the literature in this communication would be superfluous.[1-3] The purpose of this report is to describe the case in detail, since it is believed that this is the first time a patient with a double uterus has been delivered by a Waters' extraperitoneal cesarean section.

Case Report

A. W., a thirty-year-old primigravida, was admitted to the Obstetrical Service of Harlem Hospital on December 9, 1948, with a history of ruptured membranes for eleven and a half hours prior to admission. The last menstrual period was March 15, 1948, and the expected date of confinement was December 22, 1948. Although the patient gave a fifteen-year history of marriage and infertility, with frequent internal examinations by various physicians, and had attended prenatal clinic regularly after the fourth month of gestation, it was not detected that she had a double uterus and cervix. In early December, 1948, routine x-ray pelvimetry disclosed a breech presentation in an apparently ample pelvis.

Five hours after admission, when labor had begun and abdominal examination confirmed the breech presentation, a vaginal examination was done. For the first time it was recognized that a double cervix and double uterus existed. Both cervices were effaced; the left uterus contained the breech while the nonpregnant uterus was enlarged to the level of the umbilicus and filled the right side of the abdomen as a separate mass. Labor continued throughout the night in a desultory fashion. On December 10, at 10:00 A.M. cervical dilatation was only 3 to 4 cm. It was decided that, because of the history of ruptured membranes for thirty-two hours with nonengagement of the frank breech in a patient giving a fifteen-year history of infertility, extraperitoneal cesarean section would be the procedure of choice.

Under spinal anesthesia (100 mg. procaine) a Waters' extraperitoneal cesarean section was performed. During the dissection, the dome of the bladder was inadvertently entered. This was immediately repaired with two rows of chromic catgut suture, and the extraperitoneal dissection continued without further mishap. Following delivery of a 6-pound, 8-ounce living female infant, the incision was closed without drainage, and a Foley retention catheter was inserted.

The postoperative course was characterized by the resumption of grossly clear urine within twenty-four hours and normal voiding after the catheter was removed on the fourth day. Blood transfusion, penicillin, and sulfadiazine by mouth were used as supportive therapy. The temperature never rose above 100 F. and was normal following the sixth postoperative day. The patient was discharged with her baby ten days after delivery.

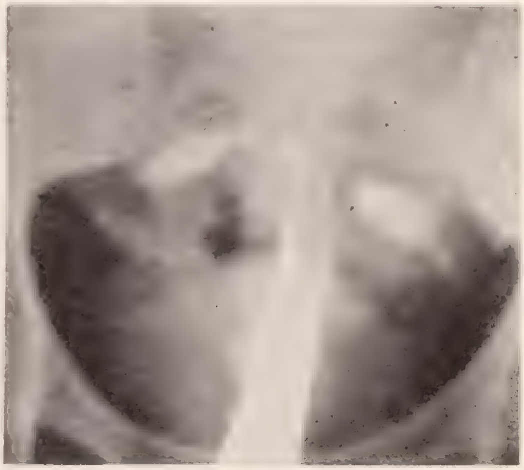

FIG. 1. Hysterogram taken three months after delivery showing double uterus.

Follow-up.—On February 7, 1949, vaginal examination disclosed two cervical orifices, while the uterus appeared to be normal in size and shape. The anomalous character could not be determined on pelvic examination. A hysterogram, done the next day, defined the nature of the abnormal uterus (Fig. 1). The patient offered no complaints. An intravenous pyelogram, done three months postoperatively in an attempt to find anomalies of the genitourinary tract and evidence of residual bladder injury, was normal.

Comment

A survey of the obstetric records of Harlem Hospital from 1930 to 1949 disclosed that the diagnosis of double uterus associated with pregnancy was made only twice. This gives an incidence of 2 in 43,862 deliveries or approximately one in 22,000. This experience differs from that of Smith and of Taylor, both of whom report an incidence of about one to 1,500 deliveries.[2,3] That the diagnosis can be missed is shown by this patient's experience. Not until labor in her first pregnancy after a fifteen-year period of infertility and a five-months prenatal observation period was the existence of a double uterus determined.

The use of the extraperitoneal cesarean section for this patient after thirty-two hours of ruptured membranes demonstrates the virtue of the procedure. Despite the accidental trauma to the bladder, the extraperitoneal aspect of the technic was preserved, while the patient's postoperative course was uncomplicated and nonmorbid.

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Special Articles

MEDICINE AND PUBLIC HEALTH IN COMMUNITY WELFARE

Herman E. Hilleboe, M.D., Albany, New York

(*Commissioner of Health, State of New York*)

WE HAVE a special problem these days to make medicine, public health, and social welfare a united instrument of technics and attitudes that will operate for the benefit of all the people. Added to religion and education for all members of the family and communities of families, these are the forces that can improve standards of living and promote greater understanding of our fellow men. Despite the emphasis placed on medicine as a profession that exists solely for the good of its practitioners, we must face the elementary fact that medicine and public health are, and have always been, social service tasks.

In the last half century the facts of history and the economic and social changes which have dislocated so many traditional patterns confront the practice of medicine with new problems. In the days of "rugged individualism," the problem of health was pretty largely the concern of the family and the isolated person. However, with the advance of industrial civilization and the urbanization of our society, health has become a community concern, and the individual is looked upon as participating in contemporary life only if he assists in promoting his economic productivity through the maintenance of sound personal health for the sake of the public health.

Public health has steadily moved along with this inevitable trend, for it is primarily concerned with whole communities of human beings. As the years pass, the public is demanding more and more prevention of disease rather than the cure of disease alone. Good medical practice has taught people to expect this kind of service. As we become more "community-conscious," whether nationally or internationally, preventive medicine and public health will be found at the very core of our social complex.

This point of view will require all of us to reexamine our professional philosophies to see if we are truly contemporary in providing the social and medical services which our age demands.

We hear a great deal these days, pro and con, about "socialized medicine." It would seem likely that extremists in the opposing camps have confused the essential issue. It is our urgent duty to consider all aspects of this problem objectively and dispassionately. It is probable that the deeply felt needs of the people will, in the long run, be the determining factor in this argument. The crying needs of the people require that we no longer postpone our efforts to meet medical care needs and hospitalization wherever they are needed.

We who are concerned with the welfare of the people are accustomed to minimize our personal opinions and prejudices, because we are aware that social forces cannot be denied. However, in these crucial days we are pioneers, and the road we take will make all the difference to the generations that come after us. No nationalized scheme of medical care has yet been presented that is mutually acceptable to both donors and recipients of the services. Netherthelęss, there is no reason why exploration should not be made in the field of medical care, utilizing existing medical resources.

By the way of beginning, individual states might well inaugurate voluntary health insurance plans in cooperation with private insurance companies and design them to fit the requirements of any given unit of government. After a time of trial and error and accumulated experience an adequate body of knowledge will be realized and will give direction to a comprehensive system of medical care.

What Can Be Done Now?

We do not have to wait, however, for the mandates of history. Medicine, public health, and social services have common tasks to perform. Achieving lasting results in these areas of socially constructive endeavor depends upon mutual understanding and cooperation. Several opportunities are open to us.

Environment and Health

We have come a long way in the last half century in providing a sanitary environment for a large portion of the American population. However, there are many regrettable deficiencies in this respect in small and unincorporated communities. We must work together to lower the barriers erected by outmoded fiscal policies and the lack of permissive legislation, so that our whole national community can realize the benefits of modern environmental sanitation. In addition, we must enlarge the scope of our thinking and action in this field.

In our planning we must boldly envision the application of sanitary practices to the home, the workshop, and the playground. We need to enter the field of housing and consider the threat to health of slum districts and hastily contrived residential construction. We must plan in advance high standards for ventilation, heating, and adequate home space. The productivity and contentment of workers should be promoted by similar planning and practices on the farm, in the shop, the coal mine, and the mill.

Adults and children need space and equipment for recreation and play. Mental and physical fatigue caused by the tedium of daily labor are most effec-

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tively corrected by rest and recreation in open-air spaces remote from the scenes of economic struggle. Parks, bathing beaches, playgrounds, swimming pools should all be encompassed in any future vision of a healthy nation.

Child Health

Another field in which we are mutually concerned is that which affects the lives and health of children. In the State of New York we have made notable advances in the protection of children. The infant mortality rate per 1,000 live births has declined from 109 in 1900 to 30 in 1947. Only forty years ago almost 10 per cent of all newborn infants died before they were one year old. This has been reduced to 3 per cent today.

Encouraging as such statistics may be, it must be stressed that there is too much disability and deaths among infants and children from such causes as premature birth, rheumatic fever, cerebral palsy, and poliomyelitis. The lifesaving forces of medicine, public health, and social service must be brought to bear jointly on these problems and also upon such hazards as diarrhea of the newborn and accidents peculiar to urban life.

Preventive Mental Health

There is perhaps no other field in which we, as cooperating members of complimentary teams, can be so effective as in preventive mental health. Mental health is derived from satisfying interpersonal relationships. Therefore, our primary task is to assure happy family experiences.

The mental hospitals of our nation are crowded as never before in our history. Prevention has not been adequately applied in this field. We must define our task and discover our plain duties in the reduction of mental and emotional conflicts and disease.

There are two methods of preventive action in the field of mental health which we should study and apply. The first is primary prevention. This involves the detection of preclinical signs of behavior problems and emotional disturbances so that functional and organic disorders that follow can be prevented from developing.

The other area is secondary prevention. This concerns itself with early detection of psychiatric disease, followed by prompt and adequate treatment, so as to bring the disturbed person back to normal behavior as quickly as possible.

It is perfectly clear that this is a field which offers social service workers a rich opportunity for high achievement. These individuals work with children every day, and in childhood there are too frequently sown the seeds of future mental disaster. It is imperative that every person who is concerned with the welfare of our people become acquainted with the newest psychiatric therapies. This will enable the professional person to recognize the earliest symptoms of personality disturbances and, by referral, help to restore to permanent health those who might otherwise proceed into the horrors of mental illness.

Public Health Nursing

There is no other field that offers more opportunity for effective cooperative action for the social service worker than the field of public health nursing. Public health nurses form the largest single group of workers who are employed to carry out the health program of the State of New York. The public health nurse is trained in technics that promote good health and the prevention of illness. Her contribution, and it is a magnificent one, is achieved through the use of nursing skills wherever they are needed. On her daily rounds she encounters all manner of complicating social and economic difficulties. Many of these require referral to social welfare workers. The public health nurse is accustomed to working as a member of a team in the health department which may include, besides the health officer, the sanitary engineer, the nutritionist, and the health educator. In the coming years we must see to it that this team also includes the social worker, especially the psychiatric social worker. It is by means of such coordinated action in these comprehensive fields of professional disciplines that society will realize a marked improvement in human relationships, personal and community health.

Tuberculosis

We have known for many years that tuberculosis is a social as well as a medical problem. Because it attacks people when they are most productive economically and when they are rearing their families, it is a social problem of no small measure. When the breadwinner of a family is stricken by tuberculosis, three sociologic consequences occur: the family is deprived of support and the community is deprived of a productive worker and has the added burden of the cost of care of a dependent family.

Recently, the New York State Tuberculosis and Health Association reported that deaths from tuberculosis in New York City occur at an earlier average age than deaths from the other leading causes. An Association spokesman declared that "the eradication of tuberculosis would confer more benefit to that community economically than would be the case for most diseases."

It was found that the average tuberculosis death in New York City occurs at the age of 50.6 years in men and 38.7 years in women, thereby depriving the community of 14.4 years of potentially productive life on the part of men and 26.3 years on the part of women. If you multiply these figures by the number of persons who died of tuberculosis in New York City in 1948, the cost of tuberculosis to the city in that one year was 31,768 person-years of working life for men and 23,938 person-years for women.

Figuring an average salary of $3,000 a year for men and $2,000 for women, which is below the State Department of Labor averages, the minimum economic loss to New York City as a result of deaths from tuberculosis in 1948 was $143,000,000—substantially more than the loss from any other disease.

Although the mortality rate from tuberculosis is persistently declining when all age groups are considered, it must be kept in mind that tuberculosis is the leading cause of death among persons between the ages of fifteen and forty-five years. Surely it is clear that further concentrated effort by all persons in the fields of medicine and social welfare is necessary if we are, in future, to eradicate this scourge of youth.

It has been shown that, to be successful, a tuberculosis control program must be fourfold in its action: (1) it must discover all hidden cases of the disease in the community; (2) it must provide medical care and isolation for all infectious cases; (3) it must provide rehabilitation and aftercare for all arrested cases, and (4) it must give economic aid to all families that have been stricken by tuberculosis.

We have gone far in realizing the objectives of the first three activities, but little or nothing has been done to bring even a minimum of economic security to families that have been financially dislocated by the disease. Those who are in the field of social welfare have the knowledge and experience to perceive that we cannot finally eradicate tuberculosis if the stresses and strains of economic pressures weaken both the diseased and the well.

The Problem of the Aged and the Chronic Diseases

In the past, medicine and public health have concerned themselves largely with the health and disease problems of youth and middle age. We have neglected our aged population and have waited upon the devastations of time before extending aid to the old.

Our population each year includes an increasing number and percentage of older people. In 1950 in the United States, it is estimated that there will be 11,000,000 persons over sixty-five years of age, as compared to 3,000,000 in 1900. It is illuminating to perceive that the percentage of elderly persons, many of whom will have to be supported, will be 7.6 per cent of the total population in 1950 as compared to 4.1 per cent in 1900. Further insight into this problem is gained by a consideration of the fact that the absolute numbers of elderly persons gives insufficient information on the social significance of the care of the aged, whereas the proportion presents a more complete picture of the real problem. In absolute numbers aged persons among us have almost quadrupled in the last fifty years, whereas the proportion of elderly persons to the remainder of the population has merely doubled. Such an approach to geriatrics gives us the kind of knowledge that is needed for an effective public health and social welfare program.

Preventive medicine, private medical care, and social service have assisted in extending the life span. As encouraging as this fact may be, there is an accompanying tribulation: the aged are subject to the chronic diseases which, because of destroyed tissue structure, are especially debilitating. Heart disease, cancer, diabetes, and other long-term illnesses resist the physician's most skillful attack and are notably disabling and lethal.

To insure health and peace of mind to our old people, preventive and curative medicine and social service can contribute technics of prevention and care. These technics should properly include the early discovery of beginning disease processes through periodic examinations that begin in early life and continue for one's remaining years. By such means many cases of chronic disease, with all their agony and sure fatality, might either be prevented or, through the substitution of different living regimens, be rendered tolerable.

Treatment, promptly and adequately provided, should be made available the moment that disease or disability of any character is detected. Geriatric services for both diagnosis and treatment need expansion. Re-ablement services that teach the sick to live within the limits of their mental and physical liabilities should be universally undertaken for all aged people.

The fields of geriatrics and gerontology urgently invite the cooperative action of the private and public health physician and the social worker. An increasingly large segment of the aging population needs our help; in giving it we can do much to alleviate the inevitable rigors and the preventable indignities of old age.

Conclusion

It is noteworthy that the State Departments of Health, Welfare, and Education have already taken steps to integrate the services which they provide for the people of New York State. This has been accomplished by the Interdepartmental Health Council which was created by the Governor in 1946. It was set up for the express purpose of coordinating these services so as to improve the health and well-being of all our citizens.

This group of community-minded government officials meets every month and has worked exceedingly well in the difficult job of correlating the many programs of the State in these allied fields. Those who work in counties and cities must accept the challenge of duplicating this successful enterprise which, in itself, is dependent upon a common bond for the interest of the people and a sympathetic understanding of a point of view of the different specialists concerned with the health and welfare of individuals.

Professional people in health have much to learn from their colleagues in education and welfare. It should be equally true that workers in health have something to offer to workers in welfare and education and thereby help to solve individual health problems. Common understanding of our mutual problems and joint planning and action constitute the pattern of the day in meeting the complex social needs of a growing state.

"Man must sow before he can reap. In other words, he must understand that he will not get the 'more abundant life' by merely voting for it—he must work for it."—*Field Marshal Viscount Montgomery*

THE DOCTOR'S TAX RETURN

SEYMOUR L. GOLDSTEIN, C.P.A., New York City

(Formerly with the Bureau of Internal Revenue)

FINAL Federal tax returns for the calendar year 1949 must be filed sometime before March 15, 1950. The government expects you to pay the correct amount of tax due, no more and certainly no less. The purpose of this article is to facilitate the preparation of an intelligent tax return and especially one where every allowable deduction is included.

Let us suppose that Dr. Rx, a general practitioner, is preparing his form 1040 (the U.S. Individual Income Tax Return). He is a typical doctor, and his tax problems are similar to those of most physicians. (It is recommended that the reader secure a form 1040 and refer to it as Dr. Rx works out his tax return.)

The obvious identifying information relating to dependents is filled in on page 1. Our model doctor has five exemptions, himself, wife, two children, and mother-in-law. It should be noted here that the law defines a dependent as a "closely related" person who earned less than $500 during the year, a resident of the United States, Canada, or Mexico, and one who received more than half of his or her support from you during 1949.

Dr. Rx then turns to page 2, Schedule C—"Profit (or Loss) from Business or Profession." Here he lists his income and expenses. Generally, his costs are the ordinary and necessary expenses incurred by him in connection with earning his income. After a careful analysis and checking of his records, Dr. Rx lists the following:

INCOME:		$17,000
EXPENSES:		
Nurse's salary	$2,000	
Rent	1,200	
Automobile expense (see statement attached)	1,200	
Depreciation on equipment and instruments	500	
Medical periodicals	50	
Cards, office expenses, stationery	40	
Expense of attending meetings and conventions of medical groups	370	
Magazines and newspapers purchased for waiting room	60	
Membership fees in professional associations	50	
Laundering uniforms	100	
Gifts and gratuities for business reasons (Christmas, etc.)	100	
Drugs and medicines	350	
Telephone and telephone service	180	
Cleaning and maintaining office	400	
Gas and light	50	
Rental of special equipment	115	
Preparation of tax return	35	
Total expenses		$6,800
Net income from profession		$10,200

Statement of Automobile Expense

Gas and oil	200
Insurance	150
Garage	300
Repairs	130
License plates	20
Depreciation (Auto purchased in 1947, cost $2,800, useful life 4 years)	700
Total	$1,500
Automobile Expense allocated to Business 80% of $1,500	$1,200

NOTE: The allocation is based on mileage records or fair estimates which indicate the extent of business and personal use.

Dr. Rx then inserts this information in the appropriate sections of Schedules C, F, and G (page 2), attaching additional sheets if needed.

Further comment on two of the expenses listed by Dr. Rx is deemed necessary:

1. *Rent.*—Dr. Rx rents an office separate from his home, and so his rent was simple to determine. Let us examine the situation where a doctor's office is in his home. This is best explained by illustration. Dr. A rents a seven-room house or apartment and uses two rooms for his office. His expenses are as follows:

Rent	$1,300
Heat, light, and gas	500
Telephone	200
Maid (cleans both house and office)	800
Total	$2,800
Allocated as a business expense—$^2/_7$ of $2,800	$ 800

The $^2/_7$ represents the ratio of the number of rooms used for the office to the total number of rooms.

Where a house is owned rather than rented, the same principle applies, but, instead of rent as above, the expenses to be allocated would include insurance, mortgage interest, real estate taxes, repairs, and depreciation. However, the interest and taxes deducted here cannot be taken later as a personal expense.

2. *Depreciation.*—Expenditures for equipment and instruments whose useful life is more than one year, *i.e.* diathermy and x-ray machines, cabinets, etc., cannot be deducted in entirety in the year of purchase. Instead an allowance called depreciation is made each year. To compute the amount of the annual depreciation, the cost of the equipment is divided by the number of years of its useful life.

Dr. Rx then turns back to page 1 of the form 1040 and enters $10,200 on line 5. He also enters $100 of interest earned on savings accounts and government bonds and $700 which Mrs. Rx received in dividends in the appropriate sections. His total income (called the "adjusted gross income") on line 6 totals $11,000.

Turning to page 3, Dr. Rx considers his personal deductions. He lists the following deductions in the sections of the form 1040 as indicated:

Contributions—Donations to churches, Red Cross, American Legion, community chests, and nonprofit schools and hospitals.

Interest—Interest on the mortgage of his personal residence and interest on a personal debt.

Taxes—Real estate and personal property taxes, State income taxes, local sales taxes, auto license fees, and State gas taxes (remember—any taxes deducted in Schedule C, cannot be deducted here).

Casualty Losses and Thefts—Any loss from destruction of property by fire, storm, or caused by natural forces, also thefts not reimbursed by insurance.

Medical and Dental Expenses—Medical and dental expenses in excess of 5 per cent of the adjusted gross income.

Dr. Rx finds that the total of the above deductions is $1,600 and will use this amount in computing his tax.

Note: If the itemized deductions totaled less than $1,000, Dr. Rx would not list these personal deductions but would use the standard deduction. The standard deduction is an amount allowed to any taxpayer amounting to the lesser of: (1) 10 per cent of the adjusted gross income or (2) $1,000 in the case of a joint return and $500 in the case of a separate return of a married person. The standard deduction is used in place of the itemized deductions where it exceeds the itemized deductions and will result in a smaller tax.

Dr. Rx now computes the tax due to the government on the bottom of page 3 as follows:

Line Number		
1	Adjusted Gross Income	$11,000.0
2	Deductions	1,600.0
3	Difference	9,400.0
4	Exemptions ($600 × 5)	3,000.0
5	Difference	6,400.0
9	$^1/_2$ of line 5	3,200.0
10	Tentative tax	664.0
11	Deduct	99.6
12	Difference	564.3
13	Tax (2 × $564.32)	1,128.6

Back to page 1, finally, and the tax due o $1,128.64 is entered on line 7. On line 8B, Dr. R takes credit for payments he has made on his 194 Declaration of Estimated Tax in the amount o $1,000. The balance of the tax due, $128.64, is pai in full with the filing of the return.

Dr. Rx then completes the questions on the bottom section of page 1 and both he and Mrs. Rx sig the form. Mrs. Rx's signature is necessary to mak the return a "joint return" and to take full advantage of the "split-income" provision of the tax law

Dr. Rx has one additional task. He must als fill out form 1040 ES, the "Declaration of Estimate Tax for 1950" and pay that tax either in full, or i equal quarterly installments. This return is als due before March 15, 1950.

521 Fifth Avenu

ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 a.m.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Do not send diagnosis.

Identify your material carefully so that it may be returned.

WHO'S WHO

in the

State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the JOURNAL *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MRS. EVELYN CLARK joined the headquarters staff in October, 1947, as switchboard operator and receptionist and in October, 1949, was transferred to the secretarial staff of the Public Relations Bureau. Here she handles correspondence and reports for the Bureau's field representatives and assists in the mailing of the *Newsletter*, new releases to newspapers and magazines, and other work done in the Bureau. Mrs. Clark is a graduate of the Mamaroneck High School and the Pratt Institute School of Business.

A native of California, she now resides in Larchmont with her two daughters, Judy, sixteen, and Jacqueline, fourteen. For five years Mrs. Clark developed and directed her own business, Evelyn Clark Creations, producing and selling imaginative toys for children. She also worked as an interior decorator and is now studying painting, planning to enter a water color in the annual Art News Show. She is a member of the Larchmont Junior Assembly.

MRS. LUELLA MACMULLAN has been with the *Directory* department for the past two years, her duties consisting of cutting stencils for address changes, corrections, and additions, and then checking, classifying, and filing these. With over 22,000 members in the State Society, it is important that these address stencils be kept accurate and up to date. The stencils are cut in metal on a graphotype machine, run off on the addressograph machine, and then checked for accuracy with the application and correspondence from each doctor. The next step is classifying the stencil according to district and county; the stencil is then filed for future use.

Mrs. MacMullan was born in Brooklyn and now resides in Queens Village. She has two sons, Frederick, twenty-four, an Army Air Corps navigator during the war and now a junior salesman trainee, and Douglas, eighteen, a student at Ursinus College in Pennsylvania.

MISS MARY LOUISE MCMAHON is assistant to Mrs. Roetger in the membership department, taking charge of the new members' application blanks when these are received from the county societies. This includes careful checking of each blank, typing of new membership cards, and advising the A.M.A. and the company which carries the malpractice insurance of each doctor's election to membership. Transfer of memberships and revocation of licenses must also be checked carefully, and the A.M.A. and Malpractice Insurance Company notified accordingly. At the end of each month the records are balanced with respect to monies received for the State Society assessment.

Miss McMahon was born in Jersey City where she now lives with her family. She is a graduate of the Henry Snyder High School and worked in the Trust Department of the Colonial Trust Company before joining the State Society headquarters staff in December, 1947.

FREDERICK W. MIEBACH is Director of Information in the Public Relations Bureau, handling press and radio relations for the State Society. Under the supervision of Mr. Dwight Anderson, he also coordinates the program of the field representatives in the promotion of the national education campaign. Mr. Miebach joined the staff in January, 1948, after ten years experience as a reporter and feature writer, three years service in the U. S. Army Signal Corps as a first lieutenant, and one year with the Veterans Emergency Housing Program in Washington, D. C.

A native of New Jersey, Mr. Miebach has his Bachelor of Arts and Master of Arts degrees in journalism from the University of Wisconsin. He is a member of Sigma Delta Chi, national journalistic fraternity, the Pica Club New Jersey newspaper organization, and the Officers Club of New York City. He resides with his wife in Bergenfield, New Jersey.

MRS. PHYLLIS E. TREPASHKO joined the staff in February, 1948, and works in the membership department as an assistant to Mrs. Roetger. Her duties consist of filing and typing correspondence relating to membership work. She also assists in posting dues on membership cards. At the time the new membership card was introduced, Mrs. Trepashko was responsible for typing and transferring information from all the old membership cards. There are over 22,000 members of the State Society for whom these new cards were prepared.

Born in Brooklyn, Mrs. Trepashko resides in Astoria with her husband, a Navy Air Corps veteran who is a mechanical engineer. She is a graduate of Bryant High School in Astoria and is now attending the Bryant Adult Education Center. For five years during the war she served in her church servicemen's canteen.

MISS GRETCHEN WUNSCH is secretary to Mr. Dwight Anderson, executive secretary of the State Society, business manager of the JOURNAL, an in charge of the Public Relations Bureau. In addition to her secretari duties for Mr. Anderson, Miss Wunsch supervises the secretarial work (the Public Relations Bureau and in the press room at the Annual Meeting Before joining the staff in February, 1948, Miss Wunsch had been secretar for the Unitarian Association in Boston, Massachusetts. During the wa she was a supervisor of shop work in the training program of the Radiatio Laboratory at the Massachusetts Institute of Technology.

Miss Wunsch, a former resident of Cambridge, Massachusetts, now liv in New York City. She attended the University of Colorado and wa graduated from the New England Conservatory of Music with a diplom in organ. Her interests include music and crafts.

MISS DOROTHY HART joined the staff in February, 1948, as a member of the *Directory* staff, and in January, 1949, was assigned to the administrative staff. She is engaged in preparing compilations of the actions of the House of Delegates on specific subjects such as medical care insurance, workmen's compensation, and war memorial, and assists in collecting information to be used in a history of the State Society. Her duties also include indexing the minutes of the Council, the Board of Trustees, and the House of Delegates, and helping with the annual meeting program booklet.

Born in Pelham, Miss Hart now resides in New York City. She is a graduate of Hunter College, where she earned a Bachelor of Arts degree in anthropology and is particularly interested in the American Indian. She is a member of the Ossining Historical Society and the Museum of Natural History.

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on December 1, 1949, the Council considered the following matters, taking action s indicated.

ecretary's Report

Remission of Assessments.—Remission of annual ssessments was voted on account of service with he armed forces for five members for 1949; on ccount of illness for three members; also War Iemorial assessment on account of illness and serve with the armed forces for 15 members.

It was voted to grant the request of the Medical Society of the County of Erie that the remission of Dr. Henrietta C. Christen's War Memorial assessment on October 14, 1949, be rescinded.

Following your last meeting, the Board of Trusees tentatively approved most of the items in the 950 budget and tabled some for consideration at its ext meeting. The Board acted affirmatively upon our recommendation to employ Mr. James Beasley s counsel to Dr. Robert R. Hannon, Executive fficer. The Trustees voted to renew Dr. Robert . Hannon's, Dr. David J. Kaliski's and Mr. George . Farrell's contracts in accordance with your recomendations. Also, it was voted by the Trustees to enew the lease on your present office.

In accordance with your instructions, your Secreary wrote to Mr. Thomas H. Clearwater of Counsel ongratulating him upon his recovery from his recent lness.

On November 17, 1949, your Secretary attended hearing at the New York State Education Departent in Albany regarding the practice of physical herapy by physical therapy technicians and physial therapists. Your Secretary has also attended to is other duties such as correspondence, attendance t committee meetings, answering telephone inuiries, and countersigning checks and vouchers, tc.

It was voted that the Secretary's report be received.

Communications.—1. Letter from Mrs. Virginia I. Kelley, formerly secretary to the late Dr. O. W. I. Mitchell, Chairman, Public Health and Education ommittee, thanking the Council and Trustees for er departure pay.

2. Letter dated November 9, 1949, from Dr. R. L. eager, Secretary of the Medical Society of the ounty of Rockland, requesting that the War Memrial assessment of Dr. James K. Pettit be remitted s he had been continued as a member of the Rockand County Society through error.

It was voted that the assessment be remitted.

3. Letter dated November 5, 1949, from Dr. . J. McCormack, Syracuse, requesting that a joint ommittee be re-established representing the Medial Society of the State of New York and the Dental ociety of the State of New York.

It was voted to empower the President to confer with the president of the Dental Society of the State of New York to re-establish this joint committee with the power to appoint the members from our Society.

4. Letter of November 20, 1949, from Mr. Yvelin ardner, associate director, National Committee for ducation on Alcoholism, to Mr. Dwight Anderson, hanking the Society for the Council room for a eeting of its Board of Directors on November 16.

5. Letter dated November 14, 1949, from the New York State Nurses Association, as follows:

"Dear Dr. Masterson:

"Please refer to our letter of October 27, in which you were informed of a resolution passed by the House of Delegates at the Biennial Meeting of the New York State Nurses Association in Buffalo, October 16–21. This resolution was:

> 'That the New York State Nurses Association as citizens and as a delegate body oppose socialized or compulsory medical care plans.'

"In view of the fact that the nurses association opposes compulsory medical care plans the Board of Directors feels that it is the responsibility of this association to have voice in the policy making and a part in carrying out voluntary health insurance plans.

"We hope that you will consider this action favorably.

"Sincerely yours,
Katherine E. Rehder, R.N.
Executive Secretary"

After discussion, *it was voted* to refer this to the Nursing Coordinating Council, Dr. Dickson, chairman.

6. Letter from Dr. G. M. Palen, President of the Medical Society of the County of Delaware, and Vice-President of the Sixth District Branch, expressing his opinion regarding the socialization of medicine.

After discussion, *it was voted* to refer this to the Committee on Public Relations and the Economics Committee's Subcommittee on Medical Expense Insurance.

7. Letter dated November 29, 1949, from Dr. Haven Emerson in regard to compulsory iodinization of salt.

This was referred to the Public Health and Education Committee.

8. Letter from the New York State Nutrition Committee, 105 East 22nd Street, New York, dated November 10, 1949, enclosing the following resolution:

> "WHEREAS, proper recognition needs to be given to the nutritional aspects of positive health and clinical disease as part of the education of medical personnel, and
>
> "WHEREAS, many physicians now engaged in the practice of medicine consider themselves as having been inadequately trained in the clinical phases of nutrition; therefore be it
>
> "*Resolved*, that the New York State Nutrition Committee recommend that proper recognition be given to nutrition in undergraduate and postgraduate medical education by the establishment at the State medical schools at Syracuse University and Long Island College of full-time staffs of medical and other professional personnel qualified as experts in the field of nutrition; and be it further
>
> "*Resolved*, that the State Nutrition Committee bring this recommendation to the attention of the Board of Trustees of the State University of New

York and the Deans of Medical Schools of Long Island College and University of Syracuse.

Frances Scudder, Chairman
Eleanor V. Green, Secretary"

It was voted to refer this to the Subcommittee on Nutrition of Public Health and Education Committee, Dr. Norman S. Moore, chairman.

9. Letter dated December 1, 1949, from Dr. B. Wallace Hamilton, secretary of the Medical Society of the County of New York, containing resolution introduced at the meeting of the Society on October 24, 1949, by Dr. Ernest P. Boas and Dr. Henry B. Richardson. It disapproved two editorials in the NEW YORK STATE JOURNAL OF MEDICINE on August 15 and September 15, 1949. This had been considered by the Comitia Minora of the Medical Society of the County of New York, sitting as a Reference Committee on October 14. This body recommended that the resolution be referred to the Publication Committee and to the Council of the Medical Society of the State of New York, and this action had been ratified at the meeting of the Medical Society of the County of New York on November 28, 1949.

It was voted to refer this communication to the Publication Committee.

The Treasurer's report was accepted.

Report of Executive Officer

Dr. Hannon reported his attendance at meetings of the Department of Education in regard to licensure of physical therapists and physical therapy technicians and in regard to psychologists who are preparing legislation for licensure.

Reports of Committees

Legislation.—Dr. Dattelbaum, chairman, stated that his committee wished to thank the Board of Trustees for engaging Mr. Beasley as counsel to Dr. Hannon. He reported that there would be a meeting of the Legislative Committee on December 2, 1949, when bills would be discussed regarding licensing of laboratory and x-ray technicians and psychologists. The Committee will try to report to the Council its attitude toward such proposed licensing legislation.

Constitution and Bylaws.—Dr. Reuling, chairman, reported that Onondaga County Medical Society had submitted some changes in their bylaws which were approved by the Committee and Counsel, and that the Second District Branch of the Medical Society of the State of New York had submitted their revised bylaws. These were approved with three alterations by the Committee and Counsel.

The Council *voted* to approve the report.

Economics.—Dr. Azzari, chairman, reported regarding meetings which had been attended by Mr. Farrell, director of the Bureau of Medical Care Insurance. A progress report of the New York State voluntary nonprofit medical care plans for the period ending September 30, 1949, was submitted to the Council. He stated in reference to the resolution that was previously directed to the Committee on Economics, and which was deferred at the request of the Committee, that the Committee had given further thought to the problem. After careful study the Committee wishes to recommend the application of the formula as set forth in the Hess report as adopted by the A.M.A. House of Delegates last June. This report is based upon a study, of two years duration, of the alleged practice of medicine by hospitals and teaching institutions; and it seems to your committee to be an adequate, fair, and orderly manner by which to investigate complaints about professional or economic relations between doctors and hospitals or medical schools.

"Furthermore, it seems to the Committee that, in so far as a medical society is concerned, the ultimate action that can be attained without recourse to law is provided.

"I recommend, therefore, on behalf of the Committee, that the Chair appoint committees known as Committees on Hospital and Professional Relations, either as separate committees of the State Society or as subcommittees of the Council Committee on Economics, to consist of men residing and practicing in the counties where medical schools and teaching hospitals are located."

After discussion, *it was voted* that this matter be tabled until after the impending meeting of the House of Delegates of the American Medical Association.

Malpractice Insurance and Defense.—Mr. H. F. Wanvig reported on the investigation of the malpractice prevention program of the Alameda County (California) Medical Association.

It was voted to refer the report to the Public Relations Committee for study and report.

Public Health and Education.—Dr. Curphey, chairman, reported that he had attended meetings of subcommittees and arranged for postgraduate instruction and teaching days for several counties He had attended a meeting requested by Dr. William A. Brumfield, Deputy Commissioner of the State Department of Health, to discuss the possibility of establishing postgraduate medical educatior programs in the universities in New York State which could be included under the plan of postgraduate instruction of his Committee, with th cooperation of the Department of Health.

Reports of Subcommittees.

Diabetes—Dr. George E. Anderson, chairman o the Subcommittee on Diabetes, reported that th letter which was circularized to all county medica society secretaries had brought excellent results.

Nutrition, Physical Medicine—The chairmen o these subcommittees have had matters referred t them within the past few days which may lead t meetings of their groups. The *Rheumatic Feve* chairman has in hand the "Guide for Local Rheumatic Fever Programs" published by the State Department of Health. He plans a meeting in the nea future.

Hard of Hearing and the Deaf—At a meeting o the Subcommittee on the Hard of Hearing and th Deaf, Dr. Gordon D. Hoople gave the history of th Conservation of Hearing Center in Syracuse, whic had been operating for about three years. He an Dr. Fowler outlined the problems involved in obtaining aid from the State Health Department. Basically it was established that interest existed, but n funds were available.

Cerebral Palsy—Dr. Curphey stated that th Cerebral Palsy Subcommittee had a problem t handle in the last few weeks. Miss Kovalsky chairman of the Public Relations Committee of th New York State Cerebral Palsy Association, woul like to enlist the aid of the State Society in disseminating, among physicians of the State, a bookle which will explain the Bress Law and describe various types of the disease through pictures and lists o symptoms, with a bibliography. The purpose of th booklet is to render the requiring of the reporting of cerebral palsy cases as effective as possible. This law goes into effect on January 1, 1950.

"The Association is seeking the State Society's approval of a folder, the dummy of which will be available shortly. I understand that this folder is for sale. The group would like to have the booklet distributed by the county medical societies at their own expense.

"I understand this lady had an interview with Drs. Brightman and Larimore in Albany on November 21. She told me that the Department of Health is proposing to send out a letter early in January, to all physicians in the State. With this letter will go a copy of the law and cards for reporting cases. Dr. Brightman suggested that the Cerebral Palsy Association's booklet could then be sent out as a follow-up."

After discussion, *it was voted* to recommend that the cerebral palsy booklet be sent to all members through the county medical societies and that an editorial on this subject be carried in the NEW YORK STATE JOURNAL OF MEDICINE.

Mental Hygiene—Dr. Curphey stated: "The subcommittee on Mental Hygiene is receiving reports from various collateral committees that investigated the mental health program which Dr. Schlessinger prepared. It is Dr. Wortis' suggestion that all the comments be routed to the State Department of Health. After that, and after the matter has been finally decided, I propose to bring it to the Council for final approval."

Public Relations.—Dr. Winslow, chairman, reported as follows:

"The Second Annual Public Relations Conference sponsored by the American Medical Association was held in Chicago on November 5 and 6, and your chairman presided over that part of the program held on Sunday morning, November 6. Representatives from most of the state societies were present at the conference, which was devoted to discussions of practical phases of public relations. Mr. Anderson and Mr. Miebach represented the Public Relations Bureau.

"The field program is continuing to develop a unified public relations program throughout the State on the part of our component county societies.

"Steps were taken this month to coordinate with the International Association of Accident and Health Underwriters, which has offered to distribute literature on behalf of the medical profession and also to supply speakers.

"A news release was issued to all State dailies, news and feature syndicates, and to State and county medical journals on the first payments from the War Memorial Fund to children of members who lost their lives in World War II, while serving as medical officers.

"Mr. Miebach represented the Public Relations Bureau at a meeting of the Committee for Constitutional Government.

"A conference was held during the month to achieve a closer coordination between the Committee on Public Health and Education, and its various subcommittees, and the Public Relations Bureau.

"Dr. Masterson, accompanied by Mr. Miebach, attended the First Annual Press Conference sponsored by the Medical Society of New Jersey at the Stacy-Trent Hotel, Trenton, on November 18. The conference brought together editors and publishers from all over the state, and led to an open discussion of public relations problems with members of the New Jersey State Medical Society.

"At the request of Whitaker and Baxter, the Public Relations Bureau assisted in the preparation of a transcription of an address by Dr. Louis H. Bauer on 'Socialized Medicine,' for national distribution. A copy of the disk will be available in the Society's offices and may be heard by members of the Society who so desire.

"A news letter was sent out, and news releases covering postgraduate education meetings in the various counties were issued.

"Mr. Walsh attended the conference of the State officers, presidents, and presidents-elect of the Woman's Auxiliary in Albany on November 15 and 16. He assisted in the preparation of material for the booklet, "Ladder to Auxiliary Success," and two articles for the *Distaff*. He also participated in discussions to promote county-wide essay contests for high school students on "The Family Doctor—Why He Must Not Be Government Controlled."

"Speakers Bureaus are now active in twenty-one counties, and others are in the process of formation."

War Memorial.—Dr. Rooney, chairman, stated that initial payments have been sent to certain of the beneficiaries who have qualified. In this connection Dr. Masterson stated that the Council, at a previous meeting, passed a resolution that the assessment must be paid by December 31, 1949. Otherwise a member who had not paid would be in arrears. The Treasurer stated that 74 per cent of the membership had paid, leaving a total unpaid of 26 per cent.

After discussion, *it was voted* to extend the period for payment of the War Memorial Assessment to May 31, 1950.

Dr. Rooney suggested that some comment appear in the NEW YORK STATE JOURNAL OF MEDICINE particularly stressing the purpose and nature of the War Memorial Fund.

It was voted that the Secretary be requested to notify the presidents and secretaries of the component county societies, before the first of January, of the extension of the period of payment to May 31, 1950.

Woman's Auxiliary.—Dr. Beekman, chairman, reported that the Woman's Auxiliary had met with the members of its board and the county society presidents and presidents-elect in Albany on November 15 and 16. At that meeting it was reported that the City of Schenectady Department of Health is showing a film under the title of "Medical Insurance—the Pathway to Health," which is said to be insidious propaganda. The Woman's Auxiliary Board recommended that the State Medical Society investigate this film.

After discussion, *it was voted* to have the Subcommittee on Review of Medical Films investigate.

Dr. Beekman read a report from the State chairman of the Legislative Committee of the Woman's Auxiliary, urging the county auxiliary chairmen to increased efforts in promoting the best kind of medical care for the American people.

Workmen's Compensation.—Dr. Kenney reported on the activities of the Committee.

New Business

American Medical Association Dues—Dr. Wentworth read an excerpt from the Secretary's letter of the American Medical Association of November 7, 1949, signed "George F. Lull."

> "When the A.M.A. House of Delegates convenes at the Clinical Session in Washington next month, it is very likely that it will consider a resolution on

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NECROLOGY

Frederick Salamon Adler, M.D., of New York City, died on January 7 in his office from a heart attack, at the age of sixty-one. Dr. Adler, a native of Germany, received his medical degree from the University of Heidelberg in 1913 and practiced in Cologne before coming to the United States twelve years ago. He was senior assistant attending physician at Mount Sinai Hospital and senior clinical assistant attending physician at the Mount Sinai Outpatient Department. Dr. Adler was a member of the New York County and State Medical Societies and the American Medical Association.

Marion Samuel Adler, M.D., of New York City, died on November 9, 1949, at the age of seventy-four. Dr. Adler was graduated from the Long Island College Hospital in 1901 and had served as clinical assistant in gynecology at the Gouverneur Hospital Outpatient Department. He was a member of the New York County and State Medical Societies and the American Medical Association.

Joseph S. Baldwin, M.D., of Brooklyn, died suddenly on January 8 from a heart attack, at the age of sixty-one. Dr. Baldwin was graduated from the Cornell University Medical College in 1913 and served overseas as a major in the U.S. Army Medical Corps during World War I. He had been associated with the New York City Police Department for more than twenty-five years, since 1923. Dr. Baldwin was named deputy chief surgeon in 1926 and became chief surgeon in 1946, succeeding the late Dr. Charles J. Dillon. At one time he was physician to the New York State Athletic Commission.

Dr. Baldwin was a member of the surgical staff of Brooklyn Hospital, surgeon at the Holy Family Hospital, and consultant surgeon at the Greenpoint Hospital. He was active in the Police Anchor Club's work with orphans and underprivileged children and was a member of the Kings County and New York State Medical Societies and the American Medical Association.

A. L. Benedict, M.D., of Buffalo, died on January 14 from a heart attack while making a professional call. He was eighty-four. Dr. Benedict received his medical degree from the University of Buffalo School of Medicine in 1888 and from the University of Pennsylvania Medical School in 1889. Dr. Benedict was associate editor of the *Philadelphia Medical and Surgical Reporter* from 1895 to 1898, editor of the *American Therapist* of New York from 1899 to 1901, and editor of the *Buffalo Medical Journal* from 1911 to 1918. He was vice-president of the American Academy of Medicine in 1902, a councilor of the American Gastroenterological Association, and the recipient of the gold medal in medicine from the American Medical Association.

From 1917 to 1918, Dr. Benedict was a captain in the U.S. Army Medical Corps, and then served with the New York National Guard. He was a Fellow of the American College of Physicians and a member of the Buffalo Academy of Medicine, the Buffalo Historical Society, the Buffalo Museum of Science, the Erie County and New York State Medical Societies, and the American Medical Association.

Alfred Berger, M.D., of Tannersville, died on October 28, 1949. Dr. Berger received his medical degree from the University of Vienna in 1919. He was a member of the Greene County and New York State Medical Societies and the American Medical Association.

John Bernardine Byrne, Jr., M.D., of Brooklyn, died on January 19 at the age of seventy-three. Dr. Byrne was graduated from the Long Island College Hospital in 1900 and had practiced medicine in Brooklyn for the fifty years since then. Until recently he had been assistant thyroid surgeon at the Kings County Hospital. Since 1926 Dr. Byrne had been a member of the board of managers of the Brooklyn State Hospital and served for many years on the staff of St. Peter's Hospital in Brooklyn and in charge of medical care at Ozanam Hall, an institution for elderly women operated by the Society of St. Vincent de Paul in Brooklyn. Dr. Byrne was a member of the Kings County and New York State Medical Societies and the American Medical Association.

William Caldwell Calhoun, M.D., of New York City, died on December 31, 1949, at St. Luke's Hospital at the age of seventy-four. Dr. Calhoun was graduated from the College of Physicians and Surgeons, Columbia University, in 1898. He was a member of the New York County and State Medical Societies and the American Medical Association.

Frank Harold Crispell, M.D., of Poughkeepsie, died on August 21, 1949, at the age of fifty-four. Dr. Crispell received his medical degree from the Cincinnati Eclectic Medical School in 1924. He was assistant attending surgeon at Vassar Brothers Hospital in Poughkeepsie and a member of the Dutchess County and New York State Medical Societies and the American Medical Association.

Charles Saul Danzer, M.D., of New York City, died on January 19 at his home at the age of fifty-four. Dr. Danzer was graduated from the New York University and Bellevue Hospital Medical School in 1915 and during World War I served with the U.S. Army Medical Corps. After the war, he engaged in research at Johns Hopkins Hospital in Baltimore, Maryland, where he invented the microcapillary tonometer, a device for determining the blood pressure in the capillary vessels. Dr. Danzer is also credited with inventing the venostat, which is used to pool the blood away from the heart in cardiac asthma. He had engaged in extensive medical research in this country and abroad.

From 1925 to 1927, Dr. Danzer was chief of the department of experimental medicine at the New York University College of Medicine. He taught at the College of Physicians and Surgeons, Columbia University, from 1926 to 1930, and at one time was professor of research medicine at the Flower Hospital Medical College. In 1932 he was chief in medicine at the Brooklyn Cancer Institute. Interested in medical jurisprudence, Dr. Danzer received a degree from New York University Law School in 1938, and contributed many papers on internal medicine and medical jurisprudence to scientific publications. Since 1934 he had been a director and medical examiner for the Eastern Life Insurance Company.

A Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, Dr. Danzer was a member of the National Gastroenterological Association, the New York Academy of Medicine, the Society of Medical Jurisprudence, and the American Heart Association.

Henry William Holling, M.D., of New York City, died on October 3, 1949, at the age of seventy-five. Dr. Holling was graduated from the College of Physicians and Surgeons, Columbia University, in 1895.

Samuel Katims, M.D., of Brooklyn, died in October, 1949, at the age of seventy. Dr. Katims received his medical degree from the Long Island College Hospital in 1906.

William Klein, M.D., of New York City, died on October 9, 1949. Dr. Klein received his medical degree from the University of Königsberg in 1905.

Edward Cyrille La Porte, M.D., of Amsterdam, died on September 4, 1949, at the age of seventy-three. Dr. La Porte was graduated from the Syracuse University College of Medicine in 1902. He was attending surgeon at Amsterdam City Hospital and St. Mary's Hospital and was a member of the Montgomery County and New York State Medical Societies and the American Medical Association.

John Marion Lore, M.D., of New York City, died on January 21 at St. Vincent's Hospital of a coronary occlusion at the age of fifty-eight. Dr. Lore received his medical degree from the New York University and Bellevue Hospital Medical School in 1915, where he was first in his class scholastically and the winner of the Glover C. Arnold surgical prize. Dr. Lore was director of the ear, nose, and throat division at St. Vincent's Hospital, where he had served on the staff for thirty-five years. He developed a research department in laryngeal disease and corrective speech—especially for the rehabilitation of school children with defective speech and for persons who had had the larynx removed. He was also clinical professor of otolaryngology at New York University Medical School.

During his career Dr. Lore had been associated with the staffs of many other hospitals, including the Manhattan Eye and Ear, as assistant surgeon and bronchoscopist; Columbus, as director of ear, nose, and throat; New York Foundling, as assistant surgeon; Polyclinic and French Hospitals, and St. Albans Naval Hospital, where he was consultant during the war. Dr. Lore was chairman of the steering committee for the New York University-Bellevue Medical Center from 1943 to 1946, and had served as cochairman for Manhattan in the Alumni Division of the Center campaign fund. He was alumni director of the New York University Medical Alumni Association, of which he was president in 1947–1948, and had been a member of the Alumni Federation and board of directors since 1945. A former president of the Italian Medical Association in New York, he was decorated in 1938 as a Knight of the Kingdom of Italy, the country of his birth.

Dr. Lore was a Diplomate of the American Board of Otolaryngology, a Fellow of the American College of Surgeons, and a member of the American Academy of Ophthalmology and Otolaryngology, the American Society of Laryngology, Rhinology, and Otolaryngology, the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

Milton Marcou, M.D., of Brooklyn, died in August, 1949, at the age of forty-seven. Dr. Marcou was graduated from the Long Island College Hospital in 1925 and was clinical assistant in otolaryngology at the Jewish Hospital of Brooklyn.

John J. Nowak, M.D., of Buffalo, died on January 2 at his home at the age of fifty-six. Dr. Nowak was graduated from the University of Buffalo School of Medicine in 1917 and took postgraduate work in Vienna, Austria, and in New York City. For the past twenty-two years he had conducted an eye, ear, nose, and throat clinic in Buffalo. A Diplomate of the American Board of Otolaryngology, Dr. Nowak was a member of the Erie County and New York State Medical Societies and the American Medical Association.

Daniel Duane Parrish, M.D., formerly of East Syracuse, died on December 26, 1949, at his winter home in Largo, Florida, at the age of eighty. Dr. Parrish was graduated from the Albany Medical College in 1901 and had practiced in New Baltimore, Salem, and Lyons Falls. He retired from practice two years ago while at East Syracuse.

David Raisky, M.D., of the Bronx, died on December 15, 1949, at the age of fifty-eight. Dr. Raisky received his medical degree from the University of Berne in 1922. He was clinical assistant physician at the Harlem Hospital and chief of arthritis at the Lebanon Hospital Outpatient Department. Dr. Raisky was a member of the Bronx County and New York State Medical Societies and the American Medical Association.

John Sengstacken, M.D., of Stony Point, died on December 31, 1949, after an illness of five months, at the age of eighty-seven. Dr. Sengstacken was graduated from the New York University Medical School in 1889 and then moved to Stony Point, where he had been in practice for sixty years. Active in professional organizations, he was the first president of the Medical Society of the County of Rockland, being elected in 1906 when that group merged with the Rockland County Medical Association.

Dr. Sengstacken served as health officer for the township of Stony Point for fifty-seven years, a State record, having been appointed to the post in 1891 and retiring voluntarily in 1948. He had also served as coroner of Rockland County and health officer for the Palisades Interstate Park. Founder of the Summit Park Sanatorium at Pomona, Dr. Sengstacken was also associated with the New York

State Reconstruction Hospital in West Haverstraw, the Nyack Hospital, and the Good Samaritan Hospital in Suffern. In 1939, on the occasion of his fiftieth anniversary of the practice of medicine, he was honored by his fellow physicians with a silver bowl and plaque presented by the Medical Society of the County of Rockland and by a special article in *Health News*, official publication of the State Department of Health, which described him as "a progressive doctor of the old school." Dr. Sengstacken was a member of the Rockland County and New York State Medical Societies and the American Medical Association.

Jacob Theodore Sherman, M.D., of Brooklyn, died on January 6 at the age of forty-nine. Dr. Sherman was graduated from the New York Homeopathic Medical College in 1923 and interned at the New York Lying-In Hospital. He was assistant professor of obstetrics and gynecology at the Cornell University Medical College and assistant attending obstetrician and gynecologist at the New York Hospital. Dr. Sherman was a member of the Kings County and New York State Medical Societies and the American Medical Association.

Oney Percy Smith, M.D., of Troy, died on January 6 of a heart attack, at the age of forty-seven. Dr. Smith received his medical degree from the University of Vermont Medical School in 1924 and interned at the Samaritan Hospital in Troy. During World War II, Dr. Smith was a captain in the U.S. Navy Medical Corps, serving as a surgeon on the aircraft carriers Enterprise and Essex during combat operations in the Pacific. He was decorated by Admiral Chester W. Nimitz for meritorious conduct as assistant to the Fleet Medical Officer on the staff of the Commander in Chief of the Pacific Fleet. The citation commended him for "outstanding professional ability and sound judgment" and spoke especially of his supervision of hospitalization and evacuation of casualties at Guam. After his discharge from service in 1946, Dr. Smith reopened his practice in Troy. He was on the surgical staff of the Troy Hospital. Dr. Smith was a member of the Rensselaer County and New York State Medical Societies and the American Medical Association.

Fredric Weldin Splint, M.D., of New York City and Queens, died on January 9 at his home in Queens at the age of sixty-eight. Dr. Splint was graduated from the New York Homeopathic Medical College in 1916. He was a physician for the Consolidated Edison Company in New York City and was a retired brigadier general of the New York National Guard, in which he had served as surgeon from 1940 to 1949. Dr. Splint was a member of Caduceus Post, Association of Military Surgeons, the American Public Health Association, the Bowne House Historical Society, the Queens County and New York State Medical Societies, and the American Medical Association.

Lawrence Montgomery Stanton, M.D., of New York City, died on January 6 at his home at the age of eighty-eight. Dr. Stanton was graduated from the College of Physicians and Surgeons, Columbia University, in 1885, after having studied medicine also at the University of Munich. Dr. Stanton, who had practiced in New York City for sixty years, was a member of the American Institute of Homeopathy and the New York County Homeopathic Medical Society.

Maximillian Zigler, M.D., of New York City, died on January 6 at his home at the age of sixty-five. Dr. Zigler was graduated from the College of Physicians and Surgeons, Columbia University, in 1905. He was an instructor in neurology at the New York Post-Graduate Hospital and Medical School and was associate neurologist at the Lebanon Hospital. Dr. Zigler was a member of the American Urological Society, the New York Urological Society, the Bronx Surgical Society, the New York County and State Medical Societies, and the American Medical Association.

Minutes of the Council

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assessments and dues. For some time the Constitution and Bylaws Committee has been studying the question of permanent membership dues payable to the A.M.A. The final report of the Committee will not be available until just prior to the Clinical Session."

A motion to inform our delegates that we believe it is inopportune at this time to increase the dues or to levy dues, with the information on hand, was *lost.*

After discussion, *it was voted* that, if the House of Delegates of the American Medical Association votes to levy dues or assessments and to have the monies collected by the state societies, our delegates be instructed to oppose such method of collection.

Disability Benefits Law—Dr. Kaliski brought up the subject of the position to be taken by the State Medical Society at the Joint Legislative Commission hearings the following week on the disability benefits law. He stated that our Society was not represented at the hearings prior to the enactment of the legislation in 1949 and that the Society was told there would be ample time in 1950 to make any amendments to the law, if in their opinion amendments were required. There are certain provisions of the law which are inimical to the best interests of the public and of the medical profession.

After discussion, *it was voted* that included with those who represent the Medical Society of the State of New York should be a representative of our Legislative Committee and our Counsel; that they be empowered to inform the Joint Legislative Committee that the Society is not satisfied with certain provisions of this law and that we are planning to have amendments introduced into the Legislature.

It was voted that the same representatives who attend the Joint Legislative Committee hearings be instructed also to attend the interstate meeting on the Workmen's Disability Benefits Laws.

MEDICAL NEWS

Governor Dewey Offers State Health Program

HIGHLIGHT of the annual message to the State Legislature given by Governor Thomas E. Dewey on January 4 in Albany was an outline for a State health program and opposition to Federal proposals for compulsory health insurance and socialized medicine.

Governor Dewey listed the following goals:

Adequate medical care, readily available, for all residents.

Payment for services rendered, when possible, by persons benefited.

Freedom of choice for doctors and patients rigidly guarded.

No government interference in the practice of medicine except to maintain proper standards.

Encouragement of voluntary medical and hospital insurance plans.

The Governor stated that New York State was demonstrating that a free society could provide for the health of its people "without surrendering its freedom, either in little pieces or in whole, to the Frankenstein state of regulation and regimentation."

MEDICALLY SPEAKING—

Army Acts To Meet Overseas Medical Shortage in Summer Months—Plans for alleviating an anticipated shortage of physicians this summer in overseas theaters have been announced by the Department of the Army. Commanders of Army General Hospitals where resident assignments are authorized are being notified by the Office of the Surgeon General that 100 medical officers are to be selected from first and second year residents to meet temporary medical needs in the European and Far Eastern Commands during summer months. Major General R. W. Bliss, the Surgeon General, emphasized that officers selected would serve only temporarily overseas and would return to their regular residency work during August. Extension of resident periods will cover time lost from formal training.

For further information, apply to the Department of Defense, Office of Public Information, Washington 25, D.C.

To Establish Clearing House for Aids to Disabled—The March of Dimes has made a grant of $19,332 to establish a reference center at the New York University College of Medicine for the listing of current information on aids and appliances for handicapped persons.

The educational project will be under the direction of Dr. Howard A. Rusk, professor and chairman of the department of physical medicine and rehabilitation at the New York University-Bellevue Medical Center. Under the terms of the grant workers will collect all information on rehabilitation aids and prepare the material in loose-leaf manual form for distribution to hospitals, agencies, and certain professional individuals.

Society Reorganized—The Brooklyn Thoracic Society, which became inactive during the war, was reorganized at a meeting on November 15, 1949. Purpose of the organization is to discuss diseases of the chest at the quarterly meetings. Membership is limited to physicians interested in pulmonary diseases. Officers of the society are Dr. Elgie K. Johnson, president, and Dr. Israel Kaufman, secretary-treasurer.

New Periodical to Appear—A new periodical, *Angiology, the Journal of Vascular Diseases*, will make its first appearance this month. *Angiology* will feature original papers relating to all phases of vascular diseases including operative procedures, clinical and laboratory research, and case reports. Published by Williams and Wilkins Company of Baltimore, Maryland, the journal will appear bimonthly. Editor is Dr. Saul S. Samuels of New York City.

David Anderson-Berry Prize for 1950—A David Anderson-Berry Silver Medal, together with a sum of money amounting to about £100, will be awarded during 1950 by the Royal Society of Edinburgh to the person who, in the opinion of the Council, has recently produced the best work on the therapeutic effect of x-rays on human diseases. Applications for this prize are invited. They may be based on both published and unpublished work and should be accompanied by copies of the relevant papers.

Applications must be in the hands of the General Secretary, Royal Society of Edinburgh, 22 George Street, Edinburgh 2, not later than March 31, 1950.

Postgraduate Training in Industrial Health—The General Motors Corporation has announced that, in cooperation with the University of Michigan, it is inaugurating a new type of postgraduate training program in industrial health technics for young physicians who have completed their internships. Under the program, first of its kind to be established in the country, the physicians will be in the employ of General Motors for a period of twelve months. Eight months of this period will be served in the medical departments of General Motors and four months will be spent at the University of Michigan School of Public Health. During the months spent in the medical departments of GM, these physicians will become familiar with the General Motors medical service programs. At the School of Public Health in Ann Arbor, they will study basic introductory courses in public health administration, environmental health, epidemiology, and health economics.

Any physician who has completed his internship in an approved hospital and is interested in industrial health work may apply for this training program through the General Motors Medical Director, General Motors Building, Detroit, Michigan. Applications will be accepted beginning February 1. Physicians now serving their internship may begin this program after July 1, 1950.

Exchange Fellowship Established by Mayo Clinic and New York University—The Physical

Medicine Division of the Mayo Clinic and the Department of Physical Medicine and Rehabilitation of New York University College of Medicine, a unit of the New York University-Bellevue Medical Center, have announced jointly that the two institutions have established an exchange residency training program. Under the new plan, each institution's residents and fellows in physical medicine and rehabilitation will receive three month's training at the other institution.

The new exchange residencies will permit residents and fellows at each institution to have the benefits of the specialized training within physical medicine and rehabilitation which is available at both the Mayo Clinic and the New York University-Bellevue Medical Center. It is another step forward in the permanent union of physical medicine and rehabilitation as one medicine specialty.

Exchange residents from the Mayo Clinic now at the Medical Center are Drs. George Twombly and Paul Nelson. Dr. Edith Kristeller is the Medical Center resident now at the Mayo Clinic.

MEETINGS

Future

New York Academy of Medicine

The New York Academy of Medicine will hold meetings on Wednesday and Thursday evenings, March 1 and March 2, at which investigators of New York City and vicinity will present results of original research in clinical medicine. The meeting is being arranged by the Committee on Medical Education of the Academy.

New York Tuberculosis and Health Association

The annual conference of the New York Tuberculosis and Health Association will be held Tuesday, March 7, at the Hotel Statler, New York City. Various phases of tuberculosis prevention and control will be discussed by outstanding leaders in the field. Election of officers of the Tuberculosis Sanatorium Conference of Metropolitan New York, which will meet simultaneously, will also be held.

American Goiter Association

A three-day meeting of the American Goiter Association will be held March 9, 10, and 11, at the Shamrock Hotel, Houston, Texas. The program will consist of papers dealing with goiter and other diseases of the thyroid gland, dry clinics, and demonstrations.

American College of Surgeons

A two-day sectional meeting of the American College of Surgeons is to be held at the Hotel William Penn, Pittsburgh, Pennsylvania, on March 14 and 15. This meeting will consist of all day and evening conferences on surgical subjects and separate meetings for hospital personnel where hospital problems will be considered at panels and round table discussions.

The surgical program will include some new surgical motion picture films, papers, and panels on such subjects as: arterial lesions of the extremities, hormone therapy in breast lesions, intestinal obstruction, gastric and intestinal intubation, treatment of head injuries, surgery of the hand, surgical lesions of the stomach, cesarean section, management of uterine prolapse, the management of traumatic conditions, and a symposium on cancer.

Members of the Medical Society of the State of New York and personnel of New York hospitals are invited to attend this meeting. The Fellows of the College in Pittsburgh wish to assure all visitors that adequate hotel accommodations will be available and that they will be most welcome at all of the sessions.

Geneva Academy of Medicine

A program of postgraduate instruction, arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York, in cooperation with the State Department of Health, will be held for the Geneva Academy of Medicine on Monday night, March 20, at 8:30 P.M. at the Bellhurst, in Geneva.

Dr. Henry H. Ritter, professor of clinical surgery, New York Post-Graduate Hospital, will speak on "Fractures in General—Treatment of Common Fractures."

National Society for the Prevention of Blindness

The National Society for the Prevention of Blindness will hold a five-day conference in conjunction with the Interim Session of the Pan-American Association of Ophthalmology, March 26 to 30, at the Floridian Hotel, Miami Beach, Florida. The theme of the meeting will be, "The Americas Unite to Save Sight," and among the subjects to be discussed are: current blindness prevention programs in countries of the Western Hemisphere, trachoma, industrial ophthalmology, eye problems of school children medical and social management of the glaucomas.

Persons directly or indirectly concerned with eye health and safety will find this conference of interest. Details concerning the program may be obtained by writing directly to the National Society for the Prevention of Blindness, 1790 Broadway, New York 19, New York.

COUNTY NEWS

Steuben County

Dr. M. W. Guernsey, Corning, president; Dr. E. J. Stevens, Hammondsport, vice-president, and Dr. R. J. Shafer of Corning, secretary-treasurer, were the officers elected at the annual meeting of the Steuben County Medical Society on December 10 at the Hotel Wagner in Bath. A dinner and program on "Treatment of Common Skin Lesions," illustrated with slides and color photography, by Dr. Earl Osborne, professor of dermatology at the University of Buffalo, preceded the business meeting.

Suffolk County

A program of postgraduate instruction arranged for the Suffolk County Medical Society by the State Medical Society with the cooperation of the State Department of Health on January 25 consisted of a symposium on "Obstetrics and Gynecology." Speakers and topics were as follows:

Dr. Claude E. Heaton, associate professor of obstetrics and gynecology, New York University College of Medicine, "The Management of Difficult Labor."

Dr. Frank P. Light, professor of clinical obstetrics and gynecology, Long Island College of Medicine, "Toxemias of Pregnancy."

Dr. Alexander H. Rosenthal, assistant clinical professor of obstetrics and gynecology, Long Island College of Medicine, "The Hemorrhagic State of Pregnancy."

Dr. Gray H. Twombly, assistant professor of cancer research, College of Physicians and Surgeons, Columbia University, "Recognition and Treatment of Pelvic Cancer."

Tioga County

Dr. F. K. Shaw of Waverly was elected president of the Tioga County Medical Society at its annual meeting on December 6. Dr. S. M. Bulkely of Spencer was elected vice-president, and Dr. Ivan N. Peterson of Owego, secretary-treasurer. Dr. Phillip Landers, Binghamton, was the guest speaker. Dr. Landers' topic was, "What the Physician Can Expect from the Ophthalmologist."

Tompkins County

Members of the Tompkins County Medical Society heard a lecture in postgraduate instruction delivered by Dr. Ellery G. Allen on November 21. Dr. Allen, assistant professor of clinical pathology at Syracuse University College of Medicine, chose as his topic "Recent Advances in Hematology." This program was arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York with the cooperation of the New York State Department of Health.

The entire slate of officers of the County Medical Society was re-elected at the annual meeting on December 19. Again serving will be Dr. C. Stewart Wallace as president, Dr. Frederick Beck as vice-president, and Dr. Richmond Douglas as secretary. The office of treasurer, formerly combined with that of secretary, went to Dr. Mary Spahr.

Warren County

At the meeting of the Warren County Medical Society in the Hotel Towers on October 13, Dr. John E. Cunningham of Warrensburgh was elected president of the Society, Dr. C. R. Barber of Glens Falls, vice-president, and Dr. Robert W. Howard, also of Glens Falls, secretary-treasurer.

The January 19 program of the Warren County Medical Society was a lecture in postgraduate instruction arranged by the State Medical Society and the State Department of Health. Dr. Edward Sharkey, instructor in surgery, Albany Medical College, addressed the members on the topic, "The Use of Radioactive Isotopes in Tumor Localization."

Wayne County

On December 13 the Wayne County Medical Society held its annual meeting at the Hotel Wayne in Lyons. Officers for 1950 were elected, and Dr. Jacob D. Goldstein, Genesee Hospital, presented a paper on radioactive iodine.

Westchester County

Named to head the Westchester County Medical Society for the year 1950 at the 152nd annual meeting of the Society on November 15, Dr. Christopher Wood of White Plains, newly elected president, delivered his inaugural address on the subject of compulsory health insurance and its evils. Other members elected to office were Dr. Henry E. McGarvey, Bronxville, president-elect; Dr. Margaret Loder, Port Chester, vice-president; Dr. Reed R. Heffner, New Rochelle, secretary, and Dr. David Fertig, Hartsdale, treasurer.

PREFRONTAL LEUKOTOMY, AN EVALUATION

Although prefrontal leukotomy probably leaves some degree of psychologic impairment, it appears that the operation will, from the standpoint of total behavior, produce results which total up to a net benefit. Admittedly, however, the degrees of impairment and improvement are difficult to estimate. From a survey of the literature, it appears that in chronic cases that failed to improve from other types of therapy, about 10 per cent return, after leukotomy, to a useful place in society. Perhaps another 15 to 20 per cent become partly independent and lead relatively happy lives. Probably 80 per cent of this variety of psychotic cases are more contented and better adjusted than before the operation. Each case will have to be individually assessed, and possible benefits weighed against drawbacks.

Collective experience may be summarized as follows: (1) Tension, apprehension, fear, worry, and agitation are greatly reduced or abolished. (2) Excited and assaultive, aggressive behavior, and ragelike exhibitions tend to increase right after the operation but tend to diminish and disappear after some weeks or a few months. (3) Paranoid ideas either subside or attenuate to a point where they cease to have overt expression. (4) Obsessive thinking becomes less distracting, and compulsive actions or ritualistic are no longer demonstrated. (5) Although rarely entirely disappearing, longstanding hallucinations either disappear or lead to a lessened response. (6) Anergic states, although frequently unchanged, sometimes change to states of greater activity, but sometimes activity may be reduced.

Specific indications are manic-depressive psychosis and involutional melancholia.—*Harry C. Solomon, M.D., J.A.M.A., July 30, 1949*

BOOKS

Books for review should be sent to Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

BOOKS RECEIVED

Migraine Cervicale (Das Encephale Syndrom nach Halswirbeltrauma). By Dr. Werner Bärtschi-Rochaix. Octavo of 188 pages, illustrated. Bern, Switzerland, Medizinischer Verlag Hans Huber, 1949. Cloth, 21.80 Sw.fr.

The Value of Hormones in General Practice. By W. N. Kemp, M.D. Quarto of 115 pages, illustrated. Minneapolis, Burgess Publishing Co., 1949. Paper, $3.00

Shearer's Manual of Human Dissection. Edited by Charles E. Tobin, Ph.D. Second edition. Quarto of 286 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $4.50.

Electrocardiographic Technique. By Kurt Schnitzer, M.D. Oblong sextodecimo of 96 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $3.50.

Healthy Babies are Happy Babies. A Complete Handbook for Modern Mothers. By Josephine Hemenway Kenyon, M.D. and Ruth Kenyon Russell, M.D. Fourth edition. Duodecimo of 310 pages. Boston, Little, Brown & Co., 1949. Cloth, $2.50.

Industrial Toxicology. By Lawrence T. Fairhall, Ph.D. Octavo of 483 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.00.

Rational Medicine. By John W. Todd, M.D. Octavo of 378 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.50.

The 1949 Year Book of Medicine (July, 1948–May, 1949). Edited by Paul B. Beeson, M.D., J. Burns Amberson, M.D., George R. Minot, M.D., William B. Castle, M.D., *et al.* Duodecimo of 831 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $4.50.

Haemoglobin. A Symposium based on a Conference held at Cambridge in June, 1948, in memory of Sir Joseph Barcroft. Edited by F. J. W. Roughton and J. C. Kendrew. Octavo of 279 pages, illustrated. London, Butterworths Scientific Publications, Ltd., New York, Interscience Publishers, 1949. Cloth, $8.50.

Blood and Plasma Transfusions. By Max M. Strumia, M.D., and John J. McGraw, Jr., M.D. Octavo of 497 pages, illustrated. Philadelphia, F. A. Davis Co., 1949. Cloth, $7.50.

Obstetrics and Gynaecology. A Synoptic Guide to Treatment. By Beatrice M. Willmott Dobbie, M.B. (Eng.). Octavo of 358 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $5.50.

Gynaecological Histology. By Josephine Barnes, D.M. (Oxford). Octavo of 242 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $6.50.

German-English Medical Dictionary. Compiled by F. S. Schoenewald, M.D. Octavo of 241 pages. Philadelphia, Blakiston Co., 1949. Cloth, $8.50.

A Practice of Orthopaedic Surgery. By T. P. McMurray, M.Ch.(Belfast). Third edition. Octavo of 444 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $8.00.

A Synopsis of Medicine. By Sir Henry Letheby Tidy, M.D. Ninth edition. Duodecimo of 1,243 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.50.

A Text-Book of Pharmacognosy. By George Edward Trease, Ph.C. Revised with the Assistance of H.O. Meek, Ph.C., H.E. Street, Ph.C., and E. O'F. Walsh, Ph.C. Octavo of 811 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $8.00.

The Origin of Medical Terms. By Henry Alan Skinner, M.B. Quarto of 379 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.00.

Bentley's Text-Book of Pharmaceutics. Revised by Harold Davis, Ph.D., with the collaboration of M. W. Partridge, Ph.D., and A. I. Robinson, Ph.C., with contributions by W. A. Broom, B.Sc., M. Ellis, M.Sc., and H. A. Turner, B.Sc. Fifth edition. Octavo of 1,100 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.50.

The Physician's Business. Practical and Economic Aspects of Medicine. By George D. Wolf, M.D. Third edition. Octavo of 563 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1949. Cloth, $10.

Annual Reprint of the Reports of the Council on Pharmacy and Chemistry of the American Medical Association for 1948 with the Comments that have Appeared in the Journal. Duodecimo of 155 pages, illustrated. Chicago, American Medical Association, 1949.

Biomicroscopy of the Eye. Slit Lamp Microscopy of the Living Eye. By M. L. Berliner, M.D. Volume II. Quarto of 1,512 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $50 set; $35 Volume II alone.

Operations of General Surgery. By Thomas G. Orr, M.D. Second edition. Quarto of 890 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $13.50.

Fundamentals of Otolaryngology. A Textbook of Ear, Nose and Throat Diseases. By Lawrence R. Boies, M.D., and associates, Charles E. Connor, M.D., Anderson C. Hilding, M.D., Jerome A. Hilger, M.D., John J. Hochfilzer, M.D., *et al.* Octavo of 443 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $6.50.

Clinical Biochemistry. By Abraham Cantarow, M.D., and Max Trumper, Ph.D. Fourth edition. Octavo of 642 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $8.00.

Medical Clinics on Bone Diseases. A Text and Atlas. By I. Snapper, M.D. Second completely revised and augmented edition. Quarto of 308 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $20.

Length of Life. A Study of the Life Table. By Louis I. Dublin, Ph.D., Alfred J. Lotka, D.Sc., and Mortimer Spiegelman, F.S.A. Revised edition.

[Continued on page 486]

3 Useful Cardiac Drugs

① **Thesodate** — Brewer IN ANGINA PECTORIS

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Enkide is useful as an adjuvant in tertiary syphilis and wherever potassium iodide therapy is indicated. Enkide insures accuracy of dosage, absence of gastric irritation and convenience of administration. Patients are more apt to follow prescription directions because of these advantages.

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[Continued from page 484]

Octavo of 379 pages, illustrated. New York, Ronald Pr. Co., 1949. Cloth, $7.00.

Group Medicine and Health Insurance in Action. By Robert E. Rothenberg, M.D., and Karl Pickard, M.D., assisted by Joel E. Rothenberg, J.D. Octavo of 278 pages, illustrated. New York, Crown Publishers, 1949. Cloth, $5.00.

Atlas of Obstetric Technic. By Paul Titus, M.D. Illustrations by E. M. Shackelford. Second edition. Quarto of 197 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $7.50.

Life at Letchworth Village. The Fortieth Annual Report of the Board of Visitors for the Fiscal Year Ended March 31, 1949. Octavo of 241 pages, illustrated. [Albany, N.Y.], State of New York, Department of Mental Hygiene, n.d.

Oral Bacterial Infection. Diagnosis & Treatment. By Lyon P. Strean, D.D.S. Octavo of 185 pages, illustrated. Brooklyn, Dental Items of Interest Publishing Co., 1949. Cloth, $5.50.

The Medical Clinics of North America. Massachusetts General Hospital Number. September, 1949. Octavo. Philadelphia, W. B. Saunders Company, 1949. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Stedman's Medical Dictionary of Words Used in Medicine with Their Derivations and Pronunciation Including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and Other Special Terms; Anatomical Tables of Titles in General Use, the Terms Sanctioned by the Basle Anatomical Convention; the New British Anatomical Nomenclature; Pharmaceutical Preparations Official in the U.S. and British Pharmacopoeias or Contained in the National Formulary; and Comprehensive Lists of Synonyms; Biographical Sketches of the Principal Figures in the History of Medicine. Edited by Norman Burke Taylor, M.D., in collaboration with Allen Ellsworth Taylor, M.A. Seventeenth revised edition. With Etymologic and Orthographic Rules. Octavo of 1,361 pages, illustrated. Baltimore Williams & Wilkins Co., 1949. Cloth, with thumb index, $8.50; without thumb index, $8.00.

Iron Metabolism and its Clinical Significance. By A. Vannotti, M.D., and A. Delachaux, M.D. Translated by Erwin Pulay, M.D. Octavo of 267 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $6.50.

Clinical Interpretation of Laboratory Tests. By Raymond H. Goodale, M.D. Octavo of 605 pages, illustrated. Philadelphia, F. A. Davis Co., 1949. Cloth, $6.50.

Clinical Neurology. By Bernard J. Alpers, M.D Second edition. Quarto of 846 pages, illustrated Philadelphia, F. A. Davis Co., 1949. Cloth, $9.50.

BOOKS REVIEWED

Clinical Aspects and Treatment of Surgical Infections. By Frank Lamont Meleney, M.D. Octavo of 840 pages illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $12.

This book has been withheld until antibiotics could be appraised. The author, a general surgeon, is equally renowned as a bacteriologist. The principles of treatment and historical descriptions of the various surgical infections insure continuing interest in his book. Case histories illustrate how methods and results have changed. The discovery of acute appendicitis and the phases of its treatment are thrilling. The author developed the use of zincperoxide for anaerobic and Bacitracin for many pyogenic organisms and describes the technic and results of their use.

William H. Field

Histology and Histopathology of the Eye and Its Adnexa. By I. G. Sommers, M.D. Octavo of 784 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $12.

Having spent some time under Dr. Sommers' personal tutelage, it was with great interest that the reviewer read this book. Knowing Dr. Sommers as a grand teacher, the reviewer found the book was no disappointment. It contains a very complete and beautifully presented normal histology; a section in general pathology, bacteriology, and parasitology, and lastly the section on histopathology. The plates on all eye sections are clear and easily studied. The text reads almost like a novel, which in itself is an accomplishment when dealing with subjects considered dry and didactic. Those interested in the pathology of the eye as well as the practicing ophthalmologist will find Dr. Sommers' book a refreshing and learned treatise on the subject.

C. E. R. Hopkins

Diagnosis of Viral and Rickettsial Infections. Edited by Frank L. Horsfall, Jr., M.D. Symposium held at the New York Academy of Medicine, January 29 and 30, 1948. Octavo of 153 pages illustrated. New York, Columbia University Press, 1949. Cloth,$3.75.

This is the initial publication of the Section on Microbiology of the New York Academy of Medicine. The participants in this excellent symposium on "Diagnosis of Viral and Rickettsial Infections" present extensive, authoritative reviews in their particular fields of endeavor. The result is a comprehensive, outstanding correlation of existing scientific data on the subject.

Due in a large measure to the critical studies of the contributors to the volume, the diagnosis of many viral and rickettsial infections has been placed on a secure footing. Because of the peculiar properties of viruses and rickettsiae, the technical procedures necessary for diagnosis are more or less elaborate. That many present procedures have definite limitations is brought out.

A number of viral infections are not included because there are no satisfactory laboratory procedures which are useful in establishing the diagnosis.

Leo Loewe

Neurological and Neurosurgical Nursing. By C. G. de Guitérrez-Mahoney, M.D., and Esta Carini, R.N. Octavo of 516 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $5.75.

This book is written for the purpose of furnishing a textbook for the training of nurses in the care and treatment of neurologic and neurosurgical patients. The book includes the fundamentals of neuroanatomy, neurophysiology, and neuropathology and an adequate description of the common neurologic and neurosurgical disorders. The subject is well

[Continued on page 488]

"A safe and effective drug to use in controlling weight gain during pregnancy."

Coopersmith, B.I.: Dexedrine and Weight Control in Pregnancy, Am. J. Obst. & Gynec. (Oct.) 1949

Coopersmith reports the successful use of 'Dexedrine' Sulfate Tablets for weight control in a series of 100 obstetric patients. Because 'Dexedrine' curbed appetite and thus enabled these patients to follow their prescribed diets, control or reduction of weight was achieved in virtually all cases. It is noteworthy that other methods, including the use of thyroid, had previously failed to prevent excessive weight gain in these same individuals. "Thyroid", Coopersmith states, "increases the appetite . . . and is toxic in many cases." "Dexedrine Sulfate", the report concludes, "is a safe and effective drug to use in controlling weight gain during pregnancy."

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[Continued from page 486]

presented, and the book is recommended as a text for student nurses and for all others who are taking care of neurologic and neurosurgical patients.

Irving J. Sands

The Story of Scabies. Vol. I. By Reuben Friedman, M.D. Octavo of 468 pages, illustrated. New York, Froben Press, 1948. Cloth, $7.50.

This book of 468 pages is the first of four volumes on scabies by the author. It is divided into five sections, which include the prevalence, prevention, and treatment of scabies and also the biology of the acarus scabiei. The latter section, which takes up 172 pages, is probably the most interesting and covers the evolution of our knowledge of the acarus, its position in the animal kingdom and a complete description of the mite in all its phases. The book is well written and profusely illustrated and has a good bibliography. It can be highly recommended, not only to the dermatologist, but to anyone interested in the subject of mites.

Abraham Walzer

Modern Foot Therapy. By Reuben H. Gross, Pod.D., in collaboration with Henri L. DuVries, M.D., Charles E. Krausz, D.S.C., Samuel L. Robbins, M.D., and Lloyd E. Wilson, M.D. With chapters by 15 others. Octavo of 710 pages, illustrated. New York, Modern Foot Therapy Publishing Co., 1948. Cloth, $9.50.

The many different chapters of this work are written by separate contributors. Due to the overlapping of the subjects for discussion, there is a great deal of repetition in the book. It would be well to prevent and remove this repetition in a next edition. This would make for a better and smaller textbook and would be easier reading.

Sixty-six pages are devoted to peripheral vascular diseases. This group of diseases that affect the foot should be more widely emphasized.

Fractures do not belong in the field of the podiatrist.

Under the title "Dysbasia Pododynia," which is an excellent chapter, the following quotes are found: "The weakfoot syndrome and the treatment based on its principles have been a part of podiatric practice for many years. . . . . A review of podiatric literature . . . . failed to reveal one reported cure of this condition. It will be shown that those changes which occur in the feet upon weightbearing, and which have been described as a pathologic condition (weak foot) are normal, and that these actions are the result of physiologic functions necessary for normal locomotion. It is obvious that there is neither treatment necessary, nor cure desired, for a normal condition. However, these feet may become painful and require treatment to eliminate the symptoms."

The above statements are very true and physicians and podiatrists should take notice of this fact.

Otho C. Hudson

The Business Side of Medical Practice. By Theodore Wiprud. Second Edition. Duodecimo of 232 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $3.50.

This little book serves its purpose very well. It would be carping criticism to seek out the points, mostly minor, in which a physician would disagree. After all, its title is "The Business Side." The author offers good advice to the doctor, who is apt to be unwilling to give his "business" the attention it deserves.

Walter D. Ludlum

Clinical Toxicology. By Clinton H. Thienes, M.D., and Thomas J. Haley, Ph.D. Second edition. Duodecimo of 373 pages, illustrated. Philadelphia, Lea & Febiger, 1948. Cloth, $4.75.

This is a revised textbook on toxicology, grouping poisons according to major toxic action and their antidotes. Particularly interesting is the section on "convulsant poisons" affecting the central nervous system.

To physicians and students who recognize the development of synthetic chemistry, this book should prove to be of inestimable value.

S. Ingram Hyrkin

Human Biochemistry. By Israel S. Kleiner, Ph.D. Second edition. Octavo of 649 pages, illustrated. St. Louis, C. V. Mosby Co., 1948. Cloth, $7.00.

Although biochemistry was originally regarded as a branch of organic chemistry dealing with the analysis of living structure and its metabolites, it has gradually evolved to incorporate the functional aspects of the material it dealt with. This has been a fortunate direction for the development of a basic discipline, for it has become an applied science so interwoven with medicine that, today, it may be more logically regarded as medical chemistry. This trend was seen in Kleiner's excellent first edition and is further exemplified in this second edition. It is permeated throughout with the clinical implications in biochemical alterations.

It is readily apparent that the next great development in medical chemistry will be the exploitation of isotopes both as tracers and thereapeutic agents. It is already off to a propitious start.

This book is a fine didactic summary of the known chemical processes as seen in health and disease.

William S. Collens

Aesculapius Comes to the Colonies. The Story of the Early Days of Medicine in the Thirteen Original Colonies. By Maurice Bear Gordon, M.D. Octavo of 560 pages, illustrated. Ventnor, N.J., Ventnor Publishers, Inc., 1949. Cloth, $10.

This comprehensive and definitive historical study is the work of a Dr. Maurice Bear Gordon, a graduate of 1940, and one of the sixteen doctors living in Ventnor, Atlantic County, New Jersey, the population of which is listed as 7,905. Dr. Gordon must be a busy general practitioner who still found time to devote at least two hours each day to the preparation of almost endless pages of quotations from original accounts, reproductions of Colonial documents, and references to contemporary newspapers and advertisements. He modestly hopes the readers will enjoy the book as much as he did its assembling.

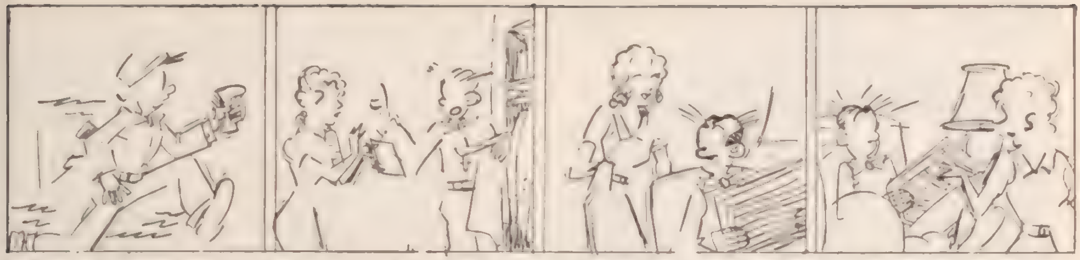
On the paper jacket, it is noted that five physicians signed the Declaration of Independence. Because of the active part that Colonial physicians played in statesmanship and politics, this book has added interest, besides the accounts of medical matters and the story of medical education in the thirteen original colonies.

Joseph Raphael

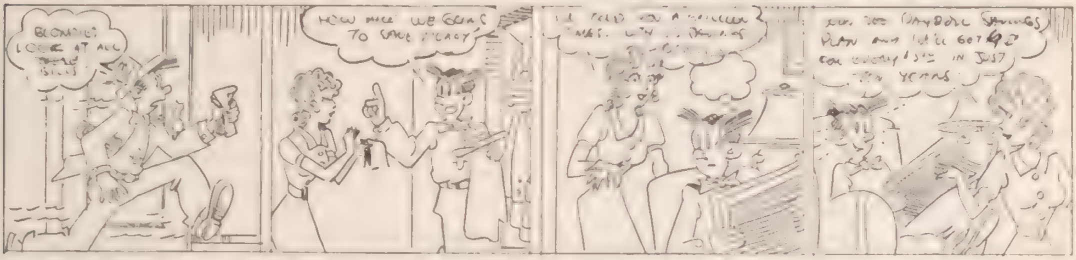
Microbiology and Man. By Jorgen Birkeland, Ph.D. Second edition. Octavo of 525 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

This book tells about the part played by microorganisms in the environment of man. The introduction to infectious disease is fairly complete, dealing with the principles of infection, immunity, and epidemiology. The order in which the diseases are

[Continued on page 490]



This is how Chic Young, the cartoonist, makes a first rough sketch for the famous strip.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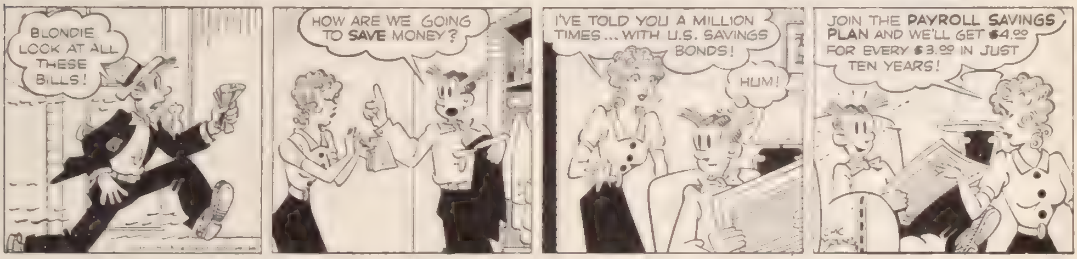
Then when each panel in a strip meets his approval, he makes a careful pencil rendering as above.


BLONDIE LOOK AT ALL THESE BILLS!
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I'VE TOLD YOU A MILLION TIMES... WITH U.S. SAVINGS BONDS!
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[Continued from page 488]

taken up is based, in general, on the manner of transmission of the infectious agent and on the site of the disease. There are also chapters dealing with the microbiology of food, milk, water, sewage, and bacteriologic warfare. EDWARD H. NIDISH

The Medical Clinics of North America. New York Number. May, 1949. Octavo, illustrated. Philadelphia, W. B. Saunders Co., 1949. Published Bi-Monthly (six numbers a year). Cloth, $18 net; Paper, $15.

The New York number of *Medical Clinics of North America* contains an extensive symposium on cardiovascular disease as well as five other clinics. The articles in the first symposium are treated by able workers in their field. Of special excellence are the papers by Ranges, Dock, Gross, and Jezer. Dock's highly stimulating paper on the neuralgic features of angina pectoris will undoubtedly arouse much discussion. It presents a fresh view of a difficult subject. MILTON J. PLOTZ

Problems of Early Infancy. Transactions of the Second Conference March 1–2, 1948, New York, N.Y. With Supplement Covering Special Meeting, July 18-19, 1947, New York, N.Y. Edited by Milton J. E. Senn, M.D. Octavo of 120 pages, illustrated. New York, Josiah Macy, Jr. Foundation, n.d. Paper, $1.00.

The purpose of the conference was to establish the relationship of the emotional conflicts of the pregnant mother to premature interruption of the pregnancy, and to assess the possible psychologic effects of such conflicts upon the infant in utero as reflected in the behavior of the baby in the newborn period. No conclusions are drawn, but the evidence, as presented in the formal papers and the general discussions, indicates that deep personal conflicts may lead through toxemias or other influences to premature delivery. Nothing is shown to suggest a psychologic effect upon the unborn infant.

A supplement contains the short formal papers presented by prominent pediatricians of France, Holland, Sweden, and Switzerland, depicting the effects of World War II upon the behavior of the children of their respective countries. The whole booklet is interesting but of no outstanding and permanent value. KENNETH G. JENNINGS

Help Yourself to Better Sight. By Margaret Darst Corbett. Duodecimo of 218 pages, illustrated. New York, Prentice-Hall, 1949. Cloth, $2.50.

The author of this book is a disciple of the late Dr. Bates, a renegade ophthalmologist, who became notorious through his sensational book titled *Throw Away Your Glasses*. Mrs. Corbett pays generous homage to Dr. Bates in her introduction and also tells us that her school of eye education was approved by the Veterans Administration.

The principle of Bates' method reiterated in this new book is essentially a simple one in theory. Dr. Bates reasoned that if people could learn to exercise their accommodation for "near," they should also learn to relax their eyes. On this hypothesis he built his fanciful book. A near-sighted person, according to Bates, could learn to see distinctly for "far" without glasses if he could only relax his accommodation. Around this wishful teaching he accumulated a group of propagandists and a following of thousands of gullible adherents.

This book is written in pleasing style and on that alone it should prove appealing. Mrs. Corbett keeps her readers busy with many psychotherapeutic rituals which have such fancy names as palming, blinking, triangle swings, elephant swings, and other meaningless formulas to hypnotize the person who is constantly worried about failing sight. Whether one agrees or disagrees with Mrs. Corbett's defense of the Bates method, she will no doubt appeal to a section of the public which is abnormally eye-conscious or persons who have failed to obtain mental relief from their ophthalmologists.

EMANUEL KRIMSKY

The New York Academy of Medicine. Its First Hundred Years. By Philip Van Ingen, M.D. Octavo of 573 pages, illustrated. New York, Columbia University Press, 1949. Cloth, $10.

The history of the New York Academy of Medicine from its inception in 1847 to the present is described in detail in this volume, which was assembled from the annals, records, reports, and minutes of the Academy. From a small group of 185 doctors, whose initial purpose was to elevate the character of the profession, it has grown to a membership of over 2,400 interested in all phases of medicine and public health, with a library of over 250,000 volumes and 150,000 pamphlets.

By reading this volume, one not only learns about the Academy of Medicine but about the medical personalities and the medical problems of the period.

The photographs of the past presidents and of the previous homes of the Academy are interesting. However, the present home and library should have been included for comparison.

NATHAN MILLMAN

A Course in Practical Therapeutics. By Martin Emil Rehfuss, M.D., F. Kenneth Albrecht, M.D., and Alison Howe Price, M.D. Quarto of 824 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $15.

An attempt has been made to combine graphically a medical textbook with a therapeutic manual, despite the recognized hazard of such an approach. Based on popularity alone, the attempt has been vindicated. Profuse full page sketches summarize symptoms, signs, and diagnostic and therapeutic principles. The text is presented in outline form in large type. Symptomatic and specific therapy in general practice are emphasized. The medical student may well find this work as practical as the physician will. One major criticism, however, is the carryover of Galenic principles and multiple-drug prescriptions. Such minor drawbacks, however, are to be overlooked for the general advantages of the text. It may well serve as a review book for the busy practitioner.

ALFRED R. LENZNER

Conference on Metabolic Aspects of Convalescence. Transactions of the Sixteenth Meeting, New York, N.Y., October 27–28, 1947. Edited by Edward C. Reifenstein, Jr., M.D. Octavo of 168 pages, illustrated. New York, Josiah Macy, Jr. Foundation, n.d. Paper, $3.00.

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1. Cooke, R. A.: in Textbook of Medicine (Cecil). Philadelphia, W. B. Saunders Company, 1947; seventh edition, p. 528.
2. Nevius, W. B.: J. M. Soc. New Jersey 46: 17 (1949).
3. Rosen, F. L.: ibid. 45: 389 (1948).

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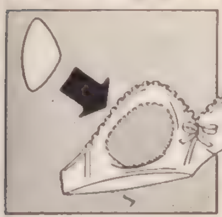

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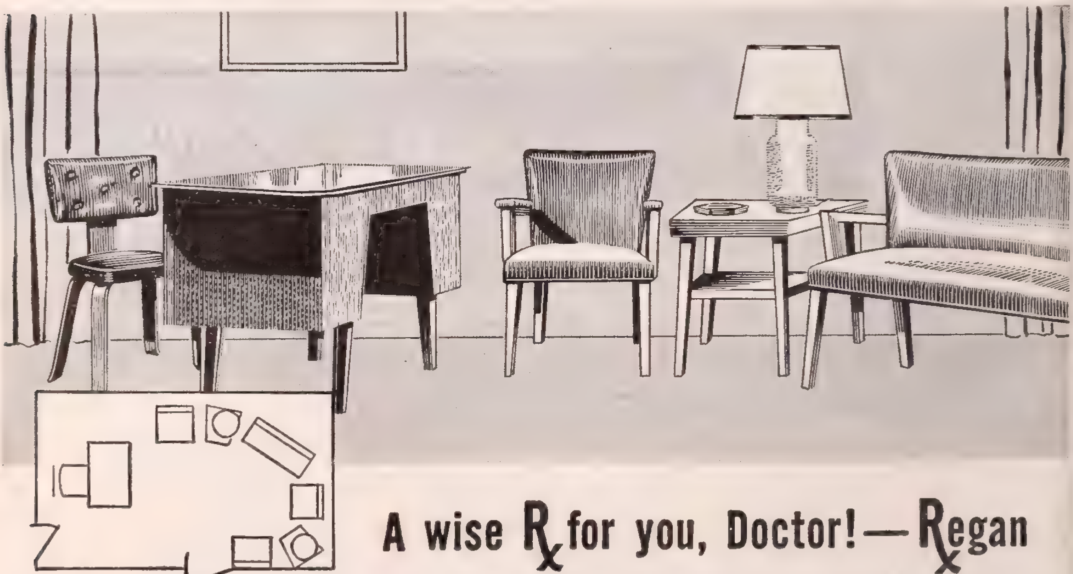

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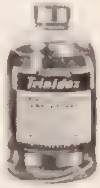

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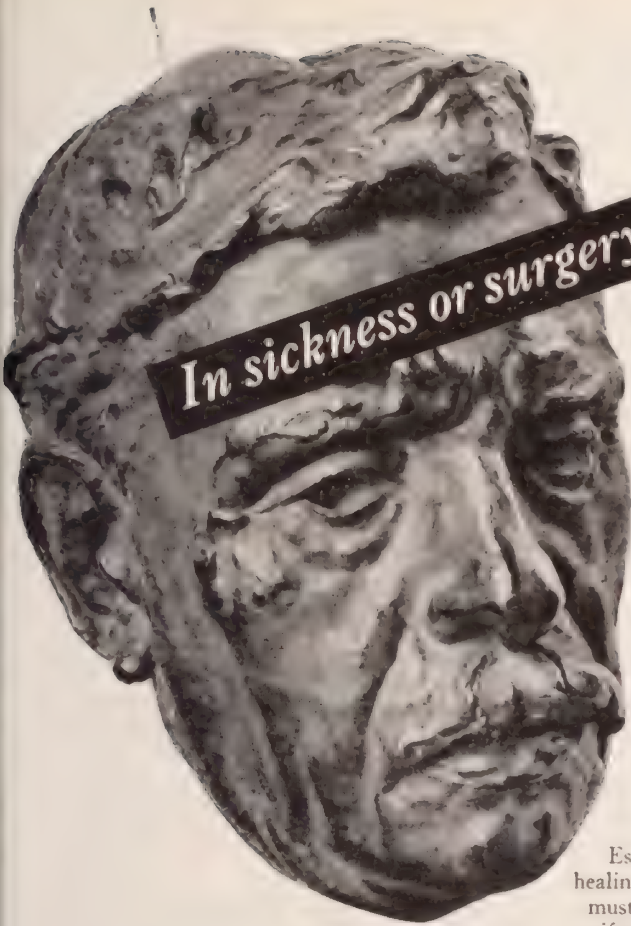
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REFERENCES: 1. Coller, F. A. and DeWeese, M. S.: Preoperative and Postoperative Care, J.A.M.A., 141:641, 1949. 2. Jolliffe, N. and Smith, J. J.: Med. Clin. North America, 27:567, 1943. 3. Kruse, H. D.: Proc. Conf. Convalescent Care, New York Acad. Med., 1940. 4. Spies, T. D.: Med. Clin. North America, 27:273, 1943.

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highly soluble uncoated tablet

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long-acting antihistaminic of low toxicity

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available: bottles of 100 tablets, 25 mg. Chlorothen Citrate per tablet.

bibliography: (1) Litchfield, J. T. Jr., and others: Bull. Johns Hopkins Hosp. 81:55, 1947. (2) Feinberg, S. M.: Quart. Bull. Northwestern Univ. M. School 22:27, 1948.

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S.K.F. announces

Dexamyl

a balanced combination
of 'Dexedrine'
& 'Amytal'

the remarkable new preparation for relieving mental and emotional distress

In 'Dexamyl', the two components—'Dexedrine'* and 'Amytal'†—work together* to ameliorate mood; to relieve inner tension; and thus to control troublesome symptoms of mental and emotional distress:

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*Trademark, S.K.F. †Trademark, Lilly

Smith, Kline & French Laboratories, Philadelphia

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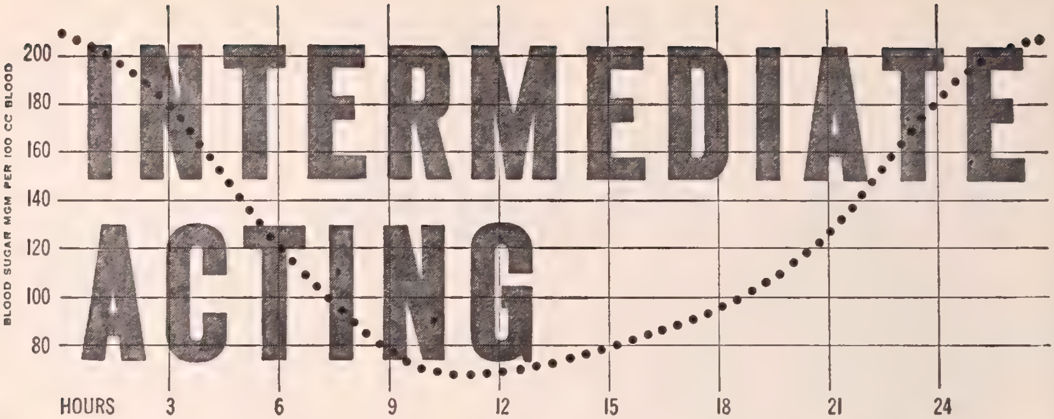

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10 cc.
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GLOBIN INSULIN
WITH ZINC
80 UNITS IN 1 CC.
KEEP IN A COLD PLACE
Burroughs Wellcome
MADE IN U.S.A.

'B.W. & CO.'—*a mark to remember*

1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.

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"Aspergum
every 3 hours
for sore throat..."*

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*Rehfuss, M. E., Albrecht, F. K., and Price, A. H.: A Course in Practical Therapeutics, Baltimore, The Williams & Wilkins Co., 1948, p. 371.

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ANTIPHLOGISTINE RUB A-535 has been thoroughly tested both clinically and in more than 6,000 homes. It was created for the symptomatic relief of the aches and pains of Chest Colds, Arthritis, Rheumatism, Neuritis, Sprains, Sore Muscles, and Headaches.

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RUB A-535 . . . is a counter-irritant and analgesic which stimulates local circulation and brings comforting warmth by producing active hyperaemia in the areas to which it is applied.

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RUB A-535 . . . may be used by children as well as adults. It is pure white, stainless, and has a pleasant refreshing odor.

RUB A-535 . . . may be used following diathermy, infra-red lamps, baking, and other forms of physio-therapy. It is ideally suited for use between office treatments.

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May we send you, with our compliments,
A full size tube of RUB A-535?

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a **new**

antibacterial

agent . . .

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B. Brussel-Smith

to feed the flame of youth... or bank the embers of age

In geriatrics or pediatrics, indeed, in every field of medical practice, protein therapy is of fundamental importance; and for most patients the safest, most practical and most effective regimen is whole protein, by mouth.

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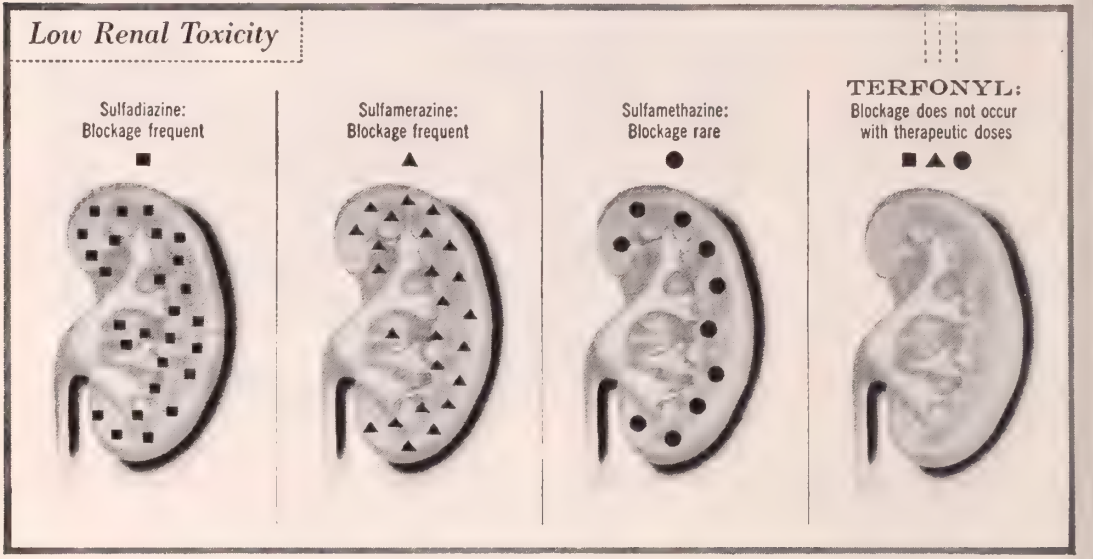
Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFE SULFONAMIDE THERAPY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Sulfadiazine: Blockage frequent ■
Sulfamerazine: Blockage frequent ▲
Sulfamethazine: Blockage rare ●
TERFONYL: Blockage does not occur with therapeutic doses ■▲●

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Terfonyl contains equal parts of sulfadiazine, sulfamerazine and sulfamethazine, chosen for their high effectiveness and low toxicity.

Terfonyl Tablets, 0.5 Gm. Bottles of 100 and 1000

Terfonyl Suspension, 0.5 Gm. per 5 cc.
Appetizing raspberry flavor • Pint bottles

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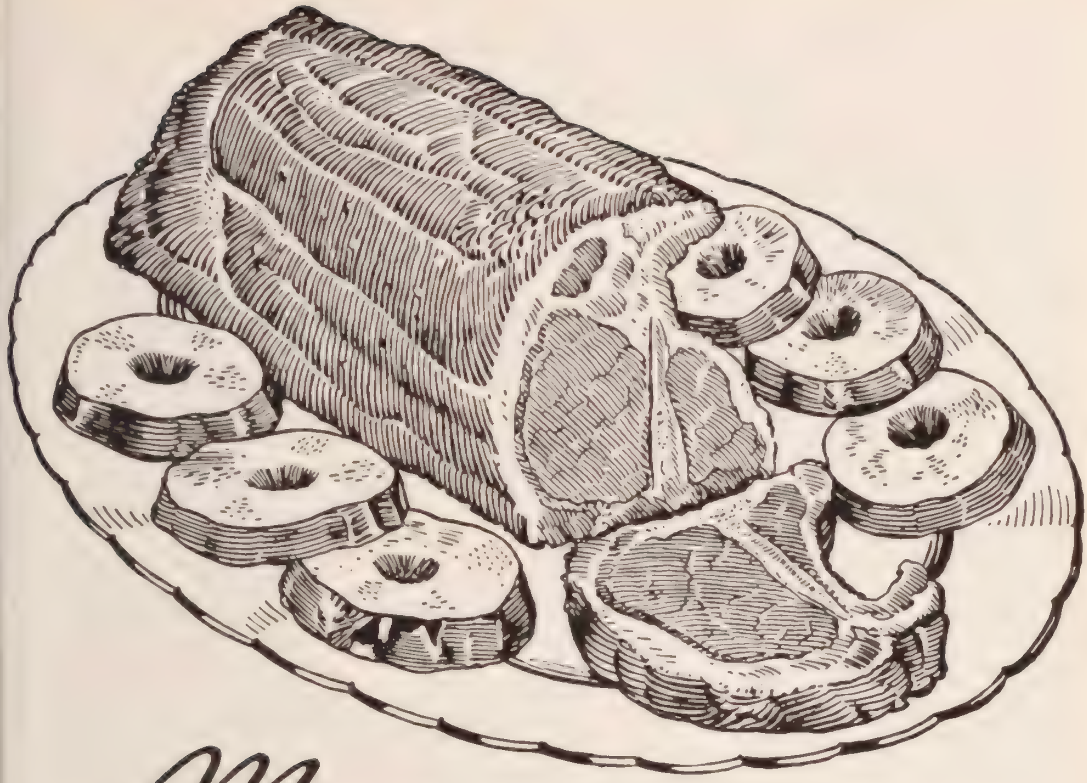

Meat...

Outstanding Value . . .

Outstanding Nutritional Benefits

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1. Biologically complete protein . . . the kind which satisfies the requirements for growth and which is needed daily for tissue maintenance, antibody formation, hemoglobin synthesis, and good physical condition.
2. The essential B complex vitamins, thiamine, riboflavin, and niacin.
3. Essential minerals, including iron in particular.

In addition to these tangible values, meat ranks exceptionally high not only in taste and palate appeal, but also in satiety value.

The instinctive choice of meat as man's favorite protein food has behind it sound nutritional justification.*

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

---

*McLester, J. S.: Protein Comes Into Its Own, J.A.M.A. *139*:897 (Apr. 2,) 1949

American Meat Institute

Main Office, Chicago...Members Throughout the United States

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Digitaline Nativelle digitalizes in hours—maintains the maximum efficiency obtainable. *Positive maintenance*—because absorption is complete and the uniform rate of dissipation provides full digitalis effect between doses. All, with virtual freedom from side reactions.

Digitaline Nativelle

Chief active principle* of digitalis purpurea (digitoxin)

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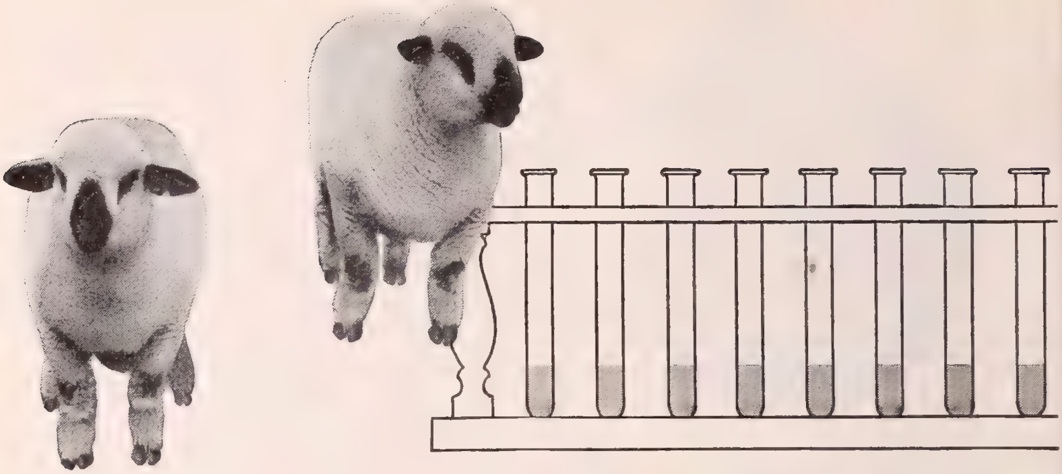

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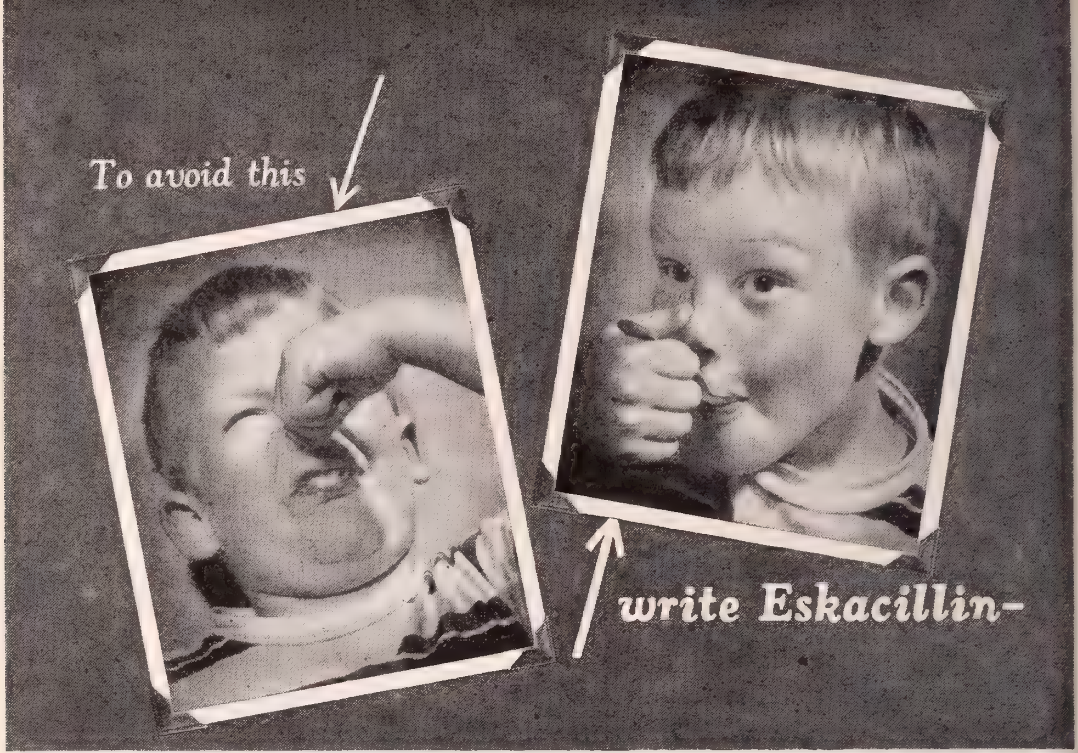

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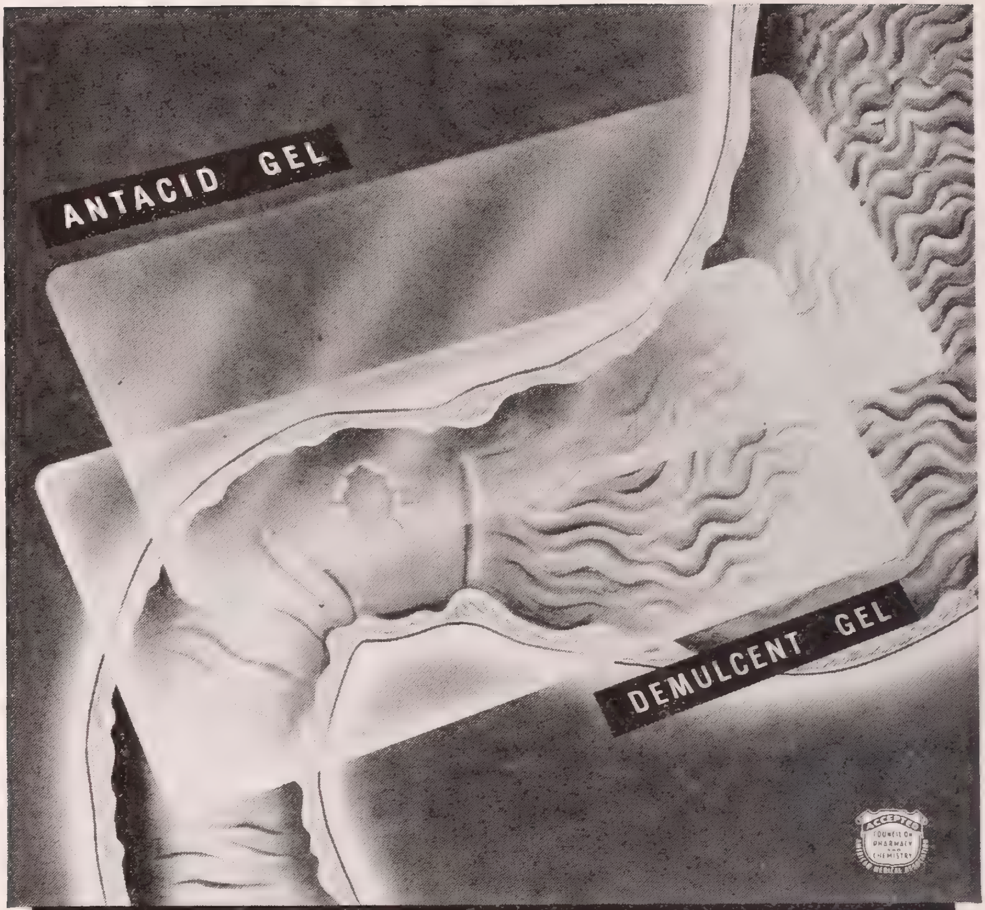

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(1) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (2) Wilkins, et al.: J.A.M.A. 140: 261-265, 1949.

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Editorials

The Annual Meeting Draws Closer

On Monday, May 8, 1950, the 144th Annual Meeting of the Medical Society of the State of New York will be officially begun when the House of Delegates is called to order at 10:00 A.M. It is hoped that all members who can will plan to attend. *Make your hotel reservations now.* The meeting will be at the Hotel Statler, Seventh Avenue and 33rd Street, New York City. Since a large attendance is anticipated, it is doubly important to make hotel reservations well in advance.

May 8 will be the 128th day of the year; sun rises 4:46 A.M., sets 7:00 P.M. E.S.T.; the day has 14 hours and 14 minutes; moon rises 1:08 A.M., sets 5:50 A.M. aged 21 days; the sun's declination 17 deg. 04′.[1] These astronomic data, as you have surmised, add up to the fact that Spring will be in the air and, we hope, in your hearts. Whether you plan to come by air, bus, or automobile, by steam, electric, or diesel train, by bicycle, subway, or on roller skates, afoot or horseback, by ox team and Conestoga wagon, or whatever, make your plans now. Watch for the April 1st issue of the JOURNAL, the Convention number.

---

[1] Old Farmer's Almanac, 1950.

Chronic Disability Control

Realizing the growth of professional interest in the fields of physical medicine and rehabilitation and their important role in meeting the ever-increasing problems of chronic disability, the Medical Society of the State of New York recently formed a combined Subcommittee on Physical Medicine and Rehabilitation. One of the primary purposes of the new Subcommittee will be to provide an educational program within the framework of the Society for further indoctrination and education of both general practitioners and specialists in these increasingly important aspects of medicine. The Subcommittee, in its educational program, will emphasize particularly that the physician's responsibility is not ended until the patient has been provided with every known treatment and retraining technic which will enable him to live the fullest life possible with his physical capacities.

The Subcommittee recently met with representatives of the New York State Department of Health to discuss the participation of the Medical Society in the State Health Department's cerebral palsy program.

A liaison committee on cerebral palsy has also been appointed, which will meet periodically with the State Health Department to review its plans and to formulate certain basic principles that should be followed in both primary and secondary cerebral palsy treatment-training centers. *The Subcommittee also urges the profession to comply with the recent State mandate of reporting all cerebral palsy cases.*

As its first educational program, the Subcommittee will present a clinical demonstration at the meeting of the Medical Society in New York City on May 9, 1950, on procedures that can be carried out by general practitioners and specialists in their own practices in the management and rehabilitation of persons disabled by poliomyelitis, amputations, hemiplegia, and paraplegia.

The individual members of the Subcommittee have also expressed a willingness to participate in the presentation of papers and clinical demonstrations to any county society or other group within the framework of the State Medical Society on the problems of rehabilitation of the chronically ill and disabled. Members of the Subcommittee are: Donald A. Covalt, M.D., Clinical Director, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, New York City; Alfred L. Lane, M.D., Director, Physical Medicine and Rehabilitation Service, Rochester General Hospital, Rochester; Richard Kovacs, M.D., Chief, Physical Medicine Service, New York Polyclinic Hospital, New York City; Walter S. McClellan, M.D., Medical Director, The Saratoga Spa, Saratoga Springs; George M. Raus, M.D., Professor of Physical Medicine and Rehabilitation, Syracuse University College of Medicine, Syracuse; George G. Deaver, M.D., Professor of Clinical Physical Medicine and Rehabilitation, New York University College of Medicine, New York City; Arthur S. Abramson, M.D., Assistant Chief, Physical Medicine Rehabilitation, Bronx Veterans Administration Hospital, New York City; Austin J. Canning, M.D., Director, New York State Rehabilitation Hospital, West Haverstraw; Norman Egel, M.D., Chief Orthopedic Surgeon, Genesee Hospital, Rochester; George W. Kosmak, M.D., Editor, NEW YORK STATE JOURNAL OF MEDICINE, and Howard A. Rusk, M.D., Professor and Chairman of the Department of the Physical Medicine and Rehabilitation, New York University College of Medicine, Chairman.

The JOURNAL cannot too strongly commend the plans and program of the Subcommittee on Physical Medicine and Rehabilitation to the attention and acceptance by the membership of the Society. Any procedure which offers the reasonable prospect of reclaiming persons disabled from disease or injury should be followed up to the limit by the medical profession. The resources of modern therapy must be employed to the full extent of their possibilities, and this opportunity made available by the Subcommittee on Physical Medicine and Rehabilitation should be followed up by every member of the medical profession in the State.

What of the Future?

In a recent discussion of "Social Morality and the 'Cradle-to-the-Grave' Philosophy," Frank G. Dickinson, of the American Medical Association staff, posed some very practical questions which in some manner will have to be answered.[1] Scanning the health progress of the half century 1900–1950, he points out that "the older half of the people dying in 1900 had lived thirty years or more, and the older half of the people dying this year (1949) have lived sixty-six years or more. The median age at death has advanced about thirty-six years." He sees in that advance a social revolution deriving from the fact that the distance from the cradle to the grave is much longer for the average man. In 1900, "one third of the people dying had lived half a century. About three fourths of the people dying this year, 1949, have lived fifty years or more." Most of those living in 1900 "were close to the cradle. Most of the people living today are far from their cradle days."

Medical and health progress have come so fast that the general problem of today is the difficulty of digesting the results and of integrating them with our social institutions and our way of life.

In 1900, 1,000 babies were expected to live a total of 49,000 years, provided health conditions remained the same as in 1900; an average group of 1,000 babies born in 1949 were expected to live a total of 68,000 years. Of the first group 57 per cent were expected to be alive in 1950, but actually, due to improved health conditions since 1900, 65 to 69 per cent of them will be alive in 1950. The population has doubled since 1900, but the number of people sixty-five and over has quadrupled. In 1933, the *best* state in the Union had a maternal mortality rate of 4.3 deaths per thousand live births, while in 1948, the *worst* state had a rate of 2.7.

The doctor can only change the age and cause of death. However, medicine is only one factor in this. Sanitation, food, and housing all play a part. While there is no "adequate" medical care for the family of a dying man, the quest for better health, for longer life, for improved medical care will never end; all that medical care can become is better; we can improve it, even if we can never perfect it.

What economic problems are posed by our increased longevity and the increasing proportion of the aged in the population? Says Dr. Dickinson: "The American people have chosen to set aside about 96 per cent of their family budgets for items other than medical care. It's not my decision; it's not your decision; it's not the decision of the American medical profession; and it certainly is not the decision of anyone in Washington. It's the decision of all the people . . . We live in a free society . . . . It's not so much a question of what (the people) can *afford to spend* as what they *choose to spend* for medical care." Under the "cradle-to-the-grave" scheme of social security involving enormous expenditures, can there be postulated at least a willingness on the part of those close to the grave to fasten themselves on the paychecks of those closer to the cradle? If so, Sinbad the Senile, the creature of health progress and fast gaining weight, can become a crushing burden on the shoulders of youth.

With the proportionate voting strength of the older population increasing, how far will that power be used to exploit youth? It is a grave problem of social morality. Dr. Dickinson asks: "Do we want to have our paychecks clipped for a few years and then retire with the assurance that those at the working ages will provide us with free medical care, free housing, free food—anything you want to name—while we spend our income during our retired years as we see fit?"

There is a grave question of social morality involved. How will it be answered? Shall we ride piggyback to the grave on the shoulders of those who are now children? "Shall we press down upon the brow of our own youth," asks Dr. Dickinson, "this crown of security thorns? Health progress has given us the power to do so!"

---

[1] John B. Andrews Memorial Symposium on Labor Legislation and Social Security, University of Wisconsin, November 4 and 5, 1949.

Sickness levels pride, and death makes us all equal.—Anonymous

An Important Decision. Of special interest to surgeons is the decision of Judge Julius Miller on April 16, 1947, in the case of C. R., an infant over the age of fourteen years, by E. R., her guardian *ad litem*, and E. R., plaintiffs *vs.* E.W.D., defendant, in Part XII, Supreme Court, New York County. After careful consideration of the proof submitted, in this case of alleged negligence, Mr. Justice Miller rendered the subjoined opinion which was affirmed by the Appellate Division of the First Department (November 19, 1948); on appeal, the Court of Appeals (January 14, 1949) denied a motion to review the decision of the Appellate Division, and it is now decided law in the State. Judge Miller's decision:

> The plaintiff did not employ the defendant to perform the operation. The operation was performed by a Doctor Lighthizer, the house surgeon, at the request of St. Vincent's Hospital. The defendant undertook to be present in the operating room, and while there to supervise the operation at the request of St. Vincent's Hospital. The latter also provided the anesthetist and attending nurses. The defendant did not employ or select the operating surgeon, or any of the nurses who were present at the time of the operation.
>
> There was no evidence of any negligence on the part of the defendant in permitting the house surgeon to perform the operation and in permitting those present to assist; nor does the evidence reveal any acts performed by the defendant in concert with the operating surgeon.
>
> It was proper practice on the part of the defendant to permit the house surgeon to clean off the iodine. There is no testimony that the house surgeon was incompetent to suture the skin and remove the iodine, and it was proper practice to permit him to do so. Whether or not the operation is complete to all intents and purposes after the skin has been sutured, there was here no failure on the defendant's part to act as a reasonably careful and prudent doctor in leaving the operating room and entrusting to the house surgeon and nurses furnished by the hospital the closing of the skin of the plaintiff and the removal thereafter of the iodine from the skin.
>
> In the circumstances here disclosed, it would be unreasonable to require the defendant to anticipate that the house surgeon or the nurses in attendance, persons deemed to be efficient by those in charge of the hospital, would or might apply to the skin, for the purpose of removing the iodine, carbolic acid, a substance known to laymen to be dangerous to the skin.
>
> It would also be unreasonable to require the defendant to anticipate that the house surgeon or the nurse in attendance, or both of them, might make a mistake and inadvertently apply carbolic acid instead of alcohol, or any other harmless substance in removing the iodine.
>
> The plaintiff has not sustained the burden of establishing that it was contrary to proper practice for the attending surgeon to leave the operating room while the skin is being sutured by the house surgeon. There was no negligence on the part of this defendant which was the proximate cause of the injury to the plaintiff.
>
> Judgment is directed for the defendant dismissing the complaint on the merits.

Any reader interested in the details of this action for alleged malpractice is referred to the trial record, which limitations of space do not warrant our reproducing here. The decision of Judge Miller is clear and merits careful study.

Those are the best critics who have the most judgment, and the least ill-nature.—Anonymous

---

An Outstanding Medical Library. At the recent annual meeting of the New York Academy of Medicine, its president, Dr. Benjamin P. Watson, in his annual address directed attention to the importance of the Academy library, which now numbers over 260,000 volumes, and catered to over 45,000 readers during the past year. The only other institution in this country of equal resources is the Army Medical Library in Washington, D.C. The necessary expenditures for this activity total more than 35 per cent of the Academy's budgeted income, and the quarters for housing this large collection of books must be further expanded to meet the constant growth. The City of New York may well be proud of its medical library and the great service which it renders to the profession, the public, and industry. It merits the recognition of our citizenry and their support.

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Scientific Articles

INDUCED CARDIAC ANOXEMIA AND CORONARY ARTERY DISEASE

STEWART F. ALEXANDER, M.D., STANLEY J. WITTENBERG, M.D., EARL T. BROWN, M.D., and ARNOLD KOFFLER, M.D., New York City

(*From the Fourth Medical Division, Bellevue Hospital*)

APPROXIMATELY one out of four patients, in whom the diagnosis of anginal syndrome is made, show objective signs of coronary insufficiency, making the interpretation of precordial pain difficult and often subjective.[1] In the effort to establish objective criteria for diagnosis the exercise tolerance and induced anoxemia tests have been developed as procedures helpful for this purpose.

The use of artificially induced anoxemia in the study of coronary artery disease has been employed now for some years in the attempt to establish the presence of organic coronary disease in individuals presenting the anginal syndrome. Recent surveys have covered the background of the technic and its physiologic basis. Despite the presentation of large series of investigations by several groups of observers, the technic has not claimed a wide following. The principal objections have centered about the potential danger of the test and the absence of value of a negative test. It has been felt that it was a time and effort-consuming procedure that revealed little more than the simpler stress or exercise tests.

As early as 1921, Green and Gilbert reported electrocardiographic changes resulting from induced anoxemia.[2] Katz *et al.* and Rothchild and Kissen produced similar results.[3,4] However, these early workers used a rebreathing apparatus which did not supply a constant oxygen supply. Larsen reported results obtained by maintaining a 9 per cent oxygen mixture in 1938.[5]

Levy and his coworkers have published a series of reports which have served to standardize the method of criteria for subsequent investigators.[6–9] Barnett *et al.* in 1941 studied a group of patients using Levy's method and concluded that the test produced normal responses in abnormal subjects and abnormal responses in normal subjects too frequently.[10] They also pointed out the dangers of the test. Levy and his coworkers explained these results by differences in altitude, technic, and selection of cases.

In the past ten years, investigators here and abroad have published results of the use of Levy's method and criteria of induced anoxemia in the study of coronary insufficiency, and the results have been relatively uniform.[6–15] Patients, in whom the clinical diagnosis of anginal syndrome is relatively certain, show positive results in 30 to 70 per cent, varying with different investigators. Biorck, a Swedish investigator in 1946, published a scholarly review of the subject and compared the results of different groups.[12]

The problem of difference in oxygen saturation of the blood with the same oxygen percentage in the inspired air has presented a technical problem which has been partly solved by the use of the millehan oximeter which measures the oxygen saturation rapidly. Burchell, Pruitt, and Barnes found that study of the oxygen saturation added little of practical value to the test.[14] Results in which oxygen saturation was kept constant were not consistent. These observers also found that the use of unipolar leads did not add to the practical value of the test.

Methods and Material

We used the induced anoxemia test as described by Levy and associates on a group of patients suspected of coronary insufficiency. The Foregger apparatus and procedure used were those described by Levy and his group. It consists of a bank of 10 per cent oxygen and 90 per cent nitrogen. The gas mixture is humidified and

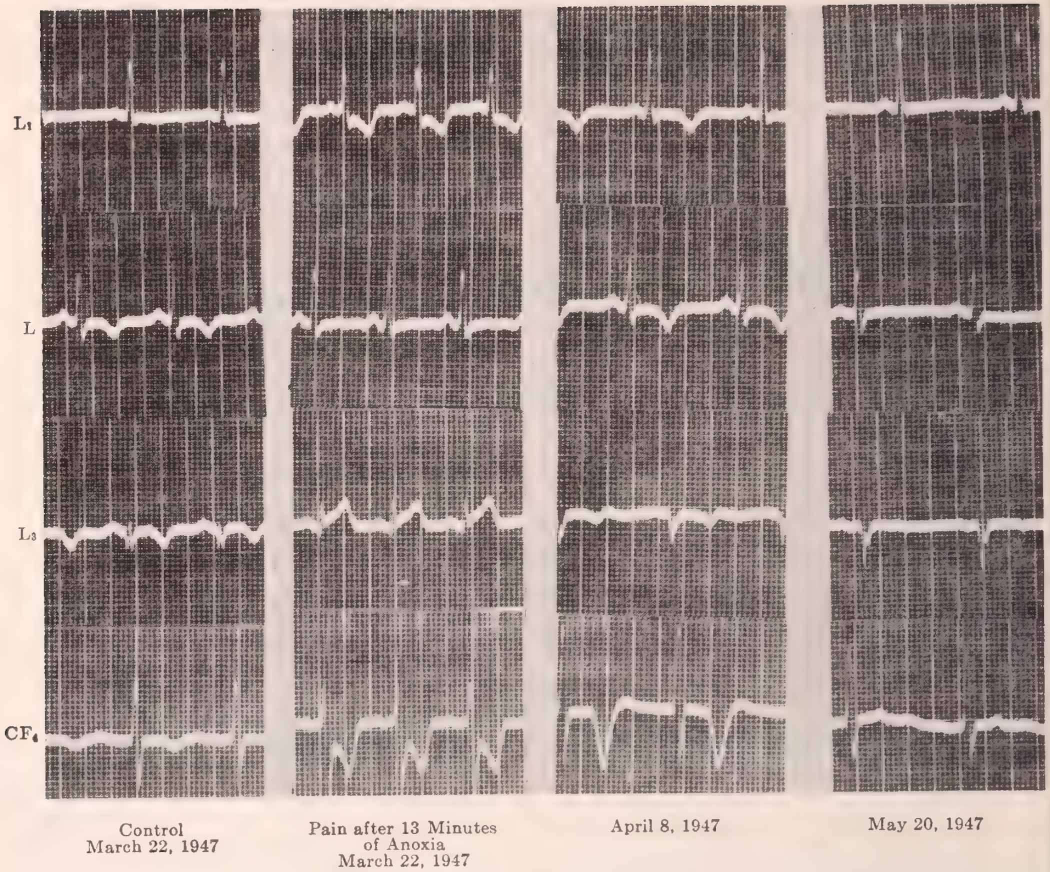


FIG. 1. Control electrocardiograph on left, taken on March 22, 1947, demonstrated old posterior myocardial lesion. Anoxemia after thirteen minutes produced severe precordial pain accompanied by deep inversion of T_1 with depression of ST segment in lead one and deep depression of the ST segment in lead CF_4 with deep inversion of T_4. These changes were a positive test indicating impaired circulation of the anterior coronary circulation. However, the changes induced by the test persisted, indicating that a new myocardial infarct was precipitated. The induced infarct ultimately healed.

flows from bank through a rubber bag into a flutter valve system and is exhaled through another flutter valve. A valve allows the investigator to switch from room air to 10 per cent oxygen and to 100 per cent oxygen quickly without the knowledge of the patient.

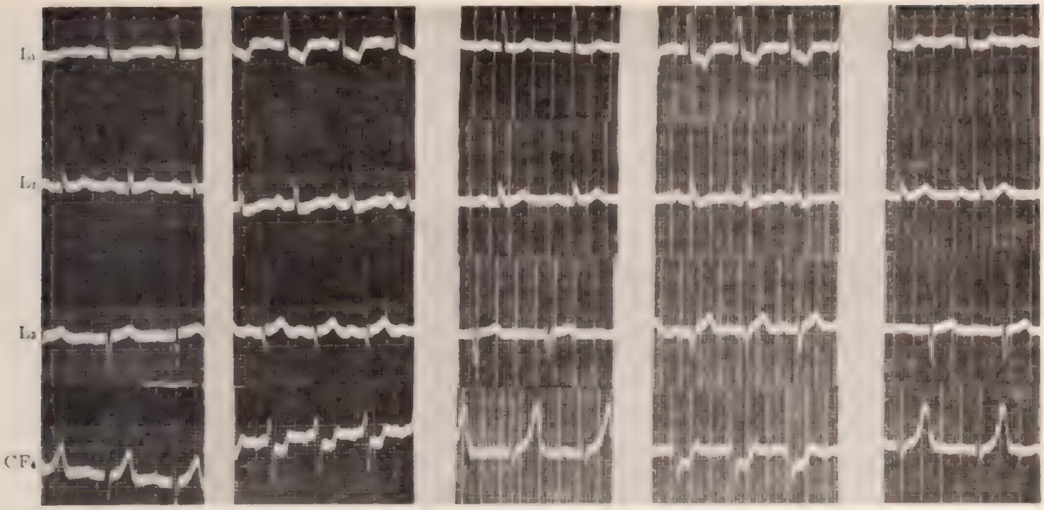
Careful histories were taken on each patient with particular reference to the characteristics of the precordial pain, and a clinical diagnosis was made before the tests were done. Control tracings were taken on all patients including the standard IV, F lead. All tests were done in a small quiet room with two observers present. Tracings were taken at the end of ten and twenty minutes anoxemia and after three minutes of 100 per cent oxygen was given. If pain occurred, a tracing was taken and 100 per cent oxygen given.

The RST and T wave changes were recorded in millimeters according to the recommendations of Levy and his group and were measured by two observers. The test was positive when any one of the following were found:

1. The arithmetic sum of the RS-T deviations in all four leads (1, 2, 3, 4) totaled 3 mm. or more.
2. There was partial or complete reversal of the direction of T wave in lead 1, accompanied by an RS-T deviation of 1 mm. or more in this lead.
3. There was complete reversal of the direction of the T wave in lead IV, F, regardless of any associated RS-T deviation in this lead.

Data Analysis

Forty-two studies were conducted on 34 subjects, all of whom had a history suggestive of the



Control — Pain after 4 Minutes of Anoxia — Control — After Exercise — Return to Normal

FIG. 2. Anoxemia produced typical pain pattern in four minutes accompanied by marked changes in leads 1 and CF_4. Note deep inversion of T_1 with ST depression and equally striking changes in lead 4. The 2-step exercise test produced equally severe pain, and electrocardiographic changes are entirely comparable.

anginal syndrome. Twenty-six of the subjects were male, and eight were female. As many as four separate anoxemia studies were carried out on the same subject. No fatalities were induced as a result of the procedure, but in one instance it was felt that a myocardial infarction was precipitated by the anoxemia study (Fig. 1).

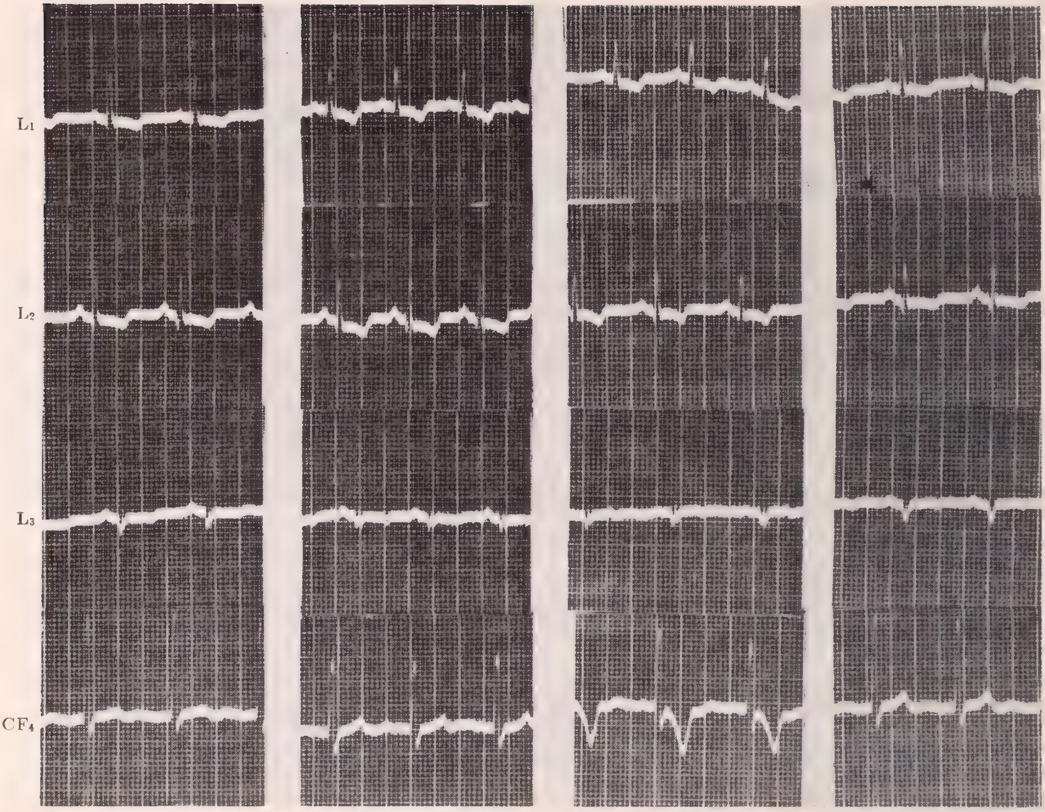
Seventeen of the anoxemia tests were recorded as positive and 25 negative. Positive results were demonstrated in 11 patients and negative results in 23. Those individuals with the more reliable history of typical precordial pain related to exertion and emotion and relieved by rest and nitroglycerin were more often associated with positive results than those with vague or atypical histories.

Electrocardiographic changes of some degree were recorded in 38 of the tests, but in 21 instances the changes were not of sufficient degree to warrant a positive test under the criteria used.

More instructive than the statistical evaluation of the tests was the study and analysis of individual recording. It is believed that considerable information concerning the significance of ST segment and T wave changes may be gained through the changes artificially induced.

Case 1.—A typical example might be considered J. K., a sixty-year-old man with a ten-year history of angina. His precordial pain was severe and constricting and radiated to the back and left shoulder. It occurred on an average of from five to ten times each day. Invariably induced by relatively mild physical exertion, it invariably was quickly relieved by rest. There had been no episode of coronary occlusion or of congestive failure. Physical examination was normal except for a very mild elevation of systolic blood pressure. His electrocardiograph showed an isoelectric T_1 with 1-mm. depression of ST_1 but otherwise was completely normal. Upon submission to anoxemia the typical pain pattern was reproduced in six minutes by which time marked changes had been produced in his electrocardiograph (Fig. 2). A full inversion of T_1 had been effected with $2^1/_2$-mm. depression of the ST_1 segment. TCF_4 which had been erect was now diphasic, and the $STCF_4$ segment had become depressed $3^1/_2$ mm. The erect character of T_2 was lost, and T_3 was now 2 mm. higher than in control records. With the stopping of the exposure to anoxemia and without supplementary oxygen, pain was promptly relieved, and within five minutes all of the electrocardiographic changes reverted to their previous configuration. The speed of changes induced and the reversibility of the changes was impressive. When the same individual was subjected to the 2-step exercise test, an entirely comparable series of changes was reproduced in less than one minute (Fig. 2). This would tend to indicate that this individual was producing his own conditions of relative anoxemia every time he walked or climbed stairs and that his electrocardiographic changes were a reflection of the sensitive equilibrium between the oxygen supply and oxygen demands of his myocardium and not merely a static recording of a fixed electrical pattern.

The reciprocal relation between changes of the



Control After 6 Minutes After 9 Minutes Return to Normal

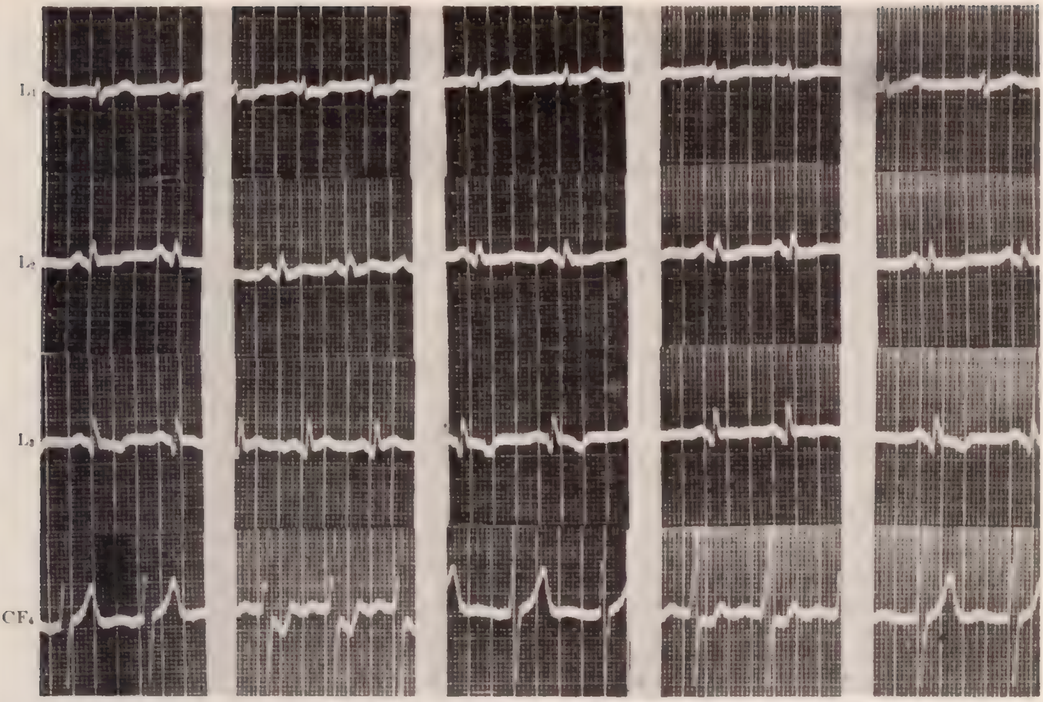
Fig. 3. After six minutes of anoxemia patient complained of typical and severe pain pattern, but no changes were demonstrated in the electrocardiograph. At considerable risk the anoxemia was continued for an additional three minutes (total of nine minutes) at which time dramatic changes were recorded in lead CF_4. All changes promptly resolved when 100 per cent oxygen was administered. This serves to point out that pain alone may precede electrocardiographic changes.

T_1, T_4 variety and T_3 alterations was demonstrated in 13 recordings. An inverted T_3 was often made diphasic or erect. At times there was an associated elevation of the ST_3 segment. This reciprocal relationship is that which would be expected from unipolar interpretation.

The production of pain without significant electrocardiographic changes is considered presumptive evidence of coronary insufficiency.[5] Case analysis again is interesting in this regard.

Case 2.—N. M. was a white man, fifty-six years of age, with a history of several years of progressive precordial pain precipitated by exertion and relieved by rest and nitroglycerin. Physical examination was negative, but the electrocardiograph showed significant changes in that there was a slight inversion of T_1, a small Q_2, inverted T_2, and a slightly inverted T_3. Upon subjection to anoxemia, pain of a typical pattern was produced in six minutes, but an electrocardiograph at this time showed no significant changes (Fig. 3). At some risk the anoxemia was continued for an additional three minutes (total of nine minutes) at which time significant alterations were produced in that TCF_4 was completely inverted and $STCF_4$ segment was depressed 3 mm. If the procedure had been stopped at six minutes, as is our practice and as we believe proper, the test would not have been classified as positive. This would indicate that in this individual anoxemia produced cardiac pain before it produced electrocardiographic changes.

Case 3.—In the case of E. D., pain was produced in eight minutes, and the electrocardiographic changes present, while striking, could not be interpreted as a positive result. The changes induced with the typical pain pattern were primarily diminution of the height of the T waves without actual inversion. The decrease in height of the T waves was 2.5 mm. in lead 1, 1.5 mm. in lead 2, and 7 mm. in lead CF_4. There was also a 1.5 mm. depression



Control

May 13, 1947
Anoxia

Return to Normal

May 21, 1947
Anoxia

Return to Normal

FIG. 4. Reproducibility of results. On May 13, 1947, induced anoxemia produced depression of the ST segment in lead 1 with a diphasic T wave and in lead CF_4 a marked depression of the ST segment with almost obliteration of an originally high T wave. On May 31, 1947, the same induced anoxemia produced an entirely comparable electrocardiographic picture.

of the ST_2 segment. According to the criteria used, this test could not be classified as positive, yet there was little doubt clinically that this patient had organic coronary artery disease. After a period of seven months rest and restricted activity, she had little cardiac pain and much better cardiac reserve clinically. At this time the anoxemia studies were repeated, and no pain and no electrocardiographic changes were produced. This type of observation suggests that lessening in the amptitude of T waves and full inversion may be stages of the same process.

A preliminary testing of cytochrome C was made using this technic to demonstrate its effect upon pain and electrocardiograph changes produced artificially by anoxemia. No significant protective action was found, and after three trials further study of cytochrome C was discontinued.

Comment

It would appear that the technic of using anoxemia studies in clinical evaluation of patients with precordial pain suggestive of the anginal syndrome offers little diagnostic aid in return for the time and care consumed in the procedure. Despite all care that may be exercised, the controls in the technic are not accurate in a finite sense, and there are too many variables for a truly quantitative study. It is true that some are susceptible to control or correction, such as oxygen content of inspired air, atmospheric pressure, gas temperature, or even blood oxygen saturation, but others are not. The rate of oxygen interchange in the lung and in the tissue cannot be related from one patient to the next, nor can arterial oxygen content technics eliminate this factor.

There are fewer variables in the anoxemia studies than in those using stress or exercise technics, wherein there is only standardization of steps and time, but neither can be considered for quantitative evaluation (Fig. 4). For clinical use, the simplicity and ease of the latter tests recommend themselves for the gross evaluation possible.

It is to be emphasized that a negative test does

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not exclude organic coronary artery disease, and this technic cannot be used as a screening device in this regard. At this stage of our knowledge, it must be considered that the production of pain without characteristic electrocardiographic changes is at best only a presumptive test. However, cases are seen which indicate that pain may be produced before electrical changes. As there are relative degrees of coronary circulation, it is also probable that instances of true organic disease will not meet the criteria conventionally employed.[7,8]

In re-evaluating each case after one or more stress or anoxemia studies, it is impressive how those individuals who had the soundest and most reliable history of angina had the more positive tests. In those individuals with the more atypical type of pain fewer positive tests were found. In many instances it was felt that a better history would have given all of the information gained by the anoxemia study.

The potential dangers of either test are small but must be accepted if the tests are used. Myocardial infarction has followed a simple stress test, and the instance of myocardial infarction following anoxia is reported above. It is probable that individuals with so far an advanced condition of relative closure would undoubtedly have his or her occlusion within a very short period of time whether or not any test was performed. However, this is little solace for patient or investigator when it occurs.

While the clinical value of anoxemia studies may be held in abeyance at this time, there is evidence that the technic may be of usefulness in investigative work and for the corroboration of theoretic principles.

The reversibility and liability of electrocardiographic changes is impressive. Severe and profound alterations of the contour and shape of the electrical pattern can be produced from minute to minute and then return to normal. Rather than represent the electrical status and potential variations as a fixed pattern, such changes indicate a relationship of the electrocardiograph to the functional capacity or state of oxygen supply of the myocardium.

A more detailed study of the mechanism or inversion of T waves may be aided by a consideration of the changes induced by these technics. The point was raised earlier as to whether a diminution in height of T waves may be a relative change tending toward inversion. This change has been recognized clinically in the first lead for some time. If valid, a study with follow up of T heights projected over a period of years might reveal early evidences of changes in the coronary circulation or of other alterations in the myocardium.

Summary

1. Objective evidence of coronary artery disease can be demonstrated at times by anoxemia technics, and, when this is not possible, by other conventional objective means.
2. The use of the anoxemia test as a general procedure is not recommended.
3. The value of a careful cardiac history is emphasized.
4. The value of anoxemia studies as a research method is pointed out and its use in this regard encouraged.

Conclusions

Definite objective evidence of coronary artery disease can be demonstrated at times by anoxemia technics when this is not possible by other conventional objective means. However, the test consumes considerable time and effort and is not without its serious dangers. There appear to be too many variables not susceptible to control to justify anoxemia studies as a quantitative test. A negative test has no value and cannot be used as means of excluding organic heart disease, a serious defect. Stress and exercise tests, while even less subject to control, are easier technics and, in general, offer a similar type of information. The value of a good history is emphasized and may often reveal as much or more than anoxemia and stress tests, its only drawback being that the information is primarily subjective rather than objective.

While the use of the anoxemia test as a general clinical test cannot be advocated at this time, the value of the procedure as an investigative tool is pointed out and its use in this regard encouraged.

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ABDOMINAL SURGICAL EMERGENCIES IN THE AGED

CONDICT W. CUTLER, JR., M.D., New York City

(From the Second Surgical Division of the Goldwater Memorial Hospital)

SOME of the difficulties confronting the surgeon in dealing with acute abdominal surgical emergencies in the aged may be illustrated by the experience of the Second Surgical Division of the Goldwater Memorial Hospital in New York. This Service, receiving chronic indigent patients from all the City's hospitals, and admitting from the City Home for the Aged, has furnished opportunity for observation and treatment of such conditions in old people constituting a peculiarly bad risk group.

Over a period of seven years there were treated 104 patients suffering from acute abdominal conditions (Table 1). They ranged in age from sixty to one hundred two years. The average age was seventy-four. The major hazards in these patients were chronic diseases and organic defects, for which most of them were already hospitalized and which there was no opportunity to rectify. Those most commonly encountered were myocardial degeneration, advanced valvular heart disease, previous coronary infarctions, hemiplegia from cerebral vascular accidents, arterial sclerosis, all varieties of renal and hepatic dysfunction, prostatism, chronic pyelonephritis, emphysema, tuberculosis, tertiary lues including lesions of the central nervous system, diabetes, anemia, malnutrition, obesity, vitamin deficiency states, hypoproteinemia, a variety of neurologic diseases, and crippling arthritis. Usually a combination of several of these ailments existed in the same patient.

TABLE 1.—TREATMENT OF ACUTE ABDOMINAL CONDITIONS IN 104 ELDERLY PATIENTS

Condition	Number of Operations	Relieved	Died	Mortality (Per Cent)
Intestinal obstruction	52	23	29	55
Acute appendicitis	5	3	2	40
Biliary emergency	43	22	21	50
Unoperated cases	0	0	4	100

There were many difficulties of diagnosis, since the existing defects often masked or mimicked conditions requiring quick intervention. There were numerous postoperative complications, particularly pneumonia. About half of the deaths were due to intercurrent diseases or to the results of pre-existing ailments. The mortality rate was high (52 per cent).

Certain general principles were developed as the result of experience: (1) to utilize every quickly available measure for the patient's support and protection; (2) to undertake the remedial operation with the least possible delay; (3) with a minimum of trauma and in the shortest feasible time, to perform the simplest procedure that would relieve the emergency, and (4) to employ every means to guard against postoperative complications.

In general, preoperative preparation consisted in replacement of fluids and electrolytes, administration of blood or plasma, and starting penicillin, although more than half our cases were seen before this drug became available.

Anesthesia constituted a relatively minor risk. Cyclopropane was the agent usually preferred. There was only one fatality directly attributable to anesthesia. Pneumonia occurred in about the same relative number of cases following each of the types of anesthesia—local, spinal, crymal, or general—and in roughly one-half of the cases appeared ten days or more after the anesthetic.

Gentleness and accuracy in the performance of the operation were found to be more important than speed. Transfusion was the most reliable method of support during operation.

Postoperatively, our chief aids in combating shock were blood and oxygen. Stimulant drugs were disappointing. Rebreathing, frequent moving, early rising, and the continuance of penicillin were employed as protection against pneumonia.

Particular efforts were required to correct anemia, metabolic disturbances, and nutritional deficiency states. Although attention to moving, keeping the patients dry (many were incontinent), early ambulation, avoidance of pressure, and maintenance of nutrition were employed, these measures often failed to prevent decubitus.

Intestinal Obstruction

Among the causes of intestinal obstruction were hernia, carcinoma, adhesions, volvulus, and foreign bodies (Table 2). The development of intestinal obstruction was often insidious, since many patients were chronically constipated. Surgical treatment was instituted as rapidly as patients could be brought to a state of operability

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TABLE 2.—OPERATION FOR INTESTINAL OBSTRUCTION (52 CASES; AVERAGE AGE, 81 YEARS)

Preoperative Condition	Number
Arteriosclerosis	47
Arteriosclerotic heart disease	37
Cerebral accident (one patient had 2)	7
Coronary thrombosis	5
Nephritis	12
Cirrhosis	1
Urologic	
Prostatism	4
Pyelonephritis	2
Carcinoma of bladder	1
Lues	2
Decubitus	3
Arthritis (disabling)	4
Tuberculosis	2
Central nervous system disorders	
Paralysis agitans	4
Cord tumor	1
Lues (central nervous system)	1
Cause	**Number**
Hernia	23
Inguinal	11
Femoral	5
Incisional	2
Umbilical	5
Ahesions	9
Volvulus	5
Neoplasm of colon	11
Foreign body (gallstone 1, peach stone 1, meat bone 1)	3
Lymphopathia	1
Undetermined	2
Duration	
Average—2 days	
Less than 24 hours—24 cases	
Operation	**Number**
Reduction	29
Resection	4
Cecostomy	11
Colostomy	2
Ileostomy	1
Exploration	2
Enterotomy (removal of foreign bodies)	3
Anesthesia	**Number**
Local	19
Cyclopropane	22
Pentothal	2
Ether	3
Spinal	5
Postoperative Complications	**Number**
Pneumonia	17
Peritonitis	2
Shock	7
Result	**Number**
Recovered	23
Died	29
Rate	55%
Cause of Death	**Number**
Pneumonia	10
Shock	7
Peritonitis	2
Uremia	1
Cardiac failure	7
Cerebral accident	1
Aspirated vomitus (anesthetic accident—spinal)	1
Ruptured esophogeal varix	1
Day of Death—4 (average postoperative)	

by the use of blood, fluids, and stomach aspiration.

In obstructive lesions of the large bowel, only a cecostomy or colostomy was done, often under local anesthesia.

In obstructions of the small intestine, the symptoms were more lively in development. Attempts at intestinal intubation were found costly in valuable time without commensurate benefit. Since cause and location were not always clear, we found a generous incision desirable. We were conservative about condemning a discolored loop of gut to resection. When the gut was hopelessly compromised with the lesion in the jejunum or upper ileum, an anastomosis seemed obligatory. In the low ileum, exteriorization might be done.

In obstruction due to hernia, we preferred an abdominal approach if there was likelihood of gangrenous gut in the sac. Relief of the obstruction was the primary purpose rather than classic repair of the hernia.

Of our 56 cases of intestinal obstruction, 52 were operated upon, while, in four, operation could not be undertaken and all four promptly succumbed. Twenty-four were operated upon within twenty-four hours of the onset. The average duration of symptoms was two days. These patients averaged eighty-one years of age. The oldest, who, incidentally, made a complete recovery, was one hundred two.

Twenty-three obstructions were due to strangulated hernias, 11 to cancer of the large bowel, nine to adhesions, five to volvulus, three to foreign bodies, one to lymphopathia venereum, and the causes of two were undetermined.

Operation in 29 cases consisted of reduction of hernia, volvulus, or freeing of constricting bands. Four small intestine resections were done.

TABLE 3.—OPERATION FOR ACUTE APPENDICITIS (AVERAGE AGE, 71 YEARS)

Preoperative Condition	Number
Arteriosclerosis	3
Diabetes	1
Arteriosclerotic heart disease	2
Nephritis	1
Paralysis agitans	1
Symptoms	**Number**
Pain	4
Vomiting	3
Constipation	1
Fever	4
Average Duration of Symptoms—2 days	
Diagnosis	**Number**
Correct	4
Incorrect	1
Operation	**Number**
Incision and drainage of abscess	2
Appendectomy	2
Incorrect diagnosis	1
Anesthesia	**Number**
Ether	1
Cyclopropane	2
Cyclopropane and local	1
Local and pentothal	1
Postoperative Complications	**Number**
Peritonitis	2
Shock	1
Result	**Number**
Recovered	3
Died	2
Mortality rate	40%
Cause of Death	**Number**
Peritonitis (1 day and 9 days)	2

There were 11 cecostomies, two colostomies, and one ileostomy with exteriorization of loop.

Twenty-three survived, while 29 died, giving a mortality rate of 55 per cent. Pneumonitis was responsible for ten deaths. Seven succumbed to shock, two to peritonitis. The patients' preexisting ailments contributed directly to the ten other fatalities.

Appendicitis

Acute appendicitis was rare, occurring in five of 104 abdominal cases (Table 3). Its behavior was atypical. After a few hours of vague abdominal discomfort a ruptured appendix might be found, or a palpable abscess might follow an episode of "indigestion" or "stomach ache" suffered a number of days previously. The physical signs were often misleading.

Our staff operated on eight patients under the diagnosis of acute appendicitis. The diagnosis was correct in four and wrong in four. One additional case diagnosed as acute intestinal obstruction showed a ruptured gangrenous appendicitis with peritonitis. Findings in the four cases incorrectly diagnosed were perinephric abscess, perforated gangrenous diverticulitis of the sigmoid, carcinoma of the cecum, perforated, with abscess, and in one no pathology.

Of the four cases correctly diagnosed, three had already suffered perforation, although their symptoms were of only one day duration or less. One patient with a four-day history of vague abdominal pain had an abscess. This patient succumbed to peritonitis, as did the case incorrectly diagnosed as intestinal obstruction. The other three survived. Mortality was 40 per cent.

Biliary Tract Emergencies

Infections and obstructions of the biliary tract presented some of the most difficult problems. In the original group studied, 34 cases demanded urgent surgery (Table 4). The average age was seventy-three. These patients rapidly became profoundly ill as a result of sepsis or jaundice, and delay in undertaking operation greatly increased the risk. Eleven of 15 patients presenting obstruction of the common duct were lost. Hemorrhage was not a factor in this mortality, due, we believe, to liberal preoperative use of vitamin K.

Of acute cholecystitis without evidence of common duct obstruction, seven of 19 were found to have perforated, four of them within forty-eight hours of the onset of the attack. Of ten patients for whom cholecystostomies were performed for cholecystitis alone, four recovered, and six died. Nine cholecystectomies were performed for acute cholecystitis, with or without gangrene. Five recovered and four died. In both cholecystectomy and cholecystostomy, already established peritonitis accounted for roughly half of the deaths.

TABLE 4.—OPERATION FOR ACUTE CHOLECYSTITIS AND COMMON DUCT OBSTRUCTION (34 CASES, AVERAGE AGE, 73 YEARS)

Preoperative Condition	Number
Arteriosclerosis	27
Arteriosclerotic heart disease	19
Diabetes	1
Pyelonephritis	3
Nephritis	14
Cerebral accident	3
Coronary accident	3
Valvular heart disease	1
Tuberculosis (miliary)	1
Lues (central nervous system)	1
Amyotrophic lateral sclerosis	1
Paralysis agitans	1
Operative Condition	**Number**
Cholecystitis: (perforated or gangrenous, 7)	19
Obstructed common duct (6 with cholecystitis)	15
Biliary carcinoma	5
Biliary stone	10
Day of Operation	
Cholecystitis (Average)	3
Obstructed duct (Average)	10
Anesthesia	**Number**
Cyclopropane	22
Local (local with pentothal, 1)	11
Ether	1
Result	**Number**
Recovered	13
Died	21
Total mortality rate	62%
Cholecystitis	50%
Obstructed duct	73%
Cause of Death	**Number**
Peritonitis	4
Pneumonia	6
Cardiac failure or coronary	6
Cerebral accident	1
Other causes	
Parotitis	1
Liver abscesses	1
Gas bacillus septicemia	1
Septic fractured hip (pinned)	1
Day of Death—25 (average postoperative)	

Of the 34 operated cases, 13 recovered, and 21 died, eight from apparently unrelated causes. The mortality rate was 62 per cent.

We were dissatisfied with these results. We doubted the advantages of emergency cholecystectomy for this type of patient and determined in the future to adhere to the principle of doing the least possible surgery required to meet the emergency. Instead of reserving cholecystostomy for the most desperate cases, we determined only to empty and drain the gallbladder in acute cholecystitis, however easy removal of the gallbladder might appear. Cholecystostomy alone was likewise adopted for relieving acute obstructive jaundice, exploration of the common duct being deferred to a more favorable time if a free outflow of bile could be obtained through the cystic duct.

There have been no fatalities among nine consecutive patients of comparable age and condition treated since this plan was adopted.

Only one jaundiced patient required primary exploration of the common duct with removal of an obstructing stone. Three of the nine patients required secondary procedures, which they tolerated well. Addition of this group of nine patients treated by conservative operation reduced the over-all mortality of the total group of 43 cases to 50 per cent.

Conclusion

Natural reluctance to submit aged and chronically ill patients to surgery may lead to delay which greatly diminishes their chances of recovery from acute abdominal emergencies. Our experience with a group of such bad risk patients has led to the conviction that if the surgical problem is met promptly, nearly half of them will survive. If surgery is withheld, nearly all will be lost. Although half of those who die after operation may be expected to succumb to the effects of pre-existing or intercurrent disease, the surgeon must accept this risk and the responsibility involved.

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MATERNAL MORTALITY IN QUEENS COUNTY, 1937-1949

George Schaefer, M.D., Forest Hills, New York

(From the Maternal Welfare Committee, Queens County Medical Society)

THE purpose of this report is to relate the activities of the Maternal Welfare Committee of Queens County, one of the five boroughs of New York City, since its inception in October, 1935, and to compare our results with those of other cities and with the country as a whole. In 1936, the Committee made a survey of prenatal clinics in the various hospitals in Queens and studied the physical and professional facilities in the hospitals having obstetric services. It attempted to increase the interest of physicians in obstetrics by giving lectures and courses in this specialty. Members of the Committee gave talks to mothers' clubs and women's organizations on prenatal care. In 1936, our Committee joined with the Maternal Welfare Committee of Kings County in issuing a pamphlet on "Standards for Prenatal Care" which was distributed to every member of the Medical Society. In January, 1937, the actual work of analyzing each maternal death was started and has continued up to the present time. Each year the incoming president of the Queens County Medical Society appoints a chairman and about 20 physicians to the Maternal Welfare Committee.

Our Committee functions in the following manner: Each week the Department of Health sends to the chairman a list of the maternal deaths occurring in Queens County and follows this list with a photostatic copy of the death certificate. The chairman assigns a member of the Committee o each case, and the member goes to the hospital where the death has occurred, reviews the chart, and gathers any pertinent information from the attending doctor, who is invited to discuss the ase at our monthly meeting. No names of either patient or hospital are mentioned at these roundable discussions, and all members of the Medical Society are invited to attend. Our main objective is to prevent maternal deaths, and those of us who attend these meetings have been greatly mpressed with how much can be learned from he mistakes made.

Statistics

In the United States the maternal death rate as dropped from 62 per 10,000 live births in 1933 o 13 per 10,000 in 1947. In Philadelphia the ate has dropped from 70.3 per 10,000 in 1931 to 0.3 per 10,000 in 1945. In Chicago the rate ropped from 46 per 10,000 in 1931 to 11 per 0,000 in 1946. In New York City the rate in 947 was 11 per 10,000. Queens County, with a population of one and one-half million, has shown a decline in maternal mortality from 63 per 10,000 in 1937 to 6.8 per 10,000 in 1948, while the total number of births has increased from 11,000 to 22,000 per year in the past twelve years. The maternal death rate is shown graphically in Fig. 1.

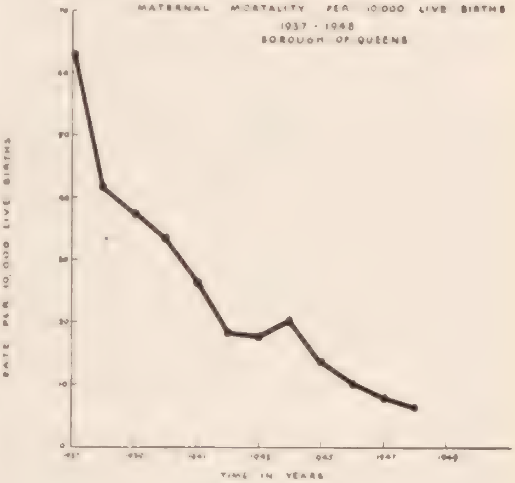

Fig. 1.

Classification

The classification used in this report differs slightly from that followed by the Department of Health in reporting puerperal deaths. Analysis of the maternal deaths in Queens has revealed that in about one third of the cases the cause of death as stated on the death certificate, from which the Department of Health gathers its statistics, does not coincide with the actual cause of death as determined from an analysis of the case. Furthermore, pulmonary complications, such as pneumonia and pulmonary embolus, are grouped under "Infection" which to our mind gives a false figure for puerperal infection. We have grouped such deaths under "Pulmonary". The heading "Accidents of Childbirth" as reported by the Health Department includes placenta previa, rupture of the uterus, ablatio placenta, inversion of the uterus, and other accidents. The actual cause of death in many of these cases is hemorrhage, and they are so classified in this report. While it is true that obstetric deaths cannot always be classified under one cause since several factors may be involved, we have

TABLE 1.—Percentage Mortality from Various Causes, 1937 to 1948

	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Total number of deaths	63	48	44	43	37	30	31	32	23	21	18	15
Abortion	19.0	22.9	29.5	14.0	10.8	6.7	9.7	9.3	8.7	9.5	16.7	33.3
Infection	19.0	27.1	22.7	18.6	27.0	6.7	12.9	15.9	8.7	4.8	11.1	6.7
Toxemia	12.7	10.4	9.1	14.0	10.8	13.3	12.9	9.3	13.0	14.2	22.2	6.7
Hemorrhage	23.8	29.2	27 3	27.9	29.7	23.3	35.5	28.1	21.7	23.8	27.8	20.0
Cardiac	1.6	2.1	2.2	14.0	10.8	16.6	3.2	28.1	8.7	19.0	11.1	0
Pulmonary	4.8	8.3	4.4	7.0	8.1	26.6	9.7	9.3	17.4	19.0	11.1	33.3
Others	19.0	0	4.4	4.5	2.7	6.7	16.1	0	21.7	9.5	0	0

attempted to select the principal cause in each case. Abortions comprise about 20 per cent of all maternal deaths. Although we have included them in this report, we believe they should be reported separately, as is done in most European countries. Actually our statistics call for maternal deaths per total number of live births, and in none of the abortions does a live birth occur. If abortions are included in maternal mortality statistics, the actual cause of death should be recorded, such as hemorrhage or infection, since most abortions are from either of these two causes.

Table 1 shows the total number of maternal deaths for each year from 1937 through 1948 and the percentage of deaths for the various groups in our classification. For the purpose of analysis we have divided the twelve-year group into two six-year groups, from 1937 through 1942, and from 1943 through 1948. These figures are shown in Table 2.

In the period from 1937 to 1942, there were 265 maternal deaths in approximately 77,000 live births, whereas in the period from 1943 to 1948, there were 140 maternal deaths in approximately 114,000 live births. Comparison of the percentages for these two groups shows that there was no change in the deaths from abortion, 17.2 per cent for the earlier group and 17.4 per cent for the more recent group. Deaths from infection dropped from 20.1 per cent to 10 per cent. Toxemias showed very little change from 11.7 per cent to 13 per cent. Deaths from hemorrhage were almost identical in the two groups, 26.8 per cent and 26.2 per cent. Cardiac and pulmonary deaths showed a slight increase in the more recent group due, in part, to our classifying pulmonary embolus and pneumonias under pulmonary causes instead of infection.

Abortions

It is of interest to note that in Queens, during the war years from 1940 to 1945, deaths from abortion dropped to about 10 per cent of the total maternal mortality, whereas before 1940 the abortion death rate was 20 per cent, and in the years following the war the rate has gradually risen so that in 1948 it comprised 33 per cent of the total maternal mortality.

If we are to reduce our maternal mortality further, definite steps must be taken for the prevention of abortions. We, as physicians, must educate the women concerning the dangers of abortion. Ignorance is at the root of much of the harm that comes from abortion. Women learn from their friends of someone who "got by" with an abortion in one way or another so that they get the impression abortion is safe and easy. As physicians we must give more time and care in explaining to the patient the dangers of abortion. Often no substantial reason is present why an additional child would be a major calamity, but at the particular moment emotions are stronger than common sense.

Better training of physicians in the prevention and treatment of abortion is necessary. More time should be devoted to this in medical schools and in intern training. Hospitals should have provisions so that curettage may not be performed by every practitioner, since infection, hemorrhage, and perforation may result from an error in judgment or technic. Curettage of the pregnant uterus is an extremely delicate surgical procedure which unfortunately is regarded lightly by many physicians and hospital authorities.

Infection

Deaths from infection have shown a marked decrease in the past six years in Queens as well as throughout the entire country. The reasons for this are well known: the advent of chemotherapy and antibiotics, their prophylactic use during prolonged labor, the use of more blood in hemorrhage and shock, and the improvement in the practice of obstetrics with less resort to unnecessary and traumatic operations. We feel that, with the proper use of chemotherapy and blood, infection will drop to less than 5 per cent of the total maternal mortality where it previously comprised almost 30 per cent of the deaths.

TABLE 2.—Percentage Mortality for Six-Year Period

	1937 to 1942	1943 to 1948
Total number of deaths	265	140
Abortion	17.15	17.38
Infection	20.18	10.01
Toxemia	11.7	13.05
Hemorrhage	26.8	26.15
Cardiac	7.88	11.8
Pulmonary	9.88	16.6
Others	6.2	7.8

Toxemias

In the past twelve years the mortality from toxemias in Queens has remained almost constant. The percentage mortality from 1937 to 1942 was 11.7 per cent, and from 1943 to 1948 it was 13 per cent. With the exception of 1948 when there was one death from toxemia, there have been three or four deaths from toxemia every year from 1943, although the total maternal mortality has dropped from 31 cases in 1943 to 18 cases in 1947. Almost all of the toxemia deaths are from eclampsia in our series, and many of the patients do not seek medical or hospital care until the first convulsion occurs. With proper prenatal care many of these deaths could have been avoided. Several of our large hospitals have not had a death from toxemia in several years.

Hemorrhage

Hemorrhage remains our most frequent cause of death in Queens. There were 26.8 per cent of the total maternal deaths from hemorrhage from 1937 to 1942 and 26.2 per cent from 1943 to 1948. Analysis of the individual deaths shows that the majority of them could have been prevented. Carelessness, on the part of the physician, patient, or both, in combating prenatal anemia and malnutrition, ill-advised and meddlesome obstetrics, poor choice of anesthesia, improper management of the third stage of labor, failure to recognize hemorrhage in time, and insufficient use of blood were all factors that were responsible for maternal deaths. We believe with Gordon that "hemorrhage has always been one of the major causes of obstetric death, yet it may be the most frequent, and at present it is the most important."[1]

Analysis of individual cases by the Committee revealed that hemorrhage was most frequently deleted from the death certificate as the actual cause of death and such causes as pulmonary embolus and heart disease incorrectly given by the attending physician. Arrangements have been made with the Bureau of Records of the Department of Health to forward the cause of death as determined by the Maternal Welfare Committee to the Department of Health so that their records may be corrected.

Pulmonary Infections

Under this heading we have included such causes as pneumonia, tuberculosis, and other lung conditions where the medical condition was the prime factor in the maternal death. We deliberated a long time before including pulmonary embolus in this category, but we feel that it belongs here rather than in "Infection." As our deaths from other causes decline, the percentage of deaths from pulmonary embolus increases, and to add these deaths to "Infection," by which we understand puerperal infection, would give an abnormal figure for this group.

Anesthesia

Although we have included anesthesia deaths under "Pulmonary," we feel that perhaps they should be included in a separate category if for no other purpose than to emphasize their importance. In Queens at least one death each year is caused by anesthesia. In Massachusetts 10 maternal deaths were directly attributed to anesthesia in 1941. There is a small but active group of propagandists for "painless childbirth" who, in various ways, blame the medical profession for its alleged indifference to the suffering of womankind. The consequence is that the pregnant woman develops a genuine phobia on the subject and makes insistent search for a physician who promises her a painless delivery. Unfortunately, the physician who makes such promises attempts to carry them out and as a result prescribes too much analgesia and gives too much general anesthesia. Most of the maternal deaths from anesthesia result from the aspiration of vomitus. Many of the patients coming to the hospital in labor have recently eaten a large meal. If general anesthesia is contemplated, their stomachs should be emptied by gastric lavage, or local anesthesia should be used. Many hospitals do not have trained anesthetists administering obstetric anesthesia, nor do they have adequate apparatus for aspiration and suction available at all times in the delivery room.

Cardiac Disease

As maternal deaths from other causes decline, cardiac deaths show an increase. In Queens over 90 per cent of the maternal cardiac deaths have a history of rheumatic fever. Most of the deaths occur before delivery from the fifth to seventh month of gestation from either an intercurrent infection resulting in subacute bacterial endocarditis or from lack of proper care by the patient with resultant cardiac decompensation. It became apparent from analysis of each case that adequate medical care was lacking and that consultation with a cardiologist, when requested, was oftentimes too late. We feel that any patient with a history of heart disease should be under the constant care of a cardiologist or internist during her entire pregnancy and labor.

Preventability

Statistics from various sources throughout the country reveal that approximately two thirds of all maternal deaths are preventable. Society must assume the responsibility, with the medical profession, of teaching the woman to avail herself of the facilities which are provided and of making those facilities measure up to the highest possible standards. Women must be educated to know what should be demanded and to refuse to accept less than the minimum.

Approximately 60 per cent of the preventable deaths occur because of some incapacity in the attendant: lack of judgment or skill, careless inattention to the demands of the case, or sheer incompetence. Obstetrics has been treated too lightly by both the laity and the profession. "Anyone can deliver a baby" has been, and is, an expression universally used. This fallacy must be corrected. Medical schools must impress on the student that the training he receives does not qualify him to practice as a specialist in obstetrics. His training is to teach him to conduct a normal labor and to be able to recognize and evaluate the abnormalities that require the services of a specially qualified obstetrician. So important is this element that it might be advisable for hospitals to set up strict regulations and enforce them, preventing any but those who show themselves specially qualified from doing any operative obstetrics.

A great deal of progress has been made in bringing the obstetric patient into the hospital and away from home deliveries and midwives. In 1942, the birth rate in the United States was 21 per 1,000 or 2,808,996 registered births. Physicians attended 92.6 per cent of the births, and midwives and nonmedical personnel attended 7.4 per cent or 208,242 deliveries. In 1942, 67.9 per cent of the live births occurred in hospitals, compared to 55.8 per cent in 1940. In New York City 40.3 per cent of the deliveries were done by midwives in 1909, whereas less than 0.5 per cent were delivered by midwives in 1947.

Summary and Conclusions

The maternal deaths occurring in Queens County in the past twelve years have been analyzed and compared with maternal mortality studies throughout the country. There has been a decline in maternal mortality from 63 per 10,000 live births to 6.8 per 10,000 over this period. The greatest decrease in maternal mortality has been in the infection group, whereas the percentage of deaths from hemorrhage has shown little change. As deaths from other causes drop, those from abortion become more increasingly significant. The dangers of abortion, the majority of which are induced, must be made clear to women. Since many of these patients do not come under the care of the physician until after the damage has been done, the medical profession cannot adequately cope with this problem.

Most, if not all, of the agitation for the prevention of maternal deaths had its origin and received its main support from medical leaders and medical organizations. Our efforts along these lines must be further increased to bring home to the patient, to the physician, and to the hospital the gravity of a situation where almost two thirds of the mothers dying in childbirth could be saved. A large proportion of the deaths from heart disease and toxemia could have been prevented with proper prenatal care. A prospective mother must be taught through media that reach the laity that prenatal care does not mean merely registering with a hospital or physician but that it is imperative to obtain care as early as pregnancy is suspected; that one visit at which no abnormalities are discovered is no guarantee of continuing good health, but that regular return for observation is vital if her attendant is to be enabled to give her the best possible care; that previous normal pregnancies do not assure her of a subsequent normal one; and that adequate prenatal care offers her the greatest assurance of an uneventful pregnancy and delivery.

Furthermore, information should be made available to the woman as to the standards of such prenatal care. She should know that minimum care must include a complete history and physical examination, blood count and typing, measurement of the pelvis, and regular checkups at which blood pressure, weight, and urine examinations are done. The pregnant woman must be educated not to insist on operative delivery when this is not indicated. She must realize that certain types of anesthesia cannot be used in every case and not to judge her attendant by the type of anesthesia he promises or uses. Unquestionably, an excessive amount of instrumentation is resorted to in compliance with the patient's insistence on a short labor. That this practice is objectionable is born out by the New York City report which revealed that of the preventable deaths 77 per cent followed operative deliveries, compared to 48 per cent which followed normal deliveries.

The unorganized, badly equipped hospital is a menace to its patients. Because of the shortage of hospital beds, patients are delivered in sanatoria which do not have the facilities to cope with obstetric emergencies. The Department of Health is attempting to raise the standards of maternal care in all institutions, and it is incumbent on the medical profession to foster such action for the protection of both patient and physician.

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EMERGENCY THERAPEUTIC BRONCHOSCOPY IN THE CRITICALLY ILL ASTHMATIC

HARRY MARKOW, M.D., Brooklyn, New York

(From the Department of Medicine, Division of Applied Immunology, Beth-El Hospital)

BRONCHOSCOPY in the treatment of the less acute types of bronchial asthma has been reported by many authors with excellent results.[1-7] Many chronic cases which fail to respond to the usual therapy have obtained relief by this procedure. The relief was attributed to the aspiration of the retained thick bronchial mucous secretion and the loosening and removal of the thick mucous plugs blocking the airways. In many instances, the procedure resulted in a rapid subsidence of the asthmatic attacks.

In the more severe and persistent type of bronchial asthma, commonly known as status asthmaticus, the patient is resistant to the various medications and therapies commonly employed. These patients are epinephrine-fast and fail to respond even to large doses of this drug. Occasionally, aminophylline intravenously, caffeine, oxygen, helium, penicillin, narcosis with rectal ether or avertin, and glucose infusions may give relief, but there are those in whom these procedures are without avail. At this stage, the patient, usually in oxygen, is becoming very restless and stuporous. Cyanosis, in spite of the oxygen, is apparent. The pulse becomes rapid, 150 or more, and bounding, and the breathing is forced and labored. If this condition continues, the patient becomes exhausted, and death from asphyxia becomes imminent.

Autopsy findings of patients who have died of bronchial asthma reveal that the tracheobronchial tree is blocked by an excessive outpouring of mucus. This mucus becomes thick and tenacious and acts as plugs completely obstructing the bronchial tubes. In only the exceptional case does the autopsy fail to reveal the presence of such obstructive bronchial plugs. Dehydration due to diminished fluid intake reduces the fluidity of the bronchial secretion and is an important factor in the pathogenesis of status asthmaticus.

Most authors of modern textbooks on allergy advocate bronchoscopic removal of this obstructing secretion as a lifesaving measure in such situations. While there are some dangers involved in this procedure, Tucker states that there are few contraindications to bronchoscopy where there is a positive indication for its use.[8] Bases and Kurtin reported a case similar to the one in this report in which the bronchoscopic aspiration of the secretion blocking the tracheobronchial airway proved to be a lifesaving measure and was followed by a prompt and spectacular recovery.[9]

At the 1948 meeting of the American Academy of Allergy, Waldbott reported on 155 therapeutic bronchoscopies performed on 112 cases of bronchial asthma without any preliminary anesthesia.[10] According to the author, the chief indication for this therapy was the state of emergency arising from the patient's inability to expel the thick tenacious mucus which might have led to asphyxiation. He states further that, in the moribund asthmatic, bronchoscopy is as obligatory a procedure as the removal of a foreign body or a tracheotomy in a patient about to asphyxiate from diphtheria. He reported that the procedure was lifesaving in ten cases and gave relief in about one third of the other cases.

The following case report emphasizes the value of the emergency bronchoscopy as a lifesaving procedure in the critically ill asthmatic where all other procedures and therapies had failed to interrupt the asthmatic crisis.

Case Report

A. C., a woman, was first seen May 15, 1942, at the age of forty-five, with a history of having had a cough for the past twenty years which became worse during winter months and on windy days. In 1937, about five years previous to her first visit, she developed wheezing respiration with some shortness of breath throughout the year but worse in the winter months. She always felt improved in the summer months. This continued up to two years prior to her first visit. In January, 1940, she went to California for "change of climate," and she experienced her first severe asthmatic attack on arrival. After a five-month stay in higher altitudes of California with moderate relief, wheezing and cough became aggravated on her return to Long Beach, California. On her return home, she underwent a nasal polypectomy in September, 1940, and improved after a series of autogenous nasal vaccine injections. In November, 1941, she again suffered severe asthmatic attacks complicated in early February, 1942, by pneumonia. Since then, up to her first visit, she had moderate heaviness with wheezing respiration but no severe asthmatic attacks. Her brother had hay fever.

Examination revealed a middle-aged female, fairly well-nourished, 5 feet $5^1/_2$ inches in height,

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Presented at a meeting of the East New York Medical Society, April 4, 1949.

weighing 135 pounds. Nasal examination revealed a red mucous membrane, enlarged right middle turbinate with polypoid degeneration, but no visible nasal purulent secretion. There was, however, a postnasal, mucopurulent discharge. The heart was regular, of good quality, with a rate of 80 and no murmurs. Examination of the chest showed hyperresonance on percussion and prolonged expiration with sibilant rales on both expiration and inspiration throughout both lungs.

Skin tests were inconclusive. There were moderate reactions to dust and feathers with an occasional slight reaction to some foods.

X-ray of the chest, done previously, was reported negative for both the lungs and the heart. Treatment was instituted with dust and feathers extracts, stock catarrhal vaccine, and ragweed extract because of the history of exacerbation of the asthmatic symptoms during the ragweed season of the previous year. These treatments were continued with the gradual addition of grass and tree extracts because of clinical aggravation of symptoms during these seasons. However, in the succeeding years, the summer months were her least trying seasons, with major aggravations occurring in November and December and March and April.

In 1943, estrogenic therapy was instituted for menopausal symptoms and continued for about a year with very little improvement in her general condition. In November, 1943, polypectomy was performed with but a temporary relief of the asthma. In December, 1944, and January, 1945, infected teeth were extracted with very little effect on her asthmatic symptoms. In May, 1946, following a bout of abdominal cramps, indigestion, and excessive asthma, she was studied by a gastroenterologist, and a diagnosis of chronic cholecystitis was made for which she was treated with medication and diet. In March, 1947, during an especially severe stretch of asthma, lasting about two weeks, she suddenly became refractory to epinephrine and aminophylline but responded to these drugs following helium and oxygen therapy. On September 12, 1947, she was carefully checked by an internist. X-ray of the lungs showed marked prominence of the hilar and bronchial markings. The blood pressure was 140/86. The blood count showed an eosinophilia of 9 per cent but was otherwise essentially negative. The blood chemistry was normal. Her weight was down to 123 pounds. The examining physician noted fullness in the anterior neck and, in the region of the lower pole of the right thyroid lobe, felt a small, soft, easily movable nodule. Later the basal metabolic rate was plus 20, and propylthiouracil therapy was instituted. This was discontinued two months later because of marked aggravation of asthmatic symptoms. During these years, her symptoms improved at times and became aggravated at other times, especially each year in March and December, with an occasional involvement in the fall pollen season. In two of the five years, however, she seemed to improve with pollen therapy during the fall of the year, in spite of the negative cutaneous pollen reactions.

In February, 1948, after a particularly poor winter, she spent eleven weeks in Arizona. She suffered moderately with asthma during the first two weeks but improved during the rest of her stay. While there, she was treated with iodides, Fowler solution, digitalis, calcium lactate, and a nightly capsule containing Demerol and phenobarbital. These medications were continued after returning home, but the asthmatic symptoms returned in about two weeks. Since June, 1948, the patient had not responded to any form of therapy. In October, 1948, because of asthma associated with increased cough and expectoration, she received a series of intramuscular penicillin injections, 300,000 units daily for ten days, together with aerosol penicillin 50,000 units every four hours, with good temporary results. All medications had been discontinued about one month previously, and on taking iodides and Fowler's solution again, she developed edema about both eyes. This medication was discontinued. She then seemed to respond to a regime of food avoidance, Hydryllin, and ephedrine medication until December, 1948, when she had an extremely severe attack. Epinephrine gave only slight relief. Intravenous aminophylline relieved her for only two hours. When her asthma returned and persisted severely, hospitalization was advised.

She entered the Beth-El Hospital on December 14, 1948, at about 6:00 P.M. An intravenous drip of 500 cc. of 5 per cent glucose, containing aminophylline, 7.5 grains, and 0.5 cc. of epinephrine 1:1,000, was started, and the patient was given oxygen by mask which was later changed to a hood. Epinephrine, 0.3 cc. was ordered to be given every two hours as well as 7.5 grains of caffeine sodium benzoate every four hours. Iodides were given orally. Penicillin, 300,000 units, was ordered daily. Three hours after her admission she became intensely dyspneic with labored breathing and a very rapid pulse. The blood pressure was 180/102. I saw the patient at 10:00 P.M., and on her insistence that the intravenous administration made her worse it was discontinued. She was very restless and dyspneic in the oxygen hood. This was temporarily discontinued but soon had to be replaced, as her condition became aggravated and she appeared cyanotic. As there was no improvement noted, she was changed into a helium and oxygen hood. She spent a very restless night without any sleep and with continuous asthma, and, by morning, it was evident that she was making very little progress.

On the following morning the patient appeared to be losing ground steadily. She appeared stuporous, dyspneic, very restless, and unable to get any air into her lungs in spite of the helium-oxygen therapy. The pulse rate was now above 150, the temperature 100.6 F., and she seemed unaware of her environment. Her condition was so critical that the laryngologist was urgently called upon to perform a bronchoscopy in an attempt to aspirate the bronchial secretion and displace some of the mucous plugs. This was started within about twenty minutes without any anesthetic. Fifty milligrams of Demerol were administered subcutaneously. The helium-oxygen hood was removed, and the patient was turned about with the head over the edge of the mattress, the operator practically sitting on the floor. A 7-mm. Jackson bronchoscope was passed into the right main bronchus. The bronchial tree was found to be completely filled with thick, glossy, tenacious mucous which was firmly adherent to the bronchial wall, obstructing the air passages. Attempts at aspiration were futile because of the character of the secretion. After instilling about 0.5 cc. of epinephrine, 1:1,000 solution, into the bronchus, suction was partially successful, yielding about 5 cc. of thick, sticky mucoid material. The walls of the bronchus were markedly edematous. The procedure was repeated in the left bronchus with similar results.

Immediately thereafter, there was a marked change in the patient's condition. She was now altert, breathing easily, although still wheezing, and appearing greatly relieved. There was no evident air hunger, and the cyanosis was lessened. On chest examination, breath sounds, barely audible before, could now be heard throughout both lungs in addition to scattered sibilant and sonorous rales.

The helium-oxygen hood was replaced, but almost immediately she complained of the cold air in the hood which, she insisted, was the cause of the return of her asthmatic breathing which was again apparent. The hood was removed and 0.5 cc. of epinephrine was then administered subcutaneously. Although resistant to this drug before the bronchoscopy, the relief now obtained was rapid and definite. Shortly thereafter the attack subsided, and she was able to sit up in bed and answer questions. With each cough she expectorated plugs of thick, jelly-like sputum which did not run when the receptacle was inverted. She appeared remarkably comfortable with a minimum degree of asthmatic dyspnea. This was attributed to the effect of the epinephrine injection, and it was evident that she was no longer epinephrine-fast. Similar effects have been noted in other cases of asthma after ether or avertin narcosis therapy. Further questioning revealed that, previously, exposure to cold air in winter caused immediate dyspnea and wheezing, and she spent weeks indoors during that season of the year. This fact could explain the increased severity of her asthmatic symptoms in the oxygen and helium hood before the bronchoscopy, since these gases enter the hood cooled by ice.

Thereafter she made slow steady progress. The pathologic report of the suctioned mucous secretion revealed numerous eosinophils. Subsequent x-ray examination of the pulmonary field showed the usual generalized prominence of the bronchial markings; the heart was not enlarged. Other laboratory reports were negative. She was discharged from the hospital on December 28, 1948, apparently free of asthmatic symptoms. Ten weeks later, the patient reported that she was well and that further asthmatic attacks had not yet reappeared.

Discussion

Asphyxiation due to bronchial obstruction is the major cause of death in bronchial asthma. Rackemann summarizes with the statement that "death from asthma is caused by the development of plugs of tough, sticky mucus which obstruct the bronchi and lead to suffocation. The mechanism by which this sticky mucus is produced is not yet clear."[11] Where the patient cannot expel the mucus with ordinary medication, such as expectorants and bronchodilating drugs, the removal of such plugs in the critically ill asthmatic by means of bronchoscopic aspiration is indicated. However, all other therapies should be used before resorting to this procedure. Dehydration should be energetically combated, replacing body fluids by means of intravenous drips. Recently, following the suggestion of Gay and Marriott, penicillin has been used in all severe cases of infective asthma with excellent results.[12] However, in the critically ill patients who resist these methods of treatment and are refractory to antiasthmatic drugs, a crisis approaches very rapidly which could terminate in death from asphyxiation and general exhaustion unless energetic measures are instituted to remove or to help the patient to expel the mucus and clear the bronchial airways of the obstruction. The use of the bronchoscope has been advocated by many allergists as a lifesaving measure in this crisis, and too much time cannot be lost either in deciding to use this procedure or in convincing the bronchoscopist to endoscope an apparently moribund patient. In this case, the removal of about 10 cc. of bronchial mucus secretion during bronchoscopy allowed sufficient oxygen to be absorbed to overcome partially the extreme anoxia and at the same time to overcome the refractoriness to medical agents, such as epinephrine.

Just what the mechanism of refractoriness to epinephrine or the overcoming of this refractoriness is to be conjectured at this time. According to Yonkman and Segal, histamine or similar substances are released by epinephrine, and such repeated injections of epinephrine may result in the overcoming of the bronchodilating, vasoconstricting, and antiedemic action of epinephrine by the bronchoconstricting action of histamine, thus aggravating rather than relieving the symptoms in status asthmaticus.[13] On the other hand, Gilman explains epinephrine-fastness by two actions of epinephrine: the excitatory, which constricts blood vessel musculature, and the inhibitory action, which relaxes smooth muscle, particularly of the bronchial tree.[14] In the treatment of asthma, both actions are important, allowing the relaxation of the constricted bronchi and the constriction of the blood vessels in the walls of the bronchi, thus overcoming the edema. However, the excitatory action of epinephrine is often followed by prolonged inhibitory action, and we have the phenomenon of aftercongestion of the mucosa following epinephrine administration. When the excitatory action (blood vessel constriction) wears off, the inhibitory action becomes more and more prominent, and the end result is capillary dilatation rather than constriction.

Until these findings are confirmed and the theories become realities, the answer to this important problem is not yet available. The importance of the emergency bronchoscopy in the critically ill asthmatic patient, as advocated by Waldbott, is emphasized by this case; this procedure may prove to be a lifesaving measure in a small number of such cases and a relief measure in a much larger number when all other procedures fail. A repetition of such a procedure may be envisioned as the pathology is a continuing one which may not be overcome by a single bronchoscopy.

Summary and Conclusions

A case of a critically ill patient in status asthmaticus, refractory to antiasthmatic drugs and therapy, is presented. The use of an emergency bronchoscopy without anesthesia, with the removal of some of the tenacious mucous plugs, was followed by prompt recovery. The modus operandi of the rapid improvement is to be conjectured at this time, since only a very small portion of the bronchial tree was opened to pulmonary ventilation for adequate oxygenation. The timely use of the bronchoscope in the moribund asthmatic may prove to be a lifesaving procedure.

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MEDICAL TESTIMONY BEFORE THE COURTS

The increasing frequency with which medical men are being called upon to evaluate disabilities for legal purposes is focusing increased attention upon the physician's status, function, and liability in court cases. Medical economics demands the special training of more men in legal medicine. The Minnesota plan under which the state medical society has established a medical testimony committee has resulted in improved standards.

Under certain circumstances the normally confidential patient-doctor relationship does not apply. When the patient is examined, not for giving treatment but for giving testimony before a court, this relationship does not exist; the information so gained is not regarded as privileged. A plaintiff who permits in court medical information about his person to become public in the process of trying to recover damages waives this privilege.

Minnesota Plan.—This plan was inaugurated in 1940. The Minnesota Medical Association organized a standing committee on medical testimony to which complaints of improper medical testimony can be brought and to which reports and reviews of such testimony can be made. The plan was devised with the cooperation of the state bar association. If specialists decide that the testifying doctor is ill-informed or insincere in his testimony, he is called before the committee. Also, a complaint may be filed against him with the state medica association.

Indications are that the plan has elevated the standards of medical testimony, and some othe states are contemplating putting similar plans into effect.

—Samuel M. Becker, M.D., Mississippi Valley Medical Journal, September, 1949

THE TREATMENT OF HEART FAILURE: DIGITALIS AND MERCURIAL INTOXICATION, PENICILLIN, DICUMAROL, MAJOR SURGERY

ARTHUR M. MASTER, M.D., HARRY L. JAFFE, M.D., and WILLIAM R. DORRANCE, M.D.,
New York City
(From the Cardiographic Department of Mount Sinai Hospital)

IN THE past the routine treatment of congestive heart failure, including left and right ventricular failure, comprised bed rest or limitation of activity, the restriction of salt and fluid intake, the use of digitalis, and the injection of mercurial diuretics preceded by acidifying salts. The relative importance of each of these factors and the amounts of each to be given were somewhat vague and left to be determined by the attending physician in each case. In recent years, along with advances in our knowledge of the mechanism of heart failure, several modifications in the method of therapy have been proposed, and new drugs have appeared. An evaluation of these is made in this report, and our own observations and suggestions are presented. We shall emphasize (1) the excessive use of digitalis in ordinary practice, the frequency of digitalis intoxication, particularly following digitoxin with the usual doses, and the necessity of changing the commonly held ideas about digitalis intoxication, since nausea and vomiting usually appear late; (2) the dangers of intensive, rapid mercurial therapy in old persons, such as the precipitation of azotemia and the aggravation of latent prostatism, also the antidiuretic effect of morphine and other drugs; (3) the routine use of penicillin in heart failure; (4) the routine use of Dicumarol in heart failure and postoperatively, since the frequency of pulmonary embolism is very much greater than is usually thought; and (5) the safety of major operations in the presence of heart disease and heart failure if adequate precautions are taken.

The mechanism of congestive failure was classically assumed to be "backward" failure. This theory postulates the following sequence of events: myocardial insufficiency and decreased cardiac output, increased venous pressure, increased blood volume, and edema. In recent years numerous clinical and experimental observations have led to the formulation of another mechanism to explain the syndrome of congestive failure.[1-9] According to this theory, sometimes referred to as "forward failure," myocardial insufficiency with reduced cardiac output results in diminished blood flow, decreased glomerular filtration and reduced excretion of salt, increased blood volume, and edema. It has been shown that in congestive failure the ability of the kidney to excrete sodium may be reduced to 20 per cent of normal.[4,10] In this explanation of congestive failure, therefore, the role of the kidney and salt restriction is of basic importance. Note that feeding large amounts of salt to healthy persons may cause a rise in venous pressure and blood volume.[11,12] Also, overdosage of desoxycorticosterone, which inhibits excretion of sodium chloride, may result in congestive failure.[13]

The salt in the diet of patients with congestive failure has been restricted for many years, and a Karrell diet, low in salt, has been used during the first days of acute congestive failure.[14] However, a great deal of laxity was usually displayed in actually drawing up the diet, and it was not uncommon for the ordinary hospital "salt-free" diet to contain up to 5 Gm. daily. In 1942, Schemm introduced an acid ash diet containing less than 2 Gm. of sodium chloride daily.[15] It has been claimed that, following the disappearance of the initial congestive failure, this diet over an extended period suffices to prevent its recurrence without the use of mercurial diuretics and acidifying drugs.[16,17] Recently Kempner has successfully used the "rice diet," consisting of rice and fruit, in the treatment and prevention of congestive failure, as well as in hypertension and renal disease.[18] This diet, which contains less salt than any other diet proposed and is very simple to control, may be employed for several days or weeks until the failure has disappeared. However, the majority of patients will not cooperate in maintaining so rigid a diet for longer periods; when it is followed, close observation of the urinary sodium and blood protein is essential. Tapioca may be substituted for rice.

Most patients will accept, and do quite well for long periods on, a low salt diet containing salt-free bread and milk, unsalted butter, cottage cheese, meats, fruits, and vegetables. Such a diet contains approximately 1.5 Gm. of salt. Powdered, low-salt milk is already on sale, and dialyzed salt-free milk will soon be on the market. The following foods should be avoided: canned vegetables or their juices, dry cereals, bacon, ham, beets, spinach, celery, kale, salt-water fish, and oleomargarine. The patient must be warned against articles and drugs containing sodium, such as alkalis, laxatives, gargles, and tooth paste. We have witnessed the probable development of

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congestive failure following the administration of sodium penicillin and the ingestion of salt tablets.

In contradistinction to the rigid restriction of fluid, which had always been routine, Schemm advocated forcing fluids to 5,000 cc. in conjunction with the acid ash diet. He reasoned that, after the extracellular salt in the body had been depleted, ingested fluids acted as a diuretic. It is now generally accepted that such an excessive amount of fluids is unnecessary and that 2,000 to 3,000 cc. are adequate to maintain diuresis without producing dehydration and to prevent the intolerable thirst which tormented the cardiac patient in former years when liquid intake was reduced.[19–22] As long as the sodium in the diet is minimal, the amount of liquids allowed may be liberal.

Mercurial Diuretics

During the past twenty years mercurial diuretics have proved of inestimable value in combating congestive failure, both left and right. In 1937, we expressed the opinion that they were usually more efficacious than digitalis in this respect, and this conviction has grown firmer with the years.[23] This is true particularly of congestive failure in extracardiac conditions associated with increased circulating blood volume and cardiac output such as Graves' disease, severe anemia, infection or high fever, chronic pulmonary disease, beri beri, Paget's disease, and arteriovenous aneurysm.[24] Until the causative factor has been overcome, digitalis is usually ineffective, but the mercurials may be beneficial. The latter are also preferable in acute coronary occlusion with infarction, in carditis associated with acute rheumatic fever and other infections, in constrictive pericarditis, and possibly in congenital heart disease. Digitalis does not affect heart failure in myxedema.

Usually 1 or 2 cc. of a mercurial have been given once or twice a week; occasionally higher doses are required more often, and, rarely, 3 or more cc. have been administered every day or two for long periods. It is not uncommon for a patient to receive hundreds of injections over many years without untoward reaction, although occasionally albumin, red and white cells, and casts appear in the urine transiently and, rarely, tubular nephrosis has resulted.[25–30] These and other reactions are unusual and mild in young persons with rheumatic heart disease, but in older persons with arteriosclerotic heart disease and apparent or latent impairment of renal function, dehydration and salt depletion may result in uremia and death.[31–40] Following adequate diuresis these patients may become apathetic, weak, confused, drowsy, restless, and agitated.[41,42] Blood studies disclose increased urea nitrogen and low serum chlorides and sodium. We have found the incidence of such reactions higher since the advocacy of daily mercurial injections by Gold and his coworkers until the patient's "dry weight" is attained, i.e., until the weight does not vary after two successive injections.[43] While the advantage of this method is doubted by some, it has proved effective, and even miraculous, in occasional resistant cases in which the failure did not respond to less frequent injections; however, the danger of salt depletion reactions has proved very real in elderly patients. In this age group it is safest to inject 1 cc. every two or three days, if necessary. The blood urea should be determined once or twice a week, and the blood chlorides, sodium, and carbon dioxide combining power occasionally. Salt depletion reactions are usually reversible if the mercurial therapy is discontinued; occasionally salt and fluids must also be administered, either by mouth or by vein, in 5 per cent concentration.[44] The profound asthenia may be the result of potassium, as well as sodium, depletion.[45] Very recently, the possibility of cerebral thrombosis following mercurials has been pointed out.[46]

In elderly men another danger in intensive mercurial therapy is the exacerbation of prostatic symptoms or activation of latent prostatism.[47]

The intravenous administration of mercurials, although usually safe, has been discarded by many physicians because of occasional fatal reactions.[48] It is customary to inject mercurials intramuscularly, but recently it has been shown that thiomerin, a mercurial combined with sodium thioglycollate, may be injected subcutaneously effectively and practically painlessly.[49,50] There are no systemic reactions, and the injections may be given by the patient or a member of his family.

Sensitivity reactions to mercurials, including chills, fever, urticaria, and asthma, are not rare, and we have noted severe purpura hemorrhagica or eosinophilia.[51–53]

Master and his associates, who were later confirmed by Ferrer and Sokoloff, showed that morphine and its derivatives exert an antidiuretic effect and should not be administered prior to. or soon after, a mercurial has been injected.[23,5] We have found this true, to a lesser extent, of codeine, quinidine, amidopyrine, adrenalin, and ephedrine.[55] We have been impressed with the fact that a severe emotional state also may inhibit diuresis. It has been noted that remaining recumbent for twelve hours after an injection increases the diuretic response.[56]

Occasionally the oral or rectal administration of mercurials enables one to reduce the number of injections required. The oral dose is variable; 2 Mercuhydrin tablets may be given daily.

Acidifying drugs, such as ammonium chloride or nitrate, enhance diuresis in the majority of patients unless they produce gastric upset. In patients who gradually cease to respond to mercurials urea in doses of 60 to 90 Gm. may be effective; its repellent taste may be disguised in fruit juice or by compounding it in effervescent form.[1] Intravenous aminophyllin is often effective in acute left heart failure, i.e., pulmonary edema, cardiac asthma, and Cheynes-Stokes respiration. Aminophyllin by suppository may be helpful in preventing these conditions.

In recent years there has been an increased tendency to permit patients with heart failure out of bed after a shorter interval.[57] This is true particularly of left ventricular heart failure.[58] Levine has suggested that, even when pulmonary congestion is present, dyspnea, may be relieved by having the patient sit up rather than lie in bed.[59]

Treatment of Special Symptoms in Congestive Failure

Gastrointestinal disturbances, cachexia, hiccup, and excitability or manic state are distressing symptoms encountered in congestive failure and, unless relieved, may add to the burden of the heart and even lead to a fatal outcome. Nausea, vomiting, and distention may be caused by such drugs as morphine and digitalis, which should be discontinued. It should be remembered that morphine is more effective when given intravenously than subcutaneously, and thus a smaller dose is required. Also, Dilaudid and Demerol may be used instead of morphine since they are less apt to produce nausea and vomiting.

When nausea and vomiting are present, sips of carbonated water and frequent small meals containing thick foods, such as gruels, rice, bread, toast, potatoes, and boiled milk, are often helpful. Many persons are unable to tolerate fruit juices and unboiled milk. In treating gastric disturbances in congestive failure one should avoid antacids containing sodium.

Hiccup is particularly prone to defy therapy. Recently, the use of quinidine has been suggested, 10 grains being given intramuscularly every hour for four hours.[60] Numerous other methods of therapy should be employed, of which inhalation of amyl nitrite and intravenous niacin have proved most effective.

Hyperirritability, constant anxiety, and manic tendencies are usually of poor prognostic significance unless caused by salt depletion. If the ordinary oral barbiturates and morphine or Demerol are ineffective, sodium amytal by vein or paraldehyde per rectum may be used.

Patients with congestive failure often are unable to eat adequately, and cachexia, anemia, and hypoproteinemia may appear, contributing to the formation of edema. Supplementary iron, vitamins, and protein hydrolysates should be given. Dexedrine often helps overcome the asthenia of heart failure, particularly in older persons. It may be given in the presence of hypertension, since it usually does not raise the blood pressure.

Digitalis

In recent years there has been a great tendency to use digitalis glycosides instead of the leaf. Gold and his associates extolled digitoxin for rapid digitalization because minimal nausea, vomiting, or other reaction is produced.[61,62] As another advantage of digitoxin, it was claimed that the majority of patients required a single oral or intravenous dose of 1.2 mg. for digitalization and a maintenance dose of 0.2 mg. In practice, however, it was soon found that, as in the case of the leaf, the digitalization dose of digitoxin varied considerably from person to person. Furthermore, the doses advocated as entirely safe resulted in numerous toxic reactions.[63-69] The delay in the appearance of nausea and vomiting in digitoxin therapy increases the necessity of great individual caution in its use. It is our distinct impression that the number of undesirable reactions to digitoxin outnumbers those encountered previously with digitalis leaf. Nevertheless, it must be emphasized that any form of digitalis may produce untoward reactions and that the dose involved varies considerably from patient to patient. Some patients cannot tolerate more than half a grain of the leaf two or three times a week, whereas, very rarely, three grains daily are required.

Since 1.2 mg. of digitoxin in one dose may be excessive, it is safer to administer an initial dose of 0.6 mg. and follow with two doses of 0.3 mg. at four or six-hour intervals. It is then continued in 0.1-mg. doses until full digitalization has been attained, 2.0 or even 3.0 mg. occasionally being required for digitalization.[65,70] For maintenance we have found that the suggested dose of 0.2 mg. is often excessive, and even 0.1 mg. may lead to toxic manifestations.[66] Therefore, we employ digitalis leaf for maintenance, usually stopping the digitoxin after 1.2 mg. has been given.

Although digitoxin was advocated because of its rapid effect, compared with the leaf, this property has proved of little practical value. Even when given by vein, digitoxin exerts its full effect only after one or more hours; therefore, when prompt digitalization is desired, intravenous strophanthin is the drug of choice. In acute pulmonary edema, for example, morphine is given subcutaneously or intravenously and, if necessary, aminophyllin by vein. If improvement does not occur promptly, 0.3 to 0.5 mg. of strophanthin is injected by vein. If the patient has been receiving digitalis, 0.1 to 0.2 mg. is given; 0.1 mg. doses may be repeated thereafter every hour as indicated. Since strophanthin is excreted rapidly, digitoxin may be given simultaneously in order to assure a continuous digitalis effect. Phlebotomy is sometimes lifesaving in pulmonary edema. Recently, the efficacy of adrenalin and ephedrin in some cases of cardiac asthma has again been pointed out.[71] Otherwise, the therapy is similar to that of pulmonary edema.

We believe that digitalis intoxication is much more frequent than is usually thought and that many cases are missed because nausea and vomiting are commonly watched for as the first symptoms of overdigitalization. The drug is pushed until nausea and vomiting appears. Actually, mild abdominal, cerebral, and ocular symptoms may appear insidiously and indicate that complete digitalization has already been achieved. Since we consider the mercurial diuretics more effective than digitalis in congestive failure, we rely on them and stop the digitalis as soon as these symptoms appear. The abdominal symptoms of overdigitalization include mild discomfort or cramps, anorexia, flatulence, or diarrhea. The cerebral and ocular manifestations at first may consist of mild weakness, headache, dizziness, restlessness, irritability, insomnia, spots before the eyes, and green or yellow vision. If the digitalis is continued, mental confusion, disorientation, mania, and stupor or coma may ensue, leading to various erroneous diagnoses.[72] In many cases digitalis intoxication often is manifested first by the appearance of arrhythmias which are often bizarre. These may be obvious on auscultation or may become apparent only in the electrocardiogram, e.g., partial auriculoventricular block or interference dissociation.

Our experience with Digoxin has not been extensive but it appears to be a safer drug than digitoxin since it is excreted more rapidly.[65] Digitalization is often effected with 1.5 mg. The maintenance dose varies from 0.25 to 0.75 mg. Lanatoside C is similar to Digoxin in dosage and action. Recently interest in thevetin and other glycosides, such as acetyl-strophanthidin, has been revived.[73,74]

Penicillin

We began to administer penicillin routinely to patients with heart failure in 1946 in order to prevent pulmonary infection and possibly pulmonary infarction. Although there is no definite evidence of bacterial invasion of the lungs in cardiac failure, areas of pneumonitis are frequent, and the bacteria usually present in the bronchi may become pathogenic in the presence of stasis. Another reason for using penicillin in congestive failure is that it is often difficult or impossible to determine the nature of the lesion in the lungs. It is our opinion that the use of penicillin has improved the results of treating heart failure and enabled some of the severest cases to survive. In the presence of heart failure the sodium salt of penicillin should not be used. We have heard a pericardial friction rub in several patients presenting skin sensitivity reactions to procaine penicillin. Apparently the allergic response spread to the pericardium.

Dicumarol and Heparin

Experience in acute coronary occlusion has shown that anticoagulant therapy is effective in preventing pulmonary and arterial emboli.[75-81] The drugs employed have been Dicumarol and heparin in the first two days. In congestive failure, as in acute coronary occlusion, there are factors conducive to thrombosis and embolism, e.g., often prolonged bed rest, slowing of the circulation, and venous stasis. Therefore, we have employed Dicumarol routinely in heart failure, provided adequate facilities for prothrombin time determination are available. We believe that patients with massive pulmonary infarction and heart failure, who probably would have succumbed in the past, have recovered with the aid of Dicumarol and penicillin. Wishart and Chapman have reported a small series of cases of heart failure treated with Dicumarol in which the incidence of pulmonary infarction was only 4.9 per cent.[82] They advise its early administration in heart failure. It may be emphasized that pulmonary embolism may be evidenced first by fever of varying degree and by minor symptoms, such as anxiety, and that cough, hemoptysis, and leukocytosis may be absent.

Although heparin is safer and requires less supervision than Dicumarol, its use in the past has been restricted because it must be given by injection, and this has been painful. However, several high potency, effective preparations are now available which are injected every six to eight hours; if a very recent preparation is used, 200 mg. may be injected twice a day. Clotting times are required only intermittently.

The first dose of Dicumarol is 300 mg., and in the majority of patients 200 mg. may safely be given the second day. The prothrombin time should be checked daily, however. On the third day and thereafter, 50 to 100 mg. of Dicumarol is usually a safe daily dose, but the next dose should not be administered until the prothrombin time for that day has been determined. After severa weeks it is often possible to maintain the patien indefinitely on a routine dosage with only a weekly prothrombin determination.[83] Heart failure usually prolongs the prothrombin time and so reduces the dosage of Dicumarol required.[84]

Considerable variation in individual response to Dicumarol exists, and in some patients stabilization of Dicumarol therapy is difficult. Thus, the ordinary dosage occasionally results in excessive prolongation of the prothrombin time and bleeding. Dicumarol should not be administered if there is a history of peptic ulcer, liver or renal disease, or hemorrhagic tendency.

In order to prevent pulmonary infarction Dicumarol should be given soon after major operations if there is no evidence of bleeding, since it does not produce bleeding at the operative site.

Heart Failure in Acute Coronary Occlusion and Rheumatic Fever

In these conditions acute infarction or carditis is present, and it is our practice to rely upon salt restriction and mercurials in the treatment of cardiac failure, avoiding digitalis unless the failure increases in spite of these measures.[23] Although coronary occlusion is probably always associated with some degree of left heart failure, in the first attack clinical signs of congestive failure are absent or slight in the majority of cases and disappear after several days. If they persist or increase, mercurials are injected. If these are ineffective, we administer digitoxin or Digoxin, taking great care to avoid overdigitalization since arrhythmias may be set up in the irritable areas around the infarction. Coronary occlusion which begins with pulmonary edema usually responds promptly to morphine and aminophyllin. If it persists, strophanthin by vein may prove valuable. It should be mentioned that some writers employ digitalis in heart failure complicating coronary occlusion, as they would in any heart failure.

Heart failure in acute rheumatic fever, even with auricular fibrillation, frequently is not affected by large doses of digitalis. In fact, digitalis often aggravates the disease. It should be used only after other measures have proved inadequate.

Heart Failure in Hyperthyroidism

One must always be on the lookout for cases of congestive failure due to hyperthyroidism since the usual symptoms and signs of that disease may be absent or slight. Prior to the onset of congestive failure there is often a history of paroxysmal tachycardia or fibrillation. When failure appears, the heart rate, whether regular or irregular, is rapid and cannot be slowed with digitalis. The failure is intractable and often rapidly progressive, being helped temporarily by mercurials only. Since the basal metabolic rate is not entirely reliable in the presence of congestive failure, the diagnosis is best confirmed by determining the urinary excretion of radioactive iodine; if less than 25 per cent is excreted, hyperthyroidism is present. Treatment by us is carried out with radioactive iodine. The effect of the drug is not pronounced until six weeks later. Therefore, if the congestive failure is severe, ordinary iodine is administered several days after the radioactive iodine has been given in order to achieve a rapid depression of thyroid activity. The iodine is discontinued after three weeks, and at the end of the six-week period another iodine excretion test is performed to determine whether a second, small dose of radioactive iodine is required for therapy. These cases are quite frequent, and this therapy has been very successful.

Shock and Heart Failure

Shock may be associated with heart failure, particularly following coronary occlusion. The treatment of severe shock in this condition has always tested the physician's ingenuity and has usually been ineffective. In recent years intravenous fluids and plasma have been used with increasing frequency but variable success.[85] In order to avoid heart failure, 5 per cent glucose should be used, instead of saline, and the rate of flow should be slow, i.e., less than 60 drops per minute. If pulmonary congestion appears, a mercurial injection should be given intravenously at once. In this way fluids may be continued indefinitely. This regime may be followed if congestive failure is also present, however, slowing the rate of flow even further. Two milligrams of neosynephrine may be added to the intravenous drip or 25 to 75 mg. of ephedrine may be injected intramuscularly. If the intravenous therapy has maintained the circulating blood volume, adrenalin may be used.

Heart Failure and Operation

For many years we have been impressed by the relative ease with which patients with severe heart disease tolerate even major operations if adequate precautions are taken to avoid anoxemia and coronary insufficiency. An excellent result can usually be obtained even in the presence of acute coronary occlusion or congestive failure when the operation is obligatory. Consultation between the cardiologist, surgeon, and anesthetist should consider preoperative preparation, the choice of procedure involving the least trauma to the tissues, and the selection of the most desirable anesthetic in each case. Because of the increased care exerted in the case of a cardiac patient, the latter may be reassured that he will tolerate operation about as well as the patient without heart disease.

There is often remarkable improvement in an intractable anginal syndrome or congestive failure following operative removal of such factors as an abscessed tooth, gallstones, inflamed rectal fissure, or enlarged prostate.

The preoperative preparation of the cardiac patient is important and should include adequate sedation. If anginal pain is present, nitroglycerin and Dilaudid have proved effective. A combination of morphine and scopolamine in the ratio of 25:1 has been advocated just before operation.[86] The proper choice of an anesthetic is of paramount importance in the cardiac patient, since even minor degrees of coronary insufficiency may be harmful or dangerous. Each patient must be carefully evaluated, and the agent chosen should depend not only upon the requirements of the patient but also upon the experience of the anesthetist. Rovenstine has indicated the value of administering parasympathetic-acting anesthetics in persons with sympathicotonia and vice versa.[87] In patients with coronary or valvular disease or hypertension, but without congestive failure, a general anesthetic is usually preferable to spinal, since the latter may produce a considerable fall in blood pressure. For minor and extraperitoneal operations intravenous sodium pentothal with 100 per cent oxygen is very satisfactory. In intra-abdominal procedures it is preferred by some, but a cyclopropane-oxygen mixture is effective for induction and thereafter traces of ether.

When there is a recent history of congestive failure, spinal anesthesia is considered best tolerated by many writers, since it produces peripheral vasodilatation and thus acts as a bloodless phlebotomy. Actually its use in the treatment of pulmonary edema has been suggested. In order to prevent a drop in blood pressure, the spinal anesthesia is preceded by 5 to 15 mg. of neosynephrine intramuscularly or 2 mg. in a continuous intravenous drip and is accompanied by 100 per cent oxygen.

Arrhythmias of all types commonly appear during anesthesia, particularly following cyclopropane. These arrhythmias are usually not serious, since ventricular arrhythmias, as a rule, respond promptly to 5 cc. of 1 or 2 per cent intravenous procaine given rapidly.[88] The latter is less effective in supraventricular arrhythmias. In cardiac patients with a history of arrhythmias, ether is usually considered the anesthetic of choice. Ether should not be employed in diabetics, since it interferes with carbohydrate metabolism; this is also true of nitrous oxide and avertin.

Transfusions are invaluable in preventing and treating shock and coronary insufficiency following operative hemorrhage. The transfusion should be begun just before the operation and should be continued after the operation if necessary. It should be given slowly to avoid pulmonary edema, but the onset of heart failure is not disastrous, since, in the rare case in which heart failure is precipitated, a mercurial given intravenously is effective. If congestive failure is present, washed red blood cells may be used instead of whole blood.

Summary

The therapeutic measures employed in congestive heart failure have been discussed in the light of our personal observations. The points stressed are as follows:

A salt-free diet may be arranged which is palatable and efficacious. A "rice diet" may be advantageous for a short period during acute congestive failure.

The liquid intake should be ample, i.e., 2,000 to 3,000 cc. daily during a salt-free diet.

Frequent or daily injections of mercurials are often effective and necessary but may be dangerous in elderly persons with latent renal disease. Salt depletion and dehydration may result in uremia and even death. The symptoms of salt depletion are weakness, apathy, confusion, drowsiness, or restlessness.

During mercurial therapy in the old age group, blood urea determinations should be made once or twice weekly and blood chlorides occasionally.

In elderly males mercurial diuresis may induce prostatic swelling with urinary retention.

Morphine, codeine, and other opium derivatives and quinidine, ephedrine, and amidopyrine are antidiuretic.

Nausea, vomiting, and distention are frequently caused by drugs, such as digitalis and morphine, and by large quantities of fruit juices and unboiled milk.

Digitalis intoxication is very common, and digitalis therapy requires careful individualization, regardless of the preparation used. Digitalis intoxication more frequently follows the use of digitoxin than digitalis leaf.

Nausea and vomiting are usually late symptoms of digitalis intoxication, being preceded by abdominal discomfort and pain, anorexia, and visual or cerebral disturbances, such as weakness, restlessness, irritability. Arrhythmias are common.

The doses of digitoxin usually recommended are frequently excessive. Digitalis leaf is safer than digitoxin for maintenance.

Digitalis should be used cautiously in acute coronary occlusion and rheumatic fever.

Penicillin is administered routinely in congestive failure to prevent pneumonitis and possibly pulmonary infarction. The potassium or aluminum salt should be used. A pericardial friction rub may appear in association with urticaria.

If adequate facilities are available for prothrombin time determination, Dicumarol should be employed in congestive failure and postoperatively to prevent pulmonary infarction which is much more common than is usually suspected. In heart failure the dose of Dicumarol required is often diminished.

Major operative procedures are usually very successful in cardiac patients, even in the presence of congestive failure, if measures are taken to prevent coronary insufficiency and shock.

The removal of a focus of disease, e.g., gallstones, abscessed tooth, thrombosed hemorrhoid, may improve congestive failure or an anginal syndrome.

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TOXICITY OF MESANTOIN

Albert L. Deutsch, M.D., Max B. Milberg, M.D., Harold A. Abel, M.D., and Edward B. Grossman, M.D., F.A.C.P., New York City

(From the Mental Hygiene, Medical, and Clinical Laboratory Units, New York Regional Office, Veterans Administration)

SINCE the original report by Loscalzo in 1945 on the use of 3-methyl-5,5-phenylethylhydantoin (Mesantoin) as an anticonvulsant agent, a number of other investigators have published their results in the treatment of epilepsy with this drug.[1] Although minor side-effects, such as drowsiness, gingival hypertrophy, cutaneous eruptions, and varying degrees of relative lymphocytosis and monocytosis, were reported by Loscalzo, Kozol, Lennox, Fetterman, and others, most observers have been in agreement that Mesantoin produced fewer toxic manifestations than did dilantin or other hydantoin derivatives.[2-14] Ruskin reported a case of fatal exfoliative dermatitis accompanied by severe neutropenia; in a comment on this case, Loscalzo expressed the opinion that such reactions were to be attributed to individual hypersusceptibility.[15,16]

More recently, however, attention has been directed to the possible myelotoxic effects of the compound by reports of five cases of severe pancytopenia with three fatalities.[17-20] In all instances, anemia, thrombocytopenia, and granulocytopenia developed after the patient had been receiving Mesantoin for a period of six to nine months; in the majority of the cases medication had not been stopped until some time after frank toxic effects had become manifest. No immediate sensitivity to the drug was reported.

A large group of veteran epileptics has been under various forms of treatment, including Mesantoin therapy, at the New York Regional Office of the Veterans Administration since July, 1946. No major toxic reactions have occurred in these patients. In order to determine the possible occurrence of unrecognized toxic effects on the hematopoietic and other systems, a careful study was made of 33 unselected patients who had received Mesantoin under the supervision of one of us (A.L.D.) for periods ranging from two to thirty-two months. The average duration of therapy in this series of patients was one and one-half years.

The clinical diagnoses and data concerning duration of treatment and dosage are presented in Table 1. Mesantoin was used both alone and in combination with other anticonvulsants. Dosage varied from 1 to 8 tablets daily; the average daily dose was 4 to 5 tablets (0.4 to 0.5 Gm.). An initial dose of one tablet daily was augmented by 0.1-Gm. increments at weekly intervals until the optimum level was attained. If other drugs were to be discontinued, dosage of these was progressively diminished so that no abrupt transition from one medication to another occurred.

At the beginning of treatment, urinalyses, complete blood counts, and erythrocyte sedimentation rates were performed on all patients at weekly intervals. After optimum dosage had been obtained, the time interval between laboratory examinations was prolonged to not more than one month. Whenever peripheral blood examinations revealed a decrease in any of the formed elements, these were repeated thrice weekly until normal values were re-established. Sternal bone marrow aspiration and a battery of liver function tests were performed at least once in each case, toward the close of the present observation period. The bromsulfalein excretion test employed was a forty-five-minute test with a dose of 5 mg. of dye per Kg. of body weight; the alkaline phosphatase determination was performed by the King-Armstrong method, prothrombin time according to the method of Quick, and gamma globulin determination by the turbidimetric method of Kunkel.[21-23]

Results of urinalyses and of routine blood chemical examinations were normal in all cases and are, therefore, not reported in detail.

The findings on sternal bone marrow aspirations were within the accepted limits of normal in all instances. In only one case was this examination performed during a period of relative anemia or granulocytopenia (Case 13). Unfortunately, the total cell count was lost in this instance; however, the smears did not indicate any deviation from average cellularity, and the differential cell count was entirely normal. These data are presented in Table 2.

Minimum and maximum hemoglobin values and erythrocyte, platelet, total leukocyte, and absolute granulocyte and lymphocyte counts during the period of observation are given in Table 3. In seven of the 33 patients a decrease in hemoglobin concentration to less than 13 Gm.

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TABLE 1.—CLINICAL DIAGNOSES, DURATION OF TREATMENT, AND DOSAGE IN 33 UNSELECTED CASES

Case	Type of Epilepsy	Date Mesantoin Started	Present Medication	Present Daily Dose (Gm.)	Other Clinical Data
1	Post-traumatic grand mal	July 1, 1947	Mesantoin	0.4	Psychoneurosis, anxiety state
2	Mixed type, grand mal, psychomotor	June 6, 1947	Mesantoin	0.5	Psychoneurosis, anxiety state; allergy; deviated septum
3	Grand mal, idiopathic	January 22, 1948	Mesantoin Dilantin	0.4 0.4	Minor neurologic findings
4	Grand mal	October 19, 1948	Mesantoin Dilantin	0.4 0.4	Negative
5	Grand mal	January 5, 1948	Mesantoin	0.5	Negative
6	Post-traumatic	May 28, 1947	Mesantoin	0.3	Negative
7	Post-traumatic, grand mal	November 14, 1947	Mesantoin Dilantin	0.4 0.4	Residuals of right hemiplegia; tic involving eyes; stuttering (post-traumatic); choreiform movement
8	Grand mal	July 15, 1947	Mesantoin	0.4	Southwest Pacific, 1 year; malaria 1944; osteochondromatosis
9	Psychomotor	September 10, 1947	Mesantoin	0.4	Psychoneurosis, anxiety state
10	Post-traumatic, Jacksonian	August 27, 1947	Mesantoin	0.4	48 months South Pacific; bronchial asthma; hay fever; psychoneurosis; neurologic findings
11	Grand mal	January 7, 1949	Mesantoin Dilantin	0.4 0.4	Negative
12	Grand mal	September 25, 1947	Mesantoin Dilantin	0.4 0.4	Deterioration with psychosis
13	Grand mal, petit mal	September 30, 1946	Mesantoin Dilantin	0.4 0.2	Atrophy of right testicle; psychosis
14	Grand mal, petit mal	November 24, 1947	Mesantoin Dilantin	0.4 0.4	Atrophy of right testicle
15	Psychomotor	March 28, 1947	Mesantoin	0.3	Negative
16	Psychomotor	April 17, 1947	Mesantoin Phenobarbital	0.4 0.03	Dermatitis of ears; impotence; psychoneurosis
17	Grand mal	December 29, 1948	Mesantoin Phenobarbital	0.4 0.03	6 months in India
18	Post-traumatic	April 2, 1947	Mesantoin	0.4, reduced to 0.2	Right hemiplegia with residuals; aphasia
19	Grand mal, idiopathic	January 30, 1948	Mesantoin Dilantin	0.4 0.4	Negative
20	Grand mal (nocturnal), idiopathic	August 4, 1948	Mesantoin Dilantin Phenobarbital	0.3 0.4 0.06	Caribbean area many years; chronic ear infection
21	Grand mal	March 30, 1948	Mesantoin	0.4	Psychoneurosis, anxiety
22	Focal, post-traumatic	April 21, 1948	Mesantoin Dilantin	0.4 0.4	Negative
23	Grand mal	January 5, 1949	Mesantoin Dilantin	0.4 0.4	Fatigue; malaria, 1944; 29 months in Southwest Pacific
24	Grand mal, post-traumatic	January 5, 1949	Mesantoin Dilantin	0.4 0.4	Neurosis
25	Grand mal, post-traumatic	January 12, 1948	Mesantoin	0.4	Negative; 19 months in Mediterranean
26	Grand mal, petit mal, psychomotor	February 10, 1949	Mesantoin Dilantin	0.2 0.4	Scarlet fever with residual cardiac murmur; psychoneurosis, anxiety
27	Grand mal	February 8, 1949	Mesantoin Dilantin	0.4 0.4	Psychoneurosis; alcoholic
28	Grand mal, psychosis	January 25, 1949	Mesantoin Phenobarbital	0.2 0.1	8 months in North Africa; negative
29	Grand mal, petit mal	May 7, 1948	Mesantoin Dilantin	0.5 0.3	2½ years in Pacific area
30	Grand mal, post-traumatic	March 28, 1949	Mesantoin Dilantin Phenobarbital	0.3 0.4 0.03	Chronic alcoholism; liver 2 fingers enlarged below costal margin
31	Grand mal, psychosis	January 19, 1949	Mesantoin Dilantin	0.4 0.4	Alcoholism denied
32	Grand mal	July 21, 1948	Mesantoin Dilantin	0.4 0.2	Negative
33	Grand mal	July 21, 1948	Mesantoin Dilantin	0.4 0.2	Negative

per 100 ml. (80 per cent) was noted at some time during treatment, with a concomitant fall in erythrocyte count to less than four million in five of these. Mesantoin treatment was not interrupted; hemoglobin concentration and erythrocyte counts again rose to within normal limits in all patients except one (Case 30), a chronic alcoholic whose diet and activities were difficult to control. Significant thrombocytopenia was not observed. Two instances of significant leukopenia were seen: in Cases 12 and 13, total leukocyte counts fell to 3,700 and 2,950, respectively, but returned to normal levels within a few days. Ten other patients showed transitory granulocytopenia without total leukopenia; these findings also disappeared after a short period without any change in the anticonvulsant therapy.

Results of the batteries of liver function tests performed are summarized in Table 4. The twenty-four and forty-eight-hour cephalin-cholesterol flocculation tests are included in the tabulation only for purpose of completeness; discussion of these is omitted for the reason that we have not found these tests to be trustworthy or informative in our laboratory. In 19 of the

TABLE 2.—STERNAL BONE MARROW EXAMINATION

Case	Total Nucleated Count Thousands per Cc.	Myeloblasts	Myelocytes Neutrophils	Myelocytes Eosinophils	Polymorphonuclear Nonsegmented	Polymorphonuclear Segmented	Eosinophils	Lymphocytes	Erythroblasts	Normoblasts
1	84.0	2.0	22.8	2.4	19.6	10.8	0.6	9.0	1.6	30.8
2	118.0	1.0	21.6	1.4	18.8	13.6	2.2	2.6	1.0	37.6
3	140.0	1.6	22.8	3.4	19.2	14.2	3.2	2.4	1.0	32.2
4	77.0	2.2	25.4	2.6	15.8	17.2	2.0	5.2	1.0	27.8
5	163.0	1.0	33.2	2.2	11.8	11.2	1.6	6.0	1.2	31.0
6	233.6	2.0	29.2	1.6	13.8	17.0	1.2	13.4	1.4	19.4
7	89.8	1.2	20.8	1.8	12.4	20.2	0	14.2	1.2	26.6
8	130.6	0.6	31.0	2.8	16.0	17.4	0.6	7.0	2.6	21.4
9	44.6	0.4	25.8	3.2	18.6	20.4	0.4	7.6	0.2	22.2
10	316.0	1.0	32.0	2.2	16.4	14.2	4.0	6.8	0.8	24.2
11	60.4	2.8	26.0	2.0	11.2	18.0	2.0	8.0	1.2	25.6
12	55.4	2.4	27.0	1.6	6.4	11.2	1.6	8.6	1.4	38.0
13	No count	1.6	21.8	1.0	17.2	18.2	1.6	8.2	1.6	28.2
14	102.0	0.4	26.6	1.8	12.6	25.6	0.2	12.4	1.6	17.8
15	113.2	1.4	31.4	1.8	8.6	21.8	1.0	9.8	0.2	21.6
16	29.6	0.8	22.6	2.0	10.6	29.2	0.6	8.4	0.4	23.6
17	140.0	1.4	30.4	1.6	10.6	12.8	0	12.4	0.4	30.2
18	129.4	2.2	27.4	1.8	18.8	15.4	1.0	7.8	1.4	24.2
19	114.8	1.8	22.8	1.2	8.8	16.4	4.0	10.2	1.0	34.6
20	67.2	0.8	18.6	2.6	13.4	21.0	1.2	9.4	0.6	31.0
21	85.7	0.8	23.4	1.4	9.2	27.4	1.0	9.0	0.6	22.4
22	56.4	2.0	21.0	2.8	21.8	20.2	1.2	8.0	1.4	21.0
23	174.6	0.8	27.4	1.6	21.8	18.6	1.4	2.4	2.0	23.4
24	67.6	0.8	26.0	4.0	7.4	20.8	1.2	15.4	1.2	21.2
25	124.0	1.6	32.0	2.8	14.0	19.6	0.4	6.6	1.6	20.6
26	108.0	1.4	17.8	3.0	14.8	18.4	1.4	12.2	0.6	28.2
27	82.7	0.2	22.8	1.6	15.2	19.6	1.8	8.6	0.8	27.8
28	57.3	1.6	28.8	0.4	20.2	20.8	0	8.6	0.6	17.8
29	51.6	1.4	20.0	0.6	11.0	20.4	0.2	9.4	0.6	34.8
30	64.4	0.4	22.8	0.6	10.4	18.6	0.8	11.8	1.2	28.0
31	135.4	2.2	31.6	2.0	10.6	14.0	0.2	9.4	1.2	26.6
32	98.3	1.4	19.2	1.2	9.2	20.8	0.2	17.4	0.8	28.0
33	53.6	0.4	24.4	0.8	11.2	16.0	0	14.6	1.0	31.2

NOTE: Elements in the differential count are expressed in percentage. Basophilic myelocytes, basophils, and monocytes did not exceed 2.2 per cent in any differential count and have been omitted from the tabulation.

TABLE 3.—MAXIMUM AND MINIMUM PERIPHERAL BLOOD COUNTS

Case	Hemoglobin, Gm. per Cc.		Red Cell Count, Millions per Cc.		White Cell Count, Thousands per Cc.		Platelet Count, Thousands per Cc.		Absolute Neutrophil Count		Absolute Lymphocyte Count	
	A	B	A	B	A	B	A	B	A	B	A	B
1	12.0	16.0	4.12	4.91	4.7	11.1	190	280	2,820	7,800	1,640	4,320
2	14.5	16.4	4.54	5.71	4.9	8.5	210	250	1,820	5,130	1,990	3,550
3	13.4	16.8	4.11	5.05	6.1	10.6	180	250	2,520	5,910	2,940	5,670
4	13.9	17.7	4.48	5.16	5.9	8.7	210	290	3,310	5,920	2,170	3,240
5	13.4	16.3	4.46	4.91	6.1	10.2	180	270	3,720	6,560	1,640	3,410
6	13.0	16.5	4.35	5.05	6.6	9.9	190	270	3,820	5,840	1,710	3,960
7	13.2	15.0	4.26	5.06	5.2	8.8	200	270	2,760	4,910	1,870	4,480
8	12.4	15.5	3.67	5.03	4.6	12.4	170	260	2,010	9,180	1,540	3,820
9	14.5	17.2	4.54	5.32	5.3	9.3	210	280	2,810	5,310	2,130	4,760
10	13.4	16.2	4.62	4.93	6.1	9.4	180	270	2,890	5,160	710	4,830
11	10.6	15.5	3.63	4.66	6.5	9.8	180	240	3,150	4,990	2,040	3,520
12	13.0	15.5	4.13	5.38	3.7	8.3	180	270	1,520	5,470	1,650	2,640
13	13.4	16.9	4.12	5.13	2.9	7.6	190	260	1,595	4,590	758	2,770
14	13.4	16.8	4.54	5.16	5.1	9.5	200	280	2,010	6,370	1,390	3,280
15	12.0	16.4	3.83	5.26	6.3	11.6	180	300	2,990	6,150	1,870	4,690
16	13.0	16.0	4.12	5.04	5.8	10.1	200	260	3,480	6,720	2,030	4,090
17	13.8	16.4	4.25	5.04	5.1	9.6	200	290	3,110	5,660	1,040	3,280
18	15.0	17.0	4.50	5.49	5.6	11.8	190	260	3,130	8,530	1,560	4,520
19	13.0	15.0	4.37	5.66	6.1	13.9	190	280	3,410	7,910	2,120	5,560
20	13.4	15.5	4.65	4.88	7.3	9.7	220	240	3,750	5,900	2,410	3,540
21	13.8	14.5	4.21	4.83	5.7	10.5	190	280	3,080	8,300	1,640	2,140
22	13.0	16.4	3.84	5.51	6.6	10.2	200	260	3,710	6,330	1,470	4,230
23	14.0	16.9	4.44	5.12	7.5	13.4	240	290	4,640	10,400	2,090	3,950
24	15.0	18.4	4.63	5.52	5.6	7.8	220	280	1,970	4,480	1,960	3,660
25	13.0	16.4	3.98	5.12	4.7	7.9	200	300	2,087	5,540	1,325	2,920
26	13.0	16.0	4.49	5.31	5.1	11.5	210	280	1,950	8,380	1,870	2,870
27	13.4	15.6	4.08	5.06	5.3	9.8	230	290	2,710	6,370	2,050	4,650
28	12.0	15.5	4.35	4.65	8.4	12.6	210	250	4,200	8,450	2,410	3,650
29	12.0	15.5	4.32	5.26	6.1	9.3	190	300	3,480	5,390	1,580	3,320
30	11.9	13.0	4.41	4.85	6.4	8.9	200	250	3,640	4,890	2,170	3,470
31	13.0	17.0	4.13	4.89	5.1	10.5	180	250	2,240	7,760	1,140	3,090
32	14.5	17.0	4.61	5.36	6.1	9.2	190	260	2,640	6,080	2,570	2,880
33	13.4	16.0	4.45	4.85	6.1	8.1	220	250	3,620	5,510	1,950	2,520

NOTE: Columns designated A represent minimum findings; columns designated B represent maximum findings.

TABLE 4.—LIVER FUNCTION TESTS

Case	Bromsulfalin (5 Mg. per 45 Minutes)	Cephalin Flocculation (24 Hours)	Cephalin Flocculation (48 Hours)	Icterus Index	Total Cholesterol	Cholesterol Esters	Ratio Esters	Alkaline Phosphatase	Thymol Turbidity	Gamma Globulin	Van den Bergh (Indirect)	Total Protein	Albumin	Globulin	Albumin-globulin Ratio	Prothrombin Index
1	7.0	1+	1+	5.2	298	196	65	6.0	3.3	5.3	0.25	7.5	4.95	2.55	1.9:1	91
2	7.4	2+	2+	6.4	366	232	63	10.3	2.2	6.5	0.25	6.47	4.45	2.02	2.2:1	100
3	3.2	0	1+	6.2	219	166	75	4.0	1.2	3.5	0.2	8.00	5.40	2.60	2.1:1	100
4	3.2	0	±	4.4	468	343	73	7.0	5.3	7.8	0.25	8.00	4.7	3.3	1.4:1	100
5	4.7	0	1+	5.2	244	164	66	15.5	2.8	8.0	0.25	7.35	5.02	2.33	2.2:1	90
6	9.1	2+	2+	5.2	217	103	48	9.5	4.3	11.1	0.2	8.45	5.40	3.05	1.8:1	86
7	12.0	2+	2+	6.2	214	136	63	10.2	3.8	5.9	0.25	6.55	5.25	1.30	4.0:1	95
8	2.7	2+	2+	4.4	181	75	41	11.7	4.3	8.3	0.15	7.35	5.40	1.95	2.8:1	80
9	3.8	2+	3+	6.0	280	119	42	9.5	4.3	7.0	0.2	7.62	5.40	2.22	2.4:1	100
10	11.2	0	1+	10.1	243	127	53	3.0	5.7	12.6	1.2	7.24	4.60	2.64	1.8:1	75
11	10.2	2+	2+	6.2	154	83	54	9.5	4.1	9.8	0.3	8.00	4.90	3.05	1.6:1	100
12	26.5	1+	2+	6.8	217	99.5	45	14.0	3.3	5.3	0.3	6.75	4.70	2.05	2.3:1	100
13	9.5	1+	1+	5.8	248	149	60	5.5	1.4	4.5	0.2	7.5	5.1	2.4	2.1:1	100
14	4.7	1+	2+	6.8	214	130	60	11.1	5.7	5.7	0.3	8.00	5.10	2.90	1.8:1	100
15	7.0	2+	2+	6.2	269	156	58	12.0	1.6	4.1	0.25	8.02	5.19	2.83	1.8:1	83
16	4.7	±	2+	6.4	338	224	66	8.2	1.4	3.3	0.3	6.95	4.95	2.0	2.5:1	100
17	6.2	0	2+	5.2	134	74.5	55	11.8	1.1	5.3	0.25	7.2	4.6	2.5	1.8:1	100
18	7.8	0	1+	5.8	199	105	52	11.3	4.5	6.5	0.25	8.2	5.6	2.6	2.1:1	95
19	11.3	1+	2+	6.0	236	160	68	8.5	4.1	4.7	0.3	6.95	4.82	2.13	2.3:1	100
20	5.5	2+	3+	8.0	234	93.5	40	7.0	4.1	11.5	0.4	7.24	4.67	2.51	1.8:1	92
21	4.2	2+	2+	6.0	244	123	51	17.8	7.0	7.0	0.25	8.25	5.55	2.7	2.1:1	100
22	6.2	0	3+	7.6	187	129	68	14.5	2.7	5.7	0.3	8.45	5.55	2.9	1.9:1	82
23	9.1	0	2+	5.6	304	194	64	13.0	2.2	5.7	0.2	7.75	5.62	2.13	2.2:1	100
24	8.8	2+	2+	8.0	181	105	58	12.0	2.6	7.4	0.4	7.5	5.1	2.4	2.1:1	100
25	7.8	1+	3+	6.8	328	201	61	7.0	0.9	4.9	0.25	7.75	5.17	2.58	2.0:1	93
26	5.5	2+	3+	6.8	280	200	71	9.7	3.3	3.5	0.3	6.65	5.25	1.4	3.7:1	90
27	4.7	2+	3+	5.2	217	146	67	3.0	3.1	5.5	0.2	7.35	5.17	2.18	2.4:1	89
28	5.5	2+	3+	5.6	300	184	61	7.7	5.3	11.5	0.2	7.75	5.02	2.73	1.8:1	100
29	6.2	±	2+	5.2	288	158	55	8.5	0.7	2.9	0.25	6.3	4.6	1.7	2.7:1	73
30	6.2	1+	2+	6.8	204	106	52	7.5	3.8	7.8	0.2	7.87	5.62	2.25	2.5:1	99
31	6.6	2+	3+	5.0	221	160	72	5.5	4.9	5.9	0.25	7.75	4.7	3.05	1.5:1	95
32	3.2	2+	3+	7.6	284	170	60	7.7	6.1	5.5	0.3	6.75	5.25	1.5	3.5:1	97

NOTE: Icterus index, thymol turbidity, and gamma globulin determinations are reported in appropriate units and alkaline phosphatase test in King-Armstrong units. Total proteins, albumin, and globulin values are reported in Gm. per cent. Bromsulfalein, ratio of cholesterol esters, and prothrombin index are expressed in percentage. All other determinations are expressed in mg. per 100 cc.

patients, results of all other liver function tests were within normal limits. In ten, evidence of hepatic functional impairment was found on only one of the tests (abnormal bromsulfalein retention in three, thymol turbidity in four, and elevated gamma globulin in three). Two patients (Cases 11 and 28) showed abnormalities in two of the tests. In only one instance (Case 10) was the pattern of the liver function tests grossly abnormal. This patient had spent four years in the South Pacific during the war and had received suppressive atabrine therapy throughout this period but gave no history of malaria, hepatitis, amebiasis, or other disease which might be adduced in explanation of these findings. Unfortunately, we are unable to offer any data on liver function tests in this group of patients prior to treatment with hydantoin derivatives. None of them, with the exception of Case 30, a chronic alcoholic with demonstrable hepatic enlargement, presents any clinical evidence of liver disease. We have not thought it advisable to discontinue Mesantoin therapy in any patient because of toxic effects. These patients continue to remain under our observation.

Mesantoin seems to fall into the increasingly large group of new drugs which are capable of bringing about superior therapeutic results, but which, rarely and for reasons as yet incompletely understood, may produce severe, and even fatal, toxic reactions. Even in the absence of serious reactions, as in the present series, it should be administered with caution under careful medical supervision. Further toxicity studies on this drug are desirable.

Summary and Conclusions

1. Thirty-three epileptic patients who have been under Mesantoin treatment for an average period of one and one-half years have been investigated to determine possible toxic effects of this drug.

2. No severe toxic reactions were noted in this group of patients.

3. Mild transitory anemia, leukopenia, and granulocytopenia were not infrequent but subsided without interruption of treatment.

4. Evidence is presented which indicates that prolonged administration of Mesantoin may not be entirely free of hepatotoxic effect.

5. We believe Mesantoin to be a safe anticonvulsant drug for use under careful medical supervision. It has not been necessary to discontinue medication in any patient in our clinic because of toxic reactions. However, further toxicity studies are desirable.

Since this article was submitted for publication, an additional case of fatal pancytopenia following the use of Mesantoin has been reported.[24]

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ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 A.M.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Do not send diagnosis.

Identify your material carefully so that it may be returned.

A MEDICAL TREATMENT FOR ACUTE CALCIFYING BURSITIS (BURSOARTHRITIS)

Ernest Leibholz, M.D., Maspeth, New York

IT SEEMS that during the last few years there has been, for reasons unknown, a gradual increase in what Dupley called "acute periarthritis humeroscapularis," which has often been referred to as "Dupley's disease" and which finally acquired the name "acute calcifying subdeltoid or subacromial bursitis." Occasionally the word "tendinitis" is used. These names represent symptoms which have appeared important to their various authors, but a name characterizing the etiology still remains to be found. In the contemporary writings it appears nearly axiomatic that the pathologic processes should be regarded as restricted to the bursa and the adjoining tendons.

My interpretation of the condition is as follows: (1) The role of the joint proper has not been sufficiently stressed. I shall try to produce evidence that not only the bursa and tendons but the joint itself is affected and that an acute arthritis gives the condition its painful and disabling character, and I shall consequently refer to the disease as "acute calcifying bursoarthritis."

(2) I advocate a systemic treatment against the presumed arthritis, and this regime has been highly successful in my series of cases.

Etiology and Incidence

Codman, to whom we are indebted for the most comprehensive studies upon this subject, believes that acute or repeated minor traumas ead to injuries of one or several of the four short otator tendons of the shoulder and the musculoendinous cuff with subsequent degeneration of he tissues.[1] Secondary accumulation of calcium carbonate and phosphate) finally breaks into he subdeltoid bursa and sets up a foreign body eaction with inflammation and pain, often quite severe.

This condition is not limited to the shoulder. A number of other joints have been known to be affected, although much less frequently, and till others are under suspicion. In all these ases, most authors agree upon the concept of raumatic etiology, especially as to the idea that he wear and tear of daily life gradually weakens he tendons until they decay, ravel, or tear.[2] Kovacs and Lewis feel that infection plays an mportant part, coming from a distant focus and ettling in a locus of lowered resistance.[3,4] Voight believes that an allergic manifestation of the menopause may be a factor in certain cases.[5]

In my own series, there was a total of 70 cases of which 48, or approximately two thirds, were shoulder cases while the remaining one third were similar inflammations of various other joints. Men were affected somewhat more often than women (3:2) and the right shoulder more frequently than the left (3:2), a fact noted by many authors. Bosworth found an incidence of two right shoulders to one left shoulder.[6] With the exception of one case (a girl of eighteen) all patients were thirty-five years of age or over, representing all walks of life. Most of the patients were in apparently good health when they contracted bursoarthritis. However, quite a few were affected by some acute or chronic disease, as one would expect from such an age group. Some typical examples were as follows: hypertension, a peptic ulcer, chronic osteomyelitis, pulmonary tuberculosis, etc. A number of women, in due proportion, were undergoing the menopause with or without distress. However, all of these complications seemed to be coincidental rather than causative factors.

Among these 70 cases there were only two instances where an acute trauma preceded and probably precipitated the inflammation. One case, a man of seventy, had exerted a sudden pull upon the hand brake of his rolling car, thus causing an acute bursoarthritis of the right shoulder. The second case concerned a man of fifty-five who, after a sudden twist during his work, developed an acute inflammation of the left wrist with calcification over the palmar aspect of the semilunar bone (Cases 4 and 15, respectively).

My impression, from the clinical viewpoint, is that the chronic wear and tear of daily use plus, occasionally, an acute trauma comprise one of several predisposing causes and that a certain still undefined metabolic disturbance, somewhat similar to but not identical with the gouty diathesis, is a major contributing factor to the formation of calcium deposits and the development of bursoarthritis.

Symptoms and Diagnosis

The diagnosis of an acute case involving the shoulder can often be made at first sight after the patient has given his history. There are two types of onset. In one, the patient may

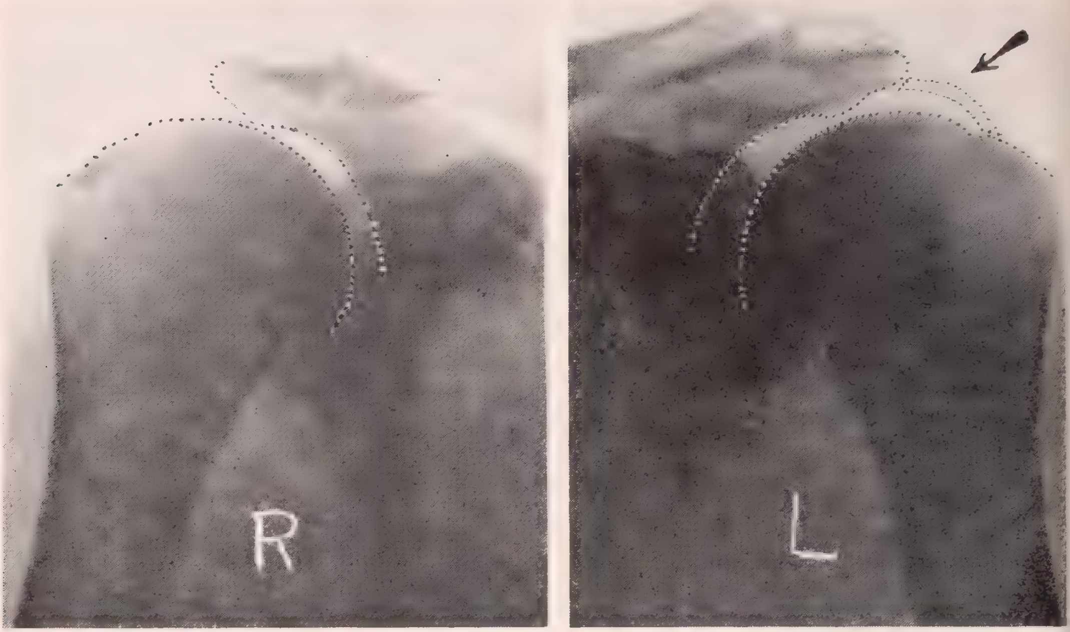

Fig. 1. Acute bursoarthritis of left shoulder. Comparative x-ray studies of right and left shoulder joints show calcium deposit (crescent-shaped) near the left subdeltoid bursa and distention of the left joint space. (Retouched)

have had some discomfort over a period of a few weeks, not enough to keep him from working but enough to make him conscious of something being wrong. Suddenly, the pain becomes so severe that he has to apply for medical help. The second and more frequent type of onset comes out of a clear sky without any prodromi. The pain becomes agonizing within a few hours and radiates toward the neck and elbow. The patient cannot move his arm and has to hold it close to the body to find a position of relative relief. The hand is frequently swollen, due to the pressure upon the axillary vessels, and undressing is a problem. In severe cases, the whole circumference of the shoulder is swollen enough to be measured, and the skin is warmer to the touch than normal. Tenderness is experienced along the shoulder cleft and centers below the tip of the acromion. In milder cases the swelling is not so pronounced, and the arm can be moved hesitatingly against the shoulder to a limited extent. Abduction and rotation are usually more restricted than other motions, but these restrictions are variable.

Laboratory tests have been no help. The sedimentation rate is found to be between 3 and 15 mm. for the first hour (Kovacs 2 to 16 mm.; Cooper 5 to 30 mm. per hour).[4,7] Temperature is normal or slightly elevated. Blood chemistry has not revealed any deviation from normal.

X-Ray Findings

In shoulder cases, it will probably always be possible to demonstrate calcium deposits, large or small, below the acromion. In order to visualize them, it is suggested to spot them by careful fluoroscopy. Some are visible in any position, others only during internal or external rotation, still others only in oblique views, depending upon their location in reference to the humerus. It will sometimes be impossible to force a severely inflamed shoulder into the favorable position, but, after a few days, one may expect to find the deposit. A large deposit may occasionally be seen through the head of the humerus, especially if the case is not quite fresh and the decalcification of the head of the humerus has set in.

After the deposit has been found, one should take an x-ray picture for future reference. It is assumed that the calcification, as long as it remains silent, is quite harmless and likely to disappear in due time but precipitates the syndrome if it invades the bursa. Bosworth studied a great number of painless shoulders and found calcification in 2.7 per cent.[6] From chance observations during fluoroscopy, the writer has been impressed by the incidence of such deposits in apparently normal shoulders ranging from hazy shadows up to the most solid, pebble-like formations, all entirely painless. In one case of fracture of the clavicle, the first x-ray picture did not show any calcification, but six weeks later there was a most impressive lump of calcium visible below the acromion, which gradually decreased in size without causing inflammation.

Another radiologic sign is recognizable but only in highly inflammatory cases. It consists of an enlargement of the joint cleft. This distention is sometimes seen upon fluoroscopy by comparing both shoulder joints in identical positions. This phenomenon is difficult to explain as caused by bursitis but lends support to the postulate of an accompanying arthritis with free fluid in the joint (Fig. 1).

In the case of other joints, distention could not be demonstrated, and calcium was found with less regularity. It may be that joints other than the shoulder tend less towards the formation of calcium deposits than does the shoulder or may not lend themselves so easily to a clear demonstration of calcium on account of their more sheltered position. Many joints are not amenable to a search for small calcium masses, and it is my guess that some cases of intervertebral or sacroiliac bursoarthritis remain undiagnosed under the guise of torticollis or lumbago.

Differential Diagnosis

According to most writers, arthritis of the shoulder is extremely rare, occurring in about 5 per cent of all inflammatory cases. This opinion is based upon two premises: first, that so-called bursitis is not associated with arthritis (to this I take exception). The second is that other types of arthritis in the shoulder are rare. Undoubtedly, the shoulder is rather infrequently subject to the more common forms of arthritis. Before handling a case believed to be bursoarthritis, one has to rule out the more common inflammatory processes, be it in the shoulder or in another joint. Among these are the following: a first attack of rheumatic fever, an acute exacerbation of rheumatoid arthritis, an acute flareup of osteoarthritis. The last named, when located, for example, in the knee, may present diagnostic problems. The stormy course of septic arthritis or the insidious progress of tuberculous arthritis will rarely present any diagnostic difficulties. Cases of arthritis which arise in the course of an acute infectious disease are diagnosed through the primary disease. Acute uric acid arthritis, extremely rare in the shoulder but less rare in other joints, must also be considered.

The main characteristics of gout are the finding of tophi and the elevation of uric acid in the blood, while in acute bursoarthritis of the shoulder the calcification clinches the diagnosis. In other joints, if no calcium is found, the diagnosis may be doubtful. In an acutely inflamed knee, one will think of osteoarthritis or synovitis of unknown origin first. It will be interesting to study cases of Pellegrini-Stieda's disease (post-traumatic arthritis of the knee with calcification of the tibial collateral ligament) and search for a possible relationship to bursoarthritis. These cases present differential diagnostic problems which at the present time cannot always be solved before instituting therapy. At the moment, the only way out, in my opinion, is to give the "systemic" treatment described below and see whether it is successful. If so, one may consider the case bursoarthritis. This method may not be quite scientific, but it is helpful.

Bursitis and/or Arthritis of the Shoulder

In the preceding portion of this article, I have avoided referring to acute shoulder cases as "bursitis." Not that there is any question that the bursa is involved. Thousands of surgical interventions have clearly demonstrated that the diseased bursa contains calcium and fluid. But what about the joint proper? This series contains no operative data. According to the operative descriptions in the literature, the bursa is opened and the inflammatory products removed, but the joint is left undisturbed. However, Codman points out that there are communications between the joint and the bursa sometimes large enough to permit entry of the inflammation into the joint, and he describes destructive processes on the cartilages.[1] King and Holmes stress the proximity of the various structures and emphasize that bursa and joint are separated by a very thin capsule only.[8] Any marked inflammation, they feel, must affect bursa and joint simultaneously just as the peritoneum becomes infected from an infected viscus.

Let us look at it from the clinical viewpoint. The so-called bursitis of the shoulder is entirely different from what we otherwise know as and call bursitis, e.g., bursitis prepatellaris (housemaid's knee), bursitis poplitea (Baker's cyst), etc. These cause some discomfort through pressure which is easily tolerated but are not painful and do not influence the adjacent joint. Bursoarthritis of the shoulder, however, has all of the characteristics of an inflammatory condition of a

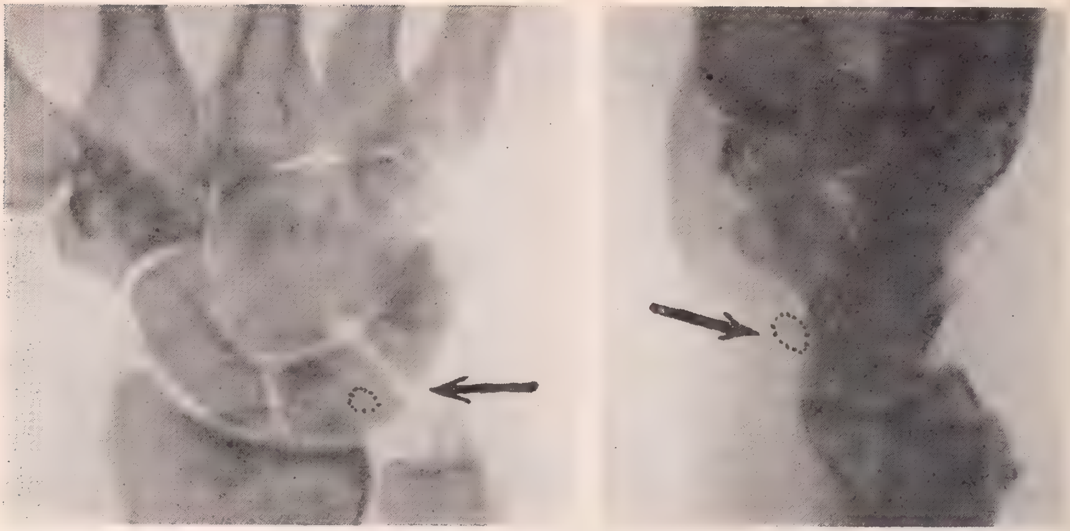

Fig. 2. Acute bursoarthritis of the right wrist. Calcification at volar aspect of the semilunar bone. (Retouched)

joint, i.e., redness, swelling, heat, pain, and protective muscle spasm—the old "*functio laesa*"—so characteristic of any acute arthritis. The radiologic sign, distention of the joint proper by fluid, also favors the concept of a true arthritis.

Other Joints

As already pointed out, joints other than the shoulder are much less frequently affected. In this series the incidence was as follows: wrist, seven; elbow, two; metacarpophalangeal joints, four; temporomandibular joint, two; hip, two; knee, five, and metatarsophalangeal joint, one. (The latter was also considered bursoarthritis because it lacked the characteristics of gout.) The involvement of different joints was noted by several authors. Kleinberg recently published two cases of calcareous bursitis which were treated by operation, one of the knee with extension into the underlying bone and one of the elbow with invasion of the joint.[9] Kaplan described two hip cases and Cooper six cases of involvement of the metacarpophalangeal joints of the right hand.[10,7] The identity of the pathology may be deduced from the following considerations:

1. The onset is identical. After a period of slight distress or without prodromi, an acute inflammation of a joint occurs in an individual free from other forms of arthritis and manifest infections with a tendency to subside spontaneously after it has run its course.
2. Calcium is often demonstrable (Fig. 2).
3. These cases react favorably to the systemic treatment.

In three cases of my series, the involvement of different joints in the same patient at different times has been observed. These cases are briefly described.

Case 1.—Mrs. M. P. was observed in March, 1946, and a diagnosis of bursoarthritis of the right second metacarpophalangeal joint was made. She was treated by two weeks of systemic regime and cured. She was again observed in March, 1947, when a diagnosis of bursoarthritis of the right shoulder was made. Treatment by two weeks of systemic regime produced a cure.

Case 2.—Mrs. A. U. was observed in December, 1942. Bursoarthritis of the left shoulder was diagnosed and treated by two weeks of systemic regime with cure. In April, 1943, a diagnosis of bursoarthritis of the right wrist was made and again treated by two weeks of the systemic regime with cure.

Case 3.—Mrs. M. P. (not same as Case 1) was observed in February, 1944, for bursoarthritis of the left shoulder. She was cured after two weeks of systemic regime. In August, 1944, she returned with bursoarthritis of the right knee, in May, 1945, with bursoarthritis of the left temporomandibular joint, and in September, 1945, with bursoarthritis of the left shoulder. In each instance she was cured by the same treatment of two weeks of systemic regime.

This case is interesting on account of the frequency of recurrences at different joints during a limited period. The disease, whatever its cause may be, seems to have burned itself out, since during the last four years there has been no further relapse. Also noteworthy was the fact that at the time of the second bursoarthritis (of the right knee), there was a true bursitis of the same knee, a "housemaid's knee." This bursitis (which certainly has nothing to do with bursoarthritis) did, as expected, in no way respond to the systemic treatment administered for the bursoarthritis of the knee. While the latter healed within the expected time of one to two weeks, the prepatellar bursitis required local treatments in the form of sclerosing injections.

Therapy

It seems to be generally agreed that no treatment is warranted for calcium deposits which do not cause pain. It is also agreed that acute bursoarthritis of the shoulder has a great tendency to subside spontaneously if given time, whether treated or untreated and in whatever manner treated. Any management will show 90 per cent cures after the calcium has been discharged from the tendon into the bursa and absorbed and after the accompanying arthritis has run its course. However, there are always some who do not recover the full use of their joint. Even those destined to get well suffer so intensely that quick relief is necessary.

Forcible abduction with or without traction is advocated by some, a painful procedure requiring prolonged sedation by opiates. Operative treatment through a muscle-splitting incision to remove fluid and calcium is advised by a number of surgeons.[1,2,6,11] This treatment permits the patient to leave the hospital after two days, move the arm gingerly after a week, and resume normal activities after three weeks on the average. It seems that simpler methods accomplish the same or better results and enjoy greater favor among the profession at large. One opinion upon this subject appeared recently under "Queries and Minor Notes" in the *Journal of the American Medical Association* and represents the statement of an authoritative although anonymous expert.[12] He recommends, "rest . . . . often with temporary immobilization in abduction and outward rotation . . . . heat . . . . analgesics . . . . x-ray treatment for additional relief . . . . in some instances needling and injection of an anesthetic." Operation is not mentioned. Injection of novocaine and aspiration of the bursa with resulting decompression of the joint is frequently practiced with success. Diathermy is an old standby, and manipulation treatment, with or without a local anesthetic, has its followers.[13] Dick, Hunt, and Ferry consider a possible metabolic disturbance and try to induce a mild acidosis to dissolve the calcium by giving ammonium chloride.[14] At any rate, as Kaplan points out, prolonged fixation should be avoided as this can cause the formation of adhesions.[15]

Suggested Systemic Therapy

In the management of acute or subacute bursoarthritis, I rely on a regime of systemic treatment. Such systemic treatment—not local—is based upon certain procedures which have been used in the past. Dietary restrictions have enjoyed some favor in the treatment of the so-called rheumatic diseases at one time or another. Salicylates are the mainstay in arthritis of all kinds, and cinchophen has a reputation, not only in cases of gout for which it was originally used, but in other cases of painful affections of joints. However, a word of caution is in order. Cinchophen is not a harmless drug and has been known to cause liver damage if used carelessly. It should be used in small doses for a few days only. A second course may be given, if necessary, after a few days intermission. The safest prescription is in combination with codeine, and thus it cannot be refilled. The treatment described herewith was developed from other conservative methods by trial and error and is presented on a purely empiric basis:

1. After proper sedation, the arm is placed in a simple sling, and the patient is advised to keep it there as long as moving it is too uncomfortable. From time to time, the patient should try to take it out and move it as much as the pain permits which usually occurs on the next, the third, or (rarely) the fourth day. On about the fifth day, he is usually ready to discard the sling entirely. In the case of other joints, the affected member is placed in a resting position as long as the pain persists.
2. The patient is placed upon a vegetarian diet for two weeks. No meat of any kind, no eggs, coffee, tea, chocolate, or alcohol are permitted. The patient lives on fruit, vegetables, milk and dairy products, bread and cereal, together with plenty of sweets and fluids.
3. It is possible to attain good results simply by giving large doses of salicylates. The medication which has, in the author's opinion, given the best results, however, is as follows:

Acetphenetidin	
Acidi Acetyl Salicylici aa	4 grains
Cinchophen	2 grains
Codeine Sulfate	$^1/_4$ grains
(Caffein	$^1/_3$ grains added for ambulatory cases)

M. et D.t.d. Caps. No. 20.

Sig. One capsule q 3 h. Not to be refilled.

This dosage may be reduced to one capsule every four hours on the second day, and afterwards four times a day. On the first day, some additional sedation may be required. For heartburn a small dose of sodium bicarbonate is helpful. The patient is instructed to return when the capsules are finished.

Upon his return, he usually can raise his arm to an angle of 90 degrees, but there is still some soreness. The same prescription is given, *omitting the cinchophen,* one capsule four times a day. The third course, if warranted by enough residual tenderness, may or may not contain some cinchophen, 1 or $1^1/_2$ grains per capsule as above. Further prescriptions if necessary should contain salicylates only.

4. In the beginning, it is suggested that no heat or diathermy be used, since in the active stage this will invariably cause much discomfort without furthering the cure. The joint should be kept warm, but no additional heat should be applied. As soon as the sling is discarded, physiotherapy may be used to good advantage. This plus the injection of thiamine chloride may prove to be of some help for residual muscular soreness.

Results

Some patients are able to resume physical work after three to four days; some need one to two weeks to resume their duties, depending, in part, on the type of work and their personal attitude. The average "acute shoulder" needs three to four days to lift the arm to shoulder height, six to eight days to raise the arm overhead, and seven to ten days to put it through all motions, although these should be undertaken somewhat cautiously. After two weeks, the arm can be used practically without limitations and in many cases much earlier. An acute onset promises a quicker cure than a subacute start; those whose treatment was begun during the first two days are at an advantage and may expect a quicker recovery. At the end of treatment, the calcium is still visible and will remain so for months before disappearing.

Other joints respond well as a rule, e.g., the two cases of involvement of the mandibular joint declared themselves to be well after the first course. Any failure (no improvement after one week) should arouse suspicion as to the correctness of the diagnosis. In the case of the shoulder, one should think of radiculitis (no limitation of passive motion; pain not centering below tip of acromion) or another pathologic condition combined with a symptomless calcium deposit.

Acute knee conditions are often very stubborn and do not respond well, partly because the knee is traumatized too much by walking and partly because many of these cases do not belong to the group under discussion. Sometimes one will be surprised by a quick cure of an acute knee condition where it was least expected. It may be noted that the only cases which did not respond well involved the knee, did not show any calcification, and were of uncertain diagnosis.

There were no failures and no need for a different type of treatment in any of the other cases. The quickness of the cure and the extreme rarity of local recurrence favors a conservative therapy.

Case Reports

CASES INVOLVING THE SHOULDER

Traumatic

Case 4.—J. S., a man, aged seventy, was a book store owner. On August 8, 1948, the patient exerted a sudden pull on the hand brake of his car to prevent it from rolling on a downgrade. The shoulder pain thus caused gradually increased until on the third day it became unbearable. On August 14, an acute bursitis of the right shoulder was found with a temperature of 101 F., painful swelling of the whole shoulder circumference, protective muscle spasm, and typical calcification. The arm was held in adduction, and every motion was painful. Treatment was begun with Demerol plus the routine salicylate and cinchophen therapy, vegetarian diet, and the use of a sling. On August 16, he was found to be improved, but the forward and sideward movements were somewhat restricted. On August 18, the arm was kept out of the sling and could be moved in all directions, but motion was still somewhat restricted. Treatment was continued, supplemented by diathermy. On August 20, the condition was improved, and the same treatment continued. On August 23, he was found to be cured and was discharged.

Spontaneous

Quick Cure

Case 5.—V. B., a twenty-five-year-old housewife was seen on September 27, 1948, and was found t have an acute bursitis of the right shoulder of on day duration, calcification being present. The routine regime was adopted with salicylate-cinchophen vegetarian diet, and a sling. On September 30, sh was improved. The arm could be moved beyon the horizontal. The regime was continued, omittin the cinchophen and the sling. On October 5, sh was discharged cured.

Case 6.—H. J. H., a male bookkeeper, aged fifty was seen on September 19, 1948. He complaine of a slight distress of the right shoulder for the pas few months. Since the previous night there ha been severe pain. Acute bursitis was found wit swelling and distention of joint and large calcification. Routine regime was prescribed, and, o

September 21, he was improved, being able to lift his arm vertically overhead with some moderate distress. Treatment continued with arm out of sling. On September 25, there was further improvement, and physiotherapy was prescribed with continuation of salicylates and vegetarian diet. He returned a few more times for physiotherapy. On October 6, he played softball. Checkup on November 11 revealed no complaints, with small calcification still present. The patient was discharged on this date.

Case 7.—H. L., a woman of forty-five, a singer, was seen on April 8, 1948. Acute bursitis with calcification in the left shoulder was found, and the routine regime was prescribed. On April 12, she was better, and the arm could be abducted to horizontal. Salicylates and vegetarian diet were continued. Slight complaints were still present on April 16, but the arm was well movable, and treatment was stopped. She reported later by telephone that she felt all right, and on June 10, a checkup showed her to be perfectly well clinically but with a small calcification still present. The patient was discharged at this time.

Case 8.—H. M., fifty-two-year-old laborer, was seen on December 23, 1943. The diagnosis of acute bursitis of right shoulder with calcification was made, and routine regime was instituted. On December 28, he was improved; salicylates and vegetarian diet were continued. At a later date, November 27, 1944, patient stated that the shoulder had not bothered him since.

Case 9.—A. M., a truckdriver, aged thirty-two, was examined on March 3, 1947, and found to have an acute bursitis of the left shoulder with calcification. Routine regime was instituted with improvement noted on March 8. The arm was left out of the sling and salicylates and vegetarian diet continued with resumption of work in two days. He reported in June, 1947, that shoulder had been all right since.

Case 10.—W. S., forty-two-year-old truckdriver, was examined on July 12, 1946, and found to have acute bursitis of the right shoulder with calcification. Routine regime was prescribed, and, on July 16, he was improved. The arm could be lifted to horizontal and was taken out of the sling. Salicylates and vegetarian diet were continued. He reported on June 19, 1947, that the arm was all right a few days after the last treatment, and he started working shortly afterwards.

Case 11.—W. S., a man aged fifty-six, was seen on July 2, 1949. Since the previous night he had had severe pain in the left shoulder. Acute bursoarthritis was present, and the arm could not be moved. X-ray showed calcification of the left shoulder and, when compared with the well shoulder, distention of the joint space (Fig. 1). Routine regime was prescribed and, on July 5, the arm was taken out of the sling, the patient being able to lift his arm nearly to horizontal with fixed scapula, with free motion to 45 degrees over horizontal, and feeling able to work and not in need of further treatment.

Slow Cure

Case 12.—A. V., a man aged forty-four, was seen on June 1, 1948, complaining of pain in the right shoulder of two weeks duration and severe for the past three days. Acute bursitis with calcification was diagnosed and the routine regime prescribed. On June 7, he resumed work but still had pain. On June 14, he felt better and, on June 17, much better. Treatment was stopped, and he reported later that arm was all right.

CASES INVOLVING OTHER JOINTS

Case 13.—C. C., a male bank clerk aged thirty-nine, was seen on September 10, 1945. He had had pain in the right hip for past two days with protective muscle spasm. He was unable to stand on his right leg. Routine salicylate-cinchophen, vegetarian regime was prescribed with bed rest. On September 13, he was improved and could get up and walk with difficulty. On September 18, he felt all right and returned to work.

Case 14.—A. G., seventy-two-year-old housekeeper, was seen on December 2, 1945. Acute bursitis of right wrist was present, and the routine regime was prescribed with improvement on December 6. On December 14, the condition was judged nearly healed and treatment discontinued. There was a relapse with more pain on December 21 and treatment was resumed. On January 5, 1946, she was improved and treatment discontinued, and on January 29, she was judged cured.

Case 15.—K. M., a machine worker of fifty-five-years, was seen on May 16, 1946, with a left wrist sprained during work on machine three days previously. Acute bursitis of left wrist with calcification, palmar to the os semilunare, was present at this time. Routine regime was prescribed with improvement on May 20. On June 1, he felt well again and returned to work.

Case 16.—M. G., a girl of eighteen, was a high school student. She was seen on September 18, 1948, and was acutely ill at that time, having had cracking and discomfort in the right temporomandibular joint for several months. Routine regime with a primarily soft diet effected a full recovery by September 25.

Comment

The above cases with various types of bursoarthritis illustrate the efficacy of the regime that I have advocated. The results have been prompt and, in most instances, permanent, with the exception of the calcium deposits which persisted for some time but were symptomless.

Summary

1. So-called "bursitis" (acute calcifying bursitis) of the shoulder is not only a bursitis but an arthritis as well. It is believed to be the dramatic end result of the following chain reaction: traumatic tendinitis, calcification, foreign body reaction, bursitis, and arthritis, kindled by an unknown metabolic disturbance. It has nothing to do with simple noninflammatory forms of bursitis such as prepatellar bursitis, etc. The name "bursoarthritis" is suggested.

2. Other joints are affected by the same condition, although much less frequently. It is more difficult, sometimes impossible, to demonstrate calcium, and so the diagnosis may remain doubtful. It is suggested to use the effect of the treatment to corroborate or disprove a questionable diagnosis of bursoarthritis in obscure cases.

3. The more acute the case, the earlier the treatment is begun, the quicker the result. Although bursoarthritis is usually a self-limited disease, the intense suffering, the disability, and the possibility of after-effects demand quick relief.

4. I claim that the following simple therapy gives a satisfactory result: A simple sling as long as pain demands rest. A diet free from animal protein and poor in purines. Medication consists of salicylates with the addition of small amounts of cinchophen and codeine in the beginning. The two latter are discontinued later and the salicylates continued alone. Physiotherapy is begun after the joint has become fairly movable.

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STAINLESS STEEL AND EARLY AMBULATION IN HERNIA REPAIR

A follow-up study of 157 traceable cases out of a total of 390 cases operated on during the years 1945 to 1948 indicates that the use of stainless steel wire in hernia repair makes early ambulation safe. Early ambulation not only reduces the hospital stay but also reduces all postoperative complications to a minimum. Four recurrences were found in 57 direct hernia repairs, a rate of 7 per cent, while in the indirect hernia repairs there was a recurrence in one case, or 1 per cent.—*Paul P. Jackson, M.D., Journal of the International College of Surgeons, July–August, 1949*

SCARE TACTICS ASCRIBED TO ACTING FSA ADMINISTRATOR

Representative Robert F. Rich (Republican, Pennsylvania) characterized as another trick to help put over socialized medicine a statement made before a congressional committee in mid-December by John L. Thurston, acting administrator of the Federal Security Agency. Appearing before the Joint Congressional Committee on the Economic Report, Thurston asserted that three out of every 30 school children "are destined to spend part of their lives in a mental hospital."

"The Truman Administration," replied Rich, a member of the committee, "determined to socialize the United States, has used every trick of propaganda and duress to put over the main plank of its socialistic program—socialized medicine. But the latest assertion of a responsible government official is one of the most shocking statements to be made in the program to socialize this country. It smacks of terrorism and is directed at the parents of the millions of school children in the nation.

"As a government official on the Truman welfare state payroll, Mr. Thurston has a right to testify in favor of the spending and socialistic programs concocted by the White House planners. But he has no right to wave the magic wand of conjuration and come up with an assertion that is bound to frighten and alarm the parents of all children attending schools in this country...... It is beyond belief that three out of an average of 30 pupils are due to suffer from mental illness, and it seems to me the administration is trying to scare the people into accepting socialized medicine."—*Journal of the American Medical Association, Washington Letter, December 31, 1949*

A SERODIAGNOSTIC SCREENING TEST FOR CANCER

IRWIN H. OLENIK, M.D., Bronx, New York

(From the Department of Surgery, Bronx Hospital)

UNTIL such time that our therapeutic measures have advanced to a point of greater "curative" rather than "delaying" success, our first line of defense against cancer will remain early diagnosis. Until very recently, that defense line was very weak, since it depended almost entirely on the establishment of a subjective symptom picture which forced the patient to seek medical assistance. Recently, this defense line has been strengthened by the establishment of cancer detection clinics for the purpose of early diagnosis of cancer. This is still not enough. An efficient screening test should be a routine from at least the third decade on through life—a test which is relatively simple, economical, and not painful. Such a screening test is a goal which should be a long step forward on the road to the conquest of cancer.

Perrin and Prevault were the first to demonstrate that substances which acted as negative catalyzers in the oxidation process within the tissues also possessed the property of extinguishing or diminishing fluorescence in fluorescent solutions, especially in aqueous solutions of uranine (sodium fluoroscein).[1-3] This property was easily demonstrated by means of the Perrin fluorometer.

Pourbaix, following her experiments at the University of Louvain, was inclined to believe that a most characteristic, and perhaps even essential, phase of neoplastic growth involves a disturbed carbohydrate intracellular metabolism.[4] In all cases of cancer, Pourbaix believed that there is a diminished oxidation in the cellular metabolism of all tissues and an accumulation of glycogen.

Achard, Boutaric, and Bouchard studied the influence of serum on the fluorescent power of solutions of uranine.[5] They concluded that, as far as the effect on fluorescence of solutions of uranine is concerned, serums from cancerous patients act as if they contain an antioxidation substance capable of slowing down or diminishing oxidation within the cell.

Herly has undertaken a study of the turbidity and fluorescence of sera per se.[6] He concluded that cancer sera transmit more light than do normal or nonmalignant sera and that fluorescence of sera per se is markedly diminished in cancer cases.

Method

The equipment needed for this test is simple, relatively inexpensive, and well within the means of all physicians. It consists of Wassermann tubes and a Wood light. Coleman photofluorometer cuvettes were used in the cases reported, but Wassermann tubes can be used. The convex surface of the Wood light is masked so that only the most direct perpendicular rays activate fluorescence of the material within the tube.

The procedure consists of adding 1 cc. of plasma to each of three test tubes. To test tube 1 add 2 drops of 0.05×10^{-6} sodium fluoroscein solution. Then stopper all the tubes with oil-silk paper and a cork. Twenty-four hours later add 2 drops of the 0.05×10^{-6} sodium fluoroscein solution to test tube 2. Rotate the tubes to mix contents thoroughly. Wipe the tubes clean with a lintless material (gauze). Expose the tubes to the Wood light rays so that only the most perpendicular rays strike the solution in the tubes. If the fluorescence in the tubes is the same, it is a negative reaction. In a positive reaction, the intensity of the fluorescence in tube 1 is diminished, and the green element of the fluorescence disappears, leaving either the yellow or white. The difference in any case is not debatable; it is a distinct difference. Tube 2 is the control tube for comparing the fluorescence changes that may have taken place over a twenty-four hour period. Forty-eight hours from start of test add 2 drops of the 0.05×10^{-6} sodium fluoroscein solution to test tube 3. Repeat the procedure as with test tube 2. Test tube 3 is the control tube for comparing the fluorescence changes after a forty-eight hour period. The interpretation of the reading is the same as at the twenty-four hour period. If the test is positive at the twenty-four hour period, it is not necessary to do the forty-eight-hour control.

Results

The cases in this preliminary report have come from all age groups. None are cases of well-established malignancies that require nursing care only. All of these cases have come to the physician and hospital for diagnosis and are in the group that can be helped if detected early enough. The cases were chosen primarily from the surgical service because tissue pathology corroboration would be obtained.

A control group of 15 cases was selected from the fourteen to twenty-two years age group. These were patients who came in for school

TABLE 1.—Results of Cases in This Report

	Total Cases	Negative	Positive	Accuracy (Per Cent)
Control cases	15	15	0	100
Proved malignancies	46	4	42	91.3
Nonmalignancies	72	66	6	91.6

examinations and were apparently free of disease (Table 1). All these cases were negative at forty-eight hours. Four cases showed a diminishing of fluorescence at seventy-two hours. Three were still negative at the end of ninety-six hours.

Forty-six cases in this series were proved cases of malignancy (Table 2). This includes two cases of multiple myeloma. Forty-two of these cases showed a positive reaction within forty-eight hours. It was noted that cases with known metastasis were later in showing up than those without known metastasis, but all were positive within the forty-eight hour period. Four definitely diagnosed cases of malignancy gave a negative reaction. All four cases were females, ranging in age from fifty-one to fifty-seven years. The first of these cases had had a radical mastectomy performed in 1946. Two years later, in 1948, symptoms of lung involvement developed, and the patient was subjected to intensive deep x-ray therapy. It was at this time that the test was performed and found to be negative. The second of these cases had a frozen pelvis due to a diffuse carcinomatosis. The primary source was unknown, but a metastatic ovarian carcinoma was reported. The third of these cases was an anaplastic duct cell carcinoma of the breast with no metastasis. The fourth case was a papillary adenocarcinoma of the large bowel. The accuracy of this test for malignant neoplasia in this series thus comes to 91.3 per cent.

Seventy-two cases in this series showed no evidence of malignancy either by tissue pathology or by any diagnostic method at our disposal (Table 3). Six of these cases (three females and three males, ages ranging from twenty-four to sixty-two years) gave a positive reading. Two of these false reactions were retested and gave a negative reading. The other four were not contacted at this time. The nonmalignant group, therefore, shows an accuracy of 91.6 per cent.

Summary

1. A simple screening test for malignancy will be a long step toward conquering cancer. Such a test can be used in a diagnostic workup and as a routine screening checkup at intervals.

2. Plasma from normal patients does not affect this fluorescence for the first forty-eight hours.

3. Plasma from patients with nonmalignant conditions does not affect the fluorescence for the first forty-eight hours.

4. Plasma from patients suffering from proved

TABLE 2.—Reaction of Proved Malignancy Cases

Diagnosis	Positive	Negative
Carcinoma, tongue	1	
Carcinoma, esophagus	1	
Carcinoma, stomach	5	
Carcinoma, pancreas	2	
Carcinoma, large bowel	5	1
Carcinoma, breast	7	1
Carcinoma, cervix	4	
Carcinoma, prostate	1	
Carcinoma, ovary	5	
Mixed tumor of parotid gland	1	
Hypernephroma	1	
Myeloma	2	
Metastatic carcinoma	7	2
Total	42	4

TABLE 3.—Reaction of Nonmalignant Cases

Diagnosis	Positive	Negative
Intrauterine gestation	1 (8 months)	3 (2, 5, 8 months)
Miliary tuberculosis of peritoneum		1
Diverticulitis		1
Hypertension		2
Bartholin cyst		1
Chronic pulmonary tuberculosis		1
Mesenteric thrombosis		1
Chronic cholecystitis with cholelithiasis		5
Lipoma		1
Poison ivy		1
Hemorrhoids		2
Trigonitis		2
Acute cholecystitis	1	1
Upper respiratory infection		2
Acute mastitis		1
Acute appendicitis	1	3
Hernia		5
Postpartum (1 day)		1
Obstruction neck of bladder		1
Chronic lymphadenitis	1	
Pneumonia		1
Adenoma of thyroid		1
Cystic disease of breast		2
Abscess, femur		1
Infection, terminal phalanx		1
Post gallbladder syndrome		1
Fibroma, uterus		2
Endocervicitis		3
Cyst of ovary		2
Endometrial hyperplasia	1	1
Heart disease		1
Varicose vein		1
Hypertrophy prostate		2
Cystocele and rectocele		1
Ankylosis of hip		1
Psychosomatic complaint		1
Observation gallbladder disease		1
Verrucous papilloma		1
Duodenal ulcer		1
Diabetes mellitus		1
Psoriasis		1
Coronary thrombosis		1
Diagnostic dilation and curettage, no pathology	1	1
Cyst of abdominal wall		1
Pyelonephritis		1
Gastric ulcer		1
Total	6	66

malignancies diminishes the fluorescence of the indicator within forty-eight hours.

5. Tabulation of the results of this test are presented.

This is a preliminary report. Further investigation is being done at this time.

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DOCTORS REPORT NEW TREATMENT FOR LOCKJAW

Two New Orleans doctors have been successful in relieving dangerous and sometimes fatal symptoms of lockjaw by administering a muscle-relaxing drug. The compound, tolserol, was used previously in anesthesia and neurologic diseases.

Moderately severe muscle rigidity and spasm were controlled satisfactorily in seven patients, Drs. Harold E. Godman and John Adriani of the Charity Hospital Anesthesiology Department say. Doses of tolserol were given concurrently with phenobarbital, a sedative. One patient with severe symptoms did not obtain satisfactory relief from the drugs.

None of the various drugs used to control rigidity and spasm of muscles in lockjaw has proved entirely satisfactory, the doctors point out. Treatment with tolserol has the advantage of helping keep the respiratory passages free of secretions. Lung complications were observed in only one of the eight patients.—*Journal of the American Medical Association, November 12, 1949*

MODERN CONCEPTS OF ACUTE PANCREATITIS

Occurring most often in the forty to sixty-five age group, acute pancreatitis is a serious disease of uncertain etiology which is not as rare as formerly supposed. Where feasible, conservative treatment is preferable to surgical intervention.

The theory of infectious origin of pancreatitis has largely been abandoned. Where infection is demonstrated, the bacteria are generally regarded as secondary invaders, action of which is not regarded as primary cause of the inflammation. Also, numerous questions arise when the "common channel" or "bile-retrojection" theory is considered. Acute cases of pancreatitis have been reported involving the area drained by the duct of Santorini, which opens separately into the duodenum. Also, x-ray studies of patients who had a T-tube placed in the common bile duct do not support the theory that bile in the pancreatic ducts will cause pancreatitis. A theory growing in popularity is that obstruction of flow of pancreatic juice rich in enzymes, such as after a heavy meal, will cause pancreatic damage proportional to the degree of obstruction and concentration of enzymes in the pancreatic juice. The obstruction may possibly be caused by edema and spasm of the smooth muscle in the sphincter of Oddi and the pancreatic ducts. However, the etiology is not clear. The condition may be caused by a combination of several factors.

Laboratory Diagnostic Aids.—(1) Serum amylase: The marked rise in serum amylase associated only with acute pancreatitis makes this a valuable diagnostic aid. However, the time at which the test is given is important, since the rise usually reaches its peak in the first forty-eight hours and may drop to normal in the next forty-eight hours. (2) Urinary amylase: This usually becomes elevated twelve to twenty-four hours later than the serum amylase level. Due to possible variance in their time cycles, it is best to make both these determinations simultaneously. Where extensive destruction of the gland has occurred, levels both in serum and urine may be normal or subnormal. (3) Blood calcium: Blood calcium will be low, sometimes enough to produce tetany.

Treatment.—Mortality rates as between conservative and surgical management of acute pancreatitis bear out the general view that the former, when possible, is the procedure of choice. The chief difficulty in conservative treatment is the occasional impossibility of ruling out ruptured peptic ulcer or intestinal obstruction, and, where reasonable doubt exists, the operation is the best choice. Also even when conservative management is initially adopted, good surgical judgment should prevail all the time the patient is under treatment.—*Donald C. Haugh, M.D., West Virginia Medical Journal, August, 1949*

Case Reports

A CASE OF CEPHALOTHORACOPAGUS

Theodore H. Grundfast, M.D., and Shirley Weisenfeld, M.D.,
Brooklyn, New York

(From the Departments of Gynecology and Obstetrics and the Department of Pathology, Jewish Hospital of Brooklyn)

DEFECTS in the germ plasm itself, as well as extraneous influences, have been advanced as causes for the origin of fetal anomalies and monstrosities. Conjoined twins undoubtedly arise from incomplete separation of two embryos resulting from a single fertilized ovum. Among the less rare types of double monster is that which will be reported here, where there is a fusion of heads and chests (cephalothoracopagus).

Case Report

V. B., a twenty-year-old primigravida whose last menstrual period had occurred on April 20, 1947, was first seen on August 14, 1947. Her expected date of confinement was January 27, 1948. She had been married for two years with a history of sterility for that period of time.

The patient had had scarlet fever in childhood and pyelitis in 1945. She had been vaccinated against smallpox on April 16, 1947. There was no history of rubella. Menarche occurred at thirteen years of age, recurring in a regular twenty-four-day cycle and lasting four days.

A family history of twins was elicited as follows: the patient's father's brother's wife (aunt by marriage) had twins; her mother's sister's daughter (first cousin) had twins; her husband's mother's sister (husband's aunt) had twins.

The husband was in good health and was a metal worker by trade.

Physical examination revealed a well-developed, well-nourished white female with no abnormal physical findings. The blood pressure was 112/66. Abdominal and pelvic examinations were consistent with a twelve to fourteen weeks gestation. Her pelvis was of gynecoid type.

Laboratory examination was as follows: The patient was Rh negative, group B; her husband was Rh positive, group B. An Rh antibody study three days prior to delivery revealed no antibodies in the patient's blood. The common cord blood of the twins was Rh positive, group B. The patient's Mazzini reaction was negative.

The pregnancy progressed normally. The blood pressure ranged between 112/66 and 126/70. There was no abnormal vaginal bleeding at any time. No toxic manifestations were evident. An excessive weight gain (22 pounds in fourteen weeks), was attributed to polyhydramnios. An x-ray was contemplated at a date near term. However, nine weeks before that time, on November 22, 1947, spontaneous labor began prematurely.

The patient was admitted to the hospital, having two- to three-minute pains, with the cervix effaced and dilated 4 to 5 cm. A breech presentation was noted. The fetal heart was heard with difficulty, the rate being 105 per minute. Subsequent to the

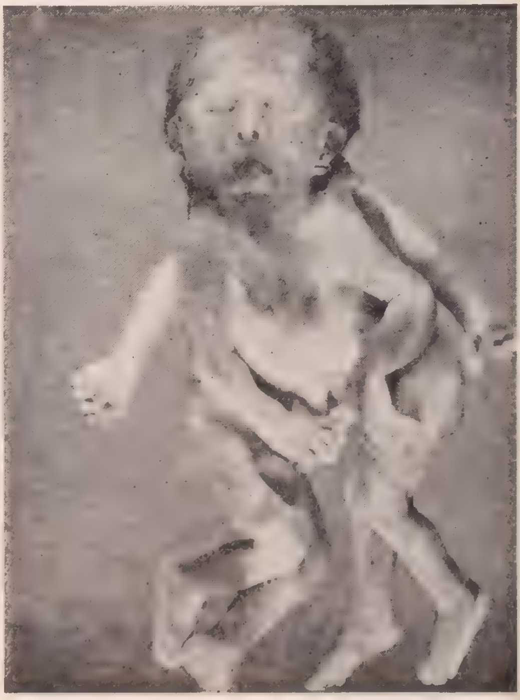

FIG. 1. View of double monster showing face.

Presented at a meeting of the Brooklyn Gynecological Society, May 18, 1949.

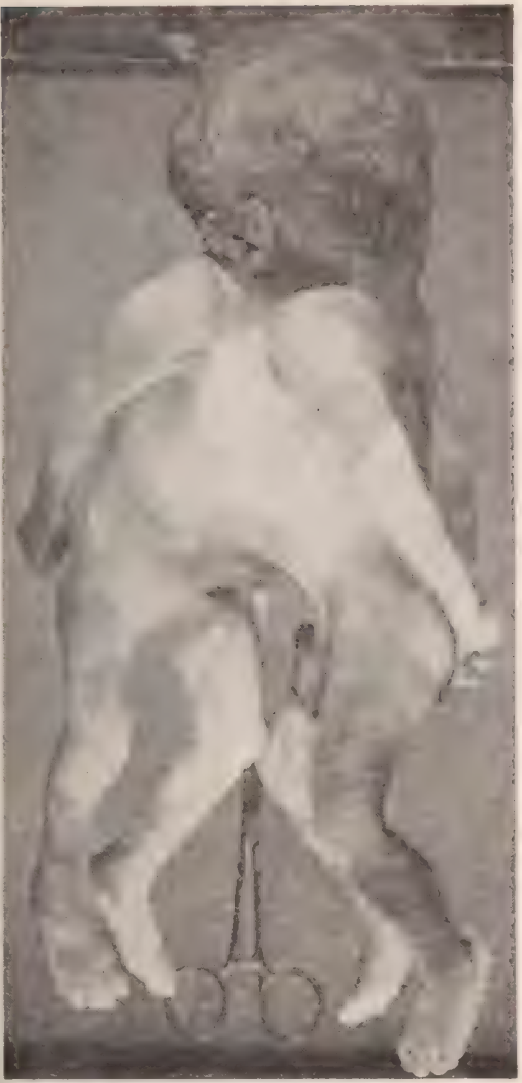

FIG. 2. Opposite view of monster.

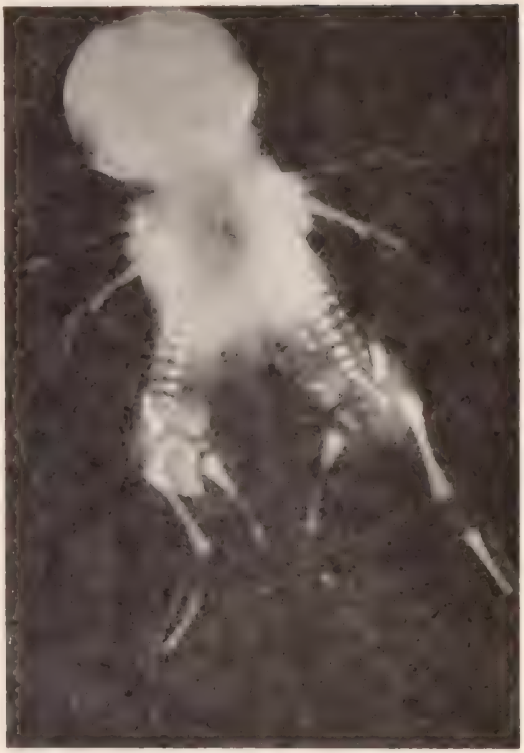

FIG. 3. X-ray of twin monstrosity showing the abnormal osseous development.

initial examination, the fetal heart could no longer be heard. There was no prolapse of the cord.

Four hours later, the cervix was found fully dilated and the patient was taken to the delivery room with a double footling presenting at the vulva. As the feet proceeded downward, a third foot was felt on the perineum. The delivery progressed spontaneously until the buttocks presented, when delay was encountered. An attempt was made to replace the second pair of feet, which now presented, in order to facilitate the delivery of the first pair of buttocks. However, as soon as the right pair of buttocks came down, the other pair of lower extremities came down with it. As the common umbilicus presented and a loop of pulseless cord was pulled down, it was apparent that the two fetuses were fused from this point cephalad, having a single common umbilical cord. As the further descent proceeded, the fusion of the costal cages, necks, and heads became evident. During the delivery, the drainage of liquor amnii was excessive in amount.

The delivery was spontaneous and easy, requiring no episiotomy. Only a small first-degree laceration in the posterior fourchette was incurred. The third stage of labor lasted three minutes, the placenta being delivered spontaneously. Blood loss was minimal.

The postpartum course was uneventful, the patient leaving the hospital on the sixth postpartum day.

Description of Specimen.—The double monstrosity consisted of a fusion of heads, necks, and chests of two infants, the combined weight being 1,875 Gm. Below the umbilicus, the two bodies were separate and distinct. There were four legs, two sets of male genital organs, four arms, and one umbilical cord, which was attached to a single placenta. The right and left bodies measured 38 and 37 cm. in length, respectively. The chests were joined as if the two babies were almost facing each other.

The head represented a fusion of two incomplete heads. There was an overriding of sutures which were more numerous than usual. An almost completely formed monstrous face with two well formed ears in their usual position was present (Fig. 1). Behind the face posteriorly were two more ears placed close together and pointing in opposite directions (Fig. 2).

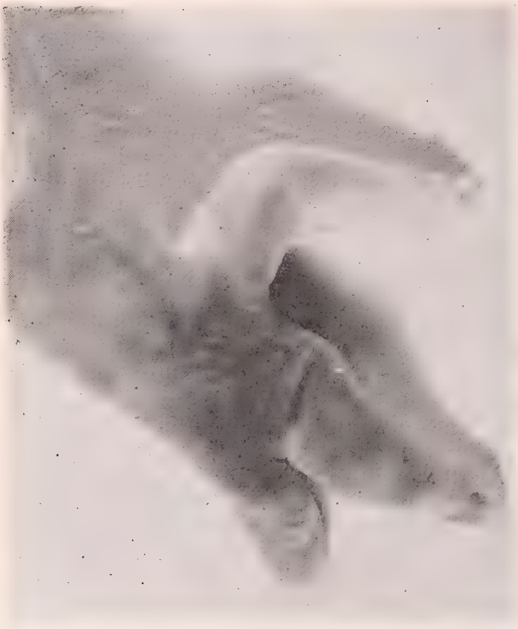

Fig. 4. View of claw hand.

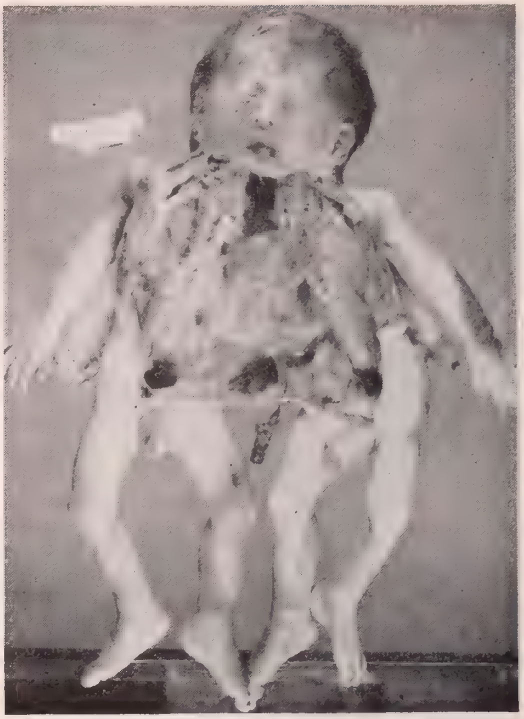

Fig. 5. View of dissected monster with the viscera removed.

There was a fusion of the necks and a fusion of the chests. On the left of the umbilical cord was a hernial sac, covered by a thin membrane through which intestine could be seen. Two spinal columns, four scapulae, and two sternums were present (Fig. 3). The arms and legs were fully developed, but the right hand of the left body had only three fingers (Fig. 4).

On opening the twin monster, four pleural cavities, one pericardial, and one peritoneal cavity were found (Fig. 5). Only two of the pleural cavities contained pulmonary tissue. A single diaphragm separated the abdominal and thoracic viscera.

A brief description of the viscera follows (Fig. 6): There were two tongues, two small epiglotti, and one uvula. Beneath the tongues there was an intermingling of thymic and thyroid tissue. One square-shaped heart was present from which arose four distinct vessels. There were two sets of lungs, each with a trachea and two main bronchi. One pair of lungs had the usual relationship to the heart; the other pair was situated behind these organs. The lungs were unaerated.

Two esophagi fused halfway down to form a single esophagus which entered into a single stomach. The stomach led into a single duodenum which received two bile ducts. Halfway down, the small intestine divided, each portion leading into a separate colon, cecum, appendix, and anus. There were two separate livers and gallbladders. There were two spleens, two pairs of kidneys and adrenals, and a single pancreatic gland. Each pair of kidneys had its respective pair of ureters leading into a corresponding bladder. A single testis, epididymis, and spermatic cord were present near each urinary bladder.

There were two separate, well-developed spinal cords leading into the brain from opposite sides. Above the right cord was a fairly well developed cerebellum. Only a small nubbin of a cerebellum was present on the left. The brain was very soft and fell apart on handling. No pituitary gland could be located.

Addendum—The patient was subsequently delivered uneventfully of a living, normal female infant, weighing 7 pounds, 1 ounce, on May 31, 1949.

Discussion

Moore states that 2 per cent of all conceptuses are monsters and that, of these, 75 per cent are aborted early in pregnancy and 25 per cent go on to term delivery.[1] Scammon estimates the incidence of double monsters as one in 50,000 births.[2] In approximately the same number (50,000) recorded delivered cases at the Jewish Hospital of Brooklyn, our case is the first occurrence of a double monster. Mall is of the opinion that the greatest number of pathologic embryos present themselves during the first seven weeks of pregnancy and that very few occur after the tenth week.[3] The survivors (those not aborted), he believes, are probably delivered as monsters later in pregnancy.

As previously stated, the development of monstrosities results from the interaction between the inherited tendencies contained within the egg and the external influences which surround and act upon it. Experimental observations have revealed the fact that the environment of the ovum can be influenced by chemicals, x-rays, infections, etc., to affect the growth of the ovum. In the case reported, the factor of Rh sensitization was excluded

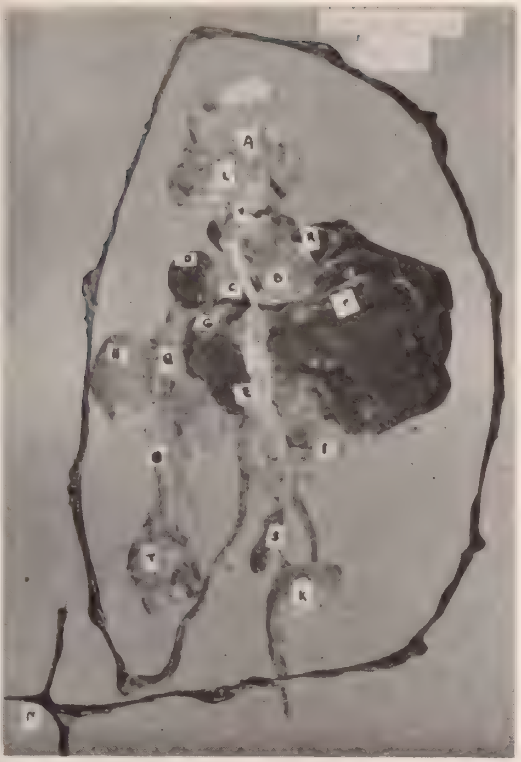

FIG. 6. View of the dissected viscera: (A) tongue, (B) heart, (C) lungs, (D) spleen, (E) spleen, (F) liver, (G) liver, (H) kidney, (I) kidney, (K) urinary bladder, (L) thyroid and thymic tissue, (N) bifurcation of intestine, (O) abdominal aorta, (Q) adrenal, (R) lung, (S) testis, (T) urinary bladder, and (V) blood vessels from heart.

by the absence of antibodies in the mother's blood. While there was a history of twins in the families of both parents, uniovular twins are usually not affected by heredity, so that it is more probable that some deleterious agent caused the incomplete ission of the early embryo. Although the patient was vaccinated a few days prior to her last menstrual period, it is conceivable that the height of the vaccinial reaction may have occurred simultaneously with and influenced the very earliest development of the fertilized ovum.

The importance of the births of monsters arises rom several considerations: (1) the problem of delivery and dystocia, (2) the problem of correction of the condition if the monster lives, and (3) progno-is in future pregnancies.

As regards the method of delivery, the diagnosis of monstrosity should be considered when the abdomen enlarges rapidly and is larger than expected at the stated time of pregnancy. Polyhydramnios is usually present. Often, only one fetal heart is heard. Labor usually comes on prematurely. Abdominal roentgenogram is the best diagnostic means at hand. Aware of the presence of a monster, the obstetrician may be able to plan his conduct of labor accordingly.

The question of correcting the abnormality rarely arises because of the frequency of associated stillbirth. Furthermore, if the monster is born alive, the survival period is usually of short duration. Of 890 congenitally malformed individuals studied by Murphy, 25 per cent were stillborn, and 90 per cent were either stillborn or failed to survive the first year of life.[4] Occasionally, as in the case of the Siamese twins, double monsters have lived a normal life span.[5] The type of monstrosity described here, however, could not survive. The surgical procedures available to separate the twins depend upon the degree and location of the fusion as well as upon whether any vital organs are shared. Naturally, the more independent the twins are functionally, the greater is the possibility of successful surgery. Sarrelangue recently reported a case where a partially developed, parasitic fetus was successfully removed from its host, an eighty-three-day-old infant.[6]

Concerning the prognosis of future pregnancies, it must be borne in mind that, in families with one malformed child, the prospect of another subsequent malformed child is 25 times greater than in the general population. However, we feel that the parents may be advised to venture another pregnancy, especially in a childless or one-child family, if they are informed as to the possibility of recurrence of another congenital malformation.

Summary

A case of cephalothoracopagus in monozygotic male twins is reported. The case is discussed briefly from the points of view of etiology, incidence, problem of delivery, postnatal correction of the abnormal condition, and finally the prognosis in future pregnancies.

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It is much better to have a bad man for your enemy than for your friend.—Anonymous

OSTEOID-OSTEOMA ASSOCIATED WITH CHONDROMALACIA OF THE PATELLA

JACOB H. TURKELL, M.D., New York City

(From the Hospital for Joint Diseases)

IN 1934, Milch described a lesion which he recognized as a benign osteoblastic tumor forming osteoid tissue.[1] The concept of this lesion as a separate entity was developed and established by Jaffe and later by Jaffe and Lichtenstein.[2,3] In 1935, Jaffe, in his description of the lesion, first coined the term osteoid-osteoma.[2] Numerous reports have since appeared in the literature describing its typical clinical, roentgenographic, and pathologic picture. Because of two rather unusual features ordinarily not encountered in cases of osteoid-osteoma, the following report is presented.

Case Report

Mrs. S. H., age fifty-four, a housewife, was first seen on December 19, 1946. Her chief complaint was inability to ascend or descend stairs in a normal manner. To do so she would lock her left knee in extension and, with the limb so fixed, limp up or down the staircase. This condition had been present for five years. She had no difficulty when walking on level ground. When bending or straightening the knee, she would experience a momentary "catch" of pain in the joint. This reaction became so intense that for the past five years she never actively extended the limb but would passively "push it up" with her right foot placed behind the left ankle. There were occasional episodes of pain at night or with inclement weather, but this had never been of striking significance. The pain appeared to be of diffuse character and seemed to involve the entire joint. Local heat and rest relieved the pain. At times she would take an aspirin, but usage of the drug was sporadic. There was no history suggestive of aspirin addiction. The patient did not recall any specific instance of trauma to the knee. She had received various modalities of physiotherapy but with no change in her status.

Her past history was unrelated and noncontributory to the presenting complaint. There was no history of generalized arthralgias or myalgias. The only joint involved was the left knee.

Clinical examination revealed the following: Gait was normal until the patient was asked to climb a staircase. She then demonstrated a stepwise progression in which the left knee was rigidly fixed in extension. Descent was performed in a similar fashion. She could not be persuaded to bend her left knee so as to attain normal stairclimbing. Locally, there was no swelling, effusion, or thickening of the joint. Extension was normal, but flexion was limited to 135 degrees, beyond which motion was restricted because of pain. Forcible compression of the patella against the trochlea surface of the femur produced audible and palpable crepitation associated with considerable pain. Active contraction of the quadriceps against resistance made by the examiner rigidly holding the patella was productive of pain referred to the patella; however, percussion of the patella bone was negative. There was no tenderness in any of the quadrants of the knee joint, and all tests for mechanical dysfunction secondary to meniscal lesions, joint mice, or instability were negative.

The rest of the physical examination was noncontributory to the presenting condition. Sedimentation rate, Wassermann, blood count, and urine were normal. Roentgenograms of the left knee showed no abnormality except for a small calcific body in the prepatellar bursal region (Figs. 1, 2, and 3). A diagnosis of chondromalacia of the left patella was made.

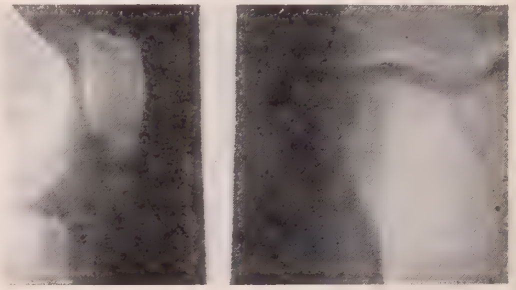

FIG. 1. Preoperative roentgenogram showing lack of any dense opaque subchondral sclerosis of the patella and absence of any small roundish relatively radiolucent or radiopaque shadow beneath the articular surface of the patella.

FIG. 2. The radiopaque oval body seen in the subperiosteal region of the patella is due to superimposition of images of a calcified body present in the prepatellar bursa upon that of the patella. The presence of this prepatellar body is more readily discernible in the soft tissue film, Fig. 3. (Retouched)

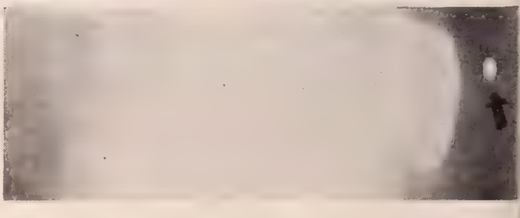

FIG. 3. Preoperative soft tissue film demonstrating presence of a prepatellar calcific body. (Retouched)

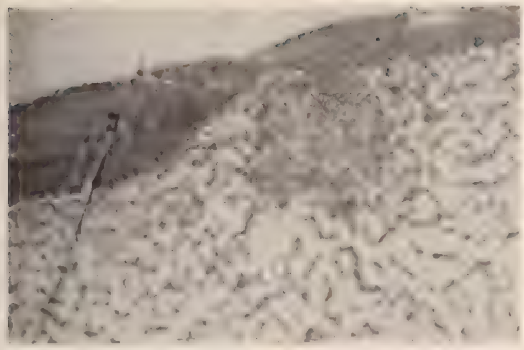

FIG. 4. Photomicrograph showing the nidus beneath the articular cartilage of the patella. Note minimal perifocal sclerosis and thinning of the overlying cartilage. (7 ×)

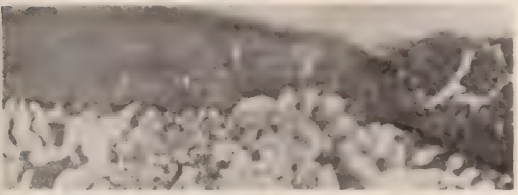

FIG. 5. Photomicrograph showing degenerative changes in the articular cartilage. (70 ×)

The patient was admitted to the Hospital for Joint Diseases and operated on July 18, 1947. At operation a slight amount of excess joint fluid was present. The synovium was injected but not thickened. The articular cartilage of the patella presented a gross, yellowish discoloration with diffuse softening, fibrillation, and scattered areas of erosion. Two long longitudinal fissures, from pole to pole, had developed in its cartilage. The articular surface of the femur was clear and showed normal glistening cartilage. A total patellectomy was performed and the defect in the fascia closed by plication. The postoperative course was uneventful.

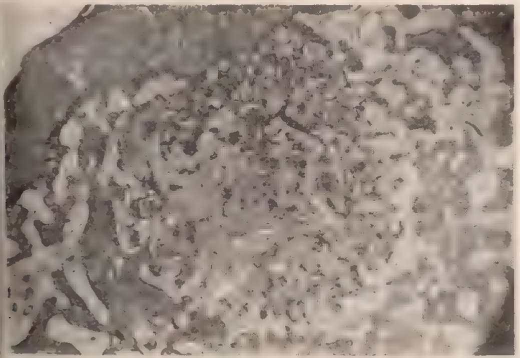

FIG. 6. Photomicrograph showing the typical osteoid-osteoma. (140 ×)

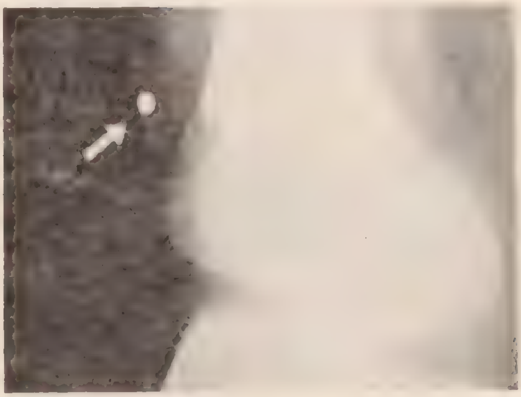

FIG. 7. Seven months postoperative roentgenogram, taken on March 24, 1948, showing no evidence of regeneration of the patella. The small prepatellar bursal body is still evident. (Retouched)

The pathologic report was as follows:

"*Gross:* Specimen consists of a patella, the articular cartilage of which is yellowishly discolored and eroded in places.*

"*Microscopic:* Sections show a small circular nidus resembling an osteoid-osteoma, just beneath the articular cartilage of the patella at one point (Figs. 4, 5, and 6).

"*Diagnosis:* Osteoid-osteoma, patella."

The preoperative roentgenograms were then carefully reviewed by several different observers at the hospital, and it was the consensus that the nidus lesion in the patella is not demonstrable.

When last examined on June 3, 1948, the patient was able to climb and descend the stairs in a normal manner, completely free of pain. There was 10 degrees loss of normal range of flexion. Extension

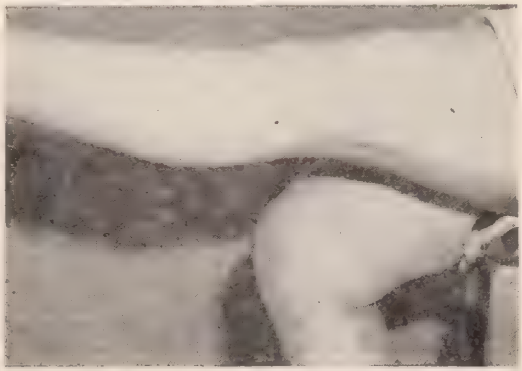

FIG. 8. Eleven months postoperative, showing normal range of extension following total patellectomy.

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* Unfortunately, the gross specimen had been discarded, and consequently no photographic reproduction is available.

was normal but associated with slight residual weakness of quadriceps against resistance. However, an excellent functional recovery had been obtained (Figs. 7 and 8).

Discussion

In the case presented the clinical picture warranted a diagnosis of chondromalacia of the patella. This was confirmed at operation. That this was not the sole offending pathology was realized only after study of the microscopic sections. Invariably, it is the roentgenographic picture that constitutes the most valuable single guide in the clinical diagnosis of osteoid-osteoma. The history and physical examination alone may furnish clues, but it is the roentgenogram which makes the diagnosis. Usually, the lesion matures and has advanced sufficiently in its evolution to be demonstrable roentgenographically within a period of six months to two years. One of the unusual features in this case was the failure, despite the five-year history, to reveal the presence of the nidus by ordinary, commonly employed routine x-ray technic. This may be explained by virtue of the fact that when the lesion arises in spongiosa bone the perifocal reaction may be either minimal or so immature as to be roentgenographically negative in contrast to the early, marked roentgenographic findings when the lesion develops in cortex of the long bones of the extremities. Associated with this was the apparently silent or few clinical manifestations and symptoms indicative of an osteoid-osteoma presented by the patient. The typical history of periodic recurring attacks of pain, usually sharply localized, occurring mostly at night, interfering with sleep was not obtained in this case. Also the absence of a history of aspirin addiction, despite the long duration of five years, did not fit in with the typical clinical pattern we have learned to expect in cases of osteoid-osteoma. It may be that the symptoms associated with a nidus developing in spongiosa bone are so mild, due to the minimal perifocal response, that they do not follow the clinical pattern we have believed to be characteristic of osteoid-osteoma. Or it may be, as in this case, that the symptoms due to the degenerative changes in the articular surface of the patella were so marked as to overshadow or hide the relatively milder reaction to the nidus.

This brings us to the other unusual feature in this case, namely, the degenerative changes in the articulating cartilage of the bone involved by the nidus. It is well known that a lesion situated near a joint and not directly involving the joint may produce changes in that joint. Sherman reported two cases in which marked changes occurred in major joints which she believed represented secondary reactions to nearby osteoid-osteoma.[4] In one case involving the hip joint there occurred permanent arthritic changes as evidenced by degenerative changes in the articular cartilage and osteophyte formation. The second case represented a reactive synovitis of the elbow joint which promptly receded following excision of the nearby osteoid-osteoma. She also mentions that, in osteoid-osteoma of the spine, arthritic changes in the small joints have appeared, and several such cases are being reported.[4]

Correlating her observations with the findings in the case presented in this report, one may conclude that more than mere coincidental relationship exists between the longstanding, provocative tumor nidus and the degenerative changes in the articular surface of the involved patella. The precise interpretation of this relationship, however, must still be kept in abeyance until further clinical pathologic data have accumulated. The value of recording case reports of this nature lies in the realization that an apparently simple osteoarthritic joint may be masking an underlying osteoid-osteoma.

123 East 83rd Street

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DISRUPTION OF THE FAMILY

Contrary to popular belief, disruption of family life in the United States is less frequent today than it was sixty years ago, according to the statisticians of the Metropolitan Life Insurance Company. This is because the drop in the number of families broken by the death of either husband or wife has counterbalanced the upward trend of divorce.

Since the early 1890's the divorce rate has climbed from about 3 per 1,000 married couples to 12 per 1,000 in 1948. During the same years the rate of marital dissolutions due to the death of the husband or wife has fallen off from 30 to about 19 per 1,000.

"Mortality has been decreasing as a factor in the disruption of family life, while divorce has been playing an increasing role," the statisticians observe. "In 1890 less than 10 per cent of all broken families resulted from divorce; by 1946 divorce accounted for nearly as many as did death. With the readjustment to peacetime life, however, the divorce rate receded and in 1948 was responsible for 38 per cent of all marital dissolutions."

This is still a considerably higher proportion than during the immediate prewar years, the statisticians point out.

ACUTE AEROBACTER AEROGENES ENDOCARDITIS COMPLICATING GENITOURINARY TRACT INFECTION

LEON N. SUSSMAN, M.D., IRA COHEN, M.D., and A. JACK FREUND, M.D., New York City

(*From the Medical Service and Laboratory, Beth Israel Hospital*)

THE unique opportunity to observe the increasing pathogenicity of a formerly unimportant organism has been afforded us. Wilhelm and Orkin, reporting from this hospital, first observed the steadily mounting frequency and increasing pathogenicity of genitourinary infection with the Bacillus lactis aerogenes, also known as Aerobacter aerogenes.[1] They showed that this organism was isolated from urine cultures in only 6.6 per cent of genitourinary admissions in 1940 and 1941, whereas it was isolated from urine cultures in 45 per cent of the 1945 to 1948 genitourinary admissions. Furthermore, among the 1940–1941 cases there were none with positive blood cultures, and there were no fatalities. In their 1945–1948 cases, however, there were four patients with positive blood cultures, one of whom died.

It is our purpose to present the first detailed report of a case of acute bacterial endocarditis caused by B. lactis aerogenes. Careful search of the literature has failed to reveal any previously reported endocarditis caused by this organism. Keefer and Hewitt make the statement, in regard to B. lactis aerogenes sepsis, that "Metastasis occurred on the heart valves in three cases, in the lungs in one, and in the meninges in one."[2] No details of these cases are presented.

Case Report

I. K., a sixty-five-year-old man, was admitted on July 13, 1948. His complaints were limited to the genitourinary tract and consisted of urinary discomfort, hesitancy, diminution of force of the urinary stream, and nocturia of about six years duration. Repeated examination over the preceding years showed progressive prostatic enlargement. Various types of conservative therapy (massage, injections, heat therapy, etc.) were unsuccessful. Prostatectomy was advised but repeatedly deferred by the patient. On several occasions the diagnosis of carcinoma of the prostate had been entertained because of the hard and nodular character of the gland. Several weeks before admission he was cystoscoped, and this procedure was followed by dysuria and hematuria. These symptoms gradually subsided and were replaced by hesistancy and urgency.

The urine was persistently cloudy. His past history was irrelevant except for the presence of a loud cardiac murmur since childhood and asymptomatic hypertension for several years. There was no history of rheumatic fever, weight loss, bone pain, chills, or urinary colic.

The patient was a fairly well nourished white male, with a temperature of 99.2 F., pulse 92, respiration 22, and blood pressure 200/110. A loud, rough precordial murmur was heard, which was transmitted to both axillae and the neck. It was heard loudest during systole and to a much lesser extent during diastole. The heart was enlarged to the left, and the rhythm was regular. It was felt that the probable cause of this murmur was either sclerosis of the aortic valve or a congenital defect. Rectally, a diffusely enlarged, hard, nodular, and irregular prostate was felt. The remainder of the examination was not remarkable.

Laboratory studies showed the blood count to be hemoglobin 94 per cent (14.5 Gm.), red blood cells 4,600,000, white blood cells 10,200, and differential as follows: polymorphonuclears 83 per cent, lymphocytes 14 per cent, monocytes 2 per cent, eosinophils 1 per cent. Urinalysis showed a specific gravity of 1.014, no albumin, and a trace of glucose. There were 20 to 30 white blood cells per high power field. The nonprotein nitrogen was 33 mg. per cent, acid phosphatase 4.6 units per 100 cc. The blood group was O, Rh positive. X-ray of the pelvis was reported as "arthritic changes in both hip joints, and lower lumbar vertebrae. There is no evidence of bony metastasis." Urine culture revealed Staphylococcus albus.

A transurethral prostatic resection was performed under spinal anesthesia on July 15. The patient's postoperative condition was good. The pathologic examination of the resected pieces of the prostate showed the glands slightly irregular in some sections and squamous metaplasia in a few with no definite evidence of carcinoma. On the fourth postoperative day the temperature rose to 102 F. Penicillin, 50,000 units, and streptomycin, 0.25 Gm., were administered every three hours. The Foley catheter, inserted at the time of the operation, was removed, but acute urinary retention developed, necessitating reinsertion of the catheter. The fever continued for one week, however.

At this time (July 27) a 4 plus glycosuria was noted. The blood sugar was 312 mg. per cent, and the nonprotein nitrogen was 46 mg. per cent. Blood count revealed: hemoglobin 64 per cent (10 Gm.), red blood cells 3,850,000, and white blood cells 30,800. The differential count showed staff cells 20 per cent, polymorphonuclears 67 per cent, lymphocytes 7 per cent, and monocytes 6 per cent. On the same day the patient had a shaking chill followed by a fever of 103 F. Examination showed the cardiac murmur to be unchanged. At the right lung base posteriorly there was some dullness, changes in breath sounds, and many rales. No growth was obtained from a blood culture taken immediately after the chill. X-ray of the chest showed increased pulmonary markings and left ventricular enlargement. Electrocardiogram was reported as indicating no abnormalities (Fig. 1). Abdominal distention was prominent and troublesome.

The glycosuria and hyperglycemia responded to insulin and fluids. The pulmonary condition resolved readily. Penicillin and streptomycin were continued. The next day, following a chill, the temperature rose to 106 F. It was felt that a prostatic infection was the probable cause of the spiking temperature. A suprapubic cystotomy was performed, and a large prostatic abscess containing approximately 2 ounces of green-brown, foul-smelling pus was evacuated. Culture of this

Aided by a grant from the Tillie Bloom Research Fund.

material revealed B. lactis aerogenes and streptococci. Following the operation, however, the spiking fever and chills persisted. On August 3, a sudden and severe attack of dyspnea occurred, accompanied by pallor and moderate shock. This was thought to be due to either a pulmonary infarction or a coronary occlusion. There was no evidence of phlebitis of the lower extremities. Calf and plantar tenderness were absent. Homan's sign was negative. There was a small area of superficial phlebitis on the left forearm. The possibility of an embolus arising from this area was considered remote. A blood sugar of about 200 mg. per cent and a 2 plus glycosuria were maintained, to avoid any possibility of a hypoglycemic state. Heparinization was begun.

An electrocardiogram taken at this time showed marked changes, with inversion of T_1 and T_4, depression of ST_1, and elevation of ST_3 (Fig. 1). These changes were interpreted as probably due to a myocardial infarction. The blood pressure fell to 170/80, and evidence of congestive failure appeared. Therapy with digitalis, oxygen, papavarine, and Demerol caused considerable improvement. Nevertheless, the chills and fever persisted, and another blood culture was taken. In forty-eight hours a gram-negative rod was cultured from this blood which was later identified as B. lactis aerogenes, the same organism previously cultured from the prostatic bed and the bladder. The streptomycin dosage was increased to 0.5 Gm. every three hours while awaiting results of the streptomycin sensitivity tests. Subsequently, the organism was reported as resistant to more than 32 units of streptomycin per cc. The septic course persisted in spite of combined therapy of intravenous sodium sulfadiazine, intramuscular penicillin, and streptomycin.

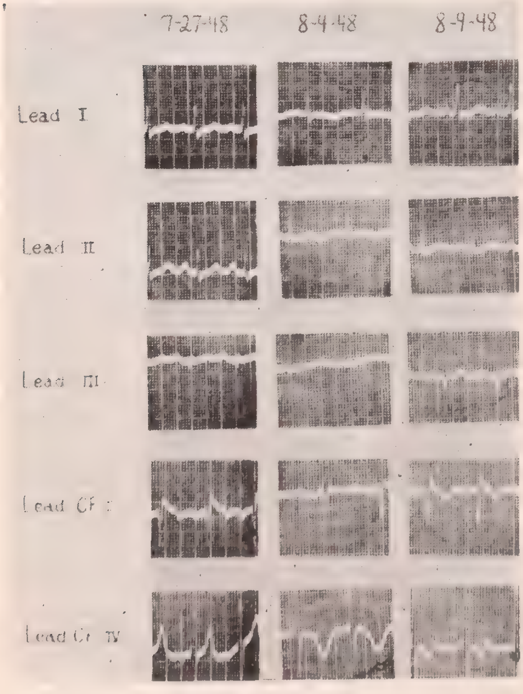

FIG. 1. Electrocardiograms showing no abnormalities on July 27 and marked changes on subsequent tracings.

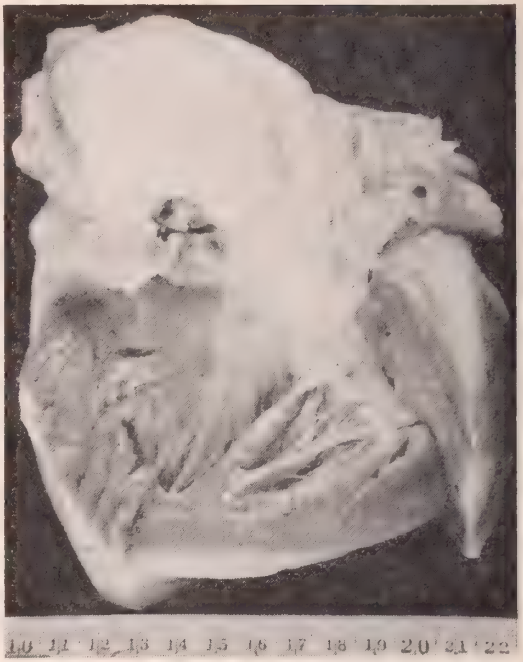

FIG. 2. Septal and aortic aspect of heart; vegetation attached to and protruding superiorly from fused right and left aortic cusps.

The advisability of attempting surgical removal of the prostate as the probable focus in so desperately ill a patient was considered. Dr. Arthur Fishberg saw the patient in consultation and agreed that the probable focus for the bacteremia was the periprostatic plexus. Because of the presence in the left

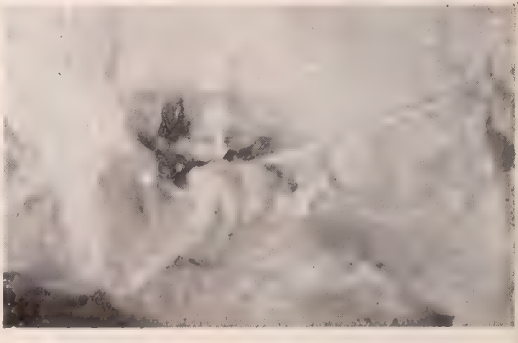

FIG. 3. Closeup of aortic valve. Here the vegetation is seen on the aortic surface of the fused portion of the left cusp and extending onto the septal myocardium. Adherent blood clot appears to separate the single vegetation into two portions.

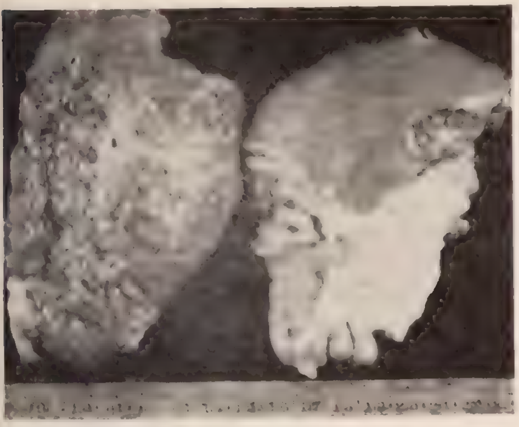

Fig. 4. Abscess cavities in the spleen: the cut surfaces on the left side of the photograph, the external surface on the right.

conjunctiva of a white-centered petechia, he suggested the possibility of a malignant endocarditis engrafted on a chronic valvular defect. A perineal prostatectomy was performed under general anesthesia on August 11. Following the procedure the patient appeared clinically improved and remained afebrile for three days. On the fourth day, however, a new crop of conjunctival petechiae was noted. B. lactis aerogenes was cultured from blood and urine obtained at this time. In spite of supportive therapy of transfusion, oxygen, digitalis, etc., the patient gradually became comatose. On the fifth postoperative day, a severe attack of dyspnea occurred during which the patient succumbed.

Autopsy Report.—Only the important findings at autopsy will be described. Of interest externally were pinpoint conjunctival petechiae. The heart weighed 460 Gm. Approximately 75 cc. of clear yellow pericardial fluid were present. The pericardium was smooth and glistening. The heart was enlarged and red-brown. The right ventricular myocardium was 0.7 cm. and the left 1.6 cm. thick. The cusps of the pulmonic valve were slightly thickened. The tricuspid and mitral valves were not unusual. A bean-sized mass of gray-pink friable material was attached to the ventricular surface of the fused right and left cusps of the aortic valve. It extended almost from one arantian nodule to the other, down in the angle of fusion onto the septal endocardium for a distance of 2 mm., and superiorly from the edges of the fused cusps (Figs. 2 and 3). A thin layer of similar gray-pink material was present on the aortic surface of the fused portion of the left cusp. A 4-mm. superficial ulcer with a red base was present on the aortic surface of the right cusp, immediately below the arantian nodule. A pure growth of B. lactis aerogenes was cultured from the aortic vegetation.

After the mass was removed, the fused adjacent portions of the right and left cusps were seen to protrude into the aortic lumen for a distance of 1.5 cm. At the midpoint the fused cusps were 6 mm. thick. The right and left cusps were very thick, distorted, and 5 mm. thick at the arantian nodules. Their edges were 3 mm. lower than the posterior cusp. On section through the zone of fusion, partly calcified, dense, gray tissue surrounded an 0.5-cm. area of soft yellow-brown material. The posterior cusp at its midpoint was 2 mm. thick. The left posterior commissure was dissociated for a distance of 2 mm. A horizontal fenestration measuring 3 by 2 mm. was present in the left cusp immediately anterior to the commissure. The base of the aorta was atherosclerotic. The coronaries were moderately atherosclerotic without appreciable narrowing except for a 1-cm. distance of eccentric narrowing of the right circumflex, 2.5 cm. behind the right border.

In the section through the right-left commissure examined microscopically, a thick polymorphonuclear leukocytic fibrinous mass was found on the lower half of the ventricular surface of the aortic valve. It was continuous with a narrow, loose, leukocytic fibrinous layer on the ventricular myocardium. The markedly thickened fused cusps, noted grossly, consisted of homogeneous connective tissue, calcific material, fibrin, and a central area of amorphous substance with acicular clefts. Fibrinous masses were attached to the surface of the valve near its edge. Numerous scars, mainly perivascular, were seen in the myocardium attached to the aortic valve. In several of these, groups of dark-staining cells were seen. The myocardium at the base of the aortic valve was largely destroyed and replaced by a polymorphonuclear leukocytic exudate. The endocardium was necrotic, thickened, and contained numerous inflammatory cells. A focus of cells as described above in the myocardium, adjacent to the aortic valve, was seen in a section of the left ventricular myocardium. A few inflammatory foci in the media and adventitia, several scattered perivascular accumulations of monocytes, and a few leukocytes were seen in the ascending aorta.

The prostatic bed was filled with clotted blood and greenish-black material. About a 0.5-cm. rim of hemorrhagic prostatic tissue was recognized. Microscopically, examination of the prostate revealed several abscesses with adjacent diffuse inflammation. The glands varied in size, and many contained corpora amylacia. An abscess at one edge of the section examined was bordered by extravasated blood. Metastatic abscesses were found in kidneys, spleen, and midileum (Fig. 4).

An incidental finding was a markedly enlarged, oval, left adrenal gland weighing 58 Gm. The center of this gland was replaced by dull, pinkish-gray tumor. This was everywhere surrounded by a distinct, bright yellow cortical zone. Microscopically, the tumor was a very edematous cortical adenoma.

Final Anatomic Diagnosis.—The final anatomic diagnosis was as follows: status after transurethral resection, suprapubic cystotomy, and perineal prostatectomy; hemorrhagic cystitis, necrosis in prostatic bed; acute aortic bacterial endocarditis (B. lactis aerogenes); deformity of aortic leaflets, perivascular myocardial scars; right ventricular hypertrophy; narrowing of segment of right coronary artery; overgrowth of small pancreatic ducts; abscesses in kidneys, spleen, and midileum; cerebral congestion and edema, and tumor of left adrenal (edematous cortical adenoma). The perivascular myocardial scars strongly suggest an old rheumatic carditis. The genesis of the partly sclerotic, deformed aortic valve probably can also be attributed to previous rheumatic disease. The acute aortic endocarditis was superimposed upon an old valvulitis.

Bacteriology.—The isolation and identification of the organism with studies of its antibiotic sensitivity were performed under the direction of Dr. E. Seligmann. Characteristic growth on Chapman's medium and other differential studies established the identity of the organism beyond doubt. Previous studies on the sensitivity of A. aerogenes (B. lactis aerogenes) by Helmholtz, Herrell and Nichols, Kleinman, Shearer, and Sprinz, Pulaski, and Adcock and Plumb all indicated a relative marked sensitivity of the A. aerogenes (B. lactis aerogenes) to streptomycin.[3-7] Seligmann's data on the cases reported by Wilhelm and Orkin show decided resistance of most of the organisms in our hospital, frequently to levels of more than 64 units.[8,1] In our case, the organism was resistant to more than 32 units of streptomycin.

Treatment.—The failure of this organism to respond to penicillin, streptomycin, and sulfonamides, NV 445-9, mandelamine, and other therapeutic agents in various combinations has been discouraging.

Comment

It is our feeling in agreement with Wilhelm and Orkin that we are probably observing a change in the degree of pathogenicity of an organism as a result of its resistance to the antibiotics and sulfonamides that have eliminated the more susceptible strain in genitourinary infections. It can reasonably be expected that other systems may likewise show an increased frequency of infection with organisms which selectively have survived the effects of antibiotics, by nature of their resistance to these drugs. Certainly an increased frequency of genitourinary tract infections by the A. aerogenes has been observed. The invasion of the blood stream, culminating in an active implantation on the endocardium represents an unusual, heretofore undescribed complication in infection with B. lactis aerogenes.

Summary

The first detailed report of a case of acute endocarditis, resulting from infection with the A. aerogenes (B. lactis aerogenes) is presented.

36 East 38th Street

The authors wish to express their appreciation to Dr. Seymour Wilhelm, Dr. Erich Seligmann, and Dr. Alfred Plaut for their assistance and helpful suggestions.

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Addendum—While this paper was in press, Wilhelm, Schloss, Orkin, Seligmann, and Wassermann reported excellent results in the treatment of B. lactis aerogenes infection with aureomycin—J.A.M.A. **141:** 837 (1949).

CARE OF PREMATURE INFANTS

The State of New York has taken definite steps to increase the chances for life of its premature infants for whom the mortality rate is now 10 times as great as for a full-term baby. A regional demonstration program for the care of premature infants was launched by the State Department of Health the first of the year. Dr. Herman E. Hilleboe, State health commissioner has announced that it will center around the Buffalo Children's Hospital and will cover the six western New York counties comprising the Buffalo State Health Region.

An annual appropriation of $35,000 has been made available to the Department to promote the program in Cattaraugus, Chautauqua, Erie, Genesee, Niagara, and Wyoming counties. This area has been chosen for the start of the program because of the availability of suitable local facilities and the interest in the problem of premature infant care shown by the medical and nursing professions in the area. In time the Department hopes to extend the program to the remaining four Upstate health regions.

Physicians delivering premature infants in hospitals lacking adequate facilities and services for the care of premature infants will be encouraged t hospitalize their premature babies at the Buffal Children's Hospital premature nursery. Transportation of the premature infant from the place o birth to the Buffalo hospital will be provide through the program. An ambulance, accompanie by a nurse with special training in the care of premature infants, will be dispatched from Children' Hospital for the purpose. The ambulance will b equipped with a heated portable incubator and apparatus for the administration of oxygen.

Parents will be expected to pay as much as the can reasonably afford toward the costs of hospita care. In arriving at an amount each family will b requested to pay, consideration will be given to th fact that the family has already had heavy medic expense for obstetric care. The care of a premature infant averages $500 for each infant and ofte runs substantially higher.

BILATERAL SIMULTANEOUS TUBAL PREGNANCY

Albert Philip, M.D., New York City

BILATERAL simultaneous tubal pregnancy is a rare occurrence. Only 86 authentic cases have been recorded in the world literature. An additional case is herewith reported.

Case Report

Mrs. G. M., twenty-seven-year-old nullipara, married five years, had been referred by her family physician for gynecologic consultation.

Past History.—At the age of ten years the patient had had appendicitis which healed under conservative therapy. Tonsillectomy had been performed at the age of eleven.

The patient's first menstruation had occurred at eleven years of age and followed a four-week cycle. Periods lasted four days with moderate bleeding and slight pain the first day. Her last normal menstrual period had been September 9, 1948.

Physical Examination.—The present illness had started on November 11, 1948, with slight vaginal bleeding. The following night there had been sharp abdominal pain in the right lower quadrant. On November 13, she felt better, and there was only slight vaginal bleeding and occasional pain. On November 19, 1948, the day before her admission to the Wickersham Hospital, she had had severe abdominal pain and had felt faint.

Consultation was held in the hospital on November 20, 1948. Examination showed that the patient was anemic. The right lower abdomen was tender on touch. Vaginal examination showed slight vaginal bleeding and a normal-sized uterus. The diagnosis at this time was ectopic pregnancy, and operation was advised.

Laboratory Examination.—Urine was amber, cloudy, and acid; specific gravity 1.018; negative for albumin and sugar; microscopically, there were many clumps of epithelium seen, 3 to 6 pus cells and 1 to 3 blood cells per high power field, and a slight trace of mucus. Blood studies showed hemoglobin 38 per cent, color index 0.9, 1,810,000 erythrocytes per cu. mm., 6,400 leukocytes, 31 lymphocytes, 2 large mononuclear leukocytes, 61 neutrophils, 2 eosinophils, and 4 stab forms. Patient had type A, Rh positive blood.

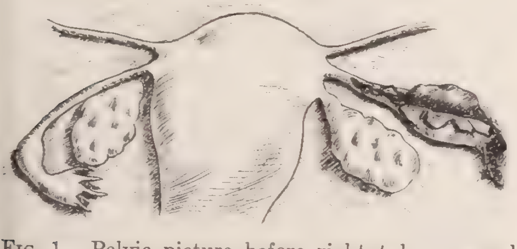

Fig. 1. Pelvic picture before right tube removal and left tube resection.

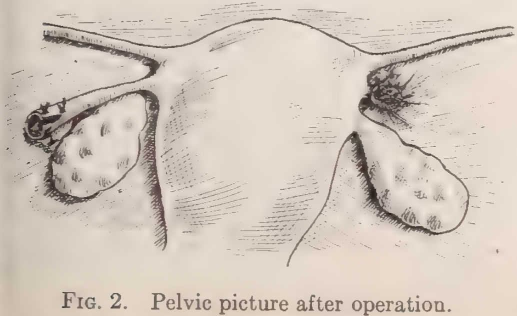

Fig. 2. Pelvic picture after operation.

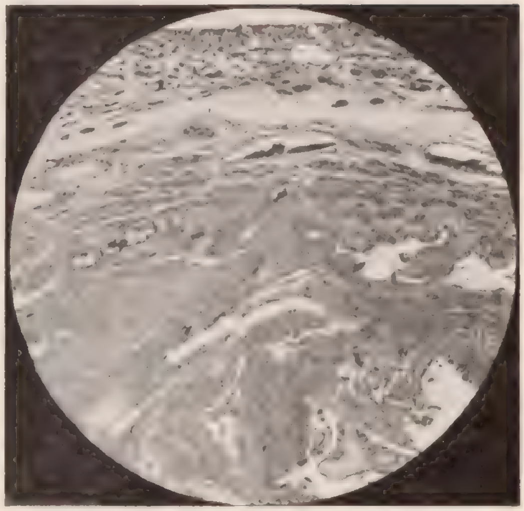

Fig. 3. Histologic picture of left tube.

Operation.—Operation, performed on November 20, consisted of a right-sided salpingectomy, resection of the left tube, and salpingostomy. About 500 to 600 cc. of partly clotted blood were found intraperitoneally. The right tube was swollen and ruptured with spongy, bloody material (Fig. 1). The left tube had a swelling the size of a hazel nut in the distal third which was suspicious of another tubal pregnancy. The right tube was removed and the mesosalpinx clamped and tied with suture ligatures. The other side was inspected, and an intact tubal pregnancy was found. The tube was resected, and a segment about 1 inch long was left (Fig. 2). The abdomen was closed in layers with silk and retention sutures applied to the skin. A blood transfusion of 500 cc. of blood and 1,000 cc. of glucose solution were given postoperatively. The patient made a good recovery. The wound healed by primary union, and the patient was discharged in good condition on December 3, 1948.

Pathologic Report.—The pathologic examination done by Dr. M. J. Fein was as follows:

Gross Examination.—One tube is elongated and measures 7 by 2 cm. The fimbriated end is missing. A large blood clot is attached to the surface of the tube. Sections through this tube show a lumen that is filled with blood and spongy material. There is a rupture through the wall through which the blood clot escaped.

The other tube is much shorter, measuring 3 by 2 cm., bulges in the midportion, and is grayish in color. On section the tube contains blood and

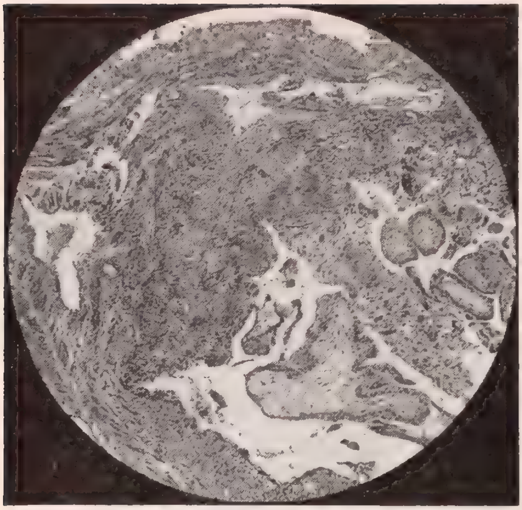

FIG. 4. Histologic picture of right tube.

spongy material in the lumen, and the wall is thickened and edematous.

Microscopic Examination.—The tubes have, within their lumina, blood with chorionic villi with a diffuse growth of decidual cells and some necrotic material (Figs. 3 and 4). Throughout the walls of both of these tubes there are areas of edema with round cell infiltration, and the blood vessels are dilated and crowded with red blood cells.

Diagnosis.—The diagnosis is bilateral tubal pregnancy with rupture.

Comment

In this case the question may arise as to whether simultaneous double ovum conception took place or whether a superfetation occurred at a different time. Clinically, the left tubal pregnancy might have been more recent than the right one, although scientific evidence of this cannot be furnished. Other authors also call attention to the wise procedure of inspecting both tubes during such an operation. In this way we may be able to prevent some eventual, unexplainable postoperative complications.

133 East 58th Street

A.M.A. TAKES ISSUE WITH FSA PREDICTION OF PHYSICIAN SHORTAGE

The *Journal of the American Medical Association* in its January 14 issue challenges a report of the Federal Security Agency predicting a shortage of physicians in 1960.

"The methods employed in this study are so unrealistic that the study adds nothing to the knowledge of the physician requirements of the American people now or in 1960," says the editorial.

F.S.A.'s report estimated that there will be 227,119 physicians living in the United States in 1960 and that this will provide 143 physicians per 100,000 population. In 1940, the report adds, there were 133 physicians per 100,000 population and 137 in 1949. The report arbitrarily sets up three minimum measures of adequacy. On the basis of these, the 1960 shortage is estimated at from 17,413 to 45,053 doctors. It also cites a ratio of 149 physicians per 100,000 population in 1909.

"This compilation," says the editorial, "does not take into consideration, however, the fact that the earlier decrease in the physician-population ratio was the result of the closing of weak medical schools and 'diploma mills.' The significance of the term 'physician' with respect to training and ability differs so markedly today from the significance of the term in 1909 that any crude statistical formula invoked to compare or contrast the situation in the two periods must be rejected.

"It is difficult to forecast the national demand for physicians because it is practically impossible to estimate in advance the rapidity of technologic progress in the practice of medicine. Nevertheless, it is possible that there will be a surplus of physicians in 1960.

"During the 1940's a great increase in the number of auxiliary personnel, as well as improvements in therapeutic remedies, greatly enhanced the amount of medical service which any 1,000 physicians could render. The Bureau of Medical Economic Research of the American Medical Association has estimated that the increase in productivity per physician during the 1940's might have been as much as one third. If this rapid and widely recognized trend continues, it certainly seems more reasonable to expect a surplus than a deficit of physicians in 1960. Obviously a crisis in the health of the people does not now exist.

"In any event, physician-population ratios are not true measures of the demand or supply of physicians. The most important objective is raising the standards of performance in the medical profession. The number of physicians divided by the number of people and multiplied by 100,000 to obtain the ratio of physicians per 100,000 population certainly cannot be expected to provide a satisfactory guide to Congress or to the American people on the number of physicians needed. A satisfactory study would pinpoint the situation in every section of the U.S.

GYNECOLOGIC CURIOSITIES

MARTIN J. LOEB, M.D., Bronx, New York

(From the Bronx Hospital)

FROM time immemorial curiosities and oddities have excited the imagination of man. Curiosity, whether a reflex or an instinct, is probably evolved from the drive for self-preservation. The curious animal looking around for noises in the brush or for sounds among the rustling leaves will occasionally save its life by detecting a lurking enemy. Curiosities have been searched for in many fields of human endeavor since curiosity has been sublimated by man into the acquisition of knowledge. The work of the elder Disraeli on the "Curiosities of Literature" is a testimony to the interest man has in the subject. Medicine, too, has its curiosity seekers. Gould and Pyle, some fifty years ago, compiled a book on the "Anomalies and Curiosities of Medicine." Other works of a similar nature have been published from time to time both in this country and abroad. The authors of these books confined themselves mostly to curiosities produced by developmental errors and congenital anomalies. Diseased conditions have occasionally been included.

Certainly no two disease processes are alike nor are their effects absolutely similar. In spite of variations, diseased conditions may be classified and placed within a pattern. Occasionally, however, some cases occur which are unique in their pathology and a repetition of a similar occurrence is a mathematic improbability. The cases to be reported belong to that category. They are, therefore, added to the literature of gynecologic curiosities.

Case Reports

Case 1.—R. B., seventy years old, gave a history of operation twelve years ago for the removal of a left ovarian cyst. Her menstrual period stopped at the age of fifty.

Her present history dated back eight months when the patient had menstrual-like pains in the lower pelvis and vagina. The pains recurred daily. For the past six months the patient had been incontinent. It was evidently active incontinence caused by the pressure of the mass on the bladder.

The patient was a well-preserved woman appearing to be about seventy years old. Her general condition was good. On vaginal examination a large bulging mass protruding from the vagina and arising from the anterior vaginal wall was seen. This mass extended into and filled the vagina completely. There was no space left between the anterior and posterior vaginal walls. It was impossible to introduce a finger to do a digital examination (Fig. 1A). Abdominal palpation revealed a large mass extending from the symphysis to about two fingers above the umbilicus. Preoperative diagnosis was possible intraligamentous cyst pressing downward into the vagina complicated by a fibroid uterus.

The patient was operated on December 14, 1946. The patient had been cystoscoped preoperatively for the purpose of introducing ureteral catheters. It was impossible to distend the bladder with water. The water was immediately expelled on introduction. The distention was made impossible by the pressure of the various masses surrounding the bladder, the interior being distorted and the walls folded up on themselves. It was impossible to locate the ureters or any other structures.

A midrectus incision was made. The abdomen was opened, and numerous adhesions were found between the intestines and a large fibroid uterus, the adhesions being the result of the previous operation. The perineum was pushed upward by the mass in the vagina so that the central part of the perineum reached the level of the symphysis pubis which in turn placed the cervix of the uterus in the upper part of the pelvis. A large soft mass bulged into the pelvis in the central portion of the perineum (Fig. 1A). A supracervical hysterectomy was performed. The right ovary which was cystic was removed with the uterus. As the uterus was cut away from the cervix, old coagulated blood exuded from the cervical opening. About 2 to 3 quarts of this material was removed (Fig. 1A).

Evidently, the cervix was connected with the anterior vaginal wall in which this large hematoma was located. After most of the coagulated blood was removed, about 3 yards of 2-inch gauze packing was inserted through the cervical opening into a cavity which was located anterior to the anterior vaginal wall (Fig. 1B). The anterior vaginal wall formed the posterior wall of the cavity. The cervix and the pelvic peritoneum were sutured, as was the

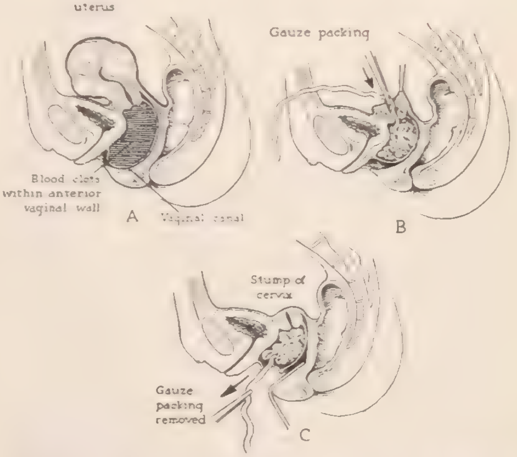

FIG. 1. (A) Synapsis between cervix of fibroid uterus and the anterior vaginal wall. Blood clots filled the spaces between the layers of the wall and in time completely occluded the vaginal cavity.

(B) Fibroid uterus removed. Cavity is being packed.

(C) Cervix, peritoneum, and abdominal wall were closed. Gauze packing was removed through an incision in the anterior layer of the anterior vaginal wall.

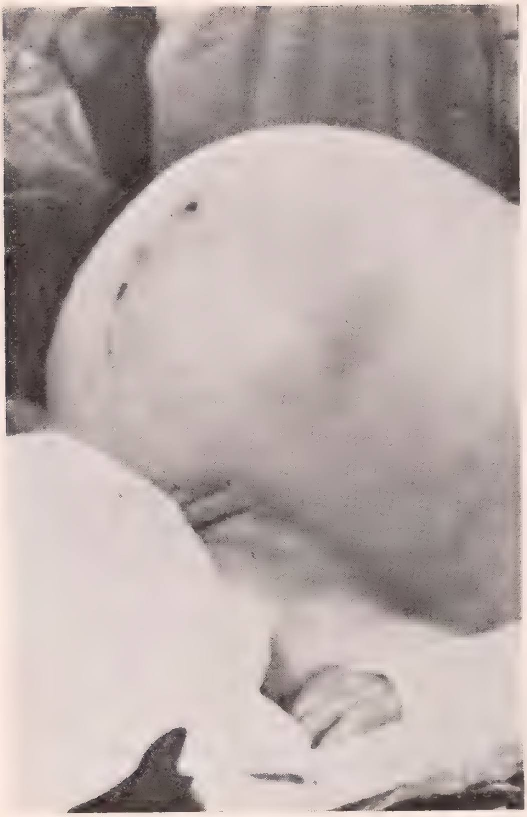

FIG. 2. Abdomen distended with pseudomucinous material.

abdominal wall (Fig. 1C). The patient was then placed in a lithotomy position. The anterior vaginal wall was incised in a longitudinal direction, care being taken to avoid injury to the bladder. The gauze, which was inserted through the cervix, was removed through the opening in the anterior vaginal wall (Fig. 1C). A great deal of clotted blood was removed at the same time. Part of the gauze was left in the cavity for drainage.

The postoperative diagnosis was fibroma uteri, cystoma ovarii, hemorrhage, and cervicoanterior vaginal wall synapsis.

The postoperative course was uneventful. The gauze from the anterior vaginal wall was removed three days later. The wound closed spontaneously, and the patient was relieved of all her symptoms. At the present writing, about two and one-half years after the operation, the patient is in excellent condition.

Comment.—This patient developed adhesions between the cervix and the anterior vaginal wall. Postmenopausal bleeding from a fibroid uterus found its way by pressure into the anterior vaginal wall where a large cavity was formed containing accumulated blood. As the bleeding increased, the cavity became larger and extended in various directions, eventually causing complete incontinence by pressure on the bladder.

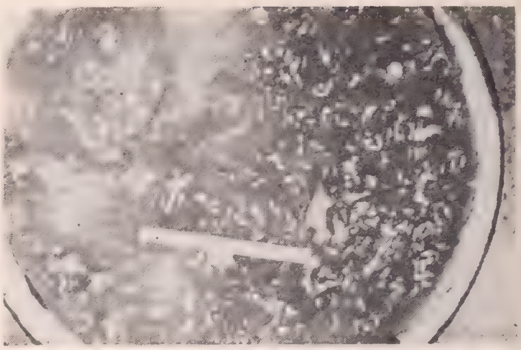

FIG. 3. Photograph of the top of a 5-gallon pail containing gelatinous material removed from the abdomen.

Case 2.—A. S., seventy-nine years old, was admitted on December 17, 1946.

The only related history is that of abdominal distention which occurred about fifteen years ago and continued through all these years. Apparently, no definite diagnosis had been made, and she had been treated symptomatically.

Six months before admission, the abdomen had become more enlarged. Constipation and anorexia from which she suffered had become more aggravated in the last few months. Daily vomiting became a distressing symptom.

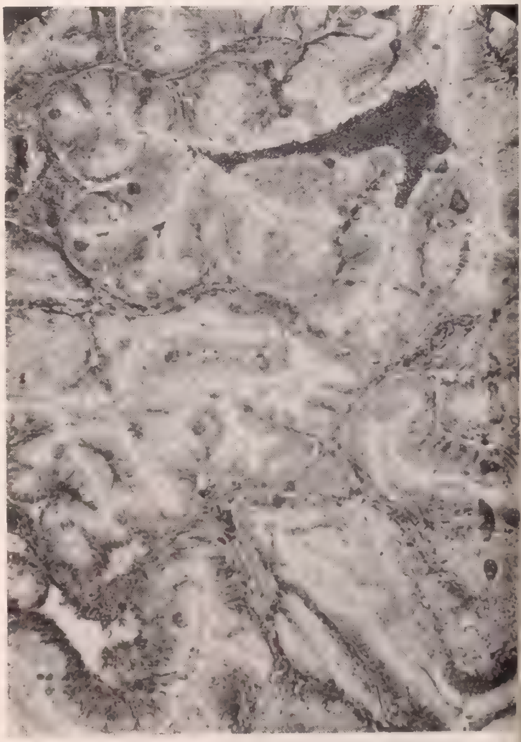

FIG. 4. Microphotograph of the gelatinous material

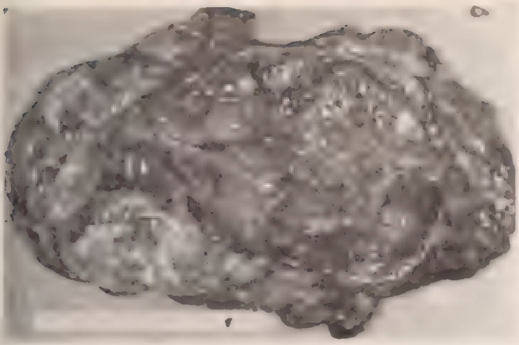

FIG. 5. Pseudomucinous cyst adenoma ovarii. Specimen removed on operation.

The patient was a seventy-nine-year-old woman of rather small stature. Her face was markedly wrinkled, and she appeared weak, cyanotic, and suffered from dyspnea and orthopnea. Her complexion was waxy, and she appeared to be very ill. Her abdomen was markedly distended and tense (Fig. 2). The distention was suggestive of fluid. Her lower extremities were very edematous. Because of this abdominal tension it was impossible to feel the spleen, the liver, or any other masses that might be present in the abdomen.

Laboratory examination was as follows: The urine contained numerous pus and blood cells; blood showed secondary anemia. The blood chemistry was within normal limits. The electrocardiogram was within normal limits. No fluid was obtained by abdominal parcentesis.

The patient was operated upon December 26, 1946. On opening the peritoneum a great deal of gelatinous material oozed out from the wound (Figs. 3, 4). A great deal more remained in the abdomen which did not come out. It was difficult to remove manually, being very slippery, but with pressure and manual manipulation within the abdomen the material was brought out. About five gallons of his substance was removed. The peritoneum was ound to be studded with hardened, gelatinous deposits glueing together many of the loops of the ntestines. Originally, a good deal of this material was contained in a pseudomucinous adenoma of the ovary which broke through and filled the entire peritoneal cavity. Some new material was undoubtedly secreted after the cyst was broken. This material filled every part of the peritoneal cavity. It was removed from the lumbar regions, from behind the liver, from behind the spleen, and from between the loops of intestines. The ovary with the broken cyst wall was then removed (Fig. 5). A three-layer suture was used for closure.

Pathologic Report.—Gross Examination: Specimen consists of four portions of tissue, the largest measuring 2 by 1.5 cm. in size. The three smaller portions of tissue are globular, smooth, encapsulated, and somewhat translucent. On section they are seen to contain a gelatinous material which is yellowish-white in color. The largest of the specimens is pinkish-white in color, irregular in shape, and on section it seems to be multicystic. The cyst contains gelatinous fluid.

Microscopic Examination: Section shows a typical structure of multilocular pseudomucinous cystadenoma. The lining of the cyst consists of low cuboidal epithelium, and the contents are mucinous in character.

Diagnosis: Pseudomucinous cystadenoma ovarii.

Subsequently she was given x-ray treatment. Altogether 2,900 r were given in one month. She did fairly well, and she was discharged from the hospital on February 5, 1947.

She was readmitted to the hospital January 18, 1949, with similar symptoms. She was again operated on. A good deal of similar material was removed, but since the last operation the material had hardened and formed practically a solid wall of the transverse colon and the omentum to which many coils of small intestines were attached. The loops of small intestine were also attached to one another.

She was discharged a month after the operation. At the present writing the patient at the age of eighty-one is still alive, and her general condition has improved.

Conclusion

Two gynecologic cases are presented which I believe deserve a place in the literature because of the rarity of their occurrence. They should be added to the curiosities of gynecology.

1882 GRAND CONCOURSE

BRITISH DOCTOR, QUITTING, HITS SOCIALIZED MEDICINE

Doctor 2108 quit the tax-supported national health service today and went back to private practice as Dr. E. F. St. John Lyburn.

"I revolt against the antiquarian methods of medicine practiced in this country," Dr. Lyburn old reporters.

"The £66,500,000 ($186,200,000) spent on useless ills and bottles of medicine under the act has been tragically wasted," he said, adding that it should ave been spent on "good modern sensible equipment."

He said that when the new state medical service began on July 5, 1948, he was the first doctor to announce publicly he would operate under it. He added he now was the first doctor to announce he would no longer do so. About 18,000 of the country's 20,000 doctors elected to enter the plan.

When the health plan came into operation, Dr. Lyburn took the title "Doctor 2108." He described it as the number sent him by Aneurin Bevan, Minister of Health.—*New York Herald Tribune, November 13, 1949*

FACIAL NERVE PARALYSIS IN INFECTIOUS MONONUCLEOSIS

BENJAMIN R. ALLISON, M.D., F.A.C.P., Hewlett, New York

PARALYSIS of the seventh nerve occurring in the course of infectious mononucleosis is unusual. The following is the report of such a case.

Case Report

A thirty-year-old white woman began to present signs and symptoms on December 30, 1946, which proved to be infectious mononucleosis. She did not feel well and noticed stiffness and tenderness in the right side of her neck. This condition persisted; her throat became sore, and on January 3 she had an oral temperature of 100 F. She went to bed and the next day called her doctor. Physical examination showed redness and swelling of the right tonsil and pharynx. There was moderate enlargement and tenderness of the lymph glands in the right side of her neck, particularly the posterior cervical group. Movement of the head produced pain and spasm in the right sternomastoid muscle. There was less involvement of the left anterior cervical lymph glands, and those in the right axillary region were enlarged and tender. She vomited on January 4 and 5, and on January 6 her temperature was 102 F., her throat very sore, and patches of whitish exudate appeared in the pharynx. A blood count on that day suggested mononucleosis. She had no rash, and her liver and spleen were not palpable or tender.

On January 10, the twelfth day of the disease, she noticed weakness of the right side of her face. On the next day she presented a typical picture of pronounced Bell's palsy. She showed no disturbance in hearing or taste, and the neurologic examination was otherwise negative. There had been no enlargement of the lymph glands near the angle of the jaw. No other signs of involvement of the nervous system appeared during the course of the illness. The facial paralysis improved slowly, there being little change for two months. Six months after onset, there was still residual weakness noticeable when she smiled or closed her eyes tightly. On January 18, she developed signs of hepatitis: jaundice, tenderness over liver, and slight elevation of the icteric index. Her appetite was poor, and mild digestive symptoms persisted for about two weeks.

Results of blood counts are shown in Table 1. Heterophile antibody reactions (in both nonabsorbed and guinea pig kidney serum) were 1:224 on January 17, 1:112 on January 30, and on February 19, 1:112 in nonabsorbed serum and 1:56 in guinea pig kidney serum. Icteric index was 15 units on January 20, 12 units on January 28, and 10 units on February 19. The sedimentation rate on February 17 was 10 mm., and the blood Kahn test on March 24 was negative.

Discussion

Of 1,805 cases of infectious mononucleosis reported in the literature, only seven instances of facial nerve paralysis are mentioned. A wide variety of neurologic findings are noted, but this report is concerned only with seventh nerve paralysis.

References, general in nature, state the occurrence of facial paralysis in infectious mononucleosis. Sir Henry Tidy, in discussing the bizarre nature of neurologic findings, says: "Hemiplegia, ocular and facial paralysis, and paralysis of various peripheral nerves are all reported."[1] Landes, Reich, and Perlow state, "Peripheral neurologic symptoms such as facial nerve palsy, oculomotor nerve involvement, optic neuritis, and anosmia are occasionally present."[2] Bernstein in a very good review of this disease states, "Peripheral cranial nerves are rarely affected."[3]

Of the seven cases of facial nerve paralysis reported, only in the two reported by Gsell was the facial palsy the sole neurologic symptom.[4] These cases were both peripheral. In the cases reported by Hiller and Fox, Zohman and Silverman, Slade, and Ricker, Blumberg, Peters, and Widerman, the facial palsy was part of extensive central nervous system involvement.[5–8] In two of these cases the diagnosis was Guillain-Barré syndrome associated with infectious mononucleosis.[5,8]

One hesitates to assume that as common a symptom as facial nerve paralysis occurring in the course of a disease is necessarily due to the causative agent of that particular disease. Only by recording such cases can their significance be determined.

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TABLE 1.—BLOOD COUNTS

1947	Red Blood Cells (Millions)	Hemoglobin (Gm.)	White Blood Cells	Polymorphonuclears	Lymphocytes	A typical Lymphocytes	Eosinophils
January 6	3.9	11.6	13,000	21	60	18	1
January 12	...	....	7,400	22	44	34	...
January 14	4.8	12.2	6,800	33	40	26	1
January 20	4.7	12.5	5,000	35	62	2	1
January 28	4.6	12.0	8,000	61	38	0	1
February 17	4.4	10.1	5,200	48	50	0	1 monocyt 1 basoph

VIRAL PNEUMONITIS OF UNKNOWN CAUSE WITH UNUSUAL NEUROLOGIC COMPLICATIONS—REPORT OF TWO CASES

Bernard Amsterdam, M.D., New York City

(*From the Medical Department of Beth Israel Hospital*)

A PRODIGIOUS amount of literature has appeared in recent years on the subject of so-called "viral pneumonitis" of unknown cause or "primary atypical pneumonia." Although it is now generally accepted, as a result of human transmission experiments with filtrates from active cases, that this disease entity is viral in etiology, attempts to isolate a definite agent have thus far been unsuccessful. A number of known organisms, such as the viruses of influenza, psittacosis, ornithosis, lymphocytic choriomeningitis, and the rickettsia of Q fever, are capable of producing a pneumonitis clinically indistinguishable from that of viral pneumonia of unknown cause. The symptomatology, course of the disease, physical signs, x-ray findings, absence of significant pathogenic organisms in the sputum, blood, or lungs, negative specific serum agglutination reactions, the presence of cold hemagglutinins and agglutinins for the streptococcus MG. in the serum of a majority of the cases, the absence of sustained leukocytosis, the low mortality rate, the relatively benign course without serious complications or sequelae, and the refractoriness to sulfonamides and penicillin are generally sufficient for diagnosis. The salient clinical, laboratory, x-ray, and pathologic features characterizing this disease have been excellently summarized in a thorough review of the literature by Finland and Dingle.[1] Complications involving the nervous system are particularly rare. Two cases with neurologic complications are herein reported.

Case Reports

Case 1 (*Viral Pneumonitis of Unknown Cause Complicated by a Focal Encephalitis with Complete Recovery.*)—A nineteen-year-old white girl was admitted to Beth Israel Hospital with fever, cough, and malaise of approximately one week duration. About eight days prior to admission, she experienced generalized aches and pains, malaise, and headache, notably frontal in location. Accompanying these symptoms was a low-grade fever of 100 F. Two days thereafter, she developed a nonproductive, harsh cough and a temperature of over 103 F. These symptoms became intensified with the temperature fluctuating to as high as 104.5 F., accompanied by substernal distress, hoarseness, chilly sensations, profuse perspiration, and anorexia. The past history, save for exposure to a classmate afflicted with what was thought to be a virus pneumonia two weeks prior to the onset of her illness, was noncontributory. Her father and sister were subsequently admitted with similar complaints after a like incubation period.

Physical examination revealed an acutely ill patient with a temperature of 102 F., pulse of 105, and respiratory rate of 24. There was some cyanosis of the lips and congestion of the pharynx. Examination of the chest revealed increased tactile and vocal fremitus, bronchial breath sounds, medium moist rales at the end of inspiration, and pectoriloquy over the left lower lobe. The status of the heart, abdomen, and nervous system was essentially normal.

Laboratory examinations showed a white blood count of 11,900 cells per cu. mm. with 53 per cent polymorphonuclears, 15 per cent staffs, 21 per cent lymphocytes, 1 per cent eosinophils, and 10 per cent monocytes. The sedimentation rate was 57 mm. in an hour. Sputum culture revealed nonhemolytic streptococci, Micrococcus catarrhalis, and few pneumococci. The urine analysis was negative. The blood Wassermann was negative. Thymol turbidity and cephalin flocculation tests were normal. Blood culture was negative. The serum cold hemagglutinin titer was zero on admission. The heterophile test was negative. An electrocardiogram was normal. X-ray of the chest revealed a consolidation of the left lower lobe of the lung.

During the course of her hospital stay, the temperature ranged between 101 and 103.5 F. for the first few days with no dramatic effect on the part of penicillin therapy. It gradually declined, fluctuating between 99 F. and 101 F. during her second hospital week and between 99 F. and 100 F. thereafter. The serum cold hemagglutinin titer progressively mounted from zero on admission to 1:50, 1:100, reaching a height of 1:200 during the third week of illness. On the tenth hospital day (eighteen days after onset of illness), when the patient was symptomatically improved and her chest signs had receded to a minimum, she developed difficulty in speaking and writing, consisting of stumbling over certain words and the inability to name certain objects although she recognized them. In writing, there were gross errors in spelling and misuse of words.

A neurologic examination showed some blurring of the nasal half of the left disk, diminution in the right corneal and abdominal reflexes, hyperactive right deep tendon reflexes, equivocal right plantar response, some increase in rebound of the right hand, and diminution in associated movements of the right arm during walking. A spinal tap revealed fluid of normal pressure, cytology, and chemistry. There was no bacterial growth, and serologic tests were negative. Visual field studies were normal. An x-ray of the skull showed increased digital markings of the bones of the vaults. Electroencephalographic studies revealed fragmentary alpha activity of 9 to 10 cycles per second and moderate voltage. Activity over the entire cortex was irregular and moderately disorganized with slow waves of moderate voltage in irregular sequences and frequencies varying from 5 to 7 per second. A focus of greater abnormality was seen in the left posterior tempero-occipital area where the voltage was high and the activity more irregular and slower than on the right. In this area there were waves as slow as 3 per second, occasionally preceded by a spike and mixed with moderately slow waves. Bipolar studies also showed a slow wave focus in the left hemisphere in the region of the left posterior tempero-occipital area. Hyperventilation increased the voltage, the slow activity, and dysrhythmia in the left hemisphere posteriorly with only insignificant effect on the right.

Within several days, her speech and writing difficulties began to improve, and recovery was complete within two weeks. A second electroencephalogram at this time revealed considerable improvement as did her neurologic status. On subsequent follow-up, no nervous system sequelae could be elicited.

Case 2 (*Herpes Zoster, Viral Pneumonitis, and Bilateral Acute Hemorrhagic Otitis Media*).—An eleven-year-old white boy presented himself with herpetic lesions over the posterior aspect of the left leg and thigh. Several days prior to the onset of these dermal lesions, he complained of malaise and fatigability. Excruciating pain in the left leg with marked sensitivity to touch preceded the eruptions which were erythematous and vesicular in character. The pain was intense, constant, and associated with marked hyperesthesia. Fever was slight. Within a week of the onset of these herpetic lesions, a dry, harsh cough set in, accompanied by a rise in temperature, increase in the degree of malaise, anorexia, frontal headache, and a mild sore throat. From then on, the temperature was of a remittant nature, fluctuating between 99 and 104 F. About one week after the onset of the cough, the patient complained of pain in both ears. The dermal lesions dried and crusted within a week. Cough and fever continued for approximately six weeks.

Physical examination before the onset of cough was negative save for the erythematous and vesicular lesions on the posterior aspect of the left leg and thigh, characteristic of herpes zoster. Examination after cough set in revealed some dullness, diminished breath sounds, and medium moist rales over the right lower lobe and to a lesser extent over the left lower lobe.

Laboratory examinations showed a white blood count of 9,000 cells per cu. mm. with 65 per cent polymorphonuclears, 30 per cent lymphocytes, and 5 per cent monocytes. A tuberculin patch test was negative. Serum cold hemagglutinin studies were not done. A chest film revealed some mottled infiltrations in the right lower lobe.

The patient was treated with large doses of penicillin without response. The temperature continued to fluctuate between 99 and 104 F. with cough becoming dry, harsh, and distressing. About one week after the onset of cough, the patient complained of sharp pain in both ears. Otoscopic examination showed a bilateral acute hemorrhagic otitis media. This subsided within several days. Chest signs gradually receded, disappearing within three weeks, while fever and cough lasted for about six weeks.

Discussion

The literature attests to the rarity of complications involving the nervous system in so-called viral pneumonitis of unknown cause. An isolated case here and there has been cited, with numerous reports of large series of cases containing no reference to neurologic complications. Rivers, in his recent book on viral and rickettsial diseases, makes no mention of complications referrable to the nervous system.[2] Scadding, Campbell *et al.*, Perrone and Wright, Gundersen and Golden all reported a fatal case of encephalitis complicating supposed viral pneumonitis.[3-7] Reimann and Hein each cites a case of meningoencephalitis with complete recovery.[8,9] Holmes described one case of encephalitis, two of acute infectious polyneuritis, one of lymphocytic meningitis, and one of serous meningitis, all with recovery.[10] Turner mentions one case of transverse myelitis, and Sheppe *et al.* describe a case of meningoencephalitis.[11,12] Ravenswaay *et al.* noted meningeal symptoms in 0.4 per cent of a series of 1,862 cases.[13] Glendy *et al.* cite three cases of "meningism."[14] The diagnosis of viral pneumonitis was made by these authors essentially by exclusion of other types of pneumonia and by roentgenologic findings.

In the first case described in this paper, there is little doubt about the diagnosis of viral pneumonitis. The exposure to a case of supposed viral pneumonia two weeks previously, the father and sister being similarly afflicted after a like incubation period, the physical signs, course, blood count, progressive rise in the titer of serum cold hemagglutinins, refractoriness to penicillin, and absence of other etiologic agents are all in keeping with the diagnosis. A lobar type of consolidation, although not the usual finding, does occur in almost 10 per cent of the cases. The father and sister of this patient did have the characteristic mottled type of infiltration. During the third week of illness, when the patient appeared to be well on the road to recovery, signs of a focal encephalitis set in. This is not unlike encephalitis occasionally complicating other viral infections as rubella, rubeola, mumps, varicella, variola, and vaccinia.

The cause of these secondary encephalitides is a moot question. Many theories have been advanced to explain their origin. These include (1) pyrexia, (2) toxemia, (3) direct invasion of the nervous system by the virus, (4) a generalized virus infection involving both lung and nervous system, (5) activation of a latent neurotropic virus, (6) drug hypersensitivity in cases treated with serum or sulfonamides, (7) anoxemia, and (8) an expression of allergy or immunity. Ingleby found inclusion bodies within the brain, lungs, and viscera in a case of virus pneumonia and postulated a virus as causal.[15] In the cases reported by Perrone and Wright and Golden inclusion bodies were not found.[5,7] Baker and Noran, in a pathologic study of encephalitis associated with all types of pneumonia including what appeared to be viral pneumonia, found that the pathologic lesions of the brain were similar, even though the cause of the pneumonitis was highly variable.[16] The encephalitis was characterized notably by extensive thromboses and prominent perivascular hemorrhages. This suggested to them the possibility that some alteration in the clotting mechanism of the blood may be a factor causing the cerebral lesions and that this factor may be derived from the lung parenchyma itself. Gundersen's case showed marked hemorrhagic encephalitis at autopsy.[6] In the case herein presented, pyrexia and toxemia cannot be implicated. Serum and sulfonamides were not administered.

Since the patient was greatly improved from her pneumonitis at the time the encephalitis set in, I feel this complication is analogous to a postinfectious rather than an active infectious encephalitic state due to the virus itself. Furthermore, since it occurred during the third week of illness and at the height of the cold hemagglutinin antibody titer, the possibility of an immunity reaction as a basis for the postinfectious encephalitis looms large.

The prognosis in these cases is variable, death occurring in several of the reported cases, recovery in others. Although the number of cases reported is admittedly too small to permit a final deduction on prognosis, it would appear that, when recovery occurs, it is complete.

The second case clinically presents the features of herpes zoster and viral pneumonia. The symptomatology, physical signs, chest film, blood count, course, and refractoriness to penicillin were all highly suggestive of viral pneumonia. This combination is unique, for I have been unable to find any reference to an association between herpes zoster and viral pneumonitis. It is also rare for herpes zoster to occur in a child of eleven.

One cannot state categorically what relationship, if any, exists between the two processes. Four possibilities present themselves: (1) a herpetic virus as causal; (2) a pneumonitic virus as causal; (3) activation of a dormant pneumonitic virus by the herpetic virus, or vice versa, and (4) a fortuitous relationship between both lesions, which I deem the least likely. It is unfortunate that studies were not carried out to determine the possible nature of such virus. It is quite possible that a pneumonitis was present at the inception, although there were no pulmonary symptoms or signs to afford a clue. Since viral pneumonia is often insidious in its onset, it would be highly advisable to take a chest film in all cases of nervous system involvement of obscure etiology to determine a possible relationship to such a virus. It may well be that some of the cases of infectious polyneuronitis (Guillain-Barré syndrome) are complications of viral pneumonitis. This condition is often associated with a respiratory infection which on more careful study may reveal a viral pneumonitis of varying degree. Holmes reports a case in point.[10] Because of the insidiousness of pulmonary involvement, the condition may not become manifest until after a neurologic complication sets in. In view of recent advances made in the therapy of viral pneumonitis with aureomycin the recognition of such an etiologic factor becomes of prime importance.[17,18]

Conclusions

1. A complete survey of the literature reveals nervous system complications in viral pneumonitis of unknown cause to be very rare.

2. Two cases are herein reported, namely, viral pneumonitis complicated by a focal encephalitis with a complete recovery and viral pneumonitis in association with herpes zoster.

3. Theories regarding the relationship between these neurologic lesions and viral pneumonitis are discussed.

4. In all cases of nervous system involvement of obscure etiology, a chest film is advisable for a possible viral pneumonitic relationship.

45 East 9th Street

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A PREVIEW OF SOCIALIZED MEDICINE

Following is a chronologic history of a Federal Employes' Compensation case as experienced by a member of our Board of Trustees:

July 26—Doctor requested authorization to operate on hernia of occupational origin (bilateral).

September 10—Reply received asking for a report on form CA-32.

September 14—Report mailed.

November 5—Date of order authorizing operation on left hernia only.

November 10—Doctor again requested authority to do bilateral operation.

December 31—Another letter by doctor to government bureau as a tracer to November 10 letter.

January 27—Letter from bureau states the request is quite unusual as one hernia is of long duration, but claim was being referred for decision.

February 8—Date of authorization to operate on left hernia, bureau stating that it did not object to having right hernia repaired at no expense to government, etc.

Ho, hum, and no doubt the doctor expected the check in his Christmas mail—next Christmas, that is.—*Secretary's Letter, A.M.A., January 9, 1950*

Special Article

WHITHER MEDICINE?

Iago Galdston, M.D., New York City

(*Secretary, Medical Information Bureau, the New York Academy of Medicine**)

IT IS a well-established fact in psychiatry that whenever a circumstance or an issue is charged with more emotion than is normal or proper to it, the emotion derives not from that which is patent, but from something else, hidden or unappreciated. It is easy to demonstrate that this is the case in the controversy over the socialization of medicine, for it is easy to see that the real conflict does not center about the reform and improvement of medical service but rather about the prerogatives and functions of government. The issue is not how medicine may be made more accessible to more of the people, for that is taking place all the time, and everyone agrees that it is an imperative objective. The real conflict centers about the legislative and administrative methods advocated by those who favor socialized medicine. For the advocates of socialized medicine insist on national rather than state legislation, on compulsory rather than voluntary insurance, on centralized rather than regional administration.

These insistencies are not accidental, nor yet incidental. They are deliberate and germane. They derive from a neatly crystallized philosophy of government, which is seldom spelled out by the advocates of socialized medicine but which can be easily construed.

In this, I think we have a clue to the reason why organized medicine has been so inept in its opposition to the advocates of socialized medicine. Organized medicine has, in the main, attempted to fight the issue on the record of medical performance and achievement. It uses mortality and morbidity statistics to show how well the American health records stand up in comparison with those of the rest of the world. Organized medicine seemingly has never caught on to the fact, never realized that the advocates of socialized medicine use medical statistics only as a means to win adherents for their philosophy of government. The crucial issue, therefore, is their philosophy of government, not their statistics, for even if their statistics and the deductions drawn therefrom were sound and correct, as they seldom are, their basic thesis would still be in error.

I have no faith in that philosophy of government which inspires and guides the advocates of socialized medicine—and of the Welfare State. But I take my assignment to be other than an exposition of the defects of that philosophy. It is the future of medicine that concerns us here. I am sure, and I hope to demonstrate, that the query, "Whither Medicine?", can be answered without direct reference as to how medical service is to be paid for and who shall govern it.

Let me begin, then, with the affirmation that there *is* a challenging medical problem confronting all of us. But having made this affirmation I must hasten to amplify it. For, in fact, there is not one problem but many; there is not one thing wrong, but many things wrong with medicine. It is important to bear this in mind, for it has been and is argued that the thing principally wrong with medicine is its costliness, and that this "wrong" could be "righted" by the magic of averages—that is by compulsory national insurance. Before we detail "the things that are wrong with medicine," we need to appreciate one rather important fact. The problems confronting us today in medicine are the evidence not of medicine's failures but rather of its triumphs. Nowhere in the length or breadth of our country and in no class of our population is the medical care now rendered and received inferior to that which was available at any time in the past. The problems in medicine and in medical service are, therefore, to be defined negatively rather than positively, to be expressed in such a phrase as—"Bad—because not as good as the best." It is important that we understand this, for all too often the facts are corrupted to make it appear otherwise. For example, much is made of the deficiencies in medical service in the rural areas. Unquestionably, quite a number of rural areas, by the standards of what we consider adequate today, are deficient. But when the gravity of the rural "health problem" is illuminated by a comparison of the crude death rates of city folks with those of the country, when it is shown that the decline in the crude death rate during the last forty years has been more rapid in the city than in the country—and this is cited as proof that rural health has declined, for it hasn't

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Presented at a meeting of the Dutchess County Social Planning Council, Poughkeepsie, October 28, 1949.

* The opinions expressed herein are the author's and are not to be taken as reflecting the opinions of any organizations with which he is associated.

kept pace with the city—when such enlightened arguments are presented, "I calls 'em bunk." By that line of argument it could be shown that during the last forty years the health of the white man has been neglected and that of the Negro, the American Indian, and of the other nonwhite races was most favored. For in 1900 the specific death rate for whites, male and female, was 17 and that of the other races 25. By 1940 the specific death rate of the nonwhites had been reduced to 13.8 and that of the whites to 10.4. Since the decline from 25 to 10.4 is numerically greater than that from 17 to 13.8, it could be argued that the health of the nonwhites had improved rapidly and that of the whites had relatively deteriorated since 1900. But such an argument is, of course, sheer nonsense.

Let me cite one other example. One young enthusiast "proved" that American medicine is very deficient in its care of those in the fifth, sixth, seventh, and later decades of their lives. How did he do it? By comparing the death rates at these age levels prevailing in the United States with those prevailing in Ireland and Bulgaria. We made the worse showing. But the young enthusiast overlooked the fact that we in the United States carry into the fifth, sixth, seventh, and later decades many persons who, had they lived in Ireland or Bulgaria, most likely would have died in their early thirties or forties. No aspersions intended on Ireland and Bulgaria.

Granted now that the medical problems confronting us are the result of the triumphs of medicine rather than of its failures, they still remain problems, and we need to define them and to see what we can do to resolve them. The problems in medical care are usually catalogued under two headings: cost, and the availability. Medical care is costly, and especially so in prolonged and serious illness.

Let us consider the second complaint first. Medical care and medical services are not available everywhere. In certain regions and communities they are menacingly lacking. It is estimated that for the nation as a whole there is one physician to every 764 persons (131:100,000). The actual distribution, however, is in the ratio of one physician to 585 persons in most urban communities and one physician to 1,250 persons in most rural communities. However, there are some rural communities in which there is but one physician for 3,000 or 5,000, or even 10,000 of the population, and he not always the youngest and the best trained among physicians. As critical as the shortage of physicians is the scarcity of good rural hospitals. In 1940, of the 3,070 counties in the nation 1,200 of them, having a combined population of 15,000,000, had no recognized hospital facilities. The rural areas similarly lack dental, nursing, and public health facilities. The complaint, therefore, that medical services and facilities are not everywhere available and that in certain regions and communities they are menacingly lacking is well founded.

In contrast to the problem of availability which, at least statistically, is easy to define, the problem of the costs of medical care is vastly complicated. The term "costly" involves at least three distinctive connotations: It may mean expensive, that is, involving the expenditure of a good deal of money; or it may mean "costly," in the sense of being beyond one's income, or again "costly" in the sense that one receives too little value for the price paid. There is no doubt that modern medical care is expensive, in that it involves the expenditure of a good deal of money. There likewise can be no doubt but that to an appreciable number of persons modern medical care is costly, in the sense that they cannot afford it. Furthermore, those among us who are critical of the quality of medical care believe that in quite a number of instances the quality of service rendered makes it costly in the sense that it is not equal to "the money's worth."

But all of this does not disentangle the complexity of the problem of medical costs, for one does not usually confront "medical costs" in the academic sense. One is rather confronted with bills: the doctor's bill, those of the druggist, the hospital, the nurse, the laboratory, the specialist, and so on. When one breaks down "medical cost" into its component parts, one finds that not all of them are equally susceptible to the criticism of being costly. Nursing is costly, for example, when the patient requires twenty-four-hour service and needs or wants private care. Laboratory services, when other than simple or routine, are generally costly. The fees of specialists and consultants are likely to be felt as expensive, principally because they are not incurred as isolated expenditures but most often together with other medical costs. The fees of the general practitioner are seldom high enough to warrant complaint.

This random enumeration of the variety of services included in so-called medical service should enable us to perceive how divergent they are in character. Some are largely custodial, as, for example the provision of a hospital bed, food, and elementary service. Some, like nursing, are, so to speak, a time and skill commodity, purchasable in fixed quantities. Some are primarily technician services—the laboratory, for example. Some are pure skills and expert knowledges liable to random and unpredictable utilization. Such are the services of the experts and consultants. I am well aware that this description does violence to almost all of the services catalogued. A hospital, for example, is never merely a hotel where the sick might stay a while, and the laboratory is always more than a place where "technical processes are applied to specimens." Yet there *is* warrant for considering these deeply correlated elements separately, for in the efforts to reduce the costs of medical service distinctly different procedures may be applied to each separate element. We have already witnessed how much the burden of hospital care has been lightened through hospitalization insurance. This happens to be one part of medical care in which we have sufficient experience to make possible a fair estimate of probable risks. Similar experiments are being conducted, although none on so large a scale, in the provision on a more economic basis of other parts of medical service, e.g., consultant, nursing, laboratory, etc.

By all this it should be clear that one cannot hope to lower costs everywhere and at once by the magic of some one formula. Each of the components in medical care calls for much study and experimentation in a number of places and under a variety of circumstances.

There is still another matter which, although generally glossed over or completely neglected, demands our attention. We pay out about 4 per cent of our spending money on medical services. This is $^1/_2$ per cent less than what we spend for recreation and a great deal less than what we spend on tobacco and alcohol. Four per cent is not a great deal. But the fact is that we do not spend it day in, day out. Medical expenditures are not usually encountered routinely but as emergencies, and no small part of the complaint that medical care is expensive derives from that. The day-in, day-out, i.e., *nonemergency*, medical care is not costly. It is the medical emergency that hurts. This is a point of crucial significance. In actual experience there is a great difference between the effort to provide against catastrophe and the effort to provide against all eventualities. The former is prudent and feasible, the latter pathologic. Yet many of those who agitate about the so-called high costs of medical care do not differentiate between ordinary and emergency medical needs. They rather lump them all in one and would have us provide against them as one. The implications here are deep and far-reaching, involving not only complicated economic factors but also, as already suggested, profound psychologic and political factors.

It is possible to become so committed to providing against sickness, old age, and the mishap of death that the means for living are dissipated, the opportunities for living are missed, and the mentality for living is corrupted by the obsession for security.

The medical problems which confront us, I said, are the witness not of medicine's failures but of its triumphs. A hundred years ago the problems of medical cost and availability were unknown. The complaints then heard revolved about the incompetence of medicine and about the many medical factions that plagued one another. The origin of modern medicine is commonly dated with the demonstration of the germ theory of disease by Pasteur and Koch in 1876. In a sense that is quite correct. Much of that which is unique in the theoretic structure of modern medicine was established at this time. The medicine we have in mind, however, when we complain of its costliness and its unavailability is of much more recent origin. It hardly dates before the beginning of the present century. It is just about fifty years old, and it developed most rapidly during the last twenty-five years. At the time when Pasteur and Koch were proving that germs did and could cause disease in 1870, there were in the United States not more than about 180 hospitals, and they could take care of approximately 146,000 patients a year. Sixty years later the registered hospitals in the United States numbered 6,437, and they took care of more than a million patients at one time. By 1943, their capacity increased to 1,650,000.

In 1870, the hospital was to most men a place of last refuge where one went to die or where one had to go because there was no alternative. Today the hospital not only cares for the sick, both ambulant and inpatient, but serves also as a teaching center for the medical student and the graduate physician, as a research center in the forefront of medicine, and as the ultimate arbiter of the tests, technics, appliances, remedies, etc., which emanate from the modern ancillary institutions, biologic, pharmaceutic, chemical, genetic, radiologic, industrial, etc.

We need to appreciate not only how greatly we have progressed in medicine, but also how rapid that progress has been. This is a matter often overlooked, and because of that people are unduly impatient with just those elements in medical practice which are the byproducts of its rapid development.

There is yet another characteristic of the progress of modern medicine which is commonly overlooked. Medicine has not followed and is not following a straight and logical line of development. On the contrary, it has not infrequently reversed itself and, so to speak, has doubled up on its pathway. It has done this in unpredictable ways, that is, nothing in its past offered a basis upon which the changes could have been anticipated. The progress of medicine is usually represented otherwise. It is pictured as a consistent advance forward and upward, from triumph to triumph, from miracle to miracle. Such a representation of the history of medicine is fictional. This being so, it must be obvious that that which is inherently unpredictable cannot be planned for, largely or in long range.

Let me illustrate this with an instance involving medical experience and commercial enterprise. Pneumonia, as is known, was one of the truly great scourges of mankind. In 1900, it was second in the order of the causes of deaths and stood high in significance because it so often destroyed men and women in the very prime of their lives. Between 1920 and 1929, 8.3 per cent of all deaths in the United States were due to pneumonia. For these reasons much research was devoted to pneumonia, and over the years very good progress was made in the solving of the puzzle of pneumonia. We learned to know where the pneumonia toxins reside, and by that knowledge we were able to begin to produce pneumonia antitoxins. The task was both difficult and complicated, yet, nothing loath, research workers, laboratory technicians, clinicians, public health workers, and solid-headed businessmen engaged in producing pharmaceutic and biologic products—fighting pneumonia with pneumonia serums. In this connection let me cite the experience of one pharmaceutic house which made pneumonia serums. At the height of the work they had 400 immunized horses, from whom they were drawing material for immunizing serum. Then it was found that rabbit serum was better. The switch was made to rabbits. When in full production, they had 25,000 rabbits, each in its own hutch. I know that invested in this enterprise were some several hundred thousands of dollars, and I know that all of this went up in smoke when, first, the sulfonamides were discovered and then later penicillin. Bear in mind that the loss of these hundreds of thousands of dollars was no more anticipated than were the discoveries of the sulfonamides and of penicillin. On the contrary, and this is a most interesting fact which I elaborated in *Behind the Sulfa Drugs*, the reason so much effort and money was vested in the production of serums was precisely because scientists in general were discouraged with the prospects of "chemotherapy."

The deductions to be drawn are the following: First, a goodly portion of those problems in medicine which trouble us now are the byproducts of medicine's rapid progress. We know where the problems are and how they came to be. We do not know, because we lack the necessary experience, how to resolve them. To gain the necessary experience we need to experiment in many places in many ways. Any over-all attempt to resolve these problems by some piece of nation-wide legislation is not only doomed to inevitable failure but in the United States would prove disastrous both to the public and the profession.

The second deduction, that which derives from the appreciation that medical progress is not always in a straight line, is to my mind most significant, and with its exposition I intend to wind up my argument.

Basic to the agitation for the extension of medical care to all the people everywhere is a remarkably naive faith in, and enthusiasm for, modern medicine. Medicine is regarded by these advocates not as a body of knowledge and a group of skills to be utilized when disease strikes, but rather as a something inherently good in itself, something on a par with housing and recreation. Their faith in medicine is really as naive as all that, and their arguments show it. In support of their thesis they cite "horrendous" statistics on disease and disability and then argue that these figures prove the need for more medical service, in more places, for more people. They thus set in apposition to disease and disability, medical service, as if the latter were the antidote to the former which, as a matter of hard reality, it is not. Medicine is not the antidote to disease, and those who receive the greatest amount of medical service are not the healthiest. The contrary is more common and more likely, although not *because* they receive the greatest amount of medical care. The naive faith in, and the uncritical enthusiasm for, modern medicine is not, however, confined to the proponents of socialized medicine. It is an almost universal phenomenon. Everyone, with but very few exceptions, shares in it and, may I add, for understandable reasons. First of all, the miracles of modern medicine are daily dinned into our brains through every channel of sense impression. And then, it is a fact attested to by everyday experience that modern medicine is miraculously competent to deal with most instances of sickness. This is so and is fully appreciated. Unfortunately, these facts are misconstrued, and modern medicine's competence to deal with instances of disease is taken to mean that modern medicine is the means royal to gain and to maintain health. It is no such thing—not the medicine which is practiced today and which those who favor the socialization of medicine would extend to everyone, everywhere!

In a sober understanding of the competences of modern medicine, the question that must concern us is not why have not our people the medical services they need and how can we get them to and for them, but, rather, why do our people require so much of medical service and how can we help them to free themselves of those needs.

This simple inversion of the proposition as commonly presented runs the risk of being considered a neat play on words. I assure you it is anything but that. In it lies a crucial issue and one of greatest import. For parallel with the miracles which have been and are so enthusiastically heralded, medicine has experienced a slow and consistent accumulation of biologic insight and understanding which has little to do with the diagnoses and the treatment of disease but which bears profoundly on the individual's optimum growth, development, and function.

Curative medicine, for all its marvels in meeting individual crisis, is hopelessly incompetent to resolve the social problem of disease. On the contrary, curative medicine, as it has reduced mortality rates in the younger decades of life, has weighted the morbidity rates of all other decades, notably the later ones. Social economists are earnestly concerned with the increasing population of the chronically ill, the old, and the infirm, which so heavily burdens the young and the well.

We have no exact knowledge of the totality of chronic diseases and of invalidism that afflicts our people, but the magnitude of the problem can be gauged by a number of relevant data. Taking in review but a few among the categories of disease and disability we find it estimated (U.S. Public Health Service, 1937) that there are in the United States some 6,850,000 cases of rheumatism, 3,700,000 cases of heart disease; a like number of cases of arteriosclerosis and high blood pressure; 3,450,000 cases of hay fever and asthma; 1,700,000 cases of chronic bronchitis; 1,550,000 cases of nephritis; 1,450,000 cases of nervous and mental diseases; 680,000 cases of tuberculosis; 1,000,000 cases of diabetes, and 330,000 cases of ulcer of the stomach and duodenum. These are not all instances of older people suffering from the ravages of life; 58.1 per cent of the persons suffering with chronic disease or permanent impairment belong to the age group between twenty-five and sixty-five years. Figures that run into the millions and percentages involving so large a population as ours are difficult to conceive.

Yet with some little effort one can sense, if not visualize, the magnitude of this problem, not only in terms of human misery but also in economic equivalents—hospital beds filled, the attendants employed in the hospitals, the enormous loss in potential productivity, and the enormous nonproductive consumption involved here.

Many find justification in these data for the extension of curative medicine, but I must urge upon you that the answer to these problems does not lie in extending curative medicine. That is a hopeless quagmire. The answer lies in allowing and in helping medical science to cultivate, to develop and to apply its newer biologic insights. These insights are embodied in the sciences of nutrition, of mental hygiene, and of endocrinology. These are the sciences that enable us to foster and promote the optimal growth, development, and function of the individual. These sciences represent a new departure in medicine; they promise us the means for relieving our American people of their current and pressing need for curative medicine.

For the cultivation, development, and application of the newer biologic insights into medicine, there is need of freedom and of public support. Neither of these will be available or possible under socialized medicine. The socialization of medicine would jell and fix for a long time the prevailing system of curative medicine, and that would be its most tragic consequence. I have estimated, to my own satisfaction, that if medicine were socialized in the United States it would be set back and retarded for three generations.

One final observation: All the aforegoing does not mean that we favor the perpetuation of the status quo or stand for business as usual. No! I am for the multiform study of and experimentation along the numerous tangents presented by the actuality, and for the forging out of such experiences the best possible ways to make medical care medical service and, ultimately, to make it the biologically integrated medicine that will relieve our people of its current need for curative medicine. What I am against are trick remedies and panaceas.

AUSTRALIA MAPS FREE MEDICINE

Sir Earl Page, Minister for Health, said recently that the right-wing government would provide free medicine for seriously ill Australians. He said drugs to be issued free on a doctor's prescription would include the lifesaving drugs penicillin, insulin, and the sulfanilamides.—*New York Times, January 19, 1950*

DR. JONES SAYS—

Two milk items I read awhile back, one, in the *Christian Science Monitor*—the opening sentence read: "Milk is selling for $10,000 a quart in New York City." That'd make you sit up and take notice, wouldn't it? But it turned out they were talking about mice's milk. It was being used for research purposes. They had to milk thousands of mice to get about two quarts a year and they figured it added up to $10,000 a quart.

The other item was in the "Foreign Letters" department of my *A.M.A. Journal* and was from London. It was about a bill pending in the House of Commons: one designed to check the spread of tuberculosis through milk. The figures this item quoted and the fact that, in England today, the spread of bovine tuberculosis through milk is still a major health problem—it's almost as surprising as the ten-thousand-dollar milk.

A recent survey, the item said, had revealed that there were 15,000 deaths a year from milk infected with bovine tubercle bacilli and "many more thousands" were crippled. In the child population the percentage in the rural areas was ten times greater than in London. This bill—it wasn't clear just what it was supposed to do, except that it provided for issuing orders limiting sale in local areas to certain classes of milk. They figured it'd take five to ten years to get the whole country covered.

Awhile ago I mentioned an historical article I'd been reading. They said there that, in 1848, England was far ahead of the United States in the matter of public health administration and I'm sure that's so. In this country, a hundred years ago, we were mostly groping around. But between tuberculin testing of cattle and pasteurization of milk it's been a long time since human infection with bovine tuberculosis germs has been a major problem here. Well, it's something to be happy about but we'd better not waste much time stopping to crow.—*Paul B. Brooks, M.D., October 3, 1949*

WHO'S WHO

in the

State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the Journal *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MRS. TRUDY RAIRDEN joined the headquarters staff in February, 1948, as an assistant to Mrs. Roetger in the membership department. She handles the details connected with recording the payments by State Society members of the annual Society and the War Memorial assessments, remissions, resignations, and reinstatements of members. These duties involve careful checking of each membership card, the preparation of statements on the distribution of payments, and a monthly report on monies received for the accounting office.

A native of Akron, Ohio, Mrs. Rairden attended Kent State University and was with the Telephone Company in Akron before coming to New York City. She was married on August 29 of last year and now resides in Flushing with her husband.

MRS. IRENE LEX joined the staff in March, 1948, as head bookkeeper in the accounting office. As such, she prepares financial statements for officers of the State Society and operates the various ledgers and books of account. In the ledgers of the Society there are more than 300 accounts which form the basis of the various reports rendered. Mrs. Lex was formerly head bookkeeper for Kopf Manufacturing Company, in New York City, and during the war worked for the Pittsburgh Equitable Meter Company, in Brooklyn, as an expediter.

Mrs. Lex was born in New York City, has resided in Mahopac, New York, Illinois, and Florida, and now lives in Brooklyn. A graduate of the Bay Ridge High School where she majored in bookkeeping, she has also attended the New York University School of Commerce, studying accounting and business administration.

MISS CAMILLE MARGHERITA MARRA joined the advertising staff of the New York State Journal of Medicine two years ago as secretary. Miss Marra handles all correspondence and records pertaining to the advertising in the Journal. In addition, she assists the director of the technical exhibits at the Annual Meeting of the State Society, aiding in handling the many details concerning the exhibits and thus contributing to the smooth functioning of the Meeting. Before coming to the Journal, Miss Marra was with The Texas Company and *Liberty* magazine. During the war she served with the Degaussing Section of the U.S. Navy Department.

Miss Marra was graduated from the Bush School and attended St. John's University. A native Brooklynite, she resides in Flatbush with her family, spending the summer months at Bay Shore, Long Island.

MISS FELICE JEANNE BAUER joined the staff two years ago as production manager of the *Medical Directory*. In this capacity she handles the advertising section and lays out the text pages of the "Blue Book." Her duties include supervision of the art work, copy, and makeup of each advertisement and working with the printer on the composition and printing of the *Directory*. Miss Bauer is also in charge of promotion, circulation, and distribution of the book.

Before entering the production phase of publishing, Miss Bauer worked for five years in an editorial capacity for several trade publications. She received her academic training at Sullins Academy in Bristol, Virginia, and her Bachelor of Arts degree at Syracuse University, with majors in English and economics. A native New Yorker, Miss Bauer lives in Manhattan.

MISS ROSE J. TOBIA is secretary to Dr. Walter P. Anderton, Secretary of the Medical Society of the State of New York. She assumed this position in April, 1948. In addition to her duties as Dr. Anderton's secretary, Miss Tobia records the minutes for meetings of the Planning Committee for Medical Policies, the Coordinating Council on Nursing Problems, and the Committee on Legislation. At the annual session of the House of Delegates, she serves as an assistant to Dr. Anderton and Miss Dougherty.

Miss Tobia was born in Brooklyn and now shares an apartment in Ridgewood with her sister. She is attending St. John's University in Brooklyn. During the war, Miss Tobia was a Yeoman, First Class, with the WAVES for three and one-half years, and was stationed in San Francisco where she was detailed as Admiral's Yeoman and later as a court reporter.

JOSEPH JAMES LOGUE, who joined the staff in June, 1948, works in the mail room as an assistant to Mr. Bonzer. His duties include the operation of the addressograph and graphotype machines and assisting with the mailing routines. A veteran of World War I, during which he served with the 77th Regiment, American Expeditionary Forces, in France, Mr. Logue retired in 1947 from the New York City Fire Department after twenty years service. Before joining the State Society staff, he worked for Bethlehem Steel.

A native of New York City, Mr. Logue resides in Elmhurst, Long Island. He has a daughter and two sons, one of whom is now serving in the U.S. Navy. Mr. Logue is a member of the Fire Department Post, American Legion; the Retired Firemen's Association of New York City, and the Holy Name Society of the Fire Department.

MISS LOUISE MASCOLO works in the *Directory* department, having joined the staff in June, 1948. Her duties include checking payments by members of the State Society of the American Medical Association assessment for the National Education Campaign and forwarding notices of these payments to the various county societies. She also assists in typing material for the *Directory*, under the supervision of Miss Loy. During the war, Miss Mascolo worked with the American Red Cross in New York City, serving as an interpreter in Italian and Spanish and as a case aid.

Born in New York City, Miss Mascolo graduated from Browne's Business College. She now resides in Astoria with her family. For several years, Miss Mascolo has studied music, both voice and piano. A soprano, she has given solo concerts on both the stage and radio.

CORRESPONDENCE

CORRECTION PLEASE

To the Editor:

In our high school days, clarity, force, and elegance were taught to be the essentials of English style. Of these, no doubt, the first is paramount. How woefully, then, have most medical writers strayed from the path of their early education! This is true not only of the occasional author, but even of the practiced professor of medicine.

It is assumed that all contributions to medical literature are preliminarily screened by editors who are masters in rhetoric and semantics. An examination of articles admitted to print in current medical journals, articles couched in poor, incorrect, unusual, and, at times, even absurd English, makes it doubtful that some of our editors are either employing their vaunted superiority or performing their expected and necessary duty. If it be that additional duties preclude editors from devoting sufficient time to this labor, then there is all the more reason for the medical writer, himself, to be on guard.

Glaring errors of expression appear as frequently in the well edited as in the commercial and poorly edited publications. To avoid any appearance of personal criticism, I shall quote from articles without naming authors or journals, for I desire to improve, not to indict. When the title page of one of our outstanding publications exhibits the caption, "Ascetic Acid in Metabolism," a very "sour" taste is left in the mouth. Indeed, I am not the first to deplore this seeming deterioration in our powers of expression. One critic has already decried the practice of qualifying absolutes as "essentially normal" or "essentially positive." He says: "Besides the lack of meaning of 'essentially,' can you really modify an absolute?"

Here are a few instances of ambiguity, chosen at random. The title of a recent book, *Nursing Pathology*, could refer either to pathology nursing, or being nursed by human, cow, or goat's milk. Actually, this is a textbook on pathology for the use of nurses. An article, headed "Human Tooth Injuries," if consistent with its title, were more fitting for a dental than a medical journal. The article, however, was concerned with bites inflicted by human beings. "Advances in Head Injuries" might refer to sharper and more lethal weapons or an improved criminal technic, although the author speaks of advances in the treatment of head injuries. A laryngologist referred to his colleagues, and not to a new specimen of Neanderthal man, when he wrote about "ear, nose, and throat men." In all these instances, clarity is sorely lacking.

The desire to appear impressive frequently results in long sentences, burdened by a complex of subordinate clauses, and at times, incorrect grammar, especially in the choice of prepositions. Consider this example: "No correlation exists among the amount of blood lost and changes in hematocrit, hemoglobin, and plasma protein concentration before and after operation." A sharp axe could split this sentence with great benefit and render it readable and understandable. "Mechanism of Radiation Effects Against Malignant Tumors" almost gives the impression that an atomic bomb is being hurled at the tumor. Not "against," but "upon" is the proper preposition. A professor accents ambiguity in the following title: "The Reaction of Tissues Following Infection and Their Place in an Environmental Conception of the Nature of Disease." Except from the pen of a union plumber, the following is unique: "Although in good health, this patient feels that he was better with the ileostomy than since he has been reconnected."

The rule that abstract words cannot have a plural is consistently ignored. "Those patients in whom there were no evidences of inflammation" is a typical example. The physician attempts to become a lawyer, for whom evidence in the generic is sufficient. Other examples are: "The disabilities of the voice and breathing in connection with thyroid surgery vary from slight to tragic" and "Physiologic Therapies in Psychiatry."

In seeking elegance, it is well to draw upon the classic tongues, but only if this be done correctly. An article, "Treatment of Gold Dermatitides," mentions no types of dermatitis. A combination of English and Greek is certain to produce a literary allergic reaction without any antihistaminic remedy at hand. Preventive treatment would be so much simpler. When one writes about "Transfusion preoperatively, intraoperatively and postoperatively," he is more of a prestidigitator than a surgeon. It is impossible to transfuse *within* ("intra") an operation. He meant to say *during* ("inter"). For him, English, not Latin, would have been the better choice. The use of the "wonder drugs" has resulted in the birth of the word "antibiotic," meaning "against life." Undoubtedly, the popularity and extensive use of these drugs would be considerably curtailed were their action true to their word. Fortunately, the proper word, "antibacterial," is finding its way into medical literature. Finally, to point out the error which is as blatant as it is ludicrous, consider the use of the word "pathology": *pathos*—disease, and *logos*—word or study. "There was no pathology found in the abdomen." Instruments and sponges have, unfortunately, been occasionally left in situ, but one would hardly expect to find a textbook there. One could scarcely refrain from snickering if a noted astronomer were to look up at the heavens on a rainy night in June and say, "Isn't it too bad there is no astronomy out tonight?"

"Ambulatory Proctology" might be an impressive title, but it can only mean that "the study of the rectum is walking about." Aristotle, founder of the peripatetic school, would turn in his grave! Not to be outdone, the word "symptomatology" has found its protagonists, thus: "Comparison of all patients with acute appendicitis with those having urologic symptomatology . . ." A truly impossible comparison! Consider, also, "sodium pentothal anesthesia for selected vaginal obstetrics . . ." "Obstetrics" is defined as the "science of midwifery." To suffix this definition to "vaginal" is meaningless. If we wish to be scientific, we should have to consider uterine, ovarian, and tubal obstetrics.

No amount of academic freedom or common erroneous usage can justify these ambiguities and contradictions. The foregoing are but a few instances of improper English, gleaned from contemporary medical literature, to illustrate some of the more common lapses from literary grace. Since, deservedly or not, we physicians are members of an esteemed profession, respected for learning, it behooves us to state our views and promulgate our teachings and experiences for the benefit of mankind, in clear-cut, accurate, and polished English. The word is to medical science what the scalpel is to surgical art and should be used as precisely, as wisely, and as artistically.

Herbert E. Stein, M.D.

35 East 84th Street
New York City
January 30, 1950

Note by the Editor

We are sympathetic with the foregoing remarks and agree with Dr. Stein that authors should exercise greater care in their writing. The correction of their errors and other faults should not be left entirely to the editor of a journal; he has trouble enough and so have his copy readers. We might add much to what Dr. Stein has said. We have some pet gripes of our own, and he failed to note that brevity and clarity likewise are essential, but unfortunately are outside the scope of many contributors. Unfortunately the limitations of space preclude the record of our complaints. We are one of many editors who would be happy if prospective authors read very carefully an article by Dr. Walter C. Alvarez, which appeared in the August 17, 1949, issue of the *Proceedings of the Staff Meetings of the Mayo Clinic*, on the "Need for Shortening Scientific Papers." It would lighten their burdens.—G.W.K.

THE A.M.A. DUES

To the Editor:

In the editorial, "The A.M.A. Dues, I—The Cold War," you seem overjoyed that the $25 assessment to fight socialized medicine which was optional has been changed to dues which are compulsory. And the closing paragraph suggests that there will be yearly dues to the $25 limit as long as a sizable portion of the American public clamors for some other way of dispensing medical care or paying for it than we now have.

Although the House of Delegates voted unanimously for the $25 dues, the rank and file membership is by no means unanimously for it. Some feel the $25 is to be used for a purpose against the public interest and by a group as sinister as the real estate lobby. Naturally, one doesn't feel like subsidizing his opponents.

I don't know if you give space to the opposition, but, if you would, I'd like to hear from others who are unhappy as I about this compulsory charge for lobbying. Particularly, I wonder how others are expressing their resistance.

Joseph S. Miller, M.D.

23 East 74th Street
New York City
January 17, 1950

Note: The Journal is always prepared to publish any bona fide expression from members of the Society, provided always that it is in good taste. We do not feel that Dr. Miller expresses the opinion of any considerable segment of the membership, but, as his own opinion, his letter is entitled to inclusion in our correspondence column.

We are only surprised that Dr. Miller should question the function of the Journal as he does in his last paragraph. While the Journal, the official organ of the Medical Society of the State of New York, must express a point of view determined by the duly elected representatives of the profession in the State, it has always given space to reasonable expression of divergent views of individuals where these were expressed cogently, legibly, and within the canons of decency and good taste.

—The Editors.

NECROLOGY

Joseph Francis Bicak, M.D., of the Bronx, died on December 24, 1949, at the age of seventy-four. Dr. Bicak was graduated from the New York University Medical School in 1897. He was a member of the American Therapeutic Association, the Bronx County and New York State Medical Societies, and the American Medical Association.

Chester Tupper Cadwell, M.D., of Wassaic, died on January 23 at the Wassaic State School Hospital at the age of eighty-three. Dr. Cadwell was graduated from the New York University Medical School in 1899 and took postgraduate work in Vienna, Berlin, and London. A practicing physician for more than fifty years, Dr. Cadwell had opened his practice in Poughkeepsie in 1900, where he stayed until seven years ago when he joined the staff of the Wassaic State School.

Dr. Cadwell was honored by the Medical Society of the State of New York and by the Dutchess County Medical Society upon his completion of fifty years of practice. He had served as a member of the Poughkeepsie Board of Health and was consulting ophthalmologist at the Vassar Brothers Hospital in Poughkeepsie. Dr. Cadwell was a Diplomate of the American Board of Ophthalmology, a Diplomate of the American Board of Otolaryngology, and a member of the Dutchess County and New York State Medical Societies and the American Medical Association.

Julius Cantala, M.D., of New York City, died on January 30 in Madrid, Spain, in an automobile accident. He was sixty-four years of age. Dr. Cantala, a native of Spain who was visiting relatives at the time of his death, received his medical degree from the University of Valladolid, part of the University of Spain, in 1914. He interned in France and then served in the Chilean Navy before coming to the United States. Here Dr. Cantala continued his medical studies at the Long Island College of Medicine, receiving an M.D. degree from that institution in 1927. Dr. Cantala had practiced in New York City for many years and was junior assistant attending physician at the French Hospital and attending physician at the French Hospital Outpatient Department.

Active in Spanish-American and historical affairs, Dr. Cantala wrote a column on science for the Madrid newspaper, *Informaciones.* He had published several books on biology and was associate curator of physical anthropology of the American Indian Museum. Dr. Cantala was a counselor of the Hispanic Institute of Columbia University, science editor of the Editor Press Service, and a member of the New York Academy of Science, the American Association for the Advancement of Science, the New York County and State Medical Societies, and the American Medical Association.

Charles Augustus Davis, M.D., of Westport, died on January 17 at the Albany Memorial Hospital at the age of seventy-two. Dr. Davis received his medical degree from the University of Vermont Medical College in 1905 and had practiced in Albany for forty years until his retirement five years ago.

Edwin Marshall Gerard Deery, M.D., of New York City, died on January 27 at his home at the age of fifty. Dr. Deery was graduated from the Harvard Medical School in 1926 and interned at Boston City Hospital and at the Presbyterian Hospital in New York City. He continued his studies as a clinical assistant to the late Dr. Harvey Cushing and then joined the attending staff of the Neurological Institute, Columbia Presbyterian Medical Center, remaining until 1937. During World War I he served with the United States Coast Guard.

Dr. Deery was consultant in neurosurgery at the New York Orthopedic Hospital, attending neurosurgeon at Goldwater Memorial Hospital, Welfare Island, and attending neurosurgeon at the Presbyterian Hospital, New York City, and the New York State Reconstruction Hospital in West Haverstraw. A Fellow of the American College of Surgeons and a Diplomate of the American Board of Neurological Surgery, Dr. Deery was a member of the New York Academy of Medicine, the New York Neurological Society, the American Association for Research in Nervous and Mental Diseases, the New York County and State Medical Societies, and the American Medical Association.

Edward Raymond Easton, M.D., of New York City and Pelham, died on February 3 at the Beekman Downtown Hospital from a cerebral hemorrhage, at the age of fifty-seven. Dr. Easton was graduated from the College of Physicians and Surgeons, Columbia University, in 1915, did postgraduate work in orthopedics at the University of Pennsylvania, and received intern and residency training at the Hospital for the Ruptured and Crippled, Bellevue Hospital, and New York Hospital, all in New York City.

During World War I, Dr. Easton served with the U.S. Army Medical Corps. He was a member of the staffs of St. Clare's and Knickerbocker Hospitals in New York City and in 1942 joined the staff of St. Vincent's Hospital, where he was senior assistant attending surgeon and surgeon for the Fracture Clinic of the St. Vincent's Hospital Outpatient Department. Dr. Easton was a Fellow of the American College of Surgeons and a member of the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

E. Almore Gauvain, M.D., of Brooklyn and Glen Cove, died on January 17 at the North Country Community Hospital, Glen Cove, at the age of fifty-four. Dr. Gauvain received his medical degree from the Long Island College Hospital in 1918 and served there from 1920 to 1925 as a lecturer and from 1925 to 1930 as an instructor in dermatology. He was attending dermatologist at the Kings and Caledonian Hospitals, in Brooklyn, and at the North Country Community Hospital, Glen Cove; associate dermatologist at the Brooklyn Hospital;

assistant attending dermatologist at the Methodist Hospital, Brooklyn; attending dermatologist at the Methodist Hospital Outpatient Department, and consulting dermatologist at the Swedish Hospital in Brooklyn.

A Diplomate of the American Board of Dermatology and Syphilology, Dr. Gauvain was a member of the American Academy of Dermatology and Syphilology, the Brooklyn Dermatological Society, the Society for Investigative Dermatology, the Kings County and New York State Medical Societies, and the American Medical Association.

P. William Haake, M.D., of Homer, died on January 11 at his home at the age of forty-nine. Dr. Haake was graduated from the Syracuse University College of Medicine in 1927 and later took postgraduate work at the New York Post-Graduate Hospital, New York City. He was attending surgeon at the Cortland County Hospital. A veteran of World War I, Dr. Haake was a past president of the Homer Chamber of Commerce. He was a member of the Cortland County and New York State Medical Societies and the American Medical Association.

Albert E. Hubbard, M.D., of Buffalo, died on November 26, 1949, at the age of eighty-one. Dr. Hubbard was graduated from the University of Buffalo School of Medicine in 1894 and was a member of the Buffalo Ophthalmological Society.

Alfred William Jackson, M.D., of Albion, died on January 30 in Carlton after a long illness, at the age of eighty-three. Dr. Jackson was graduated from the New York University College of Medicine in 1892 and from the University of Buffalo School of Medicine in 1894. He was a member of the American Public Health Association, the Orleans County and New York State Medical Societies, and the American Medical Association.

Mortimer Harry Lewis, M.D., of New York City, died on January 10 at his home at the age of fifty-two. Dr. Lewis received his medical degree from the McGill University College of Medicine, Montreal, in 1923 and interned at hospitals in New York, Troy, Chicago, and Utica. During World War II he was a major in the U.S. Army Medical Corps, stationed at Camp Hood Army Station Hospital, in Texas. Dr. Lewis, who had practiced in New York City for twenty-three years, was a Diplomate of the American Board of Otolaryngology and associate otolaryngologist at Beth David Hospital. He was a member of the Physicians Square Club, the New York County and State Medical Societies, and the American Medical Association.

Cornelia Adeline McConville, M.D., of Brooklyn, died on November 19, 1949, at the age of eighty-one. Dr. McConville received her medical degree from the Woman's Medical College and New York Infirmary in 1894 and retired from practice in 1945. She was honorary assistant surgeon and ophthalmologist at the New York Eye and Ear Infirmary and had been a member of the Kings County and New York State Medical Societies and the American Medical Association.

James Parker MacDowell, M.D., of Dundee, died on January 25 at his home at the age of seventy. Dr. MacDowell was graduated from the University of Vermont Medical School in 1904 and, before coming to Dundee in 1912, had practiced in Middletown Springs, Vermont. He had served as coroner and health officer and was Dundee school physician at the time of his death. Dr. MacDowell was a past president of the Yates County Medical Society, a member of the staff of the Soldiers and Sailors Memorial Hospital in Penn Yan, and a member of the Yates County and New York State Medical Societies and the American Medical Association.

Donald Cameron McGill, M.D., of Rochester, died on January 11 at the age of fifty-nine. Dr. McGill was graduated from the Harvard Medical School in 1919. He was chief consulting obstetrician at the Monroe County Infirmary, attending obstetrician and gynecologist at the Rochester General Hospital, and assistant attending obstetrician and gynecologist at Strong Memorial Hospital, also in Rochester. Dr. McGill, a Diplomate of the American Board of Obstetrics and Gynecology, was a member of the Rochester Academy of Medicine, the Rochester Pathological Society, the Central New York Gynecological and Obstetrical Society, the Monroe County and New York State Medical Societies, and the American Medical Association.

Seth A. Mereness, M.D., of Oneonta, died on October 29, 1949, at the age of eighty-four. Dr. Mereness received his medical degree from the Albany Medical College in 1890.

Claude Worrell Munger, M.D., of New York City, died on February 3 in Boston, Massachusetts, at the age of fifty-seven. Dr. Munger received his medical degree from the Rush Medical College in Chicago, Illinois, in 1916. Interested in hospital administration, he served as superintendent of the Columbia Hospital, Milwaukee, Wisconsin, from 1917 to 1921; as director of the Blodgett Memorial Hospital, Grand Rapids, Michigan, from 1921 to 1924, and as director of hospitals for Westchester County from 1924 to 1937. Dr. Munger became director of St. Luke's Hospital, New York City, in 1937 and served until 1948, when he retired because of ill health.

Long a trustee of the American Hospital Association, Dr. Munger served as president of that organization in 1936–1937. He was also a past president of the American College of Hospital Administrators, the New York State Hospital Association, and the Hospital Association of Greater New York. Dr. Munger served as chairman of the committee on hospital exhibits for the New York World's Fair, and in 1940 was named a member and subcommittee secretary on hospitals for the Council on National

Defense. He also had served as a consultant to the United States Public Health Service.

Dr. Munger was honored by the 1949 Award of Merit of the American Hospital Association for his work in advancing education and standards of hospital administration. He also had served as a professor of hospital administration at Columbia University, special lecturer at the Inter-American Institute for hospital administrators in Lima, Peru, and as president of the Medical Superintendents Club of North America. He was a member of the American Public Health Association, the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

John Christian Muth, M.D., of Yonkers, died on January 31 at his home at the age of sixty. Dr. Muth received his medical degree from the New York University and Bellevue Hospital Medical College in 1912, and during World War I he served as a captain in the U.S. Army Medical Corps. Dr. Muth was attending surgeon at the Yonkers General Hospital and associate surgeon at St. John's Riverside Hospital, also in Yonkers, until his retirement four years ago. A Fellow of the American College of Surgeons, he was a member of the Yonkers Academy of Medicine, the Westchester County and New York State Medical Societies, and the American Medical Association.

Frederick William Newman, M.D., of Central Square, died on January 21 at his home at the age of forty. Dr. Newman was graduated from the Syracuse University College of Medicine in 1935 and interned at the University Hospital. He was a member of the New York State Association of School Physicians, the American School Health Association, the Oswego County and New York State Medical Societies, and the American Medical Association.

Ethel B. Perry, M.D., of Belfast, died on January 17 after a long illness, at the age of sixty-two. Dr. Perry received her medical degree from the Rush Medical School in Chicago, Illinois, in 1923. Following her graduation, she was engaged in research work at the John McCormick Institute in Chicago until 1930. During that time she was managing editor of *The Journal of Infectious Diseases*. Since 1930 Dr. Perry had practiced in Belfast, where for several years she was school physician and town health officer. She was a member of the medical staff of the Cuba Memorial Hospital and served for many years as secretary of the Allegany County Medical Society. Dr. Perry was also a member of the Medical Society of the State of New York and the American Medical Association.

C. H. Richards, M.D., of Dunkirk, died on December 8, 1949, at the age of eighty-one. Dr. Richards received his medical degree from the Medico-Chirurgical College of Philadelphia, Pennsylvania, in 1892. He was honorary surgeon at the Brooks Memorial Hospital in Dunkirk and a member of the Buffalo Academy of Medicine, the Chautauqua County and New York State Medical Societies, and the American Medical Association.

Thomas Jerome Rubino, M.D., of Brooklyn, died on February 3 after a long illness, at the age of fifty-one. Dr. Rubino was graduated from the Fordham University Medical School in 1921. He had served as clinical assistant in surgery at St. Vincent's Hospital in Brooklyn and was a member of the Kings County and New York State Medical Societies and the American Medical Association.

James Henry Scott, M.D., formerly of Hempstead, died on December 23, 1949, at his home, Manitoulin Island, Ontario, Canada, at the age of fifty-four. Dr. Scott received his medical degree from Queens University Medical School, Kingston, Ontario, in 1918, and started his practice in Nassau County in 1923. Until his retirement because of ill health three years ago, Dr. Scott had been a consultant for the Central Islip Hospital, consultant in ear, nose, and throat surgery at the North Country Community Hospital in Glen Cove, director of otorhinolaryngologic surgery at Mercy Hospital, Rockville Centre, and attending otorhinolaryngologist at the Nassau Hospital in Mineola. A Diplomate of the American Board of Otolaryngology, Dr. Scott was a member of the Nassau County and New York State Medical Societies and the American Medical Association.

Clarence Jonathan Slocum, M.D., of Beacon, died on January 28 at his home at the age of seventy-six. Dr. Slocum was graduated from the Albany Medical College in 1897 and had served at the Hudson River State Hospital, in Poughkeepsie, and the Utica State Hospital before establishing Craig House sanatorium in Beacon in 1915. He was consulting neuropsychiatrist at the Vassar Brothers Hospital in Poughkeepsie. Dr. Slocum was honored several years ago by the Medical Society of the State of New York upon his completion of fifty years in the practice of medicine.

A Diplomate of the American Board of Psychiatry and Neurology, Dr. Slocum was a member of the American Psychiatry Society, the New York Academy of Medicine, the New York Clinical Psychology Society, the New York Psychiatric Association, the Dutchess County and New York State Medical Societies, and the American Medical Association.

M. Maxim Steinbach, M.D., of New York City, died on February 1 at his home at the age of fifty-seven. Dr. Steinbach was graduated from the Long Island College Hospital in 1916 and interned at Montefiore Hospital. Dr. Steinbach had practiced in New York City for thirty-three years. He was attending physician for pulmonary diseases at Montefiore Hospital and at the Bedford Hills Sanatorium. For more than twenty-five years Dr. Steinbach was with the department of bacteriology at the College of Physicians and Surgeons, Columbia University, where he was a research associate in bacteriology and an instructor. Dr. Steinbach's chief interest was tuberculosis, and he had published many papers on the mechanism of resistance to that disease as determined by constitutional factors, endocrine regulation, and vitamin metabolism. In recent years he had taken part in the study of the use of streptomycin in the treatment of tuberculosis.

Dr. Steinbach was a member of the American Association of Pathology and Bacteriology, the Society for Experimental Biology, the New York Academy of Science, the New York Academy of Medicine, the New York County and State Medical Societies, and the American Medical Association.

Charles H. Stoerzer, M.D., of Brooklyn, died on December 25 at the Greenpoint Hospital after a long illness, at the age of seventy-five. Dr. Stoerzer received his medical degree from the Fordham University Medical College in 1912.

William Stone, M.D., of New York City, died on November 18, 1949, at the age of sixty-two. Dr. Stone was graduated from the New York University and Bellevue Hospital Medical School in 1900. He was a member of the New York County and State Medical Societies and the American Medical Association.

Rosamond Holmes Waite, M.D., of Perrysburg, died on January 15 at the Buffalo General Hospital at the age of sixty-two. Dr. Waite was graduated from the University of Buffalo School of Medicine in 1923 and interned at the Buffalo City Hospital. Before opening her practice in Perrysburg, Dr. Waite was head of the medical department of the Oswego public schools for five years. She had served on the staff of the J. N. Adam Memorial Hospital in Perrysburg.

Louis Talcott Waldo, M.D., of Rochester, died on January 24 at his home at the age of seventy-six. Dr. Waldo was graduated from the University of Buffalo School of Medicine in 1898 and served for many years as a psychiatrist at State mental institutions, including Willard State Hospital. In 1924 Dr. Waldo retired from State service and opened his practice in Rochester. During World War II he served with the medical induction staff and later with the Veterans Administration. Dr. Waldo was consultant on the staff of the Rochester General Hospital, consulting psychiatrist at Genesee Hospital in Rochester, and consulting neurologist at the Rochester State Hospital. He was a member of the Rochester Academy of Medicine, the Rochester Pathological Society, the Monroe County and New York State Medical Societies, and the American Medical Association.

John Jacob Westermann, M.D., of East Hampton, died on January 27 in the Southampton Hospital from injuries suffered when his car struck a tree as he was returning from making professional calls. He was thirty years old. Dr. Westermann received his medical degree from the New York Medical College in 1944 and interned at the Mountainside Hospital in Montclair, New Jersey. During World War II he was a lieutenant in the U.S. Navy Medical Corps and was stationed at Pearl Harbor and Midway Island. Dr. Westermann was a member of the Suffolk County and New York State Medical Societies and the American Medical Association.

Daniel H. Wiesner, M.D., of Mamaroneck, died on January 26 at his home at the age of ninety. Dr. Wiesner received his medical degree from the New York University Medical School in 1880 and had practiced in New York City until his retirement five years ago. Three years ago Dr. Wiesner was honored by the Medical Society of the State of New York for having completed fifty years in the practice of medicine. He had served as consulting ophthalmologist and surgeon at the City Hospital. Dr. Wiesner was a member of the Westchester County and New York State Medical Societies and the American Medical Association.

DECLINE IN ACCIDENT TOLL

The accident toll in the United States for 1949 will total about 92,000 lives, a marked decline from the 98,000 killed in 1948, according to the statisticians of the Metropolitan Life Insurance Company.

This figure will be the lowest for any year of the past decade. In relation to population, the statisticians note, the mortality from accidents will be the lowest on record for the United States.

Each of the main classes of accidents will take fewer lives. Home accidents will account for approximately 33,000 lives, or about 2,000 less than in 1948, although they again will be responsible for a greater number of fatalities than any other class of accidents.

Motor vehicle fatalities will fall somewhat below the total of 32,000 recorded in 1948.

"In relation to travel mileage," the statisticians point out, "deaths from motor vehicle accidents probably will reach the lowest level ever experienced."

Occupational accidents will show a sharp decline, and accidents in public places exclusive of motor vehicle mishaps will take over 2,000 fewer lives than in 1948, the number dropping to about 15,000.

HOSPITAL NEWS

Hospital Construction Continues

INCREASED hospital facilities in various institutions throughout New York State are being provided by the construction of new buildings and additions to existing structures. Among recent building programs which have been completed are the following:

Creedmoor State Hospital, Queens—A new clinic to treat outpatients with psychosomatic stomach ulcers, diabetes, hyperthyroidism, and other ailments by biochemical means was dedicated on February 9 at special ceremonies held at the Hospital. The new clinic, to be called the Creedmoor Institute for Psychobiologic Studies, will occupy a building with 20,000 square feet of floor space and sixty-two rooms and will treat children and adults who cannot afford private care.

Officiating at the dedication ceremonies was His Excellency, Ambassador Carlos P. Romulo, of the Philippines, president of the United Nations General Assembly. Dr. Harry A. LaBurt is senior director of the Hospital.

Director of the new institution is Dr. Johan H. W. van Ophuijsen, former attending psychiatrist and instructor in the Veterans Administration. Dr. Co Tui, former associate professor of experimental surgery at the New York University College of Medicine, has been appointed director of biologic research, and Dr. Arthur M. Sackler has been chosen general director of research.

Edward John Noble Hospital, Canton—Ceremonies were held on January 13 to mark the completion of plans for a new fifty-bed hospital in Canton, to be called the Edward John Noble Hospital. This is the one thousandth hospital construction project to be approved for Federal aid under the Hospital Survey and Construction Act. The Canton hospital will also be unique in that it is to be operated as a single unit with an eighty-five-bed hospital in nearby Gouverneur, which will be completed in May, and a new thirty-five-bed hospital in nearby Alexandria Bay, to be completed in June. All three hospitals, to be known as the North Country Hospitals, will be named for Edward John Noble, in honor of the American industrialist and philanthropist who has contributed approximately one third of the funds for their construction. Half of the remaining funds were raised in each community, and the rest supplied by Federal grants from the United States Public Health Service, administrators of the Hospital Survey and Construction Act.

Morrisania City Hospital, Bronx—A new diagnostic clinic for ambulatory patients was officially opened on February 9 at the Morrisania City Hospital, the Bronx, in ceremonies in which Dr. Marcus D. Kogel, City commissioner of hospitals; Dr. Nathan Smith, medical superintendent of Morrisania Hospital; Dr. John Duff, president of the medical board, and Dr. Sol Biloon, director of medicine of the Hospital who will be in charge of the new clinic, participated.

Patients will be accepted by the new clinic for study and diagnosis on an appointment system. According to Dr. Kogel, each patient will be given a thorough medical checkup, including x-ray, laboratory tests, and whatever consultative services are needed.

Morrisania Hospital Marks Anniversary

CELEBRATING its twentieth anniversary, the Morrisania Hospital, the Bronx, held a dinner dance in December at the Concourse Plaza Hotel, with proceeds from the function donated to the Hospital's medical library which is named for Dr. J. Lewis Amster, former health commissioner of New York City.

Dr. Amster, honorary consulting surgeon and past-president of the medical board, acted as toastmaster. Speakers included Dr. John Duff, president of the medical board; Dr. Nathan B. Van Etten and Dr. William A. Roberts, past-presidents; Dr. J. A. Werner Hetrick, dean of New York Medical College; Dr. Jean A. Curran, president of the Long Island College of Medicine; Dr. Nathan Smith, medical superintendent; Bronx Borough President John J. Lyons, and Dr. Marcus D. Kogel, city commissioner of hospitals.

Dr. Succoroso A. Suriano, president of the Alumni Society of the Hospital, presented portraits of Dr. Duff, Dr. Frederick Flynn, Dr. Van Etten, Dr. Amster, Dr. Roberts, and Dr. Smith to the Hospital. The portraits were accepted by Dr. Kogel and are displayed on the walls of the library.

To Hold Combined Chest Conference

A COMBINED chest conference will be held on Wednesday, March 15, by Seton Hospital and Morrisania City Hospital. The conference will begin at 9:00 P.M. in the Morrisania auditorium, with Dr. Eli H. Rubin as chairman.

Topic of the meeting will be "Resectional Treatment of Pulmonary Tuberculosis." Case presentations will include: "Resections in Adults," Dr. Maurice Harte, and "Resections in Children," Dr. Morris Rubin. Discussion will be opened by Dr. Alexander E. W. Ada.

Dr. Ruth Lubliner will present a paper on "Pathology of the Resected Tuberculous Lung," and Dr. Harry M. Zimmerman will open the discussion.

NEWS NOTES

Portraits of Dr. Robert H. McConnell and Dr. Charles H. Chetwood were unveiled at ceremonies January 12 in French Hospital, New York City, with which both had been associated for many years. They retired last year and hold emeritus status. Dr. McConnell had been connected with the hospital as attending physician since 1906. In 1910 he became director of the medical service and was president of the medical board from 1904 to 1948. Dr. Chetwood had been director of the urologic service from 1920 until his retirement.

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The monthly clinical conference of Mount Sinai Hospital was held February 20 in the Blumenthal Auditorium. Papers presented included: "Posterior Fossa Subdural Hematoma," Dr. Leonard Malis; "Meckel's Diverticulum with Perforation and Hemorrhage," Dr. Nathan Schifrin; "Labyrinthine Tinnitus and Deafness," Dr. Samuel Rosen; "Two Cases of Polycythemia Vera," Dr. Abraham Saltzman and Dr. Donald J. Rosenthal, and "Generalized Lymphosarcoma Without Peripheral Lymphadenopathy," Dr. Norman E. Berman.

The next clinical conference will be held Monday night, March 20.

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A symposium on "Recent Advances in the Treatment of Cancer" was presented before the medical staff of the Bronx Hospital on January 11. Participating were: Dr. George T. Pack, Dr. John S. LaDue, Dr. Isabel M. Scharnagel, Dr. John J. Conley, Dr. J. Maxwell Chamberlain, Dr. Theodore R. Miller, and Dr. Robert J. Booher.

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City Hospital, Welfare Island, New York City, has announced a practical ward teaching program under the direction of Dr. Carl Reich, visiting physician in charge of first medicine. It is free to members of the medical profession and extends from February 1 to May 1. All phases of internal medicine will be covered.

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The medical staff of the Monticello Hospital, Monticello, has inaugurated a series of monthly scientific meetings. At the last meeting Dr. H. H. Livingston, associate clinical professor of surgery, New York Medical School, spoke on "Indications for Operative Intervention in the Management of Fractures." Following Dr. Livingston's talk, the medical staff presented a group of traumatic cases for discussion.

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The appointment of Dr. Michael M. Dasco as physician-in-charge of a newly reorganized department of physical medicine and rehabilitation at Goldwater Memorial Hospital, New York City, has been announced. Dr. Dasco, an assistant clinical professor at the New York University College of Medicine, will have direct charge of supervising research, teaching, and medical care carried out in Goldwater's new rehabilitation wards, in which there are 100 beds. Dr. Dasco will also supervise the hospital's facilities for physical therapy, occupational therapy, recreation, prevocational guidance, speech therapy, psychologic testing, and other aspects of the total rehabilitation training program.

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Dr. Alexander N. Selman of Spring Valley has been named director of surgery at the Nyack Hospital, succeeding the late Dr. Stephen R. Monteith. Dr. Selman has been a member of the surgical staff of the Nyack Hospital for many years and is also attending surgeon at the Rockland State Hospital.

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Dr. Goode R. Cheatham was elected staff president of the Ideal Hospital, Binghamton, for 1950, at the annual meeting recently of physicians affiliated with the hospital. Dr. John M. Mallory was chosen vice-president and Dr. Sophy-Page Carlucci, secretary.

New department heads are: Dr. Frank G. Moore, surgery; Dr. Karl D. Rundell, medicine; Dr. G. Thomas Giordano, pediatrics; Dr. Cheatham, obstetrics; Dr. John H. Robertson, ear, nose, and throat; Dr. John A. Kalb, anesthesia; Dr. John P. Hudock, ophthalmology; Dr. Alfred L. Standfast, radiology, and Dr. Alexander A. Kosinski, pathology.

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Dr. Morris Hinenburg, Brooklyn, who resigned as executive director of the Jewish Hospital of Brooklyn to become director of medical care for all institutions affiliated with the Federation of Jewish Philanthropies of New York, was guest of honor at a dinner recently given by the board of trustees, woman's auxiliary, and medical staff of the Jewish Hospital.

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Dr. Ruth Morris Bakwin, director of the department of pediatrics at the New York Infirmary, has been elected president of the medical board executive committee, it was announced recently.

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Dr. B. Bonaccolto, New York City, has been appointed director of the department of ophthalmology of St. Clare's Hospital, New York City, for the year 1950.

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Dr. Francis J. Fagan, Troy, was elected president of the medical staff of St. Mary's Hospital, Troy, at the annual meeting held January 26. He will succeed Dr. Clement J. Handron. Other officers chosen are Dr. Charles R. Lewis, vice-president, and Dr. John H. Sulzman, secretary.

At the meeting, plans were discussed for inaugurating a program for the hospital to meet requirements for residencies in medicine and surgery. The annual report was presented, showing that 6,916 patients were admitted during the year and that total days of service were 71,373, an average hospital stay per patient of 10.1 days.

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Dr. Kenneth Bott of Greenville was re-elected president of the medical staff of the Memorial Hospital, Catskill, at its annual meeting held in January. Other officers, also re-elected, are: Dr. Edwin G. Mulbury, Windham, vice-president, and Dr. Francis Persons, Lexington, secretary.

[Continued on page 618]

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MEDICAL NEWS

New York State Institute of Applied Arts and Sciences

(*Editor's Note:* The following report was prepared by Dr. Albert F. R. Andresen, Brooklyn, Speaker of the House of Delegates of the Medical Society of the State of New York and a member of the Advisory Commission of the New York State Institute of Applied Arts and Sciences.)

IN 1946 the New York State Legislature, by legislative act, established five institutes to provide "education and training in applied arts, crafts, retail business management, subprofessions, and technical skills, through curricula not to exceed two years in length, including related work in arts and sciences and other subjects essential to the general welfare and understanding of students." The institutes are supported by New York State tax funds and are under the supervision of the State Board of Regents. It is the purpose of the institute to provide special education at a college level for technical employment which does not require a college degree. There are no tuition fees or other fees for legal residents of New York State except a $1.00 annual locker fee and a student association assessment of $5.00 per annum. Seniors are assessed a $10 graduation fee. Students are required to purchase their own books and supplies. The New York City Institute, the largest of the five, is located in Brooklyn.

With the expectation of training girls to become "medical office assistants," our State Society was asked to nominate a representative for the Advisory Commission to assist in planning these courses, and Dr. Albert F. R. Andresen has served in this capacity for the past two years. The first course in this field was started last year, and fifty girls are enrolled. The large number of applicants are carefully screened, are given ability and aptitude tests, physical examinations, and individual conferences in order to insure their success in this field. The two-year course includes a thorough grounding in general office procedures, such as stenography, typewriting, bookkeeping, business machines, penmanship, arithmetic, transcription, filing, office practice, and communication arts and skills, and, in addition, instruction in anatomy, physiology, chemistry, laboratory and x-ray procedure, medical terminology, medical records, applied psychology, and sociology. Classes average twenty hours and laboratory work ten hours per week during each of the four semesters, and twenty-five hours per week of home study are considered necessary. The Institute therefore expects to produce medical office assistants who will be of real value in a doctor's office and who withal will not demand too large a salary.

In the training of these students the faculty considers it desirable to have the girls get some practical experience in assisting doctors in the care of patients. The students in other courses are used as salesmen in department stores, as skilled workers in hotels, factories, and laboratories. It is not considered desirable to send out the students to doctors' offices, but arrangements have been made to place these students, during their second year, in a few hospital outpatient departments, guaranteeing continuous service with successive students, and giving the students an opportunity to earn a small stipend during this employment. The Institute would welcome any inquiries regarding this service, such inquiries to be addressed to Miss A. Frances Casey, New York State Institute of Applied Arts and Sciences in New York City, 300 Pearl Street, Brooklyn 1, New York.

Five Women Doctors Receive Blackwell Awards

FIVE WOMEN doctors received the New York Infirmary's 1950 Elizabeth Blackwell Citations for distinguished achievements in the practice and teaching of medicine January 29 at a special ceremony and tea at the hospital.

The citations commemorate the 101st anniversary of Dr. Blackwell's graduation as America's first woman doctor. In 1853, four years after her graduation from Geneva College, now Hobart College, she founded the New York Infirmary.

Those receiving the awards were: Dr. Ruth Morris Bakwin, assistant clinical professor of pediatrics at New York University, director of the pediatric service at New York Infirmary, and assistant visiting pediatrician at Bellevue Hospital, for her work in pediatrics.

Dr. Leona Baumgartner, associate chief, United States Children's Bureau, assistant commissioner of the New York City Department of Health, for her achievement in improving public health services for children.

Dr. Elise S. L'Esperance, pathologist and director of laboratories at the New York Infirmary since 1910, director of the Strang Cancer Detection Clinic at the New York Infirmary, director of the Strang Cancer Detection Clinic of Memorial Hospital, assistant professor of preventive medicine (cancer) at the Medical College of Cornell University, cited for her achievements in pathology and cancer detection.

Dr. Elaine P. Ralli, associate professor of medicine and chief of the Metabolic Clinic at New York University-Bellevue Medical Center, cited for her work in the study of metabolic and nutritional diseases.

Dr. Barbara B. Stimson, member of the American College of Surgeons, orthopedist and director of services at the St. Francis and Vassar Brothers Hospitals in Poughkeepsie, cited for her work in orthopedic surgery.

Dr. Ada Chree Reid, editor of *The Journal of the American Medical Women's Association*, was present to receive her citation awarded in 1949 for work on tuberculosis control.

[Continued on page 614]

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[Continued from page 612]

MEDICALLY SPEAKING—

Exhibition of Medical Books—An exhibition of medical books written by physicians of New York City during 1949 has been arranged in the library of the New York Academy of Medicine, according to an announcement from Miss Janet Doe, librarian. The 69 books, which represent approximately one seventh of the 450 medical books published during the year, "not only bear witness to the achievements of New York City physicians, but also effectively illustrate New York City's position as the country's outstanding medical center," according to Miss Doe. Fifty-five of the books are first publications.

Miss Doe announced that it is the intention of the Academy to hold these exhibitions annually and that an invitation is issued to physicians of New York City to send copies of their work, published during 1950, to the Academy, earmarking them for next year's exhibit.

Army Selects Medical Consultants to Visit Overseas Commands—Names of 29 civilian physicians selected for participation in the Army Medical Department Overseas Consultant Program for 1950 have been announced by Major General R. W. Bliss, Army Surgeon General.

New York physicians included in the group are: Dr. John H. Boyd, New York City, and Dr. John A. Kelly, New York City, both assigned to the Far East Command, and Dr. Richard S. Farr, Syracuse, and Dr. Walter P. Gage, New York City, both assigned to the European Command.

Postgraduate Course in Orthopedic Surgery—Physicians seeking postgraduate training in orthopedic surgery will have an opportunity to study at the Hospital for Joint Diseases, according to a recent announcement. The course, being offered in affiliation with Columbia University College of Physicians and Surgeons, will consist of 11 morning and 11 afternoon sessions held on consecutive Thursdays beginning March 4 and ending May 11, 1950.

The curricula will include a series of lectures, case demonstrations, and conferences on the clinical, diagnostic, therapeutic, pathologic, bacteriologic, chemical, and radiologic aspects of skeletal disease, so integrated as to present a general review of the modern concept of the more important orthopedic diseases. There will be opportunity for clinical examination of patients.

Applications for registration should be made to the Office of the Assistant Dean, Graduate Medicine, Columbia University College of Physicians and Surgeons, New York City.

Army Civilian Intern Program—Selection of senior medical students for the Army's civilian intern program is proceeding and, to date, 52 applicants have been selected, it has been announced by the Army Surgeon General. They represent 34 of the country's approved medical schools and will intern in 48 different civilian hospitals. The first group of applications was processed on December 13, 1949. Since that date the Surgeon General's Selection Board has convened five more times in an effort to keep up with the increasing number of applications being received. It will continue to meet at frequent intervals until it has selected the 300 candidates for whom the program provides spaces.

To be eligible, a candidate must be a potential graduate who will begin an internship between January 1 and December 31, 1950, and must have been accepted for internship training in a civilian hospital acceptable to the Surgeon General.

Successful candidates will be commissioned in the Army Medical Corps Reserve and permitted to complete their internships as officers on active duty with pay and certain allowances of the grade of first lieutenant. Physicians selected for this training program will serve two years on a duty status for the year or major portion of a year of formal training received.

Blue Cross-Blue Shield Manager Honored by Doctors—For outstanding services to medicine, Harold C. Stephenson, head of the local Blue Cross and Blue Shield Plans, has been singled out by the Utica Academy of Medicine as recipient of its first annual award. He was also unanimously elected a Fellow of the Academy, the first layman to be admitted within the professional ranks. Mr. Stephenson, who is managing director of the Hospital Plan, Inc., and its associated Medical and Surgical Care, Inc., Utica, New York, was honored, at the Academy's annual meeting on January 19, with the presentation of a scroll by Dr. John B. Fitzgerald of the Award Committee as its unanimous choice for the honor.

New X-Ray Motion Picture Camera—An x-ray motion picture camera developed at the University of Rochester is now being used for the study and diagnosis of heart diseases. It is believed that this is the first time this type of diagnosis has been made by x-ray movies.

So far as is known, this is the first use of x-ray movies for cardioangiography. In view of the recent advances in heart surgery, particularly with "blue babies," it is hoped that these may be of value in learning more about such diseases and their treatment. The x-ray movies in this work are made by injecting an opaque dye through the heart and its vessels so that the flow of blood can be visualized, with the possibility of showing up various heart diseases. It has been in use at the University of Rochester Medical School for about six months, during which 16 patients, both adults and children, have been studied.

Announcement of Regular Corps Examination for Medical Officers (U.S. Public Health Service)—A competitive examination for appointment of medical officers in the Regular Corps of the United States Public Health Service will be held on May 15, 16, and 17, 1950. Examinations will be held at a number of points throughout the United States, located as centrally as possible in relation to the homes of candidates. Applications must be received *no later than April 17, 1950.*

Application forms and additional information may be obtained by writing to the Surgeon General, U.S. Public Health Service, Federal Security Agency, Washington 25, D.C., Attention: Division of Commissioned Officers.

Washington Office of A.M.A. to Move—The A.M.A. Washington office, now located at 1302 18th Street, N.W., moves to larger quarters on March 1. After that date, the Washington headquarters will be located in Rooms 300 to 312 at 1523 L Street, N.W., which is in the immediate vicinity of the Statler Hotel.

Schering Award Subject for 1950 Announced—The currently important problem fascinating medical research workers today, "The Clinical Use of Steroid Hormones in Cancer," will be the subject of the Schering Award for 1950.

[Continued on page 616]

DOCTOR,
WILL YOU MAKE THIS NOSE TEST?

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* *Proc. Soc. Exp. Biol. and Med.*, 1934, 32, 241-245; *N.Y. State Journ. Med., Vol.* 35, 6-1-25, *No.* 11, 590-592; *Laryngoscope, Feb.* 1935, *Vol. XLV, No.* 2, 149-154; *Laryngoscope, Jan.* 1937, *Vol. XLVII, No.* 1, 58-60

[Continued from page 614]

The Schering Award is conducted annually for students in the medical schools of the United States and Canada. Medical students enter the competition by preparing a manuscript on the designated subject in the field of endocrinology. Manuscripts are judged by three prominent endocrinologists. Cash prize awards of $1,000, $500, and $300 are offered.

Postgraduate Course on General Surgery.—"Practical Problems in General Surgery" will be the subject of a continuation course to be presented on April 6, 7, and 8 by the Frank E. Bunts Institute and the Cleveland Clinic. On April 7, Dr. Daniel C. Elkin of Emory University, Dr. Claude Beck of Western Reserve University Medical School, and Dr. R. B. Turnbull of the Cleveland Clinic will take part in a symposium on "Vascular Surgery." On April 8, Dr. George G. Finney of Johns Hopkins University and others will present panel discussions on surgery of the colon, pancreas, biliary tract, and stomach and duodenum.

Inquiries regarding the complete program and registration can be addressed to the Director of Education, Frank E. Bunts Educational Institute, 2020 East Ninety-third Street, Cleveland 6, Ohio.

Prize Essay Award.—The Board of Regents of the American College of Chest Physicians offers a cash prize award of $250 to be given annually for the best original contribution, preferaby by a young investigator, on any phase relating to chest disease.

The prize is open to contestants of foreign countries as well as to those residing in the United States. The winning contribution will be selected by a board of impartial judges and the first award will be made at the forthcoming annual meeting of the College to be held in San Francisco, June 22 to 25, 1950.

The College reserves the right to invite the winner to present his contribution at the annual meeting, and to publish the essay in its official publication, *Diseases of the Chest.* Contestants are advised to study the format of this periodical as to the length, form, and arrangement of illustrations to guide them in the preparation of the manuscript.

The following conditions must be observed: (1) Five copies of the manuscript, typewritten in English, should be submitted to the office of the American College of Chest Physicians not later than May 1, 1950. (2) The only means of identification of the author or authors shall be a motto or other device on the title page and a sealed envelope, bearing the same motto on the outside, enclosing the name of the author or authors.

Additional information may be obtained from the Executive Secretary of the College, 500 North Dearborn Street, Chicago 10, Illinois.

MEETINGS

FUTURE

New York Tuberculosis and Health Association, Inc.

The annual conference of the New York Tuberculosis and Health Association, Inc., will be held Tuesday, March 7, at the Hotel Statler, New York City, with morning, luncheon, and afternoon sessions.

Speakers at the morning session will include: Mr. Godias J. Drolet, assistant director, New York Tuberculosis and Health Association, "The Current Problem of Tuberculosis in New York City"; Dr. Eli H. Rubin, visiting physician in chest diseases, Morrisania City Hospital, and Mr. Donald E. Porter, supervisor, chest x-ray service, New York Tuberculosis and Health Association, "The Hospital as a Source of Tuberculosis Case-Finding," and Dr. Harry A. Wilmer, department of neurology-psychiatry, Palo Alto Clinic, Palo Alto, California.

Guest speaker at the luncheon meeting will be Dr. Harry S. Mustard, former New York City health commissioner and now executive director, State Charities Aid Association, who will speak on "Public Health Problems—Their Amenability to Solution."

The afternoon meeting will include the following papers: Dr. Esmond R. Long, director, the Henry Phipps Institute, Philadelphia, Pennsylvania, "The Changing Pattern in the Epidemiology of Tuberculosis"; Dr. Eugene Davidoff, Ellis Hospital, Schenectady, "The Patient Under Stress," and Mr. Joseph Newman, Veterans Administration, Canandaigua, "Community Teamwork in the Interests of the Discharged Hospital Patient."

Cornell University Medical College Alumni Association

The annual Alumni Day meeting of the Cornell University Medical College will be held on Thursday March 23. The second annual award to an alumnus for outstanding contributions to medicine will be conferred upon Dr. David P. Barr, professor of medicine at Cornell, and a scientific program will be presented by alumni of the college.

Speakers will include: Dr. Armand J. Quick, Milwaukee, Wisconsin, "A New Concept of Venous Thrombosis"; Dr. Paul F. Russell, New York City, "International Preventive Medicine," and Dr. Harry M. Rose, New York City, "Studies on the Inhibition of Influenza Virus by Secretions of the Human Respiratory Tract."

The scientific program will also include operating clinics and the presentation of papers by the staff of the Second (Cornell) Division at Bellevue Hospital and an exhibit covering research work at the New York Hospital-Cornell Medical Center.

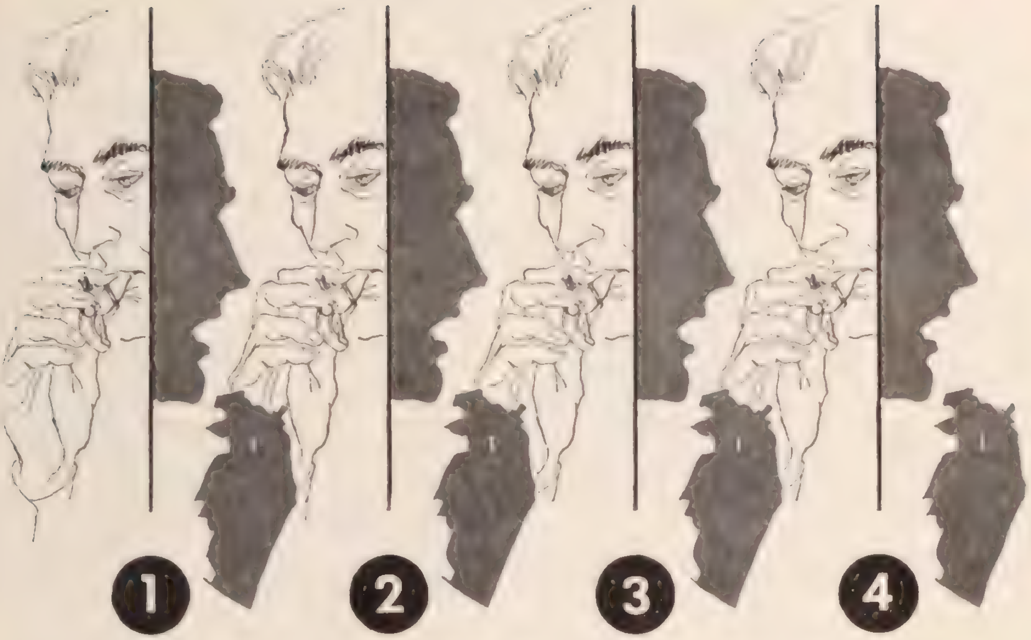
New York Academy of Medicine, Committee on Public Health Relations

The Hermann M. Biggs Memorial Lecture which is held annually in Hosack Hall at the New York Academy of Medicine under the auspices of the Committee on Public Health Relations will be delivered this year on Thursday, April 6, at 8:30 P.M. Guest speaker will be Dr. Shields Warren, professor of pathology, Harvard Medical School, and director of the division of biology and medicine, U.S. Atomic Energy Commission. The subject of the lecture will be "Public Health Aspects in the Development of Atomic Energy." The lecture is open to the public.

American College of Chest Physicans, Pennsylvania Chapter

The third annual postgraduate course in "Diseases of the Chest," sponsored by the American College of Chest Physicians, Pennsylvania Chapter, and the Laennec Society of Philadelphia, will be presented

[Continued on page 618]



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1. Krasno, L. R., Grossman, M., and Ivy, A. C. (1948), The Inhalation of Norisodrine Sulfate Dust, Science, 108:476, Oct. 29. 2. Krasno, L. R., Grossman, M. I., and Ivy, A. C. (1949), The Inhalation of 1-(3',4'-Dihydroxyphenyl)-2-Isopropylaminoethanol (Norisodrine Sulfate Dust), J. Allergy, 20:111, March.

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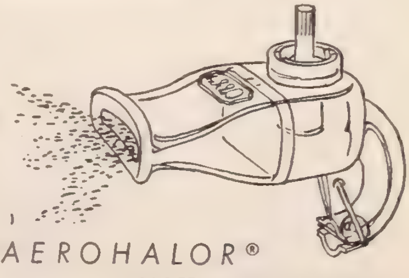
*T. M. for Abbott's Sifter Cartridge.



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[Continued from page 616]

at the Warwick Hotel, Philadelphia, Pennsylvania, from April 10 through 14. This course will emphasize the recent developments in all aspects of the diagnosis and treatment of diseases of the chest.

Applications should be sent to: American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

New York Polyclinic Medical School and Hospital

A five-day seminar in otolaryngology and ophthalmology will be held by the New York Polyclinic Medical School and Hospital from April 17 through 21. A review of recent advances in the diagnosis and treatment of the more common disorders in the fields of otolaryngology and ophthalmology, comprising lectures, motion pictures, and demonstrations in the clinics, operating rooms, and dissecting room, will be presented. Members of the staff and visiting speakers will participate.

Further information may be obtained from Dr. David N. Barrows, medical executive officer, at 345 West 50th Street, New York 19, New York.

Kessler Institute for Rehabilitation

The fourth annual "Amputee Conference" of the Kessler Institute for Rehabilitation will be held on April 20, 21, and 22, at the Institute, in West Orange, New Jersey.

Long Island College of Medicine Alumni Association

The annual Alumni Day of the Long Island College of Medicine will be held on Saturday, April 29. There will be a scientific session at Polhemus Clinic in the morning followed by the seventieth annual dinner to be held at the Columbus Club, 1 Prospect Park West, Brooklyn, at 7:00 P.M. Principal speaker will be Dr. Jean Curran, president of the College.

American Congress of Physical Medicine

The Eastern Sectional Meeting of the American Congress of Physical Medicine will be held in Washington, D.C., on Saturday, April 29. The afternoon session, starting at 2:00 P.M., will be conducted at the George Washington University Hospital, and the evening session, following dinner at the Willard Hotel, will consist of a panel discussion.

Further information may be obtained from the secretary of the Section, Dr. Herman L. Rudolph, 400 North Fifth Street, Reading, Pennsylvania.

HOSPITAL NEWS

[Continued from page 610]

• • •

Dr. Robert Hunt, former assistant director of the Rochester State Hospital, has been appointed director of the St. Lawrence State Hospital, in Ogdensburg, effective February 1. Dr. Hunt, a veteran of World War II and a lieutenant colonel in the U.S. Army Reserve, succeeds Dr. John A. Pritchard, who retired on January 1. Dr. James E. Brown, administrative assistant director at the St. Lawrence State Hospital, served as acting director during the month of January.

TAKEN FOR A RIDE

On a recent broadcast, Fulton Lewis, Jr., quoted a letter to the editor of the London *Sunday Express* from a British doctor:

> A woman patient of mine had gone shopping for many years in an invalid chair. The chair required a new canvas. I gave her a certificate.
>
> At the shop she was told to go to the local Health Ministry offices. There she was told that her chair was out of date. "Get a note from your doctor."
>
> I, in a "what's the use of worrying" mood, gave her a note saying that she required an invalid's chair. This necessitated being vetted at the local hospital, so I gave her another note to the hospital. The hospital issued a certificate that she was qualified for a chair.
>
> Some weeks later she was summoned by the Medical Officer. "Don't you think that an electric chair would be more suitable?" No, she did not want to be flying along the road, amid the traffic. Her husband already had three cars. "Well, perhaps you're right. But you must have a garage with the chair we are giving you."
>
> In spite of her protest that she had ample garage space, in due course a surveyor and two men arrived to select the best spot for the garage.
>
> She now has her chair and its garage. And all she wanted was permission to buy a piece of canvas.—*Reader's Digest, December, 1949*

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DO YOU HAVE YOUR HOTEL RESERVATION FOR THE ANNUAL MEETING?

If you do not now have a confirmed hotel reservation in New York City for the Annual Meeting of the Medical Society of the State of New York, May 8 to 12, 1950, at the Hotel Statler, please fill out and mail the reservation form at the bottom of this page, and send it directly to the Hotel Statler.

Should your reservation be received after the six hundred rooms set aside for the Society at the Hotel Statler have been assigned, your reservation will be turned over to one of the hotels in the neighborhood. Confirmation of your reservation will come to you direct from the hotel making the accommodation.

If you do not use the reservation form below, be sure to identify yourself as a physician when writing regarding reservations. This will insure proper attention to your request.

W. P. Anderton, M.D., *Secretary*

144th Annual Meeting of the Medical Society of the State of New York,
May 8–12, 1950

Mr. Mark Armani, Front Office Manager
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Dear Mr. Armani:

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(Unless requested otherwise, we will hold your reservation until 9 p.m. of the day of your arrival.)

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Room and Bath for one—per day		$ 4.50 ☐	$ 5.00 ☐	$ 5.50 ☐
		6.00 ☐	7.00 ☐	7.50 ☐
		8.00 ☐	8.50 ☐	
Double-Bed Room with Bath for two—per day	$ 7.00 ☐	7.50 ☐	8.00 ☐	8.50 ☐
	9.00 ☐	9.50 ☐	10.00 ☐	10.50 ☐
Twin-Bed Room with Bath for two—per day	8.00 ☐	8.50 ☐	9.00 ☐	9.50 ☐
	10.00 ☐	10.50 ☐	11.00 ☐	11.50 ☐
	12.00 ☐	13.00 ☐	14.00 ☐	
Suite—Living Room, Bed Room, and Bath			18.00 ☐	19.00 ☐

More Than Two Persons in One Room: For each additional person in Double- or Twin-Bed Room, the extra charge is $2.00 per day.

If a room at the rate requested is unavailable reservation will be made at the next available rate.

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TOTAL MEMBERSHIP AS OF MARCH 1, 1950—22,660

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Cayuga	A. B. Chidester	Auburn	R. J. Schaffer	Auburn	L. H. Rothschild	Auburn
Chautauqua	S. R. Patti	Dunkirk	E. Bieber	Dunkirk	C. E. Hallenbeck	Dunkirk
Chemung	A. H. Hillman	Elmira	J. J. McConnell	Elmira	J. A. Mark	Elmira
Chenango	W. H. T. Crull	Afton	N. C. Lyster	Norwich	N. C. Lyster	Norwich
Clinton	L. J. Schiff	Plattsburg	I. R. Wood	Plattsburg	K. M. Clough	Plattsburg
Columbia	O. Wilcox	Chatham	R. C. Bliss	Hudson	R. C. Bliss	Hudson
Cortland	W. J. Pashley	Cortland	J. E. Eckel	Cortland	W. E. Mosher	Cortland
Delaware	S. Solomon	Stamford	S. G. Edgerton	Delhi	S. G. Edgerton	Delhi
Dutchess	E. G. Mackenzie	Millbrook	A. A. Rosenberg	Poughkeepsie	A. A. Rosenberg	Poughkeepsie
Erie	S. A. Graczyk	Buffalo	M. J. Kazmierczak	Buffalo	W. S. Walls	Buffalo
Essex	W. S. Rose	Olmstedville	J. E. Glavin	Port Henry	J. E. Glavin	Port Henry
Franklin	C. R. Morse	Tupper Lake	D. H. Van Dyke	Malone	D. H. Van Dyke	Malone
Fulton	J. H. Larrabee	Johnstown	R. C. Warner	Gloversville	W. H. Raymond	Johnstown
Genesee	R. F. Davis	Batavia	L. F. Quinlan	Batavia	L. F. Quinlan	Batavia
Greene	M. Viviano	Tannersville	W. M. Rapp	Catskill	M. H. Atkinson	Catskill
Herkimer	E. Enzien	Frankfort	R. C. Ashley	Little Falls	R. C. Ashley	Little Falls
Jefferson	C. B. Alden	Adams	C. A. Prudhon	Watertown	L. E. Henderson	Watertown
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Monroe	J. L. Norris	Rochester	C. Parnall	Rohcester	R. E. Delbridge	Rochester
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Nassau	W. C. Freese	Baldwin	I. Drabkin	Rockville Centre	I. Drabkin	Rockville Centre
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Oneida	J. F. Kelley	Utica	D. H. MacFarland	Utica	R. C. Hall	Utica
Onondaga	C. F. Potter	Syracuse	I. L. Ershler	Syracuse	A. C. Hofmann	Syracuse
Ontario	C. C. Williamson	Gorham	C. B. Smith	Victor	C. B. Smith	Victor
Orange	N. T. Keys	Goshen	E. C. Waterbury	Newburgh	E. C. Waterbury	Newburgh
Orleans	A. F. Leone	Medina	J. G. Parke	Albion	J. G. Parke	Albion
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Otsego	H. V. Frink	Richfield Springs	J. M. Constantine	Oneonta	J. M. Constantine	Oneonta
Putnam	R. M. Hall	Cold Spring	F. J. A. Lehr	Carmel	F. J. A. Lehr	Carmel
Queens	E. A. Wolff	Forest Hills	W. Benenson	Flushing	C. Krenz	Long Island City
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Schenectady	W. M. Mallia	Schenectady	R. E. Isabella	Schenectady	C. F. Runge	Schenectady
Schoharie	F. Konta	Richmondville	D. R. Lyon	Middleburg	D. L. Best	Middleburg
Schuyler	J. Y. Roberts	Watkins Glenn	C. W. Ehrenstein	Burdett	C. W. Ehrenstein	Burdett
Seneca	K. Keill	Willard	B. Riemer	Romulus	B. Riemer	Romulus
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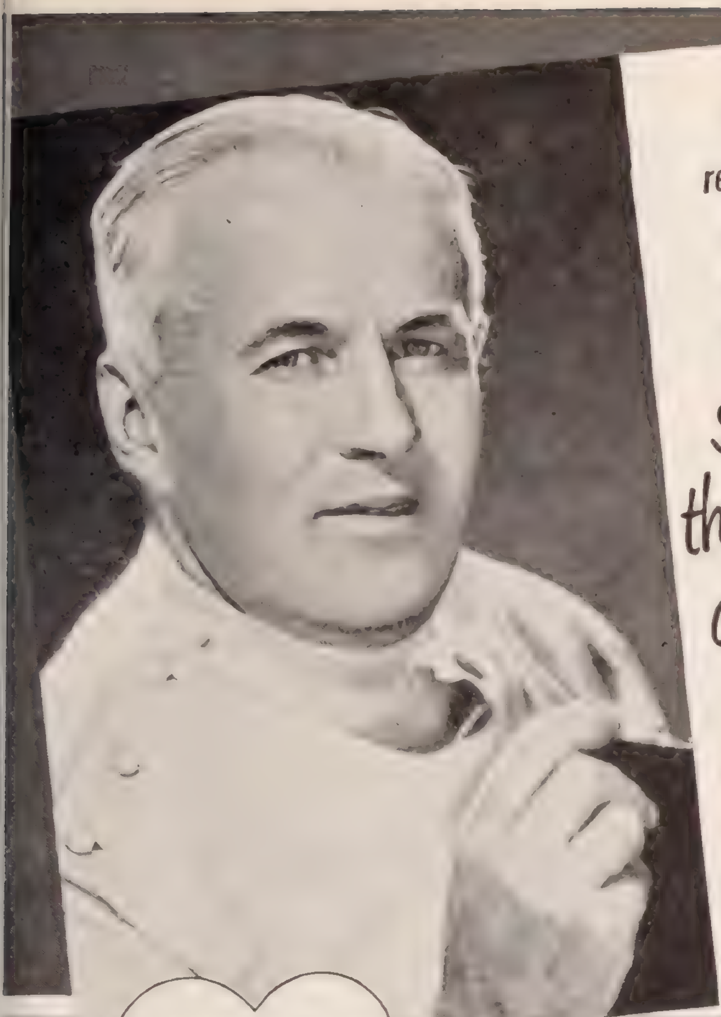

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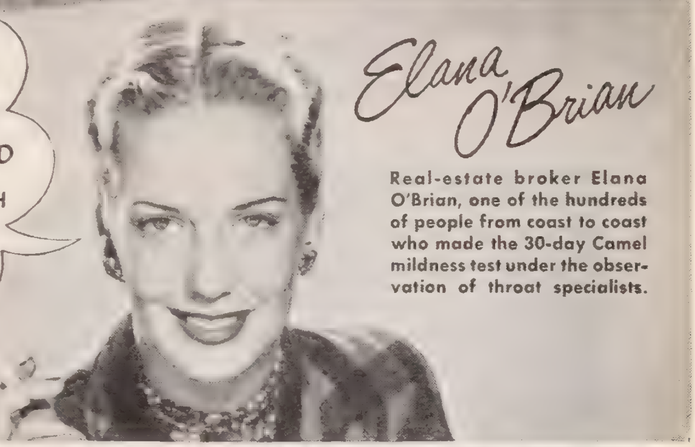

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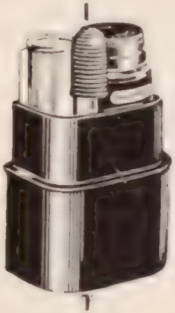

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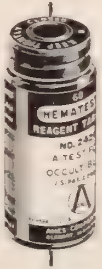

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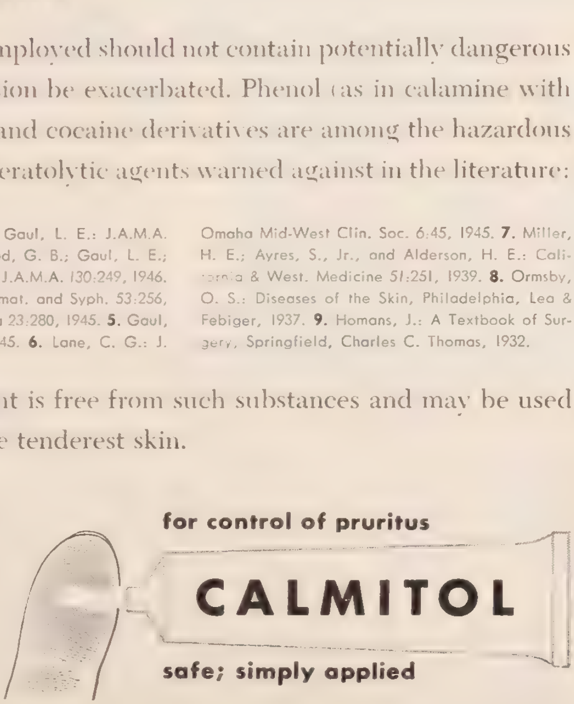

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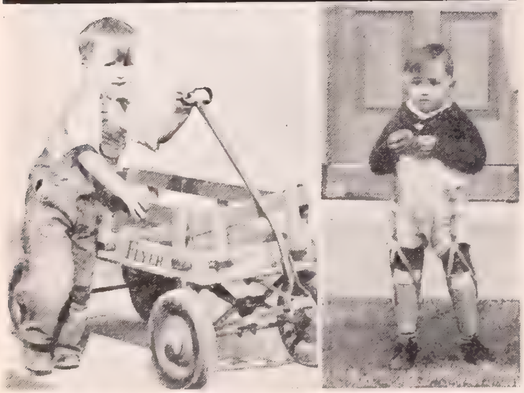

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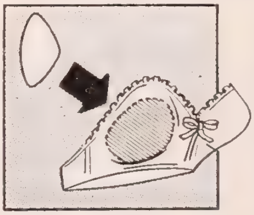

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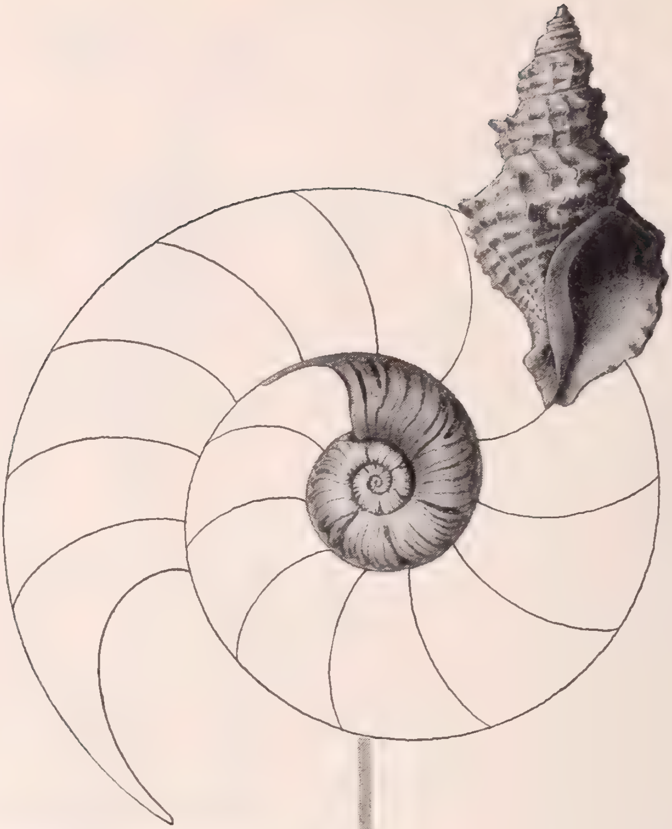

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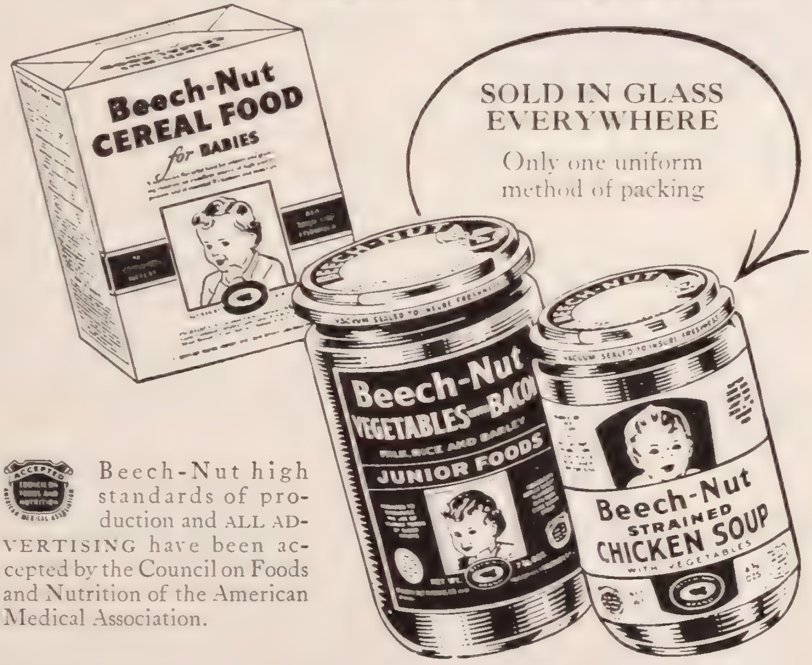
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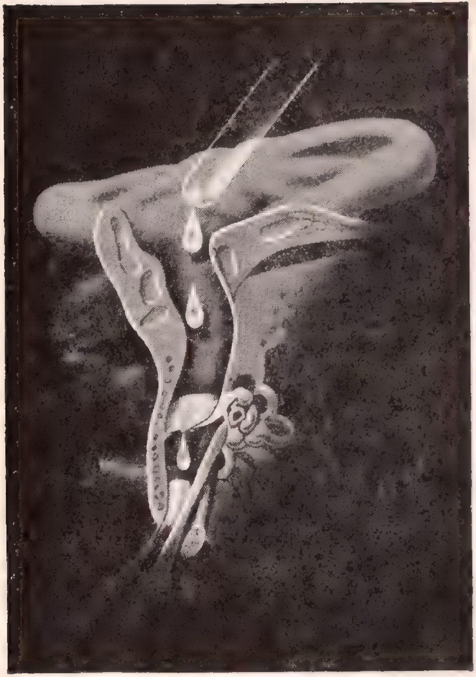

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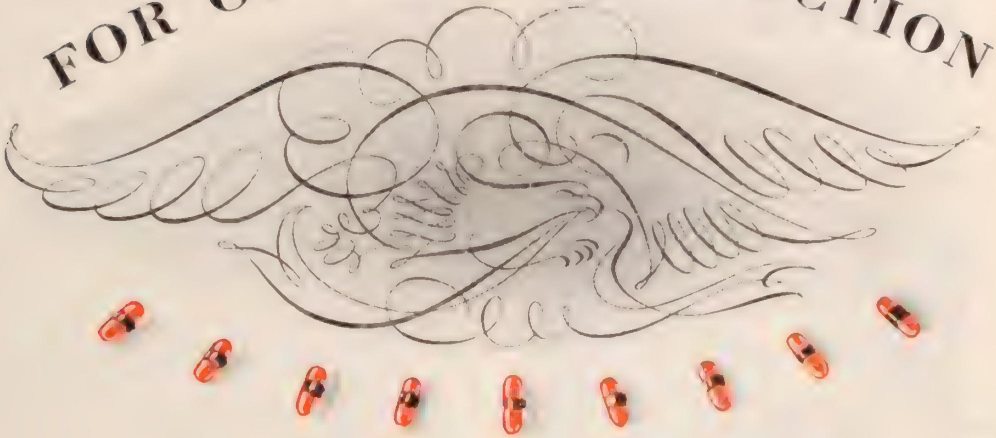

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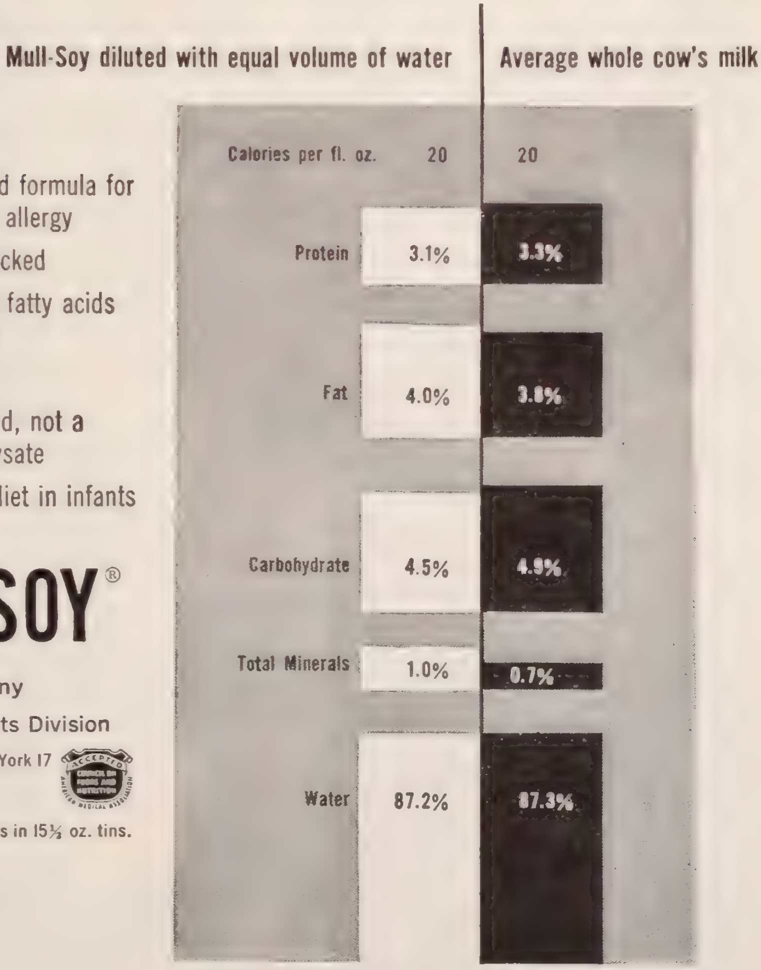

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FORMULA: Each 5 cc. (1 teaspoonful) of Robitussin contains:

Glyceryl guaiacolate	100 mg.
Desoxyephedrine hydrochloride	1 mg.

In a palatable aromatic syrup

DOSAGE: Adults: 1 to 2 teaspoonfuls, repeated every 2 to 3 hours as necessary. Children: ½ to 1 teaspoonful according to age, 3 or more times daily.

SUPPLIED: In pints and gallons.

REFERENCES

1. Boyd, E. M. et al.: Canadian J. Res., 23:195, 1945.
2. Boyd, E. M. et al.: Canadian M.A.J., 54:216, 1946.
3. Connell, W. F. et al.: Canadian M.A.J., 42:220, 1940.
4. Foltz, E. E. et al.: J. Lab. & Clin. Med., 28:603, 1943.
5. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.

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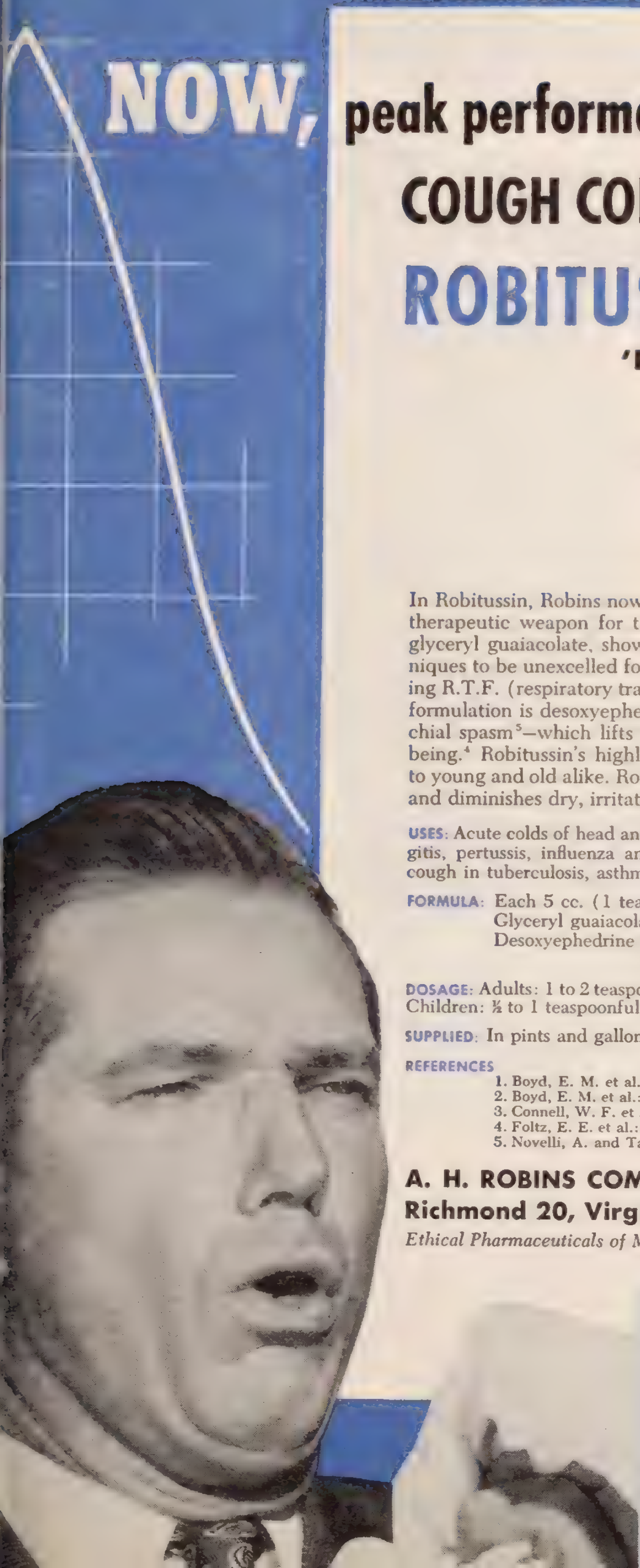

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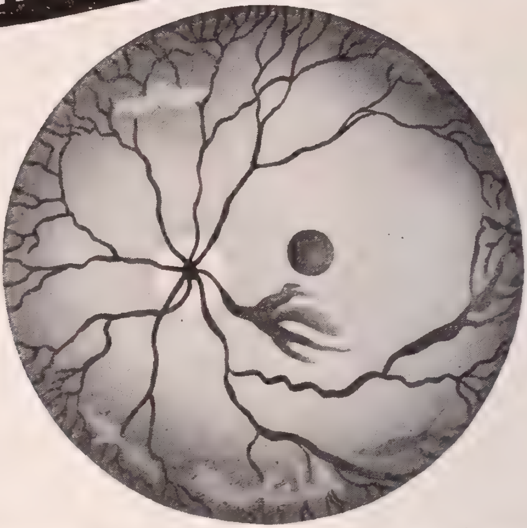

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(1.) Felch, W. C.: New York Med. *5:*16 (Oct. 20) 1949. (2.) Leinwand, I., and Moore, D. H.: Am. Heart J. *38:*467 (Sept.) 1940. (3.) Felch, W. C., and Dotti, L. B.: Proc. Soc. Exper. Biol. & Med. *72:*376 (Nov.) 1949.

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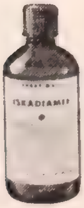

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Phenacetin (3 gr.)	**194 mg.**
Acetylsalicylic Acid (2½ gr.)	**162 mg.**
Hyoscyamine Sulfate	**0.03 mg.**
Phenobarbital (¼ gr.)	**16.2 mg.**

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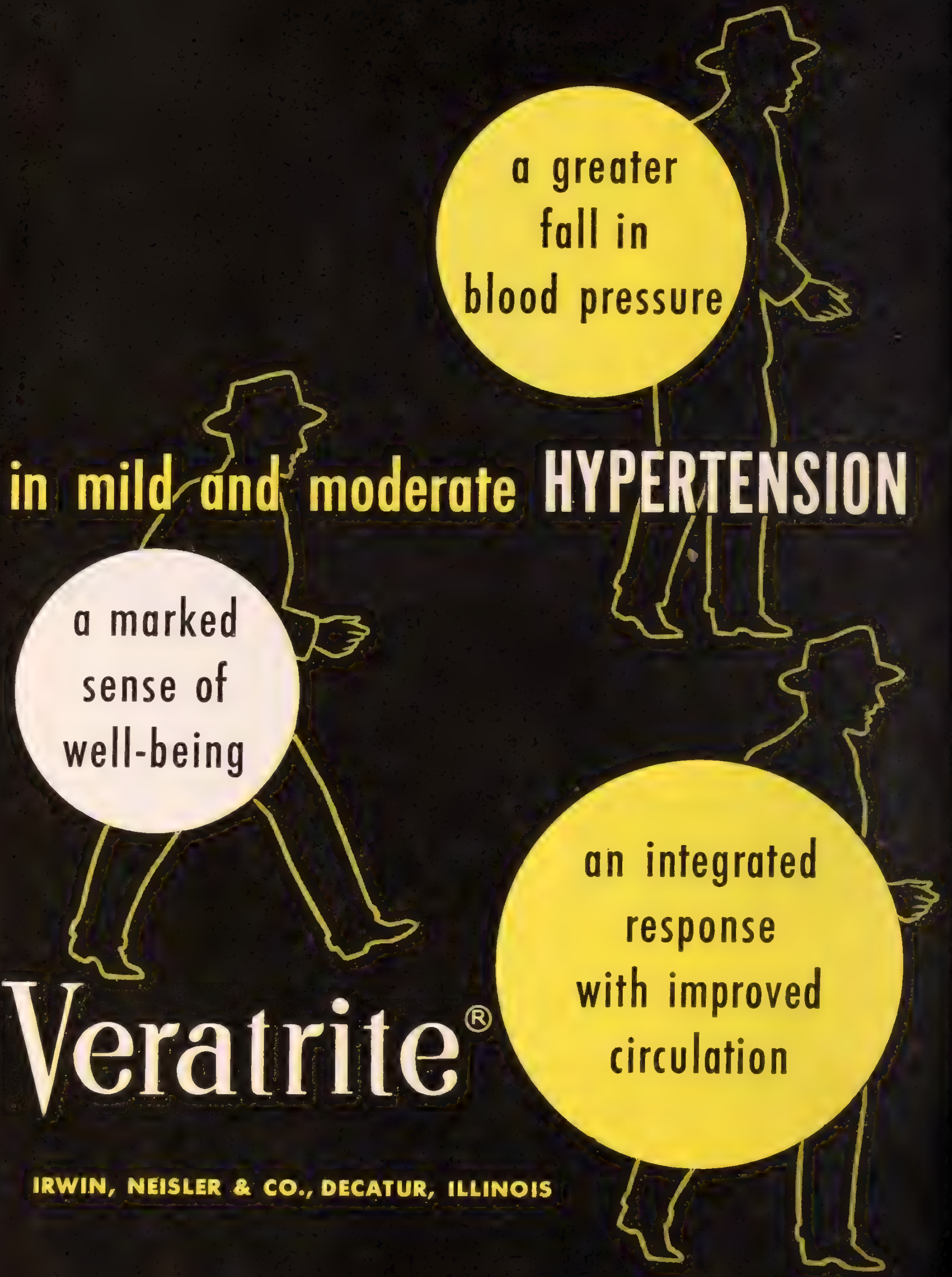
ethical pharmaceuticals of merit since 1878



a greater fall in blood pressure

in mild and moderate HYPERTENSION

a marked sense of well-being

an integrated response with improved circulation

Veratrite®

IRWIN, NEISLER & CO., DECATUR, ILLINOIS

Veratrite®

(IRWIN, NEISLER)

OF THE MANY DRUGS commonly used to lower arterial pressure in essential hypertension, veratrum viride Biologically Standardized in CRAW UNITS is *the drug that produces a physiologic fall in blood pressure.* A prominent feature in the integrated response to oral doses of veratrum viride in CRAW UNITS is a reduction in peripheral resistance without disrupting circulatory equilibrium.

VERATRITE is a practical modification of this effective hypotensive drug for everyday management of mild and moderate hypertension. VERATRITE is notable for its prolonged action, therapeutic safety and simplicity of administration.

Each VERATRITE tabule contains: Biologically Standardized veratrum viride 3 CRAW UNITS; sodium nitrite 1 grain; phenobarbital 1/4 grain. Supplied in bottles of 100, 500, 1000.

VERTAVIS for severe hypertension also available. The CRAW UNIT is an Irwin-Neisler research development.

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when mental depression and nutritional inadequacy manifest themselves as

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physical debility

℞ 'Dexedrine' plus essential B vitamins

Theptine

a light and palatable antidepressant and restorative elixir

Each 5 cc. (1 teaspoonful) contains:
'Dexedrine'* Sulfate, 2.5 mg.; thiamine hydrochloride, 5.0 mg.; riboflavin, 0.45 mg.; niacin, 6.7 mg.

Smith, Kline & French Laboratories, Philadelphia

*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

Easter Island Figurine; Photo courtesy University of Pennsylvania Museum

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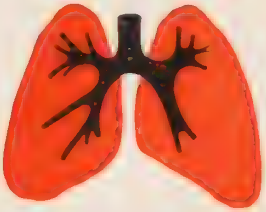
stable
crystalline

Sodium Penicillin G

by Tongue, by Lung, by G. I. Tract

By Tongue:

Sublingual Penalev tablets (50,000 or 100,000 units) are rapidly absorbed, quickly create therapeutic penicillin blood levels.



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Potent penicillin G aerosol solutions can be prepared readily by dissolving Penalev tablets in water or normal saline.

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Penalev tablets dissolve promptly and completely in milk, fruit juices, or infant formulas, without appreciably changing their tastes.

PENALEV
SOLUBLE TABLETS
CRYSTALLINE
PENICILLIN
50,000
SHARP & DOHME

Penalev

Soluble tablets sodium penicillin G: 50,000 and 100,000 units; vials of 12 tablets crystalline. Sharp & Dohme, Philadelphia 1, Pa.

Penalev®

SHARP & DOHME

Soluble Tablets Crystalline

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FOR LIVER DAMAGE

LIVER BIOPSY BEFORE TREATMENT

LIVER BIOPSY 53 DAYS AFTER TREATMENT

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MEONINE®
dl-methionine
the
amino acid
most essential
for
liver regeneration

This "easily tolerated, apparently nontoxic amino acid"[1] has established a clinical record of effectiveness as an adjunct to other dietary and supportive measures in the management of liver damage due to pregnancy, or to malnutrition, allergy, alcoholism, or chemo-toxic agents.

MEONINE TABLETS: 0.5 Gm., bottles of 100 for oral therapy.

CRYSTALLINE MEONINE: Bottles of 50 Gm. for preparation of intravenous solutions.

1. Localio, S. A.; Gillette, L., and Hinton, J. W.: Surg., Gynec. & Obst. 89:69 (July) 1949.

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WYETH Incorporated • Philadelphia 3, Pa.

CONSTANT INSPECTION for BABY'S PROTECTION

INSPECTOR
NESTLÉ'S

We don't let dust hide in our plant!

Cleanliness is just one aspect of the care we take to make Nestlé's Evaporated Milk safe for your patients. Careful controls at every step from herd inspection to examination of the filled cans assure milk of good quality, uniform in composition.

Antirachitic protection is assured by the addition of 400 U.S.P. units of genuine vitamin D_3 per pint. Nestlé's was the first evaporated milk to be so fortified.

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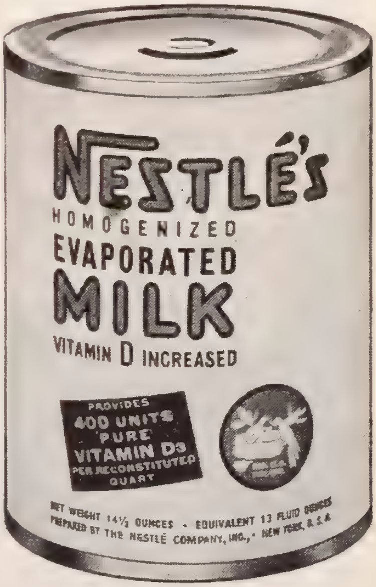
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HOMOGENIZED
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MILK
VITAMIN D INCREASED
PROVIDES 400 UNITS PURE VITAMIN D3 PER RECONSTITUTED QUART
NET WEIGHT 14½ OUNCES · EQUIVALENT 13 FLUID OUNCES
PREPARED BY THE NESTLÉ COMPANY, INC., · NEW YORK, U.S.A.

DOCTORS EVERYWHERE KNOW NESTLÉ'S

a valuable nutritional supplement during pregnancy and lactation

PRECALCIN®

Each colorful, two-tone capsule provides, in a dry, **oil-free** powder:

DICALCIUM PHOSPHATE (Anhydrous) . . . . . 0.45 Gm. (7 grains)
BONE PHOSPHATE* . 0.15 Gm. (2⅓ grains)
VITAMIN A (Ester) . . . . 2,000 U.S.P. Units
VITAMIN D (Irradiated Ergosterol) . . . . 400 U.S.P. Units
THIAMINE HCl . . . . 3.00 mg.
RIBOFLAVIN . . . . 2.00 mg.
NIACINAMIDE . . . . 10.00 mg.
ASCORBIC ACID . . . . . . 30.00 mg.
FERROUS GLUCONATE . 45.00 mg.
*FLUORINE CONTENT . 0.07 mg.

No fishy taste or odor.

SUPPLIED: Bottles of 100. Available through all prescription pharmacies.

Samples and literature on request.

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VITAMIN PRODUCTS, INC.
MOUNT VERNON, N. Y.

100 CAPSULES
WALKER'S
PRECALCIN

BRIOSCHI
A PLEASANT ALKALINE DRINK

SOLD AND FAVORED SINCE 1880
BRIOSCHI

Actively alkaline. Contains no narcotics, no injurious drugs. Consists of alkali salts, fruit acids, and sugar, and makes a pleasant effervescent drink.

Send for a sample

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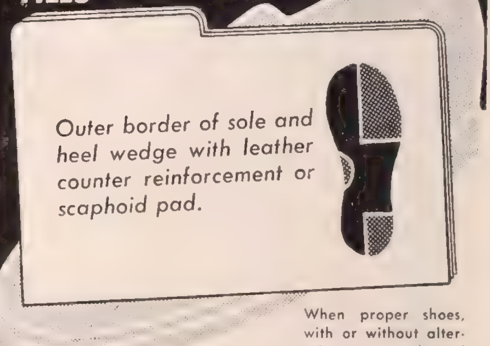
FROM OUR PRESCRIPTION FILES



Outer border of sole and heel wedge with leather counter reinforcement or scaphoid pad.

When proper shoes, with or without alterations, are indicated you can recommend Pediformes with confidence.

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FOOTWEAR
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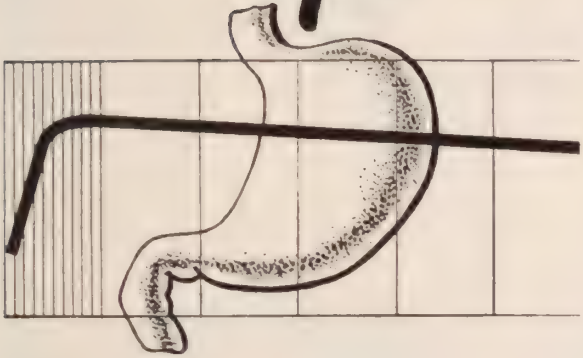
Rapid and prolonged

antacid control



Whether for prompt relief of pain or for continuous control of acidity, both speed of action and prolonged effectiveness are important.

The antacid action of Alzinox develops rapidly and continues long.

A true buffer, Alzinox is acid-neutralizing but not alkalinizing. With glycine incorporated within its chemical structure, the clinical effectiveness is enhanced, yet the aluminum content is 40% less than that of dried aluminum hydroxide.

ALZINOX

(PATCH)

Brand of Dihydroxy Aluminum Aminoacetate

How supplied

ALZINOX TABLETS: 0.5 Gm. (7.7 gr.)—bottles of 100 and 500.

MAGMA ALZINOX: 0.5 Gm. (7.7 gr.) per 5 cc.—bottles of 8 oz.

ALZINOX with PHENOBARBITAL (¼ gr.) and HOMATROPINE METHYL BROMIDE (1/100 gr.)—bottles of 100 and 500.

MAGMA ALZINOX with PHENOBARBITAL (⅛ gr. per 5 cc.) and HOMATROPINE METHYL BROMIDE (1/100 gr. per 5 cc.)—bottles of 8 oz.

THE E. L. PATCH COMPANY, Stoneham, Mass.

for the patient
in **pain . . .**

Pantopon—whole opium in purified form—combines the alkaloids of opium to provide a smooth, balanced analgesic effect. The presence of *all* the opium alkaloids tends to reduce the incidence and intensity of side reactions. Pantopon, available in four convenient forms, is applicable in almost any case where severe pain is a problem: ampuls, hypodermic tablets, oral tablets and powder.

HOFFMANN-LA ROCHE INC. • NUTLEY 10 • N. J.

Pantopon®

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HIGHER NEW ANTIRHEUMATIC THERAPY
SALICYLATE LEVELS
VITAMIN C PROTECTION

Pabasyl Tablets represent a new concept in antirheumatic therapy with the salicylates. Each enteric-coated tablet supplies:

Para-Aminobenzoic Acid*	0.3 Gm. (5 grains)
Sodium Salicylate	0.3 Gm. (5 grains)
Ascorbic Acid	0.01 Gm. (10 mg.)

Pabasyl Tablets afford rapid relief of pain, fever and inflammation in many rheumatic diseases because they provide:

1. **HIGHER** Salicylate Levels — With simultaneous administration, Paba and salicylates have a reciprocal action that increases salicylate concentration in the blood.

**As the Sodium Salt.*

2. **LOWER** Salicylate Dosage — Paba not only boosts the salicylate level attainable with a given salicylate dose but also in itself contributes analgesic and antipyretic actions.

3. **Vitamin C Protection** — Ascorbic acid maintains Vitamin C levels often depleted by fever and salicylate therapy.

Enteric coating allays gastric irritation.

pabasyl

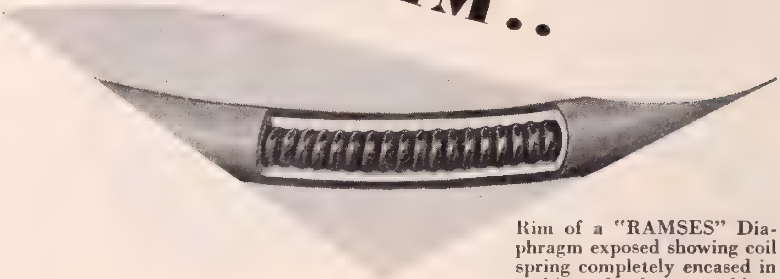
In Bottles of 100 Tablets.

Dosage adult: 2 tablets three times a day.

I.V.C®

IVES-CAMERON COMPANY, INC.
22 EAST 40th STREET, NEW YORK 16, N. Y.

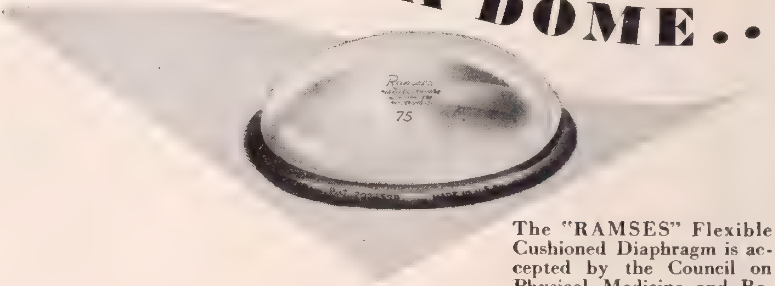
COMFORT IN A RIM..



Rim of a "RAMSES" Diaphragm exposed showing coil spring completely encased in cushion of soft gum rubber.

A coil spring with the necessary tension to hold it firmly against the vaginal walls can produce discomfort unless it is properly cushioned. Examine the rim of the "RAMSES"* Diaphragm and you will find that the coil spring is encased in soft rubber tubing, which acts as a protective cushion. This construction is patented and available only in the "RAMSES" Flexible Cushioned Diaphragm.

PROTECTION IN A DOME..



The "RAMSES" Flexible Cushioned Diaphragm is accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association.

A diaphragm dome must not only occlude the cervix—it must have a reasonably long life. The exclusive process used in manufacturing the dome of the "RAMSES" Diaphragm from pure gum rubber produces velvet smoothness, plus flexibility and long life.

A comparison will quickly reveal the advantages of supplying the patient with the patented "RAMSES" Flexible Cushioned Diaphragm.

"RAMSES" Diaphragms are available in sizes ranging from 50 to 95 millimeters in gradations of 5 millimeters.

gynecological division

Julius Schmid, Inc.

423 West 55th Street, New York 19, N. Y.

quality first since 1883

*The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

"Nowhere in medicine are more dramatic therapeutic effects obtained than those which follow estrogen therapy in the girl who has failed to develop sexually. A daily dose of 2.5 to 3.75 mg. of 'Premarin' given in a cyclic fashion for several months may bring about striking adolescent changes in these individuals."*

* Hamblen, E. C.: Some Aspects of Sex Endocrinology in General Practice, North Carolina M. J. 7:533 (Oct.) 1946.

"PREMARIN"®

Estrogenic Substances (water-soluble) also known as Conjugated Estrogens (equine).

"Premarin"—a naturally occurring conjugated estrogen—long a choice of physicians treating the climacteric—has been earning further clinical acclaim as replacement therapy in hypogenitalism.

In the treatment of hypogenitalism, "Premarin" supplies the estrogenic factors that are missing, and thus tends to eliminate the manifestation of the hypo-ovarian state. The aim of therapy is to develop the reproductive and accessory sex organs to a state compatible with normal function.

Four potencies of "Premarin" permit flexibility of dosages: 2.5 mg., 1.25 mg., 0.625 mg., and 0.3 mg. tablets; also in liquid form, 0.625 mg. in each 4 cc. (1 teaspoonful).

While sodium estrone sulfate is the principal estrogen in "Premarin," other equine estrogens...estradiol, equilin, equilenin, hippulin...are probably also present in varying amounts as water-soluble conjugates.

Ayerst, McKenna & Harrison Limited
22 East 40th Street, New York 16, N. Y.

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External Cod Liver Oil Therapy

DESITIN

OINTMENT

Contains Crude Cod Liver Oil, Zinc Oxide, Talcum, Petrolatum and Lanolin

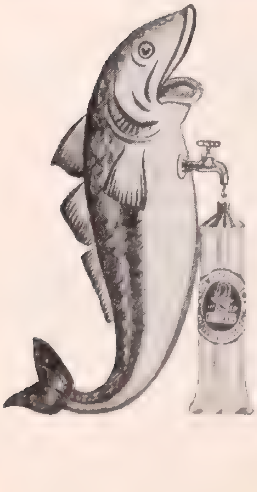
Used effectively in GENERAL PRACTICE for the treatment of Wounds, Burns, Indolent Ulcers, Decubitus, Intertrigo, Skin Lesions, Hemorrhoids, Anal Fissures, etc.

In PEDIATRICS for the treatment of Diaper Rash, Exanthema, Chafed and Irritated Skin caused by Urine, Excrements or Friction, Prickly Heat and in the nursery for General Infant Care.

Fatty acids and vitamins are in proper ratio, thereby producing optimum results. Non irritant, acts as an antiphlogistic, allays pain, stimulates granulation, favors epithelization. Under Desitin dressing, necrotic tissue is quickly cast off. Dressing does not adhere to the wound. In tubes 1 oz., 2 oz., 4 oz., and 1 lb. jars.

Desitin Medicinal Dusting Powder is super fatted with crude cod liver oil in a non irritating powder base. Indications: In infant care in the treatment of IRRITATED SKIN, SUPERFICIAL WOUNDS, DECUBITUS, INTERTRIGO, PRURITUS and URTICARIA. In 2 oz. Shaker-Top Cans.

Professional Samples on Request



For the Medical Profession

DESITIN

CHEMICAL COMPANY

70 SHIP STREET • PROVIDENCE • RHODE ISLAND

NOW. . . . full PENICILLIN dosage in these palatable forms

White's **drop-cillin**

50,000 Units* in One Dropperful

for the infant or young child—tasty when taken directly, may be added to formula or other liquid—a concentrated solution; no tablets to crush; often obviates painful injections.

White's **dram-cillin**

100,000 Units* in a Teaspoonful

for the child or adult patient—a truly delicious liquid penicillin—easy to give, easy to take, often obviates injections, assures a ready adherence to dosage schedules.

DROP-CILLIN—in 9 cc. "drop-dosage" bottles containing 600,000 units of penicillin. Solution is pink in color. Accompanying calibrated dropper, filled to mark, delivers approximately 20 drops (0.75 cc.) containing 50,000 units of penicillin.*

DRAM-CILLIN—in 60 cc. "teaspoonful-dosage" bottles containing 1,200,000 units of penicillin. Solution is ruby-red in color. Teaspoonful (approximately 5 cc.) provides 100,000 units of penicillin.*

*(buffered penicillin G potassium)

White LABORATORIES, INC., PHARMACEUTICAL MANUFACTURERS,
NEWARK 7, N. J.

CAUTION!

vitamins being destroyed

All cooks, even the best, "spoil the broth." Available statistics indicate that vitamin losses during the preparation of food range as high as 89 percent for certain water-soluble and heat-labile vitamins. Seasonal variations of vitamin content and improper food selection contribute further to a suboptimal intake of essential vitamins.

GELSEALS MULTICEBRIN

(PAN-VITAMINS, LILLY)

Prophylaxis of deficiencies of no less than the nine essential water and fat-soluble vitamins is assured by the daily administration of one Gelseal 'Multicebrin.' Two to five Gelseals 'Multicebrin' each day are indicated whenever vitamin deficiencies are complicated by such contributing factors as pregnancy, wasting diseases, and the anemias.

ELI LILLY AND COMPANY • INDIANAPOLIS 6, INDIANA, U.S.A. Lilly

NEW YORK STATE
JOURNAL OF MEDICINE

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VOLUME 50 MARCH 15, 1950 NUMBER 6

Editorials

Antihistaminic Drugs

Over the radio each day and often several times daily, listeners are urged to purchase the new antihistaminic preparations, and by particular brands, at their neighborhood drugstores. All these preparations are said to be entirely safe, free from all harm and danger, and practically certain to prevent and to cure promptly the common cold together with its early discomforts. Emphasis is placed on the fact that these preparations can be purchased over the counter without prescriptions.

Says the *New England Journal of Medicine* in part:[1]

> Similar advertisements appear in the daily newspapers either in full-page spreads or in layouts of only slightly more modest proportions. Several such advertisements by different manufacturers or distributors often appear in the same issue of the daily paper. In each of these radio commercials or newspaper advertisements, the listener or reader is told to read the December issue of the *Reader's Digest* for the proof of their claims. . . . .
>
> The validity of the claims for the antihistaminic drugs as cold cures has been criticized in a brief comment that appears in the December 10, 1949, issue of the *Journal of the American Medical Association.* In this it is stated that the Council on Pharmacy and Chemistry at a recent meeting warned against the indiscriminate use of the antihistaminic substances, which are now being promoted for the prevention of colds or even for the treatment of those suffering from colds. The Council, in contrast to the *Reader's Digest* authority, is not convinced that the data are sufficient to warrant the positive statements and claims that are being made. The Council further warns that cases have been reported in which users of these drugs became drowsy and even fell asleep while at work and, occasionally, while driving cars or operating machinery. The Council also believes that experience with these substances is still insufficient to determine whether they are harmless when used over long periods and indicates that the amounts taken in persistent colds may exceed what has been established as normally safe. . . . .

As reported in the daily press, the Civil Aeronautics Administration's medical divi-

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[1] Jan. 19, 1950, p. 105.

LIBRARY OF THE

sion has issued a warning to pilots "to be careful about operating airplanes after using antihistamine drugs in treatment of colds .... unless they were certain that it would cause them no side-reaction, such as drowsiness and dizziness. . . . ."[2] As of the same date, the U.S. Food and Drug Administration has ruled "that some of these drugs are safe when taken in recommended dosages, and they are now on general sale under various trade names." A few susceptible individuals may have side-reactions, and it would be dangerous for such individuals to operate aircraft while taking such preparations.

New York Medicine comments editorially:[3]

> The dangers to children of the new antihistaminic type drugs, now sold openly over the drugstore counter without a prescription of a physician, are stressed in a new review prepared by the Special Committee on Child Welfare of the Medical Society of the County of New York.
>
> The Child Welfare Committee experts warn parents that these new antihistamine drugs may be more highly toxic to children than to adults. The mere fact that they can be sold over the counter like a harmless drug does not mean that they should, carelessly, be left in places where small children can reach them and swallow them, or given to children in a high dosage without prescription. . . . .

Three instances of fatalities in children are cited.

We agree heartily with the logical verbiage of the editors of the *New England Journal of Medicine* in condemning the sales promotion methods of the manufacturers of these preparations directed to the public.

> Whatever the merits of antihistaminic agents may prove to be, the methods used in advertising and promoting the sales of these substances are certainly to be decried. Although these "plugs" may not be quite so revolting to radio listeners as some of the commercials addressed to young women with menstrual discomforts, they represent unfortunate exaggeration and distortion over which there is at present no effective control. Furthermore, this is the most striking example to date of the advertising methods of manufacturers and promoters who are steadily going over the heads of the members of the medical profession in attempts essentially to force physicians through their trumped-up public demand to accept remedies before their usefulness has been adequately substantiated and ill effects determined by the usual slow but more thorough and critical methods of clinical investigation.
>
> The medical profession and indeed all thoughtful persons interested in the health and welfare of the people have good reason to be shocked at this type of medical advertising direct to the public. Meanwhile, the promoters of these methods are gloating over the rapid results they are getting, and they count their returns in the millions.[1]

Is it too much to hope that in the course of time conscientious manufacturers of pharmaceutic products will see to it that such abuses of publicity by a few offenders are discontinued? It would be an outstanding public service.

---

[2] New York Herald Tribune, January 20, 1950.

[3] New York Med. **61**: 14 (Feb. 5) 1950.

What Are the Facts?

At the American Conference of Academic Deans on January 9, 1950, some rather vitriolic charges were hurled at the medical profession by the academicians.[1] As reported, it was alleged that "the medical profession is largely dictated by 'Petrillo and Fishbein economics,' " a statement by Dean Simon Leland of Northwestern University which appears to us to be as untrue as it is unquestionably ungrammatical. Viewed as a means of obtaining a little evanescent publicity by the mere sacrifice of exactitude, the above allegation by the Dean, if correctly reported, is at least as valuable as the general statement of the Committee of Deans to the effect that "Thousands of qualified premedical students are not admitted to medical schools, even though the nation needs doctors. . . . ."[1]

What are the facts? The *Journal of the American Medical Association* says:

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[1] New York Times, January 10, 1950, p. 1 and 13.

. . .enrollments of freshmen medical students this year numbered 6,986, an increase of 298 over last year. The critics had reported "there were 6,387 places to fill in the freshman class." Failures run from 10 to 12 per cent, instead of only 3 to 5, as reported to the conference.

While medical schools are working to lower this rate, a certain percentage of failures must be expected, or medical education will suffer from lack of critical screening and the public will receive medical care from physicians with inferior training. Certainly, one would not want to return to the deplorable situation that existed at the turn of this century when diploma mills were rampant.

The critics of medical education fail to point out that the physician population is increasing faster than the general population. It is the medical profession that took the leadership in 1905 in raising the standards of medical education.

Today, the profession is extending that leadership in many fields so that the public may benefit. One example is the survey of medical education now being made under the supervision of a committee appointed under the joint auspices of the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association. President Alan Valentine of the University of Rochester is chairman of this committee.

This comprehensive survey will provide information on the preparation of students for the study of medicine, undergraduate work, and graduate and postgraduate training. No one who truly is interested in the welfare of this nation would want to see the adoption of plans which might cause a return to the medical chaos that existed forty to fifty years ago. If medical advances are to be continued they must be made on the basis of careful study, planning, and experience.[2]

We confess to a feeling of shock that a supposedly serious and responsible conference of educators should permit themselves the dubious luxury of sounding off so lightheartedly for reasons apparently best known to themselves. The factual studies of the A.M.A. relating to the training and proposed educational standards for doctors of medicine have been available for many years. It is unfortunate, to say the least, that such sources as well as the history of the A.M.A. should not have been consulted by the Conference of Deans prior to the release to the public press of allegations more likely, in the end, to reflect doubt of their qualifications than to belittle the medical profession.

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[2] J.A.M.A. 143: 183 (Jan. 21) 1949.

Current Editorial Comment

Dr. Mustard Takes Over. Commencing his work as executive director for the State Charities Aid Association on January 1, 1950, Dr. Harry S. Mustard

> brings to the Association broad professional experience in the field of human welfare. In public health organization and administration, in the study of public health problems, and in furthering the many social aspects of public health programs, he has worked in rural districts and small towns as well as in large cities. Therefore he is admirably prepared to take charge of the Association's State-wide work in health and welfare. At the time of his appointment he was Commissioner of Health for New York City.
>
> The work of the Association and its impact on the State were epitomized by Dr. Mustard when he said:
>
> "There is today more need than ever for the kind of voluntary health and welfare work that the Association does. It provides, on an intensive State-wide basis, for the organization of groups of citizens interested in health and welfare, and it ensures their influence upon and participation in this work. This sort of interest and influence is absolutely necessary if, in the development of health and welfare programs, society is to avoid too much government on the one hand and too little on the other."[1]

We agree heartily with Dr. Mustard's statement. Too frequently we have observed a tendency in recent years to minimize voluntary local interest and community resources. Health and welfare work as we now observe it has expanded into a vast structure of great complexity. Much of it in this State was initiated by voluntary associations of citizens whose interest, ingenuity, resourcefulness, and

[Continued on page 670]

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[1] State Charities Aid Association News, January, 1950.

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FACTS ABOUT NUTRITION

Prepared by the School of Nutrition, Cornell University, Ithaca
Norman S. Moore, M.D., Editor

Protein Nutrition

I. The Significance of Protein Depletion

Malnutrition as seen by the physician in this country today is commonly associated with disease. In general, the nutrition of the American people is good. Simple starvation is not often seen in medical practice; thus, when undernutrition occurs, the disease responsible for it is usually discoverable. Formerly, the approach to therapy was to treat the underlying disease, by whatever method was currently advocated, and to let the nutrition take care of itself. Today, however, the importance of treating malnutrition along with the specific disease is becoming more and more recognized. Indeed, improvement of nutrition is the only treatment available in many diseases, so that therapeutic procedure is often the reverse of that formerly practiced: The malnutrition is treated and the disease is left to take care of itself. Considered in this light, the use of "supportive therapy" need no longer be regarded as an admission of therapeutic failure, but rather as a positive and often vital contribution to the patient's treatment.

Recognition of malnutrition thus becomes a primary responsibility of the physician. This is especially true in the case of protein deficiency, because its effects are so serious and because its correction is often a prolonged and arduous procedure. Protein deficiency causes decreased resistance to infection and shock, delayed wound healing, and impaired gastrointestinal and liver function.[1] The diagnosis of protein undernutrition is ordinarily not difficult—the greatest impediment to its diagnosis is the failure of the physician to think of it. A history of weight loss and of inadequate protein intake are the two most important considerations in making the diagnosis. Another is history of protein loss, as in hemorrhage, draining fistula, diarrhea, exudation, proteinuria, chronic pulmonary disease, fractures and other injuries, hyperthyroidism, and chronic fever. In addition to weight loss, the patient with protein depletion complains of weakness, fatigue, and loss of appetite, and may have some degree of anemia, hypoproteinemia, and edema. Hypoproteinemia indicates fairly severe depletion of the body proteins, because in starvation the plasma proteins are replaced at the expense of other body proteins and are thus kept up until the tissue proteins are severely diminished.

The adult human body contains about 20 pounds of protein.[2] Roughly one fourth of this is muscle protein, one sixth is supporting tissue (bone and cartilage), while the remainder consists chiefly of cellular proteins of the glandular organs, nervous system, and skin, plus the protein of the blood and extracellular fluid. A major portion of the body proteins are enzymes; these include most of the muscle proteins and other cell proteins.[3] A smaller but equally important fraction are the antibodies, hemoglobin, and some of the hormones. Thus it is seen that a state of protein deficiency means a loss of many important substances from the body. It is not possible, at our present stage of knowledge, to determine, except in a few instances, the extent of decrease of individual enzymes or hormones in protein-deficiency states, nor the individual effects of their decrease, but it is certain that many of these vital substances are altered, some more than others. It is equally certain that during periods of stress, as in disease or surgery, there is an increased requirement for certain of the enzymes because of an increase of many of the body's biochemical processes, and, if protein intake cannot supply the demand, recovery is slowed or prevented.

Little of the body protein is inert, or purely structural. Even such proteins as those of the skin and cartilage have been shown to enter into the processes of metabolic interchange of amino acids, although much more slowly than the proteins of the more active organs, such as kidney, liver, muscle, etc. Schoenheimer found that when a single isotopically labeled amino acid, lysine for example, was fed to rats for three days along with a normal diet, about half of the labeled lysine was incorporated into the tissue proteins.[4] The protein of the physiologically active organs, such as liver, kidney, testis, and blood serum, contained relatively large amounts of the recently-fed lysine, while the less active tissues, such as skin, contained small amounts. He further showed that part of the labeled nitrogen had been transferred from the lysine to other amino acids in the protein molecules. Further evidence of the interconvertibility of the amino acids of the tissue proteins come from the work of Whipple and his associates, who showed that, in anemic dogs, intravenously administered plasma was converted in large part into hemoglobin.[5] The reverse was also true, although in this instance the hemoglobin was given intraperitoneally, because of its renal intolerance. They further showed that intravenous amino acid mixtures rapidly formed both hemoglobin and plasma protein.

This newer knowledge of protein and amino acid metabolism has caused us to alter our concept of tissue "wear and tear" and of the causes of nitrogen excretion. It has long been known that some protein must always be supplied to maintain the adult organism, no matter how much energy is supplied him by fats and carbohydrates. Numerous experiments have been performed in an attempt to determine the so-called basal nitrogen requirement. It is now accepted, by various workers, that the smallest amount of protein on which the average adult can continuously maintain health, according to Recommended Dietary Allowances, is 70 Gm. daily. It was formerly thought that this represented, mainly, protein which was broken down in the death of individual cells.

The fundamental discoveries of Schoenheimer, Rittenberg, and others, working with isotopes, have given us the concept of the dynamic state of the body proteins: Each protein molecule is composed of several hundred or more amino acid units.[4] The fluid in which the protein molecules occur, whether it be intracellular or extracellular, also contains in solution free amino acids in small concentration (3-40 mg. per 100 cc.). The amino acids of the protein molecules are continuously breaking off and exchanging places with free amino acids in the surrounding tissue fluid. These may then diffuse through the fluid, to be incorporated into other protein molecules, or enter the liver to be deaminated and oxidized or perhaps be excreted by the kidney, or be changed into glucose or fat.

Thus it is seen that the body protein is in a constant state of flux, and that protein breakdown occurs not as a complete disintegration of the molecule with death of the cell, but as intermittent release and replacement of single amino acid units, with the maintenance of the integrity of the protein molecule and the living cell. Nitrogen excretion thus occurs because there are always free amino acids in the blood entering the liver, where enzymes bring about their deamination and oxidation. The rate of deamination depends upon many factors, including concentration of amino acids, availability of carbohydrate and fat for energy production, and various hormonal actions.

It was formerly taught that, in starvation, body stores are depleted in a stepwise fashion: First, the carbohydrate stores are utilized until they are exhausted, then the fat depot is called upon, and the body continues to live upon its fat until that, too, is gone; finally, the body protein itself is attacked, and in this final stage protein depletion was supposed to proceed rapidly, with wasting of muscle, liver, etc. until death rapidly ensues. We now know that the process is not so nicely regulated, and that utilization of the body protein actually begins on the first day of fasting. This occurs fairly slowly at first, gradually increasing during the first twenty-four hours, because much of the caloric requirement is initially obtained from stored carbodydrates. After the carbohydrate store has been somewhat diminished, the rate of protein depletion is then dependent on the amount of stored fat, so that an obese person breaks down his body proteins more slowly during fasting than does a thin one. However, as pointed out above, a minimum of 20 Gm. of protein daily is always destroyed, even when caloric intake is adequate. Actually, the adult male during starvation loses an average of about 50 Gm. of protein daily.[6]

Fat is the only important form of food storage in the body. Carbohydrate stores consist of a total of about 100 Gm. of liver glycogen, 5 Gm. of blood sugar, and 150 Gm. of muscle glycogen. Muscle glycogen cannot, however, be considered as storage, because it cannot be appreciably depleted. Thus the carbohydrate store totals 105 Gm., which will supply 420 calories, enough to maintain life for six to eight hours. Whether or not any actual protein storage occurs is a debated matter; many workers believe that there is a reserve supply of about 40 to 60 Gm. of a readily utilizable protein occurring chiefly in the extracellular fluid. The livers of animals have been shown to increase their protein content by about 15 per cent following a period of high protein intake, and this excess protein is then rapidly lost during starvation. It would seem, therefore, that there is some protein in the body which is not intimately concerned in cell structure and function, and which can be readily utilized without detriment to the organism. The amount, however, is probably relatively small—no more than a day's supply.

Charles R. Shaw, M.D.

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Current Editorial Comment

[Continued from page 667]

private means were dedicated to the work. The facilities of the several communities and, above all, the desire of the citizens for better health and welfare conditions were united in exploring ways and means to bring them about. Only when the end of local resources had been reached was aid of government sought.

We feel certain that Dr. Mustard will succeed in his further development of health and welfare programs in preserving and stimulating citizen and community influence in the work of the S.C.A.A. and in avoiding the invitation to lethargy inherent in too much government with its lotus flower, subsidy.

He who burns his candle when the sun shines must soon expect to go to bed in the dark.—Anonymous

Correspondence. The attention of our readers is directed to the letters in the Correspondence Column, page 729, relative to the difficulties encountered by pharmacists in filling prescriptions. It is important that doctors follow prescribed regulations, for upon them rests largely the responsibility in the matter.

If you have trusted your constitution in the hands of a quack, why not act consistently and send your watch to be mended by a blacksmith?—Anonymous

State Medicine in Australia. A new "pay-half" medical scheme proposed by the Australian Health Minister is described at length in the January 21 issue of the *Journal of the American Medical Association.*[1] The scheme was apparently promulgated by regulations of the government just prior to the federal elections of December 10, 1949, in the hope of winning cooperation from the doctors sufficiently rapidly to have a scheme established by the election date. The federal council of the British Medical Association in Australia stated, "The medical plan is not acceptable to the medical profession."

The proposal is deserving of careful reading by all physicians here as clearly demonstrating what is designated by the profession there as "political bribery." We regret that space is not available in these columns for reprinting this valuable but lengthy presentation of a situation which may well be duplicated anywhere under socialized medicine.

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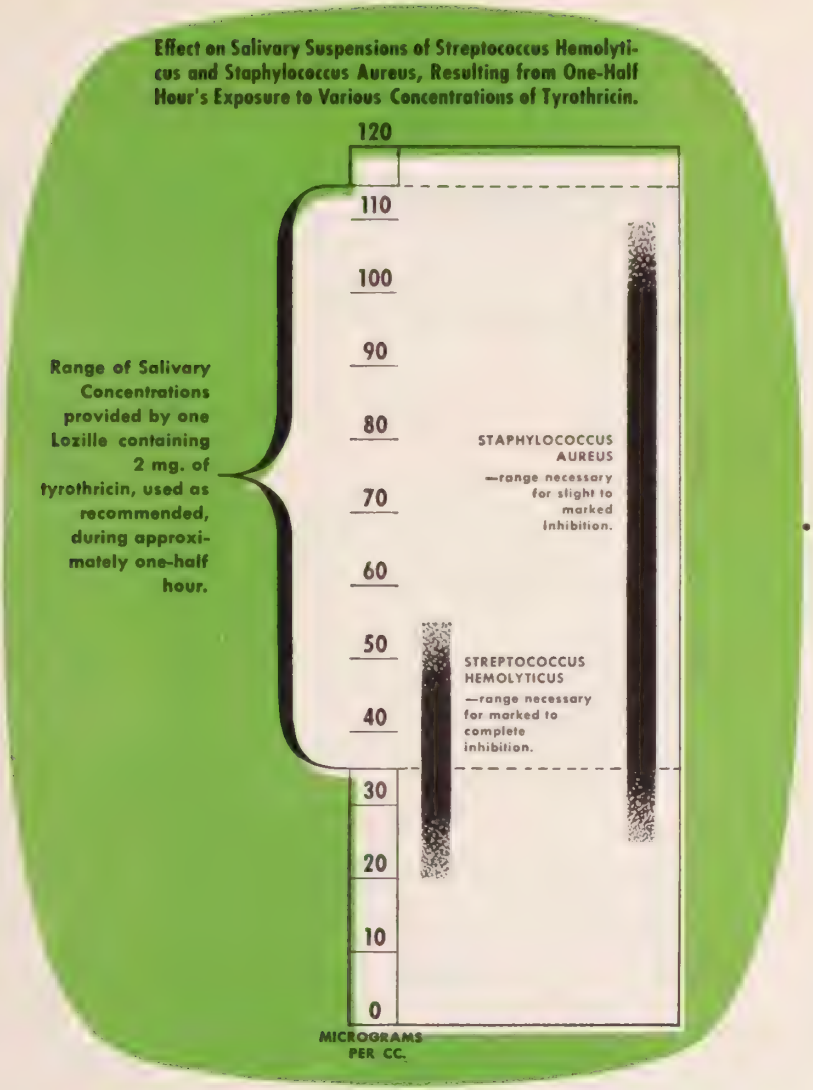
[1] J.A.M.A. **142:** 195 (Jan. 21) 1950.



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Scientific Articles

CARCINOMA OF THE COLON AND RECTUM

Henry Bruner Sutton, M.D., and John Winslow Hirshfeld, M.D., Ithaca, New York

(From the Tompkins County Memorial Hospital and the Cornell University Infirmary)

MANY doctors are apt to regard cancer of the colon and rectum as a rare disease. There is considerable justification for this attitude, since in the course of a year a man occupied with a busy general practice is not likely to see more than one or two patients with cancer of the colon or rectum. Although these cancers are rare compared to such diseases as acute appendicitis, coronary thrombosis, or lobar pneumonia, they are far from rare when considered in terms of other cancers. The figures on cancer incidence collected by the Division of Cancer Control of the New York State Health Department are probably as reliable as any. They demonstrate that, when both sexes are considered together, the colon, including the rectum, is the most common site of cancer (Table 1).

TABLE 1.—Incidence of Cancer in Upstate New York During the Years 1942 to 1944*

Site	Incidence per 100,000 Both Sexes	Male	Female
All sites	242.4	222.8	262.0
Intestine and rectum	33.7	32.7	34.8
Breast	30.3	0.7	60.0
Skin	24.5	29.2	19.8
Stomach	22 3	27.1	17.6
Cervix	14.9	....	29.7
Prostate	11.6	23.2	....
Lung	9.0	14.7	3.2
Bladder	8.3	11.5	5.2
Fundus uteri	8.3	....	16.4
Ovary	6.1	....	12.2

* These figures were obtained from the Division of Cancer Control of the New York State Department of Health.

If the figures are tabulated separately for males and females, the colon, including the rectum, leads in the male and is second only to the breast for women. Unfortunately, the figures published by the Division of Cancer Control of the New York State Health Department are prepared so that cancer of both the large and small intestine are grouped together. It is not possible, therefore, to derive the exact incidence of cancer of the colon and rectum. Cancer of the small intestine, however, is so rare that it can almost be disregarded, and the data in Table 1 can be regarded as giving an accurate picture of the incidence of cancer of the colon and rectum in relation to other malignancies.

It is agreed by everyone that, if a given cancer is to be cured, it must be diagnosed and treated early. Cancer of the colon and rectum is no exception to this rule. These lesions are readily curable by surgical procedures which do not carry a high mortality or prolonged morbidity, provided they are diagnosed and treated early. If they go undiagnosed and untreated for some time, treatment becomes hazardous, difficult, prolonged, and often entirely hopeless.

The infrequency of cancer of the colon and rectum in relation to such common diseases as peptic ulcer, acute appendicitis, hemorrhoids, and coronary thrombosis is perhaps the chief reason that these cancers go undiagnosed for considerable periods. If one doesn't think of a disease when considering a problem in differential diagnosis, he usually doesn't arrive at the correct diagnosis. Since the average doctor in general practice has to see approximately 3,000 patients before he encounters one with cancer of the colon or rectum, it is perfectly natural for him to fail to think of the disease in his daily problems of differential diagnosis. In spite of the fact that these cancers are rare in terms of other diseases they are among the most common cancers. Cancer of the colon, including the rectum, usually heads the list in tables of cancer incidence. For this reason it deserves the utmost consideration in the differential diagnosis of all abdominal and rectal diseases. The purpose of this paper is to emphasize some of the manifestations of these cancers which aid in making a diagnosis and to demonstrate the simplicity of

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Presented at a meeting of the Sixth District Branch of the Medical Society of the State of New York, Binghamton, October 6, 1948.

treatment for early lesions and the difficulty, if not the impossibility, of treating advanced lesions.

What are some of the manifestations of these lesions which can be used to facilitate prompt diagnosis? The first and most important is location. It is generally agreed that from 50 to 75 per cent of the cancers occurring in the colon or rectum occur at or distal to the rectosigmoid.[1-3] This means that more than half of these malignancies are within reach of the examining finger or sigmoidoscope, a fact which is the key to prompt diagnosis of more than half of the cases. If every patient who consulted his physician for a routine physical examination or who was being examined for some other condition was subjected to a careful digital rectal examination and to a sigmoidoscopic examination, a number of early asymptomatic cancers of the rectum and rectosigmoid could be detected. While the feasibility of such a routine may be debatable, there is no question about the necessity of these examinations in all patients who consult the physician for symptoms referable to the rectum or rectosigmoid. Every surgeon who has seen many cases of cancer of the rectum or rectosigmoid has encountered patients whose physician had assumed, without a careful examination, that their symptoms were due to hemorrhoids and had treated them accordingly.[4] It is important to emphasize that roentgen examination of the rectum by barium enema is not only unnecessary but is very unreliable (see Case 2). This area can only be adequately examined by direct vision through the proctoscope or sigmoidoscope. Examination with the barium enema should be reserved for the colon proper which is beyond reach of the sigmoidoscope.

What are the symptoms of cancer of the rectum and rectosigmoid which should alert one to the necessity for careful digital and sigmoidoscopic examination? The first and most important symptom is bleeding, either as bright red blood, blood streaking the stools, or blood mixed with the stool. This is undoubtedly one of the commonest symptoms of cancer of the rectum or rectosigmoid (see also Cases 2, 6, 7, and 8).[5,6]

A second very common sympton is a change in bowel habit, usually characterized by a frequent desire to go to stool, a constant vague sense of fullness in the rectum, the passage of mucus, or often merely an unusual looseness of the stool in an individual whose stools have always been formed.[5,6] As the lesion increases in size, tenesmus occurs and may become exceedingly annoying. The closer the lesion is to the anal sphincter, the more prominent tenesmus becomes (see Cases 6 and 8).

A third symptom, which, however, usually indicates a more advanced lesion, is abdominal cramps of gradually increasing severity which finally terminate in the symptoms of complete intestinal obstruction. Since the rectum has a large diameter, cramps and obstructive symptoms do not commonly occur in rectal cancer until they are far advanced, but they are quite common in the rectosigmoid area where the caliber of the bowel is small.

Fourth, in an appreciable number of patients the first manifestation is the development of hemorrhoids. Any patient with rectal bleeding and hemorrhoids should have the benefit of early sigmoidoscopic examination.[4] This is particularly true of the patient past the age of forty who has recently developed hemorrhoids. One should not be misled by their presence and assume they are the source of the bleeding (see Case 2). Many hemorrhoids never bleed. The blood may come from higher up in the rectum or colon.

A fifth and less common group of symptoms is those referable to the urinary tract if the growth is adherent to the bladder, kidney, or ureter (see Case 11).[4]

Sixth, occasionally a growth is latent and may be fairly far advanced before it produces any symptoms.

If the lesion is detected early, not all patients with cancer of the rectum or sigmoid require an abdominal perineal resection of the rectum and a permanent colostomy. In recent years careful studies of the lymphatic spread of these cancers have shown that the primary lymphatic spread is upward, and it is not until these channels have been blocked by metastasis that downward spread occurs.[7-11] Therefore, in early lesions of the upper rectum and rectosigmoid, located above the peritoneal reflection, it is possible to resect the tumor and re-establish the continuity of the bowel by an end-to-end anastomosis with safety by the abdominal route and thus preserve the anal sphincter. This type of procedure is not applicable low in the rectum, nor in more advanced lesions of the upper rectum because of the possibility of downward or lateral spread in these cases.[11] It may be used occasionally, if technically feasible, when the patient absolutely refuses colostomy. The chance of avoiding colostomy should spur efforts to establish an early diagnosis.

There remains for discussion the colon proper, i.e., from the cecum through the sigmoid colon. This may logically be divided, on the basis of symptoms, into the right colon and the left colon. The function and caliber of the two halves of the colon is different, and the type of growth commonly occurring in the two halves is different. These factors result in a difference in the symptoms manifested by lesions of the proximal and distal colon.

The left half of the colon functions primarily as an organ for the storage of waste. Its diameter is small, and the stool tends to be relatively dry. This, plus the annular stenosing character of many of the lesions which occur here, tend to result in early obstructive symptoms. Patients complain of increasing constipation, occasional crampy abdominal pains, an increase in the size of the abdomen, and a bloated feeling. In a few these symptoms are occasionally interrupted by bouts of diarrhea (see Cases 1 and 5). Such symptoms, especially if accompanied by blood in the stool, require immediate investigation.

Lesions of the right half of the colon usually present a different symptom complex. The diameter of the colon is larger, and because of its absorptive function, the stools tend to be more liquid. In addition, the lesions tend to be polypoid or ulcerating and involve one wall of the bowel. For these reasons, obstructive symptoms, while they do occur, are not common except when the lesion involves the hepatic flexure or the region of the ileocecal valve (see Case 12). In general, cancer of the right half of the colon manifests itself in one of four ways:

1. Vague dyspeptic symptoms. Some patients complain of mild, vague digestive disturbances which do not seem typical of any disease. Unless a careful examination is done, the cause is readily missed (Case 5).[6]

2. Anemia and weakness. Carcinoma of the cecum or ascending colon is notorious for the production of a profound secondary anemia. The mechanism of this is not clear, but all patients with unexplained anemia should be investigated to make certain that they do not have carcinoma of the cecum or ascending colon.

3. An asymptomatic mass. The patient or his physician during the course of a routine examination may discover an asymptomatic mass in the right side of the abdomen.

4. Imitation of appendicitis. A patient who apparently has previously been well may present himself with what appears to be an attack of acute appendicitis or an appendical abscess (see Case 10). At operation a perforating or perforated carcinoma of the cecum is found. Sometimes what is thought to be an appendical abscess is drained, and only when the incision fails to heal are diagnostic measures taken which detect the correct diagnosis.

Carcinoma of the colon proper can only be diagnosed by means of the barium enema. If such a lesion is suspected, barium should not be given by mouth for two reasons. First, such a procedure is apt to precipitate acute intestinal obstruction, and, second, it is not as accurate a diagnostic measure as the barium enema. The barium enema is far from foolproof, and unless it is given carefully by one skilled in its use, the results are apt to be misleading. Even in the best of hands some lesions are not demonstrated by x-ray studies. In such instances operative exploration should be undertaken if the symptoms justify it. A number of lives have been lost because a negative x-ray examination has caused operative intervention to be withheld.

Rectal adenomata or polyps may be single or multiple and benign, precancerous, or frankly malignant. They may be symptomless or may make their presence known by bleeding, protrusion, or other symptoms. The discovery of one demands thorough search for others with sigmoidoscope and air contrast x-ray studies of the colon. Biopsy must be done in every instance. Treatment, depending on the nature of the lesion and its location, may be by fulguration, snare, surgical excision, or resection of the bowel. It is to be remembered that after fulguration the lesion is not available for microscopic examination, while after surgical excision the whole lesion may be thoroughly studied.

A few case histories will emphasize the points brought out above, will show clearly the advantage of early diagnosis and treatment, and will call attention to several departures from the usual clinical picture.

Case Reports

If the lesion of the upper rectum or colon is diagnosed early enough, it can often be treated by primary resection and anastomosis. The discomfort to the patient, hospital stay, and consequent expense will not be greater than in any other major abdominal procedure. In certain cases early diagnosis may mean that a permanent colostomy may be avoided and a cure more likely to ensue.

Case 1 (*Early Lesion of Descending Colon*).—H. W., a female fifty-three years of age, gave a history of intermittent slight bleeding from the rectum for two years, alternating constipation and soft movements with abdominal cramps relieved by bowel movement for the past three months. Examination showed a small mass, mobile, slightly tender in the left upper quadrant. She had slight anemia. X-ray showed a filling defect in the upper descending colon. At operation an annular constricting carcinoma was removed, and intestinal continuity restored by primary anastomosis over a Rankin clamp. The convalescence was uneventful. The wound healed by primary union, and she was discharged on the eighth postoperative day on a restricted diet. She has continued completely well and is without complaint three years after operation. Total hospital stay was twelve days.

Case 2 (*Early Lesion of Rectosigmoid with Recent Development of Hemorrhoids*).—F. G., a forty-nine-year-old woman, complained of rectal bleeding with increasing frequency over a period of eight months. She had had no digestive symptoms. She had had a negative barium enema one month previously which was followed by a hemorrhoidectomy. Two weeks prior to examination a gastrointestinal series proved to be negative. Only then was rectal examination done, and it should have been the first procedure. Sigmoidoscopic examination revealed a lesion 6 inches from the anus. Biopsy showed adenocarcinoma. Abdominal examination was negative. At operation a large ulcerating carcinoma was found encircling the lumen just above the peritoneal fold. Primary resection and end-to-end anastomosis was done together with a cecostomy. Convalescence was smooth, and the wound healed by primary union. The cecostomy was practically healed at discharge on the thirty-second postoperative day. Discharge had been delayed because the patient did not wish to go home with a draining cecostomy. She is now well almost three years later. The area of anastomosis is still slightly constricted, but the mucosa is normal. Bowels are regular.

Case 3 (*Precancerous Polyp of Upper Rectum*).—M. L., a seventy-nine-year-old man complained of a feeling of prolapse, protrusion, and tension in the perineum for two months with some diffuse perineal tenderness. He had no change in bowel habit and no bleeding. Sigmoidoscopic examination revealed a sessile adenoma $1^1/_2$ cm. in diameter at 7 inches from the anus. Biopsy showed precancerous adenoma. Barium enema and air contrast enema revealed no other polyps. Resection with end-to-end anastomosis was performed for the lesion which could be palpated in the rectum just above the peritoneal fold. His wound healed promptly, and he was discharged on the tenth postoperative day. He has since been well for almost a year and a half and is asymptomatic.

Case 4 (*Small Malignant Polyp of Upper Rectum*).—H. T., a man, eighty-one years old, whose wife had died of cancer of the colon several years previously, presented himself greatly alarmed by one episode of slight rectal bleeding. A small papillary growth the size of a pea was removed for study with a large biopsy punch at a distance of 7 inches from the anus. The base was not much thickened. The diagnosis was adenocarcinoma. The punch presumably removed the growth completely, since the area healed so that it could not be located on repeated sigmoidoscopic examination. He has been examined frequently, and no abnormality can be seen. He is still being followed at the end of two years. Because of his advanced age it is thought best to wait until the site of the lesion can be determined. It may be that biopsy will be sufficient. This is the earliest case we have seen.

The late lesion necessitates multiple procedures, prolonged suffering, and hospitalization at great expense, with only a poor chance for cure.

Case 5 (*Late Lesion of Descending Colon Producing Complete Obstruction*).—S. W., a woman, fifty-nine years old, presented herself after having had vague dyspeptic symptoms, quite like those of gallbladder disease, for one year. For two weeks she had had an irregular diarrhea. For the past week she had had no bowel movement, had passed no gas, and had become greatly distended. There had been no nausea or vomiting.

Examination showed a very ill woman with a greatly distended abdomen. X-ray showed dilatation of the cecum, transverse colon, and splenic flexure. A transverse colostomy was done. Recovery was slow with wound abscess and extensive pelvic inflammation which subsided slowly without operation. Barium enema later revealed obstruction 4 inches below the splenic flexure. Sixty days after colostomy, resection of an annular constricting growth of the upper descending colon was done and intestinal continuity established by an end-to-end anastomosis. The patient was discharged thirteen days after resection of the colon. She returned six months later for closure of the colostomy. The long interval was necessary because of recurrent, acute respiratory infections. She was hospitalized this time for eleven days, which made a total of eighty-four days. She is now well, fourteen months later, with no evidence of recurrence.

Case 6 (*Late Rectal Lesion*).—H. S., a forty-six-year-old man, had had slight, intermittent rectal bleeding for about one year and abdominal cramps and small stools with frequent desire to defecate of three or four months duration when he presented himself. Digital rectal examination showed a low-lying rectal mass; biopsy showed an adenocarcinoma. Operation revealed a large growth of the rectum filling the pelvis. There were many large nodes along the aorta. The growth locally was adherent to the bladder and lateral pelvic walls. It was clearly inoperable. The subsequent course was rapid deterioration with continuous rectal bleeding and considerable mucous discharge with much pain. Death occurred after six months of misery.

Case 7 (*Bulky, Slow-growing Lesion of Rectum, Low-grade Malignancy*).—H. J., a forty-nine-year-old woman, had had rectal bleeding with increasing frequency and increasing constipation for over two years. Obstruction at rectosigmoid had been demonstrated a year previously, but nothing had been done about it. Examination revealed slight abdominal distention; rectal digital examination showed a stony mass attached to vaginal wall and firmly fixed to lateral pelvic walls. Biopsy of a growth 11 cm. from the anus revealed adenocarcinoma. After preliminary colostomy an abdominoperineal excision was done with considerable difficulty due to the size of the growth. The perineal wound healed slowly. Hospital stay was sixty-four days. Three and a half years later she is well with a colostomy that gives no trouble. She has gained 40 pounds in weight, and there is no sign of recurrence, in spite of the fact that the nodes were involved.

Case 8 (*Advanced Rectal Growth with Node Involvement Below the Peritoneal Fold*).—A. G., a forty-eight-year-old man, had suffered from increasing constipation for five years which had been worse during the past six months. During this time he had had intermittent bleeding from the rectum with mild diarrhea at times with small stools. He had lost 30 pounds and was slightly anemic. Examination showed a sessile tumor 1$^1/_2$ inches in diameter 11 cm. from the anus. The patient flatly refused any operation leaving him with a colostomy. The growth was resected a week after preliminary transverse colostomy, and an end-to-end anastomosis was done low in the pelvis, preserving the sphincter. The growth was large, adherent to the bladder, covered 4 inches of the long axis of the rectum, and the adjacent nodes were involved. In spite of this the patient recovered with some minor complications, had his colostomy closed at the end of four months, is now well with good rectal and anal function without any sign of recurrence, and has gained 40 pounds. It is almost four years since his operation. Cases like this tempt one to remove these large lesions if at all possible.

Case 9 (*Lesion of Cecum, Far-advanced*).—L. C., a fifty-nine-year-old woman, whose history began only ten days before admission, presented herself with vague abdominal symptoms which had been diagnosed as intestinal grippe. She presented herself complaining only of marked malaise and slight vague pain in the abdomen, slightly more noticeable in the right lower quadrant.

Examination showed no masses or rigidity and minimal tenderness at McBurney's point. Vaginal examination showed an ovarian cyst on the right side, 3 inches in diameter, not thought to be the cause of her symptoms. The hemoglobin was 14.8 Gm. per 100 cc., 4,900,000 red blood cells, and the white count and urine were normal. Barium enema showed no delay in filling the entire colon. The haustral pattern of the entire colon was normal. There was no filling defect at any point. Postevacuation film showed no point of retention or other departure from normal. She was operated on with a tentative diagnosis of subacute or subsiding appendicitis and simple ovarian cyst. At operation a large amount of yellowish fluid escaped on opening the abdomen. There was a simple cyst of the right ovary, 3 inches in diameter. The appendix was normal. In the cecum and ascending colon there was a hard irregular growth on the right lateral wall which involved 4 inches in linear extent without encircling the lumen. There were hard masses of enlarged nodes along the ileocolic and right colic vessels and hard large nodes along the aorta $^1/_2$ to $^3/_4$ inches in diameter. A very hard mass (2 inches by 2 inches) was present in the region of the celiac axis, and there were three firm rounded nodules, 1 inch in diameter, in the liver. There were large masses in the omentum and many small peritoneal implants. A mobile nodule which was excised from the omentum showed inflammatory reaction with some necrosis and neoplastic cells of an indeterminate nature. It was assumed that the cecum was the point of origin because the lesion was much further advanced here.

Her wound healed by primary union, and she was discharged from the hospital on the eighth postoperative day. The further course was rapidly downhill, and she died three months from the time of her first symptom. No autopsy was permitted. It probably is impossible in the present state of our knowledge to diagnose a case such as this early enough to have therapy of any value.

Case 10 (*Lesion Simulating Appendicitis*).—J. B., a seventy-four-year-old man, was suddenly seized with pain in the right side of the abdomen and the right flank twenty-four hours before admission. This pain localized in the right lower quadrant and was followed by nausea and vomiting. Since onset, the pain had steadily increased in severity. His bowels had not moved. Leukocytes were 17,600 with 83 per cent polymorphonuclears. He was operated on with a diagnosis of acute appendicitis, and a perforating carcinoma of the proximal ascending colon was found with metastases to the regional nodes. Because of infection at the site of perforation an anastomosis between the terminal ileum and the transverse colon was carried out. Resection of the right colon was done four weeks later. The recovery from the first procedure was fairly rapid; from the second he never regained his strength but went slowly downhill, developing during this time ascites, a large liver, and jaundice. He died six months later, and autopsy revealed widespread metastases to the liver, lymph nodes, and peritoneum.

Case 11 (*Lesion of Colon Producing a Mass and Widespread Metastases Without Digestive Symptoms but with Urinary Symptoms*).—A. T., a twenty-nine-year-old woman, gave a history of three attacks of right-sided abdominal pain, the first six months before examination, the last two weeks before admission which radiated to the right groin and was accompanied by frequent urination. The pain was sometimes relieved by urination. A mass was palpable in the right side. She had had no digestive disturbance of any kind and no change in bowel habit. Examination revealed a mass which filled the right lumbar region. It could be felt front and back. It was tender, hard, and fixed. She was slightly anemic, and the urine was negative. Pyelogram showed a normal kidney pelvis on the right. Barium enema showed a filling defect in the proximal transverse colon interpreted as probably due to carcinoma. At operation a large lesion of the transverse colon was found firmly attached to the anterior surface of the upper pole and pelvis of the right kidney. There were widespread metastases to the lymph nodes, omentum, parietal peritoneum, and the liver. A biopsy of the lesion of the colon showed adenocarcinoma. Nothing further was done. She died eight months later. No autopsy was done.

Case 12 (*Lesion of Right Colon Producing Obstruction*).—E. A., a fifty-eight-year old woman, presented a nontender mass in the right side of the abdomen which she had had for two months. During this time she was nauseated occasionally, and constipation had gradually increased to a point where it was very bothersome. Crampy abdominal pain had bothered her for the past two weeks. Examination showed a mobile mass in the right upper quadrant which was slightly tender. She was slightly anemic. There was blood in the stool. Barium enema showed a partial obstruction at the middle of the ascending colon. Operation revealed obstructive adenocarcinoma at the middle of the ascending colon. A number of lymph nodes were involved. Her initial recovery was smooth. Three months later she became jaundiced, was reoperated, and metastases were found in the hilus of the liver. Nothing could be done. Death followed six months after her first operation.

Case 13 (Lesion of Descending Colon Existing Without Obstruction).—E. C., a thirty-two-year-old woman, had had one episode of rectal bleeding three years ago. Barium enema was negative then. Six months ago she started to bleed again at intervals and had crampy pains in the left side of the abdomen. Two days previously, on bending over, she had a sudden sharp pain in the left side; since then she had run some fever, and her abdomen had been sore. Examination showed a tender mass in the left side of the abdomen just above the iliac crest. Hemoglobin was 10 Gm., white blood cells 11,700, and 77 per cent polymorphonueclears. Pyelogram showed a slight right hydronephrosis, and barium enema showed a filling defect of the descending colon extending over 4 inches. It was irregular but gave the impression of an inflammatory lesion rather than a malignant condition. There was no obstruction. Operation revealed a mobile mass, composed of small intestine, omentum, and a tumor of the descending colon. The growth was separated from the other organs, but in the process a small abscess (30 cc.) containing foul pus was opened. The lesion was resected and end-to-end anastomosis done over a Rankin clamp. With the aid of penicillin and chemotherapy she made an uneventful recovery and left the hospital on the twelfth postoperative day. She has remained well three years.

Summary

1. The usual manifestations of carcinoma of the rectum and colon have been described.
2. The importance of early digital, proctoscopic, sigmoidoscopic, and barium enema examination is emphasized.
3. The many advantages which fall to the lot of those treated early is clearly shown.
4. Cases are cited with unusual manifestations such as onset with (*a*) hemorrhoids, (*b*) urinary symptoms, and (*c*) symptoms of appendicitis.
5. Cases are also cited exhibiting (*a*) slight vague abdominal symptoms with negative physical and x-ray findings but harboring a far-advanced lesion with extensive metastases, (*b*) a lesion of the ascending colon with obstruction, and (*c*) a lesion of the descending colon without obstruction.

Conclusions

1. Cancer is the most commonly observed tumor of the colon and rectum. In certain statistics these organs lead all others in cancer incidence.
2. Carcinoma of the colon and rectum must be kept in mind in any case with vague abdominal symptoms, even though the patient is young.
3. A digital rectal examination should be a part of every physical examination.
4. A sigmoidoscopic examination and barium enema with air contrast study should be carried out in every case of bleeding from the rectum, even if the blood seems to come from hemorrhoids.

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A.M.A. ADVISES CAUTION IN USE OF NOSE DROPS

The necesssity for doctors to caution patients against promiscuous use of nose drops is pointed out in an editorial in the October 12 *Journal of the American Medical Association.* Many of the nasal preparations offered for sale are "far from innocuous," the editorial says. Severe reactions have been reported to follow instillation of salts of various sulfa drugs, and severe local effects have been reported from prolonged use of preparations that cause constriction of the blood vessels.

At least seven patients lost their ability to smell or had a continuous sense of "smelling bad odors" from use of preparations containing tyrothricin, the editorial points out. Although the disability was temporary in some patients, it has lasted more than a year in others.

TREATMENT OF SEBACEOUS CYSTS

Eugene F. Kelley, M.D., Yonkers, New York

(From the Department of Dermatology, College of Physicians and Surgeons, Columbia University, and the Vanderbilt Clinic)

FOLLICULAR retention cysts of the skin are frequently seen as single or multiple small tumors of slow growth. Their origin has long been a subject of discussion. Virchow regarded them as retention cysts, while Franke believed that the greater portion of them was formed in embryonic life.

Two types are recognized: (1) Epidermal cysts, the contents of which are odorless and not greasy. Their lining consists of stratified epithelium. These probably arise from the neck of the sebaceous gland or the hair follicle. (2) Sebaceous cysts, having a cream-cheese-like content with a greasy feel and a rancid odor. The lining is composed of large cells of the sebaceous gland, giving the impression that they arise from the body of the gland.

Many cysts grow spontaneously, unaccompanied by disease or preceded by trauma. They also occur in the cystic form of acne vulgaris, sometimes in great numbers. These are probably true sebaceous cysts. They may likewise occur following injury to the skin. An acneform dermatitis is seen in workers, who handle oil, wax, or chlorinated hydrocarbons in the manufacture of synthetic waxes, and in those who use these waxes to insulate wire and condensers. This dermatitis is frequently accompanied by cysts.[1]

The untraumatized or uninfected cyst causes no subjective symptoms, but on the exposed parts of the body these lesions are often unsightly. All forms of treatment are directed toward the complete removal of the sac or the destruction of the cyst lining in situ, for, if the cyst is merely punctured and the contents expressed, the sac usually refills and the tumor mass returns.

Surgical removal is performed under local anesthesia. An elliptic incision is made in the overlying skin; the sac is separated from the surrounding tissue by blunt dissection and removed, and the skin is sutured. The best result to be obtained from this procedure is a linear scar, which is objectionable on the face or other exposed areas.

Various modifications of surgical removal have been reported, such as expressing the contents of the cyst through a small incision and removing the sac by turning it inside out. The resulting scar is usually smaller than that obtained by surgical excision.

Another procedure frequently used after expressing the contents through a puncture wound is to fill the sac with an irritant, such as phenol or quinine and urethane. Callaway used iodine.[2] Fishman placed 0.1 grain of silver nitrate stick in the cyst cavity and removed the discolored wall en masse twenty-four hours later.[3]

It seemed desirable to seek a simple and yet efficient method of eliminating cysts, especially those situated on the face or in other prominent locations. This should be a procedure which could be used on many cysts at one time, would cause little or no pain, and leave no scar or pigmentation. The purpose of this paper is to describe such a method.

Procedure

During the two years beginning March 1, 1947, I treated 91 cysts, both epidermal and sebaceous, in the skins of 63 patients, by injection in various locations. The solution used was sodium tetradecyl sulfate (2-methyl-7-ethylundecyl-4 sulfate) and benzyl alcohol in aqueous solution.* This drug was originally intended for the obliteration of veins, and it has not been used heretofore to destroy cysts, as far as I know.

The following procedure was employed: Without using local anesthesia, the skin overlying the cyst was swabbed with 95 per cent alcohol. The contents of the cyst were evacuated only when they were firmly packed or contained pus, and this was then done through the needle puncture. A $^1/_2$-inch, 26-gauge needle and a tuberculin syringe were used. The injection was made through the skin into the cyst, enough of the solution being used to cause distention. This was usually from 5 to 10 minims, depending upon the size of the lesion. No dressing was used.

The day following injection the cysts were slightly larger and slightly tender. Thereafter the lesions became smaller each succeeding day, many disappearing within two weeks. If, at the end of two weeks, the cyst had not receded in size, the injection was repeated. As many as five or six injections were given in some cases, but in general, it was felt that three constituted an adequate therapeutic trial. Infection of the cyst was not considered a contraindication. No side-reactions of any kind were encountered.

In the first 20 cysts treated by this method, a 3 per cent solution of sodium tetradecyl sulfate was used. This resulted in the elimination of six cysts; ten cysts were reduced in size, and four recurred after having apparently disappeared. From one to three injections were given. This represented a favorable result in 30 per cent.

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* Sotradecol manufactured by Wallace & Tiernan, Belleville, New Jersey.

In the last 71 cysts, a 5 per cent solution of sodium tetradecyl sulfate was employed. Fifty-five cysts were eliminated, 27 with one injection, 14 with two, and 14 with three injections. Eleven lesions were made smaller, and five were unchanged. Favorable results were obtained in 77.46 per cent of this group. There were no known recurrences.

Summary

A simple procedure for treating sebaceous cysts by the injection of sodium tetradecyl sulfate is described. The method is not new, but this drug has not before been employed for the purpose.

Except for a slight increase in the size of the cyst the day after injection, no reactions were encountered.

With a 3 per cent solution of the drug, 30 per cent of the cysts were eliminated. When a 5 per cent solution was employed, the percentage of successful results was 77.46.

No scars, pigmentation, or other sequelae were seen.

93 Radford Street

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GAIN MADE IN CANCER DIAGNOSIS

A "notable" improvement in one of the most important methods of diagnosing cancer has been reported. It is a modification of a widely used method of detecting cancer by examining certain body fluids in a patient. Sometimes cancer cells can be found in such fluids through microscopic examination, but sometimes diagnosis is made difficult by the presence of normal cells and other "debris" in the specimen.

Three Boston researchers reported that their new technic offered a means of virtually isolating cancer cells from other components.

The American Cancer Society, which helped support the research, quoted one of the investigators as saying the technic speeded up microscopic examination tenfold and might "substantially" increase the accuracy of the fluid-examination method. The society described it as a "notable" improvement.

Drs. Don W. Fawcett, Bert L. Valle, and Marjorie H. Soule, of Harvard Medical School, Massachusetts Institute of Technology, and Massachusetts General Hospital, respectively, described the research in an article in *Science.—New York Times, January 13, 1950*

GEIGER DEVICE USED TO DETECT TUMORS

The Geiger counter, a device that detects the presence of radioactive materials, now has been put to use to verify the existence of brain tumors, according to Dr. George E. Moore of the University of Minnesota School of Medicine. Dr. Moore told the surgeons at a symposium on diseases and tumors of the skull and brain that the Geiger counter offered an almost foolproof system of detecting malignant tumors.

Dr. Moore described not only one but two "methods, both new and unusual, to locate brain tumors."

In one method, one ounce of radioactive iodine is injected at the time of operation. With the iodine, sodium fluorescein, a dye that responds to ultraviolet rays, is used. With the use of sodium fluorescein, Dr. Moore said, differences between normal and malignant brain tissues are accentuated, thus affording the neurosurgeon a better chance of "diagnosing and localizing brain tumors."

The radioactive iodine and the dye concentrate in the tumor. The tumor thus is found in two ways—with the iodine, which activates the Geiger counter, and, when it is laid open on the operating table, under an ultraviolet light.

Another method employs "radioactive iodine in an attempt to localize and diagnose brain tumors preoperatively," Dr. Moore declared. He asserted that sodium fluorescein also was of value in studying neoplastic lesions of the central nervous system.—*New York Times, December 9, 1949*

THE DELAYED TREATMENT OF APPENDICEAL ABSCESS

Philip Ladin, M.D., New York City

(*From the Surgical Services of Lebanon Hospital*)

OCHSNER in 1901 first described the delayed treatment of peritonitis of appendiceal origin which has since been associated with his name, and in 1906 in his "Handbook of Appendicitis" he further elaborated on the subject.[1,2] In his original paper he stated that he had been treating cases in this manner for about ten years, and in his handbook he reported 117 cases with a 3.4 per cent mortality. This was a striking improvement over the usual results of his day. Recently, there have been a few papers which have again emphasized these principles and the improved results of this form of treatment. Lehman and Parker in 1938 reported 98 cases of appendiceal abscess treated with operation with a 4 per cent mortality and 48 cases treated without operation with no mortality.[3] They did not have the advantages of antibiotics or the present sulfonamide drugs.

Fauley and coworkers produced peritonitis experimentally in dogs and found a mortality of 92.6 per cent in untreated dogs, 0 per cent in animals treated with penicillin started one hour postoperatively, and 21 per cent in dogs in which treatment was started twelve hours postoperatively.[4] Altmeier showed experimentally that a concentration of 1,000 to 5,000 units of penicillin per cc. completely inhibited the growth of Bacterium coli.[5] Loewe and his coworkers meanwhile had shown that the level of penicillin in the blood was almost directly proportional to the dosage of penicillin given intramuscularly and intravenously, while Ory had shown that the concentration in the ascitic fluids paralleled the concentration in the blood.[6,7] Therefore, it seemed logical that massive doses of penicillin should produce blood levels and ascitic concentrations high enough to inhibit the growth of B. coli and thereby allow the powerful localizing and curative powers of the peritoneum to come into action. Crile, working with the above factors, postulated the theory that B. coli had previously not responded because it inactivated the penicillin, and, therefore, massive doses of penicillin might overcome this inhibitory effect of B. coli.[8-10] He reported a series of 50 cases of peritonitis of appendiceal origin treated with massive doses of penicillin (100,000 units every two hours).[9] Of these 50 cases, 33 had palpable abdominal masses either on admission or during their hospital stay. There was no mortality among these cases with masses, but there was one fatality in a case of perforated appendicitis with generalized peritonitis. This patient died of mesenteric thromboses.

Brown subsequently reported seven cases of perforated appendicitis with diffuse peritonitis in which there was no mortality and remarkably little morbidity.[11] His cases were treated with sulfonamides and penicillin. Jackson reported 15 cases of perforated appendicitis with peritonitis or abscess formation.[12] These were treated with intraperitoneal sulfonamides and early ambulation, and penicillin in small doses was added in the last seven cases. There were no mortalities in his series.

The author is reporting six cases from the surgical services of Lebanon Hospital in which the delayed treatment was utilized. Delayed treatment in these cases constituted rest in bed, nothing by mouth, elevation of the head of the bed, sedation (especially opiates), continuous gastric suction drainage, intravenous fluids and amino acids, vitamins, and massive doses of penicillin. Fluids were allowed by mouth in some cases as clinical judgment dictated. Streptomycin was added in some cases. Massive doses of penicillin were continued postoperatively, along with the preoperative supportive measures as indicated.

Case Reports

Case 1.—S. S. was a six-year-old white girl admitted to the hospital with a history of having had abdominal pain for four days associated with nausea and vomiting. These symptoms had started during the terminal phases of an attack of measles. At the time of admission, examination showed an acutely ill child who was dehydrated, complaining of abdominal pain, and had a dry, hacking cough. The abdomen was markedly distended. There was tenderness and rebound tenderness all over, with rigidity most marked on the entire right side, although also present in the left lower quadrant. The impression was that the patient had a generalized peritonitis due to perforative appendicitis. Blood count on admission showed white blood cells 10,450 with 80 per cent polymorphonuclears of which 49 were bands. Urine showed only a few white blood cells. Temperature was 103 F.

In view of the long history and poor condition of the patient, delayed treatment was instituted with the addition of streptomycin, $^1/_4$ Gm. every six hours. Under this therapy the temperature gradually fell, and on the second day following admission a mass was palpated in the right lower quadrant. The above treatment was continued, however, except that the Wangensteen drainage was discontinued. Under this treatment the temperature fell to normal seven days after admission, at which time the mass that had previously been palpated was definitely smaller. The temperature continued to be normal for fifteen days, the mass could no longer be felt; at this time laboratory reports had returned to normal, and the patient appeared to be in good condition. An appendectomy was performed through a McBurney incision, and at operation the appendix was found to consist of two portions completely separated, with a fecolith lying between the divided ends. Both ends were sealed off with no evidence of leakage. Appendectomy was performed in the usual manner and the abdomen closed without drainage.

Patient had an uneventful postoperative course; the highest temperature reached 101 F., and the patient was discharged from the hospital eight days after operation with the wound clean and healed by primary union.

Pathology Report.—Acute appendicitis with periappendicitis. Culture of the abdomen showed B. coli.

Comment.—This patient was an extremely ill child who presented the so-called Hippocratic facies. In view of the pathologic findings, there is no question as to the diagnosis, but it appears that operation could have been further delayed. It is interesting to note that primary union was obtained even though the culture of the abdomen was reported as B. coli. There was no evidence of leakage from the divided ends of the appendiceal stump.

Case 2.—E. W. was a forty-six-year-old white man who was admitted to the hospital with a four-day history of nausea, vomiting, and abdominal pain. He had taken an enema and a laxative without relief of the pain. Examination at the time of admission showed a soft scaphoid abdomen which was tender only in the right lower quadrant. There was an oval mass in the right lower quadrant which showed tenderness and rebound tenderness. Rectal examination did not reveal any masses. Examination of the heart revealed an aortic insufficiency and stenosis. The rest of the physical examination was essentially normal. Temperature on admission was 103 F.

The blood count showed white blood cells 29,700 with 83 per cent polymorphonuclears of which 20 were bands. Urine was normal.

A diagnosis was made of an appendiceal abscess, and the patient was put on the delayed treatment. Under this treatment the patient improved, and the temperature reached normal on the sixth hospital day. The mass in the right lower quadrant gradually subsided and disappeared. The patient was discharged sixteen days after admission and returned six weeks later, at which time an appendectomy was performed. Operation was performed through a McBurney incision, and the appendix was found to be small and cordlike. There was no evidence of any acute inflammation. He made an uneventful recovery and was discharged home seven days postoperatively with the wound clean and healed by primary union.

Pathology Report.—Remnants of appendix with acute inflammation.

Comment.—This patient represents a case of appendiceal abscess which was treated by the delayed method and at operation revealed no evidence of persisting inflammation although the appendix was reported by the pathologist as showing acute inflammation. He made an uneventful recovery. The willingness of this patient to return for operation will be commented upon later.

Case 3.—A. G. was a nine and one-half-year-old white girl who was admitted with an eight-day history of intermittent abdominal pain associated with frequent vomiting. On admission an acutely ill child was seen with a temperature of 104 F. The skin was dry, and the tongue was dry and coated. The abdomen was soft, moderately distended, and in the right lower quadrant there was a round, tender mass which extended to the midline at the level of the umbilicus and to the symphysis pubis below. This mass was tender, and rebound tenderness was present over it. Rectal examination showed an irregular, very tender mass on the right side extending to the midline, which appeared to be continuous with the abdominal mass. Pulse was 120, respiration 34.

Laboratory examination showed urine to be normal and white blood cells 8,950 with 56 per cent polymorphonuclears of which 18 were bands. A diagnosis of appendiceal abscess was made and the patient placed on the delayed treatment. The temperature and pulse gradually subsided and reached normal on the fifth day of her hospital stay. Within twenty-four hours the abdominal mass was found markedly diminished in size, and this mass continued to become smaller until five days later, at which time it could no longer be felt either rectally or abdominally. After three days of normal temperature the patient was taken to the operating room and an appendectomy performed through a McBurney incision.

At operation the appendix was found ruptured into two portions with a fecolith lying free between the two severed ends and the distal portion wrapped in omentum. There was a great deal of evidence of inflammation which had not yet subsided; the cecal wall was edematous, and all tissues were friable. Both portions of the appendix were removed and the wound closed in layers with a single Penrose drain to the appendiceal stump. This was done because the appendiceal stump was edematous and a blowout was feared. The patient had an uneventful course. She was discharged from the hospital fifteen days postoperatively with the wound clean and healed by secondary intention.

Pathology Report.—Acute diffuse appendicitis. The culture of the abdomen was reported as positive for Bacillus proteus.

Comment.—This is a case of appendiceal abscess which was again proved by both pathologic findings at operation and microscopic report. This patient was operated upon too soon after her acute episode but still had a relatively uneventful course. It is interesting that even this soon after her abdominal mass had disappeared, culture of the abdomen showed only B. proteus. This case also showed no leakage from the completely divided appendix.

Case 4.—D. H. was a twenty-seven-year-old white woman who was admitted to the hospital with a two-day history of abdominal pain and with a past history of repeated attacks similar to this for the past three and one-half years. Physical examination revealed a patient who did not appear acutely ill. Marked tenderness and rebound tenderness were present all over the abdomen but were most marked in the right lower quadrant. Vaginal examination showed acute tenderness on moving the cervix and tenderness in the cul-de-sac. The impression was that this patient had a twisted ovarian cyst or appendicitis with peritonitis. However, because the patient had evidence of a diffuse peritonitis, she was treated expectantly, and the day following admission a tender mass was palpated in the right lower quadrant. This mass exhibited tenderness and rebound tenderness. At this time the diagnosis was changed to probable appendiceal abscess, and patient was continued on delayed treatment. The mass gradually subsided, and the abdominal signs localized in the right lower quadrant, while all other peritoneal signs disappeared. After the temperature was normal for five days the patient was operated upon through a right rectus incision, and a mass was found in the right lower quadrant which was covered by omentum. When the omentum was removed, a very small abscess cavity was found in which the appendix was buried. The appendix was removed in the usual manner, and the abscess cavity was drained, as well as the pelvis. The postoperative course was smooth; highest temperature was 100.6 F. which subsided in seventy-two hours and stayed normal thereafter. The wound healed uneventfully, and patient left the hospital twelve days postoperatively.

Pathology Report.—Acute gangrenous appendicitis. Culture of the abdomen showed B. coli.

Comment.—This represents a case of appendiceal abscess with generalized peritonitis which was treated expectantly. The abscess was becoming smaller and the diffuse peritoneal signs completely localized. Again, this patient was operated upon too soon after the acute episode. In this case the operation was done in order to drain the abscess cavity. Not sufficient time was allowed for this mass to resolve completely.

Case 5.—N. M. was a fifteen-year-old white woman who was admitted to the hospital nine days after the onset of abdominal pain. This pain began suddenly and awakened her out of her sleep. A diagnosis was made by her local physician of ruptured follicular cyst of the ovary. She was treated with penicillin at home but developed fever and vomiting and did not improve. A surgical consultation was held, and a large smooth mass was found in the midline, extending about two fingers above the pubis. This mass was tender and had questionable rebound tenderness. Rectal examination showed a general fullness with no definite mass. Movement of the cervix produced tenderness. The patient was admitted to the hospital, and on admission her temperature was 103.2 F., pulse 140.

Laboratory examination revealed white blood cells 49,950 with 70 per cent polymorphonuclears of which 17 were bands. Sedimentation rate was 78 mm.; urine was normal. The impression at that time was that the patient had either an appendiceal abscess or a pelvic inflammation. She was put on delayed treatment. The mass gradually subsided, and the temperature reached normal on the fifth hospital day and stayed there. Ten days after admission there was no mass palpable either abdominally or rectally. The patient was discharged home and returned six weeks later for operation. A laparotomy was performed through a right rectus incision. At operation, in the region of the appendix, there was a mass about the size of a hen's egg that consisted of omentum which surrounded the appendix. This mass was retrocecal and was adherent posteriorly to the posterior abdominal wall and the root of the mesentery. Within the mass of omentum there was an appendix that was markedly thickened and divided into two halves, the distal half being completely free. Within the omental mass there was also a large, free fecolith. The appendix was removed in the usual manner. One cigarette drain was placed in the region of the appendix and the abdomen closed in layers. The patient made an uneventful recovery, and the highest temperature postoperatively was 100.6 F. The wound was clean and healed by primary union except at the drainage site, and the patient was discharged from the hospital nine days postoperatively.

Pathology Report.—Acute suppurative appendicitis with periappendicitis and abscess formation.

Comment.—This patient who was allowed to go home following the delayed treatment presents a case of appendiceal abscess. The large mass, which was in the midline and which resembled an enlarged uterus, disappeared completely under delayed treatment. Her subsequent appendectomy was done under optimal conditions, excepting that she could have waited even longer between admissions. Again, the appendix was found in two separate portions, but the ends were agglutinated and healed without evidence of leakage.

Case 6.—M. S. was a two-year-old white girl who was originally admitted with a history of having been ill for ten days with an upper respiratory infection. This had been followed by abdominal pain, diarrhea, and vomiting, but the symptoms were attributed to the upper respiratory infection. When admitted to the hospital, this child was acutely ill with a temperature of 101.2 F., pallor, listlessness, and a distended, tender abdomen. There was a palpable mass in the right lower quadrant, and laboratory examination showed white blood cells 30,000 with 92 per cent polymorphonuclears of which 54 were bands. Urine showed 1 plus acetone and 1 plus albumin. She was put on delayed treatment, and the mass in the right lower quadrant disappeared while the white blood count gradually fell to 12,000. She was discharged from the hospital seventeen days after admission.

One month later she was readmitted with a history of having had recurrent episodes of abdominal pains since her discharge. On three definite occasions these attacks were associated with nausea and vomiting. At operation the appendix and two loops of ileum were found adherent to the anterior abdominal wall and to each other. This produced acute kinking of the ileum. The appendix was removed in the usual manner. The adhesions were freed and the abdomen closed without drainage. The patient made an uneventful recovery. She was discharged from the hospital nine days postoperatively with the wound clean and healed per primum.

Pathology Report.—Acute periappendicitis.

Comment.—This case was that of an appendiceal abscess which was associated with generalized peritonitis on admission. The signs subsided, and the mass disappeared. However, the patient had several attacks of partial intestinal obstruction due to the kinking and adhesions between the ileum, appendix, and the anterior abdominal wall. These recurrent attacks necessitated surgical intervention. Patient made an uneventful recovery.

Discussion

It seems logical that combining the method of delayed treatment, as originally advocated by Ochsner, with modern supportive treatment in the form of Wangensteen drainage, intravenous fluids, vitamins, sulfonamides, and antibiotics should give the best results in abscess of appendiceal origin. It does not seem that immediate surgery can offer any better results, and it is difficult to understand what is to be gained by immediate operation. The disturbance of a localizing lesion and the traumatic insult of operation to the patient can only do harm, while the theoretic advantage of removing the perforated appendix as a source of infection does not seem to be borne out by the pathology found at subsequent operation. It will be noted above that in all cases in which the appendix was found divided in two portions, even with actual fecoliths free between them, there was evidence that both torn ends had been sealed over. With the above treatment and the addition of massive doses of penicillin, the infectious factor can be controlled, and the peritoneum, as well as the divided appendix, are apparently well able to recover by themselves. Under this form of treatment the palpable appendiceal masses shrink and disappear completely, and the patient can then be operated on at some future date when the masses have disappeared and all signs of peritoneal inflammation have subsided.

The optimum time for surgery after these masses disappear is not yet certain. Ochsner suggested waiting six months, and under this regime he reported no evidence of peritoneal inflammation. However, with the present use of massive doses of antibiotics, both preoperatively and postoperatively, it would seem reasonable to expect earlier operation to be possible. From our experience it seems safe to operate after four to six weeks even though all signs of inflammation at operation are not yet gone. At such a time it is also possible to close these abdomens without drainage and obtain primary union.

It is interesting to note that several authors have reported experiences similar to ours, that patients treated in this manner have no hesitancy in returning for further surgery. This is possibly due to the comfort with which their first stay at the hospital was attended. The major disadvantage of this form of therapy is that the patient requires careful and frequent observation, thereby consuming much time. At any time that the clinical progress indicates the spreading of the peritonitis, it should be a signal for operation. However, the time for operation and indications are both dependent upon clinical judgment. The most recent summation of the modern figures was reported by Maingot who states that the average of all reports indicates the following figures in appendicitis with abscess[13]:

Delayed treatment (Ochsner)	3% mortality
Immediate operation (with simple drainage)	5 to 6% mortality
Immediate operation (appendectomy plus drainage)	6 to 8% mortality

When we consider that these figures, in the main, do not include cases in which penicillin has been used in massive doses as originally advocated by Crile, it would lead us to believe that the delayed treatment can produce close to no mortality. In view of the above experiences it is difficult to understand why this method of treatment has not become more popular. Love has explained it thus: "I feel sure that psychologic reasons are a great deterrent to the adoption of expectant treatment. If a case treated on delayed lines ends fatally, it is usually regarded as a tragedy, and all concerned may have lingering doubts in their minds as to whether immediate operation would have saved the patient. On the other hand, if the appendix is immediately removed and the patient succumbs, the general impression is that, because immediate operation was performed, everything possible was done and the fatality is accepted philosophically."[14] The author concurs with these beliefs.

Summary and Conclusions

1. The background for the delayed or expectant methods of treatment is reviewed, and the most recent experimental work to justify it is presented.
2. Attention is called to the prevailing figures of a markedly lowered mortality with the delayed method of treatment.
3. Six cases of appendiceal abscess treated by this method are reported in detail.
4. Appendiceal masses will shrink rapidly and disappear under this form of treatment.
5. The optimum time for subsequent surgery is not yet determined.
6. Careful clinical observation of the patient and good judgment as to whether or not to interrupt expectant treatment must be exercised.
7. It is believed that the temptation to interfere surgically is so great that it is responsible for the failure of this method of treatment to become more popular, even though all statistics seem to point to its superiority.

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ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 A.M.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Do not send diagnosis.

Identify your material carefully so that it may be returned.

SICKLE CELL DISEASE AND PREGNANCY

Charles W. Mueller, M.D., F.A.C.S., Rudolph S. Bila, M.D., and Warren A. Lapp, M.D., Brooklyn, New York

(From the Obstetrical Service of St. John's Episcopal Hospital)

Although 135,000 North American Negroes are estimated to have sickle cell anemia, only 32 cases of pregnancy associated with the disease have been reported to date in the medical literature.[1–18] A survey of this series, including the three cases herewith reported (a total of 35 cases), small as it is, presents certain salient facts which should be of help to obstetricians caring for Negro patients afflicted with sickle cell disease.

Despite previous reports to the contrary, there is no evidence that sickle cell disease predisposes to sterility. Thirteen of the 35 patients had been pregnant more than once, and Kobak, Stein and Daro recorded the case of a multipara who had borne seven children.[10] A total of 23 mothers were delivered of 42 living infants. In five cases pregnancy terminated by spontaneous abortion; but in only one case, that reported by Lewis, did abortion occur more than once.[8] Three of the remaining patients became pregnant subsequently and delivered living infants. Stillbirths were reported in eleven cases. Anemia is a well-recognized cause of lowered fertility, abortion, and prematurity, and it is probably this factor, not the inherent disease, which offers a poor prognosis for women with sickle cell disease who attempt to bear children.

The maternal mortality rate for parturients with sickle cell disease is high, being 22.8 per cent for the series. Maternal deaths immediately postpartum were reported in four instances. There were two deaths reported as occurring in the puerperium.[2,10] Two patients died undelivered.[9,14]

Labor seems to be prolonged in patients with sickle cell disease beyond the usual time limits quoted for normal gravida. Patients with sickle cell anemia are usually frail and have poor muscular development, which may account for the prolonged first and second stages of labor.

Toxemia of late pregnancy seems to be more frequent in women with sickle cell disease and was noted in eight of the 35 cases. The patient reported by Noyes died with an acute fulminating type of pre-eclampsia, although the findings usually associated with this condition were not demonstrated at autopsy.[14]

Puerperal morbidity is said to be more common in patients with sickle cell disease. In the series of patients collected, temperature elevations were noted postpartum but were generally explainable on the basis of sickle cell activity. Patients with sickle cell disease usually manifest fever at one time or another. Grover reported that the great majority of his patients had an elevation of temperature during most of their hospital stay, even in the quiescent phase.[17] Puerperal endometritis, as reported by the authors in Case 3, was a definite obstetric infection which responded readily to treatment. The patient of Killingsworth and Wallace is said to have died of puerperal sepsis six weeks postpartum.[10] Anemia predisposes to infection, and it is surprising that the puerperal morbidity in sickle cell disease is so low.

No specific treatment for sickle cell disease is yet known. Multiple and frequent whole blood transfusions begun early in pregnancy and repeated at frequent intervals to maintain a consistently high hemoglobin and red cell count will aid materially in a successful outcome for both the mother and her baby. It has been suggested that 20 or more transfusions may be necessary throughout the course of a single pregnancy.[19] Sickle cell activity may be precipitated by blood transfusions, but whole blood is the best antianemic therapy for patients with sickle cell disease.

Case Reports

Case 1.—A seventeen-year-old Negro woman was admitted on October 25, 1943, for treatment of acute phlebothrombosis of the right great saphenous vein. The onset had been sudden with no antecedent trauma. No evidence of inflammatory reaction was noted. The patient was pregnant and near term, having been followed throughout her pregnancy in the Outpatient Department. She was known to have had sickle cell disease since 1935 and had had frequent typical episodes of acute sickle cell activity which seemed to respond best to multiple blood transfusions. She had never developed leg ulcerations.

Although saphenous vein ligation was considered, treatment was by bed rest and elevation of the leg. Labor began spontaneously on the fifth hospital day, and the patient was delivered spontaneously four hours later, under ether anesthesia, of a living female infant weighing 7 pounds. Manual removal of the placenta was necessitated by failure of the placenta to separate after one hour. Fifteen minutes after being returned to her bed, the patient developed severe dyspnea and shock, followed by coma, and she expired shortly afterward. Death was ascribed to pulmonary embolism. Permission for necropsy could not be secured.

The infant progressed normally and was discharged on the sixth day. Sickle cell trait was never tested for.

Case 2.—A thirty-three-year-old Negro secundipara was admitted on April 8, 1947, for treatment of an acute hemolytic crisis of sickle cell disease. She was seven months pregnant. A diagnosis of sickle cell disease had been made in January, 1940, and the patient had been followed in the Outpatient Department since that time.

Her first pregnancy, in 1931, was terminated by the birth of a stillborn infant. Labor was preceded by an attack, the symptoms of which were typical of an acute hemolytic crisis of sickle cell anemia. In 1933, she again became pregnant and was delivered at term of a living male infant weighing $4^1/_2$ pounds. The child is now fifteen years old and is in good health.

Recurrent attacks of abdominal pain were treated in 1937 by cholecystectomy and subsequently by appendectomy, neither of which afforded relief.

Following diagnosis of sickle cell anemia in 1940, the patient was treated on various occasions for acute hemolytic crises by repeated blood transfusions and other supportive measures. All in all, throughout her lifetime, the patient was known to have received over 60 blood transfusions.

Her present pregnancy was marked by numerous episodes of acute sickle cell activity, requiring hospitalization on several occasions. On the present admission, after receiving a total of 2,500 cc. of whole blood in five transfusions, the red cell count was 3,820,000 with 61 per cent hemoglobin.

The membranes ruptured spontaneously on April 28. The patient was delivered twenty-four hours later of a living male infant weighing 4 pounds, 8 ounces, from the left sacroanterior position, a single footling breech presentation. The postpartum course was afebrile and uneventful. She was discharged on her seventh postpartum day.

The infant appeared normal at birth but within several hours was noted to be markedly jaundiced. Liver and spleen were not palpable. An initial blood study revealed 14.4 Gm. or 95 per cent hemoglobin; red cell count 4,970,000; white cell count 8,950 with 43 neutrophils, 50 lymphocytes, 2 eosinophils, and 3 myelocytes. There were 17 normoblasts per 100 cells. No sickle cells were noted. Icteric index was 42.8. The child was Rh positive, and the mother had been reported previously, but erroneously, as Rh negative. The question of erythroblastosis or hemolysis from sickle cell disease was considered, and, twelve hours after birth, the child was subjected to an exsanguination transfusion, 250 cc. of compatible Rh negative blood being given into an ankle vein while 300 cc. of blood was withdrawn from the superior longitudinal sinus through the anterior fontanelle. Subsequent laboratory studies proved conclusively that the developing anemia and icterus could not have been on an erythroblastotic basis.

The blood count was essentially unchanged the following day except that only 7 normoblasts per 100 cells were noted. The icterus gradually deepened, the icteric index reaching 200 on May 8, subsiding thereafter to normal. Sickling first became evident on June 7, at which time the hemoglobin was 6.8 Gm. or 45 per cent, and the red cell count was 2,870,000. The child was discharged on August 14, weighing 9 pounds, 5 ounces. The child was in good health at the age of one year.

Case 3.—A twenty-eight-year-old Negro woman was first admitted on February 25, 1947, when she was five and one-half months pregnant. Past history included a spontaneous abortion at three months gestation in 1944. Physical examination on admission revealed a palpable liver extending below the costal margin four fingerbreadths. There were old scars of previous ulcerations on both legs. Laboratory study established the diagnosis of sickle cell anemia. Hemoglobin was 5.4 Gm. or 36 per cent; red cell count was 2,320,000. She was given repeated transfusions, and, at the time of discharge on March 15, the liver was no longer palpable.

She was readmitted on June 11, 1947, and was delivered June 18 by elective low forceps after thirty-nine hours of labor of a stillborn female infant weighing 7 pounds, 5 ounces. Postmortem examination of the infant revealed congenital pulmonary atelectasis, petechiosis of the epicardium, lungs, pleura, thymus, and brain, and cephalohematoma.

The patient developed a puerperal endometritis on her fourth postpartum day which responded readily to the usual measures. She was discharged on June 30 as fully recovered.

Comment

Page and Silton have reported a case similar to that described in Case 1, their patient succumbing before delivery to pulmonary embolism originating from a thrombophlebitis of the pelvic veins.[9] Thromboses are frequent in sickle cell disease, but these generally occur in the capillaries of organs where the circulation is slowed and the oxygen tension less, such as the spleen, liver, and lymph nodes. Inherently defective red cells tend to remain diskoid in the general circulation but will revert to the sickling configuration under abnormal conditions.

The enlargement of the liver, as noted in the patient described in Case 3, is not unusual. Grover reported hepatomegaly with or without associated splenomegaly in 19 of 48 patients hospitalized for sickle cell disease at Kings County Hospital, Brooklyn.[17] He reported that rapid changes in the size of the liver and spleen were striking features of sickle cell disease, the rapid enlargement usually being accompanied by abdominal pain and tenderness.

Summary

1. Three additional patients with sickle cell

disease associated with pregnancy are added to the series of 32 patients previously reported in the literature.

2. Sickle cell disease predisposes to longer labors and toxemia of pregnancy but not to puerperal morbidity.

3. Pregnancy associated with sickle cell disease demands multiple and frequent whole blood transfusions to insure a low fetal and maternal mortality rate.

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LIVER PUNCTURE BIOPSY IN THE DIAGNOSIS OF HEPATIC DISEASE

In his address delivered for the New York Academy of Medicine's Twenty-second Graduate Fortnight in October, Dr. Frederick W. Hoffbauer, of Minneapolis, stated that during the past decade the procedure of needle biopsy of the liver has been widely accepted as a diagnostic aid. Interest in this subject began in 1939 in this country. Dr. Edgar Baron at the Mount Sinai Hospital in New York City published a series of cases in which this method was employed.

Dr. Hoffbauer discussed the practical value of liver function tests in the problem of the differential diagnosis of jaundice. This is considered to be a valuable adjunct in selected cases. It is not however, necessary in all or even in the majority of cases of jaundice.

Dr. Hoffbauer summarized and evaluated the indications, contraindications, and precautions of this diagnostic procedure, basing his comments on the many reports in the literature and on the experiences of 400 liver biopsies performed by members of the Medical Services of the Veterans Administration Hospital and the University Hospital in Minneapolis.

DR. JONES SAYS—

The *A. A. Grapevine*—ever hear of it? Well, it's this little monthly magazine published by Alcoholics Anonymous. It's for A.A.s, especially, but anybody can subscribe if they're interested and can raise two-fifty. I did. There's some unusually interesting items here in this number. A meeting of the A. A. physicians: something new in the medical meeting line! There's a lot of doctors in A. A.—good ones. Those fellows should know alcoholism and alcoholics if anyone does. Something more than just good fellowship should come out of that.

Here's an article by a doctor that's assistant vice-president of the Consolidated Edison Company. It tells how the company decided, in 1947, that alcoholism was a legitimate basis for disability retirement, "with the usual modified pay," among its 30,000 employes. When the company recognized alcoholism as a disease, he said, it "simply made up its corporate mind to look the facts in the face." The disability retirement applies to selected cases among older employes. The younger ones, if they've been employed more'n two years—they try to get 'em rehabilitated: get 'em hooked up with A. A. and so on.

Item number three: down in the U.S. Public Health Service's hospital for drug addicts, at Lexington, Kentucky, they've developed an organization they call Addicts Anonymous. Evidently they've adopted the principles and procedures of Alcoholics Anonymous. I wish they'd chosen a different name. Maybe they will eventually. If their organization grows there might be some confusion as to which "A. A." they're talking about and it'd seem desirable to keep their identities clear. But the A. A. system of group therapy—it's certainly worth trying, although the drug addicts have a tougher problem. And, speaking of problems, the selection of a name is theirs, not mine. Anyhow, all are anonymous adults aiming at active abstinence.—*Paul B. Brooks, M.D., September 26, 1949*

DIVERTICULA OF THE COLON

A Report of 274 Cases

EUGENE J. MORHOUS, M.D., Clifton Springs, New York

(From the Medical Department, Clifton Springs Sanitarium and Clinic)

COLONIC diverticula are saccular protrusions extending out from the lumen of the large bowel and have been recognized as an entity since 1849 when Cruveilhier first published an account of their presence.[1] The later work of Beer, Telling, Moynihan, Mayo, and others has served to bring the subject of colonic diverticula up to the position it now occupies—an important differential condition to be considered in the diagnosis of various large bowel disturbances.[2-7]

The classification of diverticula of the colon is a rather unsettled subject, there being a variety of classifications and many advocates for each variation. A common factor in each, however, is the knowledge that there are two major types. The first type is that in which the walls of the diverticula consist of three layers: a mucosal lining, a muscular coat, and an outer serosal layer, the same as is contained in the walls of the colon. This type is classified by various authors as the congenital, true, or prenatal diverticula. The second type involves a herniation of the mucosal lining of the bowel through some weak or weakened spot in the muscular coat, causing the formation of diverticula which have only two layers in their walls, mucosal and serosal. This type is usually classified as the acquired, false, or postnatal diverticula.

Incidence

Statistics vary with different observers, but the current consensus is that it occurs much more frequently than suspected. Ochsner and Bargen found that 0.4 per cent of the patients admitted at the Mayo Clinic during one year showed evidence of diverticula, while 6.9 per cent of patients coming to autopsy during the same period had demonstrable diverticula, and Kocour found in a series of 7,000 consecutive autopsies that 3.58 per cent of the cases in which the patient had been over forty years of age showed diverticula.[8,9] Our figures at this institution revealed that of 48,609 admissions over a fifteen-year period there were 274 cases, or 0.56 per cent, showing diverticula. This incidence is greater than reported by most observers and is due most probably to the fact that a large percentage of our admissions is in the older age group.

The condition is primarily one of adult life. Its occurrence in persons below the age of forty has been estimated by various observers at ranges between 0.3 and 5 per cent. The incidence as to sex has been reported as higher in the male by some, and by others it has been reported as higher in the female. In our 274 cases it was found that 148, or 54 per cent, were females, and 126, or 46 per cent, were males.

Relationship to Carcinoma of the Colon

Of our 274 cases, three (1.09 per cent) were associated with carcinoma of the colon, and only two of these (0.73 per cent) were associated with carcinoma of the sigmoid. These figures, however, are probably not as significant as one might assume at first glance, by reason of the fact that obviously all of these cases could not be accurately followed to the final outcome of this condition. They do, nevertheless, give an insight into the incidence and interrelationship of the two conditions.

It is questionable whether the reverse procedure, that is, studying the incidence of carcinoma of the colon associated with colonic diverticula, would offer any more accurate a figure, as one would wonder how many of these cases developed diverticula secondary to the carcinoma as a result of the changes in bowel habits, impaired blood supply, venous stasis, debility, necrosis, etc. associated with this condition. However, for the sake of completeness, 145 cases of carcinoma of the colon were reviewed and of these, five cases, or 3.4 per cent, showed evidence of colonic diverticula.

Therefore, it would seem that the only true picture of the incidence of carcinoma occurring in cases of diverticula would come from a complete follow-up of a large series of cases with diverticulosis or diverticulitis with respect to their eventual development of carcinoma of the colon. This study has, to the best of our knowledge, not yet been done.

Pathology

Macroscopically, the diverticula are almost completely concealed in fat, and in situ this must be stripped away to afford an adequate view. They appear as bluish-black, flask-shaped outpouchings set roughly in two parallel rows between the mesocolic and the antimesenteric longitudinal muscle bands. They are seen far more frequently in the descending colon and sigmoid and are almost invariably scarce in the cecum and ascending colon, even though the former regions sometimes may show multiple diverticula. However, they occur rarely in the upper rectum, owing probably to the great thickness of the bowel wall in this portion.

Microscopically, the mucosa of the individual diverticulum is usually atrophic, especially at the neck where the pressure is greatest, and fairly well preserved over the remaining fundus. With infection, there occurs edema and round cell invasion of the mucosa, usually with some ulceration, especially at the narrowed neck. The muscularis, with its muscle fibers derived from the circular coat of the bowel, is generally quite markedly thickened as a result of fibrosis and edema. The serosa may show some fibrous thickening and adhesions to the surrounding fat.

If the opening of the diverticulum becomes occluded with inflammatory swelling of the mucosa or mechanical obstruction of the neck by debris, the resultant increase in intraluminary pressure causes the wall to be thinned out, and slight leakage or perforation may occur. This may lead to perisigmoiditis, mesenteritis, or abscess formation, depending upon the degree of leakage. Because of the slowness of the process, usually sufficient time is allowed for development of a protective wall of inflammatory and fibrous tissue. This, however, may not occur, or the infection may extend through the protective wall, and generalized peritonitis or fistulas may result.

Symptomatology

As a means of studying the symptoms caused by diverticula of the colon, 250 cases were selected from the total 274 cases and reviewed more closely. The entire 274 cases were not reviewed in toto as some of these were with little or no history, having been patients admitted in a comatose or confused state.

The age of the patients was consistently in the older age group, the youngest patient in the series being thirty-nine, the oldest eighty, and the average age being sixty-three and one-tenth years. The outstanding symptoms were those referable to the bowel habits. Constipation was more common than diarrhea, occurring in 183 cases, or 73.2 per cent, whereas diarrhea occurred in only 41 cases, or 16.1 per cent. The constipation was mostly of the chronic variety of many years duration. A few, however, gave a history of constipation of short duration of from a few days to several months. Of the 41 cases having diarrhea as the bowel disturbance, 18, or 7.1 per cent of the total number of reviewed cases, had diarrhea alternating with constipation. The duration of the diarrhea varied between a few weeks to several months, but in only four was it longer than one year's duration.

The next most commonly encountered symptom was excessive abdominal gas. This occurred in 64.2 per cent of the cases and was usually in the form of flatulence, but in some both flatulence and eructations were present. This seemed to be a rather constant accompaniment of diverticula of the colon, and it is not illogical to suspect that perhaps it occurs more frequently than might be indicated by the above figure, as it is a symptom that is often not adequately recorded.

Pain was present in 60.7 per cent, located usually in the lower abdomen on the left side, although there was considerable variation since in some it was epigastric, others right lower quadrant, and in still others it was generalized throughout the entire abdomen. The character of the pain was equally variable, ranging from a bloated sensation prior to and often relieved by defecation, through the various degrees of pain up to sharp, stabbing, colicky pain simulating renal or gallbladder disease.

Palpable tenderness, located usually in the region of the sigmoid and descending colon, was present in 37.5 per cent of the cases. A comparatively high percentage, however, had tenderness located in the epigastrium, right upper quadrant, or at various other sites in the abdomen. One patient had tenderness in the left lumbar area, and pyelitis was suspected. With the tenderness there was associated rigidity and muscle spasm, and in a few, rebound tenderness was present.

A palpable mass was present in 30 patients. This was generally located in the left lower quadrant and in most instances was described as sausage-shaped and firm. In two of these patients, the mass would visibly and palpably rise and fall with defecation. These masses were often nontender.

Forty-nine patients complained of rectal bleeding, while only 12 (4.8 per cent) had laboratory evidence of bleeding. This varied from occult bleeding, to occasional streaks of blood accompanying the stool, to massive rectal bleeding in one case.

Various other symptoms occurred, including a history of weight loss in 43.2 per cent, and nausea with or without emesis in 16.4 per cent. Seven patients had low bowel obstructions, and one patient suffered a perforation of a diverticulum. There was temperature elevation in 8.8 per cent of the cases, and two of these had accompanying chills. One patient had a rectal prolapse, and another complained of vertigo which would clear up following a bowel movement. Urinary symptoms were conspicuous by their infrequency, being present in only six cases, and in these there were only complaints referable to a mild cystitis, there being no bladder fistulas in this series.

One important feature in many of these cases was that of cancer phobia. These patients were all in the so-called "cancer age group," and the presence of a mass in the abdomen, rectal bleeding, weight loss, diarrhea, or constipation immediately caused them to tender the idea of possible malignancy. How many of these patients developed this fear, and this was not brought out in the history, is, of course, unknown, but, with the current trend in lay literature toward early detection of cancer, it is safe to assume it was considerable.

Diagnosis

Roentgenologic examination of the colon by barium enema was the most valuable diagnostic aid in our series, giving the diagnosis in 207 cases, or 82.8 per cent. The characteristic finding is the occurrence of rounded, knoblike extensions from the lumen of the colon. They were predominately in the sigmoid area, there being only 11 cases in which this area was not affected. The barium enema may show indirect evidence of infection, or diverticulitis, as manifested by hypermotility and spasm in the involved segment of the bowel.

Proctoscopic examination proved to be of little value in the diagnosis, as only three cases were diagnosed in 59 patients with diverticula who were proctoscoped. Obviously, proctoscopic examination is only capable of visualizing those areas adjacent to the sigmoid, and, even if it were possible to diagnose accurately all diverticula present, there would still be other areas of possible involvement left unexamined.

Examination of the blood was of little value except in those cases showing evidence of diverticulitis in which a leukocytosis was often seen. This, like the anemia that was sometimes seen, is of little value in ruling out carcinoma, as it will also produce the blood changes seen with diverticula.

In 14 cases the diagnosis was made by operation, and in 16 cases the diagnosis was not made during life but was discovered on postmortem examination. It is interesting, and perhaps embarrassing, that the diagnosis was made or suspected by clinical examination in only ten cases, in spite of the fact that many were apparently typical cases. Malignancy of the bowel was the most commonly suspected condition. However, hepatic, cholecystic, gastric, prostatic, renal, and ovarian disease was also suspected in many instances.

Diverticula of the colon, whether they be bland or infected, offer a challenge to the diagnostic skill of the clinician. They may simulate almost any condition in the abdomen, whether it be inflammatory or neoplastic, and, therefore, must be constantly considered when dealing with those patients in the older age group.

Treatment

It is not the purpose of this paper to discuss in great detail the treatment of diverticula of the colon. It is centered, however, mainly upon the prevention of infection and the possible subsequent complications resulting from this. To do this, it is best to prescribe a low-residue, bland diet with special avoidance of those fruits containing fine seeds. Regular bowel habits without laxatives would be ideal but is a rather difficult aim to achieve. The promotion of good general health is, of course, essential, as is also the prevention or correction of obesity. Excessive use of condiments should be avoided. The habit of drinking two glasses of water at each meal is a good one for these patients to learn, as it will assure an adequate fluid intake. Harsh, irritative cathartics are strongly contraindicated. Mineral oil or mineral oil emulsion is useful in small doses given at bedtime in an effort to keep the stools well lubricated, but possible deficiencies of the fat-soluble group of vitamins must be constantly kept in mind if this treatment is continued for long periods of time. Weekly, or twice weekly, cool tap water enemas may aid in elimination of those cases where mild laxatives are ineffectual.

Those cases which develop infected diverticula, or diverticulitis, are treated essentially the same, except for the addition of antispasmodics. Bed rest should be insisted upon until the signs of infection have subsided. Heat to the abdomen may help relieve pain. Belladonna or atropine in adequate doses may aid in the relief of spasm. Phenobarbital in $^1/_2$-grain doses three times a day may be helpful in inducing adequate mental relaxation, and codeine may be given for the pain if necessary. Enemas may be dangerous if not given carefully, and they should be limited to small quantities of warm olive oil or cottonseed oil daily. Young has reported good results in the relief of pain in diverticulitis by the use of small enemas of roentgenologic barium, a discovery derived from the careful observation of the relief obtained in patients following a diagnostic barium enema.[10] This, however, should be employed with caution, as there is a real danger of forming barium fecoliths and thereby inviting obstruction. Absorbable and nonabsorbable sulfonamides may be useful in controlling existing infection and preventing possible extension. However, current reviews are not in agreement on their efficacy in diverticulitis. In all cases of diverticulitis a surgical consultation, if available, should be requested. Surgery, however, is never indicated in the treatment of uncomplicated diverticula, but rather, it is reserved for the complications of diverticulitis which are peritonitis following perforation of a diverticulum, unresolved abscess, obstruction, fistula formation, and those cases where an accurate differentiation between carcinoma and diverticulitis cannot be made by the usual medical methods.

Summary

1. A brief review of the subject of diverticula of the colon has been presented with a review of 274 cases.

2. Constipation, flatulence, lower abdominal pain, and tenderness with or without a palpable mass were the most commonly encountered complaints and findings.

3. Bladder symptoms and fistula formation were conspicuous in their infrequency.

4. Treatment is primarily medical and essentially involves prophylaxis against diverticulitis and its resultant complications.

5. Surgery is indicated only in those cases presenting complications.

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DRUGS CUT DEATH RATE OF RARE MUSCLE DISEASE

Modern methods of treatment have reduced the mortality rate of myasthenia gravis to about 10 per cent, according to two doctors from the University of Texas School of Medicine, Galveston.

In this rare disease, the cause of which baffles doctors, the victim's muscles progressively become weaker. The muscles most frequently affected are those concerned with movements near the eyes. Generalized muscular weakness also occurs.

Untreated, the disease runs a fatal course in 50 to 75 per cent of cases in a few years, say Drs. Charles T. Stone and J. Alfred Rider.

Drugs, principally neostigmine and tetraethylpyrophosphate, give complete relief in some cases and have greatly reduced the mortality rate of the disease, which is now probably about 10 per cent, they say.

—*J.A.M.A., September 10, 1949*

DR. BUSH FEARS WELFARE STATE

Dr. Vannevar Bush, president of the Carnegie Institution, warned that, if the United States overdid the "welfare state" type of personal security, it might so weaken national security as to be unable to avoid being forced into World War III. In that case, he added, we might not be able to win.

Speaking in New York's Cooper Union at convocation ceremonies in honor of its 90th anniversary, Dr. Bush warned of the danger of reversing the "virile" trend he said had made America great. In this trend he laid stress on competition, high production, high living standards, and continuing progress.

He warned that the spirit of individual risk-taking was being smothered in a search for artificial security and in over-regulation, over-taxation, and overspending by governmental bureaucracy. Dr. Bush held out high hopes for continuing progress in national security and living standards, if we "temper humanitarianism with hard common sense," and keep the kind of system that has enabled the country to prosper.—*New York Times, November 3, 1949*

THE EFFECT OF GLUTAMIC ACID ON BORDERLINE AND HIGH-GRADE DEFECTIVE INTELLIGENCE

Frederic T. Zimmerman, M.D., and Bessie B. Burgemeister, Ph.D., New York City

(*From the Department of Child Neurology, Neurological Institute*)

OUR previous reports on the effect of glutamic acid on mental function were concerned primarily with the presentation of scientific data demonstrating improvement.[1,2] Cases representing a wide segment of the learning curve were studied. No particular attempt was made to translate this improvement in terms of its potentialities as an aid to restoring some individuals as useful members of society.

This paper, therefore, is a preliminary report of results to date demonstrating the effectiveness of glutamic acid on that group of individuals who are roughly within striking distance of average intelligence in terms of the degree of improvement possible with glutamic acid. Two groups of cases are presented, those at the borderline level (I.Q. 70 to 79) and those at the upper end of the defective range (I.Q. 55 to 69). We believe that qualitative behavior changes, which accompany the intelligence quotient rise at these levels, are of greater importance to the clinician and society in general than those occurring at the lower end of the learning curve, because they may offer the patient an opportunity to become an active and useful member of society and, at the higher age levels, may place him within striking distance of economic self-sufficiency in contrast to institutional placement and care.

We have also been concerned with the problem of unpredictable degree of improvement in individual cases under glutamic acid treatment. This paper will also show, therefore, the relation between the average rise in intelligence quotient points with the presence or absence of organic factors and the emotional adjustment of the child, as expressed in terms of behavior.

From our 250 private and clinic patients, ranging in age from four to eighteen years, we have selected for this study 85 who have completed one year of glutamic acid therapy. This interval was chosen because we have found that ordinarily an intelligence quotient limit, or ceiling, is approached after about one year. Results given below are obtained, therefore, near the completion of treatment. Table 1 shows the number and percentage of our patients who gained 5 points or more in intelligence during one year of glutamic acid treatment.

TABLE 1.—Gain in I.Q. in 85 Cases Treated with Glutamic Acid

Gain in I.Q.	Number	Per Cent
10 points or more	27	32
5 to 9 points	31	36
Total (Gain of 5 points or more)	58	68

As may be seen from Table 1, in 58 cases (68 per cent), or more than two thirds of our group, the intelligence quotient was raised 5 points or more, in 31 (36 per cent) it was raised from 5 to 9 points, and in 27 (32 per cent) it was raised 10 points or more. The intelligence quotients of these patients, however, occur at all levels of the scale, and in this paper we are more interested in considering the progress of those patients within two segments of the total distribution, namely, those with initial scores at the borderline and upper defective levels.

In our group of 85, 23 patients had an initial intelligence quotient between 55 and 69 at the upper end of the defective range and 12 patients a quotient at the borderline level (70 to 79), making a total of 35 cases at these two intelligence levels. The relatively small percentage of cases here falling in the borderline and high-grade defective levels is probably due to the fact that parents are not as prone to seek aid for the less seriously retarded children. These figures, therefore, are considerably smaller than the incidence of these two segments of the learning curve in the total population.

Table 2 gives the percentage of improvement in these two intelligence quotient categories following one year of treatment.

TABLE 2.—Percentage of Improvement in 35 Cases

Gain in I.Q.	Total Number of Cases	Number Improved	Per Cent
From borderline (70–79) to low average (80–89) or average (90–109)	12	10	83
From defective (55–69) to borderline (70–79)	21	11	48
From defective (55–69) to low average (80–89)	2	2	8
No change in level		12	34

Results in Table 2 show that ten, or 83 per cent, of the 12 patients who had an initial intelligence quotient within the borderline range (70 to 79) were raised to the low average (80 to 89) or to the average level (90 to 109). Among our 23 high-grade defectives (55 to 69), 11, or 48

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per cent, were raised to the borderline level (70 to 79), and two patients, or 8 per cent, were raised from the defective (55 to 69) to the low average (80 to 89) range.

In terms of the intellectual prerequisites to becoming useful members of society 12, or 34 per cent, of our 35 cases were raised to the low average or average level of intelligence. Twelve patients, or 34 per cent, of the total 35 did not change their intelligence quotient level. Table 3 gives the raw scores for these 35 patients before and after one year of glutamic acid treatments.

In our case load, by clinical observation of treated cases, gradually two types of children seemed to respond less favorably to treatment—those with severe behavior problems and those, who by history, clinical signs, or both, presented evidence of gross cerebral pathology, whether congenital or acquired. In general, it follows that the greater the degree of pathologic change, the lower the intellectual level, with the corollary of lessened capacity for improvement. We analyzed our data, therefore, in terms of the possible interfering influence of emotional and organic factors upon mental functioning.

TABLE 3.—CHANGES IN I.Q. LEVEL FOLLOWING ONE YEAR OF TREATMENT

Initial I.Q.	Retest I.Q.
Change from Borderline (70–79) to Low Average (80–89) or Average (90–109)	
71[1]	82
74[1]	91
79[1]	96
70[2]	85
74[3]	82
71[1]	84
79[3]	98
78[1]	92
70[1]	80
70[1]	87
Change from Defective (55–69) to Borderline (70–79)	
59[3]	72
68[1]	79
61[1]	71
67	76
66[2]	71
62[3]	73
66[4]	72
60[3]	72
67[3]	71
63[1]	74
62[1]	73
Change from Defective (55–69) to Low Average (80–89)	
66[2]	80
68[1]	81
Remaining in Same Category	
70[3]	75
76[2]	78
59[2]	63
58[4]	57
60[1]	62
59[2]	63
68[4]	65
58[3]	56
61[1]	69
57[1]	67
61[3]	66
60[4]	67

[1] Behavior good and nonorganic Rorschach.
[2] Behavior good and organic Rorschach.
[3] Behavior poor and nonorganic Rorschach.
[4] Behavior poor and organic Rorschach.

Our 85 cases completing one year of treatment have consequently been investigated from the point of view of initial adjustment, and the data have been broken down into categories, dependent upon initial behavior during the psychologic test session and the Rorschach inkblot test findings indicating the possibility of organic brain damage.

The Rorschach diagnosis is based upon the presence in the personality configuration of a series of symbols or signs indicative of intracranial pathology. The test is of value in supplementing other clinical technics, since it gives an estimate of the degree of interference with optimal mental functioning and the amount and direction of personality deviation. Such data are, of course, useful in prognosis. The validity of the Rorschach as a diagnostic tool is supported by an imposing array of authorities. Rorschach himself described a few cases of intracranial pathologic brain conditions, and several investigators since then have correlated Rorschach data with clinical and neurologic findings and have enumerated certain signs indicative of personality changes as a result of intracranial brain damage.[3] Piotrowski listed ten signs which he believed differentiated patients with cortical and subcortical pathology from other groups of patients by contrasting the Rorschach record of known organics (according to clinical diagnosis) with those of other individuals.[4] Harrower-Erickson, in studying cerebral lesions among a group of patients with brain tumors, verified Piotrowski's findings for the most part and added valuable information regarding the likelihood of widespread concomitant changes in most types of intracranial lesions, which was what Putnam had pointed out neurologically.[5,6] Piotrowski, Kelley, and others have emphasized the value of the Rorschach as a diagnostic tool by describing personality deviations having an organic basis which appear in the Rorschach before clinical confirmation is apparent.[7] An example of this was given by Kelley in his description of the Nazi war criminals' trial at Neurenburg, where his diagnosis of frontal lobe pathology on the basis of Dr. Lie's Rorschach record was later validated by autopsy.

Zimmerman and Putnam likewise give further evidence that organic brain damage, which cannot as yet be picked up by our usual clinical diagnostic methods, can be present.[8] Investigation of the relation between electroencephalographic and histologic changes in the brains of cats following graded trauma showed that cortical cell changes occurred which were not reflected in changes in the electroencephalographic patterns, although the electroencephalogram is the most sensitive clinical device used for this purpose.

The Rorschach test which reflects cerebral pathology in terms of mental malfunction is, therefore, in capable hands, apparently the most sensitive instrument available for the diagnosis of organic change in the brain. Table 4 summarizes our results following one year of glutamic acid treatment.

TABLE 4.—RESULTS ACCORDING TO RORSCHACH TEST IN 85 CASES TREATED WITH GLUTAMIC ACID

Before Glutamic Acid Treatment	Number	Per Cent	I.Q. Point Rise After One Year
Behavior good and nonorganic Rorschach	29	34	9.4
Behavior good and organic Rorschach	15	17	6.8
Behavior poor and nonorganic Rorschach	24	29	6.1
Behavior poor and organic Rorschach	17	20	5.6

Table 4 shows that where the child's behavior is good in the test situation, i.e., where he is cooperative and shows interest in the test materials and the Rorschach test is free of interfering organic components, the intelligence quotient rise is highest (9.4 points) for the year. Where either behavioral or organic features are indicated, improvement is less striking (6.8 and 6.1 points). Where a combination of poor behavior and organic features exists, the least favorable prognosis is likely, the actual rise among our patients under this classification being only 5.8 points for the year.

In terms of percentages, we consider only 34 per cent of our group to be free from emotional and organic interference with mental functioning, leaving 66 per cent or two thirds of our cases with the likelihood of a less favorable prognosis, so far as a large intelligence quotient increment (as a group) under therapy is concerned, than among patients who are free from this interference. The raw scores in Table 3 are appropriately marked to show the relationship in individual cases between I.Q. rise and the behavior and organic factors as mentioned above for our high-grade defective and borderline groups.

Comment

From a total of 85 mentally retarded cases who had completed one year of treatment with glutamic acid, 35 cases were presented whose initial intelligence quotient was either in the borderline or high-grade defective groups. Twelve cases had an initial intelligence quotient within the borderline range (70 to 79), and 23 cases had an initial intelligence quotient within the high-grade defective range (55 to 69), making a total of 35 cases.

Ten of the 12 cases, or 83 per cent, were raised from the borderline level to the low average and average levels. Eleven cases, or 48 per cent, were raised from the high-grade defective level to the borderline level. Two cases, or 8 per cent, were raised from the high-grade defective level to the low average level. Twelve, or 34 per cent, showed no change in level under treatment.

If the 10 cases elevated from borderline to low average and average level are added to the two cases elevated from the high grade defective to the low average level, we have a total of 12 cases (34 per cent) of our 35 cases improved sufficiently to become useful members of society from the standpoint of intellectual prerequisites alone.

Since it appeared from clinical observation that children with severe emotional disturbances and/or severe organic brain damage did not respond as well to treatment as a group, the data on the total of 85 cases treated for one year were analyzed in these terms. Behavior during the test situation and the Rorschach inkblot test were used as criteria. With good behavior and a nonorganic Rorschach, 29 cases, or 34 per cent, showed an I.Q. rise of 9.4 points after one year of treatment. In the category of good behavior and an organic Rorschach 15 cases, or 17 per cent, showed a rise in I.Q. of 6.8 pts. after one year of treatment. With poor behavior and a nonorganic Rorschach 24 cases, or 29 per cent, showed a rise of 6.1 points in one year. Finally, with poor behavior and an organic Rorschach 17 cases, or 20 per cent, showed a rise of only 5.6 points in I.Q. in one year of treatment.

Where either behavioral or organic features are present, the average rate of improvement is considerably less striking. The poorest results are obtained with a combination of poor behavior and an organic Rorschach.

Our data, as we said, reveal that 34 per cent of our group of 35 cases were improved to the point where, in terms of intellectual equipment alone, they could become useful members of society. However, when these data are broken down to elucidate the factors having a retarding influence on the degree of improvement, it becomes apparent that organic damage to the brain and poor behavior produce this result.

It is important to elaborate further on the prevalence (and mechanics) or these two deterring factors upon intellectual growth. Thirty-seven per cent of our cases had an organic Rorschach. As we have previously indicated, there is a close correlation between demonstrable pathology at autopsy and the Rorschach picture. We have likewise demonstrated in a study on cats that, while electroencephalographic and cortical cell changes vary directly with the amount of force applied to the cortex, below a certain critical range cortical cell change occurs following trauma even though the electroencephalogram remains normal. This leaves us with the inference that a child's brain can be damaged at birth, although the damage is not demonstrable even by the instrument most sensitive for this purpose—the electroencephalogram.

Our case histories leave one with the suspicion that the routine application of forceps and surgical procedures applying or producing undue force may be one responsible factor. Perhaps, if this is so, this is a price modern woman must pay in exchange for a more expeditious delivery.

The second important factor influencing intellectual growth as revealed by our data is the child's behavior. When our data are broken down in terms of good and poor behavior in the test situation, 51 per cent of the group exhibited good behavior, while 49 per cent of the group showed poor behavior, or roughly every other child appearing for treatment is poorly adjusted.

It is believed by many parents and some physicians that the poor behavior of the retarded child is directly the result of the mental retardation. We have shown elsewhere that poor adjustment is the result of two factors: (1) the child's inability to cope successfully with his fellows because of his inadequate intellectual equipment and (2) the neurotic personality pattern of the family milieu which projects itself upon the child.[9] The first type of behavior is mitigated by glutamic acid as intellectual improvement occurs; the second type of personality maladjustment can be corrected only by psychiatric education of the parents. This is a neglected phase of mental hygiene. Well-adjusted parents of a retarded child are conspicuous by their rarity. This is understandable when it is realized that the continued care and responsibility which our religious beliefs force upon the parents of the retarded child through training go contrary to the deepest biologic instincts of man as an animal. Many other lower animal forms destroy their weak and sickly young at birth, while man, by virtue of his mores, must keep the child around him where it comes to be regarded unconsciously as a reflection against his creative forces. All too frequently there is no way out of his dilemma. If he can be helped over his feelings of guilt and self-reproach which prevent him from institutionalizing the child, it is usually economically impossible for him to place the child in a private institution. The tender feelings of love and mercy which his civilization has trained into him prevent him from sending his child to a state institution which he feels is cold and heartless—except as a last resort.

The treatment of the retarded child is, therefore, that of the usual approach of the child psychiatrist—he must treat the family as well as the child. Baldly recommending institutionalization immediately, without adequate psychiatric preparation, boomerangs and reinforces the sense of guilt already present. So the parent must refuse the physician's advice in order to neutralize his hidden guilty desire to get rid of the child.

Rejection of the child by the parents and the neurotic atmosphere of the home in general, which includes other siblings as well, superimposes a neurotic behavior pattern on the already intellectually handicapped child. The intellectually handicapped child has, according to our data, better than an even chance of being emotionally handicapped as well. The emotional difficulties no doubt operate by preventing the acquisition of behavior patterns which will permit him to use what intellectual power he does have to the best advantage.

Certain additional facts emerge from our data. We have previously demonstrated that glutamic acid is effective along a wide segment of the learning curve but that the limit of improvement in terms of I.Q. points is between 10 and 15 points. The present investigation reveals that, if a child is within striking distance of normal intelligence, he has a chance of becoming normal. Thirty-four per cent of our group were elevated to that point. The data further reveal, however, that emotional stability is likewise a prerequisite for normal intellectual functioning and that good training habits increase the chances of attaining an average level of intelligence.

The entire question of mental retardation poses a serious problem for the nation. Our work merely serves as an opening wedge to demonstrate that intelligence is not a fixed, immutable quantity as always supposed. It also shows that a certain number of "slow" individuals can be reclaimed for society by chemotherapeutic methods and that efficient mental functioning is facilitated by the inculcation of proper training patterns in childhood.

It is difficult to obtain an exact census on the number of retarded children in the nation. Because a retarded child traumatizes the deepest biologic instincts of the parents and is regarded unconsciously as a reflection on their creative forces, it is frequently hidden and "just not talked about." Exact figures, therefore, cannot be obtained. Because the "slow" child we have discussed in this paper can be hidden more deftly, this child is rarely seen, even in the physician's office, as the incidence of this group in our total case load indicates. However, since the Stanford-Binet test—the most valid of all—is based upon a sample of the total population, the resulting bell-shaped curve of intelligence indicates that the incidence of retarded children in the total population far outstrips the incidence of any other chronic condition of childhood. In terms of social and economic loss, therefore, the effect upon the fiber of our nation is impressive. A nation grows strong with its children, or dies with its children—intellectually and morally. When this loss to society through the children is multiplied by the number of parents of these children who do not function at normal efficiency because of their resulting emotional dislocation, the seriousness of the problem becomes further manifest.

Conclusions

1. Glutamic acid was effective in raising borderline and high-grade defective intelligence quotients to the low average or average level in 34 per cent of the cases reported.
2. Treatment offers these types of individuals an opportunity to become useful members of society on the basis of intellectual requisites alone.
3. As a group, children with good behavior show greater intellectual improvement than those with poor behavior.
4. Poor behavior in most instances appears to be the result of bad training habits established by emotionally dislocated parents.
5. When the neurotic personality pattern of the family projects itself upon the child, which is generally the case, psychiatric education of the parents is also necessary.
6. Organic damage to the brain, as indicated by Rorschach diagnosis, likewise diminishes the degree of intellectual improvement with glutamic acid.

710 West 168th Street

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"EMPTY HEADS PUT THEM IN—EMPTY BELLIES WILL PUT THEM OUT"

So states a distinguished Englishman, Cecil Palmer, in an interview published in *Philadelphia Medicine*. Mr. Palmer, who is a publisher, author, and journalist, made this statement in what he termed to be an "oversimplified summing up of Britain's tragic decline under doctrinaire socialism." The publisher also said: "We in Britain are discovering that you can neither strengthen the weak by weakening the strong, nor is it possible to legislate unsuccessful people into prosperity by legislating successful people out of it."

Physician-patient relationship in Great Britain under socialized medicine is no longer private or secret. According to Mr. Palmer, for centuries every doctor has willingly but compulsorily abided by the professional oath that what passes between doctor and patient is sacred. "By a stroke of the pen," said Mr. Palmer, "after the act had been passed and without any debate in Parliament, doctors were ordered by the Minister of Health—and I quote the order exactly—'To keep records of the illnesses of his public patients, and of his treatment of them and in such form as the Minister may from time to time determine, and to forward such records to the local Executive Council.'" Inevitably, the same thing would eventually happen here if S-1679 should become a law. The public's ills would soon become "back-fence" gossip.—*News Letter Association of American Physicians and Surgeons, August, 1949*

MAKE YOUR PLANS NOW TO ATTEND THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, MAY 8 TO 12, 1950, HOTEL STATLER, NEW YORK CITY

ORAL CHLOROPHYLL FRACTIONS FOR BODY AND BREATH DEODORIZATION

F. Howard Westcott, M.D., F.A.C.P., New York City

In the past three decades there has been a great deal of study done on the composition and medicinal value of chlorophyll and its derivatives. It is one of the fundamental ingredients of plant life and possibly the precursor of some body tissues. Its chemical formula is not definitely known, but the accepted structure of the magnesium salt is $C_{55} H_{72}O_5 N_4 Mg$.

In 1911 Willstaetter succeeded in breaking chlorophyll down into several fractions and producing a water-soluble one which could be used for human experimentation.[1] Between 1922 and 1930, Emil Buergi did some significant studies on the tissue-stimulating properties of porphyrins and thereby greatly increased the possibilities of their use in medical fields.[2-4]

In 1941, our studies were started with various fractions of water-soluble chlorophyll A to find an adjunct in the treatment of hypochromic secondary anemias. Experiments were carried out on white mice and guinea pigs for one year. After proving conclusively that our fractions were nontoxic as well as hematopoetically effective, we studied various types of secondary and nutritional anemias in humans. During the course of our studies in human anemias we had occasion to note that the odors of foods and vitamin B_1, usually detectable in urine, were greatly decreased when patients were taking our specially prepared chlorophyllins.* This definitely indicated that some change in the metabolism of these odorous compounds was taking place and led us to study its effect on perspiration and breath odors.

Deodorant Properties in Vitro

For estimating comparative deodorant properties of chlorophyll derivatives or fractions, a 0.1 per cent solution of benzyl mercaptan in water was used as test material. This compound has a persistent, offensive odor which is characteristic of the excretion of the skunk.

In each test, portions of 50 to 500 mg. of a chlorophyll fraction were weighed on an analytic balance and placed in small stoppered bottles. Then 5 cc. of 20 per cent benzyl mercaptan, 1 per cent thioglycolic acid, and 0.01 per cent trimethylamine solution were introduced into separate bottles and mixed thoroughly with the specially prepared chlorophyllins. The bottles were then stoppered and placed in an incubator at 37 C. Determinations of odors were made by means of the metallic osmoscope of Fair and Wells at intervals of five, thirty, and sixty minutes of incubation. Intensities of odors have been reported as osmoscopic readings, i.e., the number of dilutions of air in the bottle with atmospheric air which were necessary in order to make the odor of benzyl mercaptan imperceptible. The following tables show the results of these tests.

TABLE 1.—Effect of Specially Prepared Chlorophyllins upon Odors of 5 Cc. of 20 Per Cent Saturated Aqueous Solution of Benzyl Mercaptan

Test Number	Specially Prepared Chlorophyllins Added (Mg.)	Osmoscopic Reading After Standing 5 Minutes	30 Minutes
1	0	64	64
2	50	8	8
3	125	2	1
4	250	0	0
5	375	0	0
6	500	0	0

TABLE 2.—Effect of Specially Prepared Chlorophyllins upon Odors of 5 Cc. of Solutions of 1 Per Cent Thioglycolic Acid

Test Number	Specially Prepared Chlorophyllins Added (Mg.)	Osmoscopic Reading After Standing 5 Minutes	30 Minutes
1	0	128	128
2	50	128	4
3	125	8	1
4	250	8	1
5	375	4	1
6	500	2	1

TABLE 3.—Effect of Specially Prepared Chlorophyllins upon the Odors of 5 Cc. of 0.01 Per Cent Trimethylamine

Test Number	Specially Prepared Chlorophyllins Added (Mg.)	Osmoscopic Reading After Standing 5 Minutes	30 Minutes
1	0	128	..
2	50	16	8
3	125	8	2
4	250	8	2
5	375	4	0
6	500	0	0

Deodorant Properties in Vivo

Preliminary tests were run on persons with nursing or medical background who could properly evaluate the clinical effects of this substance on the body and breath odors. A physician and four nurses were trained to use a "Fair and Wells" osmoscope until their results were constant. Following this test period the same group was given increasing doses of specially prepared chlorophyllins, and readings were taken twenty-four hours after a bath. The results of these tests showed that the specially prepared chlorophyllins reduced detectable underarm odor from 56 to 100 per cent in all five subjects within seven hours and were effective as long as eighteen hours in doses of 65 to 200 mg. (Table 4).

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* The product used was Odolex, supplied by Walker Vitamin Products, Inc., Mount Vernon, New York.

TABLE 4.—Effect of Specially Prepared Chlorophyllins on Underarm Odor

	Dose (Mg.)	Hour	Average Osmoscopic Reading at 4 P.M.
Case 1			
Control	0		128
1st day	65	9 A.M.	4
2nd day	65	9 A.M.	4
	65	9 P.M.	
Case 2			
Control	0		256
1st day	65	9 A.M.	87
2nd day	65	9 A.M.	4
3rd day	65	9 A.M.	1
	65	1 P.M.	
	0 (18 hours)		4
Case 3			
Control	0		128
1st day	65	9 A.M.	4
2nd day	65	9 A.M.	4
	65	1 P.M.	
3rd day	65	9 P.M.	
	65	9 A.M.	1
	65	1 P.M.	

To confirm these tests, a group of 12 college girls, including four Negro and eight white girls, were given these same tests for several days in succession while running experiments on the effect of the specially prepared chlorophyllins on breath odors. When one tablet containing 100 mg. of the extract was taken in the morning before moisture had a chance to dry on the skin surfaces, the perspiration odor was not detectable in over 90 per cent of the cases and barely detectable in one case. A Fair and Wells osmoscope and direct smelling tests were used.

Since these controlled studies, over 50 more individuals have been given the tablets and requested to report their own objective observations on its effect. To date, there have been favorable reports from over 90 per cent of the subjects from individual observations on the relief of body odors (Table 5). The average dose needed has been 100 mg. daily, usually taken at breakfast or immediately thereafter.

This study shows that the specially prepared chlorophyllin tablets taken by mouth are effective in neutralizing the obnoxious odors of the body from perspiration, and the effect lasts for eighteen or more hours. In personal observations it has been found that at least one hour should be allowed for effective absorption before favorable effects can be expected.

Effect on Breath Odor

To test the efficiency of the specially prepared chlorophyllins on known breath odors, 12 subjects were given varying doses of grated onion or onion juice by mouth. Tests were done at thirty, sixty, and one hundred twenty minutes to observe the speed of deodorization; 65 to 200 mg. of the specially prepared chlorophyllins powder were allowed to dissolve in the mouth, followed by swallowing of the residue. The results are summarized as follows:

1. When onion is chewed, then swallowed, the specially prepared chlorophyllins tablets, chewed fifteen minutes later, cause an immediate cleansing of the breath, but the odor of onion returns as soon as residual particles of onion remaining in the teeth crevices are digested and release more volatile oils.

2. When onion juice was used and no particles remained in the teeth to produce later (decay) decomposition products, the odor was barely detectable by direct smelling after two hours in one case, absent in four, and definitely present in seven cases.

3. A similar study was made, but a mouth wash of the specially prepared chlorophyllins in solution was used immediately after taking onion juice. Results were more satisfactory and showed an immediate decrease in odor with osmoscopic readings from 256 to 27 after five minutes.

This study reveals that the odor of onion remaining after eating solid onion is due to particles remaining in the teeth and crevices of the mouth. Careful rinsing of the mouth with the specially prepared chlorophyllins solution or dissolving a tablet in the mouth will speed the cleansing process and make it more permanent, but it is effective only if the mouth is cleansed.

Clinical observations on breath odors caused by faulty oral hygiene or metabolic disorders,

TABLE 5.—Results in Ten Cases of Body Odor

Case	Dose Hour	First Effect	Duration	Remarks
P. I.	Tablet 1	2 to 4 hours	12 to 18 hours	Very good
Mrs. B.	Tablet 1	2 hours	12 hours	Good relief
C. H. L.	Tablet 1, A.M.	2 to 4 hours	12 hours	Complete satisfaction; needs 2 tablets at times
P. M.	Tablets 2, A.M., P.M.	4 hours	12 hours	Very good, not 100%
F. B.	Tablet 1, A.M.	2 to 4 hours	12 to 18 hours	Very good, needs 2 during menses
Mrs. J. W.	Tablets 1 to 3	2 hours	8 to 12 hours	Very good relief
D. K.	Tablet 1	Immediately	12 to 18 hours	Very good even with excessive exercise
C. L.	Tablets 2, A.M., P.M.	4 hours	12 hours	Helped bad foot odor
J. W.	Tablets 2, A.M., P.M.	1 to 2 hours	8 to 12 hours	Stopped foot odor and vitamin B_1 in urine
V. Y.	Tablets 2, A.M., P.M.	1 to 2 hours	12 to18 hours	Very good, stopped vitamin B_1 in urine

ordinarily described as halitosis, also from alcoholic beverages and smoking have been studied for two years. The following table of 10 cases shows the characteristic results reported by these patients.

TABLE 6.—RESULTS OF TEN CASES OF BREATH ODOR*

Case	Dose Hour	Remarks
Mrs. A.	Tablet 1	Excellent for bad halitosis
E. C.	Tablet 1	Good
G. Y.	Tablet 1	Good
P. S.	Tablet 1	Helped halitosis
J. H.	Tablet 1	Helped halitosis
F. H. W., Sr.	Tablet 1	Helped mouth odor from false teeth
F. E.	Tablets 3	Helped bad breath but not 100%
R. C.	Tablet 1	Stopped breath odor
J. R. H.	Tablet 1	Helped bad breath
G. C.	Tablet 1	Very good relief

* Breath odors relieved for several hours or until food, tobacco, or beverages cause a recurrence. The first effect of the dose was immediate in all cases, and the duration was indefinite.

Summary

In summarizing our experiences with the specially prepared chlorophyllins, the following claims can be substantiated:

1. Chlorophyll fractions used in these tests are entirely nontoxic and suitable for human ingestion.

2. In vitro experiments have shown their effectiveness in neutralizing malodorous substances of neutral, acid, or base reactions.

3. In vivo it effectively neutralizes obnoxious odors in the mouth from foods, beverages, tobacco, and metabolic changes (halitosis).

4. It effectively neutralizes the obnoxious odors from perspiration due to physical exercise, nervousness, and illness; obnoxious foot odors, menstrual odors, and many urine odors from ingested materials.

130 EAST 67TH STREET

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PLAN STUDY OF PESTICIDES' EFFECTIVENESS AND SAFETY

Studies to determine the effectiveness and safety of pesticides are planned by the American Medical Association Joint Committee on Pesticides, Bernard E. Conley, R.Ph., of Chicago, committee secretary, has announced. This decision is the outgrowth of a recent meeting in the A.M.A. headquarters in Chicago. The meeting was attended by representatives of the A.M.A. Council on Pharmacy and Chemistry and Council on Foods and Nutrition, the Federal Food and Drug Administration, state departments of public health, private and industrial toxicologic laboratories, and research institutes and trade associations. The committee, a branch of the A.M.A. Council on Pharmacy and Chemistry, will coordinate various medical activities interested in the pesticide problem and assist physicians and pharmacists in overcoming the difficulties which new pesticides present.—*A.M.A. News Release*

SOCIALISTIC MEDICINE COSTS BRITAIN 7.5 TIMES COLLECTIONS

Britain's socialistic provision for free medical and dental care for its citizens now costs that country 300 million pounds sterling annually, or about twice the amount originally estimated by the proponents of this paternal plan.

Minister Bevan explained that one of the reasons why the cost of the health service the first year was so much higher than had been estimated is the fees paid to physicians were in certain cases raised above the level originally scheduled. However, the chief cause of the high cost of the socialistic scheme was the overwhelming use made of it by the public. Overnight, doctors, dentists, oculists, pharmacists, and the hospitals became very popular with the people as health service became "free," and everyone wanted all they could get. In the first year 187 million prescriptions were dispensed free, 5,260,000 requests for eyeglasses were supplied, and the year's end found 3,000,000 more on order; dentists took care of 8,500,000 free patients, and 5,071 wigs were supplied to baldheaded folk.—*Insurance Economic Surveys, February, 1950*

Case Report

HYPERCHROMIC MACROCYTIC ANEMIA OF PREGNANCY

Sol S. Schifrin, M.D., and Barnett M. Hershfield, M.D., Bronx, New York

(From the Department of Obstetrics and Gynecology and the Department of Medicine, Jewish Memorial Hospital)

THIS case of hyperchromic macrocytic anemia is being presented because of its unusual features. It does not fit into the well-recognized types of hyperchromic macrocytic anemias, and although it occurred four months after delivery, its clinical manifestations and response to therapy were of the type found associated with pregnancy.

Case Report

Mrs. R. K., a thirty-year-old white primigravida, first came under care in April, 1946. Her last menstrual period was February 5, 1946. The estimated date of confinement was November 12, 1946. Her past and personal history was negative. She had measles and chickenpox in childhood. She began to menstruate at thirteen, had a thirty-one-day cycle, and flowed for seven days. At the age of thirteen she developed a slight scoliosis of the thoracic spine, the cause of which was undetermined.

Physical examination revealed a well-developed and well-nourished patient with a curvature of the spine. The blood pressure was 140/80, weight 120 pounds. Pelvic measurements revealed a borderline pelvis. Hemoglobin was 80 per cent (Sahli). Urine was negative. Wassermann was negative. Her blood type was A, Rh positive.

Except for some nausea during the first trimester the entire prenatal period was uneventful. She gained 28 pounds during her pregnancy.

She was admitted to the hospital on November 23, 1946. After a ten-hour trial of labor, during which there was no progress, the head still being unengaged, the membranes intact, the fetal heart good, a low-flap cesarean section was done under general anesthesia, and a living female child weighing 6 pounds, 10 ounces was delivered. The blood loss during the operation was slight.

The postpartum period was uneventful, and she was discharged on the ninth postoperative day in good condition. After discharge from the hospital, she was seen on three occasions for postpartum checkup. She had no complaints, and her general condition was good.

On March 22, 1947, about four months after delivery, she complained of a swelling in the throat. Examination at that time was negative with the exception of the presence of slight diffuse enlargement of the thyroid. (It should be noted that this patient's thyroid was normally slightly enlarged.)

She was next seen on April 9, about two weeks later, with the following complaints: During the preceding week she had been feeling dizzy and weak. She had palpitations, pain in the back of the head, and edema of the ankles. During this time there was no history of any abnormal bleeding.

Physical examination at that time revealed a very pale young woman. Weight was 125 pounds, blood pressure 120/80, and hemoglobin 40 per cent (Sahli). There was marked pallor of the mucous membranes. Liver and spleen were not palpable. The remainder of the examination was negative. She was placed on folic acid and iron and a high vitamin diet. Results of a complete blood count done that same day are shown in Table 1. There was poikilocytosis and marked macrocytosis. Hospitalization was refused until the next day when she fainted while trying to get out of bed.

On admission to the hospital, examination showed the very marked pallor and adenomatous enlargement of the right lobe and isthmus of the thyroid. Heart and lungs were negative. The liver was found to be 2 fingerbreadths below the costal margin. It was smooth and nontender. The spleen could not be felt. Neurologic examination was negative. There were no pathologic reflexes or sensory changes. There was no icterus. Pelvic and rectal examinations were negative.

The blood count on admission is shown in Table 1. There was achromia, poikilocytosis, anisocytosis, and polychromatophilia. Platelets were 180,000. Fragility test was normal. Blood chemistry showed the following: cholesterol 246 mg., serum albumin 3.9, serum globulin 1.2, albumin-globulin ratio 3.2. Free hydrochloric acid was found in the stomach in small amounts after histamine stimulation, being reported as 5 cc. after four hours and 15 cc. after five hours. Feces were positive for occult blood. No parasites or ova were demonstrated.

Gastrointestinal series and barium enema showed no evidence of pathology.

TABLE 1.—Results of Complete Blood Counts

	April 9	April 10	May 8	October 16
Hemoglobin	38%	20%	70%	87%
Red blood cells	1,790,000	740,000	4,490,000	4,090,000
White blood cells	7,150	8,000	7,950	10,000
Polymorphonuclears	57%	. . .	49%	. . .
Monocytes	5%	. . .	11%	5%
Lymphocytes	37%	23%	32%	24%
Eosinophils	3%	2%	4%	. . .
Basophils	2%	1%	. . .	. . .
Segmented forms	. . .	70%	. . .	61%
Nonsegmented forms	. . .	4%	. . .	10%
Band forms	2%	. . .	4%	. . .
Color index	1.1	. . .	. . .	. . .

The patient was put on 15 units of refined liver extract intramuscularly daily, vitamin B complex 1 cc. daily, Feosol tablets 4 times daily. To this was added a full diet including meat and liver every day.

Two days after admission the blood showed hemoglobin 45 per cent, red blood cells 1,950,000. After that there was a steady improvement until on April 26, sixteen days after admission, the hemoglobin was 70 per cent, and the red blood cell count was 3,400,000. The reticulocytes increased to 28 and 30 per cent. She was discharged as improved on April 28, eighteen days after admission to the hospital.

After discharge she was continued on liver injections, 15 units twice weekly for two weeks, and then on 15 units once a week for an additional two weeks. On May 8, the blood count was as shown in Table 1. Reticulocyte count was 2 per cent.

On July 8, 1947, two months later, the blood showed hemoglobin 93 per cent, red blood cells 4,670,000, white blood cells 7,150. The differential count was normal.

On September 2, 1947, the hemoglobin was 84 per cent, and the red blood cell count was 4,870,000. Five months later (February 3, 1948), the hemoglobin was 80 per cent and the red blood cells 3,770,000.

She was seen last on October 16, 1948. She had no complaints. Her physical examination was negative. The blood count taken that day is shown in Table 1. Her condition to date remains good.

Discussion

The differential diagnosis of this case of macrocytic anemia rests among the following conditions: (1) Addisonian anemia, (2) nontropical sprue, (3) malignancy of the gastrointestinal tract, (4) cirrhosis of the liver, (5) parasitic infestation as Dibothryocephalus latus, and (6) delayed pregnancy type of macrocytic anemia.

The presence of small amounts of free hydrochloric acid after histamine does not conform to the Addisonian anemia. Furthermore, vibratory sense was present, and neurologic examination was negative. In addition, pernicious anemia usually occurs in older people.

Nontropical sprue usually occurs in middle age. There is a distended abdomen, and diarrhea is often very prominent. The stool is bulky, greasy, and frothy. Bowel movements are explosive. There are usually x-ray findings in the colon or intestines suggestive of this disease.

Malignancy of the gastrointestinal tract and cirrhosis of the liver could be ruled out by the absence of positive physical, laboratory, or x-ray findings. Furthermore, the history was not suggestive of either of these conditions.

Examinations of the stool failed to show the presence of any parasitic infestation.

Finally, we gave due consideration to the possibility that the antecedent pregnancy played a part in the etiology of this case of anemia. Except for the timing, its clinical manifestations and response to therapy were the same as the primary macrocytic anemia of pregnancy. A review of the literature fails to reveal any case of hyperchromic macrocytic anemia which is related to the pregnancy and which occurred so late after the pregnancy.

Summary

A case of hyperchromic macrocytic anemia found four months postpartum has been described. The findings and response to therapy most resemble the primary macrocytic anemia associated with pregnancy or the early postpartum state.

DR. JONES SAYS—

Years ago, in one of the state mental hospitals, painters were working in one of the men's wards and they caught a patient drinking paint out of one of their pails. Well, it didn't hurt him, probably because it was inside paint with no lead in it. But what made me think of it was an item in Baltimore Health News.

In Baltimore, since 1930, they've recorded 213 cases of lead poisoning in children. Around a third of 'em were fatal. They had 31 such cases in 1948. When they investigated, they found it was chiefly children from a year and a half to three years old that'd been chewing on painted surfaces, like window sills, or eating dried paint that'd flaked off from inside woodwork. The inside painting had been done with outside lead paint.

And that reminded me of something else. Have you ever noticed a bunch of small kids in the front rows at the movies or in church. When they're waiting for the ceremonies to start there'll usually be several of 'em turned around facing the rear, with their mouths applied to the top of their seat-back. I've seen 'em when it looked as if they were chewing on the back of the seat. I guess the seats in such places usually are varnished. Varnish don't have lead in it—although it might have other things that couldn't be recommended for juvenile ingestion. But what's on it is likely to be more important, there, than what's in it. Mouths have germs in 'em and many communicable diseases—the germs or viruses are in the mouth secretions.

So—when the tots are being taught (we hope) about not putting things in their mouths, it'd be well to include paint flakes, window sills, and seat-backs in the list. And our inside paint jobs—we shouldn't forget that lead in the paint isn't necessary and, with small children around, could be dangerous.—*Paul B. Brooks, M.D., October 31, 1949*

PURE PULMONARY STENOSIS

Milton H. Morris, M.D., F.A.C.P., A.S. Tepper, M.D., and Leon Blum, M.D.,
New York City

(From the Departments of Medicine and Pediatrics of St. Joseph's Hospital)

ISOLATED congenital lesions are rare. The formation of septa, the torsion of the primitive cardiac tube, and the evolution of the aortic arches occur simultaneously during the fifth and eighth weeks of fetal life. The inherent compensatory mechanism in the organism allows for the formation of abnormal shunts and anastomosis to insure the temporary viability of the fetus when the normal channels of blood flow are altered. This embryologic sequence together with the adaptation of the fetus to altered physiology accounts for the infrequency of isolated or pure congenital heart lesions.

Taussig has not had the opportunity to study a proved case of pure pulmonary stenosis.[1] Currens, Kinney, and White report 11 cases of pure pulmonary stenosis.[2] Pollack, Taylor, Odel, and Burchell diagnosed three cases by cardiac catheterization.[3] Two cases of pulmonary stenosis are recorded by Selzer, Carnes, Noble, Higgins, and Holmes.[4] In a large series of cases Abbott observed this anomaly only nine times.[5]

The infrequency of pulmonary stenosis in reports from the literature and its rarity in active cardiac clinics in this country has prompted us to report a case of pure pulmonary stenosis with autopsy findings.

Case Report

J. G., eleven months old, was admitted to the St. Joseph's Hospital on March 7, 1949, at 5:00 P.M. The infant was delivered on April 17, 1948. The labor was normal. Low forceps were used. There was no cyanosis or respiratory difficulty at birth or during the hospital period. The birth weight was 8 pounds and 14 ounces. The child did well and did not present any problems in feeding or development. The first indication of any difficulty was at the age of two months when the mother noticed the child "rolled its eyes" and "fainted" on one occasion. The family physician saw the child the next day. He noted a normal acting child but for the first time heard a murmur over the precordium. At six months of age prophylactic immunization against pertussis, diphtheria, and tetanus was done by the family physician. The mother at this time noticed slight blueness of the lips when the child cried. It would clear when the crying ceased. At eleven months of age the child's weight was 19 pounds and 8 ounces.

Present Illness.—The mother noticed the child had several coughing spells during the night. At noon the following day the child again had several coughing spells, and the mother noticed bright red blood in the bed. At 3:30 P.M. the child vomited a large amount of bright red blood. This was accompanied by moderate cyanosis. The child was sent to St. Joseph's Hospital two hours later.

Physical Examination.—The clinical picture was that of a female, white infant in extremis. The respirations were very rapid, the pulse at the wrist barely obtainable. Marked orthopnea was present. There was some cyanosis of the lips and fingertips. The heart sounds at the apex were of poor quality. The rate could not be accurately determined. A systolic murmur was heard over the precordium and seemed more intense at the apex.

The breath sounds were vesicular, and at the lung bases many rales were heard. The abdomen was distended, and the liver was palpable two fingers below the right costal margin. The oral cavity showed dry and fresh blood over the tongue and posterior pharnyx. Within an hour after admission the lungs showed many moist and bubbling rales throughout and presented the picture of pulmonary edema. The child expired at 3:00 A.M.

Roentgenogram showed the heart to be globular in shape with a prominence in the upper left cardiac border corresponding to the region of the pulmonary conus (Fig. 1). The lower left cardiac border presented a rounded or blunted appearance and seemed to be lifted high above the left diaphragm.

Autopsy Report.—Autopsy was limited to the heart.

General Examination: Body is that of a female child about 32 inches in height, weighing about 25 pounds. The hair is brown, eyelashes and irides are brown; eight front teeth are present. Postmortem lividity present on back. There is a brown incrusted scab on the left upper arm (vaccination). Postmortem rigor present.

Body Wall and Cavities: Subcutaneous tissue measures $^1/_4$ inch. The musculature is well developed. There is excess free fluid in the pericardial sac and none in the pleural or peritoneal cavities. Heart weighed 130 Gm.

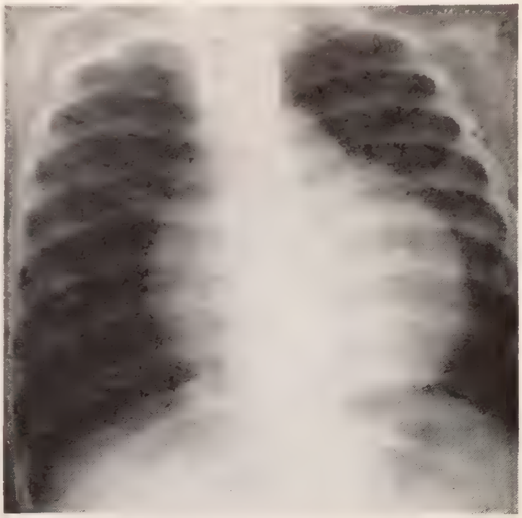

FIG. 1. Note prominence of upper left cardiac border in region of pulmonary conus. Lower left cardiac border rounded, blunted, and raised above the diaphragm. Globular-shaped heart.

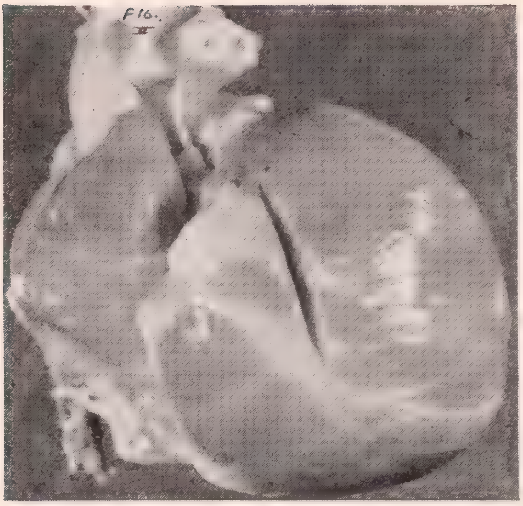

FIG. 2. Intact heart. The right ventricle forms most of the anterior surface of the heart. The left ventricle is not visible in this view.

The heart is markedly enlarged and occupies most of the anterior mediastinum with compression into the left chest cavity. The right auricle is markedly distended; the pulmonary artery and aorta are of average size. The right ventricular musculature occupies all of the anterior portion of the heart (Figs. 2 and 3). The right ventricle is markedly dilated. The foramen is anatomically patent but physiologically closed. The remainder of the auricular septum is intact. The tricuspid valve measures 55 mm. in its opened state and shows slight thickening. There is marked hypertrophy of the right ventricle in its outflow tract. The pulmonary artery presents itself as a nipple, 6 mm. in diameter with a minute opening 1 mm. in diameter at the summit of the nipple. The cusps are all agglutinated. The pulmonary artery is slightly dilated and measures 38 mm. in its open state at a point immediately above the pulmonary valve ring (Fig. 4). The left ventricle is small; the musculature measures 8 mm. in thickness; the mitral valve measures 60 mm. in its opened state. There is no ventricular septal defect.

The aortic valve is patent and shows no abnormalities. The ductus arteriosus is closed and is represented by a minute, dimpled opening on the pulmonary arterial side. On the aortic side the ductus is patent, measuring 2 mm. in diameter, and is open to this diameter for half its length and there suddenly narrows to a minute opening which continues for the rest of the distance to the pulmonary valve. The aorta is grossly normal.

Lungs examined in situ show some compression of the left lung and some aspiration of blood into the apex of the right lower lobe.

The liver examined in situ shows mottling and slight enlargement in the epigastric area. Section shows pale parenchyma. The gallbladder is filled with bile. The spleen is slightly enlarged and firm. The stomach is markedly distended with gas and blood. The small bowel contains a large quantity of blood with a moderate amount in the large bowel. The kidneys examined in situ are not remarkable. Uterus, tubes, and ovaries examined in situ are normal.

Anatomic Diagnosis: (1) Pulmonary stenosis, marked, congenital; (2) massive right ventricular hypertrophy; (3) hypertrophy of right outflow tract; (4) anatomically patent but physiologically closed foramen ovale; (5) partially opened ductus arteriosis, aortic side, and physiologically closed, pulmonary arterial side; (6) pulmonary atelectasis, and (7) blood in lungs and gastrointestinal tract.

Cause of Death: (1) Congenital heart disease, (2) congestive heart disease, and (3) pure pulmonary stenosis.

Discussion.—The child was brought into the hospital moribund, which accounts for the lack of laboratory data and an electrocardiogram. We felt that a chest plate was essential for its value in understanding the cardiac and pulmonary signs. This procedure, accompanied by the removal of the oxygen tent, disturbed the respirations and the color of

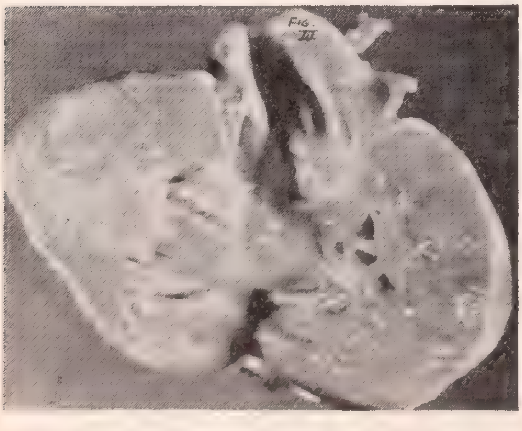

FIG. 3. Right ventricle opened. Note marked thickness of walls.

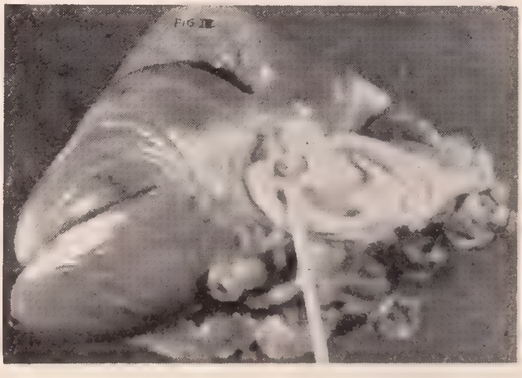

FIG. 4. Pulmonary artery opened. Note the pulmonary valve shows a complete fusion of the free margins of the cusps, producing dome-shaped fibrous diaphragm with central opening 1 mm. in width. This was the only opening through the pulmonary valve ring.

the child greatly. The finding of a murmur by the family physician made us feel that we were dealing with a congenital lesion. The absence of any degree of cyanosis and the interpretation of the cardiac silhouette suggested the possibility of pulmonary stenosis. Since no oxygen saturation or circulation time studies were done, we did not know whether there were any abnormal shunts in the form of auricular or ventricular septal defects. The early exitus of the child precluded a complete follow-up study.

Summary

We have presented a case of pure pulmonary stenosis unaccompanied by an auricular or ventricular septal defect. The foramen ovale and the ductus arteriosus were functionally closed. At what period the ductus ceased to function and whether its closure precipitated the above sequence of events, we are not prepared to state. The finding of gross blood in the stomach and the small and large bowel has not been reported in the literature in autopsies of pulmonary stenosis. Since there were no gross lesions of the intestinal tract, one could only assume the presence of a varix or the production of increased capillary permeability due to extreme anoxia. Again, the pulmonary stenosis with the loss of its compensatory blood flow by way of the ductus could have caused the rapid exitus. The hemorrhage itself was of sufficient amount to cause death. Which factor initiated the chain of events and which mechanism was actually responsible for the death we are not prepared to state; it might be that all were involved to some degree.

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AUREOMYCIN THERAPY OF MULTIPLE VERRUCAE

Joseph Dollin, M.D., Forest Hills, New York

THE common wart is an infectious papula produced by a filtrable virus, appearing anywhere on the skin of the body. Its appearance varies on different parts of the body. Warts appear to be autoinoculable and may, therefore, spread if picked or scratched.

Various treatments have been used to eradicate warts, including bismuth therapy, locally or intragluteal, freezing with carbon dioxide snow, local antiseptic preparations such as Vleminck's solution, fulguration, and often psychotherapy. After removal of these lesions there is often a recurrence, or new lesions may even appear.

Since aureomycin has been found effective in other virus diseases, it appeared indicated in the treatment of multiple verrucae.

Case Report

In March, 1949, a man, forty years of age, presented himself in my office with a history of "warts in his nose for the past year." One year previously, the first one appeared just above the upper lip. He had this removed by radium therapy. Within the next four months, four more warts had appeared, situated at the mucocutaneous junction of both nostrils. These were removed surgically by a nose and throat specialist. New growths appeared during the succeeding several months until by the time he appeared in my office he counted twelve. All were small papules, 1 to 4 mm. in diameter, and were elevated 1 to 2 mm. Their surfaces were roughened and composed of many papillary projections. They were all situated in the mucocutaneous junction of both nostrils.

Four grams of aureomycin were prescribed and taken within a period of thirty-six hours. When the patient reappeared at my office one week later, all the warts had completely disappeared.

Summary

A case of multiple verrucae which was successfully treated with aureomycin is reported.

98-120 Queens Boulevard

PRIMARY MULTIPLE CARCINOMA

J. R. Reuling, M.D., F.A.C.P., Bayside, New York, A. X. Rossien, M.D., Kew Gardens, New York, and A. N. Lakes, M.D., Culver City, California

(From the Department of Medicine, Division of Gastroenterology, and Outpatient Department, Queens General Hospital)

THERE is a comparative paucity of primary multiple carcinoma. However, it has been well established that a distinct variety of carcinoma of one organ may coexist with another variety in another organ, either close by or far removed. There have been sufficient case reports to indicate that this is no longer a medical curiosity, even though it is not a common finding.[1–5] The criteria generally accepted for multiplicity of primary carcinoma in a patient are as follows: (1) each tumor must present a definite picture of malignancy, (2) each must be distinct, and (3) the possibility of one being a metastatic growth from the other must be excluded.

Four primary cancers in one patient have been reported.[6] That patient had medullary carcinoma of the breast; carcinoma in the scar where the breast was removed and radiation had been used (with several recurrences); transitional cell carcinoma of the cervix, and papillary adenocarcinoma of the rectum. All of these lesions were histologically different and did not in any way lead to the suspicion that they were metastatic growths of one from the other.

A detailed statistical report on a total of 1,259 cases of multiple malignancies revealed that the frequency of that condition is 1.84 per cent of malignant cases.[7] A theory postulating the etiology of multiple malignancies is that there exists an inherent susceptibility for cancer, in other words, a cancer diathesis.[8]

It has been pointed out that multiple carcinoma of the anus, rectum, and sigmoid colon is reported at the rate of about 8.8 per cent per year.[9] In that report five cases of multiple primary malignant tumors of the rectum and sigmoid were added to the literature. Five primary carcinomas of the stomach were found to exist in one patient.[10] Sixty-four carcinomas "(?)" which were multiple primary melanotic tumors of the small intestines have been described.[11]

We are herein reporting a case of double primary carcinoma, one involving the esophagus and the other an asymptomatic carcinoma of the sigmoid found on routine proctosigmoidoscopy.

Case Report

L. J., a fifty-five-year-old male Negro, reported to the Gastrointestinal Clinic of the Queens General Hospital with a one-year history of difficulty on swallowing. While at first he had difficulty only with solid foods, this had become increasingly worse so that for the past two months he had had trouble swallowing gruels. He complained that, "The food seems to get stuck." He further complained of occasional retrosternal pain and less frequently of regurgitation. There was no loss of weight. The rest of the history was essentially negative, except for the presence of hemorrhoids for many years.

Physical examination revealed no abnormal findings except for external hemorrhoids.

The patient was fluoroscoped, and it was observed that there was a dilatation of the esophagus at the level of the fourth rib, with slowing in the progress of the barium contrast meal. Below the dilatation there was a constriction and defect in the contour of the esophagus. The stomach and duodenum appeared normal.

Radiographic examination confirmed the fluoroscopic findings with the report, "There is a constant napkin ring type of filling defect involving the esophagus slightly below the aortic arch, with constant narrowing of the esophagus at the junction of the upper and middle thirds with secondary dilatation of the upper third."

Proctosigmoidoscopy is routine in our Gastrointestinal Clinic. Therefore, we observed that at five and one-half inches from the anal margin on the posterior wall of the rectum there were two small pedunculated growths whose surfaces were not quite smooth nor friable. There was no evidence of bleeding. A portion was removed for microscopic study. The pathologic report was as follows: "Biopsies showed marked cytologic atypism. No invasion can be seen. Diagnosis: Adenocarcinoma, grade 1."

The patient was admitted to the hospital on September 15, 1947, with the diagnosis of carcinoma of the esophagus and adenocarcinoma of the rectum. On October 4, 1947, a transthoracic esophagogastrostomy was performed.* At operation a large fungating mass was found at the junction of the upper and middle thirds of the esophagus which was chiefly posterior in position. The lumen of the esophagus was not blocked. There were lymph node metastases. A portion of the tumor was removed for microscopic study. The pathologic report was "squamous cell carcinoma, grade 3." The patient had a stormy postoperative course and died on October 5, 1947. Unfortunately, permission for autopsy could not be obtained.

Summary

1. Multiple primary carcinomas in a single individual are not too frequently observed.

2. A case of double primary carcinoma is reported. The lesions in this case were squamous cell carcinoma of the esophagus, grade 3, and adenocarcinoma of the rectum, grade 1.

3. Statistical data on multiple cancers are cited.

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* Department of Surgery (Dr. Chester L. Davidson, Director.)

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MENINGOENCEPHALITIS DUE TO TRICHINELLA SPIRALIS

Michael S. Bruno, M.D., and Maurice Goodgold, M.D., New York City

(From the Fourth Medical Division (New York University), Bellevue Hospital)

TODAY it is a rarity for trichinosis to present itself as an overwhelming infection with initial symptoms and objective findings referable almost exclusively to the central nervous system. A male patient was recently admitted to Bellevue Hospital from another institution with the diagnosis of meningitis. Shortly thereafter the patient developed a fulminating but fluctuating, toxic encephalitis. Subsequent investigation revealed the causative agent to be Trichinella spiralis. Because of the anomalous initial picture in relation to the subsequent clinical course and laboratory findings, the following case is believed worthy of being recorded.

Case Report

J. C., a sixteen-year-old, white, male inmate of a New York State correction school, was admitted to Bellevue Hospital for the first time with a diagnosis of meningitis of undetermined etiology.

At the time of admission, it was impossible to obtain an adequate history from the patient because of his extreme toxic state. A referring transcript stated, however, that the boy was apparently well until eight days before he was admitted, at which time he developed puffiness of both eyes. Definite hyperpyrexia was noted for the first time on the following day, together with a severe headache and generalized malaise. Because the patient's condition did not improve spontaneously in the next two days, he was admitted to the dispensary of the institution for observation. On admission, he was found to have a moderately injected throat, some puffiness of the eyelids, marked conjunctival injection, and a temperature of 100.6 F. The patient was started on a course of combined sulfadiazine and sulfathiazole. On the following day and on all subsequent days prior to his admission to Bellevue Hospital, his temperature rose to 105 F. On the fifth day of illness, penicillin, in addition to combined sulfonamide therapy, was administered. On the following day, the patient became disoriented and developed visual hallucinations. A neurologic examination revealed that there was a positive Babinski sign on the right. A white cell count was 22,400 per cu. mm., but no differential count was reported. Anorexia and weakness became profound. The patient developed dizziness which was so severe that he was unable to walk without assistance. During the two-day period prior to transfer, the patient's temperature fluctuated between 102.4 and 105 F. Because of the progressive nature of the disease process and the lack of response to chemotherapy, the patient was transferred to Bellevue Hospital for further evaluation and workup. No additional information of significance could be elicited from the patient upon admission.

Physical examination revealed a temperature of 104.6 F., a pulse of 120, respirations of 30, and a blood pressure of 90 systolic and 60 diastolic. The patient was well nourished and developed but markedly dehydrated. He was weak and appeared to be in some respiratory distress. His skin was diffusely flushed; his conjunctivae intensely reddened; he was hot but not perspiring.

Examination of the head was negative except that some puffiness of the eyelids was observed. The pupils were round, regular, and equal and reacted to light and accommodation. Function of the extraocular muscles was normal. Fundoscopic examination revealed marked engorgement of all the blood vessels. The left eardrum was reddened but not bulging, and all landmarks could be identified. The turbinates were injected and swollen, and a moderate amount of purulent material was visible in the left naris. A foul odor emanated from the mouth. Oral hygiene was poor, but the oropharynx was not inflamed. The neck was definitely supple; the neck veins were not engorged, and the trachea was in midline. The thyroid gland was normal. There were no palpable lymph nodes. The lungs were found to expand fully and equally and were clear to percussion and auscultation. The heart was not enlarged to percussion, and the point of maximal impulse was in the fourth intercostal space inside the midclavicular line. There was a regular, rapid pulse. The heart sounds were of good quality; a low-pitched, soft, systolic murmur could be heard at the apex. The second pulmonic sound was not accentuated but was greater than the second aortic sound. Examination of the abdomen revealed nothing of significance. The genitalia were normal. On rectal examination the prostate gland, while normal in size and configuration, was boggy in consistency and somewhat tender. There was no clubbing, cyanosis, edema, or deformity of the extremities.

Neurologic examination revealed absence of all deep tendon reflexes except for those of the upper extremities which were hypoactive. Abdominal and cremasteric reflexes were also absent. Bilateral Babinski signs were noted. No other pathologic reflexes could be elicited.

Fluoroscopic examination of the chest revealed nothing unusual.

Course and Laboratory Data.—Examination of the blood revealed that the hemoglobin was 15.3 Gm., the red cell count 4,490,000, and the white cell count 13,400. A differential count revealed 73 per cent of the leukocytes were polymorphonuclears; 21 per cent lymphocytes, 3 per cent monocytes, 2 per cent eosinophils, and 1 per cent basophils. Examination of the urine revealed a trace of albumin. The urine was otherwise negative. A spinal tap was performed soon after admission and revealed the following: The initial pressure was equivalent to 180 mm. of water; the final pressure was 130 mm.; there was no evidence of a subarachnoid block; the spinal fluid was crystal clear, and no membrane formed on standing; the Pandy test was negative; microscopic examination revealed two lymphocytes per cu. mm.; chemical analysis revealed the protein to be 37 mg. per cent, sugar 52 mg. per cent, and chlorides 670 mg. per cent; the Wassermann test was negative, and the colloidal gold curve was 0000000000.

A roentgenogram of the chest was negative. X-rays of the sinuses revealed clouding of both maxillary and ethmoid sinuses on the left.

Because of the evident sinus pathology and the septic course, penicillin therapy was started with a dose of 50,000 units administered intramuscularly every three hours. At the end of the second hospital day, the patient's temperature dropped to 100 F., and he was less toxic. Neurologic examination revealed that all deep tendon and superficial reflexes were absent except the right biceps. The bilateral Babinski signs which were present on admission disappeared. On the third hospital day, the patient took a marked turn for the worse. His temperature rose to 104.8 F. On re-evaluation of the case, the diagnosis of trichinosis was entertained. A specimen of the patient's serum was sent to the Bureau of Laboratories of the Health Department of New York City for a trichinella precipitin test.

During the next few days the daily temperature spiked to 104 F. The patient complained of a severe headache. He was lethargic, confused, and completely disoriented. Nuchal rigidity again became evident. A second spinal tap was performed and was within normal limits. The hyperpyrexia continued. On the eighth hospital day the infected sinuses were irrigated. On the ninth day the temperature rose only to 102 F. and was the beginning of a trend toward lower temperature. For the first time, however, the patient complained of severe, generalized muscle pain and tenderness. Most of the pain was localized in the muscles of the shoulder girdle, the back, and the lower extremities. The pain was so severe that it became necessary to administer opiates. There was also marked calf tenderness bilaterally but no local evidence of an inflammatory process. Homan's sign was negative. Nuchal rigidity persisted and increased. The Kernig and Brudzinski signs became positive. A positive Babinski sign was also present on the left side. The abdominal reflexes were absent, but the cremasteric reflexes were present. The patient was perspiring profusely and was in marked distress.

On the same day the first laboratory indications of the possibility of trichinosis became apparent. The trichinella precipitin test was reported as positive with an antigen dilution of 1:1280. A 13 per cent eosinophilia was found in a differential study of the white blood cells. Penicillin therapy was suspended. The temperature continued to drop by lysis, reaching normal on the twelfth hospital day, and remained normal for the duration of his hospitalization. Muscle pain continued but with diminishing severity. The abnormal neurologic signs gradually cleared up. The patient became asymptomatic by the twenty-first hospital day when an eosinophilia of 18 per cent was noted. This gradually rose in the next two weeks so that it was 56 per cent on the thirty-eighth hospital day when it started to fall, and a few days prior to the patient's discharge the count was 49 per cent. Three months after his discharge from the hospital the eosinophil count was 2 per cent.

On the twenty-sixth hospital day the erythrocyte sedimentation rate was 72 mm. in one hour (Westergren). It was 8 mm. on the tenth hospital day. Repeated urinalyses were negative. Numerous blood cultures, a nose and throat culture, and a catheterized urine culture were negative for pathogenic organisms.

Because of the initial high trichinella precipitin titer, it was decided to repeat the test at intervals for the purpose of correlating the titer with the patient's symptoms and signs. The precipitin test was performed nine times from the patient's third hospital day to the one hundred forty-second day, following his discharge from the hospital.* The titer reached its peak on the fifteenth day of hospitalization when it was reported as positive in a dilution of 1:20,480. Thereafter, the titer gradually diminished but was positive in a dilution of 1:2,560 three months after the patient's discharge.

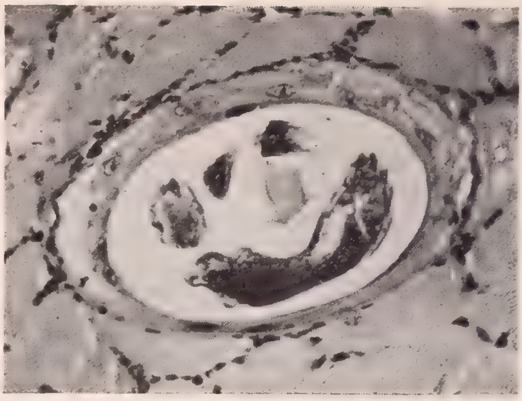

FIG. 1. Recently encysted Trichinella spiralis in skeletal muscle (gastrocnemius).

On the thirty-fifth hospital day, a specimen of blood was sent to the National Institute of Health for a trichinella complement fixation test. It was reported as positive, but no titration was attempted. On the thirty-first hospital day a specimen of the blood was sent to Dr. Witebsky at the Buffalo General Hospital for complement fixation study. The test was reported as strongly positive in serum dilutions of 1:640.

The agglutinin titers for brucellosis and the rickettsial diseases were insignificant. The agglutinin titers for typhoid O, typhoid H, paratyphoid A, and paratyphoid B were in the significant range. With typhoid O, the titer rose from 1:80 on the thirteenth hospital day to 1:400 on the twenty-fifth hospital day. The heterophil agglutination for infectious mononucleosis was negative on the tenth hospital day.

Repeated electrocardiograms were interpreted as being within normal limits.

On the thirty-second day of illness a muscle biopsy of the left gastrocnemius was performed. The pathologist's report was as follows:

> "Sections reveal multiple larvae surrounded occasionally by foreign body giant cells and for the most part by leukocytes, among which eosinophils are prominent. The larvae have a distinct, highly refractile outer rim and an accumulation of nuclei in the cytoplasmic matrix (Fig. 1). Occasionally a coiled worm can be identified. Diagnosis: Recent infestation of skeletal muscle (gastrocnemius) by Trichinella spiralis."

In view of the severity of the disease process, it is of interest from the standpoint of prognosis in trichinosis to note that the patient continued symptom free three months after his discharge from the hospital.

Life Cycle of T. spiralis

A knowledge of the life cycle of T. spiralis is necessary if one is to have a proper understanding of the disease which this parasite produces. The cycle is begun when uncooked, undercooked, or under-processed pork or pork products containing encysted trichinella larvae is ingested. Meat fibers and capsules that contain the parasites are digested, liberating the larvae in the gastrointestinal tract. The larvae attach themselves to the mucosa and burrow into the crypts of the small intestine. Receiving an abundance of nutriment, they grow rapidly to maturity. After copulation has taken place, the viviparous gravid female gives birth to motile minute larvae which are deposited directly into the intestinal lymphatics. During this phase of the cycle the patient may develop a multitude of complaints referable to the gastrointestinal tract. The magnitude of the complaints depends upon the degree of trichinosis infestation sustained. The larvae invade the intestinal lymphatics and enter the venous circulation via the regional lymph nodes and thoracic duct. While the larvae are migrating through the pulmonary capillaries, a pneumonitis of varying severity may be produced. Once they are in the arterial blood, the trichinae are rapidly disseminated throughout the body. It is during this phase of the cycle that the brain, meninges, and myocardium may become involved. After a variable period of time has elapsed the trichinella larvae, having a special predilection for skeletal muscle, eventually concentrate and encyst there. During this phase of encystment, symptomatology referable to the musculoskeletal system is frequently elicited.

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* The authors express their gratitude to Dr. Annis E. Thomson of the Bureau of Laboratories of the Health Department of New York City for her aid in performing these tests.

Methods of Diagnosis

As an aid to diagnosis, a number of laboratory tests are available to the clinician. Some tests have little more than inferential value while others are more conclusive.

Eosinophilia.—A significant eosinophilia is probably the most constant and important laboratory aid in the diagnosis of trichinosis. In the average case it manifests itself seven to ten days after infection and attains its height by the fourth week. Eosinophilia is not always constant, nor is its degree a criterion of the severity of the disease process and prognosis.[1] Rapidly fatal cases of proved trichinosis have been reported without eosinophila.[2-4] On the other hand, in a recent outbreak of trichinosis involving 256 mild cases, 88.7 per cent of such cases developed a significant eosinophil count.[5]

Intradermal Skin Test.—The skin test for trichinosis rarely becomes positive before the third week of infection. Like any other skin test, a positive reaction does not necessarily prove recent infestation. The intradermal test is of inestimable value for its convenience as a bedside procedure since it gives an immediate (fifteen-minute) response with relatively few false positive reactions.[6] In a recent report describing the use of a number of different antigens on a group of patients strongly suspected of having trichinosis on epidemiologic grounds, the over-all percentage of positive reactors was not high and, to some extent, varied with the antigen employed in the test.[5]

Complement Fixation Test.—Interest in this procedure has recently been revived with the development of a new antigen by Witebsky and his coworkers.[7] Considering all factors, the complement fixation test is probably the diagnostic laboratory procedure of choice in trichinosis. The test becomes positive in about three weeks and the incidence of false positive reactions is negligible.[5] Complexity in the performance of this test, however, appears to be a limiting factor in its applicability.

Precipitin Test.—The authors have had more experience with this test than with any other laboratory procedure for trichinosis and are of the opinion that it is oversensitive and that the incidence of false positive reactions is relatively high. We have seen false positive reactions in such diseases as lupus erythematosus disseminata, periarteritis nodosa, rheumatic fever, rheumatoid arthritis, typhoid fever, infectious mononucleosis, Brill's disease, and severe bacteremias. We might add, however, that while we have seen significant titers that proved to be false positive in varied conditions, we have never seen any titer approach the height that was achieved in the proved case herein presented.

Flocculation Slide Test.—A simple rapid flocculation slide test for the diagnosis of trichinosis in man and swine was recently devised by Suessenguth and Kline.[8] The test seems ideal for most needs. It becomes positive early in the disease and can be performed in less than ten minutes. It is sensitive and yet highly specific. Up to the present time, however, this test has not been used to any degree, and proof of its reliability awaits further clinical trial.

Muscle Biopsy.—Demonstration within striated muscle of trichina larvae which are uncoiled, unencysted, or recently encysted represents proof of recent infection.[9] Unfortunately, trichinae usually cannot be demonstrated in most sections unless infection is very heavy. A biopsy is diagnostic, therefore, only when it is positive. Trichinae are not readily revealed in microscopic sections because muscle specimens are frequently too small; complete serial sections are sometimes not taken, and the procedure itself is frequently performed too soon. A biopsy should never be considered sooner than twenty-one days after infection, and preferably five weeks should elapse before the procedure is undertaken. Some authorities believe that skeletal muscle biopsy material should be examined as a press preparation and not sectioned, since the press preparation is more certain to detect trichinae and permits a more rapid determination.[10] For the demonstration of viable larvae, the digestion-concentration procedure is probably the method of choice.[6]

Miscellaneous.—Trichinella larvae have frequently been recovered from venous blood and occasionally from arterial blood. Adult worms and larvae have also been demonstrated in stools on rare occasions after catharsis. Both forms of the parasite have been demonstrated following duodenal drainage. These methods of isolation have limited clinical applicability. In 1914, Van Cott and Lintz first demonstrated trichinae in cerebrospinal fluid.[11] Since that time, they have been found on a number of occasions and should be searched for in all cases where the central nervous system is apparently involved.

Discussion

Trichinosis can be added to that growing list of infectious diseases in which there are several highly pathognomonic signs and symptoms. However, this disease is subject to such a wide range of individual variation that not a single characteristic of the classic pattern is invariably present. In calling attention to the protean nature of trichinosis, Hall mentions its misdiagnosis under more than 50 separate and unrelated disease entities and claims that, "Between light infections, producing zoologic but not clinical trichinosis, and heavy infestations, producing severe clinical trichinosis, there is the unstudied no-man's land of infestations of intermediate degree of all sorts, which infestations must produce atypical clinical trichinosis of unknown symptomatology."[10]

In the United States, the clinical picture of trichinosis is attenuated to a considerable degree by modern technics of processing pork and its products. A piece of sausage commercially prepared under Federal regulation and inspection is usually derived from scraps and trimmings of many swine. A dilution factor is thus introduced to increase the chance of zoologic trichinosis and at the same time decrease the likelihood of inducing intense infestations that were described in former years. By the same token, the epidemiologic aspects of infection are today more elusive than they formerly were. Years ago infections were severe, and well-defined epidemics could be traced to a butchery where a single carcass of infected pork was involved. On close questioning, the patient herein presented denied eating any pork immediately prior to the onset of his illness. However, he remembered eating a number of frankfurters five days before developing the first symptoms of the current illness. These frankfurters were consumed in the school's only mess hall, where similar frankfurters were also served to more than three hundred other boys. If it is assumed that these frankfurters were the source of the patient's infection, it is logical to have expected a sizable outbreak of trichinosis. Interestingly enough, according to all available data, the patient was apparently uniquely infected to a very severe degree. Actually, subclinical infection of the other boys may have been present, or we must assume that our patient was unfortunate enough to have eaten the only infected frankfurters. From an epidemiologic standpoint, therefore, this case represents a perplexing problem.

As stated previously in this paper, the central nervous system may be invaded by trichinella larvae, but, like cardiac muscle, the brain and meninges are only transiently involved. If the central nervous system is heavily invaded, manifestations of encephalitis, meningitis, or encephalomeningitis may dominate in the early phases of infection. This may produce a picture so bizarre as to confuse the clinician, especially if other manifestations of trichinosis are overlooked.

Pathologically, the lesions of the central nervous system in trichinosis are not constant.[9] The cerebrospinal fluid may be under increased pressure, but it is usually clear and does not contain an increased number of cells. The meninges, as well as the brain substance, may be edematous and hyperemic; they may even show a nonspecific, nonpurulent inflammation. Scattered punctate hemorrhages occur in the cortical and medullary portions of the cerebrum. Microscopic changes include the following: hyperemia of the vessels of the meninges and brain with a mild perivascular infiltration by lymphocytes and polymorphonuclear leukocytes, proliferation of the capillary endothelial cells, plugging of the capillaries and larger vessels with fibrinous thrombi, and occasionally there are associated small foci of cerebral softening and degeneration.

Clinically, the patient frequently complains of a severe headache, vertigo, tinnitus, and a peculiar staggering sensation. Deafness and hemiplegia are rarely encountered. However, when they occur they can be permanent. The sensorium may be clear, but generally apathy, delirium, and stupor become manifest. Aphasia is not rare. Convulsions, either generalized or of the Jacksonian type, have been described. Reflexes may become lost for an indefinite period, only to return. The Achilles tendon reflex is generally lost before the patellar reflex. Both reflexes may be lost during the height of muscle invasion only to return in convalescence. The Kernig sign is frequently elicited, as are the Brudzinski and Babinski signs. The extent of apparent involvement is dependent upon the degree of infestation. In almost every case of central nervous system involvement in trichinosis, the manifestations are transient.

Our case is typical in almost every respect of what has been described in the literature as meningoencephalitis due to T. spiralis. The patient was acutely ill initially, showed many of the objective findings described above, had many of the subjective complaints, and then completely recovered.

Summary

A proved case of meningoencephalitis due to T. spiralis is presented. A brief résumé of the clinical features and the numerous laboratory tests for diagnosis are discussed.

The authors wish to express their thanks to Dr. J. H. Sandground, parasitologist to Bellevue Hospital, for his interest and assistance in preparing this paper for publication

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Live today as if you were to die tomorrow.—Anonymous

RESECTION OF THE ESOPHAGUS FOR LYE STRICTURE WITH ESOPHAGOGASTRIC ANASTOMOSIS

WALTER F. BUGDEN, M.D., Syracuse, New York

(From the Department of Surgery, Syracuse University Medical College)

RECENT advances in surgery of the esophagus have led to radical changes in the handling of many lesions of this structure, for example, carcinoma, congenital atresia, diverticulum, and cardiospasm. Until recently the lives of those who had swallowed caustic lye were punctuated with esophageal dilatations and gastrostomy or jejunostomy feedings to overcome the obstruction that follows healing by cicatrization. Needless to say, such measures are unpleasant and unsatisfactory.

The great reduction of morbidity and mortality associated with radical resection of the esophagus for carcinoma with high esophagogastric anastomosis lent impetus to further surgical attack on the nonmalignant esophageal lesions. In October, 1946, Dr. R. Sweet of Boston reported three cases of esophageal cicatricial stenosis, caused by chemical burns, which he treated with resection of the thoracic esophagus and high anastomosis, re-establishing continuity of the gastrointestinal tract.[1]

The purpose of this report is to present a similar case and discuss briefly the technical problems encountered.

Case Report

L. V., age fourteen, was admitted to Syracuse Memorial Hospital on November 21, 1948, with the complaint of dysphagia. In the spring of 1947, he swallowed some lye solution thinking it was maple syrup. No physician was consulted, although he sustained small burns about the lips and tongue. Six months later he first noticed difficulty on swallowing foods. Barium swallow x-rays were done which revealed a long stricture on the esophagus (Fig. 1). Shortly thereafter a gastrostomy was done. Retrograde bouginage was carried out at frequent intervals. One episode of chest pain and high fever was reported that was probably due to perforation with mediastinitis. By November, 1948, even the smallest dilator could not be passed.

Physical examination revealed a thin male of fourteen years with a healed left upper rectus scar. Examination was otherwise negative.

Laboratory work revealed a slight anemia, and the total serum proteins were reduced to 6.22 Gm. per cent.

Esophagoscopy was done on November 22, 1948, and a tight obstruction was encountered 22 cm. from the upper incisor teeth. The patient was prepared for surgery with a high protein intake, vitamin B and vitamin C intramuscularly, and penicillin intra-

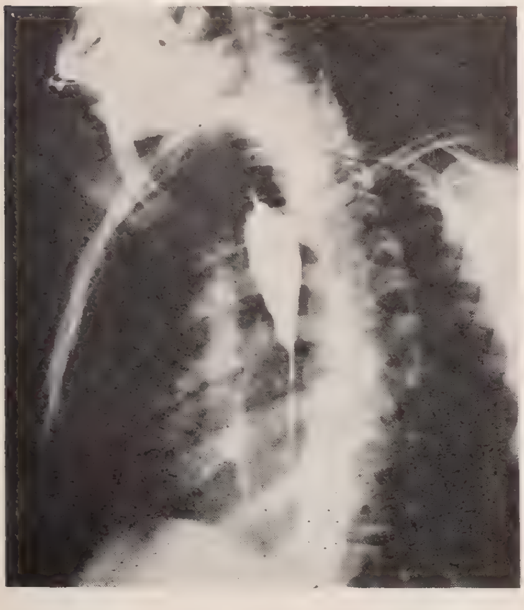

FIG. 1. Long stricture of thoracic esophagus beginning at the level of the aortic arch.

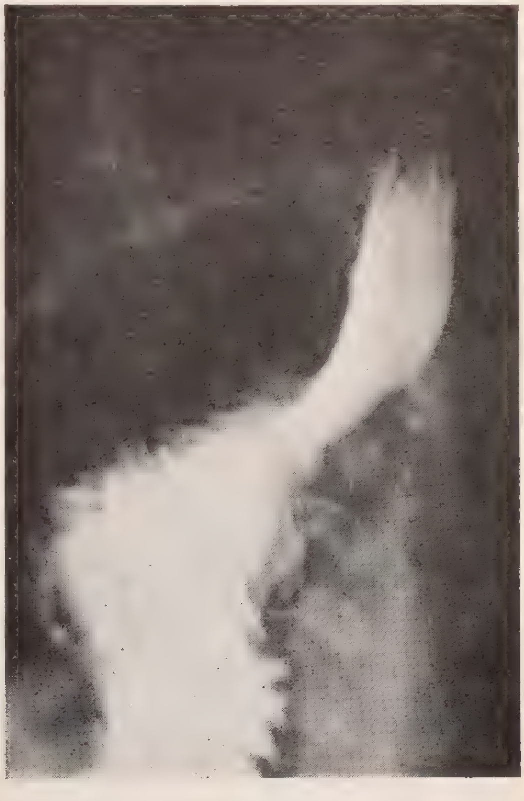

FIG. 2. Barium swallow showing anastomosis with stomach at level of clavicle anteriorly.

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muscularly and by nebulizer. On November 30, 1948, the patient was taken to the operating room where a combined operation was performed.

With endotracheal gas-oxygen-ether anesthesia a left upper rectus, muscle-splitting incision was made. The old gastrostomy was divided from the belly wall, and the entire blood supply to the stomach was then ligated, except for the right gastric and right gastroepiploic arteries in order to maintain the viability of the stomach through the intramural branches as well as the arcade of vessels preserved on both curvatures. The patient was then placed on his right side for thoracotomy. The usual curved posterolateral incision was made and the sixth rib resected. The pleura was entered through the rib bed. The mediastinal esophagus was mobilized from the aortic arch to the hiatus. This was tedious work because of the dense inflammatory reaction due to periesophagitis and mediastinitis. The arch of the aorta was then mobilized by ligating and dividing three sets of intercostal arteries. A rubber dam drain was passed under the arch to make traction and the esophagus dissected free up to the dilated proximal portion above the arch. The phrenic nerve was pinched to paralyze the diaphragm, and this structure was then split. A few small remaining attachments were divided to obtain complete mobilization of the stomach. The stomach was then transected just below the cardia and the distal end closed with two rows of sutures. The esophagus could now be passed under the aortic arch and presented in a position that seemed comfortable for the anastomosis. An ellipse of the stomach was then removed from the anterior wall, high up on the fundus, to be the anastomotic site. A two-layer anastomosis was then done, using interrupted fine silk sutures. After the anastomosis was completed, the stomach was sutured to the mediastinal structures to prevent tension on this suture line. The diaphragm was closed around the pylorus of the stomach, the wound closed in layers, and a rubber drain brought out through the tenth interspace to a water seal bottle. The patient received 1,000 cc. of blood plus 1,000 cc. of molar lactate. The operation took five hours.

The immediate postoperative condition of the patient was excellent. Blood pressure on return to his room was 110/78, pulse 100. Continuous oxygen plus streptomycin and penicillin were administered postoperatively. He received nothing by mouth for seventy-two hours, then water in sips, followed by milk and broth on the next day. Custards and junket were given on the seventh postoperative day, mashed potatoes and pureed vegatables by the ninth day, and a regular diet by the twelfth day. The patient was ready to be discharged on his sixteenth postoperative day (Fig. 2). Within two months he gained 20 pounds.

Summary

A lye stricture of the esophagus, corrected by resection of the esophagus and esophagogastrostomy high in the thorax via an abdominothoracic approach, is described.

Acknowledgment is made for valuable assistance given by Dr. William Michaels.

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FIGHT OR FLIGHT

The human brain is a wonderful thing. It starts working the moment you are born and never stops until you stand up to speak in public.—*J.A.M.A., October 8, 1949*

GOLD SHOTS FIGHT CANCER

Combined shots of liquid radioactive gold and the new war gas, nitrogen mustard, are healing 82 per cent of rat and mice cancers at the Medical College of Virginia, Richmond.

The liquid gold alone heals 62 per cent. The gold and mustard shots are given by needles.

These experiments were reported to the Southern Medical Association by Dr. George Z. Williams. They are confined to animals in order to learn what may be safe for humans, and how they may be used.

The healing effects of the radioactive gold are its beta rays, which are streams of the smallest known particles, electrons.

Dr. Williams said that solid cancers retained 95 per cent of the gold. But there were other cancers where gold rapidly leaked out and spread throughout the body.

The leaking gold went largely to livers and spleens, Dr. Williams said. In the rats and mice, this leakage had done no apparent damage in one year.

Nitrogen mustard was added to the gold shots because the gas attacked and destroyed nuclei of tissue cells.—*New York Times, November 18, 1949*

PERNICIOUS ANEMIA AND HYPOTHYROIDISM

NORMAN DEANE, M.D., and JOHN D. CURRENCE, M.D., New York City

(From the Department of Medicine and the Department of Rehabilitation and Physical Medicine, New York University Post-Graduate Medical School)

PERNICIOUS anemia is a relatively common clinical occurrence and with proper liver therapy presents no major therapeutic problem in the uncomplicated case. Coincidental association with other pathologic states can occur but does not usually modify the therapeutic response to liver. Coexistent pernicious anemia and hypothyroidism is rare but has been reported.[1] An awareness of this association is important because this particular endocrinopathy may impair the response of pernicious anemia to adequate liver therapy. The following case report is apparently illustrative of this phenomenon and also of the fact that, when these two diseases coexist, adequate liver therapy may have no effect upon the macrocytosis until thyroid administration is begun.

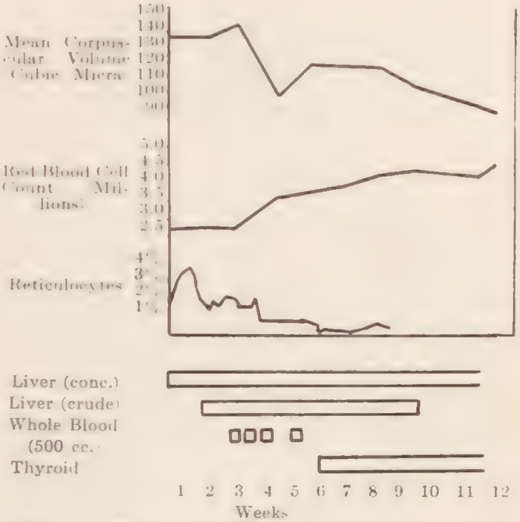

FIG. 1. Note changes in mean corpuscular volume produced by transfusion and thyroid administration.

Case Report

The patient, a sixty-three-year-old white man, was admitted to the University Hospital, New York University-Bellevue Medical Center, with a chief complaint of inability to walk.

The patient dated the onset of the present illness to two and a half years prior to admission when he noted a "dragging" sensation in his left leg which was soon followed by similar symptoms in the right leg. There was also a sensation of numbness and tingling on the soles of the feet. These symptoms increased progressively in severity, and at the time of admission the patient was unable to walk. One month before admission his tongue was reddened and painful for several days. Shortly before admission he began to complain of weakness and paresthesias in his upper extremities. The patient's past medical history was not significant.

Physical examination revealed an elderly, obese, gray-haired white male who was markedly pale. Temperature, pulse, respirations, and blood pressure were normal. The tongue was red and smooth, and the mucous membranes were pale. The remaining examination of the eyes, ears, nose, throat, and neck was negative. The chest was emphysematous but normal to percussion and auscultation. The heart was not enlarged. A normal sinus rhythm was present, and the sounds were of good quality. No abdominal masses, spasm, or tenderness were noted. There was no edema, deformity, or limitation of passive motion of the extremities.

Neurologic examination revealed the cranial nerves to be normal. The deep tendon reflexes were markedly diminished in the upper extremities and absent in the lower extremities. Vibration sense was absent, and position sense was markedly impaired in the legs. A bilateral Babinski reflex was present. The arms showed slight impairment of these functions. The remaining sensory examination was normal. The patient was confined to bed, unable to stand or walk, and could perform very few of the routine tasks of living. His general attitude, affect, and orientation were good.

A tentative diagnosis of pernicious anemia with posterolateral spinal cord degeneration was made. Initial studies revealed a hematocrit of 34 per cent; stained smear of the peripheral blood showed macrocytosis, anisocytosis, and poikilocytosis, and bone marrow aspiration disclosed erythroblastic hyperplasia with numerous megaloblasts. Gastric analysis following histamine stimulation failed to demonstrate free hydrochloric acid in the gastric juice. The patient was given concentrated liver extract (15 units intramuscularly) once a day and was followed with daily reticulocyte counts. As may be seen in Fig. 1, the peak response was 3.7 per cent, occurring six days after the beginning of treatment. The expected reticulocyte response in a patient with a count of 2,500,000 red blood cells is 12 per cent.[2] Although there had been no marked hematologic response, the patient's neurologic status began to improve dramatically. Diminution in sensory symptoms and increase in muscle strength were apparent, and he was placed on a program of muscle training and muscle exercise of gradually increasing scale.

In view of the impaired reticulocyte response and the lack of any significant increase in the red blood cells after two weeks, it was decided to eliminate other possible complicating factors in this macrocytic anemia.[3] Gastrointestinal x-rays with barium meal and barium colon enema showed no evidence of ulceration or malignant disease. No intestinal "short-circuiting" or stricture was present. The stools were negative for occult blood and for ova or parasites (including Diphyllobothrium latum). Liver function studies including icterus index, colloidal red, thymol turbidity, and thymol flocculation were normal. There were no digestive disturbances which together with normal stools and absolute achlorhydria were considered to eliminate sprue. A trial of vigorous whole crude liver therapy, oral and parenteral, was given without significant effect upon the reticulocytes. A basal metabolism was reported 23 per cent below the average normal and total serum cholesterol was 270 per cent. Thyroid was administered in increasing dosage: 60 mg. daily for twelve days, 90 mg. daily for eight days, and 120 mg. daily thereafter. Following thyroid therapy, it was noted that the macrocytosis which had persisted during five weeks of vigorous parenteral liver therapy began to diminish steadily until the mean corpuscular volume reached a normal value. There was no reticulocyte response to the thyroid therapy. At the time of discharge the patient was able to walk and perform the simple tasks of living in a satisfactory manner.

Discussion

The clinical picture of pernicious anemia and hypothyroidism has certain similarities such as weakness, gastrointestinal symptoms, lethargy, neurologic symptoms, and achlorhydria. A definitive separation may be made by a bone marrow examination which shows a hypoplastic marrow with decreased nucleated red cells in hypothyroidism or a hyperplastic marrow with megaloblasts in pernicious anemia.[2]

There are other laboratory aids in diagnosis. Basal metabolism is normal or elevated in pernicious anemia and reduced in hypothyroidism. Reduction of total serum cholesterol occurs consistently in pernicious anemia, but this value is elevated in hypothyroidism. In hypothyroidism, anisocytosis or poikilocytosis is not evident, and the red cell diameter distribution curve will have a normal shape, even though the macrocytosis is marked.[4] In pernicious anemia anisocytosis and poikilocytosis are prominent. The macrocytosis of myxedema is corrected by thyroid.

It would seem, therefore, that separation of the two conditions should not, with the aid of a laboratory, pose too great a problem. Optimum therapy would then consist of either concentrated liver extract or thyroid with no additional advantage to be expected from combinations of the two.

Rarely, pernicious anemia will occur in patients with thyroid underactivity, and in such patients the administration of liver may not elicit a characteristic hematologic response although, as in the case reported, neurologic symptoms and findings improve dramatically. In this eventuality, metabolic studies should be done before discarding the diagnosis of pernicious anemia. If a degree of hypometabolism, presumably thyroid in origin, exists, the proper administration of thyroid will improve the hematologic response to liver and correct the continuing macrocytosis which is specifically due to lack of thyroid hormone.

Summary

Pernicious anemia and hypothyroidism present certain clinical similarities.

Pernicious anemia can coexist with hypothyroidism in which case the hematologic response to liver may be impaired.

Patients with pernicious anemia who have continuing macrocytosis after adequate liver therapy should have metabolic studies and thyroid administration if indicated.

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DOCTOR CITES LIMITATIONS OF TUBERCULOSIS VACCINE

BCG vaccination against tuberculosis as now advocated appears to be a rather puny weapon against the disease, says a Veterans Administration doctor.

Protection with the harmless, man-made BCG vaccine cannot be expected to succeed where natural vaccination with living, virulent human tuberculosis germs already has failed, Dr. E. M. Medlar of Sunmount, New York, points out in the October 29 issue of the *Journal of the American Medical Association.*

BCG vaccine is a preparation for prophylactic inoculation against tuberculosis. It consists of living bovine tubercle bacilli that have been grown over a period of many years so that their virulence is greatly reduced.

Great numbers of people receive a "natural vaccination" by contracting a slight infection from other human beings, Dr. Medlar explains.

"In adults over forty years of age, both minimal pulmonary tuberculosis and deaths from tuberculosis are caused in large part by reinfection after a previous infection has healed.

"It is extremely doubtful that artificial vaccination can produce results superior to natural vaccination, and yet natural vaccination fails to control the disease.

"It is suggested that greater emphasis be given to the major problem in tuberculosis—unrecognized tuberculosis and that due to reinfection in adults over forty years of age. An effective solution to this problem would make the use of prophylactic measures in youth unnecessary."

CARCINOMA OF THE DUODENUM TREATED BY PANCREATICODUODENECTOMY

William Trevor, M.D., New York City

(From St. Clare's Hospital)

Carcinoma of the duodenum is an uncommon lesion. It occurs approximately three times in every 10,000 autopsies.[1] It is because of this rarity that the following case treated by pancreaticoduodenectomy is reported.

If chronic trauma and irritation are considered causes of malignancy, then duodenal carcinoma should be more frequent because the duodenum is the main traffic circle of the intestinal tract. At this crossroads the common duct enters with its bile and bile salts; the stomach empties its acid contents; the pancreatic ducts pour forth their digestive enzymes, and Brunner's glands secrete their alkaline juices. Thus, the duodenum is a container in which chemical reactions are constantly occurring with the accompanying irritation and trauma. The duodenum seems to have some special immunity to carcinoma. Supporting this fact is the observation that carcinoma of the stomach practically always stops at the pylorus.

In the case presented, the carcinoma was apparently slow growing, since there was no evidence of metastasis to the regional lymph nodes or neighboring structures in spite of the eight-month history of jaundice. The primary tumor was also relatively small for the duration of the disease.

An interesting point in the history is that the stools were sometimes brown. Thus, the jaundice was of the intermittent type, even in the presence of an obstructing tumor. Another interesting fact in the history is the story of chills and fever at monthly intervals, such as is frequently seen in common duct stone with concomitant cholangitis.

Case Report

The patient was a sixty-year-old white engineer who was seen for the first time on April 5, 1948. His chief complaint was jaundice of eight months duration. He was well until August, 1947, when he developed anorexia, nausea, and jaundice. There was a 10-pound weight loss during the eight-month interval. The stool had been almost white, and the urine very dark. However, from time to time, the stool was brown. At the onset he developed a severe itching which had improved lately. Six years previously there had been an attack of sharp right upper quadrant pain. There was no history of dyscrasia to fatty foods. Once a month he had suffered shaking chills, requiring a blanket.

The systemic review was negative except for the following positive facts. He gave a history of rheumatism every year for several years from the age of nine onward and of malaria every spring. Further details were unavailable. For the past week he had noted ankle edema. Nocturia had been present for a few months. The past history was not significant.

He had delayed treatment because his wife had been operated on for carcinoma of the right colon, and he was aware of her diagnosis.

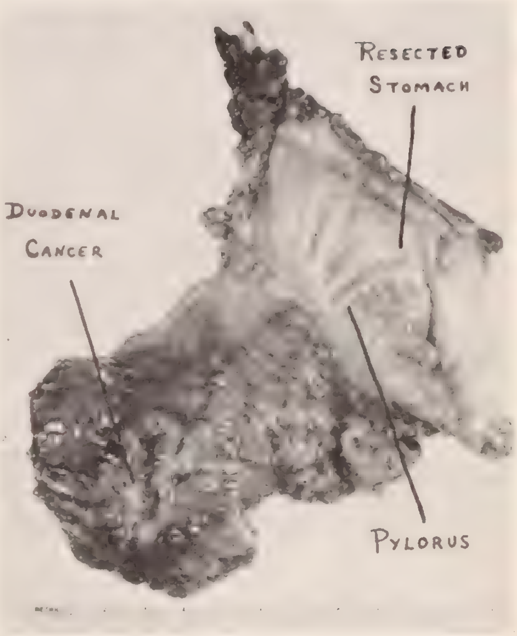

Fig. 1. Gross specimen showing cancerous ulceration with raised, rolled, firm border typical of intestinal carcinoma.

Physical examination revealed a well-developed, icteric white male, appearing chronically ill, with the following positive findings: The nose showed a septal perforation measuring 2 cm. in diameter of which the patient was not aware. The liver was palpable three fingerbreadths below the costal margin in the midclavicular line and was firm. The margin of the spleen was felt. Moderate ascites was present. Rectal examination was impossible because of extreme tenderness. Pitting edema of the ankles was elicited.

The laboratory tests were significant: bilirubin was 7.2 mg.; cholesterol was 217 and cholesterol esters 130; the albumin-globulin ratio was 2 to 1 with total protein of 8.4 Gm. per cent. The Kahn test was negative.

There was nonvisualization of the gallbladder. The gastrointestinal tract showed no pathology on barium administration.

On April 24, 1948, a first-stage cholecystojejunostomy and jejunojejunostomy was performed at St. Clare's Hospital for a palpable mass in the head of the pancreas. There was marked hob-nailed cirrhosis of the liver with portal hypertension, splenomegaly, and ascites of 3,000 cc. of clear yellow fluid. The postoperative course was uneventful except for the rapid clearing of the jaundice. He was discharged on May 7, 1948.

In the next four weeks the ankle edema cleared, the weight increased 14 pounds, and there was minimal ascites.

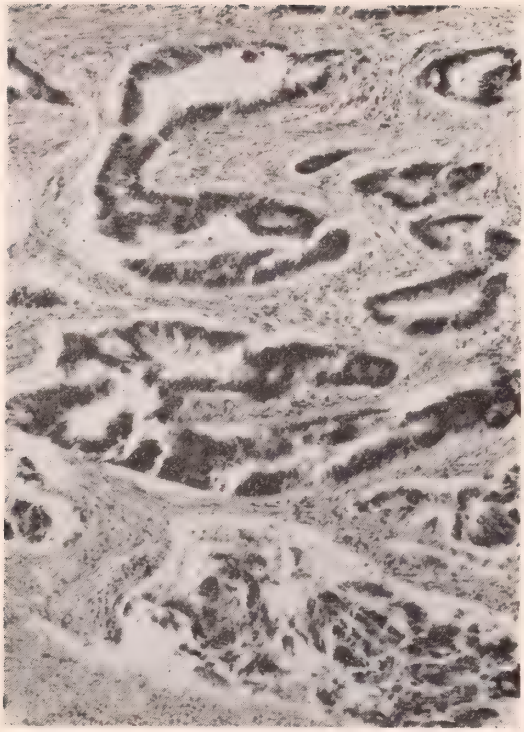

FIG. 2. Photomicrograph showing numerous, irregular, glandular structures lined by multilayered, columnar epithelium with hyperchromatic nuclei.

On June 12, 1948, a second-stage pancreaticoduodenectomy was performed at St. Clare's Hospital. It was technically difficult because of massive adhesions and almost uncontrollable bloody oozing of the portal system due to the portal hypertension.

Postoperatively, the patient did well until the seventh day. He had been out of bed and feeling fine, but on the seventh day he became semicomatose, and there was bile drainage from the wound. On the eighth postoperative day he was unconscious and expired the following day. The last three days the patient was afebrile. The blood urea nitrogen was elevated to 32, but the urinary output remained over 1,000 cc. daily. We were at a loss to explain the sudden change in the absence of positive physical signs except for a possible hepatorenal failure or a cerebral vascular accident.

Pathology.—The gross pathologic specimen revealed a segment of duodenum with the head of the pancreas attached (Fig. 1). In the duodenum there was an irregularly rounded ulcer measuring 2.5 by 2.5 cm. with a rolled, firm border. It had the typical gross appearance of an intestinal carcinoma. On sectioning the ulcer, there was seen an irregular firm tumor infiltrating the wall of the duodenum. On opening the common duct it was found to be markedly dilated, measuring 12 mm. in diameter. The proximal end is occluded by a polyp-like nodule which was due to invasion by the tumor from the duodenal aspect.

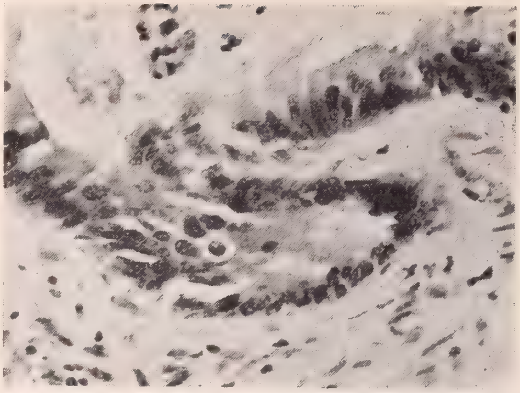

FIG. 3. High power photomicrograph showing irregularity of glandular pattern and variation of size and shape of epithelial cells.

The microscopic findings on sections taken through the duodenum, pancreas, and common duct were as follows (Figs. 2 and 3): There was a sudden transition between the normal mucosa of the duodenum to that of the neoplasm. The latter consisted of numerous irregular glandular structures lined by multilayered, columnar epithelium showing all the typical characteristics of malignancy. The glandular structures varied in size and shape; many of them were rather large, cystically dilated, and filled with pale eosinophilic material. The tumor invaded the entire wall reaching the serosa. Sections of the pancreas showed areas of necrosis but no invasion by tumor. As observed grossly, the tumor extended to the common duct, and the compressed parts of the duct could be seen within the tumor area. A biopsy of the liver revealed early cirrhosis.

The pathology diagnosis by Dr. J. M. Ravid was infiltrating adenocarcinoma of the duodenum, grade III, with extension into and obstruction of the common duct.

The autopsy revealed the liver to be considerably enlarged, weighing 2,100 Gm. The capsule showed innumerable coarse nodules. On section the parenchyma was firm and studded with innumerable grayish-white nodules measuring from 2 to 4 mm. in diameter. The gross appearance was that of a coarse nodular cirrhosis.

The spleen was enlarged, weighing 275 Gm.

The intestinal anastomoses at the gastrojejunostomy, cholecystojejunostomy, and jejunojejunostomy were intact. The duodenal stump was closed tightly with sutures. The stump of the common duct was partially patent since the portion that had been turned in by triple inversion with fine silk mattress sutures was necrotic, thus permitting escape of bile. There were about 1,500 cc. of yellow turbid fluid present in the peritoneal cavity.

Summary of the pathologic findings showed biliary cirrhosis of the liver, terminal bronchopneumonia, diffuse fibrinous peritonitis, moderate coronary arteriosclerosis, moderate fibrosis of the myocardium, and infiltrating adenocarcinoma of the duodenum with extension to and obstruction of the common duct.

139 EAST 36TH STREET

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LUMBAR RETROPERITONEAL GANGLIONEUROMA

S. Thomas Glasser, M.D., F.A.C.S., Clifford Moran, M.D., and Arnold J. Capute, M.D.,
New York City

(From the Surgical and Pediatric Services and the Department of Pathology of the New York Medical College, Flower-Fifth Avenue Hospitals)

The case described herein is reported because of its interest and rare occurrence. Although ganglioneuromata are uncommon tumors, the retroperitoneal lumbar variety is quite rare. For a better appreciation of the features of our case, we mention briefly the salient points of this entity. A splendid review of the subject was given by Reynolds and Cantor in 1946 and Larson in 1947.[1,2] Generally, primary retroperitoneal tumors of any type are uncommon. A survey of the incidence was reviewed by Donnely who referred to the Mayo and Dixon report of 1927 in which only 200 cases of primary retroperitoneal tumors had been recorded.[3] Another report appeared in 1938 when Frank reviewed 107 assorted retroperitoneal tumors between 1925 and 1936.[4] It is impossible to ascertain how many of these growths were ganglioneuromata. Up to the present time, 200 cases of ganglioneuromata throughout the body have been reported. According to McFarland, up to 1931, only 32 authentic cases of retroperitoneal ganglioneuromata were present in the literature.[5] However, the lumbar retroperitoneal type is quite rare, since less than 50 cases have been recorded up to 1946.[1]

Ganglioneuromata originate from displaced cells which in the embryo arise from the neural crest.[6] These tumors occur almost anywhere in the body where corresponding sympathetic pathways or cranial nerves are located. Thus, besides being found within the central nervous system they may be situated in the mediastinum, retroperitoneal space, adrenal, gastrointestinal tract, and elsewhere. The tumor reported in this article was found in the lumbar retroperitoneal region, a rare location as mentioned before.

In considering the pathology of these growths, it is acceptable to trace the origin of the ganglioneuroma from the neurocyte. This cell must be of the mature type; otherwise a pheochromocytoma or neuroblastoma would be more likely to develop. However, the benign nature of the ganglioneuroma is fairly well established. A malignant degeneration must be exceptionally rare.

The structure of a ganglioneuroma is quite characteristic. Grossly, the solitary tumor is firm and well circumscribed resembling a neurofibroma. Microscopically, the pattern is typical. Clumps of mature-looking ganglion cells or isolated ganglion cells are easy to distinguish embedded in a groundwork of bundles of nonmedullated or medullated fibers as seen in neurilemomas or neurofibromas. The ganglion cells are scattered in the tumor so that multiple blocks of tissue must be sectioned before they are found.

There is nothing characteristic of ganglioneuromata except for symptoms which are secondary to pressure or encroachment by the tumor. As a matter of fact, a retroperitoneal mass which has been present for many years without symptoms suggests the diagnosis of ganglioneuroma. It appears to be more common in children or young adults. On palpation the growths are tense but not hard with a fairly smooth outline which suggests encapsulation, although it is deeply fixed and large. Adherence to contiguous structures, especially large vessels or ureter, and the tumor's own vascularity make removal of these tumors difficult or impossible. Since they are generally considered benign, a cure is expected whenever complete excision is possible. Deaths due to uncontrollable hemorrhage and vessel lacerations have been reported in the literature. In the opinion of some authorities, the patient may go through life without difficulty, provided the ganglioneuroma does not cause symptoms secondary to size and pressure. Most neuropathologists feel that the likelihood of malignant degeneration is slim.

Case Report

P. K., a four-year-old white girl of Jewish parentage, was admitted on September 10, 1948. She was referred to the Flower-Fifth Avenue Hospital by a doctor who had noticed an abdominal mass during the course of a routine preschool examination. The child was definitely asymptomatic. An examination two and one-half years previously had not revealed the presence of an abdominal mass. The family and past history were noncontributory.

Physical examination at the time of admission revealed a well-developed, well-nourished, white female in no apparent discomfort. The temperature was 99.8 F., respirations 22, and pulse 108. The only significant findings were limited to the abdomen which was of a visibly protruberant type. Palpation revealed a firm, nontender, well-outlined, fixed mass posteriorly which extended from the left lower quadrant across the lower abdomen encroaching on the right lower quadrant and also spreading into the pelvis on the left side. The uppermost limit on the left side was to the level of the second lumbar vertebra. Rectal examination found the tumor to be of the same consistency with posterior fixation to sacrum and ileum, filling the lesser pelvis.

Laboratory data were as follows: On September 11, 1948, the urine was negative: red blood cells 4,400,000; white blood cells 10,700; neutrophils 73 per cent, and lymphocytes 35 per cent; on September 16, alkaline phosphatase was 228 King-Armstrong units. Hemoglobin was 93 per cent on September 20: red blood cells 3,500,000; white blood cells 18,200; neutrophils 73 per cent; lymphocytes 21 per cent; eosinophils 5 per cent; monocytes 1 per cent, and Vollmer patch negative. Urine was negative on September 21 On September 25, hemoglobin was 93 per cent; red blood cells 5,000,000; white blood cells 8,800; neutrophils 57 per cent; eosinophils 7 per cent; lymphocytes 34 per cent, and monocytes 2 per cent.

The barium enema on September 13 revealed a

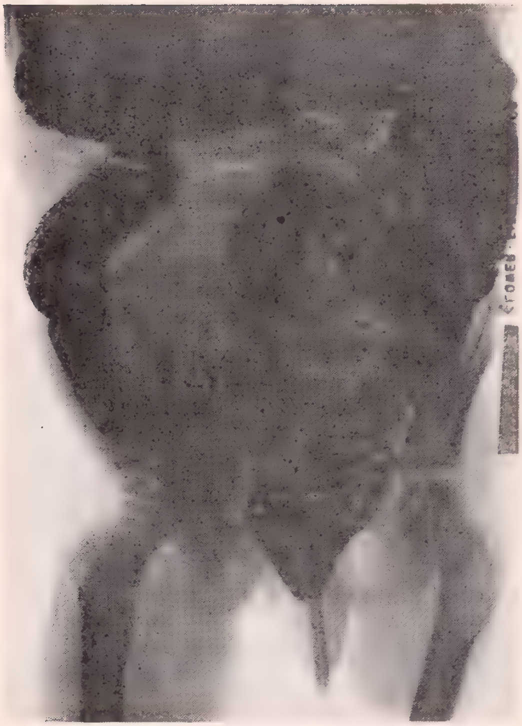

FIG. 1. Roentgenogram on September 13 showing large, circumscribed soft tissue shadow.

"large, circumscribed, soft tissue shadow involving the lesser pelvis and extending to the body of the fourth lumbar vertebra. The lower sigmoid is displaced to the right side and forward. There is a slight filling defect in the upper portion of the sigmoid colon due to extrinsic pressure" (Fig. 1).

The intravenous pyelogram on September 16 was reported as follows (Fig. 2): "The pelvis on the right side shows slight distention. The calyceal system and pelvis on the left side are normal. The right ureter is slightly dilated and shows a marked degree of displacement to the right and anteriorly and toward the midline. There is a filling defect of the urinary bladder which is due to extrinsic pressure from the mass in the pelvis. The soft tissue mass occupies most of the lower pelvis extending from the anterior surface of the sacrum to the posterior wall of the bladder and up to the level of the body of the fourth lumbar vertebra. The fundus of the bladder is displaced up out of the lesser pelvis against the anterior abdominal wall by the space occupied by the mass."

Pathology Report—*Gross Examination*—The specimen consists of a yellowish-pink, lobulated mass of tissue measuring 7.0 by 6.5 by 2.5 cm. On palpation, it has a rubbery consistency. It cuts with increased resistance. The cut surfaces present in some areas a grayish-white, fibrous appearance. Other areas are pale yellow in color with a fatty appearance. These areas are soft and cut with ease.

Microscopic Examination.—The sections are stained with Masson's trichrome stain and Harris' hematoxylin and eosin. These show interlacing strands of myelinated and some nonmyelinated nerve bundles (Fig. 3). The former predominate.

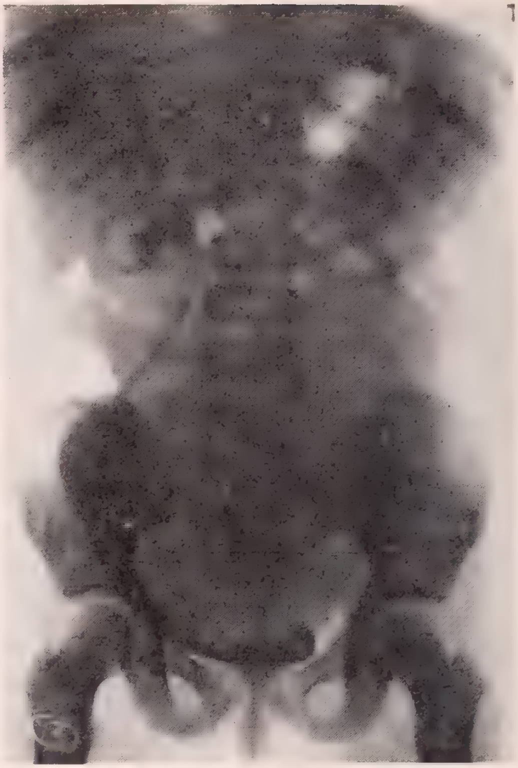

FIG. 2. Intravenous pyelogram taken on September 16 showing slight distention of pelvis on right side, slight dilation and marked displacement of ureter, and filling defect of urinary bladder.

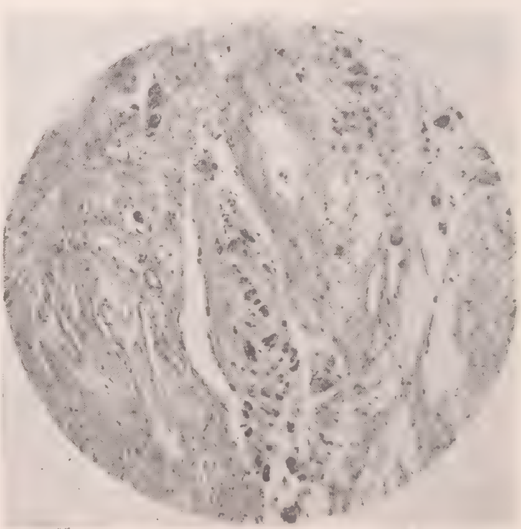

FIG. 3. Stained section of tumor showing interlacing strands of myelinated and nonmyelinated nerve bundles.

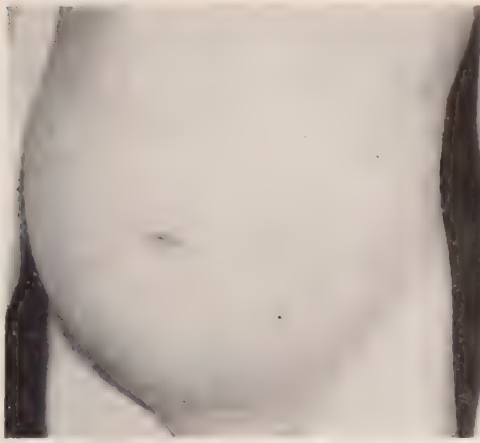

FIG. 4. Incision site—from the tip of the left twelfth rib to a point midway between the anterior superior iliac spine and the umbilicus.

The bundles are cut in cross section, longitudinally and obliquely. In widely separated areas are small clumps of cells averaging three to six cells per clump. These are among the nerve bundles. The cells are large, round to oval in shape, average 50 to 60 micra in diameter, and are discrete. Their nuclei are round and eccentric, averaging about 10 micra in diameter. Each has a prominent, dark pink nucleolus. The cytoplasm is finely granular and contains a dark, greenish-brown, finely divided pigment which appears distributed at the periphery of the cells. There is some variation in size of the ganglion cells. Some are small, while others are giant-sized. Occasional multinucleated cells are noted. The morphology of these cells is identical with those of the sympathetic ganglia. No other cell types are noted.

Pathologic Diagnosis.—Ganglioneuroma apparently arising in a sympathetic ganglion in the lower lumbar retroperitoneal region. The tumor presented in this case is composed chiefly of nonmedullated fibers in agreement with most of the reports in the literature. A myelin sheath stain (Spielmeyer) shows that only a rare fiber is medullated.

Operation.—The patient was put in a supine position with a small sandbag placed under the left buttock. The incision extended from the tip of the left twelfth rib to a point midway between the anterior superior iliac spine and the umbilicus (Fig. 4). The external oblique, internal oblique, and transversus muscles were split in the direction of their fibers. The peritoneum was pushed medially away from its reflection on the lateral abdominal wall, and the retroperitoneal space was exposed on the left side and past the midline. A large mass extending in the left lumbar gutter from the second lumbar vertebra down into the lesser pelvis and across the midline at the level of the sacral promontory was encountered. A biopsy was taken for frozen section which proved unsatisfactory and suggested the possibility of a liposarcoma. The left ureter was readily found and retracted from its anterolateral position. The uppermost (lumbar) part of the tumor was freed with difficulty by blunt dissection, it being bound down firmly in its posterior attachment, particularly to the bodies of the lower lumbar vertebra. Great care was exercised in avoiding the aorta which was not adherent to the tumor. At this point troublesome bleeding was encountered from the pelvic aspect of the growth and was controlled with difficulty. On careful examination, it was determined that the intimacy of the tumor to the iliac vessels would make a complete excision too hazardous. It was deemed advisable to bisect the tumor and the upper half which had previously been mobilized was excised. The abdomen was closed without drainage.

The postoperative course was uneventful except for swelling of the left lower extremity with evidence of iliofemoral vein block. However, the child was ambulated and discharged greatly improved two weeks later October 8, 1948. The child was re-examined in follow-up three months later and was found to be asymptomatic. A palpable, nontender mass could be readily palpated in the left lower quadrant extending across the midline. There were no residual effects in either extremity. At this time the question of attempting a complete removal of the tumor was raised. This was decided against because of the patient's age, because of the fact that this type of tumor was likely to remain benign, and also because, if operation became necessary at a later date, the developing of collaterals around the iliac vessels would make a subsequent exploration less hazardous if the major vessels were injured.

Summary

1. We report a case of lumbar retroperitoneal ganglioneuroma because of its rarity and interest.

2. The clinical, operative, and pathologic findings are in accordance with those described in the literature.

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OUT OF THE PAST

"I place economy among the first and most important virtues, and public debt as the greatest of dangers. To preserve our independence, we must not let our rulers load us with perpetual debt. We must make our choice between economy and liberty, or profusion and servitude. If we can prevent the government from wasting the labors of the people under the pretense of caring for them, they will be happy."—*Thomas Jefferson*

DO YOU HAVE YOUR HOTEL RESERVATION FOR THE ANNUAL MEETING?

If you do not now have a confirmed hotel reservation in New York City for the Annual Meeting of the Medical Society of the State of New York, May 8 to 12, 1950, at the Hotel Statler, please fill out and mail the reservation form at the bottom of this page, and send it directly to the Hotel Statler.

Should your reservation be received after the six hundred rooms set aside for the Society at the Hotel Statler have been assigned, your reservation will be turned over to one of the hotels in the neighborhood. Confirmation of your reservation will come to you direct from the hotel making the accommodation.

If you do not use the reservation form below, be sure to identify yourself as a physician when writing regarding reservations. This will insure proper attention to your request.

W. P. Anderton, M.D., *Secretary*

ALL RESERVATIONS MUST BE IN BY APRIL 24

144th Annual Meeting of the Medical Society of the State of New York,
May 8–12, 1950

Mr. Mark Armani, Front Office Manager
Hotel Statler, New York 1, New York

Please reserve accommodations as checked (√) below:

Name..
Address..
City......................................State..................................
(Unless requested otherwise, we will hold your reservation until 9 p.m. of the day of your arrival.)
Date arriving......................................Hour.........a.m......p.m.....

Room and Bath for one—per day		$ 4.50 ☐	$ 5.00 ☐	$ 5.50 ☐
		6.00 ☐	7.00 ☐	7.50 ☐
		8.00 ☐	8.50 ☐	
Double-Bed Room with Bath for two—	$ 7.00 ☐	7.50 ☐	8.00 ☐	8.50 ☐
per day	9.00 ☐	9.50 ☐	10.00 ☐	10.50 ☐
Twin-Bed Room with Bath for two—	8.00 ☐	8.50 ☐	9.00 ☐	9.50 ☐
per day	10.00 ☐	10.50 ☐	11.00 ☐	11.50 ☐
	12.00 ☐	13.00 ☐	14.00 ☐	
Suite—Living Room, Bed Room, and Bath			18.00 ☐	19.00 ☐

More Than Two Persons in One Room: For each additional person in Double- or Twin-Bed Room, the extra charge is $2.00 per day.

If a room at the rate requested is unavailable reservation will be made at the next available rate.

WHO'S WHO

in the

State Society's Office Staff

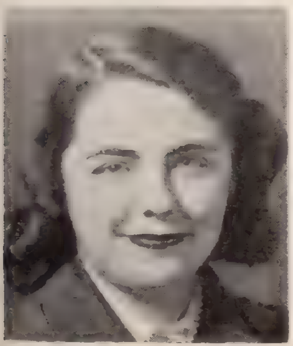
For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the Journal *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MRS. GRACE L. NYECKI joined the headquarters staff in August, 1948, and is with the *Directory* Department. Her duties include checking daily newspapers and county society bulletins for notices of deaths of physicians, clearing *Directory* cards for these from the files, and submitting them to the Journal editorial department for the "Necrology" listing. Mrs. Nyecki also handles correspondence with county clerks to obtain lists of newly registered physicians in each county and the listing of address changes to be made for the *Directory*.

A graduate of Newtown High School, Elmhurst, Mrs. Nyecki was with Kayser Stores in New York City as a window designer before joining the State Society staff. A native of New York City, she now resides in Queens with her husband, an Army veteran who conducts his own tailoring business. She belongs to the Italian Charities of Queens.

MISS FRANCES BITTNER is a member of the staff of the Membership Department, where she handles typing and filing of membership cards, posting of payments of State Society dues and War Memorial assessments, and typing of correspondence. Miss Bittner joined the staff in the fall of 1948. Born in Vienna, Austria, she attended schools in Vienna and in Munich, Germany, and the L'École des Abeilles in Paris, France. She came to the United States in 1940 and for five years was at the New York Academy of Medicine, working in the library and with the Bureau of Medical Education. In 1947 she went to Paris and worked as admitting clerk at the American Hospital of Paris.

Miss Bittner now resides in New York City with her mother. Interested in art and literature, she speaks three languages—German, French, and English.



MISS MARY PATRICIA TULLY joined the headquarters staff in September, 1948, and is clerk in the accounting department, which is headed by Mr. Thomas E. Alexander. Miss Tully handles subscriptions to the New York State Journal of Medicine, as well as complimentary, exchange, and advertisers' copies. She also prepares the semimonthly payroll for all State Society employees, separates the cash book, and assists in the preparation of Social Security tax reports. She is a graduate of the St. Vincent Ferrer High School in New York City, where she majored in business subjects. Her employment with the State Society staff is the first position she has had.

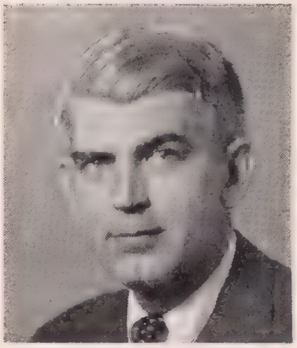
A native of New York City, Miss Tully now resides there with her family.

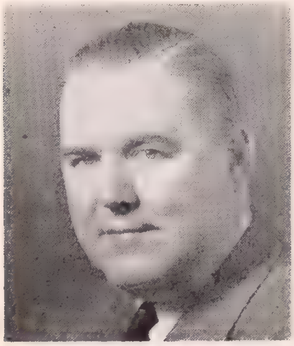
MISS EILEEN T. BUCKLEY joined the headquarters staff in February, 1949, and is in the Public Relations Bureau where she serves as secretary to Mr. Thomas E. Walsh. Mr. Walsh is director of the Speakers Bureau, liaison officer for the Woman's Auxiliary, and field representative for the Greater New York area, and Miss Buckley handles the secretarial duties connected with these. She also works in the Press Room at the Annual Meeting of the State Society.

Miss Buckley received her Bachelor of Science degree in commerce education from the College of Mount Saint Vincent, and before joining the staff was secretary in the sales department of the American Cystoscope Makers, New York City. A native New Yorker, she lives in the Bronx with her family. She belongs to several church organizations and is currently studying journalism and public relations at the Fordham University adult education school.

STEPHEN KENNETH LEECH joined the staff last year as a field representative in the Public Relations Bureau, assigned to the Central New York territory. The field representatives are coordinating the public relations activities of the county medical societies and organizations in the National Education Campaign and serve as liaisons between the county and State medical societies. Mr. Leech was formerly sales manager for Group Hospital Service in Wilmington, Delaware, and management consultant for the Emerson Engineers, in New York City. During World War II he served in the European Theater with the U.S. Army for two and one-half years.

Mr. Leech was born in Schenectady, New York, and attended Washington and Lee University in Lexington, Virginia.



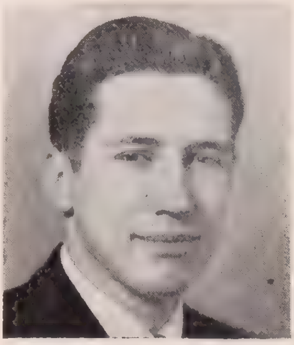


MARTIN J. TRACEY joined the staff a year ago and is the field representative in the Public Relations Bureau assigned to Albany and the surrounding territory. As field representative he works with the county medical societies to promote opposition to compulsory health insurance and to coordinate the public relations work of the State Society and the component county societies. For more than ten years, Mr. Tracey was an associate of Dale Carnegie in the field of effective speaking and human relations, and for several years he served as director of public relations for a motion picture chain in Brooklyn, Queens, and Long Island.

A native of New York City, Mr. Tracey received his Bachelor of Arts degree from Fordham University and his Bachelor of Law degree from Fordham Law School, being subsequently admitted to the New York State Bar. He now resides in Brooklyn with his wife and four children.

JOHN E. WEINRICH is the Public Relation Bureau field representative for Buffalo and Western New York, having joined the staff a year ago. Function of the field staff is to assist in the development of effective and worth-while public relations programs, to coordinate the county societies public relations work with other groups and with the State Society, and to further the National Education Campaign. Mr. Weinrich received his Bachelor of Science degree from Harvard University and his Master of Science degree from the London School of Economics of the University of London. Mr. Weinrich was formerly London representative for the British Institute of Public Opinion, a lecturer in economics at the London Polytechnic Institute, and for three years payroll auditor for the Maryland Casualty Insurance Company. During World War II he served for three years in the U.S. Naval Reserve.

Born in New York City, Mr. Weinrich now resides in the Bronx with his wife and six months old son, Johnathan.



SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on January 9, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of service with the armed forces for one member for 1950, three for 1949, two for 1948, and two for 1947; on account of illness for ten members for 1950, eight for 1949, and two for 1948; also War Memorial assessment on account of illness and service with the armed forces for five members.

It is with deep regret that I must report to you that Dr. Stephen R. Monteith of Nyack, a delegate from our Society to the American Medical Association, died on his way home from Washington, at Roosevelt Hospital, New York City, on December 8, 1949. Dr. Monteith's health had been impaired for the past few years. His second attack of coronary thrombosis became manifest on his way upstairs at the Pennsylvania Station. It is requested that you instruct me to write a letter of sympathy to Mrs. Monteith to whom I sent a telegram in the name of the Society on December 9.

It was so voted.

Last month, in accordance with your recommendations, the chairman of the Board of Trustees signed the annual contracts for Dr. Robert R. Hannon, Dr. David J. Kaliski, and Mr. George P. Farrell. The 1950 budget was amended and approved by the Board of Trustees for three months with expectation of a review at the end of that time. They also acted favorably upon your recommendations for appropriation for Speakers Service Bureau, extraordinary expenses, and departure pay for Mrs. Virginia Kelley.

Your Secretary requests confirmation of his action, with Dr. Masterson's approval, in accepting an invitation from the American Social Hygiene Association for our Society to be one of the sponsors of its annual meeting at the Hotel New Yorker, New York City, on February 1, 1950. Last year the Council voted to accept the American Social Hygiene Association's similar invitation.

Confirmation of action *was voted.*

Dr. Mary J. Kazmierczak, secretary of the Medical Society of the County of Erie, has written a request from her society that Dr. Louis E. Blanchard's resignation be rescinded. It was accepted by you October 25, 1949. Dr. Blanchard was in good standing when he resigned but now prefers to resume active membership.

It was voted to rescind Dr. Louis E. Blanchard's resignation.

Dr. Herbert B. Smith of Corning, who has been a retired member since May 19, 1948, has written requesting that he be nominated for Associate Membership in the American Medical Association. Your Secretary respectfully requests your instruction to do so.

It was voted to nominate Dr. Herbert B. Smith for Associate Membership in the American Medical Association.

Dr. W. Morgan Hartshorn of New York City has presented to the Society an autographed copy of his *History of New York Polyclinic Medical School and Hospital* and an autographed copy of his *History of Class of 1902, College of Physicians and Surgeons, Columbia University, New York City.* These have been drawn to the attention of Dr. Fenwick Beekman, chairman of your Committee on History of the Medical Society of the State of New York.

It was voted to send a letter of thanks to Dr. W. Morgan Hartshorn.

Dr. Milton G. Potter, chairman of the Committee on Problems of Alcoholism, has asked me to convey information to you which he received from Dr. I. Jay Brightman, Assistant Commissioner of Health of the State of New York. At a meeting on January 3, 1950, in Buffalo, representatives of the New York State Department of Health, Senator Mahoney and Assemblyman Mailler accepted the outline of a plan to have legislation introduced that would allow the State of New York to take title to the U.S. Marine Hospital in Buffalo. The object will be to use this hospital for research and experimentation in chronic diseases, of which alcoholism will be one. It is planned to have this conducted under the auspices of the University of Buffalo Medical College, and it is hoped to obtain $250,000 from the legislature.

In addition to referring a matter of the Schenectady socialized medicine film to your Committee on Film Review, your Secretary has taken the liberty of writing about it to Dr. Ralph E. Isabella, secretary of the Medical Society of the County of Schenectady.

On December 13, 1949, your Secretary had the delight of listening to Dr. Louis H. Bauer oppose Dr. Theodore Sanders, a member of the Executive Board of the Committee for the Nation's Health, in a debate upon "Should We Have Compulsory Health Insurance." The debate was held in the theater attached to the Church of St. Ignatius Loyola, New York City.

On December 20, 1949, your Secretary had the privilege of addressing the annual meeting of the Medical Society of the County of Monroe, upon Physicians Home, Inc. However, the evening was saved through a stirring and entertaining address by Councillor Floyd Winslow, who spoke upon "The Medical Witness."

In the near future a letter will be sent to officers of our component societies in regard to the American Medical Association dues. We have not yet heard from Dr. George F. Lull, Secretary, whether or not the A.M.A. will be responsible for expenses in regard to collecting these dues.

After discussion, *it was voted* that it was the sense of the Council that all expenses in connection with the collection of the American Medical Association dues should be paid by the American Medical Association and that we should so inform them.

Dr. Masterson has asked me to draw to your attention the report of a reference committee at the recent American Medical Association House of Delegates urging that the various state societies establish Grievance Committees. Several other state societies have already instituted such committees to hear complaints of the public regarding individual members.

It was voted that the Secretary send this information to the county societies stating that it is the opinion of the Council that each county society should institute such a committee.

Dr. Lull has also requested active opposition to the

School Health Services Act, S. 1411. This would legalize medical treatment for all school children by school doctors. The American Medical Association also requests active opposition to H.R. 6000 which includes a provision for compulsory, contributory, permanent, and total disability insurance. This is held to be a matter which should be handled locally and not through Washington. It also multiplies opportunities for malingering, and removes the program from the insurance category. H.R. 5940 has already passed in the Senate. It proposes Federal grants to medical colleges for five years. It unfairly favors new schools over previously established ones, gives the National Council on Education for Health Professions sweeping authority to investigate medical schools, establish a new method of calculating cost of instruction, and thus would interfere with administration policies. Your opposition to this legislation has also been urged by the Board of Trustees of the American Medical Association.

It was voted to refer these matters to the Legislative Committee with the request that they communicate with our senators and representatives stating our opposition to these bills.

Communications.—1. Letter under date of December 27, 1949, from Dr. Louis H. Bauer, Secretary-Treasurer, The World Medical Association, to Dr. W. P. Anderton, Secretary, Medical Society of the State of New York, requesting the Council to recommend to the Board of Trustees that they make a contribution to the World Medical Association proportionate to the size of the Society.

It was voted that the Council request the Board of Trustees to make as liberal a donation as possible to the World Medical Association, having in mind the contributions of the other state societies.

2. Correspondence between Dr. Chas. Gordon Heyd, President of United Medical Service, Inc., and the Coordinating Council of the Medical Societies of the Counties of Bronx, Kings, New York, Queens, and Richmond, re raising of income ceilings for service benefits.

It was voted that the Council approve raising of the income ceiling for service benefits from $1,800 to $2,500 for an individual and from $2,500 to $4,000 for a family, in medical care plans.

3. Letter from Dr. John H. Mulholland, Chairman, Section on Surgery, to Dr. Anderton, requesting that the Council approve the payment of travel expenses for two guest speakers from Boston.

After discussion, *it was voted* that the Council authorize the Convention Committee to pay the expenses of the two guest speakers from Boston for the Section on Surgery, without establishing a precedent.

4. Letters dated December 27 and 31, 1949, from Mr. Joseph A. Vanacore, member of the Fordham Pharmaceutical Association, requesting a letter re health regulations, State Board of Pharmacy rules, etc., be printed.

It was voted that this correspondence be referred to the Publication Committee.

5. Letter dated December 30, 1949, from Dr. G. B. Gilmore, Secretary, Bronx County Medical Society, protesting action taken by the Council extending the period for the payment of the War Memorial Assessment.

After discussion, *it was voted* that the Bronx County Medical Society be informed in light of the difference of opinion in this matter of deferring payment of the assessment for the War Memorial Fund it has been referred to the House of Delegates for decision.

6. Letter dated December 19, 1949, from Dr. Irving M. Pallin, President of the New York State Society for Anesthesiologists, petitioning the Medical Society of the State of New York to create a committee on Hospital and Professional Relations, as outlined and defined by the Hess Report which was approved by the House of Delegates of the American Medical Association in June, 1949.

After discussion, *it was voted* that the Secretary be instructed to write Dr. Pallin, informing him that the American Medical Association, at the Interim Meeting in Washington in December, had not made any definite decision in the matter, and that therefore action should be deferred until after a decision had been reached.

7. Letter dated December 29, 1949, from Dr. Joseph C. Bunten, President of the Association of American Physicians and Surgeons, Inc., requesting the Society to sponsor a State-wide essay contest.

It was voted that this be referred to the Public Relations Committee for consideration and report at the next meeting.

8. Letter dated January 10, 1950, from Dr. Milton L. Smith, Director, Educational Unit of CARE, Cooperative for American Remittances to Europe, Inc., outlining CARE plan for sending American medical books to medical schools overseas.

After discussion, *it was voted* that the Council approve the efforts of CARE in the way of sending books to medical libraries abroad, that the matter be referred to our component county societies for activation, and that the Secretary consult with Dr. Louis H. Bauer, Secretary of the World Medical Association, before contacting the county societies.

9. Letter dated December 30, 1949, from Dr. DeWitt C. Mead, Secretary of the Medical Society of the County of Oswego, regarding transfer of members from one county society to another.

Approval was voted of Dr. Anderton's reply stating that the Committee on Revision of Constitution and Bylaws is instituting measures to correct the apparent contradictions in the bylaws of the Medical Society of the State of New York.

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon reported his attendance at various meetings under the auspices of the Department of Education in regard to the future licensing of physiotherapists and psychologists and also a meeting of the Joint Legislative Committee hearing on disability insurance, where he presented the views as expressed by the Council at its last meeting; that is, the limiting of privilege of issuing certificates under the Disability Law to physicians qualified under the Workmen's Compensation Law, the penalties for incomplete or untruthful reports (the physician having no chance for appeal under such ruling), and also physicians not being paid adequate fees for attending any arbitration.

He attended a meeting of the Albany County Society Legislative Committee, meeting with the legislators of that region. The Senators and Assemblymen of the State Legislature and the Federal representatives met with members of the Albany County Society. He stated it was a very fine meeting. There was a very good understanding brought about between the members of the county society and the legislators.

At the meeting in the last part of November with the psychologists, he objected to the words in their proposed bill, "diagnosis" and "therapy." At that meeting they more or less agreed to remove those words. Of the proposed bill as sent around by Dr. Conroe on December 29, he distributed copies to all members of our Legislative Committee. Out of the 14 copies he sent out he received two answers.

Report of Committees

Legislation.—Dr. G. R. Wendt, chairman of the Department of Psychology of the University of Rochester, representing Dr. Irwin A. Conroe, Assistant Commissioner for Professional Education in the New York State Department of Education, presented a draft of a bill to license private practitioners of psychology. He gave the history of the development of this bill and discussed his belief that it should become a law.

The Council *voted* not to oppose this bill provided the words "diagnosis" and "therapy" as applied to psychology were omitted from the bill.

Dr. Dattelbaum, chairman of the Committee on Legislation, reported that he had attended a meeting of the physiotherapists at which amendments to their bill were discussed, and at which he presented the views of the Council.

Mr. Martin read the complete opinion in the *New York Law Journal* of January 4, 1950, in the case of *The People of the State of New York, appellant, vs. Virginia Martine Maybrook, also known as J. Virginia Maybrook, respondent*, decided December 20, 1949.

It was voted that the Council deems it inexpedient at this time to have the Panken Bill reintroduced into the State Legislature for the present.

Dr. Hannon raised the question of legislation discussed last year in the House of Delegates, in reference to amending the Education Law concerning nervous and mental disorders. The minutes show that in Section 52, the resolution was introduced; in Section 107, it was voted that a bill be introduced; in Section 161, action was rescinded and the matter referred to the Council.

Dr. Masterson requested Dr. Dattelbaum to prepare a report with recommendations for the next meeting, so that the Council can act and report to the House of Delegates.

Constitution and Bylaws.—Dr. Reuling, chairman, reported two matters: one, from the County of Orange, where they wished to elect a special standing committee or a standing committee. This did not fit into their bylaws. The Secretary was requested to write and suggest that they revise their bylaws.

The other was from the County of Schenectady. The revision of their constitution and bylaws was approved except for some minor changes.

Convention.—Dr. Anderton read a letter from Dr. J. G. Fred Hiss, chairman of the Convention Subcommittee on Scientific Exhibits, requesting instructions from the Council as to whether or not he should accept two applications for exhibits: (1) dealing with results of a clinical analysis of 948 infertile couples and (2) "Contributions of Planned Parenthood to Community Health."

After discussion, *it was voted* to decline acceptance of these exhibits.

Economics.—Dr. Azzari, chairman, reported regarding meetings which had been attended by Mr. Farrell, Director of the Bureau of Medical Care Insurance. He stated that at the last meeting of the Council the recommendation of the Committee on Economics, that the Hess formula be applied in taking care of the controversial subject about hospitals and teaching institutions practicing medicine, was taken up, and the recommendation was tabled after Dr. Reuling stated that in all probability at the Washington session of the American Medical Association the whole Hess formula would be reconsidered. Since that has happened, he recommended to the Council that they also defer action on this application of the Hess formula until such time as the matter is clarified by the American Medical Association, as it is a problem of national character and involves the entire country.

It was voted to approve Dr. Azzari's recommendation to defer action.

The report was *approved* as a whole.

Ethics.—Dr. Reuling, chairman, reported that no questions on ethics had been submitted to the Committee. However, the proposed revised "Principles of Professional Conduct of the Medical Society of the State of New York" were distributed to be studied by the members of the Council for approval at the next meeting, and submitted to the House of Delegates in the Council report.

The Council *voted to approve* printing in the back of the "Principles of Professional Conduct" a skeleton for the establishment at the county level of Grievance Committees.

The Council *voted* that Mr. Martin, Counsel, be asked to prepare a report for its next meeting, concerning the present existing Appendix 2, Medical-Legal Principles, recommending changes or additions.

Nursing Education.—Dr. Dickson, chairman, reported: "I am very happy to announce that your Committee on Nursing Education held a meeting in this room yesterday with the Coordinating Council on Nursing Problems. We had a very well-attended, interesting, and informative meeting. The material discussed and the recommendations at that meeting will be presented at the next Council for your consideration.

"There is another matter, Mr. President, that I would like to get your opinion and approval on at this time. As you probably recall, in the last agenda of the Council you received a letter from Miss Katherine E. Rehder, the Executive Secretary of the New York State Nurses Association, which was referred to my committee. It stated that the Nurses Association was opposed to compulsory medicine. The letter also said that in view of the fact that the Nurses Association opposes compulsory medical care plans, its Board of Directors feels that it is the responsibility of this Association to have a voice in policy making and a part in carrying out voluntary health insurance plans.

"Your Committee has taken the liberty of drafting a reply to Miss Rehder and we ask the Council's approval.

Dear Miss Rehder:

This is to acknowledge your letter of November 14, 1949, in regard to your Association having a voice in the policy-making and a part in carrying out voluntary health insurance plans.

In New York State there are six voluntary nonprofit medical care plans approved by the Medical Society of the State of New York, which are autonomous within themselves and controlled by their own Boards of Directors.

> We are pleased to cooperate with you to the extent of forwarding to each plan a copy of your letter of November 14, 1949.
>
> We wish to express our appreciation of the resolution adopted by your Association at its Biennial Meeting in Buffalo, October 16–21, 1949.
>
> Sincerely yours,
>
> *Note:* Attached is list of the names and addresses of plan presidents to whom copies of the letters were sent.

"Here is a letter that we suggest be sent to the presidents of the six voluntary medical care plans in New York State which are approved by the Medical Society of the State of New York:

> Enclosed please find copy of letter addressed to the President of the Medical Society of the State of New York by Miss Katherine E. Rehder, R.N., Executive Secretary of the New York State Nurses Association, and a copy of our reply.
>
> These are for your information and any action which you may wish to take is left to the discretion of your corporation.
>
> Sincerely yours,"

The Council *voted approval* of both letters.

Planning Committee for Medical Policies.—Dr. Kenney, chairman, reported: "Following the meeting of the Council on November 10, 1949, at which time Dr. William C. White, president of the First District Branch, appeared before this body, the President, under date of November 23, referred a request to the Planning Committee to study the functions, duties, constitution and bylaws, and other matters pertaining to the reorganization of the First District Branch.

"The Planning Committee at its meeting on December 1, 1949, and again on January 11, 1950, gave considerable study to this matter. The Planning Committee, therefore, recommends to the Council that the President of the First District Branch be requested to call a meeting of the First District Branch and to reorganize this branch under the provisions of the present Constitution and Bylaws of the Medical Society of the State of New York.

"For the information of the Council, the Planning Committee is giving continuing study to the resolution of the House of Delegates re the setting up of principles for group practice.

"I would ask approval of our recommendation."

The Council *approved* the recommendation.

Publication.—Dr. Redway reported for Dr. Kosmak, who was ill, as follows: "The Publication Committee met January 11, 1950, and considered routine matters.

"Mr. Anderson's arrangements with salesmen of advertising for the *Directory* and JOURNAL were reviewed in detail. Approval was voted of Mr. Anderson's arrangement with Mr. Baldwin for exhibits at the 1950 Annual Meeting.

"It was voted that the letter of employment for salesmen be submitted for approval to Mr. Martin, the counsel of the Society, before being sent to the recipients.

"Routine matters relative to the *Directory* were also considered."

The report was *approved.*

Public Health and Education.—Dr. Curphey, chairman, reported that he had attended various meetings and arranged postgraduate instruction and teaching days.

Revision of the *Course Outline Book* is being undertaken for 1950–1951. Letters are being sent to the deans of medical colleges in the State requesting assistance in arranging new courses; also to all physicians who have previously arranged such courses for our postgraduate education program.

Problems of Rural Health—A meeting of the Council Committee on Public Health and Education was held at the offices of the State Health Commissioner, December 15, 1949.

Members of the State Department of Health submitted (1) An editorial by Dr. Hilleboe on rural health programs; (2) A brief review of the medical problem of rural health by Dr. Redway.

Following a general discussion of the problem it was agreed that the need existed for a survey in the State of rural practice in New York. The State Department of Health expressed its willingness to conduct this survey.

In the discussion it was emphasized that the Medical Society of the State of New York should impress on the component county medical societies their responsibility in studying the problem with the aim of finding a solution.

Rehabilitation and Physical Medicine

The recommendation that the name of the subcommittee be changed to Physical Medicine and Rehabilitation *was approved.*

Special Committee to Study the Absorption of State-aided Laboratories into County Health Departments—Dr. Curphey reported as follows: "I should like to report on the recent meeting of the Council-constituted Committee to Study the Problem of the Absorption of State-aided Laboratories into County Health Departments. You might remember at the last meeting of this Council I requested the appointment of a committee with members from the Medical Society of the State of New York, the New York State Society of Pathologists, the New York State Association of Public Health Laboratories, and the New York State Department of Health. (That incidentally represents the type of constituted committee agreeing with the practice in the past where any specific problem concerning the Society in which the State Department of Health is involved has been referred to members in the profession who have special knowledge, interest, and experience in the subject.)

"That Committee met, and as a result of its deliberations it came out with this resolution:

> *Resolved*, that the State-aided public health laboratories in New York State, while acting in close cooperation with, should be independent of the county health departments; that they should have separate boards of managers and separate budgets; and be it further
>
> *Resolved*, that, in consultation with representatives of the county medical societies, the county health departments, and the county hospitals—where they exist—ways and means of close and effective collaboration be worked out.

"At this meeting the two representatives from the State Department of Health were opposed to the resolution, and they requested the privilege through Dr. Hilleboe of submitting a minority report, which was read. It opposed repeal of the present law, which permits a common board to serve both a county health department and a county laboratory, and it advocated that the privilege should remain for a local group to determine whether or not it desires to appoint such a common board.

After discussion, *it was voted* that the majority opinion of the Committee be supported.

Blood Banks—Dr. Curphey reported that Dr. Unger, chairman of the Subcommittee on Blood Banks, sent him a letter a few days ago, which he had turned over to our President. It is in respect to the Governor's approach to the problem of civil defense, and it specifically refers to the part that the blood bank group might play in the program.

It was voted that this matter be referred to the Committee on Emergency Preparedness to report upon at the next meeting of the Council.

Public Relations.—Dr. Winslow, chairman, reported as follows: The Interim Session of the American Medical Association on December 6 to 9 in Washington, D.C., was attended by Mr. Dwight Anderson and members of the Public Relations Bureau. They also took part in the Sixth Annual Conference of County Medical Society Officers (Grass Roots Conference) on December 8.

A special mailing was made to a key list of physicians who are actively engaged in the National Education Campaign, in which was enclosed a report on the public relations activities in Tompkins County.

Newspaper clippings received by the Public Relations Bureau indicate that considerable publicity was given by up-State newspapers in the selection of Dr. John R. MacElroy, of Jonesville, as the New York nominee as the Outstanding General Practitioner of the Year. The doctor chosen by the A.M.A. was Dr. Andy Hall, of Illinois.

On December 21 the field representatives were recalled to the New York office. They have all since returned to their respective areas. During the interim, several staff conferences were held at which plans were made for operations during 1950.

News releases covering postgraduate education meetings were issued for Ontario, Chenango, and Clinton Counties.

Speakers Bureaus operated by county medical societies in various parts of the State now make it possible to provide speakers to discuss the issues involved in compulsory health insurance in every metropolitan area and most of the rural areas.

As a means of putting before the public the positive features of American medicine as it is practiced today, radio station managers are being advised that the Speakers Service of the Public Relations Bureau has a list of outstanding physicians who are willing to participate in radio and television programs.

A packet of materials prepared by the Bureau on Medical Economic Research of the A.M.A., containing information to show that there is no medical care crisis in the United States, was distributed to all chairmen of Speakers Bureaus. The same materials were sent to the public relations chairmen of the Woman's Auxiliary, while a summary of health insurance bills now pending in Congress was sent to the Legislative Chairmen of the Woman's Auxiliary.

It was voted to accept the report.

Veterans Administration, Liaison with.—Dr. Bauckus, chairman, reported on the Veterans Medical Care Plan, Inc., giving a résumé of the work done by the Plan since its inception.

The President stated he thought Dr. Bauckus and his committee deserve the thanks of the Society for the very fine work they have done.

Woman's Auxiliary.—Dr. Beekman, chairman, reported on the activities of the President of the Auxiliary and the Committee.

Workmen's Compensation.—Dr. Kenney, chairman, reported on the activities of the Committee.

Report of the New York State Delegates to the A.M.A.—Dr. Winslow, chairman of the delegation, submitted a report of the Delegates from the Medical Society of the State of New York to the American Medical Association Interim Session December 6 to 8, 1949, held in Washington.

New Business

New York Institute of Applied Arts and Sciences—Dr. Andresen reported as our representative on the Advisory Board of the New York Institute of Applied Arts and Sciences that he had helped to plan a two-year course for the training of office assistants for doctors' offices. The first class will be graduated next summer. He also helped in establishing a course for laboratory technicians and requested the privilege of having a report regarding these courses published in the JOURNAL.

Approval was voted.

New Committee Appointments—Dr. Anderton reported that he had been asked by the President to request the approval of the following appointments which were made necessary by the death of Dr. Stephen R. Monteith; first, Chairman of the Public Medical Care Subcommittee of the Committee on Economics, Dr. Charles F. Rourke, of Schenectady; second, a member of the same subcommittee, Dr. William R. Donovan, of Geneva; and third, to be Chairman of the Geriatrics Subcommittee of the Public Health and Education Committee, Dr. Scott Lord Smith, of Poughkeepsie.

The President also requested power to appoint our Society members on the Joint Committees with the New York State Pharmaceutical Association, and the New York State Dental Society.

The Council *voted approval* of the three appointments, and the establishment by the President of the two new committees as requested.

Memorial to Dr. Stephen R. Monteith—Dr. Anderton read the following resolution which was approved:

> "WHEREAS, it has pleased Almighty God to take from our midst our respected and admired colleague, Dr. Stephen R. Monteith; and
>
> "WHEREAS, Dr. Monteith, a former Vice-President, had long been an active member of the House of Delegates of the Medical Society of the State of New York and a constructive member of committees of our Society; therefore be it
>
> "*Resolved*, that the Council of the Medical Society of the State of New York spreads upon its minutes our sorrow at Dr. Monteith's untimely demise and expresses the sympathy of our Society for Mrs. Monteith and her children."

Extraordinary Legal Expenses

The Council *voted* to request the Board of Trustees to make an appropriation for extraordinary legal expenses which may occur during January, 1950.

They also *voted* to recommend an additional appropriation on the legal advisors' last bill.

In this connection Dr. Masterson stated he would request Mr. Martin to submit a report at the next meeting.

Note of Felicitation to Dr. Kosmak

It was voted that the Secretary be instructed to communicate with Dr. Kosmak that the Council felicitates him on his enforced absence.

NECROLOGY

Alfred Bornmann, M.D., of Brooklyn, died on February 8 at his home at the age of seventy-one. Dr. Bornmann received his medical degree from the New York Homeopathic Medical School in 1899 and had practiced for over fifty years. He was attending physician at the Carson C. Peck Memorial Hospital and on the staff of St. John's and Methodist Hospitals. Dr. Bornmann was a member of the American Institute of Homeopathy, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

C. Alexandre Guillot, M.D., of New York City and Watertown, died on February 11 at his home in Watertown at the age of sixty. Dr. Guillot received his medical degree from the Howard University Medical School in Washington, D. C., in 1925. Of French ancestry, Dr. Guillot spoke the French language fluently and during World War I served overseas with the U. S. Army Intelligence Service as an interpreter. Dr. Guillot practiced in New York City until 1941, when he moved to Watertown, although he also maintained a New York City office. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association. Dr. Guillot was buried, with full military honors, in the Arlington National Cemetery, Arlington, Virginia.

William Wendell Hala, M.D., of Monroe and Brooklyn, died on February 11 at the Carson C. Peck Memorial Hospital in Brooklyn after a long illness, at the age of sixty-seven. Dr. Hala received his medical degree from the University of Maryland Medical School in 1905 and had practiced in Brooklyn for more than forty years. He was an associate professor of pathology at the Long Island College of Medicine and consulting pathologist at the Kings County and Carson C. Peck Memorial Hospitals, both in Brooklyn. A Diplomate of the American Board of Pathology, Dr. Hala was a member of the New York State Pathology Society, the New York Pathology Society, the Orange County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James William McChesney, M.D., of Baldwin, died on February 4 at the Nassau Hospital, Mineola, at the age of sixty-one. Dr. McChesney was graduated from the Cornell University Medical College and interned at the New York Hospital. During World War I, Dr. McChesney was a first lieutenant in the U. S. Army Medical Corps. He started his practice in Baldwin about thirty-three years ago. Dr. McChesney was chief urologist at the Nassau Hospital; attending surgeon at the South Nassau Communities Hospital, Rockville Centre; consulting urologist at St. Joseph's Hospital, Far Rockaway, and chief of the urology and tumor service at the Meadowbrook Hospital, Hempstead. A Fellow of the American College of Surgeons, Dr. McChesney was a member of the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Petluck, M.D., of the Bronx, died on February 17 in the Lebanon Hospital at the age of eighty. Born in Russia, Dr. Petluck was graduated from the University of Moscow in 1892 and then came to the United States, where he received his medical degree from the Tufts Medical School, Boston, Massachusetts, in 1898. He practiced in New Bedford, Massachusetts, before coming to the Bronx, where he had practiced for the past forty-five years. Dr. Petluck was formerly associated with the Harlem, Bronx, Fordham, and Mount Sinai Hospitals. He had been acting chief of the outpatient surgical department at Mount Sinai.

Ray Hoskins Rulison, M.D., of New York City, died on February 12 at Clareyville, New York, while on a fishing trip. He was sixty-seven years old. Dr. Rulison was graduated from the Syracuse University College of Medicine in 1907 and went to Europe to continue his postgraduate studies in Paris. Opening his practice in Monroe, Dr. Rulison, in 1921, became chief of the first syphilis clinic organized at Bellevue Hospital, New York City. Dr. Rulison was chief dermatologist at the Lincoln Hospital, the Bronx; attending dermatologist at the New York Eye and Ear Infirmary, and consulting dermatologist at the Tuxedo Memorial Hospital, Tuxedo, and the Elizabeth A. Horton Memorial Hospital, Middletown.

A Diplomate of the American Board of Dermatology and Syphilology, Dr. Rulison was a member of the American Academy of Dermatology and Syphilology, the New York Academy of Medicine, the New York Dermatology Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edward Taylor, M.D., of New York City and formerly of Garden City, died on February 18 at his home at the age of sixty-five. Dr. Taylor received his medical degree from George Washington University Medical School in 1908. For several years he served as staff doctor on a railroad construction project along the Amazon River in South America, and then studied at the London School of Tropical Medicine. From 1916 to 1918 he did research work in poliomyelitis at the University of Vermont, after which he left to join the United States Government project on the disease in South Africa. In 1923 he returned to the United States, and in 1933 he became medical inspector in the Garden City public school system, retiring in 1943.

CORRESPONDENCE

REGULATIONS FOR THE PHARMACIST

To the Editor:

As retail pharmacists we are confronted with many problems: new board of health regulations, State board of pharmacy rules, narcotic division, and various items that need correcting from time to time. The great majority of pharmacists are honest and scrupulous relative to prescription compounding and abiding by the physician's request and wishes; therefore, it is necessary for the doctor to assist us as much as possible. It is annoying to the doctor and pharmacist both to verify a request for a repeat prescription by the patients who become indignant and abusive when we tell them that their physician must authorize us for a renewal, and the prescriber becomes annoyed at us because he has to check his records or probably rewrite another script.

A few rules to abide by:

All narcotic prescriptions must have full name and address of patient written in ink or indelible pencil.

Chronic cases for morphine or derivatives must have a diagnosis written on the prescription. Narcotic inspectors insist we should know the ailment when repeated prescriptions for M.S. are filled for the same patient.

Chronic cases of hypertension or heart ailments calling for Theominal, Diurbital, digitalis, etc., can be written for one or more months repeated prescriptions, depending on when the patient should be re-examined.

All prescriptions should have a designated number of refills permitted and a time interval.

All phenobarbital preparations, alone or combined with nontherapeutic vehicles, must state the time intervals and how often the prescription can be refilled. All these are automatically void after three months. All prescriptions written for items that the manufacturer labels with the legend, "Cannot be sold without a doctor's prescription," such as Imadyl Unction, Elixoid, Ertron, thyroid, etc., can only be compounded once unless specified in writing.

Another evil confronting us is the dispensing of samples by the doctor. The patient is instructed to get more from his pharmacist if he gets results, and invariably it is an item needing a prescription.

We, as pharmacists, will be obliged to you if this letter is printed asking a little cooperation from your subscribers.

Joseph A. Vanacore
Fordham Pharmacists Association

571 East 187th Street
Bronx 58, New York
January 27, 1950

To the Editor:

In collaboration with the letter sent to you by our colleague, Mr. Joseph Vanacore of the Fordham Pharmacists Association, may I, on behalf of the Italian Pharmaceutical Association of New York, add our voice to the sentiments described therein.

We are daily faced with a tremendous problem concerning the compounding of doctors' prescriptions. Due to the numerous regulations imposed upon us by the City, State, and Federal authorities, we are legally compelled to adhere to a set schedule.

Our problems would be greatly alleviated if we could obtain the cooperation of the medical profession to follow their share of the demands made upon us both, many of which are primarily the responsibility of the physician. I make particular reference to the prescription writing relative to the barbiturate laws of our State. Section A reads as follows:

> No prescription for barbiturates or any other hypnotic or somnifacient drug shall be refilled by a pharmacist or druggist if the prescription bears direction that it is not to be refilled. Prescriber may indicate the number of times the prescription can be refilled. If the prescriber fails to specify (*a*) not to be refilled (*b*) an indication of refillable time period, then such prescription may be refilled by the pharmacist or druggist during a period of not more than six months from the original date of filling the prescription. However, the prescription shall not be refilled prior to the termination of the period which, according to the direction for use, the medication will have been used by the person for whom it was prescribed.

We are compelled to follow the letter of the law, which is indeed difficult without the physician's help. I am sure that through the medium of the Journal this message could be brought before them. There is one very important point I would like to make. Many physicians are not acquainted with the Federal regulations which prohibit a pharmacist to sell any preparation which carries the legend, "To be dispensed only on the prescription of a physician." Many times a physician will (verbally) request his patient to get the item at the drugstore We are thereby placed in a very embarrassing situation. To comply with the patient's request we would be breaking the law.

The result is confusion and loss of time, whereas the writing of a prescription would obviate any inconvenience to all concerned.

This letter is written with the true spirit of friendship and cooperation toward the medical profession, and it is our sincere hope that it will be accepted in the spirit that it was written.

Julius A. Matteo
Chairman of Professional
Relations Committee
Italian Pharmaceutical Association

653 Crescent Avenue
New York 57, New York
January 27, 1950

SENSITIVITY TO SESAME SEED

To the Editor:

I was very much interested in the article by Dr. Leo Rubenstein, entitled "Sensitivity to Sesame Seed and Sesame Oil," in the JOURNAL dated February 1, 1950, page 343.

The author states that his is the first case reported. This is possibly so. However, I can report an identical case of a patient of mine who has been under my observation for the past fifteen years. At that time, at the age of twenty-five, he got a severe attack of urticaria and bronchial asthma, which proved likewise to be due to eating of halvah, a substance he had ingested many times previously without symptoms. Further study revealed that sesame seed was the guilty offender.

Since then he has had a large number of attacks, each of which could be proved due to sesame seed or oil, which appears to be the only allergen in his case. Relief is always obtained by epinephrine.

Of further interest is the fact that the longest period without any attacks was five years, from 1941 to 1946, when he was in the Army, traveled all over this country and the Pacific area, and ate regular G.I. foods without attacks. After his return to civilian life in this country, numerous attacks, all after sesame, occurred.

Not being an allergist, I did not consider the case remarkable, but now I feel it worth putting on record.

MEYER FRIEDENSON, M.D.

230 Central Park West
New York City
February 4, 1950

PLAYING OUR HAND

To the Editor:

At the present time, the doctors of this country are carrying on an active program of "public education" in opposition to the proposed compulsory insurance plan of the Federal government. The people of the United States will finally determine whether we are to have government-controlled medicine or not. I believe it is very easily possible for doctors unwittingly to do their cause more harm than good. They have a habit of discussing this question amongst themselves. The speaker generally commands a sympathetic ear and carries away the delusion that he has been talking to the public and that, if he continues in the same vein, he will also have a sympathetic ear with other segments of the population. This is a mistake and often leads assignees from the county societies' speakers bureaus to commit serious errors in public.

Not long ago, I listened to a presentation from a county medical society before the members of a Rotary Club. The speaker was a physician, and another physician member was selected to introduce him. He began by saying: "Our speaker for today will talk to you about a subject which threatens to affect both your pocketbook and mine." In his address, the speaker presented two themes: first, that, under state medicine, the doctor is so preoccupied with "form filling," "red tape," and "complying with bureaucratic control" that he is forced to dispense an inferior brand of medical care. Second, he claimed that the doctors of the United States are maintaining the highest standards of medical services and that the health of the people in the United States is good because of the maintenance of such services. This is the theme of more than 90 per cent of the physician speakers who argue in public against state or socialized medicine. This experience, however, in my opinion, puts on the menu three items which are bad for public consumption:

1. Financial interests.
2. Airing a gripe.
3. Self-praise.

If we wish to "win friends and influence people," it is fundamental that we apprise them of the benefits which they may expect to derive from the "Doctors' Deal."

There is another aspect of this subject which, I feel, requires careful study by the doctors with a necessary revision of their attitude toward voluntary insurance. We claim to be patronizing and promoting voluntary insurance plans and also that we are opposed to socialized medicine. In fact, however, socialization of medicine has been practiced by the doctors for centuries. We treat about one-half our patients for nothing and charge the other half twice or more than twice as much as would be necessary if everybody paid his way. In this manipulation, we actually set ourselves up as the sole arbiter in the distribution of wealth as between two classes of people. If a representative of the government does the same thing, we scream "socialism," "dictatorship," and "totalitarianism!" When we are asked to abandon this—our particular contribution to world socialism—we do so with the greatest reluctance. Recently, United Medical Service wished to raise its income ceiling. A level of $5,000 for families was suggested. This was beaten down by the action of the doctors themselves in the seventeen component medical societies and a $4,000 ceiling was finally agreed upon. Anybody in this income group, however, can go to the social service departments of his nearest hospital and, with minor extenuating circumstances, be passed as "eligible for free medical care." This action by the county medical societies, therefore, fails to remove the burden of medical expenses from the vast majority of people who actually suffer most and who are, and always will be, the backbone of our society. It also leaves the impression with the lay spectator on the outside that the doctors are trying to use the voluntary prepayment system to derive income from a group of people who would otherwise pay them very little, or, perhaps, nothing at all.

If the doctors wish to continue to direct the destinies of insurance companies, they must become insurance-minded, rather than private practice-minded. This means, first, that they must be prepared to accept for their services smaller sums from larger numbers of people on a sure-pay basis, rather than larger sums from smaller numbers of people on the basis of a calculated loss, and, second, that they must accept the necessity of issuing new policies with higher income ceilings, higher premiums, and higher rate schedules. I believe that their objective, at the present time, should even reach as high as an income of $20,000. This would, necessarily, be accompanied by the exertion of pressure upon governments—city, county, state, and Federal—to pay something to the physicians who, at the present time, take care of indigent cases free of charge. We might point out to the representatives of these governments in the course of this action that the type of "socialist" who has appeared upon the scene in the United States is one who is willing to assume his rightful share of public responsibility only on condition that he assumes all responsibility.

I do not believe that the people of the United States want government medicine, but, in the presentation of our hand to the public, I have very serious misgivings that we are playing a losing game.

Milton Sills Lloyd, M.D.

667 Madison Avenue
New York City
February 15, 1950

MORE ON POLITICS AND MEDICINE

The following is taken from "The Sun Dial," a column written by H. I. Phillips and featured in *The New York World Telegram and The Sun:*

This department is not opposed to anything that will bring adequate aid to the sick, but, continuing its forecast of possible happenings under nationalized medicine carried to extremes, it imagines further tidings from most anybody's town:

Chick Holcomb just got his new set of uppers from his district leader. They don't fit but he is too loyal a party man to complain. . . . . Drew Platt broke two ribs last week. The government doctor came with an order to set three, so Drew had to break another rib. . . . . Jim Prouty, who notified the medical bureau that he had a bad case of gout, has received treatment for tonsilitis and will let it go at that until a change in administration.

Twins arrived at Chidsey Tuttle's home last week, but the form called for only one child, so the matter goes to arbitration. . . . . Dr. Jason Finch has opened offices in the Kickapoo Political, Chowder & Marching Club. . . . . He is one of the most competent physicians who ever won the men's sack race at a party clambake. . . . . Annie Hodge broke a thumb the other day and was treated for a dislocated toe. . . . . Carrie Hanson's two kids have whooping cough and are reported by Town Chairman "Swifty" McGuinness as doing well, considering no campaign is on this season.

Nick Pitts was kicked by a horse yesterday. Through some confusion at the medical bureau, a horse doctor responded to his call. The doctor said Nick had glanders and a popped osselet, and would not be argued with. . . . . The wig sent Eb Nettleton has three new front teeth and a pair of arch supporters attached. It looks queer on Eb but he will wear it that way until the wig bureau and teeth and arch supporter administrations get together. . . . . Sadie Epps, who fell overboard from a canoe and asked treatment for immersion, is in a bad way. She got treated for a fall off a saddle pony. . . . . Dodie Munns is puzzled by a strange rash on his back. Nothing can be done until Washington sets up a Department of Rashes. . . . He turned down pills for biliousness.

Caleb Mitchell's boy wants to practice medicine, and his father is trying to make up his mind whether to send the boy to a medical school or to a party caucus. . . . "Stinky" Hobbs was feeling pretty miserable until the doctor sent him by the government arrived and "Stinky" got a good look at him. . . . The case of Mollie Beezle has finally been processed. Her pulse will be taken by the Democrats, her temperature by the Republicans, and her metabolism by a bipartisan committee.—*New York World-Telegram and The Sun, February 3, 1950*

MEDICAL NEWS

International Congress on Obstetrics and Gynecology, May 14 to 19

AT THE fourth American Congress on Obstetrics and Gynecology to be held in New York City from May 14 to 19, 1950, the following addresses will be given:

Dr. Arthur Hertig of the Harvard Medical School will speak on, "The Implantation of the Human Ovum." Discussion will be by Dr. Axel Westman of Stockholm, Sweden.

Professor Robert Courrier of the College of France in Paris will speak on, "Some Recent Observations on the Physiology of Reproduction." Discussion will be by Dr. Bernhard Zondek of Tel Aviv.

Dr. Samuel Reynolds of the Carnegie Institute for Embryology in Baltimore, Maryland, will speak on, "The Contractility of the Human Uterus and its Physiologic Basis." Discussion will be by Dr. José Botella-Llusia of Madrid.

Professor Carl Kaufmann of the University of Marburg, Germany, will speak on, "Psychologic Factors Affecting Ovarian Function." Discussion will be by Dr. Willard M. Allen of Washington University, St. Louis, Missouri.

Professor Hans Kottmeier of the Radiumhemmet in Stockholm, Sweden, will speak on, "The Therapy of Gynecologic Cancer." Discussion will be by Dr. Norman F. Miller of the University of Michigan in Ann Arbor.

Dr. Herbert Traut of the University of California will speak on, "Early Diagnosis of Uterine Carcinoma." Discussion will be by Dr. Ragnevald Bredland of Oslo, Norway.

Professor Heinrich Martius of the University-Frauenklinik at Gottingen, Germany, will speak on, "The Treatment of Cancer of the Cervix." Discussion will be by Mr. Charles Read of London.

Professor Leon Gerin-Lajoie of the University of Montreal will speak on, "Uterosalpingography in the Differential Diagnosis of Uterine Bleeding." Discussion will be by Dr. Claude Beclere of Paris, France.

Professor Manuel Luis Perez of the University of Buenos Aires in Argentina will speak on, "Usefulness of Antibiotics in Obstetric Surgery." The discussant is not yet arranged for.

Dr. Carlos D. Guerrero of Mexico City will speak on, "The Conservative Management of Myoma Uteri." Discussion will be by Dr. Julian Waldo Ross of Howard University at Washington, D.C.

Dr. Walter Seegers of Wayne University in Detroit, Michigan, will speak on, "The Nature of the Blood Coagulation Mechanism and Its Relationship to some Unsolved Problems in Obstetrics and Gynecology." Discussion will be by Dr. H. de Watteville of Geneva, Switzerland.

Professor Harold L. Sheehan of the University of Liverpool in England will speak on, "The Kidney in Abruptio Placentae." Discussion will be by Dr. A. van B. Bastiaanse of Amsterdam, Holland.

Professor Lakamanaswami Mudaliar of the University of Madras in India will speak on an aspect of the pathologic physiology of pregnancy. The paper will be discussed by Dr. Manuel B. Rodriguez Lopez of Montevideo, Uraguay.

Professor Arnaldo de Moraes of the University of Brazil in Rio de Janeiro will speak on, "Total Hysterectomy in Nonmalignant Conditions—Indications and Technics." The discussion will be by Dr. Tassilo Antoine of Vienna.

Professor Toshio Hasegawa of the University of Tokyo will speak on, "Changing Incidence of Various Obstetric and Gynecologic Disorders During the War Years." Discussion will be by Dr. Erik Rydberg of Copenhagen.

Professor G. Dellepiane of the University of Turin has prepared a paper on the cytology of malignant cells. He will be aided in its presentation by Professor Claudio Braigozzi of Turin.

Dr. Birger Lundquist of Stockholm will speak on, "Maternity Care in Sweden," and his paper will be discussed by Miss Ruth Taylor, R.N., of the Children's Bureau, Washington, D.C.

Dr. Marian Yang of Peking and Geneva will speak on, "Maternity Care in China," and her paper will be discussed by Dr. Nicholson J. Eastman of the Johns Hopkins Hospital in Baltimore.

Dr. Dorothy Taylor, Senior Medical Officer for Maternity and Child Welfare of the British Ministry of Health in London, will speak on, "The Evolution of the British Maternity Service," and her paper will be discussed by Dr. J. S. Collings, Research Fellow of the Nuffield Provincial Hospital Trust of London, England.

Dr. George Baehr, chairman of the Board of Directors of the Health Insurance Plan of Greater New York, will speak on, "Maternity Care Under the Insurance Plan of Greater New York," and his paper will be discussed by Dr. Benjamin Watson, president of the New York Academy of Medicine.

Dr. Leonard Goodman, director of the Maternity Hospital at Korle Bu. Accra in the Gold Coast Colony of West Africa, will speak on, "Maternal Care in Africa." His paper will be discussed by Dr. Honoria Acosta-Sisson of Manila, Philippine Islands.

All of the foregoing papers and discussions will be presented at general sessions of the Congress taking place in the ballroom of the Hotel Statler on Monday through Friday mornings, May 15 to 19, 1950. For further information address Dr. George W. Kosmak, Chairman, Committee on Medical Publicity, 23 East 93rd Street, New York, 28.

Employment Opportunities for Civilian Medical Personnel in the Pacific Islands

PRESIDENT Harry S. Truman has decided that administrative responsibility for Guam and American Samoa, which are U.S. possessions, and for the Trust Territory of the Pacific Islands, which comprises the former Japanese mandated Marshall, Caroline, and Marianas Islands, will be transferred from the Navy Department to the Department of the Interior. An executive order makes this transfer of responsibility effective on Guam on July 1, 1950. The transfer in American Samoa and the Trust Territory is scheduled to take place on July 1, 1951.

It is planned that naval officers and enlisted personnel serving in these island governments will be replaced with civilians before the transfer dates. Each island area has hospital facilities, small island or village dispensaries, and public health organizations. Medical work in these islands, in view of the great need for health services, the varied nature of medical problems, and the differing cultures of the people, offers an important challenge to doctors and other medical personnel.

Guam has a population of about 75,000, of which 27,000 are Guamanians. The Guam Memorial Hospital, a temporary structure with 250 beds, including tuberculosis wards and a staff of nine medical officers, serves primarily the Guamanian population. It is operated by the Guam Government and shares some facilities in common with the adjoining naval hospital. In this medical center are schools for native medical assistants, dental assistants, and nurses, which are attended by Guamanians, Samoans, and Trust Territory islanders. It has been planned that a permanent, fully equipped hospital will be built for civilians in Guam in the near future.

American Samoa has a population of over 19,000, almost all of whom are Samoans. The island government maintains a 200-bed hospital, built in 1945–1946, and a staff of five medical officers. Since 1912, a training school for Samoan registered nurses has been in operation.

The Trust Territory has been under American administration since the occupation of the islands during and after World War II. The territorial government has established six 50- to 75-bed general dispensaries, each with a staff or two or three medical officers. These hospitals or dispensaries are located at Saipan in the Marianas, Yap and Koror in the Western Carolines, Truk and Ponape in the Eastern Carolines, and Majuro in the Marshalls. In the smaller islands health work is cared for by native health and nurse aides. A small leprosarium is maintained at Tinian in the Marianas.

In establishing medical positions for the governments of these three areas, the Department of the Interior will follow Federal classifications, but applicants need not be on a Civil Service register to be eligible for appointment. Positions for physicians, public health officers, hospital administrators, laboratory technicians, pharmacy technicians, and nurses are available. Salaries for doctors will range from $6,400 to $8,800 per annum. A post differential of 25 per cent in addition to salary is allowed at present for employes stationed in the islands. Transportation is paid for employes and their dependents. Housing is excellent in Samoa and, although of an advanced base type in Guam and the Trust Territory, is adequate for tropical conditions. Houses are furnished, and rents are reasonable.

Further information regarding opportunities for health work in the Pacific Islands can be obtained from the Division of Territories and Island Possessions, Department of the Interior, Washington 25, D.C.

Rural Health Problem Being Solved

THAT the rural health problem is steadily being solved through cooperative community efforts was the consensus of the fifth annual Conference on Rural Health held in Kansas City, Missouri, on February 3 and 4. The conference, sponsored by the Committee on Rural Health of the American Medical Association, in cooperation with farm organizations, brought together more than 500 medical and lay leaders concerned with providing medical care to small communities.

Among the recommendations for further progress were the following:

1. Communities should make every effort to attract doctors by providing hospital or clinical facilities to enable them to keep abreast of the times and to make community life attractive to them and their families.
2. Wider community participation in securing necessary facilities is a forward step which should be pushed with increasing vigor. This is a phase in which community health councils can play a leading role.
3. Existing and proposed facilities should be coordinated and integrated for an effective and fully utilized program.
4. An intensified educational program is needed to acquaint people with facilities available to them, with university extension services an important medium in this education.
5. Communities must be stimulated to undertake more realistic and objective measurement of health and hospital needs, it having been pointed out that many of the hospitals built with Federal aid under the Hill-Burton Act were being used only to half capacity.
6. Tax funds should be used to provide medical care only when it is impossible for an individual to secure such care without such help.
7. Progress has been made in enrolling rural people in prepayment medical care plans, but greater efforts should be made in that direction.
8. Medical schools should screen applicants early to eliminate those unqualified to become doctors, should encourage rejectees to prepare for related professions, and should incorporate training in rural practice into the curriculum.

Annual Meeting of American Academy of Orthopaedic Surgeons

THE seventeenth annual meeting of the American Academy of Orthopaedic Surgeons was held from February 11 through 16 at the Waldorf-Astoria, New York City. Just prior to this meeting the American Society for Surgery of the Hand held a two-day meeting, and the American Board of Orthopaedic Surgery simultaneously held its final examinations for those surgeons who wished to qualify as specialists in bone and joint surgery.

A four-day scientific program featured many outstanding papers, and there were approximately 60 scientific exhibits prepared by various surgeons or groups of surgeons from all over the United States. Three gold medals were awarded for the most outstanding exhibits, chosen on the bases of Originality, Research Problems, Scientific Importance and Information, and Clinical Value. In Class I—Originality of Presentation, Drs. William

Cooper and Philip D. Wilson, Jr., New York City, were awarded third prize for their exhibit on "Eight Decades of Operative Orthopaedics at the Hospital for Special Surgery, 1863–1950." First prize in Class II—Scientic Value, went to Drs. Edgar M. Bick and Joseph W. Copel, New York City, for, "Osteogeny of Human Vertebrae."

New York State doctors elected as members of committees were Dr. Frederick R. Thompson, New York City, who was named a member of the Committee on Legislation and Medical Education, and Dr. Joseph D. Godfrey, Buffalo, who was elected a Junior Member of the Executive Committee.

In addition, the following were elected to membership in the Academy: Drs. Everett C. Bragg, Alan Ralph Cantwell, Joel Hartley, Herbert A. Laage, Abraham S. Rothberg, Jacob H. Turkell, Edmond Uhry, Jr., Stephen Wahl, Milton J. Wilson, and Seymour Zaller, of New York City; Drs. Aaron M. Gold and Andrew Schildhaus, of the Bronx; Drs. John G. McNamara, Donald J. McGilligan, Joseph Saal, Louis Starr, and Robert F. Warren, of Brooklyn; Dr. Alvin Hulnick of Staten Island; Drs. Edwin Robert Linwood and Robert H. Sherry, of Rockville Centre; Dr. Philip T. Schlesinger of Glens Falls; Dr. Frederick N. Zuck of Rochester; and Drs. Russell B. Erikson, George H. Marcy, and Vincent D. Moran, of Buffalo.

MEDICALLY SPEAKING—

Albany Medical College Sponsors Second Postgraduate Program—Albany Medical College is sponsoring a second postgraduate program of eight weekly panel discussions, covering recent advances in the fields of medicine, surgery, pediatrics, and neuropsychiatry. The course began March 2 and will continue through April 20, Dean R. S. Cunningham has announced.

The program, open to all physicians in the Albany area, consists of a series of panel discussions to be held in the x-ray amphitheater of Albany Hospital. A fee of $15 will be required for enrollment in the program.

About 30 members of the Medical College faculty will participate in the panel discussions, according to Dr. Cunningham.

Congress on Medical Education and Licensure—Dr. Jacob L. Lochner, secretary of the New York State Board of Medical Examiners and president of the Federation of State Medical Boards of the United States, delivered the presidential address at the 46th Annual Congress on Medical Education and Licensure conducted by the Advisory Board for Medical Specialties, the Council on Medical Education and Hospitals of the A.M.A., and the Federation. The meeting was held on February 7 in Chicago. Dr. Lochner spoke on "Interstate Reciprocity by Medical Licensing Boards and Basic Science Boards."

The Annual Federation Dinner followed an all-day meeting which included a panel discussion entitled, "Recent Developments with Respect to Foreign Medical Schools." Speakers at the dinner were as follows: Dr. Ernest E. Irons, president of the American Medical Association, Dr. Raymond B. Allen, president of the University of Washington, and Dr. Willard C. Rappleye, dean of the College of Physicians and Surgeons, Columbia University.

A.E.C. to Reduce Prices of Fission-Product Radioisotopes—The Atomic Energy Commission has announced that fission-product radioisotopes would be available after March 1, 1950, in greater quantities and at reduced prices.

Prices of all the fission products, some 16 items, have been reduced considerably. For example, radioactive iodine has been reduced from $1.00 per millicurie (radioactivity unit) to 75 cents per millicurie and radiostrontium and radiobarium from $1.35 to $1.00. In the case of the latter two isotopes the price is further reduced to 50 cents per millicurie for quantities of 100 millicuries and more. Even the more expensive items such as radioactive promethium and neodymium, formerly priced at $100 and $75 per millicurie, have been reduced to $75 and $50, respectively, with price tags of $20 and $12 per millicurie on quantities exceeding 10 millicuries.

Radioactive iodine is the best known and most widely used fission product. This isotope has already been used extensively for studying, diagnosing, and treating various thyroid disorders, such as hyperthyroidism and special types of thyroid and brain tumors. Although radioiodine can also be produced by bombarding stable tellurium, all the radioiodine distributed today is extracted as a fission product, the A.E.C. said.

American Board of Obstetrics and Gynecology Announces Oral and Pathology Examinations—The general oral and pathology examinations (Part II) for all candidates will be conducted by the American Board of Obstetrics and Gynecology at The Shelburne, Atlantic City, New Jersey, by the entire Board from Sunday, May 21, through Saturday, May 28, 1950. Formal notice of the exact time of each candidate's examination will be sent him several weeks in advance of the examination dates.

Candidates for re-examination in Part II must make written application to the Secretary's office not later than April 1, 1950.

Applications are now being received for the 1951 examinations. Application forms and Bulletins are sent upon request made to Paul Titus, M.D., Secretary, American Board of Obstetrics and Gynecology, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

Robert Roesler de Villiers Foundation to Sponsor Contest—The Robert Roesler de Villiers Foundation is offering a prize of $500 for the paper which in the opinion of a four-man jury, consisting of doctors from Switzerland, Sweden, and the United States, makes the most significant contribution to the knowledge of the nature, causes, origin, treatment, or cure of acute leukemia and allied conditions. Should the jury find that the paper to which it awards the prize is of outstanding importance, the jury may suggest to this Foundation that it increase the prize in proportion to the practical value of the paper to a maximum of $1,000.

Papers to be considered for the contest shall have been either published or accepted for publication by a reputable journal in or outside of the United States between the date of this offer and October 20, 1951. Papers published prior to the date of this offer shall be ineligible for submission hereunder. If the jury or the Foundation believes that exceptional circumstances exist, the jury may consider for this contest papers that have not been published or accepted or submitted for publication.

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The jury's decision as to the prize-winning paper shall be made public by this Foundation or, at the request of this Foundation and on its behalf, by the International European Society of Hematology and the International Society of Hematology on October 20, 1951, the anniversary of Robert Roesler de Villiers' death. This foundation has taken steps which it expects will provide for the publication of the jury's decision in medical and periodical bulletins and daily papers in the Western Hemisphere as well as on the other sides of the Atlantic and the Pacific. For further information write to A. R. de Villiers, president, Robert Roesler de Villiers Foundation, 417 Park Avenue, New York 22.

Comprehensive Postgraduate Course in Rheumatic Fever and Rheumatic Heart Disease—The St. Francis Sanatorium for Cardiac Children, of Roslyn, Long Island, will conduct a comprehensive postgraduate course in rheumatic fever and rheumatic heart disease from June 1 through 14 at the Sanatorium. The program is under the direction of Dr. Leo M. Taran, medical and research director of St. Francis Sanatorium. Attendance is limited, and applications should be submitted before May 1, 1950. For further information address Rev. Mother Superior, F.M.M., St. Francis Sanatorium for Cardiac Children, Roslyn, Long Island, New York.

Annual Dinner of the Caduceus Post, American Legion—The thirtieth annual dinner of Caduceus Post 118 of the American Legion was held on February 24 at the Seventh Regiment Armory, New York. Principal speaker for the evening was Dr. George F. Lull, secretary and manager of the American Medical Association and formerly Deputy Surgeon General, who chose for his topic, "Compulsory Health Insurance and the Welfare State." In addition, Dr. John J. Masterson, president, and Dr. Walter P. Anderton, secretary, of the Medical Society of the State of New York, were among the guests of honor.

Willkie Fund Set up to Study Heart Disease—A fund dedicated to pure research into cardiac ailments and related problems, to be known as the Wendell Willkie Memorial Fund for Research in Heart Disease, has been formed with headquarters at the Lenox Hill Hospital, it was disclosed recently by Mr. William H. Zinsser, president of the hospital.

He said that the Fund's research program will be conducted in the laboratories of the hospital's older building. "Important facts and leads have already been explored," he said, "and the study of cardiovascular disease, better known to the public as high blood pressure, hardening of the arteries, and hypertension, will be expanded as the funds grow."

Dr. George L. Rohdenburg, who was an associate in cancer research at Columbia University for twenty-five years and director of the Lenox Hill Hospital laboratory for thirty-three years, will be executive director of the Fund's research program.

At the present time, Dr. Rohdenburg said two medical men, a chemist, and a technician were engaged in research under the program. As additional money enters the Fund, more researchers will be added. He said the research would center on investigations into "causative factors." Any results obtained would appear in medical or technical journals and thereby become available to the medical profession.

Brooklyn Urological Society Elects Officers—At the annual elections of the Brooklyn Urological Society held recently, the following were elected as officers of the Society for 1950: Dr. Harold B. Hermann, president; Dr. Mark Fishberg, vice-president, and Dr. Andrew J. McGowan, secretary-treasurer.

Union College Celebrates Founders Day—Physicians of the Albany district joined in the annual observance of Founders Day at Union College on February 25. This year the ceremony honored Dr. T. Romeyn Beck, noted nineteenth century authority on medical jurisprudence and a graduate from Union College in 1807. Founders Day speakers included Dr. George Packer Berry, dean of Harvard Medical School; Dr. J. Lewis Donhauser, professor of surgery at Albany Medical College, and Dr. Francis T. Schwentker, professor of pediatrics at Johns Hopkins University.

New York Speakers at the American Academy of General Practice—Dr. Clarence E. De La Chapelle, professor of medicine and associate dean of the New York University Post-Graduate Medical School, spoke at a scientific assembly of the annual meeting of the American Academy of General Practice on February 22. Dr. De La Chapelle reported on the regional hospital plan adopted in 1947 as part of the New York Medical Center and related to the postgraduate medical school.

Dr. Howard A. Rusk, chairman of the Department of Rehabilitation and Physical Medicine of the New York University College of Medicine, also addressed the assembly on the part the family doctor plays in the rehabilitation of handicapped patients.

MEETINGS

PAST

Congress on Industrial Health

The tenth annual Congress on Industrial Health, sponsored jointly by the American Medical Association and the Medical Society of the State of New York, was held February 20 and 21 at the Hotel Roosevelt, New York City. Dr. Anthony J. Lanza, chairman of the A.M.A. Council on Industrial Health and of the Institute of Industrial Medicine, New York University-Bellevue Medical Center, presided. Dr. John J. Masterson, president of the State Society, gave the address of welcome.

The program included symposiums on "Prepayment Health Plans for Industrial Workers," "Human Relations in Business and Industry," and "Case Finding in Industry"; a conference on "Noise in Industry," and a luncheon and dinner with special guest speakers.

New York Psychoanalytic Society

Dr. Gregory Zilboorg presented a paper on, "Death of a Salesman" at the meeting of the New York Psychoanalytic Society held February 28 in New York City.

[Continued on page 738]

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CALCIUM	1.12 Gm.	VITAMIN C	30.0 mg.
PHOSPHORUS	0.94 Gm.	VITAMIN D	417 I.U.
IRON	12 mg.	COPPER	0.5 mg.

*Based on average reported values for milk.

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.

[Continued from page 736]

Eastern New York Eye, Ear, Nose, and Throat Association

At the March 2 meeting of the Eastern New York Eye, Ear, Nose, and Throat Association, a program of scientific papers was presented. Dr. Hugh Leahey, Albany, spoke on, "Pediatric Aspects of Some Eye, Ear, Nose, and Throat Diseases," and Dr. Sidney Etkin, chief roentgenologist of the Veterans Administration, spoke on, "Radiation Therapy in Disease of the Eye."

Mount Sinai Hospital, New York City

Dr. Rene J. Dubos, from the Rockefeller Institute for Medical Research, gave the William Henry Welch Lecture on March 14 at the Mount Sinai Hospital, New York City. His topic was, "Bacteriologic Aspects of Tuberculosis."

FUTURE

Bellevue Hospital Radiation Therapy Alumni Association

The annual meeting of the Bellevue Hospital Radiation Therapy Alumni Association will be held on Thursday afternoon, March 23, at 1:00 P.M. at Bellevue Hospital, New York City, on the eighth floor of the Administration Building.

The Ira I. Kaplan Lecture will be delivered by Dr. John F. Daly, professor of otolaryngology at New York University-Bellevue Medical Center, on "Management of the Cancer Problem in Head and Neck." Other speakers on the program will be Drs. Milton Friedman, Nicholas Demy, Sidney Rubenfeld, Rieva Rosh, George Green, and Harry Manning.

Mount Sinai Hospital, New York City

The eighth Bela Schick Lecture will be delivered by Dr. Charles A. Janeway, professor of pediatrics, Harvard Medical School, and physician-in-chief Children's Hospital, Boston, Massachusetts, on Wednesday, March 29, at 8:30 P.M. in the Blumenthal Auditorium, Mount Sinai Hospital, New York City. His topic will be, "Clinical and Experimental Studies on Diseases Due to Foreign Protein."

Pennsylvania Academy of Ophthalmology and Otolaryngology

The annual meeting of the Pennsylvania Academy of Ophthalmology and Otolaryngology will be held May 12 to 14, 1950, at the Bedford Springs Hotel, Bedford, Pennsylvania. In addition to the presentation of scientific papers, 12 study groups will be conducted. Further information may be obtained from the secretary, Dr. B. F. Souders, 143 North Sixth Street, Reading, Pennsylvania.

Association for Physical and Mental Rehabilitation

The fourth annual convention of the Association for Physical and Mental Rehabilitation will be held May 23 to 27, 1950, in Memphis, Tennessee, with headquarters at the Hotel Peabody. Further information may be obtained from the convention chairman, Mr. Clement G. McNamara, Physical Medicine Rehabilitation Service, Kennedy VA Hospital, Memphis 15, Tennessee.

New York State Health Conference

The forty-sixth annual New York State Health Conference will be held June 5 to 8, 1950, at Lake Placid.

American Society for the Study of Sterility

The annual meeting of the American Society for the Study of Sterility will be held June 24 and 25, 1950, at the Sir Francis Drake Hotel, San Francisco, California. Further information may be obtained from the secretary-treasurer, Dr. Walter W. Williams 20 Magnolia Terrace, Springfield 8, Massachusetts.

PERSONALITIES

Honored

Dr. Robert M. Cleary, chief orthopedic surgeon, Crippled Children's Guild, Buffalo, at a testimonial dinner marking his completion of twenty-eight years service with the institution. . .Dr. Maurice J. Lewi, president of the Long Island University College of Podiatry, at a party celebrating his ninety-second birthday, given by two thousand of his students, colleagues, and friends. . .Dr. Christopher G. Smith, medical officer of the New York Telephone Company's Long Island area, at a dinner marking his retirement after more than thirty years of service with the company.

Awarded

Dr. Donald S. Childs, Syracuse, the Gold Medal Award of the Radiological Society of North America, Inc., for service to the science of radiology. . . Dr. Emanuel D. Friedman, professor emeritus of neurology, New York University-Bellevue School of Medicine, a Townsend Harris Medal awarded to alumni of City College for "outstanding achievement in some significant field of human endeavor". . .Dr. Elliott S. Hurwitt, New York City, the Sir Henry Wellcome Medal and Prize, from the Association of Military Surgeons of the United States, for his paper, "A Blood Vessel Bank under Military Conditions". . .Dr. George E. Sylvester, Black River, past president of the Jefferson County Medical Society, the sixty-year palm from Bethany Lodge, 821, F.&A.M., symbolic of sixty years of Masonic service.

Appointed

Dr. Robert M. Albrecht, Sand Lake, as senior health physician in the State Department of Health, assigned as epidemiologist to the Bureau of Communicable Diseases. . .Dr. William Amster, U.S. Army Air Force veteran, as head of the Medical Service Department of Schering Corporation, Bloomfield, New Jersey. . .Dr. William F. Bale, professor of radiation biology, University of Rochester Medical School, as radiobiologist on the staff of the U.S. Atomic Energy Commission, Division of Biology and Medicine. . .Dr. James F. Benedict, Buffalo, as Erie County medical examiner. . .Dr. Earle G. Brown, Hempstead, as health commissioner of Nassau County. . .Dr. Frank A. Calderone, former director of the New York office of the World Health Organization, as executive director of the New York City Cancer Committee.

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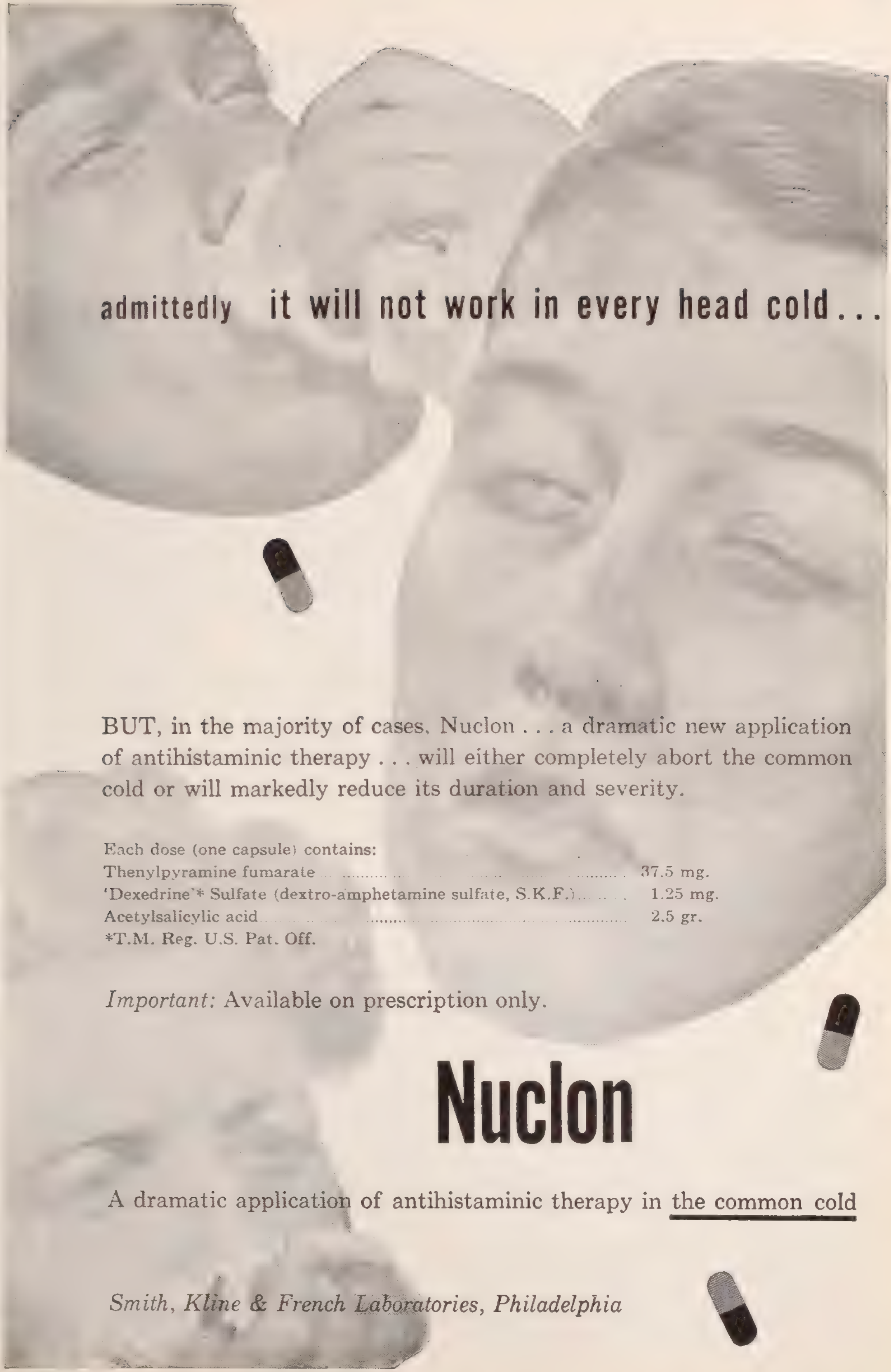

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[Continued from page 738]

Dr. Frank R. Ferlaino, New York City, as assistant clinical professor in the department of industrial medicine, New York University-Bellevue Medical Center...Dr. Robert W. Graves, Albany, as professor of neurology in the department of neurology and psychiatry, Albany Medical College...Dr. Joaquin V. Luco, of the Catholic University, Santiago, Chile, as visiting professor of physiology in the department of physiology and pharmacology, Long Island College of Medicine...Dr. Richard D. Kearns, Broadalbin, as coroner of Fulton County... Dr. John H. Keating, New York City, president of the New York County Medical Society, as chairman of the doctors division of the 1950 Red Cross Fund campaign.

Dr. Morton L. Levin, assistant commissioner for medical services of the State Department of Health, as director of the Commission on Chronic Illness... Dr. Jermyn F. McCahan, former medical director at Bausch & Lomb Optical Company, Rochester, as assistant to Dr. Carl M. Peterson, A.M.A. Council on Industrial Health...Dr. John F. Mahoney, former director of the venereal disease research laboratory, United States Public Health Service, as commissioner of health of New York City to succeed Dr. Harry S. Mustard...Dr. Orin L. Rogers, Johnson City, as director of health for the first supervisory school district of Oneida County... Dr. C. Travers Stepita, New York City, as associate dean, New York University Post-Graduate Medical School...Dr. Leslie A. White, Whitehall, as coroner of Washington County.

Elected

Dr. Donald B. Armstrong, second vice-president of the Metropolitan Life Insurance Company, as president of the New York Tuberculosis and Health Association, and as chairman of the Committee on Medical Information of the New York Academy of Medicine...Dr. Edward Percy Eglee, Bronxville, to the board of directors of Associated Hospital Service...Dr. Albert Noyes, Jr., Rochester, to the board of trustees of the Sloan-Kettering Institute for Cancer Research, New York City...Dr. Earl D. Osborne, University of Buffalo School of Medicine, as president of the American Academy of Dermatology and Syphilology...Dr. Leon Sutton, Fayetteville, as president of the American Society of Plastic and Reconstructive Surgery.

Speakers

At the annual meeting of the American College of Allergists in St. Louis, Missouri, in January—Dr. T. Wood Clarke, Utica, on "The Relation of Allergy to Character Problems in Children"; Dr. F. M. Whitacre and Dr. Rita C. Parcil, New York City, "Dangers from Cosmetics"; Dr. G. Everett Gaillard, White Plains, "Chlor-Trimeton"; Dr. Victor L. Cohen, Buffalo, "Snake Venom"; Dr. Maxwell L. Gelfand and Dr. A. Robert Widlitz, New York City, "The Use of Mercurial Diuretics to Differentiate Cardia Asthma from Bronchial Asthma," and Dr. Harold A. Abramson, Dr. B. Sklarosky, and Dr. H. H. Gettner, New York City, "An Inspiration Time Meter for Aerosol Therapy and Research."

Dr. James A. Brussel, assistant director, Willard State Hospital, on compulsory health insurance at the annual convention of the New York State Solid Fuel Retailers Association and at a meeting of the Waterloo Rotary Club...Dr. C. Ward Crampton, New York City, on "Personnel Management and the Older Worker" at a meeting of the Personnel Club of New York...Dr. George James, State Department of Health, at the annual dinner meeting of the Newburgh Public Health and Tuberculosis Association...Dr. Nolan D. C. Lewis, New York City, on "Evaluation of Present Research in Psychiatry" at the first annual assembly of the Fowler Memorial Lectures at Edgewood Sanitarium, Orangeburg, South Carolina.

Dr. Edith M. Lincoln, New York University College of Medicine, at a special meeting in Paris, France, sponsored by the United Nations International Children's Emergency Fund and the World Health Organization on "Tuberculosis in Children" ...Dr. William H. Oldendorf, Binghamton State Hospital, on "Psychiatry Today" at a meeting of the Endicott Kiwanis Club...Dr. George T. Pack, New York City, on "Tumors of the Soft Somatic Tissue" at a graduate program held at the University of Virginia, Charlottesville, Virginia...Dr. Joseph I. Pascal, New York City, on "A Physiologic Study of Refractive Errors" at the one hundredth meeting of the Reading Eye, Ear, Nose, and Throat Society... Dr. William Trevor, New York City, on socialized medicine at a meeting of the Young Women's Republican Club of New York...Dr. R. T. Williams, Wyoming Community Hospital, on socialized medicine at a meeting of the Warsaw Kiwanis Club...Dr. Frank Woolsey, Jr., chief of the medical department of Watervliet Arsenal, on the heart, at a meeting of the Albany Monarch Club.

New Offices

Dr. Gerald J. E. Ansell, formerly of London, England, general practice in Kirkwood...Dr. Herman J. Brezing, Army veteran, general practice of surgery in Niagara Falls...Dr. John Hilton Brown, Rocky Point, general practice in association with Dr. Hyman Millman, Lake Mohegan...Dr. Robert E. Butler, general practice in association with Dr. J. Merrel Parker, Rochester...Dr. John M. Collins, former medical director, Corning Glass Works, Corning, general practice in Sikeston, Missouri...Dr. John A. Cooke, Jr., former flight surgeon with U.S. Army Air Force, practice of general surgery in Kingston...Dr. Nello Delbel, formerly of Peru and Keeseville, general practice in Plattsburgh.

Dr. J. Herbert Dietz and his wife, Dr. Sarah E. Flanders, general practice in Oneonta...Dr. John Ferger, formerly at the Mary Fletcher Hospital, Burlington, Vermont, general practice in Dundee... Dr. Francis J. Frantz, Jr., Hornell, general practice in Warsaw...Dr. Jack Getzlek, Utica, practice of surgery in Yorkville...Dr. Carlos O. Gutierrez, Auburn, practice of medicine and obstetrics, Painted Post...Dr. Reino Frederick Hill, general practice in Kennedy...Dr. Russell Hooker, Pleasantville, with the Mount Kisco Medical Group, Mount Kisco...Dr. Melvin E. James, Rushford, practice of obstetrics and gynecology, Buffalo...Dr. Anthony P. Leuzzi, former instructor of psychiatry, University of Michigan, general practice in Yonkers.

Dr. Habeeb Maroon, former flight surgeon with the U.S. Army Air Force, practice of general surgery in Kingston...Dr. Frank Matthias, Munnsville, general practice in Morrisville...Dr. Frank C. Meyer, Syracuse, general practice in Meridian... Dr. Robert R. Onorato, Buffalo, practice of obstet-

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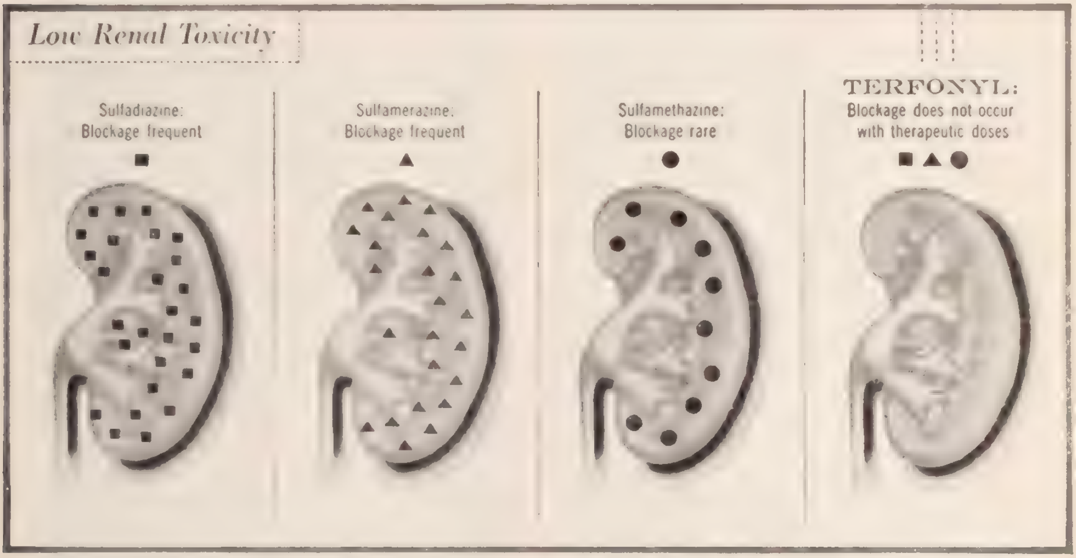
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[Continued from page 740]

rics and gynecology, in Yonkers...Dr. Thomas V. Santulli, director of surgery at St. Joseph's Hospital, general practice in Yonkers...Dr. Samuel T. Schlamowitz, New York City, practice of cardiology and internal medicine in Syracuse...Dr. Walter H. Sieling, Forest Hills, general practice in Stony Brook...Dr. Frank J. Stashak, of West Virginia, general practice in Northville...Dr. William F. Tague, Syracuse, general practice in Montour Falls ...Dr. Max Thaler, New York City, general practice in Parishville.

COUNTY NEWS

Albany County

At the February 22 meeting of the Albany County Medical Society, held at the Albany College of Pharmacy Auditorium, Dr. Cushman D. Haagensen, director of the Institute of Cancer Research of Columbia University and associate professor of surgery, College of Physicians and Surgeons, Columbia University, was the guest speaker. Dr. Haagensen presented a paper on, "Cancer of the Breast." Dr. Thomas J. O'Donnell, president of the Society, presided at the meeting.

Dr. Irving Sherwood Wright, professor of clinical medicine, Cornell University Medical School, and president of the New York Heart Association, presented a paper on, "Thromboembolic Diseases and Their Treatment," at the January 25 meeting.

Committee chairmen for 1950 have been announced as follows: program, Dr. Francis J. Stephens; public health, Dr. John J. Clemmer; legislation, Dr. Harold P. McGan; workmen's compensation, Dr. William H. de Rouville; woman's auxiliary advisory, Dr. Arthur J. Wallingford; economics, Dr. Lyle Sutton; public relations, Dr. John C. McClintock; maternal welfare, Dr. James J. Britt; cancer, Dr. James H. Flynn; hard of hearing, Dr. Joseph L. Holohan; general practice, Dr. Hugh L. Bowman and Dr. John F. Mosher; industrial health, Dr. Robert C. Towse, and veterans affairs, Dr. Harry D. Eastman and Dr. John G. McKeon.

• • •

The Albany County chapter of the American Academy of General Practice held a round table discussion on the aims and principles of the Academy February 2 in Albany. New officers of the Albany Chapter are: Dr. William G. Richtmyer, president; Dr. William L. Gould, vice-president; Dr. Frank Maxon, secretary-treasurer; Dr. Charles Smith, Dr. Nathan Flater, and Dr. Archie Meckler, directors, and Dr. John Powers, membership.

Bronx County

Dr. Charles Hochman, medical examiner of Bronx County, was guest speaker at the meeting of the Bronx County Medical Society held February 15 at the Concourse Plaza Hotel. His topic was, "You and the Medical Examiner," covering "The Physician's Responsibility for Death Certification," "Autopsies," and "The Medical Examiner's Function in Criminal Cases."

At the regular meeting held on January 18, Dr. William Dameshek, of the New England Center Hospital, spoke on, "Recent Advances in the Therapy of Leukemia, Lymphosarcoma, and Myeloma."

Cayuga County

Dr. Augustus B. Chidester, of Auburn, was elected president of the Cayuga County Medical Society at the annual meeting held in December. Other officers are: Dr. F. L. O'Koniewski, Auburn, vice-president; Dr. Robert J. Schaffer, Auburn, secretary; Dr. T. D. Stapleton, Auburn, executive secretary, and Dr. Leonard H. Rothschild, Auburn, treasurer. Guest speaker at the meeting was Dr. Carleton W. Bullard, who described medical conditions in England, France, Italy, Holland, Denmark, Norway, and Sweden as he had observed them during an extended visit to Europe last summer.

At the January meeting of the Society, Miss Hilda J. Aulenbach, supervisor of the Public Health Nurse Service of Auburn, was the guest speaker. Her topic was, "History and Activities of the Visiting Nurses Program in Cayuga County."

Chemung County

Plans to establish an emergency call system were adopted at the January meeting of the Chemung County Medical Society held January 25 in Elmira. The system will set up a panel of doctors who will be available for night calls, over weekends, and on holidays, for those who are unable to reach their own physician. Dr. A. H. Hillman presided at the meeting.

Chenango County

A program of postgraduate instruction was presented at the meeting of the Chenango County Medical Society held March 14 at the Oxford Inn, Oxford, arranged by the State Society's Council Committee on Public Health and Education with the cooperation of the State Department of Health. Dr. Richard H. Lyons, professor of medicine, Syracuse University College of Medicine, spoke on, "The Use and Abuse of Newer Drugs."

Officers of the County Medical Society for this year are: Dr. William H. Crull, Afton, president; Dr. Martin H. Jacobi, Norwich, vice-president; Dr. Norman C. Lyster, Norwich, secretary-treasurer, and Dr. A. K. Benedict, Sherburne, and Dr. Ben L. Dodge, Bainbridge, delegates to the House of Delegates of the State Society.

Clinton County

Dr. Bernard Rogoff, assistant attending surgeon, Hospital for Special Surgery, New York City, spoke on, "Clinical Aspects with the Use of Cortisone, ACTH, and Other Steroids in Rheumatic Disease," at the meeting of the Clinton County Medical Society held February 23 in Plattsburgh.

On Thursday, March 16, at 8:15 P.M. at the Champlain Valley Hospital Nurses Home, Plattsburgh, Dr. David K. Miller, professor of medicine, University of Buffalo School of Medicine, will present a paper on "Recognition and Management of the Commoner Virus Diseases."

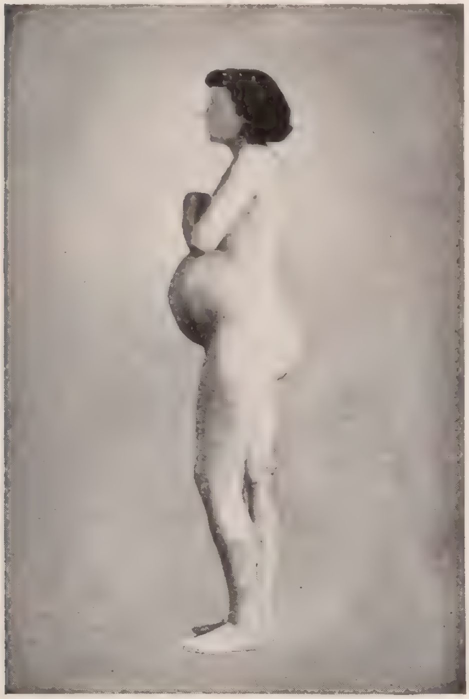
Dr. Florence Brent, from the department of obstetrics and gynecology, Long Island College of Medicine, will speak on, "Toxemias of Pregnancy," at the meeting to be held Thursday, April 20, at 8:15 P.M.

[Continued on page 744]

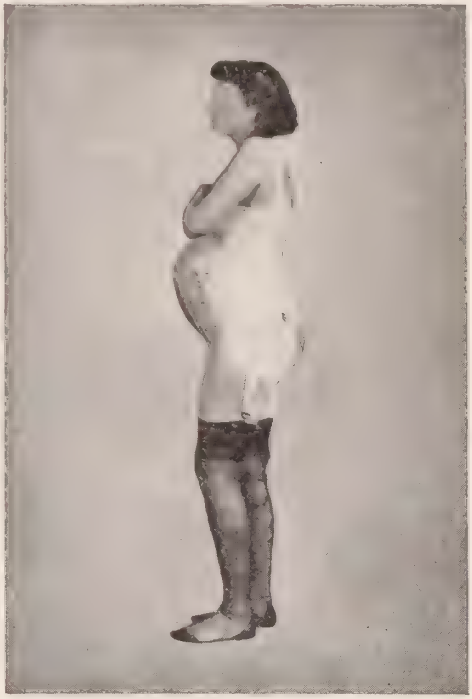
Varicose Veins during Pregnancy

In estimating the value of support of the abdominal wall during pregnancy a prominent Obstetrician states, among other items, the following:—*

"By supporting the abdominal wall, it holds the growing uterus in place. Thus the feeling of weight and discomfort is lessened and, at the same time, interference with the return circulation from the lower extremities is diminished. Accordingly, edema of the ankles and varicosities occur much less frequently when a good maternity corset is worn."



● Patient 32 years old, gravida IX, para VII. Severe varicosities of both legs and vulva; noticed with first pregnancy, increasing with each succeeding pregnancy. Came to clinic when in seventh month of pregnancy.



● Same patient: No support worn in previous pregnancies. Patient states she has had some relief from varicosities since wearing the garment. Relief especially as regards tiredness; can go longer each day.

Education of mothers to see their physicians early in pregnancy is still sorely needed. Camp Supports are recommended by many Obstetricians.

**Alfred C. Beck, M.D.,*
Obstetrical Practice, Fourth Edition,
Chapter IX, Page 181,
Published 1947 by
The Williams & Wilkins Company, Baltimore

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KINGS COUNTY MEDICAL SOCIETY ANNUAL DINNER

Guests of honor at the Fifth Annual President's Dinner of the Medical Society of the County of Kings, held January 25 at the Hotel St. George, Brooklyn, included: (*standing, left to right*) Dr. Charles F. McCarty, Director, Kings County Medical Society; Dr. Charles A. Anderson, Chairman, dinner committee; Dr. Thurman B. Givan, Chairman, Coordinating Council; Dr. John F. Mahoney, New York City Commissioner of Health; Dr. Duncan W. Clark, Dean, Long Island College of Medicine; Dr. Henry J. Barrow, President, Bronx County Medical Society, and Dr. Oscar M. Race, President, Richmond County Medical Society.

(*Seated, left to right*): Dr. Jean A. Curran, President, Long Island College of Medicine; Dr. Irwin E. Siris, Retiring President, Kings County Medical Society; Honorable Miles F. McDonald, District Attorney, Kings County; Dr. Charles W. Mueller, President, Kings County Medical Society; Dr. John J. Masterson, President, Medical Society of the State of New York; Rabbi Sidney S. Tedischi, Union Temple, Brooklyn; Dr. Marcus D. Kogel, New York City Commissioner of Hospitals, and Dr. Walter P. Anderton, Secretary, Medical Society of the State of New York.

[Continued from page 742]

These programs are postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

Delaware County

At the meeting of the Delaware County Medical Society held in Downsville on February 14, guest speaker was Mr. Thomas E. Walsh of the State Society Public Relations Bureau. The County Medical Society went on record as being opposed to compulsory health insurance and favoring the voluntary plan.

The group decided to have meetings once a month on the second Tuesday rather than meeting every other month. The March meeting was held in Walton on March 14.

Dutchess County

Dr. E. Gordon MacKenzie of Millbrook was elected president of the Dutchess County Medical Society for 1950 at the meeting held January 11. Serving with Dr. MacKenzie are: Dr. John F. Rogers, vice-president; Dr. Albert A. Rosenberg, secretary-treasurer, and Dr. Joseph L. Cummings, associate secretary-treasurer.

Standing committees for the year include: Dr. Scott Lord Smith, public health and public relations; Dr. Maxwell Gosse, legislation; Dr. Frank A. Gagan, *Caduceus;* Dr. Louis W. Stoller, economics; Dr. Chester O. Davison, cancer; Dr. Gilbert C. MacKenzie, county public assistance; Dr. John J. McGrath, city public assistance; Dr. John F. Rogers, program, and Dr. Louis R. Ferraro, woman's auxiliary.

At the February 8 meeting, held at the Hudson River State Hospital, Dr. Joseph Felsen, director of laboratories, Bronx Hospital, spoke on, "Bacillary Dysentery, Colitis, and Enteritis."

Erie County

Mr. William F. Martin, Counsel to the Medical Society of the State of New York, was guest speaker at the February meeting of the Erie County Medical Society, held February 28 in Buffalo. His topic was, "The Problem of Malpractice." Presiding at the meeting was Dr. Stephen A. Graczyk, president of the County Society.

Franklin County

Dr. Nicholas D'Esopo, of the Veterans Administration Hospital, Sunmount, spoke on, "Newer Aspects of the Chemotherapy of Tuberculosis" at the meeting of the Franklin County Medical Society held February 16 in Malone.

Dr. Warriner Woodruff, Saranac Lake, has succeeded Dr. Carter R. Morse, Tupper Lake, as president of the County Society.

Fulton County

A joint meeting of the Fulton County Medical Society, the Montgomery County Medical Society, and the Fulton-Hamilton-Montgomery Counties Dental Society was held on January 10 in Johnstown. A program of postgraduate instruction, arranged by the State Society Council Committee on Public Health and Education with the cooperation of the State Department of Health, was presented. Dr. Sigmund S. Stahl, research associate in the department of peridontia, New York University School of Medicine, presented a paper on "Oral Manifestations of Systemic Disease."

Greene County

A meeting of the Greene County Medical Society was held on January 25 in Catskill, with Dr. M. K. Colle presiding. Guest speaker was Dr. Frederick Elliott, New York City, of the United Medical Service, who spoke on, "Voluntary Health Insurance."

[Continued on page 746]

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References

1. American Committee for the Control of Rheumatism, Pemberton, R.: Rev. Gastroenterol., 9:91, 1942.
2. Spackman, E. W. et al: Am. J. M. Sci., 202:68, 1941.

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[Continued from page 744]

Jefferson County

Dr. William Woodin, instructor in medicine, Syracuse University College of Medicine, spoke on, "Antihistaminic Drugs in the Therapy of Allergic Diseases," at the regular monthly meeting of the Jefferson County Medical Society, held February 21 in Watertown.

On March 21, at 6:30 P.M, at the Black River Valley Club in Watertown, Dr. Victor Logan, assistant professor of medicine, University of Rochester School of Medicine, will speak on, "Present Trends in Peptic Ulcer Therapy."

Both programs are postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

Committee chairmen for the County Society have been announced as follows: Dr. L. F. Withington, public relations; Dr. H. N. Cooper, cancer clinic; Dr. S. E. Simpson, public health; Dr. W. W. Hall, diabetic; Dr. C. S. Shuman, program; Dr. G. S. Nellis, medical insurance; Dr. William Grace, legislation; Dr. N. H. Gardner, blood bank; Dr. E. E. Babcock, economics; Dr. D. G. Gregor, welfare advisory; Dr. A. H. Henderson, woman's auxiliary, and Dr. J. C. Harberson, JOURNAL.

Kings County

Dr. Charles W. Mueller was inaugurated as president of the Kings County Medical Society at the regular monthly meeting of the Society held January 17 in Brooklyn. His inaugural address was, "Strategy at Half Time." At the meeting, Dr. Arthur H. Blakemore, associate surgeon, Presbyterian Hospital, New York City, presented a paper on "Portal Hypertension."

On January 25, the annual president's dinner was held at the Hotel St. George in Brooklyn. Dr. Irwin E. Siris, retiring president, was awarded the President's Medal and Scroll by Dr. John J. Masterson, president of the Medical Society of the State of New York. Guest speaker was the Honorable Miles F. McDonald, district attorney of Kings County.

At the regular meeting held on February 21, guest speakers and their topics included: "Legislation in New York State," Mr. William F. Martin, counsel, Medical Society of the State of New York, and "The Value and Purpose of Group Practice under Prepayment Plans," Dr. George Baehr, chief of the medical service, Mount Sinai Hospital.

Livingston County

Officers and committee chairmen for the Livingston County Medical Society for this year have been announced as follows: Dr. Anderson V. Vickers, president; Dr. Ernest A. Sanders, vice-president; and Dr. L. A. Damon, secretary-treasurer.

Also: Dr. Victor Breen, compensation; Dr. Frank Smarzo, public health and alcoholism; Dr. Alden Townsend, legislation; Dr. Gerald Manley, welfare; Dr. George Lynch, public relations; Dr. Tracy Swan, social health, and Dr. Charles Gullo, basic science.

Nassau County

Mr. William Alan Richardson, editor of *Medical Economics*, spoke on, "Health by Compulsion," at the regular meeting of the Nassau County Medical Society held January 31 in Garden City.

At the February 28 meeting, Dr. Charles G. Williamson, associate professor of clinical medicine, Long Island College of Medicine, spoke on "Treatment of the Diarrheas." The paper was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

New York County

The regular meeting of the New York County Medical Society was held February 27 at the New York Academy of Medicine. Guest speaker was the Honorable Henry D. Sayer, general manager of the Compensation Insurance Rating Board, who spoke on, "Workmen's Compensation in its Relationship to Medical Practice and Its Future Outlook."

Niagara County

Dr. Carl J. Graf, associate professor of neurosurgery, University of Buffalo School of Medicine, spoke on, "The British Doctor," at the regular monthly meeting of the Niagara County Medical Society held February 14 in Lockport.

Oneida County

Dr. George G. Deaver, professor of clinical rehabilitation, New York University College of Medicine, will speak on, "Medical Rehabilitation," at a meeting of the Oneida County Medical Society to be held Thursday, March 30, at 8:30 P.M. at Hutchings Hall, Utica State Hospital, Utica. The program is postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

Other programs of postgraduate instruction completed recently for the County Society include:

January 24—"Diarrhea of the Newborn: Etiology, Epidemiology, Control, and Prevention," Dr. Ray E. Trussell, professor of preventive medicine, Albany Medical College.

February 14—"New Antimicrobial Agents," Dr. Paul A. Bunn, associate professor of medicine, Syracuse University College of Medicine.

February 28—"Low Back Pain," Dr. Thomas I. Hoen, professor of neurology and neurosurgery, New York Medical College, and Dr. John R. Cobb, associate professor of orthopedic surgery, Hospital for Special Surgery, New York City.

Officers for the Society for this year are: Dr. John F. Kelley, president; Dr. Edwin P. Russell, vice-president; Dr. David H. MacFarland, secretary; Dr. Gerald C. Walker, assistant secretary; Dr. Robert C. Hall, treasurer, and Dr. E. G. Evans, librarian.

Queens County

Dr. Margaret Evelyn Fries, attending psychiatrist, Hillside Hospital, and consultant, New York Infirmary, spoke on, "The Physician's Role in Character Development," at the regular meeting of the Queens County Medical Society held February 28 in Forest Hills.

At the January meeting, Dr. Arthur H. Blakemore, associate attending surgeon, Presbyterian Hospital, New York City, spoke on, "The Portacaval Shunt in the Treatment of Portal Hypertension."

Rensselaer County

Dr. J. William Hinton, professor of clinical surgery, New York University Post-Graduate Medical School, will present a paper on, "The Intractable Ulcer, with Emphasis on the Indications for Surgery," at the meeting of the Rensselaer County Medical Society, to be held Tuesday, April 11, at

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8:30 P.M., at the County Court House, in Troy. The program is postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

Other programs of postgraduate instruction presented recently include:

February 14—"The Medical Examiner Versus the Coroner System," Dr. Theodore J. Curphey, medical examiner, Nassau County.

March 14—"Coronary Artery Insufficiency: Its Recognition and Treatment," Dr. Arthur C. DeGraff, professor of therapeutics, New York University College of Medicine.

New officers of the County Society for the year 1950 are as follows: Dr. George F. Reed, president; Dr. Helmer P. Howd, vice-president; Dr. Henry C. Engster, treasurer, and Dr. Irving Strosberg, secretary.

Richmond County

The second annual joint meeting of the Richmond County Medical Society and its Woman's Auxiliary was held on January 11 at the Atlantic Inn, Staten Island. Guest speaker was Mr. Loring McMillen, director of the Staten Island Historical Society, who spoke on, "Historic Staten Island."

At the February 8 meeting of the County Society, held jointly with the staff of the Marine Hospital, a symposium on "Ulcerative Colitis" was presented by the hospital staff. Participating were: Dr. T. B. H. Anderson, Dr. L. H. Sophian, Dr. H. L. Skinner, Dr. G. M. Gordon, Dr. C. F. Naegle, Dr. A. A. Doerner, Dr. A. B. Tulipan, and Dr. V. T. Davis.

Rockland County

Dr. Samuel Silbert, of Mount Sinai and Montefiore Hospitals, New York City, spoke on, "Peripheral Vascular Disease," at the meeting of the Rockland County Medical Society held February 1 in Nyack.

Schenectady County

At the regular meeting of the Schenectady County Medical Society, held February 7 in Schenectady, Dr. Paul C. Swenson, professor of radiology, Jefferson Medical College, Philadelphia, Pennsylvania, presented a paper on, "Problems in the Roentgenologic Diagnosis of Lesions of the Gastrointestinal Tract."

On March 7, Dr. Ferdinand J. Schoeneck, clinical instructor in gynecology, Syracuse University College of Medicine, spoke on, "Gynecology in General Practice," as a program of postgraduate instruction arranged by the State Society Council Committee on Public Health and Education with the cooperation of the State Department of Health.

Tioga County

Programs of postgraduate instruction, arranged by the State Society Council Committee on Public Health and Education with the cooperation of the State Department of Health, have been presented recently for the Tioga County Medical Society. These have included the following:

February 8—"Glomerulonephritis," Dr. Hilmert A. Ranges, assistant professor of clinical medicine, New York University College of Medicine.

February 16—"Suppurative and Calculus Diseases of the Kidneys," Dr. Edward Craig Coats, instructor in surgery (urology), Cornell University Medical College.

February 22—"Hypertension and Hypertensive Renal Disease," Dr. Milton Plotz, associate professor of clinical medicine, Long Island College of Medicine.

March 2—"Hypertension, Edema, and Proteinuria of Pregnancy," Dr. Eugene Scadron, assistant clinical professor of obstetrics and gynecology, New York University College of Medicine.

Ulster County

A program of postgraduate instruction was presented for the Ulster County Medical Society at its meeting on February 7 in Kingston. Dr. Leon E. Sutton, clinical professor of surgery, Syracuse University College of Medicine, spoke on, "Reconstruction Following Industrial Injuries." The program was arranged by the State Society Council Committee on Public Health and Education with the cooperation of the State Department of Health.

Officers of the County Society for 1950 are as follows: Dr. Saul Ritchie, president; Dr. Virgil DeWitt, vice-president; Dr. Bartholomew J. Dutto, secretary, and Dr. Herbert B. Johnson, treasurer.

Wayne County

Officers of the Wayne County Medical Society for this year include: Dr. George Pasco, Wolcott, president; Dr. John L. Pulvino, Clyde, vice-president, and Dr. Irving Derby, Newark, secretary-treasurer.

Westchester County

Dr. Maurice Bruger, associate professor of medicine, New York Post-Graduate Medical School, spoke on, "Recent Advances in the Estimation of Liver Function with Emphasis on Procedures of Value in the Differential Diagnosis of Jaundice," at the regular meeting of the Westchester County Medical Society held January 17 in White Plains.

At the February 21 meeting, Dr. David M. Spain, director of the Westchester County Department of Laboratories and Research, spoke on, "Sudden and Unexpected Death in Westchester County."

. . .

Organization of the Westchester Heart Association as an affiliate of the American Heart Association was announced in January. Dr. Herman Tarnower, Scarsdale, was elected president, and Dr. F. Morgan Pruyn, Mount Kisco, vice-president. Hoping to curb rheumatic fever and heart disease, the new organization plans to stimulate interest in public and medical education, vocational guidance, research work, diagnostic and treatment centers, and improved convalescent care.

Wyoming County

For the sixty-fifth consecutive year, the Wyoming County Medical Society held its midwinter meeting at the Greene Sanitarium, Perry, on January 11. Members and their wives heard a talk by the Reverend M. A. Garland, Episcopal rector of Warsaw. For the past sixty-four years the County Society has held its January meeting at the Sanitarium. The custom was started upon the invitation of Dr. Cordelia A. Greene and has been continued by her successor, Dr. Mary T. Greene.

Yates County

Dr. William G. Roberts of Penn Yan is the new president of the Yates County Medical Society for this year. Serving with him are Dr. William P. Rhudy, vice-president, and Dr. Glenn Hatch, secretary-treasurer.

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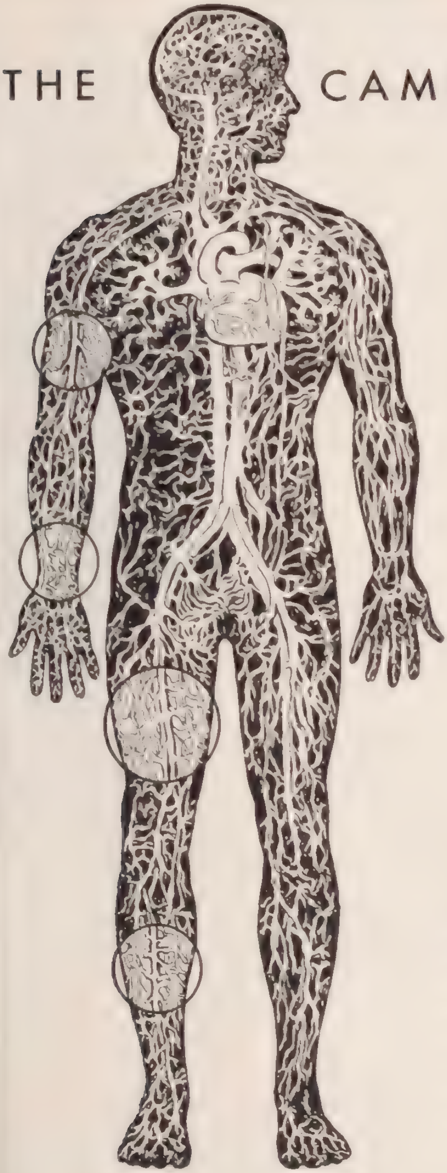

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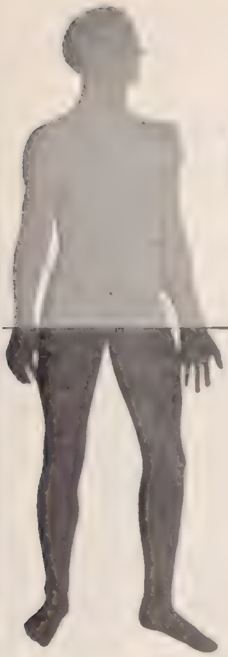

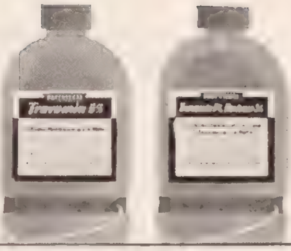

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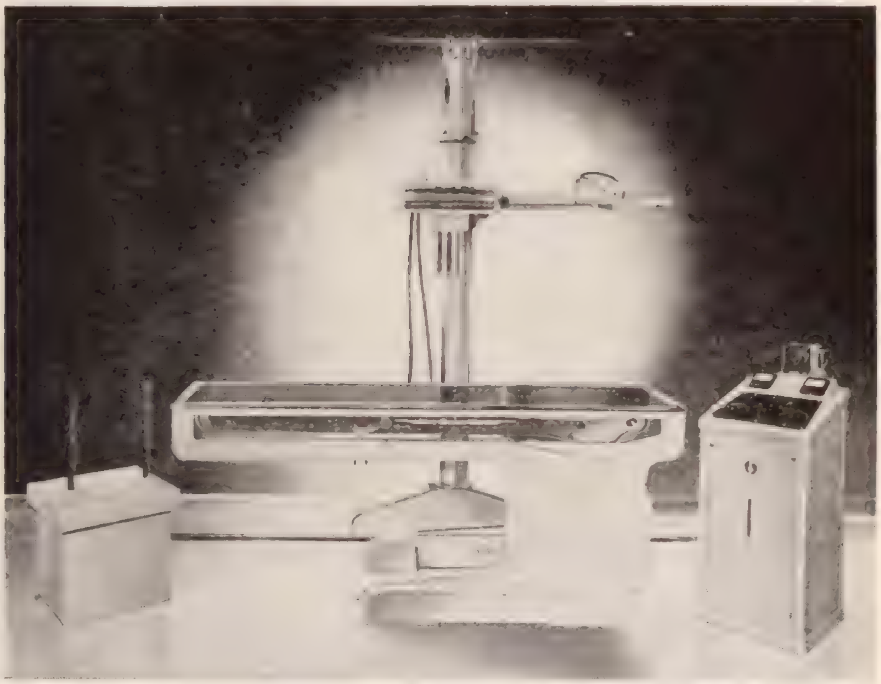

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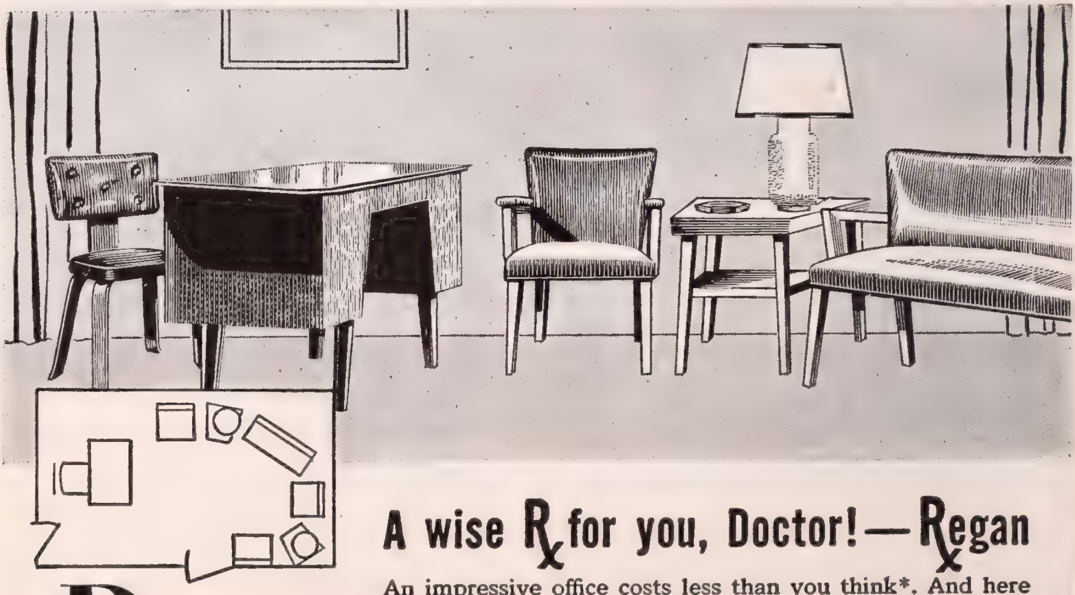

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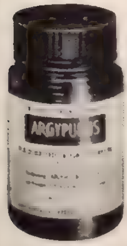

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[1] Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2] Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3] Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, p. 342.
[4] Reid, R. D., Felton, L. C. and Pitroff, M. A. Pro. Soc. for Exp. Biol. and Med., Vol. 63, p. 438.

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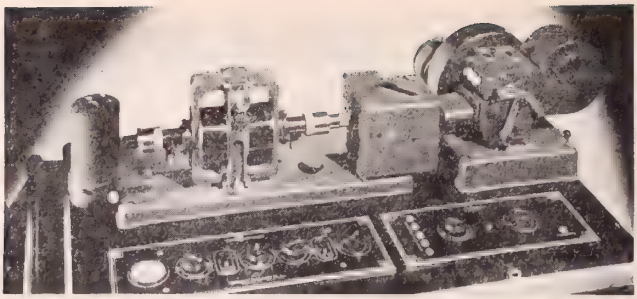

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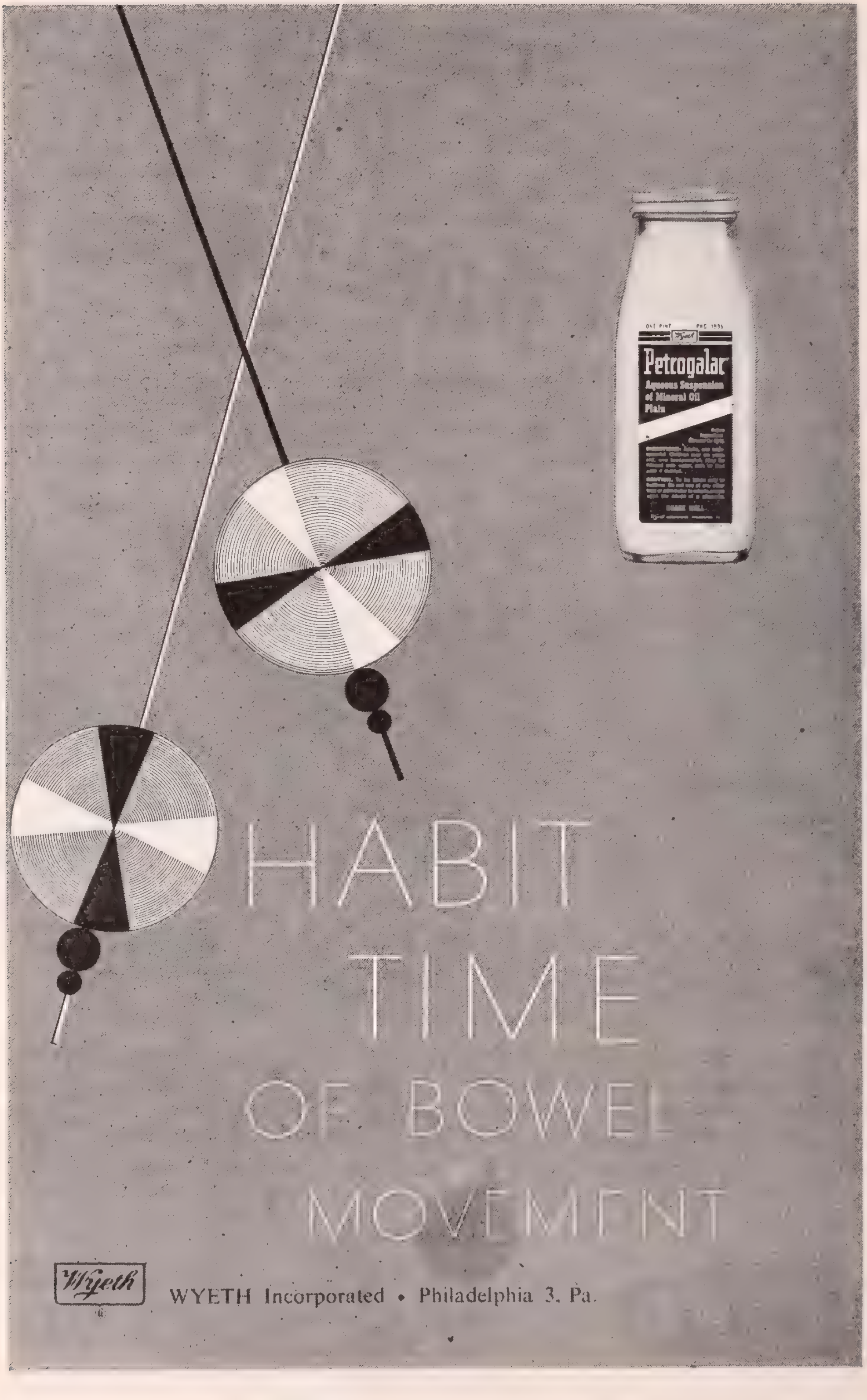
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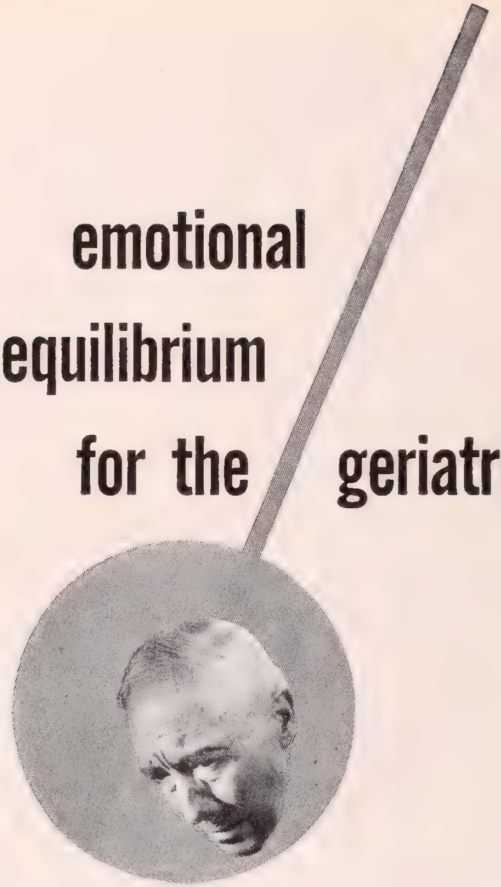

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Bibliography:

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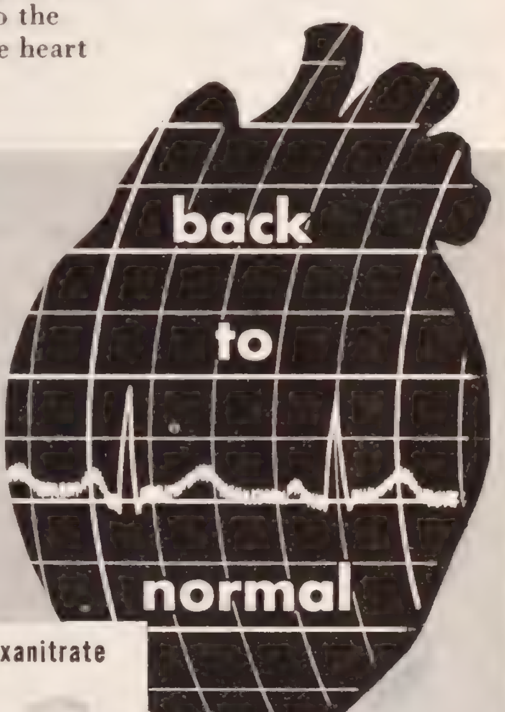

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(1) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (2) Wilkins, et al.: J.A.M.A. 140: 261-265, 1949.

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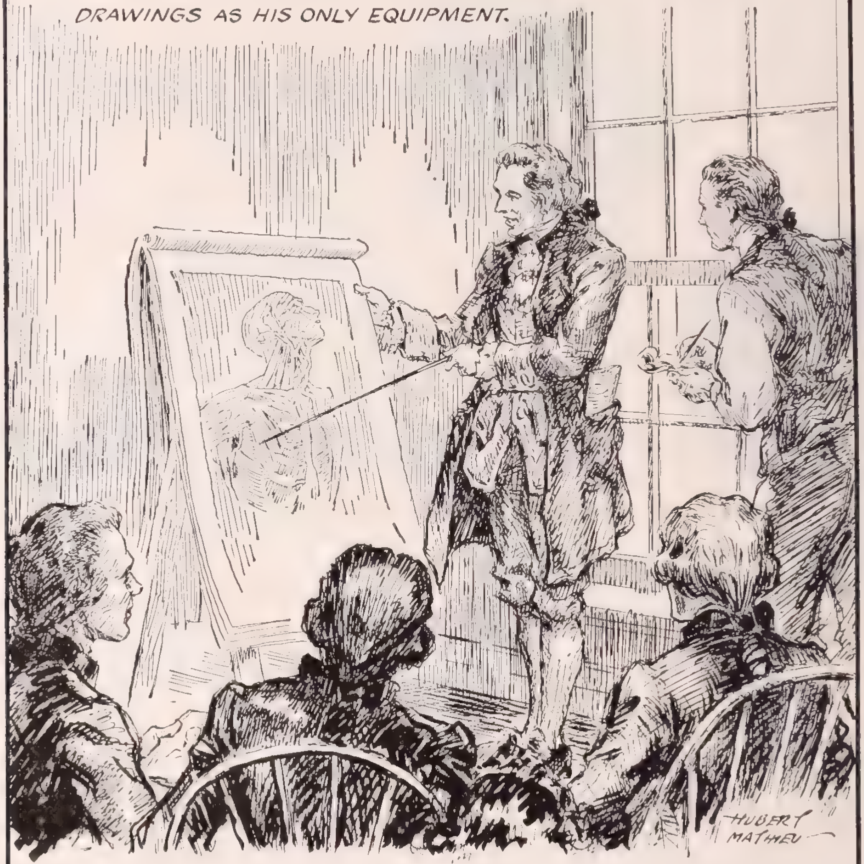

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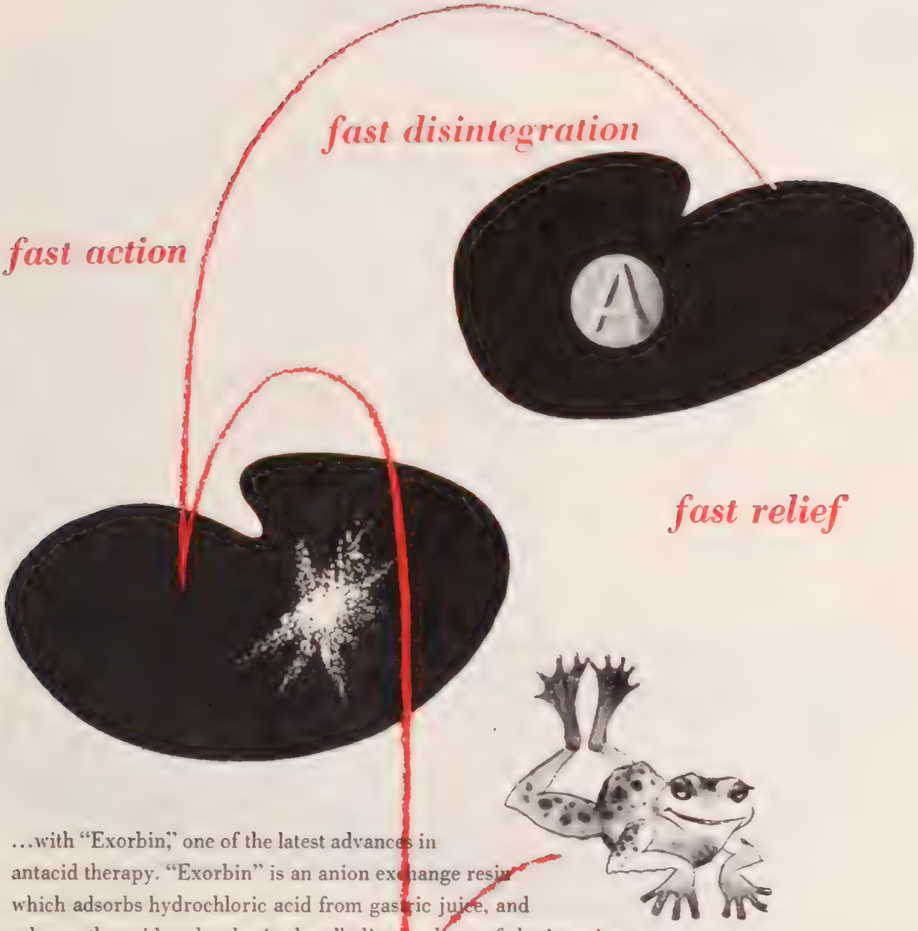

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[1] Kraemer, M.: Postgrad. Med. 2:431 (Dec.) 1947.
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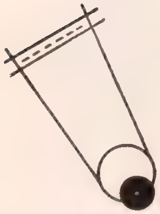
The one serious drawback to local antibiotic therapy—the tendency to development of local allergic reactions—is largely overcome when Bacitracin Ointment-C.S.C. is employed. The low index of allergenicity of this antibiotic is one of its outstanding features, and has been emphasized in a recent publication.*

Bacitracin Ointment-C.S.C. contains 500 units of bacitracin per gram. It has produced excellent results in the treatment of ecthyma, infectious eczematoid dermatitis, folliculitis, sycosis vulgaris, and pyoderma gangrenosum. In decubitus ulcer it not only controls the infection promptly but also encourages more rapid healing. Impetigo contagiosa responds particularly well, many cases completely clearing up within 48 hours of the initiation of therapy.



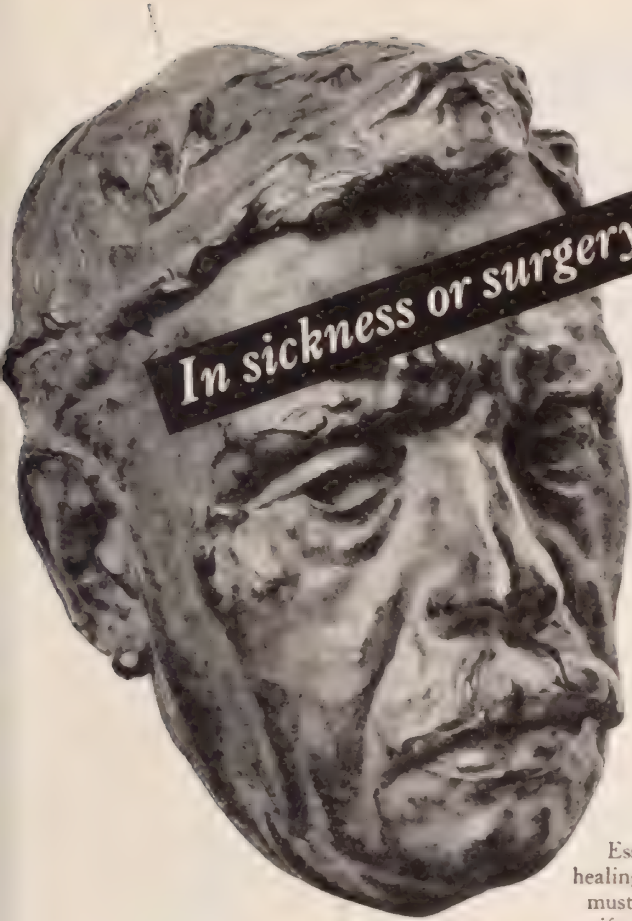
Bacitracin Ointment-C.S.C. contains 500 units of bacitracin per gram in a petrolatum base. Available in ½ and 1 ounce tubes.

---

*Derzavis, J. L.; Rice, J. S., and Leland, L. S.: Topical Bacitracin Therapy of Pyogenic Dermatoses; a Clinical Report, J.A.M.A. *141*:191 (Sept. 17) 1949.

C.S.C. Pharmaceuticals

A DIVISION OF COMMERCIAL SOLVENTS CORPORATION, 17 EAST 42ND STREET, NEW YORK 17, N. Y.



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Depletion of the critical water-soluble B complex and C vitamins occurs so commonly in the presence of physical pathology, as to make a presumption of nutritive impairment[2] almost axiomatic. Essential to normal cell metabolism and wound healing, these poorly-stored, readily-diffusible factors must be replenished — usually by *massive dosage* —if tissue rehabilitation[3] and return to health[4] are to be expedited. • Allbee with C 'Robins' provides this all-important "saturation dosage" in convenient capsule form. It incorporates the important B factors in 2 to 15 times daily requirements, plus 250 mg. of vitamin C — *the highest strength of ascorbic acid available today in a multi-vitamin capsule.* • Its prescription represents a sound contribution toward decisive recovery from disease, or toward pre- and post-operative nutritional support.[1]

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Calcium pantothenate	**10 mg.**
Ascorbic acid (C)	**250 mg.**

REFERENCES: 1. Coller, F. A. and DeWeese, M. S.: Preoperative and Postoperative Care, J.A.M.A., 141:641, 1949. 2. Jolliffe, N. and Smith, J. J.: Med. Clin. North America, 27:567, 1943. 3. Kruse, H. D.: Proc. Conf. Convalescent Care, New York Acad. Med., 1940. 4. Spies, T. D.: Med. Clin. North America, 27:273, 1943.

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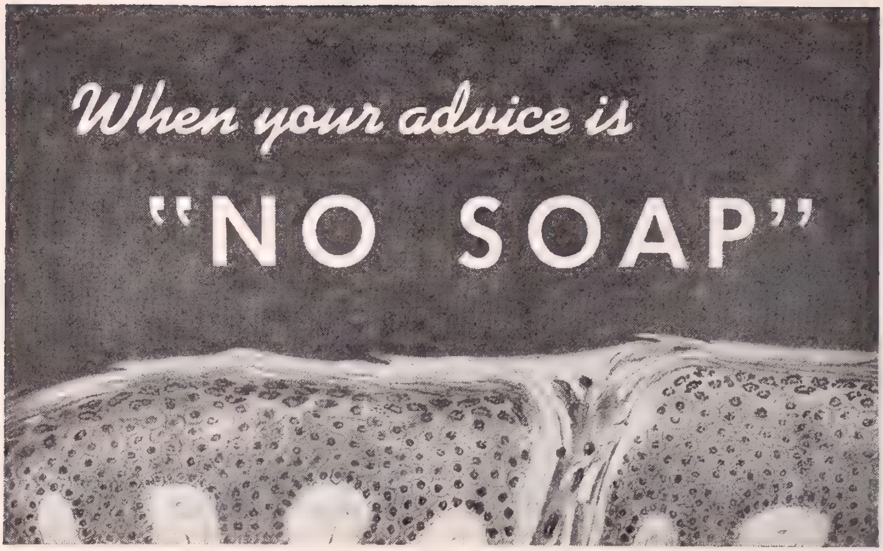

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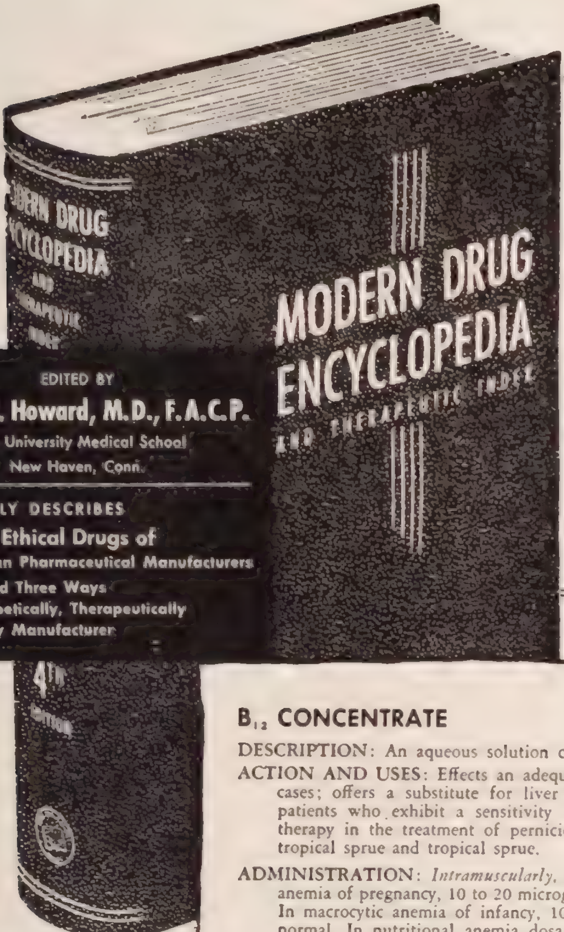

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Marion E. Howard, M.D., F.A.C.P.
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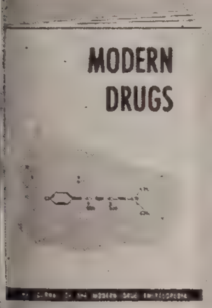

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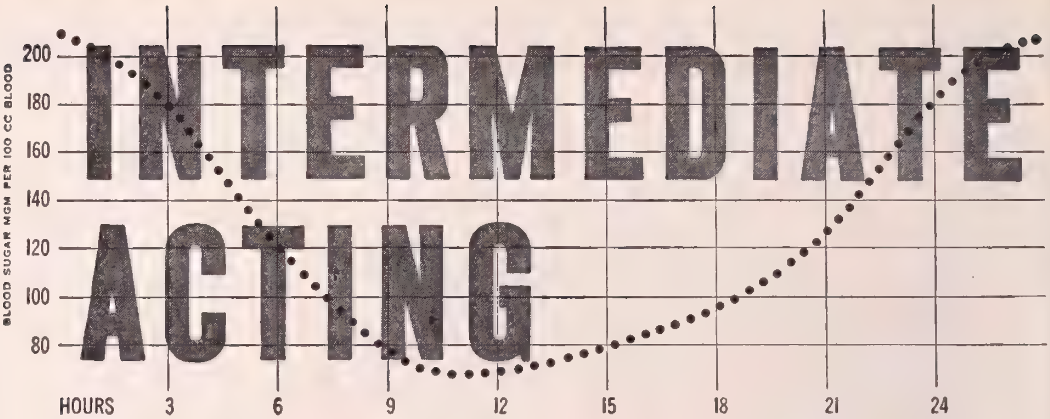

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1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948

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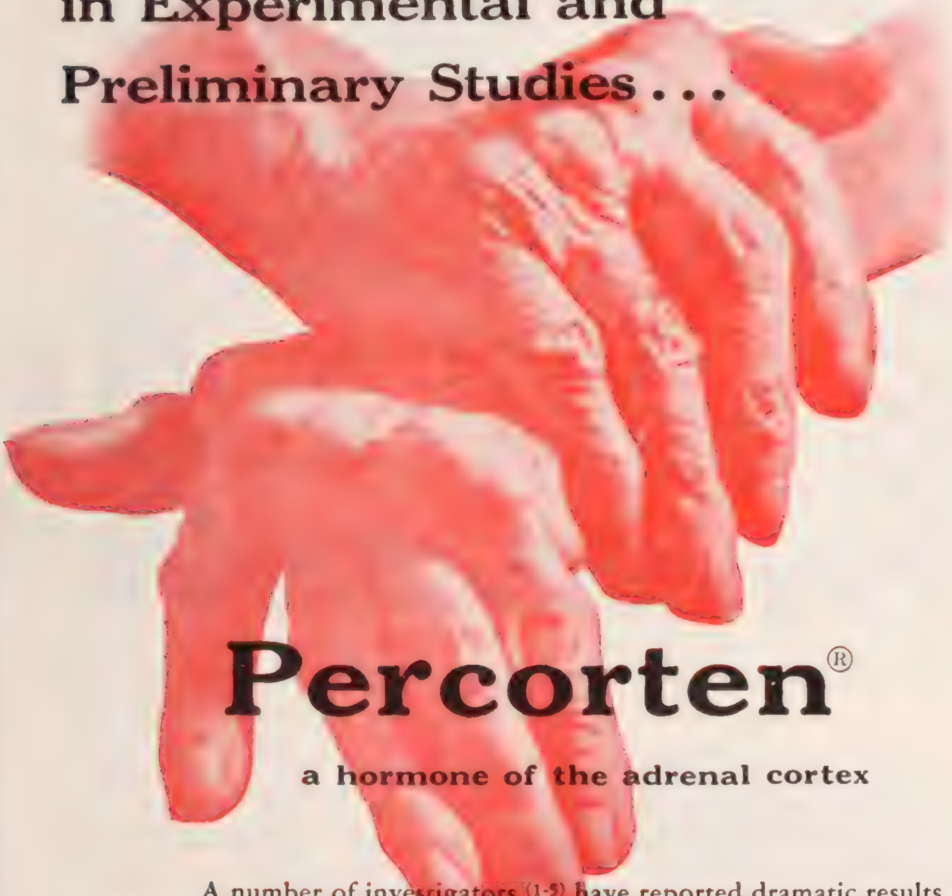

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1. *Lewin, E., and Wassén E.: Lancet 2:993, Nov. 26, 1949* **2.** *Le Vay, D., and Loxton, G. E.: Lancet 2:1134, Dec. 17, 1949* **3.** *Fox, W F.: Lancet 2:1156, Dec. 17, 1949* **4.** *Loxton, G. E. and Le Vay, D.: Lancet 2:1204, Dec. 24, 1949* **5.** *Douthwaite, A. H.: Lancet 2:1244, Dec. 31, 1949*

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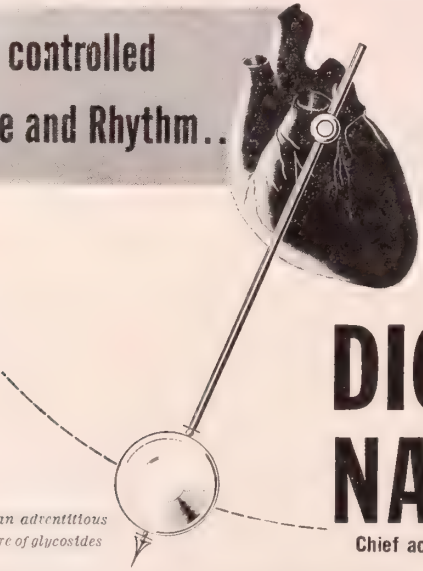

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1. Weiss, S., Espinal, R. B. & Weiss, J.: Therapeutic Application of Anion Exchange Resins in the Treatment of Peptic Ulcer. Review of Gastroenterology, 16:501-509, June, 1949.

Literature and samples available.

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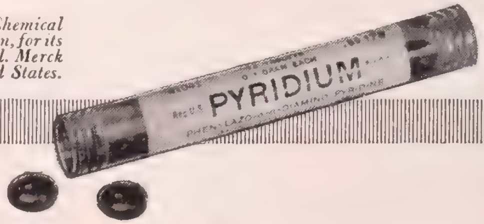

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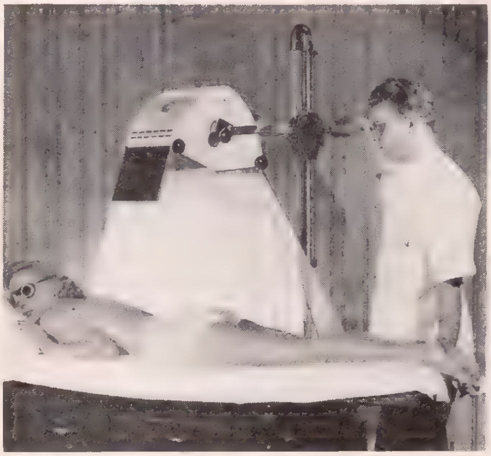

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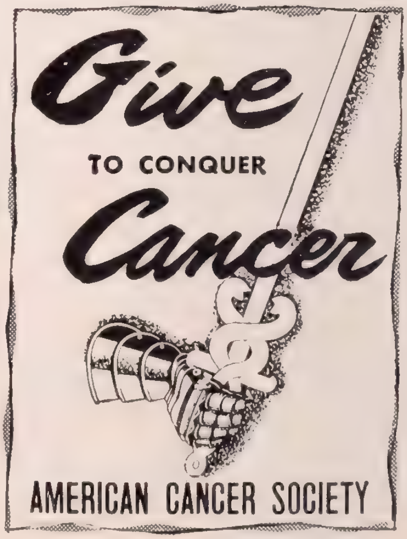

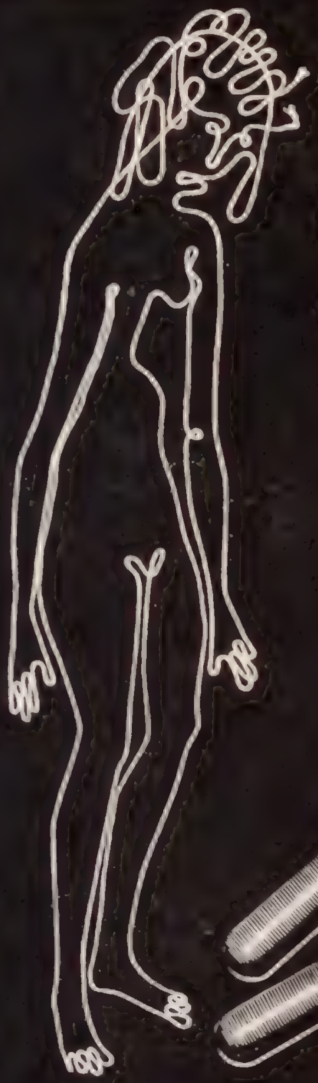

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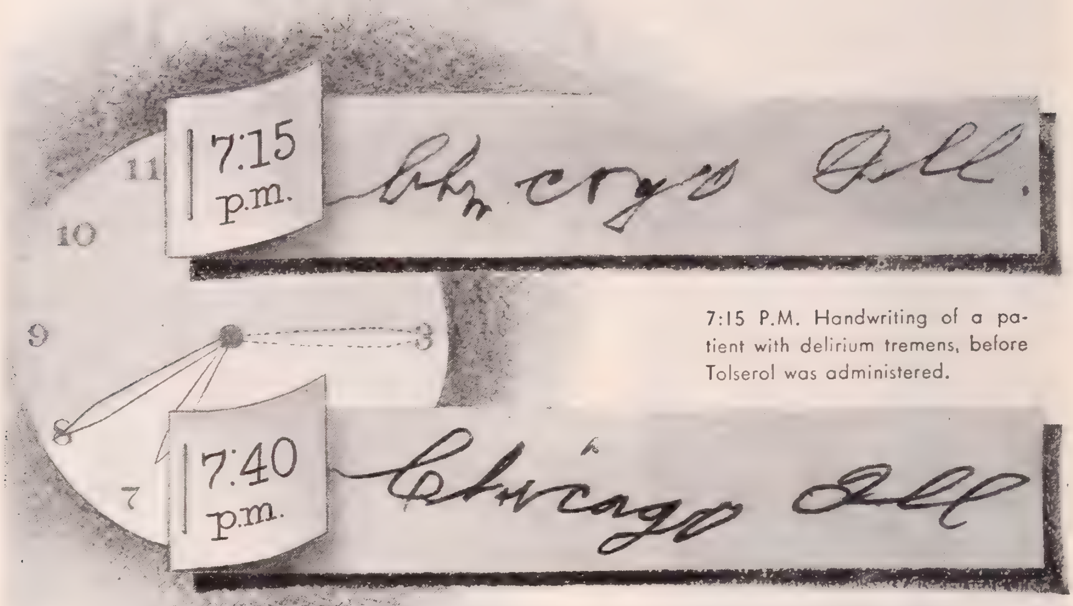

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NEW YORK STATE JOURNAL OF MEDICINE

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VOLUME 50 APRIL 1, 1950 NUMBER 7

Editorials

The Convention

On May 8, 1950, the one hundred forty-fourth Annual Convention of the Medical Society of the State of New York will convene at the Hotel Statler, New York City. It is hoped that registration will exceed that of previous years, in view of the trend since 1946, when younger members of the profession began to attend in greater numbers.

In this Convention issue of the Journal will be found as many of the Annual Reports of the officers and committees of the Society as could be prepared by the time of going to press; others will follow in the April 15 issue. Since these reports concern the activities of the Society during the past year, it is hoped that they will be carefully studied by the membership as they appear. There is no other way by which the members can learn of the vast subject matter covered by the work of the committeemen and officers, and what was done for the advancement of scientific medicine, medical education, and medical practice in the State.

Our good friends, the commercial exhibitors, whose generous cooperation assists in making possible the display of the most recent scientific apparatus, books, pharmaceuticals, and biologicals, will be present in the greatest numbers since the close of the war. You will find their exhibits listed in this issue for your information.

While we are not now able to announce the principal speaker at the banquet, we do urge you to attend; arrange to sit with friends and enjoy yourselves.

Note that this year there will be televised surgery for your instruction among the many scientific exhibits, and motion pictures covering a wide variety of subjects will be shown.

The General Sessions, commencing Wednesday, May 10, in the Keystone Room off the Ballroom Balcony, will feature a symposium on the autonomic system, covering surgery, pharmacologic agents which modify its function, clinical manifestations of autonomic dysfunction, and fundamental concepts of autonomic function; also recent advances in the treatment of malignancy, practical applications of recent advances in genetics to clinical problems, and the pathogenesis and treatment of heart failure.

The Teaching Day of the Council Committee on Public Health and Education, the Committee on Problems of Alcoholism of the Society and the State of New York, Department of Health, will be devoted to the subjects of "Rehabilitation of the Chronically Disabled" and "Chronic Alcoholism as a Medical Problem."

The House of Delegates this year will consider among other things many knotty questions relating to voluntary medical care insurance, the new Disability Benefits Law, revision of the Code of Professional Ethics and of the Constitution and Bylaws of the Society. To be informed of the questions and changes to be considered, the membership is urged to read the Annual Reports carefully in this and subsequent issues.

Again may we remind you to secure your room reservations? Hotel space is at a premium.

Physicians and Phosphate Insecticides

During the last war, the Germans, who had concentrated their efforts on phosphorus-fluorine compounds in their intense search for lethal war gases, discovered that some of these compounds were more effective as insecticides than chemical warfare adjuncts. The compounds tetraethyl pyrophosphate, known as TEPP, hexaethyl tetraphosphate, spoken of as HETP, and O, O-diethyl O, p-nitrophenyl thiophosphate, designated E-605 by the Germans but now called Parathion in the United States, were uncovered by British and American teams occupying Germany at the close of the war.

During the postwar years, these insecticides were found to be of major importance to agriculture. Of the group, Parathion has been the one most extensively developed in this country. It is now being used by farmers, florists, and commercial spray operators in the form of aerosols, sprays, and dusts. So far its use by home gardeners has been discouraged.

It is highly important that the medical profession realize the widespread use of these phosphate insecticides and be informed of the toxic symptoms they cause in man. Millions of gallons of spray solutions and large quantities of dilute dust containing Parathion were applied for insect and mite control during 1949. Three fatalities and an unknown number of poisonings occurred during last season. All of the fatal cases followed prolonged inhalation of Parathion wettable powder or spray mist and extensive skin contact.

Parathion inactivates the cholinesterase enzymes of the blood and tissues, and, therefore, the signs and symptoms resulting from excessive absorption are primarily those of marked parasympathetic stimulation. The initial complaint is usually giddiness or headache, followed often by abdominal cramps, diarrhea, nausea, weakness, and a sense of contraction in the chest. If the cholinesterase level drops precipitously, marked signs of parasympathetic stimulation will be evidenced by hyperhidrosis, miosis, lacrimation, and salivation.

Many of the parasympathetic symptoms and signs are relieved by atropine. Doses of 1 or 2 mg. per hour up to a daily total of 20 mg. of the drug may be required to control respiratory symptoms and to keep the patient fully atropinized. The intravenous route is best for those severely poisoned. Unfortunately, atropine does not block the muscular weakness. Artificial respiration may be necessary for many hours—clearing of the airways by suction if they are obstructed or positive pressure oxygen if pulmonary edema is present may be lifesaving. Patients severely poisoned can completely recover after full atropinization and artificial respiration. Morphine should not be given. The acute emergency requiring atropine and artificial respiration may last forty-eight hours.

Physicians in areas where large scale use of phosphate insecticides is prevalent should be on the alert for people who give a history of vertigo followed in two to eight hours by nausea, abdominal cramps, vomiting, diarrhea, muscular twitching, pressure in the chest, convulsions, coma, or pulmonary edema. They may be severely poisoned, and the prompt administration of atropine will block many of the parasympathetic effects.

If a person exhibits toxic symptoms from exposure to the phosphate insecticides, he should be warned against further exposure until restoration of blood and tissue cholinesterase to normal levels has taken place. Because all the phosphate insecticides inactivate cholinesterase, persons exposed to any specific one may be susceptible to any of them for a considerable period of time. Restoration of the cholinesterase level occurs slowly. Laboratory methods are available for the determination of the blood level of cholinesterase. Physicians would do well to advise their patients not to expose themselves further to the phosphate insecticides until the cholinesterase of the blood has returned to normal.

The medical profession has a great responsibility to agricultural personnel who will be using these insecticides this year—alertness on the part of physicians and hospital employes will undoubtedly cut the toll of those who would otherwise die through their own carelessness.

What Next?

We invite the attention of our membership to the official statement of the Democratic Party in its platform adopted at the 1948 convention: "We favor the enactment of a national health program for expanded medical research, medical education, and hospitals and clinics." We do not find in that platform any further official reference concerning Federal aid to improve national health.

A number of bills introduced into the Congress since 1948 have apparently sought by quite proper legislative procedure to implement such a program. Presumably hearings on these bills, if and when reported out of committees, will follow the usual course with opinions pro and con being afforded the opportunity to be heard.

Meanwhile, a booklet, "National Health Insurance, What It Means To You," prepared by the self-styled Committee for the Nation's Health, seems to be appearing in nation-wide distribution from some source. This brochure and questionnaire is openly favorable to the welfare state medical program, as might be surmised from its preparation by Dr. Channing Frothingham's organization, of which the executive committee, according to Mr. John O'Donnell, lists, among others, Mrs. Franklin D. Roosevelt, Chester Bowles, Mrs. Mary Keyserling, John Gunther, and Newbold Morris.[1]

The booklets "go out in envelopes which in the upper left hand corner carry the words: 'Democratic National Committee, permanent headquarters, 1200 18th Street N.W., Washington 6, D. C.' "[1] It would thus appear that their distribution is underwritten in a manner to cause recipients of the booklets to infer at least endorsement of the contents—a program for socialized medicine—by the Democratic National Committee.

Apparently many members of the Democratic Party do not see eye to eye with the proponents of national compulsory health insurance, nor do they seem to approve of this particular action of the national committee. To quote Mr. O'Donnell again:

> The staunchly democratic *Daily Advance* of Lynchburg, Virginia, in an editorial entitled "What Price Democrats?," angrily observes that there are "several things that Democrats who are not Fair Dealers would like to know," and asks the questions:
>
> "By what procedure of the Democratic Party was the Democratic National Committee authorized to be the promoter of socialized medicine? How many and what members of the Democratic National Committee know about or participated in this promotion?
>
> "Is it one of the recognized and legitimate functions of such a committee of one of the two major political parties to so function? What other spurious and undemocratic procedures is the Democratic National Com-

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[1] Daily News, February 14, 1950.

mittee promoting in the name of the Democratic Party?

"They (Democrats) should demand to know whether their national committee has tacitly prefixed 'Socialist' before Democratic National Committee and thereby secretly or semisecretly split away from the Democrat Party as real Democrats know it."

We feel that, irrespective of party affiliations, it is surely time for Americans to examine how far we have gone along the devious path toward socialism. A recent book, *The Road Ahead*, by John T. Flynn, an economist, is well worth careful study by those who would inform themselves of the background of this important subject.[2] Intelligent opinion on much of what has happened in this country and on what is to come must be founded on comprehensive study of recent history. Mere criticism of political mechanics, artful dodges, and sly maneuvers such as we have illustrated s pointless. Thinking men and women will not be materially influenced but more likely nauseated by such tactics.

We urge our membership of whatever political affiliation to do its own thinking, based on serious study of available sources of real information. It is the duty and privilege of each citizen-taxpayer to do so.

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[2] The Devin-Adair Company, Publishers, New York City.

Current Editorial Comment

Legislation. We call attention to an article on page 916 of this issue in view of the bills now pending in the State Legislature relative to the release of dogs from city pounds for purposes of animal experimentations. It is stated that in New York City, 70,000 "stray dogs" are put to death annually and that possibly only about 5,000 are needed for laboratory purposes. The situation may be designated as ridiculous from a sane and sensible point of view, yet the antivivisectionists have had their hysterical way for years in halting by their activities the progress of medicine. Witness their protest in Baltimore, which, fortunately, failed to sway the decision of that city's council. We trust that a similar action can be carried out in New York.

There is more money got by industry than is spent by prodigality.—Anonymous

Retrolental Fibroplasia. Blindness resulting from retrolental fibroplasia which occurs mainly in premature infants is receiving increasing attention in the current medical journals. This condition appears to develop within four to six months after birth, with the highest incidence in very small infants. Its etiology and pathogenesis are unknown. Recent studies indicate that the masses of tissue replacing the vitreous humor, from which the name of the condition is derived, are the end result of the pathologic process. Reports from some areas suggest that one out of every ten infants weighing less than 1,500 Gm. at birth develops the condition, while case-finding efforts in other areas have failed to disclose a single case.

The condition is known to exist in New York State, since over 60 cases in children under six years of age were reported to the State Commission for the Blind during 1947 and 1948, the first years of reporting of blindness in this State. It is likely that there are many more cases that have not yet been reported.

This subject is of some concern to those who are responsible for the care of premature infants, particularly since studies suggest the possibility of an association between an apparent recent increase in the number of cases and changes in the treatment of premature infants.

Approximately 300 infants weighing less than 1,500 Gm. are born each year in New York State, exclusive of New York City, and survive the first month of life. The number of such infants may be expected to increase with the development and extension of special facilities for the care and health supervision of premature infants.

The need for further study of this condition if the risk of blindness in this group of

[Continued on page 806]

DEVELOPMENTS IN PUBLIC HEALTH

From the New York State Department of Health

William A. Brumfield, Jr., M.D., Editor

New Edition of Parents Book

The new edition of the *Parents Book* has just been released by the State Department of Health. This booklet on care during the prenatal period, delivery, and the postpartum period has been completely rewritten to bring it in line with current medical and nursing practices.

The text of the *Parents Book* was reviewed in detail by members of the Council Committee on Public Health and Education and of the Subcommittees on Maternal and Child Welfare of the Medical Society of the State of New York. Many valuable suggestions made by this group were incorporated in the final draft, and, indeed, the whole tone of the book was developed in accordance with their suggestions. The group approved the use of the *Parents Book* for general public health education in New York State.

The *Parents Book* repeats in many different ways that there is no substitute for early and continued medical care, and statements such as the following appear frequently in the booklet: "*Your doctor* is the only one who can give you the special instructions that you need." The booklet is intended to supplement the specific advice and instructions given by the family physician. It is designed primarily to aid in the development of sound emotional attitudes on the part of the pregnant woman, rather than to impart a specific body of information, except in so far as such information prevents or releases anxiety and tension.

The father and grandparents are brought into the picture in the introduction. Grandparents are advised to read the *Parents Book* in order to reach a common understanding with the parents in regard to the care of the new baby, especially when they are actively involved in such care themselves.

An innovation in this *Parents Book* is a section on preparing other children in the family for the expected arrival of a new addition. In most other books on prenatal care this subject has been avoided altogether or reference is simply made to other books concerned with care of the infant and young child. It was felt by those responsible for preparation of the booklet that the ideal time to reach parents, in order to ease the inevitable jealousies among children in the family, was before the birth of the new baby.

An attempt was made in this booklet to present a balanced discussion of breast-feeding. Although breast-feeding is recommended as the most natural way of feeding a baby and one which holds many positive psychologic values, an effort was made to avoid increasing emotional conflict of women who could not breast-feed their babies for physical or psychologic reasons.

The current situation in medical practice in upstate New York was taken into consideration in the preparation of the booklet. The majority of women now present themselves to their family physicians for care fairly early in pregnancy and continue under care through the final postpartum examination. In view of the fact that home deliveries are comparatively rare in New York State, the section on home delivery in previous editions has been omitted altogether, and an expanded section on what the pregnant woman may expect in her hospital delivery experience has been inserted in its place.

In view of the fact that maternal mortality has been reduced to such extremely low levels in New York State, and maternal morbidity is more readily controlled with recent advances in medical science, the possible dangers of pregnancy have been greatly de-emphasized. Instead, a positive approach to childbearing is presented.

The booklet is written in two sections. The first part is a narrative description which can be read through easily at one sitting or which can be perused at odd times by the parents. Informational material in regard to specific matters is given in Part II so as not to interrupt the smooth flow of the narrative portion. Signs of pregnancy are given in this reference section, since it was thought that the majority of women reading the booklet would be those in whom pregnancy had already been diagnosed by their physicians. Details of breast care, diet, equipment for the baby, things to take to the hospital, exercises, and a glossary of words commonly used in regard to obstetric care are all given in the reference portion of the booklet.

It is hoped that physicians in private practice as well as those in outpatient departments of hospitals will promote the use of the *Parents Book* among their patients as early in pregnancy as possible. Supplies of the *Parents Book* may be obtained by writing to the city or county health commissioner or State district health officer within whose jurisdiction a physician practices.

Edward R. Schlesinger, M.D.

Current Editorial Comment

[Continued from page 804]

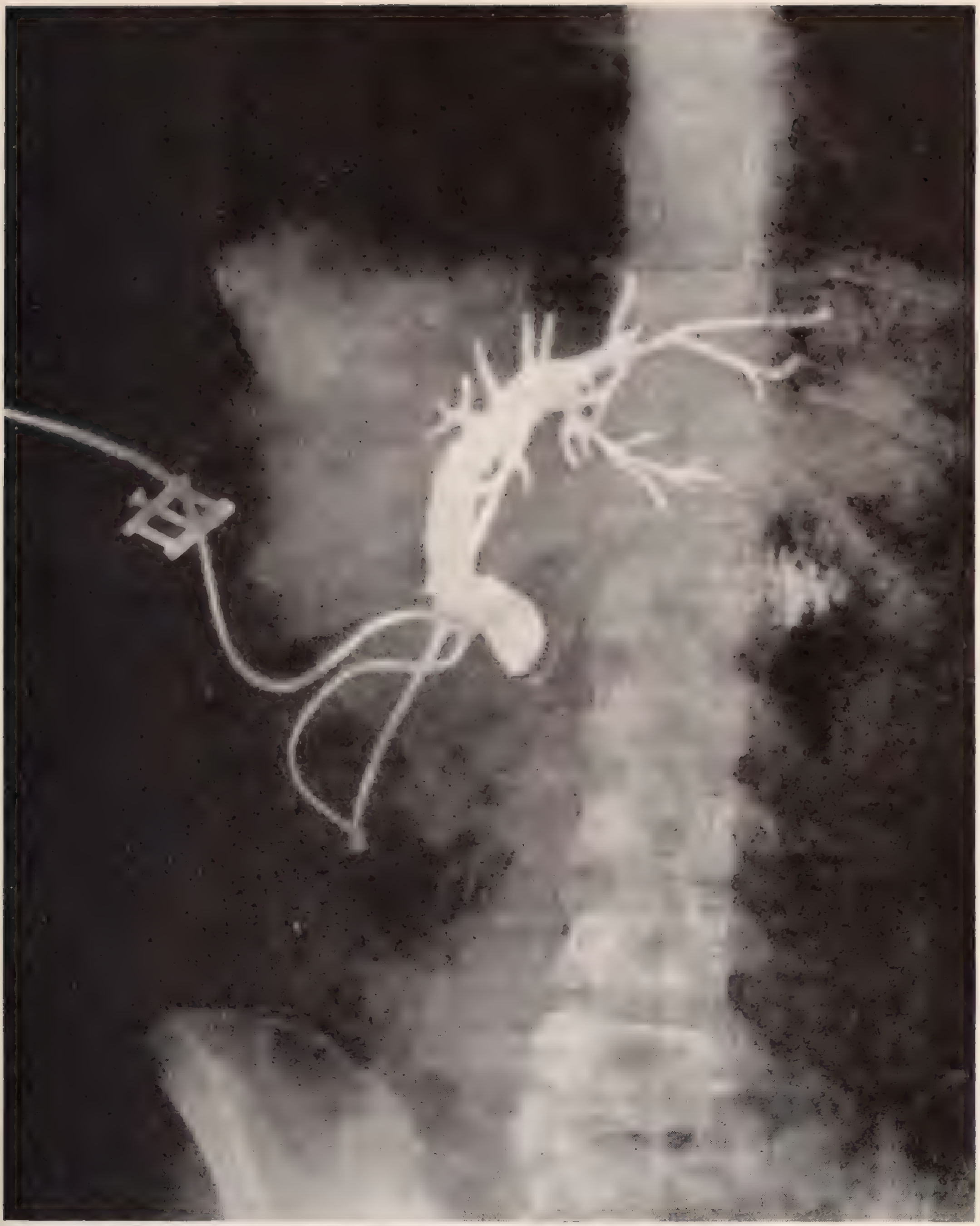
children is to be reduced is obvious. The Bureau of Maternal and Child Health of the State Department of Health, with the cooperation of the Medical Society of the State of New York, is currently investigating the problem. A survey is being made of all babies weighing less than 2,000 Gm. at birth. Infants in whom retrolental fibroplasia is suspected on the basis of information supplied by the parents will be followed further with their physicians for diagnostic confirmation. It is expected that this survey will provide basic information on the incidence and geographic distribution of the condition, and it may uncover a group of cases for detailed study of possible causative factors.

Try to deserve a friend, and you will soon get one.—Anonymous

The Certificate of Birth. It is essential that every individual should have recorded the facts about his or her entry into this world. This has great significance in many ways, not only for the person concerned but, in a larger sense, for social purposes—so that significant facts based on the population as a whole may become available. While the face of the certificate records certain recognized essentials, the reverse is of equal importance. The questions asked there have been carefully considered; they are not idle questions; they cover complications of pregnancy and labor, operative procedures, and condition of the baby. They are extremely valuable in fundamental studies in the relationship of parity, age of the mother, etc., in the incidence of complications of pregnancy and labor, as well as the relationship of these to the incidence of prematurity and its prognosis. They will prove of increasing practical value to physicians and hospital administrators in the analysis of statistics for each hospital when tabulations now being prepared by the State Department of Health become available.

In 1948, the supplemental information asked for was supplied in 91 per cent of all certificates in the State, outside of the City of New York. However, 97 per cent of all live births occurred in hospitals. There were 25 hospitals in upstate New York, according to the Commissioner of Health, in which the supplemental information was not provided in 10 per cent or more of all certificates filed from these institutions. There were nine hospitals in which more than 90 per cent of the certificates were unanswered, and these certificates accounted for 60 per cent of all the unanswered certificates.

It seems important that physicians should cooperate with the health authorities in fulfilling an obligation toward their communities and their patients by answering these questions properly and adequately on birth certificates, and that hospital authorities make it their business to see that it is done by those responsible. It means a great deal to the child and its mother, and in a large measure contributes to the value of our vital statistics.



Common duct visualization with Iodochlorol (Searle), after cholecystectomy.

KETOCHOL® provides a combination of the oxidized, unconjugated form of those bile acids normally found in human bile. By encouraging a "flushing out" of the biliary tree, Ketochol is providing effective therapy for noncalculous cholecystitis, biliary dyskinesia and postcholecystectomy syndromes.

SEARLE *RESEARCH IN THE SERVICE OF MEDICINE*

"valuable therapeutic agent in dermatologic practice"[1]

4 excerpts from the literature on Vioform

Overton "The effect of 3% Vioform in a water-miscible base or in petroleum jelly has been assessed under carefully controlled conditions on a variety of dermatoses in 176 patients. It proved a useful local application in the treatment of the following conditions: coccogenic sycosis barbae, seborrhoeic dermatitis, otitis externa, acute vesiculo-papular eczema. The incidence of cases of intolerance was low."[2]

Sulzberger & Baer "Both long clinical experience and the present studies indicate that Vioform (5-chloro-7-iodo-8-hydroxyquinoline) is a valuable remedy in topical therapy. . . . Since submitting this report we have confirmed our observations in hundreds of additional cases. The results have strengthened our conviction that Vioform preparations, while not panaceas, are among the most valuable local therapeutic agents with very low irritancy and a low index or potential of sensitization."[3]

Martin-Scott ". . . in at least 37 cases in which penicillin had failed Vioform produced the desired result. . . . It is concluded that 3% vioform is a valuable addition to the medicants at present used in this country for pyococcal dermatoses."[1]

Perlman "Its results in the treatment of infantile eczema, as well as in the eczemas of older children, have been found good . . . in fact, on occasions Vioform has been proved to be the topical answer to eczema when orthodox treatment with the tars failed."[44]

1. Martin-Scott, I.: Brit. Med. J., May 14, 1949
2. Overton, J.: Brit. Med. J., May 14, 1949
3. Sulzberger & Baer: Arch. Derm. & Syph., 58: Aug. 1948
4. Perlman, H. H.: J. of Pediat., July 1948

Vioform

cream 3% in a special water-washable (flesh color vanishing cream) base—50 Gm. jars and 1 pound jars.

ointment 3% in a petrolatum base (tends to stain, should be covered in use)—50 Gm. jars and 1 pound jars.

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VIOFORM (brand of iodochlorhydroxyquinoline)—Trade Mark Reg. U.S. Pat. Off. 2/1570M

1950 ANNUAL CONVENTION

Medical Society of the State of New York

May 8 to 12—Hotel Statler, New York City

House of Delegates

The regular annual meeting of the House of Delegates of the Medical Society of the State of New York will be called to order at 10:00 A.M. on Monday, May 8, 1950, in the Penn Top, 18th floor of the Hotel Statler, New York City.

In accordance with Chapter II, Section 3 of the Bylaws, the House will assemble according to the following schedule:

Monday, May 8, 1950, 10:00 A.M.
Tuesday, May 9, 1950, 9:00 A.M. and 2:00 P.M.
Wednesday, May 10, 1950, 9:00 A.M.

At the last adjourned session (9:00 A.M., Wednesday, May 10) the election of officers, councilors, trustees, and delegates will occur in accordance with Chapter III, Section 1 of the Bylaws.

ALBERT F. R. ANDRESEN, M.D., *Speaker*
W. P. ANDERTON, M.D., *Secretary*

Annual Meeting

The Annual Meeting of the Medical Society of the State of New York will be held on Wednesday, May 10, at 7:00 P.M. in the Penn Top, 18th floor, Hotel Statler, New York City.

JOHN J. MASTERSON, M.D., *President*
W. P. ANDERTON, M.D., *Secretary*

Registration

Registration for delegates will be held in the foyer of the Penn Top, 18th floor of the Hotel Statler, on Monday, May 8, after 9:00 A.M.; for members and guests on the ballroom floor, on Tuesday, Wednesday, and Thursday, May 9, 10, and 11, from 9:00 A.M. to 6:00 P.M., and on Friday, May 12, from 9:00 A.M. to 2:00 P.M.

Exhibits

Scientific Exhibits will be located on the ballroom floor, the ballroom balcony, and the lobby mezzanine.

Technical Exhibits will be located on the ballroom floor.

Scientific Motion Pictures will be shown in Parlor C, ballroom floor.

Teaching Day

A special series of lectures, arranged by the Council Committee on Public Health and Education of the Medical Society of the State of New York and the New York State Department of Health, will be held Tuesday, May 9, at 9:30 A.M. and 2:00 P.M. in the Keystone Room, ballroom balcony. See program on page 810.

Scientific Sessions

General Sessions will be held on Wednesday and Friday afternoons. Section and Session Meetings will be held on Wednesday morning; Thursday morning, afternoon, and evening, and Friday morning.

144th Annual Meeting

The Penn Top, Wednesday, May 10, 7:00 P.M.

Calling the Society to order by the President, John J. Masterson, M.D.

Reading of the Minutes of the 143rd Annual Meeting by the Secretary, W. P. Anderton, M.D.

The Annual Banquet

The Annual Banquet will be held in the Penn Top, Wednesday, May 10, at 7:00 P.M., guest speakers to be announced.

Tickets will be available at the registration desk on the ballroom floor.

The Woman's Auxiliary

See page 819 for the program.

TEACHING DAY

Arranged by the Council Committee on Public Health and Education
of the Medical Society of the State of New York

THEODORE J. CURPHEY, M.D., Garden City, *Chairman*
GEORGE BAEHR, M.D., New York City
CHARLES D. POST, M.D., Syracuse

The Committee on Problems of Alcoholism of the Medical Society of the State of New York

MILTON G. POTTER, M.D., Buffalo, *Chairman*

and the

State of New York Department of Health

HERMAN E. HILLEBOE, M.D., Albany, *Commissioner*
I. JAY BRIGHTMAN, M.D., Albany

Tuesday, May 9, 1950

Keystone Room, Ballroom Balcony

THEODORE J. CURPHEY, M.D., *Presiding*

9:30 A.M.

REHABILITATION OF THE CHRONICALLY DISABLED

A CLINICAL DEMONSTRATION OF PROCEDURES IN THE MANAGEMENT OF THE CHRONICALLY ILL AND DISABLED FOR GENERAL PRACTITIONERS AND SPECIALISTS

Presented by the Subcommittee on Physical Medicine and Rehabilitation

HOWARD A. RUSK, M.D., *Chairman*
Professor and Chairman, Department of Physical Medicine and Rehabilitation, New York University College of Medicine, New York City

1. REHABILITATION OF THE HEMIPLEGIC PATIENT
   Alfred L. Lane, M.D., Rochester, Chief, Physical Medicine and Rehabilitation Service, Rochester General Hospital
2. REHABILITATION OF THE PARAPLEGIC PATIENT
   Arthur S. Abramson, M.D., Bronx, Assistant Chief, Physical Medicine and Rehabilitation Service, Veterans Administration Hospital
3. REHABILITATION OF THE POLIOMYELITIS PATIENT
   George G. Deaver, M.D., New York City, Professor of Clinical Rehabilitation and Physical Medicine, New York University College of Medicine
4. REHABILITATION OF THE AMPUTEE PATIENT
   Donald A. Covalt, M.D., New York City, Clinical Director, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center
   Earle Daniel, New York City, Chief of Prosthetic Service, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center

2:00 P.M.

Panel Discussion

CHRONIC ALCOHOLISM AS A MEDICAL PROBLEM

MILTON G. POTTER, M.D., *Moderator*

1. THE HOSPITAL VIEWPOINT
   C. Nelson Davis, M.D., Malvern, Pennsylvania, Medical Director, Malvern Institute
2. THE PSYCHIATRIC VIEWPOINT
   Harry M. Tiebout, M.D., Greenwich, Connecticut, Director, National Committee for Education on Problems of Alcoholism; Physician in Charge, Blythewood
3. THE INTERNIST'S VIEWPOINT
   James J. Smith, M.D., New York City, Director of Research on Alcoholism, Department of Medicine, New York University-Bellevue Medical Center
4. THE PUBLIC HEALTH VIEWPOINT
   I. Jay Brightman, M.D., Albany, Assistant Director, Division of Medical Services, State of New York Department of Health
5. THE GENERAL PRACTITIONER'S VIEWPOINT
   Marvin A. Block, M.D., Buffalo, Chairman, Committee on Problems of Alcoholism, Medical Society of the County of Erie; Instructor in Medicine, University of Buffalo
6. ALCOHOLICS ANONYMOUS
   W. G. W., Cofounder

Each lecture will be approximately ten minutes, followed by general discussion.

SCIENTIFIC PROGRAM

Alfred P. Ingegno, M.D., *Chairman*, Brooklyn
and
Chairmen of Sections and Sessions

GENERAL SESSIONS

Dr. Ingegno, *Presiding*

THE presentations at these Sessions will consist of half-hour lectures, without discussion. The meetings will start promptly at the hour specified. Members are requested to be in their seats at least five minutes in advance of the meeting time.

Wednesday, May 10—2:30 P.M.
Keystone Room, Ballroom Balcony

Symposium

THE AUTONOMIC NERVOUS SYSTEM

1. Fundamental Concepts of Autonomic Function
   L. Corsan Reid, M.D., New York City, Associate Professor of Physiology, New York University College of Medicine
2. Pharmacologic Agents Which Modify Autonomic Function
   Alfred Gilman, Ph.D., New York City, Professor of Pharmacology, College of Physicians and Surgeons, Columbia University—*By invitation*
3. Clinical Manifestations of Autonomic Dysfunction
   Richard H. Lyons, M.D., Syracuse, Professor of Medicine and Head of Department of Medicine, Syracuse University College of Medicine
   Francis S. Caliva, M.D., Syracuse, Research Fellow, Department of Medicine, Syracuse University College of Medicine—*By invitation*
4. Surgery of the Autonomic Nervous System: Indications and Results
   Bronson S. Ray, M.D., New York City, Professor of Clinical Surgery, Cornell University Medical College; Attending Surgeon, New York Hospital

Friday, May 12—2:00 P.M.
Salle Moderne, 18th Floor

1. Recent Advances in the Treatment of Malignancy
   I. Snapper, M.D., New York City, Physician and Director of Medical Education, Mount Sinai Hospital
2. The Pathogenesis and Treatment of Uremia
   Louis Leiter, M.D., New York City, Chief, Medical Division, Montefiore Hospital; Clinical Professor of Medicine, College of Physicians and Surgeons, Columbia University
3. Practical Application of Recent Advances in Genetics to Clinical Problems*
   Laurence H. Snyder, Sc.D., Norman, Oklahoma, Dean of the Graduate College and Professor of Medical Genetics, University of Oklahoma—*By invitation*
4. The Pathogenesis and Treatment of Heart Failure
   William Dock, M.D., Brooklyn, Professor of Medicine, Long Island College of Medicine

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* The A. Walter Suiter Lecture . . . This will be the eleventh lecture to be delivered under this fund.

SECTIONS

All papers read before the Society by members become the property of the Society. The *original* copy of each paper shall be left with the Secretary of the Section.

Discussers should have their remarks typed and should hand them to the Secretary.

Time limits: Twenty minutes for each paper, five minutes for individual discussion.

Section meetings shall begin promptly at the hour specified. The first order of business of the first session of the second day of Section meetings shall be the election of officers. *"To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry."*—Bylaws, Chapter XII, Section 3.

Section on ANESTHESIOLOGY

Chairman......HAROLD F. BISHOP, M.D., Valhalla
Vice-Chairman.....................................
...........JOHN C. DESSLOCH, M.D., Rochester
Secretary..
..FRANCES A. HARMATUK, M.D., New York City

Wednesday, May 10—10:00 A.M.
Headquarters Room, 18th Floor

Panel Discussion

DIAGNOSTIC AND THERAPEUTIC NERVE BLOCKING
Emery A. Rovenstine, M.D., New York City, *Moderator*
Louis R. Orkin, M.D., New York City
Jack Milowsky, M.D., New York City
Martin Helrich, M.D., New York City—*By invitation*
Samuel Joseph, M.D., New York City—*By invitation*

Thursday, May 11—2:00 P.M.
Headquarters Room, 18th Floor

1. COMPARISON BETWEEN CATHETER AND MALLEABLE NEEDLE TECHNICS FOR CONTINUOUS SPINAL ANESTHESIA
Robert D. Dripps, M.D., Philadelphia, Pennsylvania—*By invitation*

2. THE ROLE OF STERILIZING SOLUTIONS IN THE CAUDA EQUINA SYNDROME FOLLOWING SPINAL ANESTHESIA
Paul W. Searles, M.D., Buffalo
William K. Nowill, M.D., Elmira
Discussion: Samuel I. Guest, M.D., Buffalo—*By invitation*

3. ANESTHESIA FOR EMERGENCY SURGERY FOLLOWING MASSIVE GASTROINTESTINAL BLEEDING
E. Dean Babbage, M.D., Buffalo
William A. Ballas, M.D., Buffalo—*By invitation*
Discussion: Howard A. Patterson, M.D., New York City; Paul M. Wood, M.D., New York City

4. REVIEW OF CHLOROFORM ANESTHESIA IN OBSTETRICS
Rose M. Lenahan, M.D., Buffalo
E. Dean Babbage, M.D., Buffalo
Discussion: Milton G. Potter, M.D., Buffalo

5. RESPIRATORY COMPLICATIONS ASSOCIATED WITH DEMEROL
Thomas F. McDermott, Jr., M.D., New York City
Discussion: H. B. Van Dyke, M.D., New York City—*By invitation;* Vincent J. Collins, M.D., New York City

Section on CHEST DISEASES

Chairman..
...SAMUEL A. THOMPSON, M.D., New York City
Secretary.......DONALD R. MCKAY, M.D., Buffalo

Thursday, May 11—2:00 P.M.
Salle Moderne, 18th Floor

1. CURRENT TREATMENT OF TUBERCULOUS EMPYEMA
Herbert C. Maier, M.D., New York City
Discussion: Adrian A. Ehler, M.D., Albany

2. PNEUMOPERITONEUM VERSUS PNEUMOTHORAX
James S. Edlin, M.D., New York City
Sydney Bassin, M.D., New York City
Discussion: Roger S. Mitchell, M.D., Trudeau

3. RESULTS OF THE SURGICAL THERAPY OF CONGENITAL CARDIOVASCULAR ANOMALIES
George H. Humphreys, M.D., New York City
Discussion: John R. Paine, M.D., Buffalo

4. NEWER CONCEPTS OF CHRONIC COR PULMONALE
Irené Ferrer, M.D., New York City
Discussion: Charles W. Lester, M.D., New York City

Friday, May 12—10:00 A.M.
Penn Top North, 18th Floor

1. THE VALUE OF PULMONARY FUNCTION TESTS
Dickinson W. Richards, Jr., M.D., New York City
Discussion: Robert A. Bruce, M.D., Rochester

2. SURGICAL TREATMENT OF MULTILOBAR BILATERAL BRONCHIECTASIS
John D. Stewart, M.D., Buffalo
Discussion: Paul A. Kennedy, M.D., Buffalo

3. The Results of Blood Vessel Transplants in Human Beings
   Robert E. Gross, M.D., Boston, Massachusetts—*By invitation*
   Discussion: Ralph A. Deterling, M.D., New York City
4. The Role of Chemotherapy in Pulmonary Tuberculosis
   Kirby S. Howlett, Jr., M.D., Shelton, Connecticut—*By invitation*
   Discussion: Foster Murray, M.D., Brooklyn

Section on DERMATOLOGY AND SYPHILOLOGY

Chairman . . . . . Eugene F. Traub, M.D., New York City
Secretary . . . . . John H. Hunt, M.D., Elmira

Thursday, May 11 10:00 A.M.
Penn Top South, 18th Floor

Symposium
Lupus Erythematosus

1. Nucleic Acid Depolymerization in Lupus
   Boris Gueft, M.D., New York City
2. Physiologic Alterations in Lupus Erythematosus
   Norman B. Kanof, M.D., New York City
3. Serologic and Chemical Aspects of Lupus Erythematosus
   George H. Kostant, M.D., New York City
   Charles R. Rein, M.D., New York City
4. Blood Factor in Acute Disseminated Lupus Erythematosus
   John R. Haserick, M.D., Cleveland, Ohio—*By invitation*
5. The Effect of Pituitary Adrenocorticotropic Hormone (ACTH) and Cortisone on Disseminated Lupus Erythematosus and the Mesenchymal Tissues
   Charles M. Plotz, M.D., New York City—*By invitation*
   Edward L. Howes, M.D., New York City
   J. Wallace Blunt, M.D., New York City—*By invitation*
   Karl Meyer, M.D., New York City
   Charles Ragan, M.D., New York City
6. The Therapeutic Value of Bistrimate, Sodium Para-aminobenzoate, and the Tocopherols in Chronic Diskoid Lupus Erythematosus
   H. H. Sawicky, M.D., New York City
7. Vitamin, Antibiotic, and Gold Therapy for Lupus Erythematosus
   Frances Pascher, M.D., Brooklyn
8. The Relationship Between Diskoid Erythematosus and Disseminated Lupus Erythematosus
   A. Patrick Wilson, M.D., Buffalo—*By invitation*
   James W. Jordon, M.D., Buffalo
9. Acute Disseminated Lupus Erythematosus: Two Unusual Cases
   Maurice J. Costello, M.D., New York City
   Raymond A. Havrilla, M.D., Jamaica
   Marie A. Bouquette, M.D., New York City—*By invitation*

Discussion of Symposium: Herbert Spoor, M.D., New York City; J. Gardner Hopkins, M.D., New York City

Friday, May 12—10:00 A.M.
Penn Top South, 18th Floor

1. Further Experiments in Prolonging Local Anesthesia by Injections of a Suspension of Procaine Base in Water
   Samuel Monash, M.D., New York City
   Alvo Guiducci, M.D., New York City—*By invitation*
2. The Impact of Psychiatry on Therapy in Dermatology
   Herman Sharlit, M.D., New York City
   Discussion: Montague Ullman, M.D., New York City
3. Treatment of Acne Vulgaris
   Herbert H. Bauckus, M.D., Buffalo
4. Seborrheic Dermatitis
   George Clinton Andrews, M.D., New York City
   Anthony N. Domonkos, M.D., New York City
   Charles F. Post, M.D., New York City
5. N-Ethyl-O-Crotono-Toluide (Eurax) as an Antipruritic
   Samuel M. Peck, M.D., New York City
   Theodore J. Michelfelder, M.D., New York City—*By invitation*
6. Undecylenic Acid Therapy for Psoriasis: A Critical Evaluation
   Sam C. Atkinson, M.D., New York City—*By invitation*
   George M. Lewis, M.D., *New York City*
7. Control of Tinea Capitis
   Anthony C. Cipollaro, M.D., New York City
   Adrian Brodey, M.D., New York City

Section on GASTROENTEROLOGY AND PROCTOLOGY

Chairman . . . . Frank Meyers, M.D., Buffalo
Vice-Chairman . . . . . Alfred Buda, M.D., Brooklyn
Secretary . . . . Harry L. Segal, M.D., Rochester

Wednesday, May 10—10:00 A.M.
Salle Moderne, 18th Floor
Proctology Program

1. The Incidence of Amebiasis in the Albany Area
   Robert C. Towse, M.D., Albany
   Dicran A. Berberian, M.D., Loudonville
   E. W. Dennis, Ph.D., Albany—*By invitation*
2. The Value of Proctosigmoidoscopy as a Routine Examination in Preventing Deaths from Colonic Cancer
   Charles J. Miller, M.D., New York City
3. Therapeutic Trends and Management in Advanced Carcinoma of the Colon and Rectum
   Michael R. Deddish, M.D., New York City

4. A Newer Concept in the Management of Nonspecific Ulcerative Colitis
   James J. Stefano, M.D., Brooklyn

Thursday, May 11—2:00 P.M.
Penn Top South, 18th Floor
Gastroenterology Program

1. Pancreatitis: Further Observations of Value in Its Recognition
   William F. Lipp, M.D., Buffalo
2. Cholinergic and Anticholinergic Drugs and Their Trial in Treatment of Gastrointestinal Disorders
   Keith S. Grimson, M.D., Durham, North Carolina—*By invitation*
3. Chloromycetin and Antiulcer Factors in the Treatment of Chronic Ulcerative Colitis (One Year Clinical Evaluation)
   Z. T. Bercovitz, M.D., New York City
4. Diarrheal Diseases: A New Specialty
   Wm. Z. Fradkin, M.D., Brooklyn

Section on
INDUSTRIAL MEDICINE AND SURGERY

Chairman......WILLIAM P. ECKES, M.D., New York City
Secretary......H. DAN VICKERS, M.D., Little Falls

Wednesday, May 10—10:00 A.M.
Conference Room 2, Mezzanine Floor

1. Appraisal of Industrial Health Examinations
   Frederick H. Shillito, M.D., New York City
   Discussion: Robert Rehm, M.D., New York City—*By invitation*
2. Periodic Health Examination of Executives
   S. Charles Franco, M.D., New York City
   Discussion: Norman Plummer, M.D., New York City

Thursday, May 11—2:00 P.M.
Conference Room 2, Mezzanine Floor

1. Health and Medical Services for Agricultural Workers in the Tropics
   Edward Salisbury, M.D., New York City
   Discussion: Kenneth Fourcher, M.D., New York City
2. Cortisone: Its Chemistry, Physiologic Activity, and Clinical Applications
   Augustus Gibson, M.D., Rahway, New Jersey—*By invitation*
   Discussion: Thomas H. McGavack, M.D., New York City

Section on
MEDICINE

Chairman..THOMAS H. MCGAVACK, M.D., New York City
Vice-Chairman.........EDWIN W. GATES, M.D., Niagara Falls
Secretary......CHARLES G. WILLIAMSON, M.D., Brooklyn

Thursday, May 11—10:00 A.M.
Keystone Room, Ballroom Balcony

Joint Meeting with the Section on Surgery
(See Section on Surgery)

Friday, May 12—10:00 A.M.
Salle Moderne, 18th Floor

1. Clinical Evaluation of Aureomycin and Chloramphenicol
   Vernon Knight, M.D., New York City—*By invitation*
   Discussion: Z. T. Bercovitz, M.D., New York City; Paul A. Bunn, M.D., Syracuse
2. Serologic Tests in the Diagnosis of Cancer
   Linn J. Boyd, M.D., New York City
   Discussion: Ernest Witebsky, M.D., Buffalo; Gilbert Dalldorf, M.D., Albany
3. Newer Insulins with Special Reference to NPH-50
   Franklin B. Peck, M.D., Indianapolis, Indiana—*By invitation*
   Discussion: Joseph F. Painton, M.D., Buffalo; Joseph Izzo, M.D., Rochester
4. Working Minimum of Hepatic Function Tests for Rationalizing the Treatment of Jaundice
   Franklin M. Hanger, M.D., New York City—*By invitation*
   Discussion: Alfred Lenzner, M.D., Buffalo; Victor Logan, M.D., Rochester

Section on
NEUROLOGY AND PSYCHIATRY

Chairman.....THEODORE J. C. VON STORCH, M.D., Bronx
Secretary.....ORMAN C. PERKINS, M.D., Brooklyn

Thursday, May 11—10:00 A.M.
Headquarters Room, 18th Floor

Joint Meeting with the Section on Pediatrics

1. Epilepsy in Childhood
   William G. Lennox, M.D., Boston, Massachusetts—*By invitation*
2. Craniocerebral Trauma in Infancy and Childhood
   Donald D. Matson, M.D., Boston, Massachusetts—*By invitation*
3. The Common Types of Encephalitis in Children
   Horace L. Hodes, M.D., New York City—*By invitation*
4. Brain Tumors in Infancy and Childhood
   Sidney W. Gross, M.D., New York City

Friday, May 12—10:00 A.M.
Keystone Foyer, Ballroom Balcony

1. Electroencephalography in Metabolic Disease
   Burton M. Shinners, M.D., Buffalo
2. Psychologic Factors of Migraine in Children
   Joel Katz, M.D., New York City—*By invitation*
   Arnold P. Friedman, M.D., New York City
   Ann Gisolfi, Bronx—*By invitation*
3. Mortality in Head Injuries
   Robert Whitfield, M.D., Albany
   Eldridge H. Campbell, M.D., Albany
4. Steroid Therapy in Psychiatric Disorders
   Johan H. W. van Ophuijsen, M.D., New York City
   Mortimer D. Sackler, M.D., New York City

Raymond R. Sackler, M.D., New York City
Arthur M. Sackler, M.D., New York City
By invitation
Marvin Weinberg, M.D., New York City

Section on OBSTETRICS AND GYNECOLOGY

Chairman Joseph H. Cornell, M.D., Schenectady
Secretary Morris Glass, M.D., Brooklyn

Wednesday, May 10—10:00 A.M.
Keystone Room, Ballroom Balcony

1. Pregnancy in the Chronic Cardiac Patient
J. Thornton Wallace, M.D., Brooklyn
Discussion: Edwin P. Maynard, Jr., M.D., Brooklyn
2. Pregnancy with Tuberculosis: Its Management and Prognosis
James Blake, M.D., Schenectady
Discussion: William G. Childress, M.D., Valhalla
3. Hysterography and Hysterosalpingography: An Analysis of 2,500 Cases with Special Emphasis on the Value of the Procedure and Technic
Morris A. Goldberger, M.D., New York City
Richard H. Marshak, M.D., New York City
Arthur M. Davids, M.D., New York City
Discussion: Mortimer N. Hyams, M.D., New York City

Thursday, May 11—2:00 P.M.
Keystone Room, Ballroom Balcony

1. The Early Diagnosis and Treatment of Early Cancer of the Cervix
Paul A. Younge, M.D., Boston, Massachusetts—*By invitation*
Discussion: Frank R. Smith, M.D., New York City
2. The Effect of Therapy on the Incidence of Abortion
Clyde L. Randall, M.D., Buffalo
Discussion: Ward L. Ekas, M.D., Rochester
3. The Role of Complete Surgery in Diseases of the Pelvis
Chester E. Clark, M.D., Syracuse
Discussion: Louis P. Tischler, M.D., Schenectady

Section on OPHTHALMOLOGY AND OTOLARYNGOLOGY

Chairman Walter F. Duggan, M.D., Utica
Secretary Greydon G. Boyd, M.D., New York City

Thursday, May 11—10:00 A.M.
Parlor 2, Ballroom Floor
Ophthalmologic Program

1. The Use of the Superior Rectus in Surgery for Blepharoptosis: A Criticism
Loren P. Guy, M.D., New York City
Discussion: Harold Whaley Brown, M.D., Montclair, New Jersey—*By invitation*
2. Some Practical Uses of Sutures in Ophthalmic Surgery
Charles A. Perera, M.D., New York City
Discussion: Walter S. Atkinson, M.D., Watertown
3. Aneurysms of the Circle of Willis with Particular Reference to Their Ocular Manifestations
Eldridge Campbell, M.D., Albany
C. W. Burklund, M.D., Albany—*By invitation*
Discussion: Harold H. Joy, M.D., Syracuse
4. The Causes of Blindness in New York State
Raymond E. Meek, M.D., New York City
Discussion: Everet H. Wood, M.D., Auburn

Friday, May 12—10:00 A.M.
Conference Room 2, Mezzanine Floor
Otolaryngologic Program

1. Cancer of the Mouth
Hayes Martin, M.D., New York City
Discussion: Irl Hazard Blaisdell, M.D., Syracuse; Clyde Heatly, M.D., Rochester
2. Rehabilitation: The Otolaryngologist in Audiology
Francis L. Lederer, M.D., Chicago, Illinois—*By invitation*
Discussion: George Trainor, M.D., Rochester; Alfred Doust, M.D., Syracuse
3. Topical Medication in Otology
Jules Gyula Waltner, M.D., New York City
Discussion: Paul Gross, M.D., New York City; Benjamin M. Volk, M.D., Albany

Section on ORTHOPEDIC SURGERY

Chairman Otho C. Hudson, M.D., Hempstead
Secretary George H. Marcy, M.D., Buffalo

Thursday, May 11—10:00 A.M.
Parlor 1, Ballroom Floor

Joint Meeting with the Section on Orthopedic Surgery of The New York Academy of Medicine

Chairman
Robert L. Patterson, Jr., M.D., New York City
Secretary
Robert K. Lippmann, M.D., New York City

1. Problems Incurred in the Use of Intramedullary Pins
Frederick H. vom Saal, M.D., New York City
Discussion: Joseph D. Godrey, M.D., Buffalo
2. Diagnosis of Rupture of the Nucleus Pulposus
Lee Ramsay Straub, M.D., New York City
Discussion: Edward T. Wentworth, M.D., Rochester
3. A New Procedure for Subluxation of the Distal End of the Ulna
Frederick Lee Liebolt, M.D., New York City
Discussion: William P. Bartels, M.D., Hempstead

Friday, May 12—10:00 A.M.
Parlor 1, Ballroom Floor

1. SYNOVECTOMY OF THE KNEE JOINT: INDICATIONS AND END RESULTS
   Pio Blanco, M.D., Buffalo
   Discussion: Henry P. Lange, M.D., Brooklyn
2. DISPLACEMENT OF LOWER FEMORAL EPIPHYSIS
   Benjamin E. Obletz, M.D., Buffalo
   Discussion: Edgar M. Bick, M.D., New York City
3. DISABILITY EVALUATION
   Harry V. N. Spaulding, M.D., New York City
4. PARAPLEGIA RESULTING FROM TUBERCULOSIS OF THE SPINE: DIFFICULTIES ENCOUNTERED AND RESULTS FROM SPINAL FUSION
   David Bosworth, M.D., New York City
   A. Della Pietra, M.D., New York City
   Discussion: Mather Cleveland, M.D., New York City

Section on
PATHOLOGY AND CLINICAL PATHOLOGY

Chairman......ARTHUR PURDY STOUT, M.D., New York City
Vice-Chairman......ANDREW A. EGGSTON, M.D., Mt. Vernon
Secretary.......M. J. FEIN, M.D., New York City

Wednesday, May 10—10:00 A.M.
Parlor 1, Ballroom Floor

1. STUDIES ON THE MECHANISM OF RESISTANCE TO TRANSPLANTED CANCER CELLS
   John Kidd, M.D., New York City—*By invitation*
   Discussion: Milton Eisen, M.D., New York City
2. BIOCHEMICAL AIDS IN THE DIAGNOSIS OF CANCER
   Oscar Bodansky, M.D., New York City
   Discussion: Herbert Brendler, M.D., New York City
3. CYTOLOGIC DIAGNOSIS OF CARCINOMA OF THE PROSTATE
   Peter A. Herbut, M.D., Philadelphia, Pennsylvania—*By invitation*
   Discussion: George Papanicolaou, M.D., New York City—*By invitation;* Locke L. Mackenzie, M.D., New York City
4. THE POSSIBILITY OF CORRELATING THE APPEARANCE OF CELLS IN SMEARS AND SECTIONS OF TUMORS
   N. Chandler Foot, M.D., New York City
   Discussion: Sidney A. Gladstone, M.D., New York City; Antonio Rottino, M.D., New York City

Thursday, May 11—2:00 P.M
Penn Top North, 18th Floor

1. CYTOCHEMICAL STUDIES IN ACUTE LUPUS ERYTHEMATOSUS
   Paul Klemperer, M.D., New York City
   Discussion: Alfred Angrist, M.D., Jamaica
2. CHRONIC INFLAMMATORY LESIONS OF THE THYROID GLAND
   Arthur W. Wright, M.D., Albany
   Discussion: Virginia Kneeland Frantz, M.D., New York City
3. EXTENSIVE PLASMOCYTOSIS AND HYPERSENSITIVE STATES
   Theodore Robertson, M.D., New York City—*By invitation*
   Discussion: Milton G. Bohrod, M.D., Rochester
4. PREGNANCY CHANGES IN THE UTERINE CERVIX MISTAKEN FOR EPIDERMOID CARCINOMA IN SITU
   Joseph Schleifstein, M.D., Albany
   Discussion: William F. Finn, M.D., New York City

Section on
PEDIATRICS

Chairman.......JEROME GLASER, M.D., Rochester
Vice-Chairman......REGINALD A. HIGGONS, M.D., Port Chester
Secretary......FREDERICK H. WILKE, M.D., New York City

Thursday, May 11—10:00 A.M.
Headquarters Room, 18th Floor

Joint Meeting with the Section on Neurology and Psychiatry
(See Section on Neurology and Psychiatry)

Friday, May 12—10:00 A.M.
Parlor 2, Ballroom Floor

1. HYALURONIDASE IN PEDIATRIC PRACTICE
   Joseph Schwartzman, M.D., Brooklyn
   Discussion: Ruel A. Benson, M.D., New York City; Philip Cohen, M.D., New York City

Panel Discussion

PRESENT STATUS OF THE SULFONAMIDES AND ANTIBIOTICS IN PEDIATRIC PRACTICE

ERWIN NETER, M.D., Buffalo, *Moderator*

1. THE PRINCIPLES OF SULFONAMIDE AND ANTIBIOTIC THERAPY
   J. M. Ruegsegger, M.D., Pearl River
2. THE PRESENT STATUS OF SULFONAMIDE THERAPY IN PEDIATRICS
   Alfred E. Fischer, M.D., New York City
3. THE PRESENT STATUS OF PENICILLIN AND STREPTOMYCIN THERAPY IN PEDIATRICS
   Herbert C. Soule, M.D., Rochester
4. EVALUATION OF AUREOMYCIN, CHLOROMYCETIN, AND OTHER NEW ANTIOBIOTICS
   Samuel Karelitz, M.D., New York City

Section on
PUBLIC HEALTH, HYGIENE, AND SANITATION

Chairman........WILLIAM A. HOLLA, M.D., White Plains
Secretary...........F. E. COUGHLIN, M.D., Troy

Wednesday, May 10—10:00 A.M.
Keystone Foyer, Ballroom Balcony

1. PUBLIC HEALTH ASPECTS OF HEART DISEASE
   I. Jay Brightman, M.D., Albany
   Discussion: Herman Tarnower, M.D., Scarsdale
2. MILKBORNE POLIO EPISODE
   Michael Lipari, M.D., Oneonta
   Discussion: Robert F. Korns, M.D., Albany

3. Family Utilization of Health Resources
   Olif Larson, Ph.D., Ithaca—*By invitation*
   Walter C. Levy, M.D., Syracuse
   William E. Mosher, Jr., M.D., Cortland
   Discussion: Ray D. Champlin, M.D., Syracuse—*By invitation*
4. The Rehabilitation Program as It Relates to the General Practitioner
   Leon Sternfeld, M.D., Albany—*By invitation*
   Anne M. Bahlke, M.D., Albany
5. Coordination of the Health Education Program and What Makes It Click
   Granville W. Larimore, M.D., Albany—*By invitation*

Thursday, May 11—2:00 P.M.
Parlor 1, Ballroom Floor

1. Treatment of Syphilis from the New Drug Standpoint: Changes Necessary in Handling the Venereal Disease Patient
   Bernard I. Kaplan, M.D., Ossining
   Discussion: James H. Lade, M.D., Albany—*By invitation;* Lopo DeMello, M.D., Pleasantville
2. Tuberculosis in Mental Hospitals
   Julius Katz, M.D., Albany—*By invitation*
3. Relationship of Child Health Conferences to the Private Practice of Medicine
   Reginald A. Higgons, M.D., Port Chester
   Discussion: Norman Survis, M.D., New Rochelle
4. The Teaching of Preventive Medicine in Medical Schools
   Ray E. Trussell, M.D., Albany
   Discussion: Franklyn B. Amos, M.D., Albany

Section on
RADIOLOGY

Chairman........ Ramsay Spillman, M.D., New York City
Vice-Chairman........ E. Forrest Merrill, M.D., Rochester
Secretary.. Robert P. Ball, M.D., New York City

Thursday, May 11—10:00 A.M.
Salle Moderne, 18th Floor

Round Table Discussion

Film Reading Session

Interesting proved cases will be presented for discussion. Discussion leaders will be announced at a later date.

Friday, May 12—10:00 A.M.
Headquarters Room, 18th Floor

1. Duodenal Loop Triad
   William Snow, M.D., New York City
   Jerome A. Marks, M.D., New York City
   Discussion: Robert P. Ball, M.D., New York City
2. Subclinical Mineral Oil Pneumonitis
   Louis Schneider, M.D., Bronx
   Discussion: Henry K. Taylor, M.D., New York City
3. The Role of the Radiologist in Civilian Defense
   James Patrick Cooney, Col. (MC), USA, Washington, D.C.—*By invitation*
   Discussion: Harold W. Jacox, M.D., New York City
4. Presentation of Cinefluorography
   George H. Ramsey, M.D., Rochester
   James S. Watson, Jr., M.D., Rochester
   Sidney Wineberg, M.D., Rochester—*By invitation*
   F. Dreisinger, R.T., Rochester—*By invitation*
   Discussion: William H. Stewart, M.D., New York City

Section on
SURGERY

Chairman........ John H. Mulholland, M.D., New York City
Secretary... John D. Stewart, M.D., Buffalo

Thursday, May 11—10:00 A.M.
Keystone Room, Ballroom Balcony

Joint Meeting with the Section on Medicine

Panel Discussion

Pre- and Postoperative Fluid Therapy

J. H. Talbott, M.D., Buffalo, *Moderator*
George Anderson, M.D., Brooklyn
Ernest S. Breed, M.D., New York City
Henry Thomas Randall, M.D., New York City
Louis M. Rousselot, M.D., New York City
Francis D. Speer, M.D., New York City

Friday, May 12—10:00 A.M.
Keystone Room, Ballroom Balcony

1. Arteriosclerotic and Diabetic Gangrene of the Feet
   John B. McKittrick, M.D., Brookline, Massachusetts—*By invitation*
   Discussion: Beverly Chew Smith, M.D., New York City
2. The Management of Regional Lymph Node Metastases
   Grantley Walder Taylor, M.D., Boston, Massachusetts—*By invitation*
   Discussion: William L. Watson, M.D., New York City
3. Intestinal Obstruction
   Earle Mahoney, M.D., Rochester
   Discussion: Frank McGowan, M.D., New York City
4. Recent Knowledge of Preoperative Preparation Influencing Mortality
   John S. Lockwood, M.D., New York City
   Discussion: Charles Gardner Child, III, M.D., New York City

Section on
UROLOGY

Chairman..... William A. Milner, M.D., Albany
Vice-Chairman........ Robert S. Hotchkiss, M.D., New York City
Secretary........ Walter G. Hayward, M.D., Jamestown

Wednesday, May 10—10:00 A.M.
Parlor 2, Ballroom Floor

1. PYELOGRAM CLINIC
   William R. Delzell, M.D., New York City

2. ANOMALIES OF THE KIDNEY AND URETER
   Meredith F. Campbell, M.D., New York City
   Discussion: Adolph G. DeSanctis, M.D., New York City; William B. Garlick, M.D., Albany

3. TESTICULAR TUMORS
   Archie L. Dean, M.D., New York City
   Discussion: William J. Staubwitz, M.D., Buffalo—*By invitation*

Thursday, May 11—2:00 P.M.
Parlor 2, Ballroom Floor

1. URACHAL CYST WITH REPORT OF TWO CASES
   Henry C. Engster, M.D., Troy
   Discussion: Gustavus A. Humphreys, M.D., New York City

2. CONSERVATIVE SURGERY IN THE TREATMENT OF HYDRONEPHROSIS
   Vincent J. O'Conor, M.D., Chicago, Illinois—*By invitation*
   Discussion: Albert M. Crance, M.D., Geneva

3. CLINICAL RESULTS OF THE TREATMENT OF CANCER OF THE PROSTATE
   Thomas F. Howley, M.D., New York City
   Discussion: Leo E. Gibson, M.D., Syracuse

SESSIONS

Session on
HISTORY OF MEDICINE

Chairman... GEORGE ROSEN, M.D., New York City
Vice-Chairman............ LEONARD J. SCHIFF, M.D., Plattsburg
Secretary............ FREDERIC D. ZEMAN, M.D., New York City

Thursday, May 11—8:00 P.M.
Salle Moderne, 18th Floor

1. THE CHANGING EPIDEMIOLOGIC PATTERN IN NEW YORK CITY
   Wilson G. Smillie, M.D., New York City

2. DEVELOPMENT OF CARE FOR THE ORTHOPEDICALLY HANDICAPPED IN NEW YORK CITY
   Edgar M. Bick, M.D., New York City

EVENING MEETING—OPEN TO PUBLIC

Session on
PHYSICAL MEDICINE

Chairman............ HANS J. BEHREND, M.D., New York City
Secretary...... THOMAS E. WALSH, M.D., Syracuse

Thursday, May 11—10:00 A.M.
Penn Top North, 18th Floor

1. HYDROTHERAPY IN CONVALESCENT POLIOMYELITIS
   Robert L. Bennett, M.D., Warm Springs, Georgia—*By invitation*
   Discussion: A. D. Gurewitsch, M.D., New York City

2. MODERN CONCEPTS OF DIATHERMY
   Jerome Weiss, M.D., Brooklyn
   Discussion: Richard Kovacs, M.D., New York City

3. THE ROLE OF PHYSICAL THERAPY IN REHABILITATION
   George M. Raus, M.D., Syracuse
   Discussion: William Bierman, M.D., New York City; Michael M. Dacso, M.D., New York City

WOMAN'S AUXILIARY

TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

ANNUAL CONVENTION

Hotel Statler, New York City, May 7 to 10, 1950

THE ANNUAL CONVENTION of the Woman's Auxiliary to the Medical Society of the State of New York will be held May 7 to 10, 1950, at the Hotel Statler in New York City.

All doctors' wives, whether or not members of a Woman's Auxiliary to a County Medical Society, are urged to register at the Registration Desk, Foyer of the Salle Moderne, 18th Floor. They are cordially invited to participate in all parts of the program.

PROGRAM

Sunday, May 7

2:00 P.M.–5:00 P.M.	Registration of Delegates, Alternates, Guests—**Salle Moderne Foyer, 18th Floor** Registration for Luncheon, Monday, May 8, 12 NOON; for Supper Party, Tuesday, May 9, 7:00 P.M.
4:00 P.M.–6:00 P.M.	Reception*—**Salle Moderne, 18th Floor**

Monday, May 8

9:00 A.M.–5:00 P.M.	Registration, all doctors' wives—**Salle Moderne Foyer, 18th Floor** Registration for Luncheon, until 12 NOON Registration for Supper Party, Tuesday, May 9, 7:00 P.M.
9:00 A.M.–5:00 P.M.	Registration of Delegates—**Salle Moderne Foyer, 18th Floor**
9:00 A.M.	Preconvention Meeting of Executive Board—**Keystone Room, Ballroom Balcony**
12 NOON	Luncheon—**Salle Moderne, 18th Floor**
3:15 P.M.	House of Delegates Meeting, First Session—**Keystone Room, Ballroom Balcony**

Tuesday, May 9

9:00 A.M.–5:00 P.M.	Registration of all doctors' wives—**Salle Moderne Foyer, 18th Floor** Registration for Supper Party, 7:00 P.M.
9:00 A.M.	House of Delegates Meeting, Second Session—**Salle Moderne, 18th Floor**
2:00 P.M.	House of Delegates Meeting, Final Session—**Salle Moderne, 18th Floor**
7:00 P.M.	Supper Party—**Salle Moderne, 18th Floor**

Wednesday, May 10

2:00 P.M.	Postconvention Meeting of Executive Board and County Presidents' Conference—**Conference Room 2, Mezzanine**
7:00 P.M.	Banquet, Medical Society of the State of New York—**Penn Top, 18th Floor**

OFFICERS

President, Mrs. William J. LaVelle
President-Elect, Mrs. Hugh Henry
First Vice-President, Mrs. Herman W. Galster
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Corresponding Secretary, Mrs. A. Braunstein

Convention Committee

Chairman, Mrs. Michael M. Schultz
89–36 190 Street, Hollis
Cochairman, Mrs. Charles E. Scofield
880 Park Place, Brooklyn

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* Courtesy of VanPelt and Brown, Incorporated.

WOMEN'S MEDICAL SOCIETY OF NEW YORK STATE

ANNUAL MEETING

Hotel Statler, New York, May 7 to 8, 1950

THE forty-third annual meeting of the Women's Medical Society of New York State will be held in New York City, May 7 and 8.

There will be an informal meeting on Sunday, May 7.

PROGRAM—Monday, May 8

9:00 A.M.	Registration Business Meeting—**Conference Room 2, Mezzanine Floor**
12 NOON	Luncheon—**Times Service Restaurant, Times Building**
2:00 P.M.	Scientific Meeting—**Conference Room 2, Mezzanine Floor**

Program for Scientific Meeting

1. THE GYNECOLOGIC ASPECT OF COMMON MARITAL PROBLEMS
   Sophia J. Kleegman, M.D., New York City
   Discussion: Lewis Sharp, M.D., New York City; Abraham Stone, M.D., New York City; Robert L. Dickinson, M.D., New York City
2. QUESTION OF SPONTANEOUS OUTGROWING TO ALLERGY
   Leoni N. Claman, M.D., New York City
   Discussion: Gertrude Felshin, M.D., New York City
3. SOME ANATOMIC MANIFESTATIONS OF HOMEOSTASIS
   Alice Ida Bernheim, M.D., New York City
   Discussion: Abraham Penner, M.D., New York City

Officers of the Women's Medical Society

Honorary Presidents

Mary T. Greene, M.D.
Helene J. C. Kuhlmann, M.D.
Rosalie Slaughter Morton, M.D.

President

Adelaide Romaine, M.D.
35 West 9th St., New York City

Vice-Presidents

Elizabeth Vuornos, M.D.
12 Chestnut St., Liberty
Rose M. Lenahan, M.D.
605 Lafayette Ave., Buffalo
Myrtle Wilcox-Vincent, M.D.
134 Main St., Binghamton

Secretary

Mabel Silverberg, M.D.
2 West 87th St., New York City

Treasurer

Julia Lichtenstein, M.D.
2 West 87th St., New York City

COUNCILLORS

1st District Branch

Madge C. L. McGuinness, M.D.
51 East 87th St., New York City

2nd District Branch

Isabelle F. Borden, M.D.
83-09 35th Ave., Jackson Heights

3rd District Branch

Matié E. Green, M.D.
11 South Lake Ave., Albany

4th District Branch

To be announced

5th District Branch

Marguerite McCarthy-Brough, M.D.
1811 West Genesee St., Syracuse

6th District Branch

Margaret Vencko, M.D.
88 Oak St., Binghamton

7th District Branch

Julia A. Delehanty, M.D.
41 Main St., Geneseo

8th District Branch

Harriet Hosmer, M.D.
333 Linwood Ave., Buffalo

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Emily Dunning Barringer, M.D.
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Mary J. Kazmierczak, M.D.
Clara H. Pierce, M.D.
Elise S. L'Esperance, M.D.
Madge C. L. McGuinness, M.D.
Marguerite P. McCarthy, M.D.
Theresa Scanlan, M.D.
Helen G. Walker, M.D.

Honorary Members

Judge Dorothy Kenyon
Catherine Macfarlane, M.D.

CHAIRMEN OF COMMITTEES

Scientific Program

Gertrude Felshin, M.D.
888 Park Ave., New York City

Legislative

Lois J. Plummer, M.D.
131 Linwood Ave., Buffalo

Medical Education

Mary T. Greene, M.D.
Sanitarium, Castile

Public Health

Sophie Rabinoff, M.D.
166 East 96th St., New York City

Public Relations

Leoni Claman, M.D.
40 East 88th St., New York City

Membership

Dr. Helen G. Walker
2750 Main St., Buffalo

Resolutions

Anna P. Walsh, M.D.
391 Jersey St., Buffalo

Medical Economics

Helen Toskov, M.D.
526 Linwood Ave., Buffalo

Arrangements

Flori D. Frothingham, M.D.
133 East 58th St., New York City

Publicity

Madge C. L. McGuinness, M.D.
51 East 87th St., New York City
Sara Bass, M.D.
333 East 80th St., New York City

SCIENTIFIC EXHIBITS

Hotel Statler, New York, May 9 to 12, 1950

J. G. FRED HISS, *Chairman*, Syracuse
ALFRED H. NOEHREN, M.D., Buffalo
BEVERLY CHEW SMITH, M.D., New York City

BALCONY OF GRAND BALLROOM

BOOTHS 201 TO 232

THE "2-STEP" TEST IN THE DIAGNOSIS OF CORONARY INSUFFICIENCY

Arthur M. Master, M.D.
Leon Pordy, M.D.
Harold S. Arai, M.D.
Leonard E. Field, M.D.
Sidney Storch, M.D.
Mount Sinai Hospital
New York City

Diagnosis of coronary disease is often complicated because objective evidence cannot be obtained in 25 to 40 per cent of patients. Physiologically, electrocardiographic indications of coronary insufficiency are more likely to become evident in tracings made following standard exercise than at rest. Coronary insufficiency is considered to be ruled out if two tests are negative, a standard and then a "double 2-step." Coronary insufficiency exists if the electrocardiogram following the "2-step" exercise is positive. Depression of the RS-T of over 0.5 mm. in any lead is a positive result, as is a change from an upright T wave to an isoelectric or inverted T wave. The "2-step" test is a simple standardized walking procedure and produces no untoward reactions. (*Booth 201*)

APPLICATIONS OF ELECTROKYMOGRAPHY IN THE DIAGNOSIS OF CARDIAC DISEASE

Simon Dack, M.D.
David H. Paley, M.D.
Mount Sinai Hospital
New York City

Electrokymography is a new method for the study of cardiac pulsations based on the use of the photosensitive multiplier tube. With this method it has become possible to amplify and record the movements of each cardiac chamber in the form of a pulse curve, simultaneously with the electrocardiogram, phonocardiogram, and carotid pulse tracing. In this exhibit are illustrated the technic of recording and the application of electrokymography in normal individuals and in the diagnosis of the following cardiac diseases: (1) myocardial infarction and ventricular aneurysm, (2) valvular heart disease, (3) congenital heart disease, (4) pericarditis, (5) bundle branch block, (6) aortic aneurysm and mediastinal tumor, (7) myasthenia gravis, and (8) cardiac arrhythmias. (*Booth 202*)

THE DIAGNOSIS OF ARRHYTHMIAS BY ESOPHAGEAL LEADS

Charles D. Enselberg, M.D.
Montefiore Hospital
New York City

Enlarged photographic reproductions of electrocardiograms, conventional and esophageal leads, show the characteristic appearance in normal rhythm and in arrhythmias. The latter include premature systoles and tachycardias arising from the sinus node, auricles, auriculoventricular node, and ventricles; auricular flutter and fibrillation; sinus arrest; interference dissociation; all grades of auriculoventricular block; Wolff-Parkinson-White syndrome, and several complex arrhythmias not capable of elucidation except by esophageal leads. The form of the auricular complex, including its T wave, is exceptionally well shown. Criteria for the differential diagnosis of arrhythmias by this ultimate method are given. (*Booth 203*)

ETIOLOGIC DIAGNOSIS OF HEART DISEASE

American Heart Association, Inc.
New York City

The exhibit consists of three panels. They chart the leading causes of death in six age groups, list the various etiologic causes for heart disease, give the criteria of the American Heart Association for such diagnosis in six leading types, show colored illustrations of pathologic classifications, and give the aims and purposes of the American Heart Association as a voluntary health agency in the field of cardiovascular disease. (*Booth 204*)

DISORDERS OF THE HEART BEAT: NEW METHOD OF TEACHING

Esterino E. Santemma, M.D.
Meadowbrook Hospital
Hempstead

In order to facilitate the teaching of the disorders of the heart beat, electrocardiographic tracings have been superimposed on a diagrammatic heart. Briefly, the method employs four plates, the first being the master plate, which demonstrates in one view the major disorders and where they originate. The remaining three plates present sample electrocardiographic tracings, again showing the point of origin and grouped for easy visualization. The work represents the views as presented in current textbooks on electrocardiography; only those views that make for simplicity of understanding have been adopted. *(Booth 205)*

PATHOLOGY OF THE EYE IN OLD AGE

Abraham L. Kornzweig, M.D.
Hospital and Home for Aged and Infirm Hebrews
New York City

The material for this exhibit was obtained from postmortem study of 120 eyes of patients at the Hospital and Home for Aged and Infirm Hebrews. Death occurred chiefly between the ages of seventy and ninety years. The usual and common findings in the eyes of old people were classified. The unusual findings were also noted, even if they occurred in only one case. Clinical examinations were done on all of these patients, but this exhibit relates chiefly to the pathologic findings in the eyes at postmortem. All of the usual and many of the unusual findings are shown by a series of colored photomicrographs and an explanatory text. *(Booth 206)*

OCULAR PATHOLOGY IN GENERAL MEDICINE

Samuel Gartner, M.D.
Abraham Schlossman, M.D.
Edwin Billet, M.D.
Montefiore Hospital
New York City

A series of transparencies, mainly in color, will demonstrate the ocular pathology in a number of medical conditions. Among others, diabetes, tuberculosis, leukemia, lymphosarcoma, and metastatic tumors will be shown. *(Booth 207)*

THE CROSS-EYED CHILD

Emanuel Krimsky, M.D.
Brooklyn

Strabismus or cross-eye is an especially prevalent condition. Because it usually becomes evident in early childhood, it calls for early detection and evaluation and for the institution of corrective measures, whenever possible. This exhibit aims to portray the problem of cross-eyes in terms of possible origin, including heredity, of simple methods of diagnosis, of its relation to possible visual loss, and from the standpoint of recognized methods of treatment. *(Booth 208)*

EARLY RECOGNITION OF GLAUCOMA SAVES SIGHT

Franklin M. Foote, M.D.
Willis S. Knighton, M.D.
Virginia Smith Boyce, B.A.
National Society for the Prevention of Blindness
New York City

Graphic presentation of methods to discover early glaucoma. Transparencies showing special tests and procedures used in the diagnosis and control of glaucoma. Charts showing glaucoma statistics and outline of glaucoma control program. *(Booth 209)*

MODERN TREATMENT OF ALCOHOLIC PATIENTS

Western New York Committee for Education on Alcoholism, Inc.
Edwin E. Steward
University of Buffalo School of Medicine
Buffalo

Posters portraying the New York State pilot program for research and treatment in alcoholism are accompanied by an explanation of organization and therapy, with material on recent developments and the use of drugs in the treatment of alcoholic patients. *(Booth 210)*

DIARRHEAL DISEASES: A NEW SPECIALTY

Wm. Z. Fradkin, M.D.
Jewish Hospital of Brooklyn
Brooklyn

Discussion of diarrhea as a subspecialty with a presentation of charts, models, and instruments in use at the present time in this rapidly growing field of gastroenterology. *(Booth 211)*

TESTS USEFUL TO THE GENERAL PRACTITIONER IN THE DIFFERENTIAL DIAGNOSIS OF JAUNDICE

Carl H. Greene, M.D.
Maurice Bruger, M.D.
Elliot Oppenheim, M.D.
New York University Post-Graduate Medical School
New York City

Charts describe the various types of tests of hepatic function. Histories of illustrative cases are given to show the use of these tests in the differential diagnosis of jaundice. *(Booth 212)*

LATEX-COVERED OBSTETRIC FORCEPS BLADES

Emanuel M. Greenberg, M.D.
Beth Israel Hospital
New York City

Obstetric forceps blades may be cushioned by rubber in order to reduce trauma to the newborn skull. The blades are dipped in liquid latex until a thin coating is applied. Such rubberization is applicable to any type of obstetric forceps. An actual pair of rubberized forceps will be demonstrated, together with suitable printing on a chart. *(Booth 213)*

REVERSIBLE BRONCHIECTASIS

Walter Finke, M.D.
Genesee Hospital
Rochester

Outstanding observations and views on the problem of reversible bronchiectasis since Laennec. Previously reported cases of proved reversed bronchial dilatation. Factors indicating that "pseudobronchiectasis" represents an early, transient stage of permanent chronic bronchiectasis and favoring a more dynamic approach to this disease.

Reports and evaluation of four additional cases of partly or completely reversed bronchiectasis.

Diagnostic and therapeutic problems. Detection of early bronchiectasis. Indications for its possibly reversible character. Medical management in minimal cases should aim at preventing their chronicity by eliminating the underlying infectious process (antibiotics) and assuring free bronchial drainage (liquefying agents, bronchodilators, postural drainage, etc.). In this way eventual cure may be hoped for. *(Booth 214)*

ERYTHROBLASTOSIS FETALIS—ANTENATAL DIAGNOSIS AND RESULTS OF TREATMENT BY EXCHANGE TRANSFUSION

Alexander S. Wiener, M.D.
Irving B. Wexler, M.D.
Jewish Hospital of Brooklyn
Brooklyn

Tests for univalent and bivalent Rh antibodies are explained diagrammatically. Statistics are presented showing correlation between antibody titer and stillbirth rate. The authors' method of exchange transfusion is described in colored illustrations and charts giving the percentage of exchange. The postoperative course is also shown. Tables give the statistical analysis of results, showing a reduced mortality rate and absence of neurologic sequelae. (*Booth 215*)

THE PROBLEM OF CEREBRAL PALSY

Herman E. Hilleboe, M.D.
I. Jay Brightman, M.D.
Granville W. Larimore, M.D.
New York State Department of Health

Some of the problems connected with cerebral palsy are presented. They include the incidence of the disease, case-finding procedures, and the facilities for care. Emphasis will be placed upon the role of the general practitioner in the handling of the disease. (*Booth 216*)

DUODENAL LOOP TRIAD

William Snow, M.D.
Harlem Hospital
Bronx Hospital
New York City

Roentgen Findings: (1) Duodenal loop—thickened mucosa, dilatation, intermittent spasm; (2) gallbladder—failure of visualization with radiopaque medium, faint visualization with radiopaque medium, stones; (3) pancreas—diffuse calcification, pseudocystic enlargement of the head.

Usual Etiology: Alcohol, chemical irritation, infection, duodenal ulcer with adhesions, allergy, right heart failure, and contributory physical exertion.

Symptoms and Signs: (1) Duodenal—indigestion, fullness in epigastrium, belching, and heartburn (indicating high intestinal tract irritation); (2) biliary—biliary colic, jaundice, and other complications of the system; (3) pancreatic—sharp attacks of raw, griping, colicky pain to the left of the umbilicus radiating to the left shoulder; nausea and vomiting.

Treatment: (1) Removal of causes; (2) in severe recurrent pancreatitis subtotal gastrectomy relieves the condition, possibly by sidetracking the food from the duodenal loop and alleviating the duodenitis. (*Booth 217*)

ADENOMAS OF COLON AND RECTUM

Robert Turell, M.D.
Beth Israel Hospital
Harlem Hospital
New York City

The diagnosis and treatment, electrothermic and surgical, are described. All types of adenomas, small and large, pedunculated and sessile, benign and malignant, will be shown in photographs. An illuminated latex model and an x-ray viewing box with slides of microscopy will be included. (*Booth 218*)

SEGMENTAL RESECTION IN PULMONARY SURGERY

Emil A. Naclerio, M.D.
Columbus Hospital
New York City
Lew A. Hochberg, M.D.
Kings County Hospital
Brooklyn

The purposes of the exhibit are to emphasize the importance of the segmental conception of pulmonary anatomy, to discuss the clinical importance of the lung, and to present a number of representative cases operated upon by the exhibitors in which the concept of segmental resection has been utilized. Surgical methods used in the removal of the subdivision of the lobe are also enumerated. (*Booth 219*)

DIAGNOSIS OF LIPOID PNEUMONIA BY SPUTUM EXAMINATION

Louis Nathanson, M.D.
Samuel Losner, M.D.
Mendel Jacobi, M.D.
B. W. Volk, M.D.
Walter R. Slade, M.D.
Jewish Sanitarium and Hospital for Chronic Diseases
Brooklyn

A method of cytologic sputum examination for the diagnosis of lipoid pneumonia is described showing a characteristic picture, revealing lipophages and free lipoid, staining positive with Sudan IV. A survey of 368 chronically ill patients by using this technic revealed 51 cases of lipoid pneumonia, 13.8 per cent, 42 of which were confirmed by aspiration biopsy from the lung. Only 37 of these patients were diagnosed clinically and roentgenologically as lipoid pneumonia. Forty-two patients had intermittent productive cough; nine had no pulmonary symptoms. The employed method of sputum examination is very helpful in establishing the otherwise difficult clinical diagnosis of lipoid pneumonia. (*Booth 220*)

SUBCLINICAL PNEUMONITIS IN THE ADULT DUE TO MINERAL OIL

Louis Schneider, M.D.
School of Public Health, Columbia University
New York City Health Department
New York City

Widespread use of chest film routinely and in tuberculosis surveys is uncovering many cases of benign basal pneumonitis in the apparently well adult due to repeated aspiration of mineral oil. The majority of cases thus discovered is traceable to use of mineral oil as laxative, while a few have resulted from the nasal instillation of liquid petrolatum. Salient points regarding the history of oil intake, the x-ray features of this man-made disease, and sputum studies are emphasized. This entity has been frequently mistaken for carcinoma of the bronchus, an error which has led to needless pulmonary resection. (*Booth 221*)

THE DEVELOPMENT OF PULMONARY TUBERCULOSIS IN PERSONS OVER FORTY YEARS OF AGE

Vera Leites, M.D.
Aaron D. Chaves, M.D.
Bureau of Tuberculosis, New York City Department of Health
New York City

Pulmonary tuberculosis, formerly considered a disease of young people, has become of increasing importance in elderly persons. In New York City of 17,454 deaths from tuberculosis in the five-year period 1942 to 1946, 10,496, or 60 per cent, occurred in persons above forty years of age. The exhibit consists of two groups of cases. The first group presents films of patients over forty years of age showing the development of pulmonary tuberculosis within a variable period after a normal chest film had been obtained. The other group illustrates the frequently progressive course of minimal pulmonary tuberculosis in elderly persons. Increased attention of the family physician to the frequency and possible seriousness of pulmonary tuberculosis in elderly persons will lead to earlier diagnosis and treatment. (*Booth 222*)

Variational Anatomy of the Middle Colic Artery: Its Significance in Gastric and Colonic Surgery

Alfred L. Shapiro, M.D.
Brooklyn Cancer Institute
Beth-El Hospital
Brooklyn

The variational anatomy of the middle colic artery is described as present in one hundred original dissections. The study is presented in a series of diagrams, charts, and photographs, with particular reference to the significance of these structures in enteroanastomoses, gastrectomy, and collectomy. (*Booth 223*)

Upright Simultaneous Stereoscopic Visualization of all the Digestive Organs

A. L. Soresi, M.D.
Greenpoint Hospital
Brooklyn

Unique features of simultaneous upright stereoscopic visualization of all digestive organs are exact position, contour, and interrelations of stomach, duodenum, liver, gallbladder, spleen, small intestine, and colon, revealed as clearly as if abdomen were transparent.

Truly living anatomy, physiology, and pathology of digestive organs becomes self-evident. Thus, effects of postoperative adhesions, an hitherto unknown pyloro-duodeno-cholecysto-colon-appendicular syndrome, are revealed, explaining the pathogenesis of most digestive disturbances, with clear indications for treatment. Upright visualization is essential, because most digestive disturbances are due to the upright position assumed by humans.

Two tubes, special diaphragm, gravity film changer, working harmoniously allow taking two films in about one second, with two-tenths-second exposure at 400 ma. (*Booth 224*)

Congenital Tumors and Structural Defects in Childhood

Harold W. Dargeon, M.D.
Memorial Hospital
New York City

Congenital structural defects are observed with frequency in pediatric practice. Many childhood neoplasms are of a congenital nature. The exhibit shows examples of the not infrequent occurrence of the tumor and structural anomaly in the same child. (*Booth 225*)

Clinical Aids in the Diagnosis of Neurocirculatory Asthenia

Jacob J. Silverman, M.D.
Staten Island Hospital
Staten Island

In studying a large group of patients who manifested cardiac complaints without demonstrating organic heart disease, it was found that a correlation of the palmar sweat response and the presence of a tremor gave important clinical information. The sweat studies were obtained by observing the type of print the fingerprints portrayed upon chemically treated paper. To record the tremors an ordinary 6-inch loudspeaker was enclosed in an airtight chamber. The vibration of the fingers made contact with this apparatus, and an ordinary electrocardiographic machine was placed in circuit to photograph and record the tremor waves. Various types of tremor and sweat pattern were obtained. It was found that a tremor of large amplitude associated with an excessive palmar sweat response was of diagnostic significance.

The exhibit consists of charts, photographs, and models of the apparatus. (*Booth 226*)

Hysterography and Uterosalpingography in the Diagnosis of Intrauterine and Intramural Lesions

Morris A. Goldberger, M.D.
Richard H. Marshak, M.D.
Arthur M. Davids, M.D.
Mount Sinai Hospital
New York City

Hysterography and uterosalpingography are very valuable in the diagnosis of intrauterine and intratubular pathology. They are of special value in patients where the history, the clinical picture, or the bimanual examination do not give sufficient evidence of an exact diagnosis or indicate the method or extent of the intrauterine process. Submucous fibroids, adenomyosis uteri, endometrial polypi, placental polyps, carcinoma of the uterus, and congenital malformation will be presented. There will be an analysis of 3,500 cases especially as to the safety of the procedure, comparison of the various contrast media, and the technic employed. (*Booth 227*)

Sponge Biopsy: A New Method in Cancer Diagnosis

Sidney A. Gladstone, M.D.
New York Polyclinic Medical School and Hospital
New York City

Sponge biopsy is the microscopic examination of tissue particles procured by rubbing a suitable sponge over an accessible ulcer or mucous membrane. The sponge (gelatin or cellulose) and absorbed contents are fixed in formalin, embedded in paraffin, cut, and stained by hematoxylin and eosin in the routine manner, prior to microscopic examination by the pathologist. The simplicity of the method lends itself to office practice in the diagnosis of ulcerative lesions of the cervix, rectum, skin, mouth, etc. as to the presence or absence of cancer. The reliability of the method closely approximates that of surgical biopsy. The method is pre-eminently suitable for the diagnosis of early superficial carcinoma of the cervix before the onset of clinical signs or symptoms. (*Booth 228*)

Reconstructive Surgery

Mortimer M. Kopp, M.D.
Beth-El Hospital
Lutheran Hospital
Maimonides Hospital
Brooklyn

Heroic instructive models and schematic drawings and photographs of surgical reconstructive procedures for various surface defects of congenital and acquired origin will be shown. (*Booth 229*)

TISSUE TRANSPLANTATION AND PEDIATRIC PLASTIC SURGERY

Wilson A. Swanker, M.D.
D. McCullagh Mayer, M.D.
J. Eastman Sheehan, M.D.
St. Clare's Hospital
New York Medical College
New York City

Tissue transplantation will be presented by means of photographs and sketches depicting the methods and the results of transplantation of the various locations. Step procedure drawings will be used.

A pictorial presentation of information as to the optimal time for surgery will be offered as an illustration of what the general practitioner and the pediatrician can offer patients in the way of plastic rehabilitation. (*Booth 230*)

RECONSTRUCTIVE SURGERY

Morton I. Berson, M.D.
New York City

Tissue transplantation is shown by moulages, photographs, sketches, and stereopticon slides presenting new surgical procedures in contracture sequelae of burns and in the correction of industrial, road, and domestic injuries, in which there is total or subtotal loss of tissue. Use of tube pedicles, split-skin and full-thickness grafts, derma-fat-fascia grafts, and bone and cartilage grafts is shown. (*Booth 231*)

RESECTION ANGULATION OPERATION FOR ARTHRITIS OF THE HIP: FUNCTIONAL RESTORATION OF THE HIP WITHOUT ANATOMIC RECONSTRUCTION

Henry Milch, M.D.
Abraham L. Umansky, M.D.
Hospital for Joint Diseases
New York City

The objective of the operation is the restoration of relatively painless mobility without loss of stability. This is accomplished by (1) resection of the femoral head and neck (by removal of the incongruent head, pain and limitation of motion are eliminated; by resection of the neck, a sufficient hiatus is provided to minimize the possibility of reankylosis) and (2) the abduction or pelvic support type of osteotomy.

The procedure has been employed in cases of traumatic arthritis following nonunion of the femoral neck, in quiescent rheumatoid arthritis, in malum coxae senilis, and osteoarthritis of diverse etiology. It has been employed in patients between the ages of fifteen and ninety-one. It does not involve any prolonged plaster immobilization, and patients may leave the hospital within six weeks after operation. (*Booth 232*)

EXHIBIT AREA

BOOTHS 233 TO 236

BEHCET'S SYNDROME: APHTHOSIS

Helen Ollendorff Curth, M.D.
Columbia University, College of Physicians and Surgeons
New York City

Behcet's syndrome, aphthosis, is a benign systemic disease characterized by recurrent attacks of uveitis (iritis or iridocyclitis) with hypopyon, oral aphthae, and genital ulcerations. The ocular disease usually leads to blindness in both eyes. Cases with any two of the classic signs are considered abortive forms of the disease. Associated signs such as a high degree of nonspecific cutaneous hypersensitivity, erythema nodosum, and various infectious processes of the skin, muscles, gastrointestinal tract, etc. have been observed in many patients. No definite cause of the disease has as yet been established. Treatment has not been successful. The differential diagnosis is discussed. (*Booth 233*)

ETIOLOGIC FACTORS IN DIABETES

Jacob Schwartz, M.D.
Beth-El Hospital
Brooklyn Women's Hospital
Brooklyn

Charts summarize a statistical study of diabetes among 11,188 patients treated over a thirty-eight-year span of private practice in which 99 per cent of the patients were of Jewish origin. The author believes that the exhibit demonstrates, inter alia, the following propositions.

1. The incidence of diabetes among Jews is no higher than among other groups.
2. While obesity creates a predisposition to diabetes, it is not a primary contributing factor as is generally contended.
3. Prolonged hypertension, with the resultant arteriosclerosis of the blood vessels of the pancreas, contributes significantly to diabetes.
4. Pregnancy is of much greater importance in explaining the higher incidence of diabetes in women than has been previously supposed. (*Booth 234*)

PATHOLOGIC CHANGES IN THE COMPONENT JOINTS OF THE SHOULDER

Charles J. Sutro, M.D.
Hospital for Joint Diseases
New York City

One hundred shoulder regions were obtained from postmortems. The humeroglenoidal, acromioclavicular, and sternoclavicular joints and the contiguous soft parts were examined and findings correlated by radiographic and histologic preparations. In many instances serial histologic mounts of the upper ends of the humeri were prepared in order to interpret the radiographic findings. Special emphasis was placed on the humeroglenoidal "cuff" and its site of insertion. An attempt was made to explain by histologic studies the "cystic" areas frequently noted in the radiographs of the proximal end of the humerus. Radiographs, photographs, and microscopic preparations will be the basis of the exhibit. (*Booth 235*)

The Application of the Benzodioxane Test in the Diagnosis of the Diencephalic Syndrome

Harry Mandelbaum, M.D.
Leon E. Fierer, M.D.
Samuel Spatt, M.D.
Jewish Hospital of Brooklyn
Brooklyn

Charts describe the diencephalic syndrome, illustrate reactions to the benzodioxane test (negative response, hypotensive action in pheochromocytoma, and pressor reaction in diencephalic syndrome), and give a statistical analysis of responses to the test in a group of patients studied because of a marked lability of blood pressure. (*Booth 236*)

Parlor A
Parlor B
Booths 237 to 249

Automatic Syringe and Its Application in Medicine, Surgery, and Experimental Research

George B. Jerzy Glass, M.D.
New York Medical College
New York City

Presentation of the new electrically controlled device invented by the exhibitor for automatic administration of injections and infusions of various volumes of drugs (5 to 100 cc.) at a precise rate of speed ranging from a few minutes to several hours and electrically maintained at a fixed rate by setting the dial of the instrument. This instrument may be applied to a wide range of procedures including administration of pentothal and procaine during operation, local and caudal anesthesia, blocks, slow injection of any drug which gives side-effects if injected quickly, administration of any substance tested in experimental research at controlled predetermined rate, slow intravenous infusions of sodium amytal in narcoanalysis, procaine in pains and collagen diseases, myanesin in spasticities, coramine or picrotoxin in poisonings, heparin in anticoagulant treatment, histamine in allergic conditions, magnesium sulfate in convulsions, penicillin when high and steady blood levels are required, diodrast and lipiodol in urography, myelography, and salpingography. (*Booth 237*)

Histamine Biochemotherapy in Suggested Psychiatric Disorders

Johan H. W. van Ophuijsen, M.D.
Arthur M. Sackler, M.D.
Mortimer D. Sackler, M.D.
Raymond R. Sackler, M.D.
Creedmoor State Hospital
Queens Village

An outline of histamine biochemotherapy for psychiatric disorders, particularly schizophrenia, details technic, dosages, somatic reactions, contraindications, psychiatric response, and results. Sound recordings of patients' descriptions of the effects of therapy are presented. (*Booth 238*)

Hypoalbuminemia and Renal Lesions in Experimental Hyperglobulinemia

Ralph M. Sussman, M.D.
Selwyn Z. Freed, M.D.
Beth Israel Hospital
New York City

When homologous gamma globulin is injected intraperitoneally into rabbits over a prolonged period of time, a hyperglobulinemia is produced. This is accompanied by a hypoalbuminemia. In the renal glomeruli of these animals a characteristic lesion is produced which resembles intercapillary glomerulosclerosis (Kimmelstiel-Wilson). There is also anatomic evidence in the proximal tubules of the kidneys of an active reabsorption of the filtered protein. (*Booth 239*)

Sulfonamide Mixture Therapy

David Lehr, M.D.
New York Medical College,
Flower and Fifth Avenue Hospitals
New York City

The exhibit illustrates (1) the relative merits and drawbacks of sulfonamide drugs available at present for use in mixtures, (2) the factors which determine the selection of appropriate drugs in optimum proportions, and (3) a new concept of sulfonamide allergy. Sulfadiazine and sulfamerazine qualify for first and second place, respectively, as mixture components. Sulfathiazole, sulfapyrazine, sulfamethazine, and sulfacetimide deserve attention as possible third and fourth members of a combination. (*Booth 240*)

Sphenopalatine Ganglionic Block for the Relief of Painful Vascular and Muscular Spasm with Special Reference to Lumbosacral Pain

J. Lewis Amster, M.D.
Morrisania City Hospital
Bronx

Chart I—Diagram of cephalic sympathetic ganglia, (sphenopalatine, otic, ciliary, and submaxillary) and of sympathetic trunks. The sphenopalatine ganglia belong to the series of sympathetic nodes which hook up with the superior cervical ganglia thus making the sphenopalatines part of the sympathetic ganglionic chain. Interruption of the sphenopalatines is produced by anesthetizing the ganglia by topical application through the intranasal route and will relieve pain due to vascular and muscular spasm.

Chart II—Nasal speculum in situ exposing middle and inferior turbinates.

Chart III—Nerve supply of nasal cavity.

Chart IV—Anesthesia applied topically to sphenopalatine ganglion and posterior pharyngeal wall.

Anatomic model of nose and throat with a view of the cotton-tip applicators in position. (*Booth 241*)

Chloromycetin Therapy in Chronic Ulcerative Colitis: One-Year Study

Z. T. Bercovitz, M.D.
Theodore Bawer, M.D.
New York University-Bellevue Medical Center
New York City

Charts, graphs, and posters show results of a one-year study of chloromycetin therapy in 20 patients with chronic ulcerative colitis.

The bacteriologic response to chloromycetin therapy was marked to complete inhibition of bacterial growth of both Escherichia coli and streptococci in stool cultures, with this inhibition continuing from the first to approximately the fourteenth day of therapy before return to the usual bacterial flora.

Except in one case, the clinical response under chloromycetin therapy has been very marked and sustained improvement, both symptomatically and sigmoidoscopically. The improvement has been so marked that therapy was completely discontinued in more than half of the patients, and in about one third of the patients there have been complete remissions lasting up to more than seven months as of this time. (*Booth 242*)

THE USE OF BACITRACIN IN AEROSOL FORM

Samuel J. Prigal, M.D.
Moses L. Furman, M.D.
New York Medical College,
Flower and Fifth Avenue Hospitals
New York City

Charts and drawings present a description of bacitracin, its particular advantages, indications, and contraindications, the synergism that it exerts in combination with penicillin, the mechanism of action of bacitracin aerosol, blood, urine, and toxicity studies, bacteriologic studies before and after treatment, epidemiologic studies in families where there is chronic respiratory infection, and results of treatment. (*Booth 243*)

SURFACE-ACTIVE SOLVENTS IN TOPICAL ANTIBIOTIC THERAPY

Edwin J. Grace, M.D.
Grace Clinic
Brooklyn
Vernon Bryson, Ph.D.
The Biological Laboratory
Cold Spring Harbor

The results of five years experience in the nonoperative treatment of suppurative diseases of the lung, using the topical application of antibiotics dissolved in a surface-active solvent, are presented. Data on controlled laboratory experiments involving the treatment of induced pneumonia in 500 pure-strain mice with penicillin-detergent aerosol are reviewed. Radioactive sodium chloride is used as a tracer substance in animals to demonstrate the simplicity and efficiency of using aerosol therapy correctly in patients. Clinical histories and findings of most common forms of chronic pulmonary infections and those of other patients cured after unsatisfactory surgical results are reviewed. Genetically, the danger of developing resistant bacterial strains is reduced for all practical clinical purposes. (*Booth 244*)

CERVICAL CYTOLOGY INDICATING THREATENED ABORTION

Clyde L. Randall, M.D.
Richard W. Baetz, M.D.
Donald W. Hall, M.D.
Paul K. Birtch, M.D.
University of Buffalo
Buffalo General Hospital
Buffalo

Kodachrome photomicrographs show cervical cytology during the normal menstrual cycle, normal pregnancy, and abnormal pregnancies (threatened abortions). (*Booth 245*)

THE ACCURATE ADMINISTRATION OF INTRAVENOUS FLUIDS

David J. Graubard, M.D.
New York City
Milton C. Peterson, M.D.
Kansas City, Missouri
Raphael W. Robertazzi, M.D.
Brooklyn

The physician is called upon to administer various types of fluids in the operating room. Up to the present time, the only way the anesthetist has been able to measure the rate of flow has been by counting drops. This exhibit presents various types of "Flowrator": for the intravenous administration of procaine hydrochloride, plasma, whole blood, amino acids, or barbiturates (sodium pentothal); for the measurement of gases for anesthesia; and for the administration of low flow rates of various drugs. The history of the development of the "Flowrator" and the physical formula explaining the mechanism are illustrated by charts. (*Booth 246*)

HISTAMINE IN A RETARDING MENSTRUUM IN THE TREATMENT OF PERIPHERAL VASCULAR DISORDERS

Samuel Feldman, M.D.
Joseph Goodgold, M.D.
I. J. Greenblatt, Ph.D.
Beth-El Hospital
Brooklyn
J. L. Linder, M.D.
Kings County Hospital
Brooklyn

Microcrystalline histamine diphosphate was suspended in a mixture of beeswax and sesame oil. This preparation releases histamine slowly from the site of injection and causes a general peripheral vasodilatation. Over 100 cases, involving a two-year study, were observed, and the findings will be reported by means of colored charts with data concerning type of case, number of cases treated, contraindications, and comments on the objective data obtained by the use of physical instruments. An evaluation of results and the effects on gastric acidity are to be presented. Colored photographs of some of the patients' extremities before and after treatment will accompany the charts. (*Booth 247*)

HYALURONIDASE ADMINISTRATION

Joseph Schwartzman, M.D.
New York Medical College, Flower and Fifth Avenue Hospitals
New York City

Studies will illustrate the method of administration of hyaluronidase and its efficacy. Charts will demonstrate the percentage of sensitivity and degree of toxicity as well as its value in the absorption of different fluids. (*Booth 248*)

EVALUATION OF ORAL MERCURIAL DIURETICS

Max H. Stein, M.D.
Jacob Lipschitz, M.D.
Theodore D. Cohn, M.D.
Mendel Jacobi, M.D.
Beth-El Hospital
Brooklyn

The effects of oral mercurial diuretics are compared to their use parenterally in a two-year follow-up study of a group of patients. The effects of mercury excretion, renal alterations, if any, and toxicologic and diuretic effects of the drugs used are considered. (*Booth 249*)

LOBBY MEZZANINE

HOW THE SOCIETY SERVES THE PHYSICIAN

Medical Society of the State of New York

How the Society serves the physician is important to every member. This exhibit presents graphically the services of the various departments.

THE DIRECTORY

Medical Society of the State of New York

Here is an opportunity for you to see just exactly what the *Directory* "Blue Book" contains. The new edition is the largest and best indexed *Directory* the Society has ever published.

Changes in biographic data may be left at this exhibit.

NEW YORK STATE JOURNAL OF MEDICINE

Medical Society of the State of New York

The exhibit of the NEW YORK STATE JOURNAL OF MEDICINE is designed to show the variety and extent of the material included in each issue of the publication, such as editorials, scientific articles, case reports, special articles, necrology, medical and hospital news, woman's auxiliary, correspondence, book reviews, etc.

The editorial staff invites your contributions of news items and scientific articles.

COUNCIL COMMITTEE ON PUBLIC HEALTH AND EDUCATION

Medical Society of the State of New York

Charts show activities of this Committee, emphasizing help given to county medical societies in arranging programs.

VOLUNTARY PREPAID MEDICAL CARE PLANS

George P. Farrell
Bureau of Medical Care Insurance
Medical Society of the State of New York

A colored map of New York State indicates areas served by each of the six plans. Graphs illustrate growth in enrollment and benefits to members.

VOLUNTARY HEALTH INSURANCE

Howard Brower
Council on Medical Service, American Medical Association
Health Insurance Council
Associated Medical Care Plans
Chicago, Illinois

A map and chart description sets forth the extent of voluntary health insurance in the United States. The percentage of population enrolled is adjusted to reflect percentage of eligible population. A portrayal is given of past, present, and future of voluntary health insurance together with a list of the types of prepayment plans available.

MEDICAL PROCEDURE IN WORKMEN'S COMPENSATION

Willis M. Weeden, M.D.
New York State Workmen's Compensation Board
New York City

Documents used in preparing a case in compensation; the relationship of the physician to the case; the various steps followed, illustrating the importance and urgency of the medical reports; the interrelationship of (1) the attending physician, (2) the carrier's physician, (3) the State examiner, and (4) possible consultants.

Special Exhibit Relating to the New Disability Law.—This includes pertinent parts of the law; the physician's part under the new law; his relationship to his patients and the assistance he will render to them in filing claims; the method to be used in evaluating periods of disability and the importance of accurate diagnoses and prognoses; forms to be used and possible methods of deciding contested cases.

SCIENTIFIC MOTION PICTURES

PARLOR C, BALLROOM FLOOR

Tuesday, May 9

Morning

9:00 AMBULATORY PROCTOLOGY
Alfred J. Cantor, M.D., Flushing

9:50 CERVICITIS: ETIOLOGY, DIAGNOSIS, TREATMENT
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.**, Loyola University, School of Medicine, Chicago, Illinois

10:45 FUNCTION OF THE EAR IN HEALTH AND DISEASE
H. G. Kobrak, M.D., University of Chicago, Chicago, Illinois

11:25 HYPOTHYROIDISM: ETIOLOGY, DIAGNOSIS, TREATMENT
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

12:28 MODIFIED GUILLOTINE AMPUTATION OF LEG FOR ARTERIOSCLEROTIC AND DIABETIC GANGRENE
Beverly C. Smith, M.D., New York City

Afternoon

2:00 NONOPERATIVE TREATMENT OF PARANASAL SINUSITIS
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.**, New York Polyclinic Medical School and Hospital, New York City

2:20 HYPOTHYROIDISM: ETIOLOGY, DIAGNOSIS, TREATMENT
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

3:13 CERVITIS: ETIOLOGY, DIAGNOSIS, TREATMENT
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.**, Loyola University, School of Medicine, Chicago, Illinois

4:00 CLEFT PALATE
Mortimer M. Kopp, M.D., Brooklyn

4:12 ALLERGY: IMMUNOLOGY, DIAGNOSIS, TREATMENT
Leo Criep, M.D., University of Pittsburgh, School of Medicine, Pittsburgh, Pennsylvania

5:13 TREATMENT OF THE MAJOR NEURALGIAS
Roland M. Klemme, M.D., St. Louis University, St. Louis, Missouri; or ARTERIAL BLOOD PRESSURE

Wednesday, May 10

Morning

9:00 TISSUE TRANSPLANTATION
Morton I. Berson, M.D., New York City

9:50 HYPOTHYROIDISM: ETIOLOGY, DIAGNOSIS TREATMENT
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

10:43 ALLERGY: IMMUNOLOGY, DIAGNOSIS, TREATMENT
Leo Criep, M.D., University of Pittsburgh, School of Medicine, Pittsburgh, Pennsylvania

11:36 CERVICITIS: ETIOLOGY, DIAGNOSIS, TREATMENT
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.**, Loyola University, School of Medicine, Chicago, Illinois

12:30 ANATOMY OF THE EAR
Samuel J. Kopetzky, M.D., and **Ralph Almour M.D.**, New York Polyclinic Medical School and Hospital, New York City

Afternoon

2:00 HYPOTHYROIDISM: ETIOLOGY, DIAGNOSIS, TREATMENT
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

2:53 NONOPERATIVE TREATMENT OF PARANASAL SINUSITIS
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.**, New York Polyclinic Medical School and Hospital, New York City

3:13 ARYTENOIDECTOMY: OPEN APPROACH FOR BILATERAL ABDUCTOR PARALYSIS
De Graaf Woodman, M.D., College of Physicians and Surgeons, Columbia University, New York City

3:27 REHABILITATION FOR PARKINSON'S SYNDROME
Roland M. Klemme, M.D., St. Louis University, St. Louis, Missouri

4:26 CERVICITIS: ETIOLOGY, DIAGNOSIS, TREATMENT
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.**, Loyola University, School of Medicine, Chicago, Illinois

5:21 MODIFIED GUILLOTINE AMPUTATION OF LEG FOR ARTERIOSCLEROTIC GANGRENE
Beverly C. Smith, M.D., New York City

5:44 RHINOPLASTY
Mortimer M. Kopp, M.D., Brooklyn

Thursday, May 11

Morning

9:00 Resection Angulation Operation for Arthritis of the Hip
Henry Milch, M.D., Hospital for Joint Diseases, New York City

9:15 Chronic Purulent Otitis Media
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.,** New York Polyclinic Medical School and Hospital, New York City

10:07 Nonoperative Treatment of Paranasal Sinusitis
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.,** New York Polyclinic Medical School and Hospital, New York City

10:27 Hypothyroidism: Etiology, Diagnosis, Treatment
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

11:20 Cervicitis: Etiology, Diagnosis, Treatment
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.,** Loyola University, School of Medicine, Chicago, Illinois

12:15 Function of the Ear in Health and Disease
H. G. Kobrak, M.D., University of Chicago, Chicago, Illinois

Afternoon

2:00 Allergy: Immunology, Diagnosis, Treatment
Leo Criep, M.D., University of Pittsburgh, School of Medicine, Pittsburgh

2:53 Cervicitis: Etiology, Diagnosis, Treatment
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.,** Loyola University, School of Medicine, Chicago, Illinois

3:48 A Clinic on Deafness
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.,** New York Polyclinic Medical School and Hospital, New York City

4:26 Hypothyroidism: Etiology, Diagnosis, Treatment
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

5:19 Tissue Transplantation
Morton I. Berson, M.D., New York City

Friday, May 12

Morning

9:00 Rhinoplasty
Mortimer M. Kopp, M.D., Brooklyn

9:16 Nonoperative Treatment of Paranasal Sinusitis
Samuel J. Kopetzky, M.D., and **Ralph Almour, M.D.,** New York Polyclinic Medical School and Hospital, New York City

9:36 Hypothyroidism: Etiology, Diagnosis, Treatment
J. Lerman, M.D., Massachusetts General Hospital, Boston, Massachusetts

10:29 Modified Guillotine Amputation of Leg for Arteriosclerotic Gangrene
Beverly C. Smith, M.D., New York City

10:45 Cervicitis: Etiology, Diagnosis, Treatment
Bela C. Balas, M.D., and **Herbert Schmitz, M.D.,** Loyola University, School of Medicine, Chicago, Illinois

11:40 Resection Angulation Operation for Arthritis of the Hip
Henry Milch, M.D., Hospital for Joint Diseases, New York City

11:56 Ambulatory Proctology
Alfred J. Cantor, M.D., Flushing

12:44 Arytenoidectomy: Open Approach for Bilateral Abductor Paralysis
De Graaf Woodman, M.D., College of Physicians and Surgeons, Columbia University, New York City

1:00 Tissue Transplantation
Morton I. Berson, M.D., New York City

The films are shown through the courtesy of Mr. Joseph P. Hackel, Medical Film Guild, New York City, in cooperation with the Medical Society of the State of New York.

THE TECHNICAL EXHIBITS

WHITE LABORATORIES, INC.
INTERNATIONAL VITAMIN CORPORATION
IVC

The Technical Exhibits at the 144th Annual Meeting at the Hotel Statler, New York, May 9 to 12, will again feature the latest in pharmaceutical products, equipment, and services for the physician. You will not want to miss their exhibits, since they offer you an unequalled opportunity to do your professional shopping under one roof. It would be well to add that the exhibitors, through their payments for space, contribute a large share toward the expense of your convention. They will appreciate your interest.

Following are short descriptions of the displays to be seen.

Abbott Laboratories, North Chicago (Booth 116), will exhibit a number of its leading products, such as rapid/repository penicillin for aqueous injection; Nembutal, a short-acting barbiturate; Aerohalor, Abbott's powder inhaler; Norisodrine, for reduction of bronchospasm in asthma; Pentothal Sodium, for intravenous anesthesia; Dayamin, a multiple vitamin product, and others.

Air-Shields, Inc., Hatboro, Pennsylvania (Booth 76), will demonstrate their Isolette Chapple infant incubator and their Croupette humidity and oxygen tent. Unchanging atmospheric conditions are provided for the prematures in the Isolette since access to the child is gained through arm ports in its Plexiglas hood. The Croupette is a unique piece of equipment which combines "cold steam" and the safe administration of oxygen for the treatment of croup and other respiratory ailments.

The Alkalol Company, Taunton, Massachusetts (Booth 125), will feature Alkalol, the balanced, alkaline, saline solution for the treatment of mucous membranes and irritated tissues. It is bland, nontoxic, and effective and has been a favorite since 1896. We are also showing Irrigol, a powder which in solution makes an aseptic, slightly astringent vaginal douche. It is widely used also for colonic irrigations and as an effective rectal enema.

Almay, Inc., New York (Booth 29), cordially invites all members and their guests to visit our display of elegant hypoallergenic cosmetics. Almay therapeutic specialties and prescription bases will also be on display. Specific information and descriptive literature will be made available by our representatives.

Ames Company, Inc., Elkhart, Indiana (Booth 134). Representatives will be glad to discuss Decholin tablets and Decholin Sodium ampuls, the standard hydrocholeretic agents for the treatment of biliary tract diseases. They will be demonstrating Clinitest, Hematest, and Acetest, simplified tests for the detection of urine-sugar, occult blood, and acetone bodies.

Arlington Chemical Company, Yonkers, New York (Booth 110), cordially invite you to visit their booth where their representatives will be happy to answer any questions regarding Arlington Chemical products. Featured will be Gustamate, the new development of importance to physicians prescribing low sodium diets. Other products featured will be Caminoids, Neo-Cultol, and our complete line of allergenics.

The Armour Laboratories, Chicago (Booth 5), will welcome members of the Medical Society of the State of New York to visit their exhibit while attending the annual convention. Information and literature on many new items in the field of endocrinology recently made available to the medical profession by the Armour Laboratories, may be secured at the Armour booth.

Association of American University Presses, (Booth 18). Distinguished for authoritative content and excellence of editorial work, books from university presses claim enviable rank among nonfiction and technical publications. The Association of American University Presses has arranged an exhibit for your enjoyment at this meeting and to give you an opportunity to purchase some of the important titles for your library.

Ayerst, McKenna & Harrison, Ltd., New York (Booth 103). Premarin (Estrogenic Substances—water soluble), a highly effective and well-tolerated preparation of naturally-occurring, orally-active, conjugated estrogens (equine). The potency of Premarin is expressed in terms of its principal estrogen, sodium estrone sulfate.

The A. C. Barnes Company, New Brunswick, New Jersey (Booth 96), cordially invite all physicians to visit their new exhibit. Argypulvis, a recent addition to the Barnes line, will be featured by a series of illuminated color transparencies depicting an effective new treatment for Trichomonas vaginalis vaginitis. Literature and professional samples will be available. Argyrol and Ovoferrin also will be on display. See the Barnes color and sound films, "Cervicitis—Etiology and Treatment" and "Nonoperative Treatment of Paranasal Sinusitis," at the Scientific Motion Picture Exhibit.

W. A. Baum Company, Inc., New York (Booth 71), will feature two new interesting items. The new Air-Lok Cuff, now standard equipment on all Baumanometers, is an accurate, simple-to-use cuff that is applied and removed in a fraction of the time heretofore necessary. The new Phlebaumanometer is a precision instrument for determining the blood pressure in large and small veins, accurately, quickly, and without loss of blood. Also, all models and parts of the Lifetime Baumanometer will be exhibited.

J. Beeber Company, New York (Booths 8, 9, and 10), is pleased to present the newest equipment used in diagnostic work, as well as in the treatment of diseases: The Raytheon Microwave Diathermy, which is considered one of the foremost advancements in medicine; the Brociner-Mass Clinical Analyzer, photoelectric colorimeter, precalibrated for the most accepted procedures; the Mikrark Illuminator, as well as the Beck-Lee direct developing Electrocardiograph.

The Beech-Nut Packing Company, New York (Booth 105). The Beech-Nut Nutritionists will be in attendance at their exhibit to discuss the Strained and Junior Foods. The newest product, Beech-Nut Cereal Food, will also be on display. It is a scientifically prepared blend of enriched farina, oatmeal, defatted wheat germ, cornmeal, defatted corn germ, powdered beef bone, dried Brewer's yeast, salt, and sodium iron pyrophosphate.

Bilhuber-Knoll Corp., Orange, New Jersey (Booth 139), cordially invite you to visit their booth. Here Quadronal, the new antiasthmatic preparation, Octin, an antispasmodic with unique mode of action, and other time-tested medicinal chemicals, such as Dilaudid, Dicodid, Metrazol, Theocalcin, and Bromural, are presented for your interest.

The Borden Company, New York (Booth 37). Borden's Infose brand syrup for infants is a concentrate of selected apple juice standardized for pectin and partially neutralized for milk modification. A completely natural product containing the naturally occurring sugars, Infose supplies pectin and available organic iron in one convenient source for the infant's formula. Ask for complete data at this booth.

Brewer & Company, Inc., Worcester, Massachusetts (Booths 91 and 92). This exhibit consists of specialties centering around Thesodate, the original enteric-coated tablet of theobromine sodium acetate, and Luasmin, a combination of theophylline sodium acetate, phenobarbital, and ephedrine for the treatment of asthma. Also, Brewer capsules and ampules, other specialties including Soduxin (sodium succinate-Brewer) and standard pharmaceuticals manufactured by Brewer & Company, Inc., including a complete line of vitamin preparations for internal use and injection. Gel-Ets, the newest mode in oral vitamin therapy, and Amchlor, enteric-coated, 1-Gm. tablets of ammonium chloride, are also featured.

Bristol Laboratories, Inc., New York (Booth 6). This exhibit at the 1950 meeting of the Medical Society of the State of New York will be devoted to the display of antibiotics and pharmaceutical products. Qualified representatives will be on hand to assist the medical profession with any inquiries. Literature describing Bristol products will be available.

Brown's Medical Bureau, New York (Booth 66). Miss Gladys Brown, Owner-Director, who, for the past twenty years, has had the pleasure of serving you, will be glad to discuss your problems, whether they be personnel for your office, hospital, or industrial corporation, or if you yourself are seeking new contacts.

The Burdick Corporation, Milton, Wisconsin (Booth 120), will have on display their complete line of physician medicine equipment. Of special interest will be their new MF-49 Approved Universal Diathermy and Direct-Recording Electrocardiograph. Physicians are invited to register for a free copy of Syllabus, a compilation on the use of physical medicine equipment.

Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, New York (Booth 64), will feature a completely new type antihistaminic, Perazil brand Chlorcyclizine

Hydrochloride. Perazil differs chemically in that it is a piperazine rather than a conventional ethylenediamine compound. Ask our representatives about the advantages of Perazil. We will also feature Wellcome brand Globin Insulin, the accepted intermediate acting insulin, and Digoxin, for safe, predictable digitalization.

Cambridge Instrument Company, Inc., New York (Booths 130 and 131). The new Cambridge Simpli-Scribe model direct-writing portable electrocardiograph will be one of the important developments featured in the exhibit of this well-known line of diagnostic instruments. Also shown will be the Simpli-Trol portable and Mobile models of the Cambridge Standard String Galvanometer Electrocardiograph and Electrocardiograph-Stethograph with Pulse Recorder, the Cambridge Electrokymograph, and the Cambridge Plethysmograph.

Camel Cigarettes, New York (Booths 30 and 31), will feature color slides of background data from their newest research. After weekly examinations of the throats of hundreds of men and women smoking Camel cigarettes exclusively for thirty days, throat specialists reported "Not one single case of throat irritation due to smoking Camels."

Cameron Heartometer Company, Chicago and New York (Booth 12). See the improved Heartometer, a scientific precision instrument for accurately recording systolic and diastolic blood pressures, also furnishing a permanent graphic record of the pulse rate, disturbances of the rhythm, myocardial response, the action of the valves, as well as peripheral vascular circulation. The Heartometer clearly reveals heart disturbances in both early and advanced stages and is of great value in checking the progress of treatments.

Cameron Surgical Specialty Company, New York and Chicago (Booth 97). This year a few surprises await you. The new Boroscope (flexible esophagoscope) will be shown. We now make electrosurgical units in six sizes for office and hospital use, and these will be on display. Also see the highest power "cold" headlite in the world and the new breast transilluminator.

S. H. Camp and Company, Jackson, Michigan (Booth 7). A complete line of Camp anatomic supports for orthopedic, sacroiliac, hernia, postoperative, visceroptosis, and other specific conditions will be shown. Experts from the Camp staff will be in attendance to answer questions pertaining to scientific application of these supports and to advise regarding the availability of them in Authorized Service departments of stores throughout the country.

Carnation Company, Los Angeles, California (Booth 78), cordially invite you to visit their booth where you will see an attractive display on Carnation Evaporated Milk, "the milk every doctor knows." Some valuable information on the use of this milk for infant feeding, child feeding, and general diet will be presented, and the method by which Carnation is generously fortified with pure crystalline Vitamin D, 400 U.S.P. units per reconstituted quart, will be explained. Interesting literature will also be available for distribution.

Chatham Pharmaceuticals, Inc., Newark, New Jersey (Booth 132), cordially invite you to call at their booth for a copy of *Facts and Therapy in Hemorrhage*, a comprehensive chart outlining the prevention and control of bleeding with Koagamin, parenteral blood hemostatic. Also inquire about Ultracain Ointment used in dermatologic and surgical conditions.

Chilcott Laboratories, Division of the Maltine Company, Morris Plains, New Jersey (Booth 34). Cellothyl, methylcellulose tablet exhibiting unique bulking properties in constipation, will be competing for attention with Proloid, Tedral, and Depancol, established ethical specialties of Chilcott Laboratories. In vitro demonstrations of the manner in which Cellothyl forms its smooth bulk will be given.

Ciba Pharmaceutical Products, Inc., Summit, New Jersey (Booth 57), invite you to visit their exhibit for latest information on Priscoline (formerly known as Priscol), a valuable adjunct to the treatment of peripheral vascular disease. Pyribenzamine, HCL, the antihistaminic drug for prevention and relief of anaphylaxis and many forms of allergy will also be featured. Representatives in attendance will gladly answer any questions about these and other Ciba products.

The Coca-Cola Company, Atlanta, Georgia (Booth 140). Ice-cold Coca-Cola served through the cooperation and courtesy of the Coca-Cola Bottling Company of New York, Inc., and the Coca-Cola Company.

Cochrane Physicians' Supplies, Inc., New York (Booth 83). This exhibit will feature stainless steel instruments, both domestic and foreign manufacture, for both the general and specialty requirements.

Commercial Solvents Corporation, New York (Booth 94). CSC Pharmaceuticals will feature bacitracin in vials, ointments, troches, tablets, and nose drops, and several new pharmaceutical products including Gluco-Mycin Oral Tablets for preoperative intestinal sterilization and Glucurone Tablets, a new arthritic preparation containing glucuronolactone. Also displayed will be penicillin products, Inositol, Solution Choline gluconate, and Kwell Ointment.

Davies, Rose & Company, Ltd., Boston, Massachusetts (Booth 20). Few therapies interest physicians more than does digitalis. To be assured of a preparation of dependability is, of course, of the utmost importance. We have been proud of having been able, throughout the years, to make available for heart treatment a preparation of digitalis that has met universal approval—Pil. Digitalis (Davies, Rose). Our Messrs. W. B. Poole, H. V. Orne, and C. R. White will be at our booth to welcome you.

The Denver Chemical Manufacturing Company, Inc., New York (Booth 22). Galatest for the instantaneous determination of urine sugar and Acetone Test (Denco) for the detection of acetone in urine will be exhibited. You are cordially invited to visit our booth for demonstration of these "spot tests" for sugar and acetone. Galatest and Acetone Test (Denco) offer advantages of accuracy, simplicity, and economy in routine urinalysis.

Desitin Chemical Company, Providence, Rhode Island (Booth 95). Desitin Ointment is the pioneer in external cod liver oil therapy, combines highest potency crude Norwegian cod liver oil, zinc oxide, talcum in a lanolin petrolatum base. Desitin Ointment excels in the treatment of traumatic injuries.

Desitin Ointment is not liquified at body temperature nor decomposed by secretions. Desitin Ointment contains no phenol or other harsh irritants; it is soothing and emollient. Indications: postoperative dressing, slow-healing wounds, diabetic and varicose ulcers, burns, sunburn, bedsores, chafing, abrasions, lacerations, and diaper rash. Desitin Powder is a unique medicinal toilet powder containing crude cod liver oil, zinc oxide, magnesium oxide, and talcum.

Doak Company, Inc., Cleveland, Ohio (Booth 68). Colloids of bismuth, calcium, iodine, and iron for parenteral administration in the treatment of arthritis, syphilis, calcium and iodine deficiency. Dermatologic preparations for treatment of various skin manifestations.

Doho Chemical Corporation, New York (Booths 81 and 82), and its subsidiary, Mallon Chemical Corporation, makers of Auralgan, O-tos-mo-san, and Rectalgan, are proud to announce their new nasal decongestant, Rhinalgan, balanced formulation of two active chemical compounds that gives prolonged vasoconstriction used as a spray, in their patented Dohony Spray-o-mizer, pleasant tasting, with no systemic effect (pressure or respiratory), and can be safely used for infants and children. Their representatives are anxious to explain the merits of Rhinalgan and distribute samples of this innovation.

Dome Chemicals Incorporated, New York (Booth 86). The House of Dome is introducing a new fungicide with a penetrant called Fungi-Treat; also the well-known Domeboro in individual calculated-dose packets; Daxalan, a rigidly standardized whole crude coal tar ointment in two strengths.

Durex Products, Inc., New York (Booth 53). The most extensive line of A.M.A.-accepted contraceptive devices and preparations will be displayed for your examination and approval by Durex Products. Here you will be able to inspect Bow-Bend, Dumas, Duraflex, Mensinga, and Durex Coil Spring Diaphragms, four types of diaphragm inserters, and, of course, Lactikol Jelly and Lactikol Creme. Unique combination sets for convenient dispensing will be demonstrated.

Eaton Laboratories, Inc., Norwich, New York (Booths 113 and 114). Recent specialties include the latest additions to the Furacin family: Furacin Anhydrous Ear Solution and Furacin Vaginal Suppositories. Tripazine, triple sulfa tablet to minimize crystalluria; Aspogen, aluminum, amino acid salt for peptic ulcer; Puracin, scabicide, pediculicide, and ovicide. Results of recent clinical studies of the efficacy of Lorophyn Suppositories will be available.

Endo Products, Inc., Richmond Hill, New York (Booth 80), will feature Vifort (an aqueous polyvitamin drop, favoring better absorption of vitamin A) and its companion product Acon (a high potency, water-soluble vitamin A); Mesopin (a gastrointestinal antispasmodic); Hycodan (a selective cough sedative); and Norodin (an improved psychomotor stimulant and antidepressant).

Fellows Medical Manufacturing Company, Inc., New York (Booth 32), cordially invites you to visit their exhibit for information on the latest products developed in their laboratories. Fello-Sed will be featured; Fellows Sedative Elixir, chloral hydrate potentiated by calcium bromide, presented in an aromatic sugar-free vehicle which successfully masks the odor and taste of chloral. Other products on exhibit: ArBeC Suppositories, Fellows Aminophylline Barbiturate Compound in a newly developed base for prompt relief and rest in asthmatic conditions; Erqua Tablets and Liquid, Sodium Salicylate and Menadione for safer salicylate therapy; Ionlex with Folic Acid, Ferrous Gluconate, Liver and B-Complex in therapeutic doses.

C. B. Fleet Company, Inc., Lynchburg, Virginia (Booth 2), cordially invites you to stop by their booth for a short visit with the representative who sees you in your office about once a year. Perhaps there is something about Phospho-Soda (Fleet), the pure, stable, aqueous concentrate of the two U.S.P. sodium phosphates, you would like to discuss with him.

General Electric X-Ray Corporation, Chicago (Booth 122).

Otis E. Glidden & Company, Inc., Evanston, Illinois (Booth 99). Visit the Zymenol exhibit and receive, no charge, a $1.25 size bottle of Zymenol to convince yourself by personal or family trial that Zymenol, an emulsion with brewers yeast, is an effective bowel management without habit-forming irritation, distention, purgation, or lubrication.

Goodman-Kleiner Company, Inc., New York (Booth 44). Physicians treating marital infertility are invited to witness demonstrations of the newly improved Weisman Gynograph and Gynogauge, Council-Accepted. Also on display: the Goldman-Belskie life-size, palpatable, latex anatomic models, which simulate tissue consistency and permit demonstrations of pathologic abnormalities and clinical procedures, and the Leis Abdominal Retractor, frame type.

Grune & Stratton, Inc., New York (Booth 123). Notable among the books shown by Grune & Stratton are the following new publications: Miller, *Angina Pectoris and Myocardial Infarction;* Dameshek, *Chemotherapy of Leukemia and Leukosarcoma;* Soskin, *Progress in Clinical Endocrinology;* Maliniac, *Breast Deformities and Their Repair;* Sigler, *Cardiovascular Disease;* Crohn, *Regional Ileitis;* Iason, *Synopsis of Hernia;* Swartz, *Elements of Medical Mycology.*

Hanovia Chemical and Manufacturing Company, Newark, New Jersey (Booth 25), will exhibit a new short wave diathermy machine, F.C.C.-approved, self-lighting ultraviolet quartz lamps for general and local irradiation, sollux radiant heat lamps, and germicidal lamps for the destruction of airborne bacteria.

Harold Supply Corporation, New York (Booth 4), will display complete line of physicians specialties including institutional supplies. Sales representation for Hamilton Wood and Metal Furniture; Ritter ear, nose, and throat equipment; Profexray apparatus; Birtcher F.C.C. short wave; Continental X-Ray; Edin Electrocardiograph, and agents for all standard manufacturers in the medical line. S. Mehlinger and J. Shnitzer will be in charge of the booth.

The Harrower Laboratory, Inc., Jersey City, New Jersey (Booth 13). The Harrower exhibit has three main points of interest: (1) gastroscopic pictures illustrating the coating action of Mucotin, the Council-Accepted mucin antacid. (2) schematic presentation of physiologic action of Prulose, a corrective laxative, and (3) the role of the Kreb Cycle and Hematocrin in energy metabolism is graphically shown. Reprints and samples will be available at the booth.

H. J. Heinz Company, Pittsburgh, Pennsylvania (Booth 33), will display Strained and Junior Foods as well as a wide variety of nutrition material at their booth. Doctors will find the products of interest not only for feeding infants and other small children but also in gastrointestinal cases, preoperative and postoperative disturbances, oral troubles, geriatrics, and a number of conditions where Strained and Junior Foods are required.

Hoffmann-La Roche, Inc., Nutley, New Jersey (Booth 100). At the attractive Roche booth physicians will find the latest Roche products being featured. These include Gantrisin, a highly soluble sulfonamide with a rich clinical background; Thephorin, the interesting antihistamine in its several new dosage forms; and Roniacol Tartrate, the peripheral vasodilator for oral use. Roche representatives will be present to discuss these and other Roche products of interest to physicians.

Holland-Rantos Company, Inc., New York (Booth 38), will feature Council-accepted Koromex products for conception control. See the different combination sets, the anatomically correct Pelviform Clinical Teaching Model and H-R Lubricating Jelly for gynecologic and surgical use. Investigate the effectiveness and practicability of Nylmerate Jelly in the treatment of trichomoniasis and moniliasis.

Homemakers' Products Corp., New York (Booth 46). For the first time, Diaparene Chloride will be presented as a mentholated dusting powder in control of urinary excoriation and odor due to surgical and senile incontinence; also recommended for prevention and treatment of diaper rash in infants. Diaparene Ointment and Tablets will also be sampled.

"Junket" Brand Foods, Little Falls, New York (Booth 102). Visual aids explain the importance of rennet in infant and adult nutrition and the value of rennet desserts in both normal and restricted diets. Trained personnel available at all times to answer questions in detail. Authoritative literature is available describing dietary applications of rennet products. Complimentary packages of "Junket" Rennet Powder and "Junket" Rennet Tablets for the profession.

Kalak

TRADE MARK REG. U.S. PAT. OFF.

Kalak Water Company of New York, Inc., New York (Booth 17). For thirty-five years, the medical world has known and used this oral solution made to resemble the mineral constituents of body water and used to replace them when desired. It contains no element foreign to the fluids. It is alkaline and highly charged with carbon dioxide.

The Kelley-Koett Manufacturing Company, Covington, Kentucky (Booth 56). Keleket, the pioneer creator of quality x-ray equipment cordially invites every visitor of the Medical Society of the State of New York meeting to visit their booth. On display will be several recently designed units of medical x-ray equipment, along with a complete line of medical x-ray accessories and supplies.

Kellogg Company, Battle Creek, Michigan (Booth 23). Physicians who are interested in diet will want to review the set of special diet pads covering bland, high-residue, low-caloric, high-caloric, salt-restricted, and low-fat diets offered by the Kellogg Company as a special service. These diets have been carefully prepared from the recommendations of best known authorities on diet in disease. Mrs. Winefred B. Loggans, field representative, will be on hand and will welcome any discussion or questions concerning these diets.

Lakeside Laboratories, Milwaukee, Wisconsin (Booths 72 and 74). At Booth 72 Lakeside will introduce its new oral mercurial diuretic Tablets Mercuhydrin with Ascorbic Acid for use in maintenance therapy of congestive heart failure. The parenteral form will also be featured. Representatives will be on hand to explain their use in the routine therapy of congestive heart failure. Booth 74 will feature the lipotropic medications, Methyroid and Lipotropic Capsules, Lakeside, as well as the new Aqueous Suspension of Estrotate (alpha estradiol 3-trimethylacetate).

Lanteen Medical Laboratories, Inc., Evanston, Illinois (Booth 84), extend a cordial invitation to visit their booth. Representatives will be happy to discuss an improved contraceptive technic. All of the well-known Lanteen products will be available for discussion.

Lea and Febiger, Philadelphia, Pennsylvania (Booth 42). This exhibit will be of special interest because of their display of such outstanding new books and new editions as Cozen, *Office Orthopedics;* McManus, *Medical Diseases of the Kidney;* Kessler, *Rehabilitation;* Pullen, *Communicable Diseases;* Pohle, *Clinical Radiation Therapy;* Bridges, *Dietetics for the Clinician;* Comroe, *Arthritis;* Palmer, *Stomach Disease as Diagnosed by Gastroscopy;* Tuft, *Clinical Allergy;* Singer, *Differential Diagnosis of Chest Diseases;* Goldberger, *Unipolar Lead Electrocardiography;* and many others.

Lederle Laboratories Division, American Cyanamid Company, New York (Booth 21), cordially invite you to visit their exhibit, where you will find representatives who are prepared to give you the latest information on Lederle products.

Ruth and Florence Lee, B.S., M.A., Medical Illustrators, New York (Booth A). An exhibition of surgical, pathologic, and anatomic drawings. These and other drawings have been used by prominent physicians and surgeons in the fields of abdominal surgery, anesthesiology, gynecology and obstetrics, neurology and neurosurgery, ophthalmology, oral surgery, otolaryngology, orthopedic surgery, plastic surgery, and urology. Our drawings have been used to illustrate medical books and articles in journals; at lectures in the form of slides and at exhibitions.

Lennon-Peek Surgical Company, Brooklyn, New York (Booth 41), will exhibit Emerson Resuscitators, latest diagnostic, specialty, and surgical instruments, x-rays, fluoroscopes, approved diathermy units, office and examining room equipment, and modern bookkeeping system and files for physicians. They are distributors for leading manufacturers, and catalogs are available at booth.

The Liebel-Flarsheim Company, Cincinnati, Ohio (Booth 55), cordially invite you to visit their booth in which their latest diathermy and Bovie electrosurgical apparatus will be available for examination and demonstration. This year's exhibit features the "Office Bovie," an electrosurgical unit specially designed for office use. Capable representatives will be on hand at all times, and we hope you will stop by so that we may become acquainted.

Eli Lilly and Company, Indianapolis, Indiana (Booth 59), cordially invite you to visit their exhibit. The display for 1950 features a presentation on the incidence and potential number of diabetics in America. The attending representatives will be pleased indeed to assist visiting physicians in every way possible.

J. B. Lippincott Company, Philadelphia, Pennsylvania (Booth 51), presents an interesting and active exhibit of professional publishing. With the "pulse of practice" centering in an advisory editorial board of active clinicians who constantly review the field, current and coming trends in medicine and surgery are known continually. On the studied recommendations of these medical leaders, Lippincott Selected Professional Books are undertaken.

Lobica-Debruille, Inc., New York (Booth 47), will exhibit Metione Powder, a flavored form of D.L-Methionine making large doses of this amino acid easy to take and eliminating patient resistance. Council-accepted. Metiogran, methionine mixed with lactose so that it readily dissolves in the babies' formula or milk ration. Clears ammoniacal urine and resulting diaper rash and ulcerations within one week. Also Scopodex, a detoxicated scopolamine for relief of motion sickness; Taxol, a physiologic laxative; and Genoscopolamine for symptomatic relief of parkinsonism.

M & R Dietetic Laboratories, Inc., Columbus, Ohio (Booth 73), will display Similac, a food for infants, and Cerevim, a cereal food. Our representatives will appreciate the opportunity to discuss the merit and suggested application for both the normal and special feeding cases.

Mager & Gougelman, Inc., New York (Booth 69), cordially invite you to visit their exhibit of plastic and glass eyes. They will also present the latest implants designed and developed for maximum motility and will feature the Troutman Magnetic Implant with a kodachrome film showing the surgical technic.

Maltbie Laboratories, Newark, New Jersey (Booth 3), where representatives will be in attendance to explain selective medical therapy in hepatobiliary disease with Cholan-DH, Cholanor, and Cholan-HMB with phenobarbital.

Maltex Company, Burlington, Vermont (Booth 136), cordially invite you to their booth to see Maltex Cereal made from toasted wheat and malted barley. Taste our date bread and crisp ginger cookies and examine our height-weight charts, daily diet records, and scientific reducing diets. You'll be sure to find useful material here.

The S. E. Massengill Company, Bristol, Tennessee (Booth 79), calls your attention to its showing of the comparative advantages of dual and triple sulfonamide combinations. With an emphasis on the reduced renal hazard due to lessened crystalluria, decreased instance of allergic manifestations, and greater therapeutic efficacy due to lessened acetylation, the exhibit offers excellent opportunity for your discussion of the sulfonamide story. Medical Service Representatives of the company will be pleased to register you for literature and samples.

Duncan C. McLintock Company, Inc., Hackensack, New Jersey (Booth 14), will feature Lestreflex, a flexible adhesive bandage that is entirely new in the field of pressure therapy. It contains no rubber or zinc oxide and can be applied to sensitive skins. We will also have on display the Polyestol bandage, 33 per cent of its weight being methyl salicylate available for transcutaneous absorption.

Mayflower Surgical Supply Company, Brooklyn, New York (Booth 36). Brooklyn's largest medical distributor of drugs, chemicals, medical supplies, instruments, hospital supplies, laboratory supplies, x-ray, physiotherapy, E.K.G. equipment, hospital beds, and oxygen equipment. Liberal trade allowances. Equipment can be purchased on a three-year payment plan.

Mead Johnson & Company, Evansville, Indiana (Booth 65). Dextri-Maltose, Oleum Percomorphum, Pablum, Pabena, Olac, and other Mead products used in infant nutrition will be on display at the Mead Johnson exhibit at your Medical Society of the State of New York meeting. Protenum, a new high protein product, will be displayed. Also, Lonalac, for low sodium diets. Our representatives at the exhibit will be glad to discuss with you the new improvements of Amigen and Amisets.

Medical Film Guild, New York (Parlor C). "Medical Films That Teach" presents a refresher course in fundamental medical problems. Each film subject is produced in the manner of a textbook, profusely illustrated, offering information comparable to that found in postgraduate courses as presented at our leading medical schools. These films review such subjects as *Allergy-Immunology Diagnosis and Treatment*, *Management of the Failing Heart*, *Arterial Blood Pressure Technic—Physiology Measurement*, *Hypothyroidism: Etiology-Diagnosis-Treatment*, *Cervicitis: Etiology and Treatment*, *A Clinic on Deafness*, *A Clinic on Sigmoid Sinus Thrombosis*, *A Clinic on Petrositis with Meningitis*, *Bronchial Catheterization and Bronchopulmonary Lesions*, *Treatment of the Major Neuralgias*, *Function of the Ear in Health and Disease*, *Chronic Purulent Otitis Media*, *Bronchial Asthma*, and many others. These films are available at no charge to intern groups, hospital staff conferences, limited nurses' groups, and general medical meetings. This includes projection service at no charge and is arranged through grants for postgraduate instruction.

Merck & Company, Inc., Rahway, New Jersey (Booth 24), features the new diagnostic agent Benodaine, of value for detecting hypertension caused by the presence of an epinephrine-producing tumor (pheochromocytoma).* The antihistaminic agent Neo-Antergan^R also will be featured. Neo-Antergan is advertised to the medical profession exclusively. Other Merck products on display include Urecholine^R for relieving urinary retention, gastric retention, and abdominal distention; Cobione^R (Crystalline Vitamin B-12 Merck) for the treatment of megaloblastic anemias; and PAS (Para-Aminosalicylic Acid Merck) for complementing streptomycin and dihydrostreptomycin in tuberculosis therapy.

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* Benodaine is the trademark of Merck & Company, Inc. for its brand of piperoxane.

The Wm. S. Merrell Company, Cincinnati, Ohio (Booth 109). For prompt relief of bronchial asthma, Merrell announces Nethaphyl. Clinically tested for the past eight years, Nethaphyl has relieved 85 to 90 per cent of asthmatic cases, with almost complete clinical freedom from "jitters" or other side-effects and no acquired sensitivity. It is effective in most ephedrine-fast patients. Nethaphyl combines Nethamine, Butaphyllamine, and phenobarbital.

Philip Morris & Company, New York (Booth 118), will demonstrate the method by which it was found that Philip Morris cigarettes, in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representatives will be happy to discuss researches on this subject and problems on the physiologic effects of smoking.

The C. V. Mosby Company, St. Louis, Missouri (Booth 48), cordially invite you to visit their booth where you will find many new and interesting titles. Among some of the recent releases are Berman, *Principles of Surgery;* Dodson, *Urological Surgery;* Meakins, *Practice of Medicine;* Cleckley, *Mask of Sanity;* Kantor, *Handbook of Digestive Diseases;* Titus, *Atlas of Obstetric Technic,* and many others.

National Dairy Council, Chicago, Illinois (Booth 35), cordially invites you to visit the exhibit showing the nutrients present in ice cream. Ice cream compares favorably with milk as a food. Up-to-date nutrition information is available for your waiting room and patient counseling. Literature may be requested.

The National Drug Company, Philadelphia, Pennsylvania (Booth 26), cordially invite you to attend their booth. Resinat, Council-Accepted, a newly accepted therapy for peptic ulcer, and Protinal Powder, Council-Accepted, protein carbohydrate mixture, will be the featured products. AVC Improved, effective in moniliasis as well as trichomoniasis, and Hesperidin-C, for abnormal capillary fragility and permeability, will also be on display. Trained representatives will be in attendance to discuss with all physicians National's vast array of pharmaceutical, biologic, and biochemical preparations.

The Nestle Company, Inc., New York (Booth 104), cordially invite you to visit their exhibit where specially qualified representatives will be on hand to answer your questions on any of Nestle's milk products, already best known and most used for babies 'round the world.

New York Medical Exchange, New York (Booth 43). Miss Patricia Edgerly, director, will be in the booth to consult with you regarding personnel for your office or hospital. She will have the credentials of young assistant physicians, technicians, secretaries, nurses, in short, any medically trained personnel; also a list of interesting, well-paid opportunities.

Ortho Pharmaceutical Corporation, Raritan, New Jersey (Booth 75), cordially invite you to visit their booth. Featured will be the Ortho Kit, a new convenient, and complete kit containing the requisites for conception control in a beautiful woven plastic zippered purse. New products displayed will include Diffusin (hyaluronidase), Masse' nipple cream, and other new gynecic pharmaceuticals.

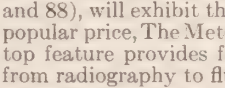
Parke, Davis and Company, Detroit, Michigan (Booth 58). Members of our Medical Service Staff will be on hand at our commercial exhibit for consultation and general discussion of the products classified in our pharmaceutic, antibiotic, and biologic lines. Important specialties such as chloromycetin, penicillin S-R, benadryl, vitamins, hypnotics, antibiotics, etamon, oxycel, thrombin topical, influenza virus vaccine, and other biologics will be featured. You are cordially invited to visit our booth with the assurance your interest will indeed be very much appreciated.

E. L. Patch Company, Stoneham, Massachusetts (Booth 115), will have a very interesting and revealing demonstration dramatizing the quick disintegration and rapid buffering action of Alzinox, the Patch brand of dihydroxy aluminum aminoacetate, the new combination of glycine and aluminum which gives rapid and prolonged action in hyperacidity and peptic ulcer. In addition, Patch representatives will be glad to give you more information about Glytheonate, Sestramin, Kondremul, and other Patch medicinal products.

Pet Milk Company, St. Louis, Missouri (Booths 126 and 127). A miniature working evaporated milk plant will be exhibited by Pet Milk Company in their booth. This exhibit offers an opportunity to obtain information about the production of Pet Milk, its use in infant feeding, and the time-saving Pet Milk services available to physicians.

Picker X-Ray Corporation, New York (Booths 87 and 88), will exhibit the new practical x-ray unit at a popular price, The Meteor. A patented, tilting table-top feature provides for rapid and easy conversion from radiography to fluoroscopy in either horizontal or vertical positions.

Pitman-Moore Company, Indianapolis, Indiana (Booth 67), will feature a number of products recently introduced as the result of the activities of the Company's greatly expanded research department. Medical representatives from the firm's Eastern region will be on hand to meet their friends in the profession.



The Procter & Gamble Company, Cincinnati, Ohio (Booth 77), features five popular pads of instruction sheets designed to save the time of busy doctors and nurses in giving patients instructions in routine care. Subjects covered are "Instructions for Routine Care of Acne," "Bathing Your Baby," "Bathing a Patient in Bed," "The Hygiene of Pregnancy," and "Home Care of the Bedfast Patient." You may replenish your supply of these helpful materials by registering at the booth.

The Radium Emanation Corporation, New York (Booth 138), will display and explain leakproof Radon Seeds (permanent or removable types), loading-slot implanters, Ametal Rubber gynecologic applicators, and several new applicators and improvements in cancer therapy technic.

Rare-Galen, Inc., Harrison, New Jersey (Booth 19). (Formerly Rare Chemicals, Inc. and Galen Company). In addition to the Council-Accepted androgenic preparations Testosterone Propionate "Rare" and Methyl Testosterone "Rare," our exhibit will feature new forms of Eucupin, long-lasting local anesthetic-analgesic, and Salysal, potent salicylate which does not cause local gastric irritation. Such distinctive vitamin preparations as Galen "B" and Aquasperse A and D will also be presented along with the hypoallergenic detergents Acidolate, Dermolate, and Terjolate.

L. &. B. Reiner, Inc., New York (Booth 63), presents the Jones Motor-Basal, the original waterless metabolism apparatus with many exclusive and distinctive features. Also the Jones Multi-Basal, an entirely new approach in the field of metabolism. Also shown is the EPL Cardiotron, the original direct-recording electrocardiograph with features not available in any similar unit. On display the new H. G. Fischer Spacesaver X-ray Apparatus available in capacity from 30 to 250 ma. A complete line of Allison Physicians' Furniture may also be seen.

A. H. Robins Company, Inc., Richmond, Virginia (Booth 50), is featuring the sedative-antispasmodic, Donnatal; the antirheumatic, Pabalate; and Entyzyme, digestant with unique "peptomatic" action. Robins' medical service representatives will welcome the privilege of discussing with physicians attending the meeting these and other products in the Robins' line of prescription specialties.

Roehr Products Company, Waterbury, Connecticut (Booth C), will feature Glass Automatic Syringe, a new electrically controlled instrument, devised by Dr. G. B. Jerzy Glass, for the automatic administration of injections and infusions of various volumes of drugs at a fixed and precise rate of speed, selected by setting the dial of the instrument, and electrically maintained for a period of time ranging from a few minutes to several hours.

J. B. Roerig and Company, Chicago, Illinois (Booth 85). Members of the Medical Society of the State of New York are cordially invited to visit their exhibit. The feature of the exhibit will be the new multivitamin-mineral preparation, Viterra. Company representatives will be on hand to supply complete information and to extend the courtesy of the Professional Service Department to all visitors.

Rystan Company, Inc., Mount Vernon, New York (Booth 117), will exhibit chloresium preparations which contain the purified, therapeutically active, water-soluble derivatives of chlorophyll-A ($C_{55}H_{72}O_5N_4Mg$). They are natural, nontoxic biogenic healing and deodorizing agents for the topical treatment of wounds, burns, ulcers, dermatoses, and lesions of the intestinal tract; also for healing, decongesting, and deodorizing inflammatory periodontal conditions. These cell-stimulating, biotherapeutic preparations also tend to reduce scar tissue formation and deodorize malodorous conditions by inhibiting the action of proteolytic anerobic bacteria.

Sanborn Company, Cambridge, Massachusetts (Booth 15). Featured at this booth will be the new Sanborn Electrophrenic Respirator, a device for securing artificial respiration by controlled electrical stimulation of the phrenic nerve. For the clinician, there will be demonstrations of the Viso-Cardiette, direct-writing electrocardiograph, the photographic Instomatic Cardiette, and the Metabulator, latest model Sanborn metabolism tester. And for the research-and-teaching physicians, actual instruments or complete data will be available concerning the Poly-Viso (multichannel biophysical research recorder), the Electromanometer (for pressure recordings), and other new Sanborn instruments for cardiac and other research, teaching, and diagnosis.

Sandoz Pharmaceuticals, Division of Sandoz Chemical Works, Inc., New York (Booth 89). Physicians attending the Medical Society of the State of New York convention are cordially invited to visit this booth which will feature Cafergone, the first effective oral preparation for the treatment of migraine and related headaches, and Bellergal, a time-tested preparation for use in functional disorders. Other products displayed at this convention are Belladenal, Mesantoin, Dihydroergotamine, D.H.E. 45, and Ipesandrine. A new handbook listing our products will be available, and representatives in attendance will gladly answer any questions about these and other Sandoz products.

Saratoga Springs Authority, Saratoga Springs, New York (Booth 124). This exhibit consists of a knotty pine display emphasizing treatments with use of naturally carbonated mineral water at the New York State-owned Saratoga Spa, Saratoga Springs, New York. Recreational features also described. Literature will be available, and an attendant will serve geyser water throughout exhibit hours.

Schenley Laboratories, Inc., New York (Booth 121). Physicians are invited to visit this exhibit which features Rutaminal, combining rutin, aminophylline, and phenobarbital for cardiovascular protection; Titralac, the antacid with a titration curve like that of milk; Sedamyl, which provides sedation without hypnosis; and Vascutum, which provides cardiovascular protection for geriatric patients. Qualified personnel in attendance.

Schering Corporation, Bloomfield, New Jersey (Booth 107). Buccal Tablets of Oreton, Progynon, Proluton, and Cortate with the exclusively new base, Polyhydrol, will be featured at the Schering exhibit. Polyhydrol makes possible complete absorption of hormones via the buccal route providing advantages of high effectiveness, convenience, and economy. Trimeton and Chlor-Trimeton, two outstanding antihistamines, and Coricidin, Schering's new treatment for the common cold, containing Chlor-Trimeton, aspirin, phenacetin, and caffeine, will highlight the exhibit. Schering representatives will be present to welcome you and will be happy to answer inquiries concerning Schering's new products as well as their other hormone, x-ray diagnostic, chemotherapeutic, and pharmaceutical specialties.

Schieffelin & Company, New York (Booth 29), will feature (1) Schieffelin Benzestrol, extensively tried and proved as a well-tolerated, dependable estrogen; (2) Cortisorbate Tablets, the unique adrenal cortex preparation assayed for oral administration; (3) Homabital, affording the modern approach to controlling visceral spasm; (4) Merbak, powerful surface bactericide that has gained A.M.A. seal of acceptance.

Julius Schmid, Inc., New York (Booth 133). Ramses Gynecological Products are shown here. While all are "Council-Accepted," every one exceeds Council requirements, explaining, perhaps, why individual physician acceptance constantly increases. All are offered for use under physician guidance. All are marketed with the best interests of physician and patient in mind, according to highest professional standards.

G. D. Searle & Company, Chicago, Illinois (Booth 101). You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle products of research. Featured will be Dramamine for the prevention and active treatment of motion sickness; Alidase, for hypodermoclysis; Ruphyllin, for abnormal capillary fragility; Hydryllin, new and effective antihistaminic, as well as such time-proved products as Searle Aminophyllin in all dosage forms, Metamucil, Ketochol, Floraquin, Kiophyllin, Diodoquin, Pavatrine, and Pavatrine with Phenobarbital.

Sharp & Dohme, Inc., Philadelphia, Pennsylvania (Booth 16). Visitors attending the Medical Society of the State of New York meeting are cordially invited to visit their exhibit. Stable, portable, Lyovac Normal Human Plasma, irradiated to destroy viral contaminants that might cause homologous serum hepatitis, merits your attention. Unusual specialties including Cremo-sulfonamides, pleasantly flavored, palatable suspensions of the most effective systemic and enteric sulfonamides, and Delmor, a delicious nutrient powder, also will be of major interest.

Smith, Kline & French Laboratories, Philadelphia, Pennsylvania (Booths 61 and 62). Benzedrex Inhaler will be a feature at this exhibit. Benzedrex Inhaler, the new and better Smith, Kline & French Inhaler, is so superior that we have discontinued Benzedrine Inhaler. Benzedrex Inhaler has the same agreeable odor as the old Benzedrine Inhaler, gives even more effective shrinkage, and does not produce excitation or wakefulness. Physicians tell us that they and their patients find Benzedrex Inhaler the best inhaler they have ever used.

Spencer, Incorporated, New Haven, Connecticut (Booth 128). On display will be Spencer Supports for men, women, and children individually designed for each patient according to the medical indications. Of special interest will be Spencer's new support designs for children and Spencer Breast Support designs for mastectomy. See also Spencer's Simulated Vertebrae Model and Blood Pressure Sleeve.

E. R. Squibb & Sons, New York (Booth 60), will feature service material in various fields of therapy at the meeting of the Medical Society of the State of New York. Monographs on therapy, and practical aids will be available for your perusal from which you may select informative items to fill your particular need. Come and browse in the Squibb booth.

Swift & Company, Chicago, Illinois (Booth 112). The original all-meat baby foods, Swift's Meats for Babies and Juniors, will be exhibited by Swift. These high-protein, body-building foods are available in six varieties, beef, lamb, veal, pork, heart, and liver. These products are also widely used for adult special diets. You are cordially invited to discuss with the Swift representatives the clinical research being conducted on strained and diced meats.

Teca Corporation, New York (Booth 11), exhibits its latest models of low volt generators, shortwave diathermy apparatus, and other equipment for physical medicine. Shown are Low Volt Generator Models CD7 and CD8, featuring variable frequencies, controllable surge and rest periods, and built-in oscilloscope; also exhibited are 2-circuit generators Models CD6, SP3, and Auto-Surge with original facilities and circuit divisions. The new TECA F.C.C.-approved shortwave diathermy apparatus will be demonstrated.

Marvin R. Thompson, Inc., Stamford, Connecticut (Booth 40). The role of balanced electrolytes in relation to involuntary mechanism.

U.M.A. Inc., New York (Booth 135), is showing the latest and most essential instruments for vascular diseases; the Collens Sphygmo-oscillometer is a blood pressure apparatus and an oscillometer in one instrument at the extremely low price of $36; the U.M.A. Thermocouple is the standard the world over for taking skin temperatures and intramuscular temperatures; the Collwil Intermittent Venous Occlusion Apparatus is the accepted simple method for the treatment of vascular diseases. They are also showing Intubevac, the simplest, most effective and trouble-free unit for intestinal decompression yet devised. It is brand new.

United Medical Service, New York (Booth 141). This exhibit will consist of posters, photographs, charts, and other educational material which has been used successfully to keep the public and the medical profession informed on up-to-date developments of the "doctor's plan," the nonprofit, voluntary Blue Shield Plan in the New York City area.

U. S. Vitamin Corporation, New York (Booth 70). Exhibit demonstrates the greatest vitamin technicologic advance of the present decade, "oil-in-water" multivitamin solutions includes Vi-Syneral Injectable, an aqueous parenteral multivitamin solution, ready for immediate injection; and the original oral aqueous multivitamin formula, Vi-Syneral Vitamin Drops. Also, professional samples of Methischol, Vi-Syneral Therapeutic, Tri-Sulfanyl, Poly-B, Vi-Litron, and others.

Universal Products Corp., Norristown, Pennsylvania (Booth B). You've often wished to have a light at the end of your finger. The new "Surgeon's Fingalyte" shown here is just that. Bulb on finger tip, it penetrates into all cavities, gives perfect cold transillumination, and saves the physician's time. Other features include a headlight, weighing only two ounces, containing a small case with constant sterilizing vapor, and the Surgeon's "X-L-Lyte," with a record of 60,000 in use.

The Upjohn Company, Kalamazoo, Michigan (Booth 39), will present the anticoagulant family: Heparin, Depo-Heparin, and Dicumarol, with particular emphasis placed upon Depo-Heparin. When heparin is prepared in a gelatin vehicle (Depo-Heparin) and administered intramuscularly, marked prolonged effects are obtained. A single injection of 1 cc. (200 mg.) of Depo-Heparin will prolong the blood coagulation time for about twenty-four hours.

Vanpelt and Brown, Incorporated, Richmond, Virginia (Booth 54), extends a cordial invitation to the Medical Society of the State of New York to visit its exhibit where representatives will be happy to answer questions and supply clinical samples of products.

Varick Pharmacal Company, Inc., New York (Booth 98). The makers of Digitaline Nativelle, the original digitoxin, have prepared an interesting and informative exhibit on new and broader concepts of treating the failing heart. Emphasis is given to the role of Digitaline Nativelle, the preparation of choice in congestive failure. Literature and samples of Digitaline Nativelle will be available as well as copies of our recently published brochure, *Low Sodium Diet.* We cordially invite you to visit our exhibit.

Walker Vitamin Products, Inc., Mount Vernon, New York (Booth 1). Precalcin, the complete prenatal product supplying all essential vitamins and minerals, will be featured at this exhibit. Precalcin is unique in that the capsules contain a dry powder fill with no fish liver oils, thereby providing excellent tolerance and patient appeal. Other featured products include Cevex (Council-Accepted vitamin C drops), Histacin (cold therapy), and Neodrops (water miscible multivitamins). Other vitamin and amino acid products will also be displayed, and representatives present will be glad to discuss all aspects of current therapy in these fields.

Wallace & Tiernan Products, Inc., Belleville, New Jersey (Booth 52), cordially invite you to visit their booth where representatives will be on hand to discuss their pharmaceutical preparations. They will exhibit Desenex, the well-known fungicide, including the new Desenex Solution; Sotradecol, a new sclerosing agent for varicose veins; Azochloramid, a nonsensitizing topical antiseptic; and Monomestrol, an estrogenic preparation highly effective orally or parenterally.

William R. Warner and Company, Inc., New York (Booth 108). An exhibit devoted to the new cholinergic compound, Stigminene Bromide, is being shown in this booth. Representatives will be in attendance to provide information on the use of Stigminene Bromide in the treatment of postoperative abdominal distention and urinary retention and to answer all inquiries regarding this new cholinergic preparation.

Westinghouse Electric Corporation, New York (Booth 137).

Westwood Pharmaceuticals, Division of Foster-Milburn Company, Buffalo, New York (Booth 106), introduces a new method for combating monilial vaginitis (especially during pregnancy) with Gentia-Jel. This unique gentian violet jelly is packaged in single-dose disposable applicators for dainty, convenient application. Physicians are invited to demonstrations of how Gentia-Jel takes the messiness out of specific gentian violet therapy.

Whirlpool Carriage, Inc., Brooklyn, New York (Booth 119), will demonstrate their Schroeter Whirlpool Carriage, a unique portable whirlpool apparatus that makes possible full body or partial whirlpool therapy in any tub or tank in the doctor's office, the hospital, or the patient's home. This equipment has the acceptance of the Council on Physical Medicine of the American Medical Association and the approval of Underwriters' Laboratories.

White Laboratories, Inc., Newark, New Jersey (Booth 93). At this booth will be an interesting display of this firm's products. Trained medical service representatives in attendance will appreciate the opportunity to discuss with you the clinical background and therapeutic merit of the recent products of White's research. You are cordially invited to visit this booth.

Whittier Laboratories, Chicago, Illinois (Booth 111). You are cordially invited to visit the Whittier Laboratories exhibit featuring Resmicon, Arthralgen, and Chlorothen, Whittier.

Winthrop-Stearns, Inc., New York (Booths 28 and 90), extends a cordial invitation to visit their booths where the following products will be featured: Pluravit (R) Drops, dispersible 8-vitamin liquid, including Drisdol (R), pleasing citrus flavor, stable, easily administered; Neo-Synephrine (R); Thenfadil, nasal solution, potent vasoconstrictor with antihistaminic, for common cold, allergic rhinitis, acute and chronic sinusitis.

Wyeth Incorporated, Philadelphia, Pennsylvania (Booth 49). Hydase, highly purified hyaluronidase, and Artisone, a new, dramatically effective antiarthritic, will be featured along with such widely prescribed ethical specialties as Amphojel, Kaomagma with Pectin, Petrogalar, Meonine, Basaljel, and S.M.A. Trained representatives will be on hand to supply literature and samples of many outstanding therapeutic agents.

Yorke Publishing Company, New York (Booth 129). At this booth you will find the *American Journal of Medicine*, known from coast to coast as "The Green Journal." This new, progressive journal presents many Hospital Staff Conferences and two big symposia yearly. It also publishes the latest medical findings of the leading medical schools in 130 text pages monthly.

F. E. Young & Company, Chicago, Illinois (Booth 27), will exhibit Young's Dilators, Physician's Pharmacal Service, Sulf-A-Test, PSP Test Set, and Young's Albumin Test. Young's dilators are used in the treatment and prevention of contracted anus, particularly following hemorrhoidectomy, as an aid in perineal dissection and in the repair following delivery. Register for recent reprints. Physician's Pharmacal Service is a comprehensive listing of ethical products in table form for easy reference, kept up to date by monthly supplements, and, being loose-leaf, new pages easily replace former pages. Be sure to see this living encyclopedia. Sulf-A-Test, Young's PSP Test Set, and Young's Albumin Test will be demonstrated. These are accurate, rapid office tests replacing the more time-consuming laboratory methods.

ANNUAL REPORTS

of the

Officers, Council, and Committees

of the

MEDICAL SOCIETY OF THE STATE OF NEW YORK

to the

HOUSE OF DELEGATES

144th Annual Meeting

May 8 to 10, 1950

Hotel Statler, New York City

1950 HOUSE OF DELEGATES—REFERENCE COMMITTEES

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- Archibald K. Benedict, Chenango
- J. William Quinlan, Monroe
- Thomas R. Cummins, Essex
- Sylvester C. Clemans, Fulton

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Malpractice Insurance and Defense Board
Report of Legal Counsel
- Henry W. Miller, *Chairman*, Putnam
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- W. Walter Street, Onondaga
- Kenneth F. Bott, Greene
- Austin B. Johnson, Nassau

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William Roberts, Yates
Ralph Sheldon, Wayne

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POSTGRADUATE EDUCATION
EMERGENCY PREPAREDNESS
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Charles S. Lakeman, Monroe
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Council—Part III
PUBLIC HEALTH ACTIVITIES A—INDUSTRIAL HEALTH, RURAL MEDICAL SERVICE, PROBLEMS OF ALCOHOLISM
Harry Golembe, *Chairman*, Third District Branch
Milton G. Potter, Erie
David Corcoran, Suffolk
M. Renfrew Bradner, Orange
Charles E. Goodell, Chautauqua

Council—Part IV
PUBLIC HEALTH ACTIVITIES B—CANCER, HARD OF HEARING AND THE DEAF, MENTAL HYGIENE, RHEUMATIC FEVER, BLOOD BANKS
Frederick S. Wetherell, *Chairman*, Onondaga
Abraham M. Rabiner, Section Delegate, Kings
Alfred Angrist, Queens
John J. Brick, Broome
Fred A. Jordan, Cortland

Council—Part V
PUBLIC HEALTH ACTIVITIES C—PHYSICAL MEDICINE, REHABILITATION, NUTRITION, GERIATRICS, DIABETES, CEREBRAL PALSY
Norman S. Moore, *Chairman*, Tompkins
George E. Anderson, Kings
Madge C. L. McGuinness, New York
Samuel Gitlow, Bronx
Christopher Stahler, Jr., Section Delegate, Albany

Council—Part VI
ECONOMICS, PUBLIC MEDICAL CARE, MEDICAL RESEARCH, MEDICAL SERVICE, JOINT COMMITTEE OF THE HOSPITAL ASSOCIATION OF NEW YORK STATE AND THE MEDICAL SOCIETY OF THE STATE OF NEW YORK
Thomas O. Gamble, *Chairman*, Albany
Aaron Kottler, Kings
Edwin L. Harmon, Westchester
Henry I. Fineberg, Queens
Irwin Felsen, Allegany

Council—Part VII
MEDICAL CARE INSURANCE
Guy S. Philbrick, *Chairman*, Niagara
John M. Galbraith, Nassau
Frederic E. Elliott, Section Delegate, Kings
Leo F. Schiff, Clinton
Frank C. Hamm, Kings

Council—Part VIII
LIAISON WITH VETERANS ADMINISTRATION
WAR MEMORIAL
Reginald A. Higgons, *Chairman*, Westchester
Roger F. Lapham, New York
John C. Brady, Erie
George A. Burgin, Herkimer
James Greenough, Otsego

Council—Part IX
LEGISLATION
J. Homer Cudmore, *Chairman*, New York
George J. Lawrence, Queens
John F. Kelley, Oneida
Morris Weintrob, Kings
John L. Edwards, Columbia

Council—Part X
WORKMEN'S COMPENSATION
A. Wilbur Duryee, *Chairman*, New York
Herbert E. Wells, Erie
Roman R. Violyn, Montgomery
Theodore R. Proper, Orange
F. B. Theis, Rockland

Council—Part XI
PUBLICATION, FILM REVIEW
PUBLIC RELATIONS
Eugene H. Coon, *Chairman*, Nassau
J. Lewis Amster, Bronx
Henry E. McGarvey, Westchester
Edward F. Shea, Ulster
Philip D. Allen, New York

Council—Part XII
MISCELLANEOUS—CONVENTIONS, MEDICAL LICENSURE, NURSING EDUCATION, WOMAN'S AUXILIARY, OFFICE ADMINISTRATION AND POLICIES, ETHICS, MEMORIALS, HISTORY
Joseph A. Geis, *Chairman*, Fourth District Branch
Samuel Lubin, Kings
Libby Pulsifer, Monroe
Eugene F. Galvin, Ulster
Frederick H. Amendola, New York

Miscellaneous Business A
A. H. Aaron, *Chairman*, Erie
Peter Murray, New York
Edward P. Flood, Bronx
John L. Sengstack, Suffolk
Joseph L. Kiley, Saratoga

Miscellaneous Business B
Peter J. Di Natale, *Chairman*, Genesee
Clifford A. Crispell, Dutchess
Charles A. Prudhon, Jefferson
Arthur F. Gaffney, Oneida
B. Wallace Hamilton, New York

ANNUAL REPORTS

MEDICAL SOCIETY OF THE STATE OF NEW YORK

1949–1950

REPORT OF THE PRESIDENT

To the House of Delegates, Gentlemen:

This past year probably will be remembered as one in which the American medical profession assumed the difficult task of educating the people of our country about the dangers to their health and well-being of compulsory sickness insurance. It is hardly necessary to tell you of the success of our efforts.

The Medical Society of the State of New York has a prominent part in this activity, as befits the largest State organization of its kind, and is continuing to do so. The basic objectives are the same now as they were in the beginning—to present the case for adequate medical care and standards under a voluntary system on the basis of facts and truth.

Although it has been a crucial year, it has been a source of deep satisfaction to know every effort was put forth to halt the socialization of medicine. The successful result of our endeavors to date has been a distinct service not only to the medical profession but, which is more important, to the public as well.

One has to read the annual reports of the Officers, Trustees, and various Committees of the Council to learn of the many activities in which the State Medical Society is engaged. These are increasing each year. New problems are constantly arising, demanding more and more time of the Officers and various Committees. Like all large bodies, a great part of our work is carried on by Committees with the authority and approval of the Council. With a few fulltime personnel engaged in the major duties of the Society, it is only fitting at this time to say that we owe a great debt of gratitude to the chairmen and members of our many Committees who are giving so unselfishly of their time, energy, and talents in our behalf and in behalf of the citizens of our State.

It has been extremely gratifying to me to see so many Committee members, often at a great personal sacrifice, travel to New York City and to different parts of the State and even to other states many times each year to attend meetings. I do not think you would find such unselfish devotion by so many in any other professional group. They seek no reward or glory, and their only recompense is the inner satisfaction one derives from doing some good for others. I shall not go into details of the work and accomplishments of the other Officers and Committees, as that will be found in their reports, but will only make some brief comments.

Public Relations Committee.—In the earlier part of 1949, following the American Medical Association meeting of the House of Delegates in December, 1948, our Public Relations Committee was hurriedly assigned the task of implementing in our State the American Medical Association Educational Campaign. Under the wise and energetic leadership of Dr. Floyd S. Winslow and Mr. Dwight Anderson and his staff, a plan of intensive activity was quickly formulated covering every county in the State. The splendid results of their prodigious efforts are now history. The marked success of their public speaking campaigns initiated during the past year is also worthy of our commendation. The future of medicine is in our hands if we adopt a wise and courageous public relations program, and I cannot too forcibly impress on our members the importance of the work of this Committee if medicine is to remain free and untrammeled. They must have our earnest cooperation.

Publication Committee.—Due to conditions beyond its control, the Publication Committee was greatly disturbed during the postwar period over the delay in delivery of our JOURNAL. We are happy to say the JOURNAL is now being delivered on time. The Committee is now at work on the new *Directory*, a most difficult and painstaking job. It has been decided to eliminate the listing of physicians from New Jersey and Connecticut in the next issue, but material of much informational value—a new feature—will be found in the forthcoming *Directory*. The high quality of the JOURNAL's scientific section has been maintained, and I must render my tribute of praise to our Editors for the excellence of their editorials. Having attended several meetings of the Publication Committee during the past three years, I learned to appraise the vast amount of work required of Dr. George W.

Kosmak, Dr. Laurance D. Redway, and Mr. Dwight Anderson, Business Manager of the JOURNAL and *Directory*. They deserve our thanks and appreciation.

Public Health and Education Committee.—The Public Health and Education Committee is one of the most important committees of the Council. Under the able leadership of Dr. Theodore J. Curphey, the Committee and its Subcommittees have been most active during the past year. A detailed account of their many activities will be found in Dr. Curphey's report. Dr. Herman E. Hilleboe, State Health Commissioner, has been most cooperative with the State Society and its committees. Since our work complements each other, this harmonious relationship augurs well in our efforts toward the solution of our mutual problems, and other programs requiring the joint cooperation of the State Department of Health and our Society for their implementation.

Disability Benefits Law.—This new law goes into effect July 1, 1950. It is a new social insurance law which provides for the payment of weekly benefits to workmen covered by the law for inability to work due to nonoccupational sickness and accident. The law will be administered by the chairman of the Workmen's Compensation Board, Miss Mary Donlon. At her request your President appointed Dr. Andrew Eggston as a representative of the State Society to the Advisory Committee representing various interests concerned with the law.

More detailed information of that law will be furnished the medical profession before the meeting of the House of Delegates, and I would suggest they visit the booth which the Workmen's Compensation Board will have in the exhibit, where copies of the simplified doctors' forms and other literature regarding the act may be obtained.

We have assured Miss Donlon of our cooperation, which is so essential to the successful functioning of this new measure.

Night and Emergency Calls.—As of December, 1949, the Council on Medical Service of the American Medical Association reported that a total of 225 emergency call plans were in operation. Some of the counties in our State already have such plans working. To allay complaints and gain the good will of the public, we would recommend that all of the counties develop a workable plan for this service. We realize that a uniform plan, due to varying conditions, cannot be adopted for every county.

Grievance Committees.—A letter was recently sent to the secretaries of the various counties by your Secretary, Dr. Walter P. Anderton, at the suggestion of the American Medical Association, urging the formation of a grievance committee. Several of the states now have state-wide grievance committees, but I do not think this would be practical in New York, due to the size of our population and the number of its physicians. I believe they could best function on a county level in this State. Some of the county societies already have a board of censors functioning, as would a grievance committee, to receive complaints of physicians or patients of a physician. The grievance committees in other parts of the country, in addition, are now accepting complaints from patients as to fees charged and attempt to effect an amicable settlement. We are informed that the functioning of these committees in other places has resulted in vastly improving the relations between the profession and the public, whose support is of vital importance to us at this time.

Medical Expense Insurance.—We are pleased to note there has been a marked increase in the number of subscribers enrolled in Medical Care Plans during 1949. The membership on December 31, 1949, was 2,079,353, an increase of 540,094 or 35.08 per cent. The amount of premiums was $13,583,452, an increase of $4,287,784 or 46.06 per cent, and the claims incurred were $9,529,805, an increase over 1948 of $3,167,317 or 49.78 per cent. The Bureau of Medical Care Insurance has an important function to perform in stimulating the growth of and the interest of our members in the voluntary nonprofit medical care plans. Mr. George Farrell, Director of the Bureau, Dr. A. H. Aaron, Chairman of the Medical Expense Subcommittee, and Dr. Renato J. Azzari, Chairman of the Economics Committee, have worked very hard to promote the growth of these plans. They need our cooperation toward their goal of enrolling several million more subscribers in the plans in this State. A vastly increased enrollment in these plans throughout the country is necessary if we wish to avoid socialization of medicine.

Postgraduate Medical Courses.—There is a growing demand for these courses, which I believe will increase, and considerable time of Dr. Curphey and his Committee is given to this work. I think the time has arrived when we should seriously consider the establishment of a Bureau of Postgraduate Medical Education to coordinate and integrate this work in cooperation with the nine medical schools in our State, the State Department of Health, the State Society, and others interested in postgraduate education. The planning of the courses, evaluation of the teaching and experiments being carried on, and making available at the State Society office all information regarding this work, to be effective is a full-time job, and I believe we owe it to our members to accept this responsibility.

Workmen's Compensation Committee.—We have had conferences with Miss Mary Donlon, Chairman, Workmen's Compensation Board, regarding recommendations of the last meeting of the House of Delegates and other requests and resolutions regarding the fee schedule. We recently received a communication from Miss Donlon asking us to submit a report on the amount of remuneration deemed by the State Society to be fair and adequate for the types of medical care rendered to injured workers and requesting our position with regard to the many recommendations concerning changes in fee schedule that have been made to her. This has been done, and supplementary reports will be made at the meeting of the House of Delegates by Dr. J. Stanley Kenney, Chairman of the Committee. Dr. Kenney and his Committee have worked very hard during the past year. He has been untiring in his efforts, and his intimate knowledge of this work is a valuable asset to the Society. Miss Mary Donlon has been very cooperative and most sympathetic toward our problems and is anxious to have a fee schedule that will be satisfactory to all interests concerned.

Legislation.—The Legislation Committee was enlarged this year to fourteen members geographically distributed throughout the State, as recommended by the House of Delegates. Legal counsel was also engaged as recommended by the House of Delegates to assist Dr. Robert R. Hannon, our Executive Officer. Dr. Dattelbaum and his Committee have had several meetings, and he will advise us in his supplementary report of the action of the Legislature on the various bills submitted for our consideration. The thanks of the Society is due Dr. Dattelbaum and his Committee for their active interest in this important work.

The Woman's Auxiliary.—The report of the Advisory Committee on Woman's Auxiliary is most heartening. It tells of the great amount of work carried on by the Auxiliary during the year and of the valuable assistance given to our Public Relations Committee in supplementing the American Medical Association, State, and County Educational Campaign; also their cooperation with the other Committees of the Council. We are greatly indebted to Mrs. William J. Lavelle, President, and the other officers and all of the members of the Auxiliary. It can be truly stated the Woman's Auxiliary is now an actuality in the real sense of the word. I wish to convey to them our sincere thanks and deep appreciation for the excellence of their accomplishments during the past year.

Finally, I wish to express my deep appreciation for the valuable assistance given me by Mr. Anderson and his staff, by Dr. Kaliski, Mr. George Farrell, Dr. Robert R. Hannon, Mr. William Martin, Legal Counsel, and Miss Dougherty and our loyal staff at Society headquarters. To Dr. Walter P. Anderton I am especially indebted for his wholehearted cooperation, guidance, and wise counsel. The Society is indeed most fortunate in having as our Secretary a person so eminently qualified for the position as Dr. Anderton. Without his help and the assistance of those mentioned above it would be an impossible task to carry on the ever-increasing duties of this office.

Again, I wish to convey to the House of Delegates my deep gratitude and appreciation for conferring on me the highest honor at your command. The honor carried with it many responsibilities which I have endeavored to fulfill faithfully. To my successor, Dr. Carlton E. Wertz, I wish to express my sincere thanks for attending several of the District Branch Meetings and relieving me of other duties. I beseech for him your full cooperation in the trying times ahead.

Respectfully submitted,
JOHN J. MASTERSON, M.D., *President*

REPORT OF THE SECRETARY

To the House of Delegates, Gentlemen:

Membership.—The following table is a study of the membership during the year 1949:

Membership—1948	21,171	
New members—1949	1,188	
Reinstated members—1949	965*	
		23,324
Deaths—1949	278	
Resignations—1949	450	
License revoked—1949	5	
License suspended—1949	2	735
		22,589
1949 delinquent members		1,100
Membership—1949		21,489

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* This figure has been adjusted by 284 which is necessary, due to failure to include reinstated members in prior years.

Honor counties (all of whose members paid their dues in 1949) include Columbia, Greene, Lewis, Niagara, Orleans, Putnam, Seneca, Ulster, and Wyoming.

Comparative totals of membership since 1938 follow:

1938	16,177	1944	18,941
1939	16,785	1945	19,234
1940	17,409	1946	20,524
1941	17,781	1947	21,303
1942	18,313	1948	21,171
1943	18,652	1949	21,489

In 1949, 30 members of the Medical Society of the State of New York became Associate Fellows of the American Medical Association.

During 1949, remissions of dues were voted for illness or temporary service in the armed forces as follows:

COUNTY	ILLNESS	SERVICE	TOTAL
Albany		1	1
Bronx	2		2
Broome	1		1
Erie	15	2	17
Kings	5	5	10
Monroe	3		3
Nassau	2		2
New York	17	8	25
Oneida	3		3
Orange	1	1	2
Queens	13		13
Richmond	1		1
Tompkins	1		1
Wayne	1		1
Westchester	4		4
Total	69	17	86

During 1949, the Council voted remission of War Memorial assessments for 118 members as follows:

COUNTY	NUMBER
Bronx	4
Broome	1
Erie	15 (1 rescinded)

Kings	27	
Monroe	2	
Nassau	1	
New York	34	
Niagara	2	
Oneida	4	
Ontario	3	
Queens	14	
Richmond	3	
St. Lawrence	1	
Seneca	1	
Steuben	2	
Westchester	5	
	119	
	1	(rescinded)
	118	

On January 20, 1950, Dr. George F. Lull, Secretary and General Manager of the American Medical Association, wrote that the Medical Society of the State of New York stood forty-eighth on the list of fifty-three constituent associations in percentage of members who had paid this voluntary assessment.

The following data as of December 31, 1949, regarding War Memorial assessment is submitted for your information:

County	Members	—Number—		—Per Cent—	
		Paid	Unpaid	Paid	Unpaid
Albany	352	263	89	75	25
Allegany	37	34	3	92	8
Bronx	1,518	1,466	52	93	7
Broome	233	222	11	95	5
Cattaraugus	82	72	10	88	12
Cayuga	67	63	4	94	6
Chautauqua	120	97	23	81	19
Chemung	108	91	17	84	16
Chenango	37	33	4	89	11
Clinton	53	47	6	89	11
Columbia	44	44	0	100	0
Cortland	42	0	42	0	100
Delaware	36	34	2	94	6
Dutchess	219	195	24	89	11
Erie	1,064	936	128	88	12
Essex	39	37	2	95	5
Franklin	75	56	19	75	25
Fulton	63	39	24	62	38
Genesee	48	48	0	100	0
Greene	28	23	5	82	18
Herkimer	56	55	1	98	2
Jefferson	87	73	14	84	16
Kings	3,533	3,098	435	88	12
Lewis	17	10	7	59	41
Livingston	41	37	4	90	10
Madison	47	27	20	57	43
Monroe	701	555	146	79	21
Montgomery	65	65	0	100	0
Nassau	792	520	272	66	34
New York	6,618	5,306	1,312	80	20
Niagara	151	132	19	87	13
Oneida	270	236	34	87	13
Onondaga	459	386	73	84	16
Ontario	104	95	9	91	9
Orange	193	173	20	90	10
Orleans	18	18	0	100	0
Oswego	57	41	16	72	28
Otsego	66	51	15	77	23
Putnam	16	16	0	100	0
Queens	1,740	926	814	53	47
Rensselaer	162	104	58	64	36
Richmond	194	131	63	68	32
Rockland	117	113	4	97	3
St. Lawrence	83	55	28	66	34
Saratoga	65	47	18	72	28
Schenectady	190	177	13	93	7
Schoharie	17	14	3	82	18
Schuyler	11	11	0	100	0
Seneca	34	34	0	100	0
Steuben	91	89	2	98	2
Suffolk	340	254	86	75	25
Sullivan	45	42	3	93	7
Tioga	29	27	2	93	7
Tompkins	87	80	7	92	8
Ulster	102	97	5	95	5
Warren	65	65	0	100	0
Washington	36	32	4	89	11
Wayne	59	59	0	100	0
Westchester	950	689	261	73	27
Wyoming	30	30	0	100	0
Yates	22	18	4	82	18
Total	22,025	17,788	4,237	81	19

Council.—Regular meetings of the Council have been held monthly except in July and August. The committees and Malpractice Insurance and Defense Board have reported as often as their business required. The large volume of work has been published for you in résumés of Council minutes in the NEW YORK STATE JOURNAL OF MEDICINE. Two new committees were instituted during the past year: the Joint Committee of the Medical Society of the State of New York and the New York State Pharmaceutical Association, and the Historical Committee. The annual reports of committees appear elsewhere in this publication. The "Résumé of Instructions of the 1949 House of Delegates and Actions Thereon by the Council, Board of Trustees, and Officers" will appear in the April 15 issue.

Publications.—The report of the Publication Committee details for you its endeavors and accomplishments. Your pride in the NEW YORK STATE JOURNAL OF MEDICINE has been justified by the fine caliber of scientific articles and editorials that have appeared. Compilation of material for the 1951 *Medical Directory of New York State* is well under way.

Annual Meeting.—The 1949 annual meeting in Buffalo last May was successful from every standpoint. It was attended by 1,609 members, 538 guests, 335 exhibitors, making a total of 2,482 as compared with 1,973 in Buffalo in 1947. The attendance in New York City in 1948 was 6,020.

Comments.—Your Secretary wishes to record his appreciation of the honor you have bestowed upon him in allowing him to serve the Society, this House, the Council, Board of Trustees, and committees during the past year. He attended both meetings of the House of Delegates of the American Medical Association. He went to Chicago for the annual meeting of state society secretaries and editors November 3 and 4, 1949, and the sessions of the public relations conference relative to the National Educational Campaign, February 12, 1950. On November 5, in Chicago he attended a meeting of the Correlating Committee of the Committee on Medical

Care for Industrial Workers, which functions under the Council on Medical Care of the American Medical Association. At this meeting disability benefits insurance laws were discussed; such laws are in existence in New York, Rhode Island, New Jersey, and California.

President John J. Masterson and your Secretary attended the annual meeting of New York State district health officers and school physicians at Saranac Lake, June 19 to 21, 1949. Your Secretary was a member of the Citizen's Committee on Hospital Bond Issue for New York State. He attended the Tenth Annual Congress on Industrial Hygiene of the American Medical Association, of which our Society was a sponsor, in New York City, February 19 and 20, 1950, and he was honored to be an invited guest at the annual meeting of the Medical Society of the County of Monroe and the annual dinner of the Medical Society of the County of Kings. President Masterson and your Secretary also attended the 1950 annual meeting of the Caduceus Post (New York City) of the American Legion on February 24. It was also your Secretary's privilege to attend the seven District Branch meetings that were held last fall, the annual meeting of county society legislative chairmen, and the meeting of county society secretaries in Albany. He attended several hearings on legislative matters and functioned with Dr. Clayton W. Greene and Dr. Norman S. Moore on the Nurse Advisory Council of the New York State Department of Education.

Our Society was represented at the 1949 annual meeting of the Medical Society of the State of Pennsylvania in Pittsburgh by Treasurer James R. Reuling and Councillor J. Stanley Kenney. President-Elect Carlton E. Wertz represented the Society at the annual meeting of the Vermont State Medical Society at Burlington; and Councillor J. Stanley Kenney attended the New Jersey State Medical Society 1949 meeting at Atlantic City. On account of a clash of dates you were not represented last year at the Connecticut State Medical Society annual meeting.

Last fall much pressure was brought upon the officers and trustees to have our Society take active official part in the political campaign. The Council reiterated your time-honored policy not to do so. This wisdom has been upheld by opinion from the Bureau of Legal Medicine of the American Medical Association to the effect that no medical organization as such should work for or against the candidacy of any nominee for elective public office. Nevertheless, the opinion states that every citizen as an individual has a right to take part in politics and to belong to political action committees.

During the past year your Secretary has supplied inquirers with a list of localities desiring general practitioners in New York State and in many instances has discussed where to practice with physicians desiring advice. During my vacation last August, I visited all the places on our list at the time (11).

On September 13, 1949, two representatives from the Federal Bureau of Investigation of the U.S. Department of Justice requested permission to examine the files and records in your office at 292 Madison Avenue, New York City. On account of the absence at a district branch meeting in Oswego of the immediately responsible officers, we could not comply with this request immediately. Shortly thereafter, following conferences among officers, trustees and councillors, upon advice of Mr. William Martin, Counsel, the firm of Messrs. Donovan, Leisure, Newton, Lumbard, and Irvine was engaged to represent your Society in the investigation. This action was approved by the Council. An investigation of the Medical Society of the State of New York and the Medical Societies of the Counties of Bronx, New York, Kings, Queens, Richmond, and Nassua has proceeded. Your Secretary has been informed that its object is to determine whether or not in the opinion of the Department of Justice these Societies have been guilty of violation of the Sherman Antitrust Act. The investigation continues at the time of writing of this report.

It is with profound sorrow that your Secretary officially reports to this House the untimely death of Dr. Stephen R. Monteith of Nyack, in New York City on December 8, 1949, on his way home from the Interim Session of the American Medical Association in Washington, D. C. Dr. Monteith was a former Vice-President of this Society and a member of this House of Delegates, Chairman of the Subcommittee on Geriatrics of the Committee on Public Health and Education, and Delegate from the Medical Society of the State of New York to the American Medical Association. He is survived by his wife, son, and daughter. A telegram of sympathy was sent to Mrs. Monteith in the name of our Society, and copy of a resolution was dispatched from the Council.

Your Secretary is sorry that space does not permit him to enumerate the many helpful acts of kindness that have been his good fortune to encounter during the past year. From President Masterson, Miss Doris K. Dougherty, Executive Assistant to the Secretary, from his fellow officers, councillors, trustees, and members of the committees as well as the office staff, the Secretary has received guidance and cooperation for which he is very grateful.

Respectfully submitted,

W. P. Anderton, M.D., *Secretary*

REPORT OF THE TREASURER

To the House of Delegates, Gentlemen:

The financial status of the Society for the year 1949 is shown in the appended abbreviated report of the annual audit which was done by the firm of Patterson and Ridgway, Certified Public Accountants.

Attention is called to the fact that we have, during the past year, not operated within our dues income. The excess of operating costs over income amounted to $26,868.40.

There have been increased costs in several departments, notably Administration, necessitated by rising salary costs and costs of materials. Most of the departments have operated well within their budget. Even in Administration no necessity arose for extrabudgetary appropriations.

The bulk of the deficit, however, is occasioned by two items. First, the increased cost of the JOURNAL, which this year shows a loss of $4,909.78 before the allocation from dues of $2.50 per member. This is the first year since we have taken over the publication of our own JOURNAL that we have shown a deficit.

In the Treasurer's report last year a comparison was presented for the three preceding years outlining the progressive decrease in operating income from the JOURNAL with the additional note that "we might expect a continuing decrease in revenue from this source." This predicted trend now proves correct and is clearly shown as follows:

1945	$37,020.01
1946	25,201.64
1947	5,076.05
1948	1,332.87
1949	*4,909.78**

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* Italics indicate red figures (deficit).

The second large item accounting for the deficit is the increased cost of operating the Public Relations Bureau. It must be remembered that at the last session of the House of Delegates a resolution was adopted to "memorialize the Council and Board of Trustees to appropriate all necessary funds for a successful public relations and legislative campaign, even if a deficit should develop at the end of the year."

As your Treasurer, I must point out to this House of Delegates the rapid increase in the costs for this work. This can best be demonstrated by again presenting comparative figures. Attention is called to the fact that the first figure is for ten years ago, followed by the figures of five years ago and the figures for last year and lastly those for the current year.

1939	$ 8,510
1944	20,300
1948	27,500
1949	64,332

It should be further noted that the figure $64,332 does not represent a full year's expenditure at the increased tempo, for it was not until after the House of Delegates had acted in May, 1949, that the full impact of these costs has been in effect. The House of Delegates is the policy-making body of our Society, and it is up to you to decide whether we are to continue the current "style" of deficit spending.

In closing, I wish to thank the head of the Accounting Department, Mr. Thomas E. Alexander, and the members of his staff for their fine, loyal, and tireless work. And finally, the House should be aware of the grand cooperation of Dr. Fenwick Beekman, the Assistant Treasurer, in assuming the full duties of the Treasurer on several occasions.

Respectfully submitted,

JAMES R. REULING, M.D., *Treasurer*

Auditors' Certificate

To the Board of Trustees, Medical Society of the State of New York:

We have examined the balance sheet of the Medical Society of the State of New York as of December 31, 1949, and the related statements of operating income, financial income, and capital for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

We did not confirm the unpaid members' dues by correspondence with the members.

In our opinion, the accompanying balance sheet and statements of operating income, financial income, and capital present fairly the financial position of the Medical Society of the State of New York at December 31, 1949, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

PATTERSON AND RIDGWAY

Certified Public Accountants

February 9, 1949

MEDICAL SOCIETY OF THE STATE OF NEW YORK

STATEMENT OF OPERATING INCOME AND EXPENSES

For the Year Ended December 31, 1949

OPERATING INCOME		
Members' Dues for the Current Year—After Reserve		$318,685.00
Less: Allocation to JOURNAL Circulation Income, as Authorized by the Board of Trustees		55,947.50
		262,737.50
Arrears (Dues)		1,073.00
Operating Income (*Loss*) from the JOURNAL	$ _4,909.78_*	
Plus Allocation of Dues	55,947.50	
		51,037.72
Sundry		12.50
		314,860.72
OPERATING EXPENSES		
Administrative	92,982.24	
Public Relations Bureau	64,332.85	
Legislative Bureau—Albany Office	19,794.54	
Workmen's Compensation Bureau	20,522.11	
Bureau of Medical Care Insurance	15,985.84	
Scientific Activities	16,126.00	
District Branches	2,498.12	
Planning Committee for Medical Policies	397.37	
Woman's Auxiliary	2,000.00	
Malpractice Defense and Insurance Board	1,114.92	
Malpractice Audit	1,000.00	
Counsel—Retainer and Expenses	21,990.71	
Traveling Expenses	17,371.94	
Committee on Alcoholism	414.88	
A.M.A. Conference Room Expense	499.94	
Conference of Presidents	50.00	
Pharmacopoeia Revision Committee	100.00	
Special Legal Services	9,054.00	
Veterans Medical Service Plan of New York	495.13	
Medical Directory, (One-half the Estimated Cost of 1949 *Directory* Was Allocated to 1948)	44,320.60	
Annual Meeting	10,677.93	
TOTAL		341,729.12
EXCESS OF OPERATING EXPENSES OVER INCOME		$ _26,868.40_*

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* Italics denote figures in red.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

BALANCE SHEET

December 31, 1949

ASSETS

GENERAL FUND

CURRENT ASSETS

Cash in Banks and on Hand		$54,202.19
Accounts and Notes Receivable	$9,881.38	
Less: Reserve for Doubtful Accounts and for Agency Commissions	1,215.00	8,666.38
Advances to Veterans Medical Service Plan of New York, Inc.		17,211.67
Dues Receivable—Net, estimated		8,500.00
Investments:		
At Cost (Market or Redemption Value $515,292.74) (See Note A)		484,071.72
Accrued Interest Receivable		8,134.70
Inventory of Paper Stock		4,737.16
TOTAL CURRENT ASSETS		585,523.82

PREPAID EXPENSES

Advance Costs—*Medical Directory 1951*	26,267.54	
Advance Costs—1950 Annual Meeting	2,631.45	
Sundry Expenses and Deposits	2,236.80	
TOTAL PREPAID EXPENSES		31,135.79
FURNITURE AND FIXTURES—At Nominal Value		2.00

ENDOWMENT FUNDS

Cash in Bank		12,600.60

WAR MEMORIAL FUND

Cash in Bank	18,268.44	
Investments—U.S. Treasury Bonds (Market Value $193,648.43)	191,799.28	
Accrued Interest Receivable	971.37	
TOTAL WAR MEMORIAL FUND		211,039.09
TOTAL ASSETS		$840,301.30

LIABILITIES AND CAPITAL

GENERAL FUND

Current Liabilities		
Accounts Payable	$ 10,450.10	
Commissions Payable—Journal and *Directory* Advertising Sales	9,918.93	
Taxes Payable (Including Withholding)	5,039.79	
Total Current Liabilities		$25,408.82
Deferred Credits		
Journal Advertising and Circulation	2,010.55	
Annual Meeting—1950	21,643.20	
Reprints Paid in Advance	499.15	
Membership Dues—1950	6,801.00	
Total Deferred Credits		30,953.90
Reserve for Future Annual Meetings		10,000.00
Capital—General Fund		550,298.89
ENDOWMENT FUNDS		
Lucien Howe Prize Fund	5,093.58	
Merritt H. Cash Prize Fund	2,027.81	
A. Walter Suiter Lectureship Fund	5,479.21	
Total		12,600.60
WAR MEMORIAL FUND		211,039.09
TOTAL LIABILITIES AND CAPITAL		$840,301.30

Note A: U. S. Treasury bonds in the amount of $39,000 have been earmarked for the Journal Reserve, and $10,000 for the Annual Meeting Reserve.

STATEMENT OF FINANCIAL INCOME, EXPENSE, AND CAPITAL

For the Year Ended December 31, 1949

	General Fund	War Memorial Fund	Lucien Howe Prize Fund	Merritt H. Cash Prize Fund	A. W. Suiter Lectureship Fund
BALANCE AT JANUARY 1, 1949	$556,183.75	$139,119.50	$4,993.22	$1,987.87	$5,418.30
ADDITIONS:					
Excess of Operating Expenses over Income	*26,868.40**				
Assessments Collected		74,350.00			
Donations Received		200.00			
Interest on Bank Balances	625.53		100.36	39.94	110.91
Income from Securities	19,580.53	3,269.59			
Profit (Net) from Sale of Securities	1,485.17				
	551,006.58	216,939.09	5,093.58	2,027.81	5,529.21
DEDUCTIONS					
Custodian and Investment Fees	707.69				
Prize					50.00
Benefits Disbursed		5,900.00			
BALANCE AT DECEMBER 31, 1949	$550,298.89	$211,039.09	$5,093.58	$2,027.81	$5,479.21

* Italics denote figures in red.

CASH IN BANKS AND ON HAND—December 31, 1949

GENERAL FUNDS	$ 46,017.49	
Less: Due to Investment Fund	20,000.00	
		$26,017.49
INVESTMENT FUNDS	8,184.70	
Plus: Due from General Fund	20,000.00	
		28,184.70
TOTAL		54,202.19
ENDOWMENT FUNDS		
UNION DIME SAVINGS BANK		
Lucien Howe Prize Fund		5,093.58
Merritt H. Cash Prize Fund		2,027.81
A. Walter Suiter Lectureship Fund		5,479.21
TOTAL		12,600.60
WAR MEMORIAL FUND		
Bayside National Bank		17,349.69
Chase National Bank		918.75
TOTAL		$ 18,268.44

INVESTMENTS—December 31, 1949

The investments of the Society (General Fund) are summarized as follows:

	Cost	Market
U.S. Government Bonds (See Note "A")	$279,677.49	$288,575.77
Railroad Bonds	5,551.25	5,840.00
Public Utility Bonds	20,139.50	21,855.00
Mortgage	5,109.26	5,109.26
Preferred Stocks	9,909.06	10,343.75
Common Stocks	163,685.16	183,568.96
TOTAL	$484,071.72	$515,292.74

The investments of the Society (War Memorial Fund) are summarized as follows:

	Cost	Market
U.S. Government bonds	$191,799.28	$193,648.43

These securities (except the Mortgage, which is held by you in the State Society's Office) are in the possession of the Chase National Bank as Custodian for the Trustees of the Medical Society of the State of New York.

NOTE A: U. S. Treasury bonds in the amount of $39,000 have been earmarked for the JOURNAL Reserve, and $10,000 for the Annual Meeting Reserve.

REPORT OF THE BOARD OF TRUSTEES

To the House of Delegates, Gentlemen:

This report of your Board of Trustees covers in some instances the year 1949, in other instances the period between the 1949 meeting of the House of Delegates and February 15, 1950. A short supplementary report will be presented in May.

Your Board of Trustees expresses grateful appreciation to the officers of the Society, committee chairmen, and employes who have participated in its work. Your Board does not sit in a tower removed from contact with the other activities of the Society. Its meetings are attended with intelligent, informed, and convincing voice, if not vote, by the President of the Society, the Secretary, the Treasurer, Assistant Treasurer, and Counsel. One Trustee is a member of the Planning Committee for Medical Policies; one is a member of the Publications Committee; one is a member of the Office Administration and Policies Committee; two are members of the War Memorial Committee; one is a member of the Committee on Constitution and Bylaws; one is a member of the Committee on Economics; one is a member of the Liaison Committee with the Veterans Administration; one is a director of the Veterans Medical Service Plan of New York, Inc. The Chairman of the Board is a member of the Council and most of the Trustees attend regularly the meetings of the Council. Because of these contacts the Trustees come to their meetings prepared for spirited discussion. It took 527 pages of typewritten verbatim minutes to cover the formal discussions of the Board during the year. This, even, would have been much greater, were it not for the frequent, informal, preliminary meetings which are held by the officers of the Society and the members of the Board.

To make sure that the accounting of all funds is correct and to guard against unwise use of current funds, the monthly reports of the Treasurer, the annual report of the Treasurer, the Auditor's report, and the budget produced by the Finance Committee and the Council are scrutinized and digested with great care.

The Bylaws of the Society (Chapter V, Section 2), require that, "The budget prepared by the Council shall be submitted to the Board for its approval." The fact that the Treasurer of the Society has also functioned as Chairman of the Finance Committee of the Council has been of great value to the Trustees during the past year. The Board's interpretation of the Bylaws concerning the budget is that it is empowered to change the budget if, after due consideration, it seems wise to do so and to make extra budgetary appropriations, when necessary, to meet changing needs of the Society, its officers, and employes during the year. The Board believes that operation under a budget is necessary, but that a budget is a means to an end, not an end in itself. By means of a budget, fiscal experience in *regular* expenses of each year may be utilized to try to keep expenses within income in succeeding years, but, under present-day uncertainties, the execution of the affairs of the Society requires elasticity in attitude toward many items in the budget, on the part of those controlling its funds. An unchangeable budget would result in the worst sort of conservatism.

Your Board of Trustees has usually been tightened down to a frugal mood and has shown a most satisfactory increase in value of surpluses and investments (Table 1).

TABLE 1.—FINANCIAL STATISTICS

Year Ending December 31	Surplus (General Fund)	Balance of Investments at End of Year[1]
1944	$520,637	$337,248
1945	538,399	446,696
1946	544,800	444,223
1947	477,777	481,943
1948	556,184	490,900
1949	550,299	512,164[2]

[1] Includes investment cash account. Investments at cost. Excludes War Memorial Fund.

[2] Market value of investments and cash in investment account on December 31, 1949 was $543,385.

In 1947, there were losses in the then current financial position, largely due to net loss of $59,400 in publication of the *Directory* and a $15,300 expense in moving the Society's offices. In that year, there was an excess of expenses over income of $67,023. Nevertheless, there was an increase in the investment balance during the year of $37,720.

In 1948, largely due to a $5.00 increase in dues, there was an increase in dues income of $133,955. The 1947 loan of $50,000 was paid. There was a net income of $78,407 and an increase in investment balance of $8,957.

In 1949, changing conditions required unusual elasticity of fiscal policy on the part of Trustees who are inherently frugal. First of all was the Society's contribution to the fight against National Compulsory Health Insurance. On May 4, 1949, the House of Delegates memorialized "The Council and the Board of Trustees to appropriate all necessary funds for a successful public relations and legislative campaign, even if a deficit should develop at the end of the year." This was presented to the Council and Board of Trustees on June 16, 1949. At that time the Trustees appropriated an additional $20,000 to the budget of the Public Relations Bureau, making it $51,000. On November 11, 1949, the Trustees appropriated another $19,000, making it $70,000. The 1950 budgetary appropriation to the Public Relations Bureau adds another $15,129, making it $85,129. (More than $12,000 of this is accounted for by transfer, in the budget, of the Speakers' Bureau from Administration to Public Relations and does not represent increased expense to the Society.) If present policies maintain throughout the year, this budgetary allotment to Public Relations may not be adequate. However, there was a saving of $5,667 in the 1949 budgetary allotment to Public Relations, and it is not anticipated that Public Relations will participate as actively in the State legislative campaign as usual. So, it may suffice.

In order to increase the efficiency of the Legislative Bureau by enlargement of the Legislation Committee and addition of the services of legal counsel in Albany, in November the Trustees added $625 to the budget of the Legislative Bureau, making it $20,270. In further response to this demand, the 1950 budgetary appropriation to the Legislative Bureau is $27,524, an increase of $7,254 over 1949.

In September, 1949, the impact of an investigation by the Federal Department of Justice into the affairs of the Medical Society of the State of New York, Queens, Kings, Bronx, Richmond, and Nassau required immediate expenditure of money for legal aid. That was appropriated month by

TABLE 2.—INVESTMENTS—GENERAL FUND (DECEMBER 31, 1949)

	Interest Rate (Per Cent)	Date of Maturity	Par or Shares	Cost	Market or Redemption Value	Income During 1949
U.S. GOVERNMENT BONDS						
U.S. Treasury Certificates of Indebtedness	$1\frac{1}{8}$	1950	$25,000	$ 25,000.00	$ 25,000.00	$ 281.25
U.S. Treasury Certificates of Indebtedness	$1\frac{1}{4}$	1950	20,000	20,000.00	20,014.84	125.00
U.S. Savings—Series "D"	...	1950	10,000	7,500.00	9,800.00	400.00
U.S. Savings—Series "F"	...	1953	30,000	22,200.00	26,610.00	780.00
U.S. Savings—Series "G"	$2\frac{1}{2}$	1954	10,000	10,000.00	9,640.00	250.00
U.S. Savings—Series "G"	$2\frac{1}{2}$	1954	10,000	10,000.00	9,610.00	250.00
U.S. Savings—Series "G"	$2\frac{1}{2}$	1955	4,000	4,000.00	3,832.00	100.00
U.S. Savings—Series "G"	$2\frac{1}{2}$	1959	51,300	51,300.00	49,350.00	1,282.50
U.S. Treasury	$2\frac{1}{2}$	1954–1952	5,000	5,000.00	5,135.94	125.00
U.S. Treasury	2	1953	1,500	1,476.19	1,520.16	30.00
U.S. Treasury	$2\frac{1}{2}$	1968–1963	9,000	9,000.00	9,455.63	225.00
U.S. Treasury	$2\frac{1}{2}$	1969	9,000	9,000.00	9,421.88	225.00
U.S. Treasury	$2\frac{1}{2}$	1969	5,000	5,000.00	5,226.56	125.00
U.S. Treasury	$2\frac{1}{2}$	1970	31,000	31,000.00	32,365.94	775.00
U.S. Treasury	$2\frac{1}{2}$	1971–1966	5,000	5,000.00	5,217.19	125.00
U.S. Treasury	$2\frac{1}{2}$	1972–1967	29,000[a]	29,000.00	30,114.69	725.00
U.S. Treasury	$2\frac{1}{2}$	1972–1967	20,000[b]	20,000.00	20,768.75	500.00
U.S. Treasury	$2\frac{1}{4}$	1962–1959	15,000	15,201.30	15,492.19	317.29
Income on U.S. Bonds sold or redeemed during 1949				.....	.....	466.58
TOTAL U.S. GOVERNMENT BONDS				$279,677.49	$288,575.77	$ 7,107.62
RAILROAD BONDS						
New Orleans, Texas & Mexico—1st Mortgage B	5	1954	1,000	$ 5,551.25	$ 5,840.00	$ 300.00
New Orleans, Texas & Mexico—1st Mortgage B (Certificate of Deposit)	5	1954	5,000			
PUBLIC UTILITY BONDS						
American Telephone and Telegraph—Convertible Debentures	$2\frac{3}{4}$	1961	18,800	$ 20,139.50	$ 21,855.00	$ 213.31
Income on utility bonds sold in 1949				.....	.....	234.96
				$ 20,139.50	$ 21,855.00	$ 448.27
MORTGAGE						
Marrone, T R.—Brooklyn Property	5		5,817.76	$ 5,109.26	$ 5,109.26[c]	$ 297.36
PREFERRED STOCKS						
Rochester Gas & Electric Corp. Cumulative	4		50	$ 5,211.81	$ 4,962.50	$ 200.00
Pure Oil Cumulative Convertible	5		50	4,697.25	5,381.25	250.00
Income on preferred stock sold during 1949				.....	.....	644.64
TOTAL PREFERRED STOCKS				$ 9,909.06	$ 10,343.75	$ 1,094.64

COMMON STOCKS	Shares	Cost	Market or Redemption Value	Income During 1949
American Gas & Electric	111	$ 4,504.08	$ 5,605.50	$ 158.25
Central Illinois Light	55	1,796.26	1,986.88	....
Consolidated Natural Gas	102	4,564.51	4,437.00	204.00
Consumers Power	280	8,314.82	9,730.00	....
Illinois Power	112	3,251.57	4,088.00	205.00
Ohio Edison	200	5,831.32	6,425.00	....
Peoples Gas, Light & Coke	55	6,747.68	7,335.63	....
Union Pacific Railroad	160	10,342.80	13,440.00	960.00
Allied Chemical & Dye	60	10,412.10	12,300.00	600.00
American Tobacco	100	6,516.22	7,450.00	400.00
Dow Chemical	115	5,531.59	6,339.78	....
General Electric	200	7,393.50	8,425.00	400.00
General Motors	100	5,318.00	7,162.50	800.00
Hercules Powder	135	6,026.65	7,053.75	351.00
International Nickel of Canada	100	4,565.00	2,812.50	200.00
Kennecott Copper	100	3,815.00	5,087.50	400.00
Melville Shoe	100	2,418.50	2,600.00	180.00
Montgomery Ward	200	9,018.24	10,975.00	600.00
Mueller Brass	200	3,721.75	3,050.00	210.00
New Jersey Zinc	150	9,053.78	8,437.50	412.50
Paramount Pictures	100	3,157.84	2,200.00	200.00
Standard Oil Co. of New Jersey	219	12,602.74	14,618.25	870.00[d]
Texas Company	$307\frac{1}{2}$	15,019.59	18,565.42	1,151.25
Union Carbide & Carbon	150	3,818.12	6,693.75	675.00
United Shoe Machinery	150	9,943.50	6,750.00	431 25
Income from common stocks sold during 1949		.....	.....	924.39
TOTAL COMMON STOCKS		$163,685.16	$183,568.96	$10,332.64

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[a] Earmarked as authorized by the Board of Trustees for the JOURNAL Reserve.

[b] Of which $10,000 are earmarked for the JOURNAL Reserve, and $10,000 for the Annual Meeting Reserve, as authorized by the Board of Trustees.

[c] Book value.

[d] Also paid 2 per cent in stock.

SUMMARY OF INVESTMENTS	Cost	Market or Redemption Value	Income During 1949
U.S. Government Bonds	$279,677.49	$288,575.77	$ 7,107.62
Railroad Bonds	5,551.25	5,840.00	300.00
Public Utility Bonds	20,139.50	21,855.00	448.27
Mortgage	5,109.26	5,109.26	297.36
Preferred Stocks	9,909.06	10,343.75	1,094.64
Common Stocks	163,685.16	183,568.96	10,332.64
Total All Investments	$484,071.72	$515,292.74	$19,580.53

TABLE 3.—Investments—War Memorial Fund (December 31, 1949)

	Interest Rate (Per Cent)	Maturity	Par	Cost	Market or Redemption Value	Income During 1949
U. S. Government Bonds						
U.S. Savings Series "G"	2½	1961	$ 75,000	$ 75,000.00	$ 74,100.00	$1,562.50
U.S. Treasury	2	1953–1951	15,000	15,145.73	15,201.56	169.95
U.S. Treasury	2¼	1962–1959	15,000	15,110.30	15,501.56	258.89
U.S. Treasury	2½	1967–1962	25,000	25,625.33	26,398.44	384.23
U.S. Treasury	2½	1970–1965	25,000	25,376.66	26,101.56	411.13
U.S. Treasury	2½	1972–1967	20,000	20,189.14	20,768.75	355.82
U.S. Treasury	2½	1972–1967	15,000	15,352.12	15,576.56	127.07
Total U.S. Government Bonds			$190,000	$191,799.28	$193,648.43	$3,269.59

month, amounting to $7,650 in 1949 (see supplementary report for 1950).

There were other extrabudgetary appropriations between May, 1949, and January, 1950, amounting to $17,150.53, for various unexpected expenses, chiefly the Annual Meeting deficit, *Directory* deficit, and Journal deficit. The total of extrabudgetary appropriations in 1949 was $85,436.89 (22 per cent of the total budgeted expenditures). But, there was a saving in the total 1949 budgeted expense of $33,122 and an underestimate in budgeted income of $5,973, making the budgetary overestimate $39,095.

The 1950 budget does not balance by $25,749. The 1949 budget did not balance by $44,272, but there was a saving in it of $39,095. The expenses exceeded the income by only $5,177, and the investment balance did not suffer. In fact, it increased $21,264. The unbalanced budget for 1950 carries no item for extraordinary legal expense which may well reach $35,000. A much more likely figure for budgetary deficiency for 1950 would be $70,000. The 1950 expense budget is probably trimmed too low, $18,523 lower than the final 1949 budget. However, there were savings in the 1949 budget to the extent that the final loss was $5,177. The suggestion that the 1950 budgetary deficiency may be $70,000 is based upon the present budgetary deficit of $25,749, unforeseen expenses $10,000, extraordinary legal expense $35,000.

The final facts are that the Society operated in 1949 at a net loss of $5,177; the total surplus decreased $5,885, but the investment balance increased $21,264. We face high costs of publication, extraordinary legal expense, and an uncertain demand for public relations activities. If the House believes it advisable to function in the black, an emergency assessment would seem to be necessary—emergency assessment rather than increase in dues because of the probable temporary nature of our extraordinary expenses and the definite possibility that the Journal may get out of the red and that the expense of publication of the *Directory* may be less.

In accordance with the constant policy of the Board of Trustees against deficit financing in favor of maintenance of expenditures within income and maintenance of the capital funds intact, the Board recommends that the House of Delegates levy an emergency assessment of $3.00 for the year 1951 to cover the deficits of 1949 and 1950.

The Board has received monthly reports from the War Memorial Committee, has controlled its investments, and counseled in its expenditures (see report of that Committee for details).

One of the functions of the Board of Trustees is the making and execution of all contracts for the Society. A new contract for three years was made with Mr. Dwight Anderson, to be Executive Secretary, Director of the Public Relations Bureau, and Business and Advertising Manager of the New York State Journal of Medicine and the *Medical Directory*, remuneration on a salary plus advertising commission basis. Contracts were renewed for one year with Dr. R. R. Hannon, Executive Officer, at $11,000; with Dr. D. J. Kaliski, Director of the Workmen's Compensation Bureau, at $12,000; with Mr. George P. Farrell, Director of the Bureau of Medical Care Insurance, at $9,500. A new lease was made for the property harboring the Society's offices at 292 Madison Avenue, New York City, with the option of termination as of April 30, 1951, for 2 years at $18,000 per year. A new lease was made for office space in Albany occupied by the Executive Officer and his staff at $1,647.50 annually for three years. Contract was made with Patterson and Ridgway, auditors, for one year at $1,250.

In the matter of investments, the Chase National Bank acts in two capacities: (1) as custodian of the portfolio for which $407.69 was paid in 1949 and (2) an advisory service on investments, the fee for which is $300. The Board of Trustees is not restricted in its fiduciary capacity to the use of this advisory service. In fact, at times, chiefly through the knowledge and wisdom of Dr. Ross, changes have been made in the investments resulting in very appreciable profit to the Society. In comparison with investment counseling service in general, the cost of this one is very low. It may well be that the time will come when change to a more active type of counseling will be advisable and profitable.

A copy of the Auditor's Report on the Investment Portfolio of 1949 is included in Tables 2 and 3.

Respectfully submitted,

EDWARD T. WENTWORTH, M.D., *Chairman*
EDWARD R. CUNNIFFE, M.D.
JAMES F. ROONEY, M.D.
DAN MELLEN, M.D.
WILLIAM H. ROSS, M.D.

REPORT OF THE FINANCE COMMITTEE

To the House of Delegates, Gentlemen:

It has been the custom in the past for the incoming president to appoint the Finance Committee some time after the Annual Meeting. The summer has usually intervened before this Committee has been able to get at its work. Because of the necessary delays in compiling large groups of figures, this procedure has meant that the budget was not ready for presentation to the Council and Board of Trustees until the closing months of each year, which gave little opportunity for these bodies to digest properly and acquaint themselves with the figures.

This year the Finance Committee proposed and the Council and Board of Trustees approved of a new procedure. Department heads have already been notified that they are to prepare their 1951 Budget so that the Finance Committee may have its work done prior to September 1. The new procedure also provides for a different method of presentation. It involves the preparation of reports by the Accounting Department of the amounts expended in the two preceding years for presentation to the department heads. It is required that each item in the new budget be then supported with adequate data, reasons, and detailed statements of the needs for the amount requested.

As during the past year, each department head will then be required to appear before the Finance Committee to consult further and give any additional explanation which the Finance Committee may desire in order that proper explanations may be given to the Council and the Board of Trustees. In getting started earlier during the past year, the Council had the opportunity of a full month in which to make studies and any changes it found necessary. The budget was presented to the Council at its September meeting. In addition to the written comments, verbal explanations were made by the chairman of the Finance Committee, item by item. At the October meeting the Council again went over the budget and adopted it, referring it to the Board of Trustees at their meeting the same afternoon. The Trustees then had the report in their hands for a month and in November passed all but a few items, and in December the whole budget was approved for a period of three months.

With certain exceptions having to do with expenses which at the time could be only inadequately estimated or were entirely unforeseen, the Committee believes that the department heads have done an excellent job. This opportunity is taken to thank each of them for their earnest and sincere cooperation.

As to the budget itself, it was composed this year of forty typewritten pages. There is attached hereto a summary of the budget for the current year.

Respectfully submitted,

JAMES R. REULING, M.D., *Chairman*
ALBERT F. R. ANDRESEN, M.D.
MAURICE J. DATTELBAUM, M.D.

SUMMARY OF BUDGET—YEAR ENDED DECEMBER 31, 1950

	1949 BUDGET	1950 BUDGET
INCOME:		
Dues (net)	$323,700	321,900*
Dividends and Interest	16,000	18,000
	$339,700	339,900
EXPENDITURES:		
JOURNAL (net)	9,120	6,552
Administrative	96,313	92,726
Public Relations	70,000	85,129
Legislative	20,270	27,524
Workmen's Compensation	21,065	21,129
Medical Care	16,270	16,984
Scientific Activities	21,070	21,270
District Branches	3,038	3,100
Planning Committees	800	875
Woman's Auxiliary	2,000	2,000
Malpractice Insurance	1,170	1,000
Malpractice Audit	1,000	750
Legal	22,000	22,000
Travel	24,815	27,685
Middle Atlantic States Conference	150	0
Committee on Problems of Alcoholism	750	1,000
A.M.A. Conference Room	500	500
Conference of Presidents	50	50
Friends of Medical Research	0	100
Veterans Medical Service Plan	0	500
Medical Directory (1951)	54,555	36,390
Annual Meeting	11,215	−1,615
Pharmacopœia Revision Committee	100	0
Appropriation—Special Legal Expense	7,650	0
TOTAL	383,901	365,649
Deficit	*$44,201*	*$25,749*

* Estimated.

REPORT OF THE COUNSEL

To the House of Delegates, Gentlemen:

Your Counsel herewith submits his report of the activities of the Legal Department of the Medical Society of the State of New York for the period from February 1, 1949, to and including January 31, 1950.

As our report indicates, the past year has been an exceedingly busy one, both in court and in consultation. The report states only conclusion and can give no true picture of the amount of work involved.

During the year, your Counsel's legal staff has remained unchanged, consisting of Mr. Thomas H. Clearwater, the Attorney for the Society, Mr. Robert J. Bell, Mr. John J. DeLuca, Mr. Robert W. Prier, and Mr. Harold B. Smith. Each of them has continued his good work on behalf of the Society and its members. Unfortunately, Mr. Clearwater underwent two operations during the year and was disabled for a long period, but he is now resuming his work.

In making his report, your Counsel divides his activities into three categories: (*a*) The actual handling of malpractice actions and claims; (*b*) counsel work with officers, committees, and individual members of the Society, and (*c*) legislative matters.

Litigation.—We have often written and spoken concerning the ever-present hazard of a physician becoming involved in malpractice litigation. We wish to re-emphasize the fact that much of such litigation results from careless and thoughtless criticism by one physician concerning the work of another and to urge upon physicians to be on guard against so stimulating a patient to institute an action against another physician. We wish to point out that, in our activities, we find that there is no type of medical practice in which there is immunity from malpractice suits. Both general practitioners and specialists of all sorts become involved in such litigation and in many cases in which they feel no blame can properly rest upon them

These are years in which the public is generally lawsuit-minded, and verdicts in all sorts of personal injury actions are larger than ever before. Malpractice cases, of course, are affected by the trend of the times.

As the House of Delegates is well aware, your Society has for years sponsored a Group Plan of insurance to afford protection to its members against financial loss as a result of malpractice litigation. The excellent work of the Plan has continued. During the year, the Yorkshire Indemnity Company has terminated its relationship with the Society as carrier for the Plan, and that role has been taken over by the Employers Mutual Liability Insurance Company of Wisconsin. We wish to point out that, of course, most of the lawsuits which are pending at the present time, which are insured under the Group Plan, are those in which the Yorkshire Indemnity Company is the carrier. That Company is fully and fairly continuing to discharge its obligations to its assureds, and we wish to express our appreciation for the cooperation of Mr. Horace Crowell, Jr., Vice-President of the Company, and Mr. Thomas J. Finnegan, the head of its legal department, for the excellent way in which they have cooperated with your Counsel in the handling of cases and claims.

We have had a number of claims and suits in which the new carrier is involved and wish to express our appreciation for the intelligent cooperation that we have received from Messrs. William L. Daily and William C. Richardson, representatives of that Company.

The Society furnishes malpractice defense without charge to members who carry no malpractice insurance. Each year, and the past year is no exception, a substantial number of members find themselves confronted with malpractice litigation without financial protection. Invariably, such physicians express to your Counsel regrets that they had not had the foresight to carry malpractice insurance.

During the year, the Malpractice Insurance and Defense Board, organized a few years ago as a special committee of the House of Delegates, has continued to discharge its duties under the able chairmanship of Dr. Leo F. Schiff of Plattsburg.

This Board has held numerous meetings in its attempts to contend with the various problems that arise in connection with malpractice defense. Your Counsel and others from his staff have attended the meetings of the Board.

With these preliminary statements, we note that there were commenced, in the present reporting period, 211 actions as against 203 actions during the preceding similar period. While the number of new actions is greater than the year before, the proportionate increase is not nearly so great as over the next preceding year when there were 153 new cases. The amount of new litigation seems to have leveled off, which we feel is an encouraging sign. We note, from Table 1, that during the reporting period we have disposed of 153 cases, which is 13 more than during the preceding year. Fifty-two of these cases were terminated in favor of the physician, and 101 were settled. During the year, there were no cases which resulted in a judgment in favor of a plaintiff against a physician.

The figures set forth in Table I do not include a large number of claims which are outstanding, on some of which it may be anticipated that suit will eventually be brought. We attempt to convince as many as possible of the claimants and their attorneys that their claims lack merit, and we are successful in so concluding a large number of claims.

At the end of the reporting period, there were pending approximately 500 cases, many of which are entirely dormant.

Counsel Work.—During the period of this report, your Counsel and Mr. Clearwater have attended the Annual Meeting of the Society and the regular meetings of the Council and Board of Trustees and have conferred on many occasions with members of such bodies in connection with numerous legal problems that have arisen. Each year, the activities of your Society become more complex, and each year there are necessarily more legal problems attendant upon those activities.

Your Counsel prepared the contracts between the Society and Mr. Dwight Anderson, Dr. Robert R. Hannon, Dr. David J. Kaliski, and Mr. George P. Farrell and also the contract with the Society's auditors.

Your Counsel, with the Committee on Constitution and Bylaws, has examined a number of proposed

TABLE 1.—Number of Suits Instituted and Disposed of in 1949–1950

	Instituted 1949–1950, 12 Months	Disposed of 1949–1950, 12 Months
1. Fractures, etc.	24	14
2. Obstetrics, etc.	21	15
3. Amputations	6	3
4. Burns—x-rays, etc.	33	17
5. Operations	59	49
6. Needles breaking	1	3
7. Infections	10	13
8. Eye infections	1	2
9. Diagnosis	16	9
10. Lunacy commitments	2	1
11. Unclassified—medical	38	27
Total	211	153
Actions for death	26	13
Infants' actions	19	21
Total	45	34
How Disposed Of		
Settled		101
Terminated in favor of defendant physician		52
Judgment for plaintiff		0
Total		153

amendments to the constitution and bylaws of several county societies and has rendered advice and made recommendations with respect thereto.

Throughout the year, we have been in frequent consultation with Dr. Anderton, Mr. Anderson, and Dr. Kaliski in connection with various problems of a legal nature that have arisen in connection with their activities.

Your Counsel constantly receives requests, oral and written, for opinions from members of the Society on a great variety of subjects. Some of the matters upon which advice has been given during the past year, are the following: propriety of employment by a physician of an unlicensed physician as an assistant, withholding from patient a diagnosis of cancer, blacklisting of patients by collection agency, extent of practice by osteopathic physicians, legal problems of a blood bank, legal status of nurse anesthetist, partnership contracts between physicians, sale of a physician's practice, legal status of sterilization operations, performance of operations by residents, refusal to divulge confidential information, appointment of physicians to examine food handlers under local law, right of governing body of hospital to appoint or expel staff members, liability of hospitals and surgeons for acts of interns and nurses, when physician may refuse to treat a patient, ownership of x-rays, intravenous administration by nurses, status of physician in will contest, illegal use of title "doctor," limitation of actions against physicians, legal status of commercial laboratories, and legal aspects of therapeutic abortions.

We should mention that your Counsel's office is at the service of all the members of the Society, and daily we are consulted either by personal inquiry or by telephone concerning many legal problems, particularly emergency situations which cannot be handled by correspondence. We attempt to be of assistance to physicians with such problems, and this naturally entails a considerable amount of time and work.

During the year, your Counsel has appeared before a number of medical societies and other groups of doctors to address them concerning medicolegal problems. These have included talks before county and other local medical societies, an address by your Counsel at the Annual Meeting of the Society, an address given to Naval Reserve Medical Officers, and a lecture at a college of medicine.

Legal Advice and Activities.—During the reporting period, your Counsel and his staff have conferred with various people in connection with proposed amendments to the laws affecting the practice of medicine and the medical profession. These problems have been the subject of conferences with the Society's officers and committeemen and with Dr. Hannon, the Executive Officer.

Mr. Clearwater attended the annual meeting of the Council Committee on Legislation with the Chairmen of the County Society Legislation Committees at Albany. On a number of occasions, we also conferred concerning proposed legislation with representatives of the hospitals and of various medical specialties.

Conclusion.—In closing his report, your Counsel wishes to express his appreciation for the work of his own staff and for the cooperation, aid, and advice of your Society's members throughout the State, who have helped us both in court and out, in the handling of malpractice actions, and in connection with our numerous problems. The officers of the Society and the members of the Council and Board of Trustees have aided and assisted us in great measure. Such cooperation has enabled your Counsel to obtain the results shown in this report.

Respectfully submitted,

William F. Martin, *Counsel*

February 1, 1950

REPORT OF THE COUNCIL

To the House of Delegates, Gentlemen:

Your Council has the honor to report on the executive and administrative affairs of the Society in the period following your last meeting, May 2 to 6, 1949. The various matters that came before it, actions thereon, and recommendations are here presented.

Constitution and Bylaws

The Council Committee on Constitution and Bylaws has the following membership:

James R. Reuling, M.D., *Chairman*...Bayside
George W. Kosmak, M.D.....New York City
James F. Rooney, M.D.....Albany

The Committee on Constitution and Bylaws has had referred to it during the past year changes and revisions in the constitutions of five county societies (Broome, New York, Onondaga, Orange, and Schenectady) and two district branches (First and Second). In each instance your Secretary, Dr. Walter P. Anderton, has carefully and minutely gone over each one, has made many corrections and suggestions, and has then forwarded them to the Counsel of the Society for his determination of any legal implications.

This procedure has resulted in a minimum of work for the Committee, and they wish to express their thanks to Dr. Anderton, Mr. Martin, and Mr. Clearwater for their valuable assistance.

PART I

Postgraduate Medical Education

Following the death of Dr. O. W. H. Mitchell in December, 1948, the Council Committee on Public Health and Education functioned under Dr. Charles D. Post who acted as chairman until March, 1949. With the able assistance of the secretary, Mrs. Virginia Kelley, Committee activities and postgraduate instruction arrangements were continued uninterrupted, pending the appointment of Dr. Theodore J. Curphey as chairman. Dr. Curphey, Medical Examiner of the County of Nassau and formerly assistant professor of pathology at New York University College of Medicine, was appointed in March, 1949. Mrs. Kelley being unable to leave Syracuse, the capable and efficient services of Miss Susan Baker, a graduate of Smith College, were secured, and the office of the Committee was moved from Syracuse to the Queens County Medical Society building in Forest Hills in September, 1949. At this time the Committee wishes to express its deep appreciation to Dr. Walter P. Anderton, Secretary of the State Society, Miss Doris K. Dougherty, Executive Assistant, and to the office staff for their earnest assistance in the initial organization of the activities of the Council Committee on Public Health and Education in its new environment.

The membership of the Council Committee on Public Health and Education is as follows:

Theodore J. Curphey, M.D., *Chairman*..........Garden City
George Baehr, M.D.............New York City
Charles D. Post, M.D...............Syracuse

ADVISERS

Herman E. Hilleboe, M.D., Commissioner, New York State Department of Health, Albany
John F. Mahoney, M.D., Commissioner of Health, City of New York
Harry S. Mustard, M.D., former Commissioner of Health, City of New York

The Council Committee on Public Health and Education arranges for instruction in a wide variety of subjects. Speakers are provided by the Committee for meetings of county medical societies, hospital staffs, and other medical groups. This program is made available through the combined efforts of the faculties of the medical schools and research institutions in New York State, the New York State Department of Health, the Dental Society of the State of New York, the Division of Industrial Hygiene and Safety Standards of the New York State Department of Labor, the Medical Society of the State of New York, and several other organizations and associations.

For programs arranged by the Committee, the Medical Society of the State of New York pays the traveling expenses of the speakers from inside the State, and the honoraria for all speakers are provided by the State Department of Health.

Instruction may be arranged as series of lectures, single lectures, symposiums, or teaching days. A teaching day is a combination of clinics, demonstrations, and lectures for a morning and afternoon or an afternoon and evening.

The Committee is in the process of revising the *Course Outline Book*, with the listing of subjects and available speakers. Every effort is being made to have the new edition ready in time for the Annual Meeting in May, 1950. Several new sections have been added, e.g., Alcoholism, Anesthesiology, Geriatrics, Nutrition, and Forensic Medicine.

Since the 143rd Annual Meeting of the Medical Society of the State of New York in May, 1949, the Committee has arranged, as of February, 1950, for postgraduate instruction, presented as lecture series, symposiums, or single lectures, for 24 counties:

COUNTY	INSTRUCTION	NUMBER OF LECTURES
Allegany	Endocrinology	1
	Electrocardiography	1
Cayuga	General Medicine	2
Chenango	General Medicine	1
	Psychiatric Problems in General Practice	1
Clinton	Cancer	1
	Cortisone, ACTH, and Other Steroids in Rheumatic Disease	1
	General Medicine	1
	Obstetrics	1
Cortland	Alcoholism	1
Fulton	Psychosomatic Medicine	1
	General Medicine	2
	Rheumatic Fever	1
	Cancer	1
	Fluid-Electrolyte Balance	1

Herkimer	Rheumatic Fever		1
	Cancer		1
Jefferson	Dermatology		1
	Poliomyelitis		1
	Orthopedics		1
	Endocrinology		1
	Alcoholism		1
	Antihistamine Therapy		1
	General Medicine		2
	Gynecology		1
Nassau	Radioactive Isotopes		1
	Cardiology		1
	General Medicine		1
Oneida	General Medicine		6
	Orthopedics		1
Oneida	Cortisone, ACTH, and Other Steroids in Rheumatic Disease*	(Utica Academy of Medicine)	1
	Orthopedics		1
	Neurology in General Practice		1
	General Medicine		2
	Fluid-Electrolyte Balance		1
Onondaga	General Medicine		1
Onondaga	Medical Mission to Poland (Syracuse Academy of Medicine)		1
Ontario	General Medicine		3
	Radioactive Materials		1
	Poliomyelitis		1
	Cortisone, ACTH, and Other Steroids in Rheumatic Disease		1
Ontario	Corneal Grafts	(Geneva Academy of Medicine)	1
	Clinical Child Psychology		1
	Anesthesiology		1
	Obstetrics		1
	Psychiatric Problems in General Practice		1
Otsego	Cardiology		1
Queens	Radioactive Materials		1
Rensselaer	General Medicine		3
	Forensic Medicine		1
	Cardiology		1
Saratoga	Psychiatric Problems in General Practice		1
	Rheumatic Fever and Rheumatic Heart Disease		1
	Dermatology		1
	General Medicine		1
Schenectady	Industrial Medicine		1
	General Medicine		1
	Gynecology		1
Schoharie	General Medicine		4
	Tuberculosis		1
	Cardiology		1
Suffolk	Obstetrics and Gynecology		4
Sullivan	Industrial Medicine		8
Tioga	Renal Disease		4
Tompkins	Hematology		1
Ulster	Industrial Surgery		1
Warren	Radioactive Materials		1
	Pediatrics		1

Regional Meetings and Teaching Days.—For regional meetings, invitations are sent to the members of the medical societies in counties adjacent to that in which the instruction is given, or to the members in certain regions and districts where the meetings are held. The Committee will arrange for the speakers and printing and distribution of programs to county medical societies, medical schools, hospitals, the New York State Journal of Medicine, the *Journal of the American Medical Association*, and the Bureau of Public Relations of the Medical Society of the State of New York for publication in the local newspapers.

The following is a list of counties where Regional Meetings or Teaching Days have been held this year:

COUNTY	REGION	INSTRUCTION	NUMBER OF LECTURES
Albany	Columbia, Greene, Rensselaer, Schoharie, Sullivan, Ulster	Cancer*	3
Broome	Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Tioga, Tompkins	Cancer*	5
Fulton	Montgomery; also Dental Societies of Fulton, Montgomery, and Hamilton Counties	Oral Manifestations of Systemic Disease	1
Monroe	(Not regional)	Rehabilitation	1
		General Medicine	3
Orange	Dutchess, Sullivan, Ulster	Cancer*	4
Otsego	Chenango, Delaware, Schoharie	Cancer*	5
Suffolk	(Not regional)	Heart	4

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* Traveling expenses, honoraria of speakers, and printing of programs provided by the New York State Department of Health.

In an attempt to obtain a comprehensive idea of the individual activities in the direction of postgraduate education on the part of the county medical societies, it was decided to request the services of the Public Relations Bureau to assist in a survey relative to the appointment and responsibilities of the various chairmen of the postgraduate education committees. To this end a brief questionnaire was prepared for the field representatives of the Public Relations Bureau for distribution in their activities. To date the response has been slow, but we are obtaining a better knowledge of the needs of the individual county medical societies in this regard.

During the year the Council Committee on Public Health and Education held a regular monthly meeting with Commissioner Hilleboe and his staff for the purpose of discussing plans of mutual interest to both organizations. The President and Secretary of the State Medical Society were regular attendants at these meetings.

Teaching Day at the Annual Meeting.—The subjects chosen this year are of immediate interest, namely, a clinical demonstration of rehabilitative procedures which can be carried out by general practitioners and specialists in the management of the chronically ill and disabled—paraplegics, hemaplegics, amputees, in neurologic conditions, and in old cases of poliomyelitis—and a panel discussion by six speakers on "Chronic Alcoholism as a Medical Problem."

To stimulate further the interest of the chairmen of the postgraduate education committees it was decided to hold a luncheon on the Teaching Day. A circular letter has been sent to the presidents of the various county medical societies requesting them to appoint a chairman in those instances where no such appointment exists, so that each county medical society will be represented at the luncheon. The primary purpose of this meeting is to obtain criticisms and suggestions from the component county medical societies as to their individual needs and how best the Council Committee might organize its plans for the future.

PART II

Maternal and Child Welfare

The Subcommittees on Maternal and Child Welfare have the following membership:

Maternal Welfare

Charles A. Gordon, M.D., *Chairman*	Brooklyn
James K. Quigley, M.D.	Rochester
Edward C. Hughes, M.D.	Syracuse
Frederick H. Wilke, M.D.	New York City

Regional Chairmen in Obstetrics:

1. New York, Richmond, Bronx
   George W. Kosmak, M.D., 23 East 93rd Street, New York City
2. Kings, Queens, Nassau, Suffolk
   Harvey B. Matthews, M.D., 162 Clinton Street, Brooklyn
3. Westchester, Rockland, Dutchess, Putnam, Orange
   Julian Hawthorne, M.D., Highland Hall Apartment, Rye
4. Schenectady, Fulton, Montgomery, Schoharie, Greene, Ulster
   William M. Mallia, M.D., 1364 Union Street, Schenectady
5. Albany, Washington, Saratoga, Columbia, Warren, Rensselaer
   Joseph O'C. Kiernan, M.D., 496 Madison Avenue, Albany
6. Clinton, Essex, Franklin, St. Lawrence
   Edwin W. Sartwell, M.D., 14 Brinkerhoff Street, Plattsburg
7. Jefferson, Lewis, Herkimer, Hamilton
   Wendell D. George, M.D., Trust Company Building, Watertown
8. Onondaga, Oswego, Oneida, Madison, Cortland, Cayuga
   Edward C. Hughes, M.D., 713 East Genesee Street, Syracuse
9. Broome, Tioga, Chenango, Otsego, Delaware, Sullivan
   Stuart B. Blakely, M.D., 16 Stratford Place, Binghamton
10. Monroe, Orleans, Wayne, Livingston, Ontario, Yates, Seneca
    Ward L. Ekas, M.D., 176 South Goodman Street, Rochester
11. Chemung, Schuyler, Steuben, Tompkins, Allegany
    R. Scott Howland, M.D., 531 West Water Street, Elmira
12. Erie, Niagara, Chautauqua, Cattaraugus, Genesee, Wyoming
    Lewis F. McLean, M.D., 826 West Delavan Avenue, Buffalo

Child Welfare

Frederick H. Wilke, M.D., *Chairman*	New York City
A. Clement Silverman, M.D.	Syracuse
Charles A. Gordon, M.D.	Brooklyn
Albert D. Kaiser, M.D.	Rochester
Alexander T. Martin, M.D.	New York City
William J. Orr, M.D.	Buffalo
Paul W. Beaven, M.D.	Rochester
Thurman B. Givan, M.D.	Brooklyn

Regional Chairmen in Pediatrics (for regions comprising counties as shown in the list of Regional Chairmen in Obstetrics):

Region
Number

1 Harry Bakwin, M.D., 132 East 71st Street, New York City
2 Charles A. Weymuller, M.D., 85 Pierrepont Street, Brooklyn
3 Reginald A. Higgons, M.D., 264 King Street, Port Chester
4 James J. York, M.D., 930 State Street, Schenectady
5 Hugh F. Leahy, M.D., 176 Washington Avenue, Albany
6 Ivan R. Wood, M.D., 71 Court Street, Plattsburg
7 H. Louis George, Jr., M.D., Trust Company Building, Watertown
8 Tyree C. Wyatt, M.D., 713 East Genesee Street, Syracuse
9 John B. Burns, M.D., 153 Chapin Street, Binghamton
10 Albert D. Kaiser, M.D., 729 Buckingham Street, Rochester
11 George R. Murphy, M.D., 531 West Water Street, Elmira
12 William J. Orr, M.D., 333 Linwood Avenue, Buffalo

1. A meeting of the Subcommittees on Maternal and Child Welfare was held on March 30, 1949. Present at this meeting, in addition to the Subcommittee members, were certain of the officers of the Medical Society of the State of New York and the Council Committee on Public Health and Education, the New York State Commissioner of Health, the Director of the Division of Maternal and Child Health, and the Director of Public Health Education of the State Department of Health. This meeting was called at the request of the State Department of Health for the purpose of reviewing the rough draft of the *Parents Book*, a publication of that Department. The joint committee prepared a final draft, which has since been published.

2. During September, 1949, the State Department of Health submitted a Mental Health Program Plan for approval and recommendation by the Medical Society of the State of New York. The plan was referred to the chairmen of the Subcommittees on Mental Hygiene, Child Welfare, and Maternal Welfare at a meeting held on October 21, 1949. Following a discussion of the plan the chairmen submitted it to the component Committee members for criticism and advice. The stated objectives of this program were as follows:

A. To make childbearing a positive emotional experience for the mother as the foundation of later sound relationships with the infant.
B. To prepare parents during the mother's pregnancy for care of their children through the creation of confidence upon their part and an anticipation of the emotional satisfactions to be derived from such care.
C. To promote the development of psychologically sound care of the mother and infant in the hospital during the postpartum period.
D. To guide parents in anticipation of the emotional needs of their children at each stage of development from infancy, through the preschool and school years, and adolescence.
E. To advise parents in the handling of minor difficulties as they arise.
F. To discover more serious emotional difficulties in their children at an early stage and to refer both children and parents for specialized psychiatric care as needed and to provide follow-up services to insure that such care is obtained in so far as possible.
G. To meet the emotional needs of children suffering from disease or disability, both in the home and in the hospital.

Certain definite recommendations were made by the Committees to Dr. Edward R. Schlesinger, Director of Maternal and Child Welfare of the State Health Department, which were incorporated in the final plan. These, in turn, were submitted to the Council at its meeting on February 9, 1950, and the plan was approved as amended.

3. Following a meeting of the Council Committee with the New York State Department of Health on January 19, 1950, Dr. Schlesinger, on behalf of the Department, presented an outline of a projected epidemiologic study of retrolental fibroplasia, emphasizing the existence of this condition in premature children in as many as 20 per cent under a birth weight of 1,500 Gm. and from 2 to 15 per cent in the weight range of 1,500 to 2,000 Gm. The relatively high frequency of the condition in this group suggested the value and the need for such a study. The Council, at its February 9, 1950 meeting, approved the referral of this matter to the Subcommittee on Child Welfare. This Subcommittee is now studying the matter and will report at a future date.

4. Another matter discussed by the Committee on Public Health and Education at the January meeting with the State Department of Health was the reporting of complications of pregnancy and labor on birth certificates. A modification of the existing certificate was suggested, whereby a confidential medical report listing the various complications would be placed on the reverse side. The Council, at its February 9, 1950 meeting, approved the referral of this matter to the Maternal Welfare Subcommittee for study.

PART III

Public Health Activities A

Industrial Health.—The Subcommittee on Industrial Health has the following membership:

Leonard Greenburg, M. D., *Chairman*	New York City
David J. Kaliski, M.D.	New York City
Stuart A. Good, M.D.	Buffalo
Stanley E. Alderson, M.D.	Albany

No meetings have been held during the past year. The Chairman of the Committee had an informal discussion with Dr. Greenburg on January 12, 1950. The latter called attention to the laboratory facilities available in his department for the investigation of clinical and fatal cases of occupational disease in which an industrial hazard might be involved, and he urged that the practitioners of the State utilize these facilities. He also called attention to the importance of reporting all industrial diseases and cases of industrial poisoning.

The Tenth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the American Medical Association and by the Medical Society of the State of New York, was held February 20 and 21, 1950, at the Hotel Roosevelt, New York City, and was attended by several representatives of the State Society, as well as by the Chairman of the Council Committee. A symposium on prepayment health plans for industrial workers and a luncheon address by Miss Mary Donlon on New York State's new approach to disability benefit insurance were two outstanding features of the program.

PART IV

Public Health Activities B

Cancer.—The Subcommittee on Cancer has the following membership:

George C. Adie, M.D., *Chairman*	New Rochelle
Edward Douglass, M.D.	Rochester
Irwin E. Siris, M.D.	Brooklyn
Victor C. Jacobsen, M.D.	Troy
Louis C. Kress, M.D.	Buffalo
John S. Fitzgerald, M.D.	Utica
Dwight V. Needham, M.D.	Syracuse
Cushman D. Haagensen, M.D.	New York City
Clyde L. Randall, M.D.	Buffalo
Charles S. Cameron, M.D.	New York City
Paul R. Gerhardt, M.D.	Albany

For the first time the Department of Health of New York State is represented on the committee by Dr. Paul R. Gerhardt, Director of the Bureau of Cancer Control. Also for the first time, the American Cancer Society is represented in the person of Dr. Charles S. Cameron, Medical Director of the Society. These men have been appointed to regular membership by the President.

During 1948, the Subcommittee on Cancer directed the Chairman of the Committee and the Director of the Bureau of Cancer Control of the Department of Health to prepare a "blueprint" for detection centers. This pamphlet has been prepared and published. Its purpose is to serve as a guide for the organization and conduct of a detection center. The proposed *Cancer Manual*, to be written by New York physicians and published under the auspices of the Medical Society and the Health Department, is still under discussion. Physicians are now receiving the monthly *Cancer*

Bulletin under the Joint Project of the State Medical Society, the State Dental Society, the New York State Division of the American Cancer Society, and the Bureau of Cancer Control of the State Health Department, as well as the monographs from the American Cancer Society at three-month intervals, which serve to keep the physician informed in a limited way as to progress in cancer diagnosis and treatment. The manual would serve as a condensed reference book on cancer in all parts of the body. The cost of such an undertaking has postponed progress in this work, but the Committee believes this to be a desirable project and hopes to see it completed eventually.

There has been an increased activity in the objectives of the cancer control program. Four new detection centers and four new tumor clinics were added to the upstate region in 1949. There have been seven Cancer Teaching Days held throughout the State with 29 lectures being given to 1,516 physicians.

The Program Plan for Cancer Control, as outlined by the Health Department and endorsed by the Medical Society in 1948, was adopted by the New York State Division of the American Cancer Society in 1949.

There were 594 public education meetings in 1949 as compared to 531 in 1948. The total audience reached was 44,570. There were ten radio talks given during the year.

Under the fellowship program 26 physicians obtained a total of forty-four and one-half man-months of training in 1949.

In September, 1949, a three-day cancer refresher course for the general practitioner was held in Buffalo. Fifteen physicians enrolled in this course which was sponsored by the Postgraduate Department of the University of Buffalo School of Medicine in cooperation with the Erie County Chapter of the American Cancer Society and the State Health Department.

With the excellent aid of the State Health Department and the various divisions of the American Cancer Society in the State, particularly the New York State Division, the cancer work as endorsed by the Medical Society has been greatly facilitated. Without this cooperation your Subcommittee would have great difficulty in carrying out its plans.

Hard of Hearing and the Deaf.—The Subcommittee on Hard of Hearing and the Deaf has the following membership:

Gordon D. Hoople, M.D., *Chairman*	Syracuse
Edmund P. Fowler, M.D.	New York City
Marvin F. Jones, M.D.	New York City
Charles A. Anderson, M.D.	Brooklyn

This Subcommittee met on November 13, 1949. The primary purpose of the meeting was to discuss ways and means of accelerating the program for the care of the hard of hearing and the deaf in the State, especially as it concerns the children of school age who are hard of hearing. A program plan prepared by the State Department of Health, relative to the conservation of hearing, had been presented beforehand to the members of the committee. Discussion centered on possible approaches for obtaining funds to implement this State-wide program.

The State Health Department expressed interest in the plan but, because of budgetary restrictions, found it impossible to offer any financial support at this time. Various avenues of approach aimed at obtaining financial aid from philanthropic groups in the State were discussed. Dr. Hoople investigated these possibilities but was unable to obtain any immediate support.

It is hoped that in the future funds may be obtainable for the development of auditory centers to be set up through the State. The confirmed success of the center which has operated in Syracuse for the past three years is assurance of the soundness of this approach. The magnitude of this problem as it concerns the school child will be appreciated when it is realized that surveys based on hearing tests performed in schools indicate that the incidence of defective hearing among this group in the State is over 150,000.

Mental Hygiene.—The Subcommittee on Mental Hygiene has the following membership:

S. Bernard Wortis, M.D., *Chairman*	New York City
Leslie A. Osborn, M.D.	Buffalo
Harry A. Steckel, M.D.	Syracuse
George R. Lavine, M.D.	Rochester

There was no stated meeting of this Subcommittee. The Chairman, however, met with those of the Maternal and Child Welfare Subcommittees for discussion of the Mental Health Program Plan submitted by the State Health Department and reported on above.

Rheumatic Fever.—The Subcommittee on Rheumatic Fever has the following membership:

Charles A. R. Connor, M.D., *Chairman*	New York City
Clayton W. Greene, M.D.	Buffalo
J. G. Fred Hiss, M.D.	Syracuse
James W. Quinlan, M.D.	Rochester
George M. Wheatley, M.D.	New York City

This Subcommittee has had no meeting up to the time of the submission of this report. A meeting is contemplated for the month of March and will be reported on later.

Blood Banks.—The Subcommittee on Blood Banks has the following membership:

Lester J. Unger, M.D., *Chairman*	New York City
Morris Maslon, M.D.	Glens Falls
Ralph Stillman, M.D.	New York City
Ernest Witebsky, M.D.	Buffalo

There was a meeting of the Subcommittee on September 7, 1949, at which time the situation was reviewed to date. It was pointed out that the so-called "Westchester Plan" of cooperation with the Red Cross had not been approved by the latter as of that time.

The State Health Department described its progress in the previous two years with blood banks in Tompkins, Montgomery, and Broome Counties, as well as in the City of Kingston. It was emphasized at the outset that the problems in the metropolitan area were entirely different from those in the rural communities. It was felt that a State-wide program should be the objective and that this could be developed on a regional basis.

It was agreed to initiate a pilot plan in a rural hospital. The Glens Falls Hospital was chosen as the experimental unit. The final recommendations from the meeting were as follows:

1. To stimulate and support the pilot plan at the Glens Falls Hospital.
2. To set in motion the "Westchester Plan" as a pattern for community blood banks in their relationship with procurement agencies of their choice.
3. To attempt to develop a program for the whole State.

In making these recommendations the committee bore in mind that there are four kinds of communities to be considered: the large metropolitan area; suburban communities like Westchester and Nassau that are self-supporting; groups of counties centering around a large upstate city, for example, Albany, Syracuse, and Rochester; and completely rural communities where the program lags most.

In the interim the pilot plan has not been activated because of certain operational difficulties encountered.

A meeting of the Subcommittee was held on March 6, 1950. Concerning relationships with the Red Cross, the motion was made, seconded, and unanimously carried as follows:

> That the Subcommittee on Blood Banks reiterates its stand as approving the last report adopted by the House of Delegates in May, 1949 (New York State Journal of Medicine, September 1, 1949, Part II, p. 104, 105).

PART V

Public Health Activities C

Physical Medicine and Rehabilitation.—The Subcommittee on Physical Medicine and Rehabilitation has the following membership:

Howard A. Rusk, M.D., *Chairman*	New York City
Donald A. Covalt, M.D.	New York City
Alfred L. Lane, M.D.	Rochester
Richard Kovacs, M.D.	New York City
Walter S. McClellan, M.D.	Saratoga Springs
George M. Raus, M.D.	Syracuse
George G. Deaver, M.D.	New York City
Arthur S. Abramson, M.D.	Bronx
Austin J. Canning, M.D.	West Haverstraw
Norman Egel, M.D.	Rochester

The first meeting of the Subcommittee on Rehabilitation and Physical Medicine was held at the Institute of Rehabilitation and Physical Medicine, New York City, on Thursday, September 1, 1949. Those present were Drs. Theodore J. Curphey, Charles D. Post, Austin J. Canning, Alfred Lane, George M. Raus, Walter S. McClellan, Richard Kovacs, George G. Deaver, Donald A. Covalt, Howard A. Rusk, Chairman, and by invitation, Morton L. Levin, I. J. Brightman, and A. M. Lilienfield.

Dr. Morton L. Levin and the staff of the New York State Health Department presented an outline of the proposed blueprint for the program of the State Health Department for cerebral palsy. Following discussion by the members and a presentation by Dr. Canning of the experience of the cerebral palsy program at the New York State Rehabilitation Hospital in West Haverstraw, the following motions were made, seconded, and carried:

> *Resolved*, that we heartily endorse the program presented by the State Health Department in principle but feel that, in the long-range plan, the most important facet is that of adequate training of physicians and ancillary personnel and that such training should be on a broad base with experience in both in- and outpatient facilities, taking into consideration the physical, psychologic, social, and educational problems, and that another important facet is general education of the medical profession, both general practitioners and specialists, in the problems of cerebral palsy so that they will be familiar with the handling and proper channeling of these patients. This Subcommittee will try to carry on such a program within the framework of the State Medical Society.
>
> *Resolved*, that when the investigation which is now being made by the State Health Department is complete, this Subcommittee will review these procedures and try to formulate certain basic principles that should be followed in both the primary and secondary treatment centers.

It was recommended that a Subcommittee on Cerebral Palsy be appointed. The Chairman appointed a committee consisting of three members: Dr. Austin J. Canning, Dr. Alfred Lane, and Dr. George G. Deaver, Chairman. All suggestions with regard to the Cerebral Palsy Program will be referred to this Subcommittee. It will also study the tentative set of standards for personnel which has been outlined by the State Health Department and will report at the next meeting.

> *Resolved*, that this Subcommittee urge the cooperation of the profession in following the State mandate of reporting all cerebral palsy cases, feeling that it will be of great benefit both to the public and to the profession.

After a review of the aims and purposes of the Subcommittee on Rehabilitation and Physical Medicine, the following motion was made, seconded, and carried:

> *Resolved*, that the Council Committee be requested to give this Subcommittee as much of the Teaching Day as possible at the next meeting of the Medical Society of the State of New York so that it can put on a dynamic clinical demonstration for both general practitioners and specialists which will show procedures that can be carried out by them in their own practices in the management of the chronically ill and disabled with a patient presentation of paraplegics, hemiplegics, amputees, neurologic conditions, old polios, etc.

Upon receipt of a letter from Mr. Jack Applebaum, Executive Officer, The New York State Society of Physiotherapists, Inc., to Dr. Walter P. Anderton, Secretary of the Medical Society of the State of New York, this was circulated to all members of the Committee, and comments were requested. A summary of the comments was forwarded to the Council Committee on January 23, 1950, together with a letter from the Chairman reviewing the situation in New York State with regard to the training, licensing, and practice of physical therapy in New York State.

Following a meeting attended by one member of the Educational Committee of the Medical Society of the State of New York, one member of the Legislation Committee of the Medical Society of the State of New York, one representative of each of the three schools at present educating physiotherapists in New York State (Columbia University, College of Physicians and Surgeons; New York University School of Education, and Ithaca College), a member of the New York State Chapter of the American Physical Therapy Association, a member of the Society of Licensed Physiotherapists in New York State, and a representative of the New York State Department of Health, at which amendments were proposed to the Medical Directives Act of the State of New York affecting the licensing and registration of physical therapists in the State of New York, a memorandum was forwarded to all members of the Subcommittee soliciting their mail or telegraphic vote on the proposed amendments. The

Committee voted 7 to 2 in favor of the amendments, and the results of the Committee's vote were forwarded to the Council Committee.

Arrangements have been completed for the Subcommittee to present a Teaching Day program at the 144th Annual Meeting of the New York State Medical Society in New York City on Tuesday morning, May 9, 1950. The program will consist of a clinical demonstration of procedures for both general practitioners and specialists that can be carried out by them in their own practices in the management of the chronically ill and disabled and deals specifically with the rehabilitation of the hemiplegic patient, the paraplegic patient, the poliomyelitis patient, and the amputee patient.

In accordance with the recent changes of nomenclature of the Council on Physical Medicine and Rehabilitation of the American Medical Association, the American Board of Physical Medicine and Rehabilitation and the Baruch Committee on Physical Medicine and Rehabilitation, it was recommended to the Council Committee on November 30 that the title of the Subcommittee be changed from "Subcommittee on Rehabilitation and Physical Medicine" to "Subcommittee on Physical Medicine and Rehabilitation." This change was approved by the Council.

Each member of the Subcommittee has been supplied with a copy of the outline of the Cerebral Palsy Program Plan for 1949–1950 of the New York State Department of Health and a memorandum from the New York State Department of Health relating to the compulsory reporting of cerebral palsy cases.

Nutrition.—The Subcommittee on Nutrition has the following membership:

Norman S. Moore, M.D., *Chairman*	Ithaca
Edgar C. Beck, M.D.	Buffalo
Norman Jolliffe, M.D.	New York City
Benjamin M. Bernstein, M.D.	Brooklyn

To date, no meetings of this Subcommittee have been held since the Annual Meeting of 1949.

Geriatrics.—The Subcommittee on Geriatrics has the following membership:

Stephen R. Monteith, M.D., Chairman*	Nyack
Scott Lord Smith, M.D.	Poughkeepsie
C. Ward Crampton, M.D.	New York City
Wardner D. Ayer, M.D.	Syracuse
Frederic D. Zeman, M.D.	New York City

The Subcommittee records at this time its deep regret and profound loss at the untimely death of the Chairman in December, 1949. Dr. Monteith had performed outstanding services in the organization and activities of this Subcommittee during the three years of its existence. Just prior to his death he had been invited by Governor Dewey to meet with him for the purpose of presenting his views on the care of the aging, at which time Dr. Monteith had urged legislation regulating nursing homes for this group in particular.

The Council, at its meeting on January 12, 1950, appointed Dr. Scott Lord Smith to serve as chairman of the Subcommittee. Dr. Smith called a meeting on February 27; the various aspects of this matter were discussed. It was felt that a definite need existed for the coordination of the efforts of the various agencies in the State interested in the problems of the aged. Among other things it was suggested that consideration be given to the formation of a central bureau on a State-wide basis in which hospitals and charitable and governmental agencies would be included. It was also felt that an educational campaign in geriatrics, directed to the medical profession and the public, was necessary.

Diabetes.—The Subcommittee on Diabetes, a newly appointed committee, has the following membership:

George E. Anderson, M.D., *Chairman*	Brooklyn
Charles F. Gibbs, M.D.	Rochester
Scott Lord Smith, M.D.	Poughkeepsie
Frederick Williams, M.D.	Bronx

The Committee has been very active in respect to the importance of developing a sound program designed and controlled by the medical profession for the detection of diabetes in the population. To this end, the Council, at its September 8, 1949, meeting, approved the distribution of a communication, prepared by the Subcommittee and directed to the various county medical societies, relative to the then impending Diabetes Detection Drive. The following suggestions were part of the document:

> "It is suggested by your State Committee that:
>
> 1. There be appointed in each county by the Medical Society a 'County Committee on Diabetes,' with power to act to expedite the will of that county society in regard to D.D.D., that this committee, in so far as possible, work in cooperation with your State Committee through its Chairman.
>
> 2. Your county society go on record as approving the sale of self-testing sets over the drug counters of the county, that the druggists of your county be apprised of this action, and that approach to the finding of people with glycosuria through self-testing or other means be given as wide an advertising publicity as is possible, using local newspapers, health department bulletins, etc. Medical authorization of the self-testing philosophy is important since the American Diabetes Association is arranging for streetcar and bus cards advertising this phase of the drive in communities where the medical profession has expressed itself in favor of the project. There will be space at the bottom of these placards for the inclusion of such data as: 'A joint project of the . . County Medical Society, the Medical Society of the State of New York, and the American Diabetes Association.' Drug store windows will be placarded in similar manner.
>
> 3. In larger centers of population, the 'Detection Centers' of last year in New York State be replaced by 'Teaching Centers,' which will function during Diabetes Week or as long thereafter as feasible. These 'Teaching Centers' will be run by the local medical profession with the cooperation of any lay organizations it may elect. They will serve the public not by testing the urine of the individual, but by instructing him when and how to do testing at home on himself and the members of his family. These centers may hold forth in school buildings, health stations, or otherwise. During the week an individual self-testing set and as much testing material as may be necessary to test the family might be given to each one visiting the 'Teaching Center.' It is anticipated that the manufacturers will supply such organized 'Teaching Centers,' on consignment during Diabetes Week, with such testing sets and material. It has been suggested that in each 'Teaching Center' the public be exposed to a coin box and mildly encouraged to help

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* Deceased.

defray the costs of the self-testing sets taken home, in order to spread further the benefits of self-testing. This donation of a few cents would be purely voluntary and would not in any way preclude the individual's receiving the necessary material to take home. Any discrepancy between the coin box returns and the monetary value of the sets distributed during the week would be written off as advertising by the manufacturer, namely, 'These self-testing sets, by . . . . Company, are available all year 'round over drug counters.' It would be anticipated that as a gesture of good faith all of the material left undistributed at the end of the week would be promply returned to the manufacturer after the termination of 'Teaching Center' activity. During the week, the local medical profession might plan to present, in teaching centers, a number of brief talks by physicians to the laity, emphasizing the importance of diabetes from a health standpoint and the advantages of early discovery.

4. In some counties employers be approached with the suggestion that they buy the individual tests wholesale for free distribution to their employes during Diabetes Week as a public service and building of good will between employe and management. Employes supplied free with enough of such testing material to take home and test their entire families will carry home with the tests a tangible expression of the good will of management. Every positive test will be a gilt-edged invitation for the individual to see his *own* physician."

In his annual report Dr. Anderson emphasized the fact that there is a rapidly growing sentiment in the State against the detection center philosophy and in favor of the principle of individual initiative as fostered by the assumption of the public of at least some responsibility for its health. (*Chairman's note:* Dr. Anderson states that the teaching center idea, where education alone would be meted out and where individuals and groups would be taught, under the auspices of the medical profession, to test their urine for sugar as a health habit and if positive promptly to see their own physicians for a diagnosis—analogous to the use of the clinical thermometer in lay hands—is to be recommended as the method of choice. This approach was approved by the House of Delegates at its 1949 Annual Meeting.)

Dr. Anderson further recommends formal action directed at informing the constituent county medical societies that the State Society has gone on record as favoring periodic urine testing for sugar at home by laymen, that every county society, if it has not already done so, be urged to go on record as formally approving the plan and to notify its local pharmaceutical societies of such action. The following is his suggested resolution, to be forwarded to the county medical societies:

"Whereas, there are many hidden diabetics in this country, and

"Whereas, many people cannot be persuaded to visit their physicians for periodic health examination, much less urinalysis, and

"Whereas, 'Diabetes Detection Centers,' where mass urine and blood testing are meted out to the public, have been deemed by many professional groups in this State to be not in the interest of the individual's welfare, since they tend to guide the individual to bureaucratic medicine rather than to his own personal physician, and since these centers usually holding forth in a public building create the unjustified inference that the diagnosis of noncommunicable disease is a governmental rather than a professional responsibility, and

"Whereas, it would be in large measure possible to guide these people for diagnosis and care to their own physicians of choice if they themselves were encouraged to make periodic urine tests for sugar on themselves at home and, if positive, to see their own physicians for diagnosis (analogous to the use of the clinical thermometer by laymen), and

"Whereas, the American Diabetes Association has invited all pharmaceutical manufacturers of the country to produce simple testing sets for sale and distribution to the public, and

"Whereas, a trial experience of two months with individual testing sets distributed free to the public or vended over drug counters to the public resulted in over 2,200 people in New York City (over 3,800 in New York State) being guided to the physicians of their choice for diagnosis (often before symptoms and signs of their disease had developed), and

"Whereas, the Medical Society of the State of New York has formally approved the principle of the individual's testing his own urine periodically at home for sugar and thereby being guided to the physician of his own choice for a diagnosis, therefore be it

"*Resolved*, that the Medical Society of . . . . County does go on record as approving the principle of encouraging the individual to test his own urine periodically at home for sugar and if positive promptly to see his physician for a diagnosis as to the cause of the sugar, and

"*Resolved*, that the county medical society inform the local pharmaceutical associations in its vicinity of its action to the end that these local organizations will encourage their constituent pharmacists to stock their shelves with testing equipment for sale to the public, that the pharmacist be urged to publicize the fact that the medica profession through the county medical society has approved this as an accepted means of finding the unknown diabetic and guiding him to medica care before he develops the symptoms and the complications of his disease, and

"*Resolved*, that the county medical society publicize this new principle, through its Committees on Public Health and Publicity, as being the doctors' method."

This resolution was presented to the Council at it meeting on March 9, 1950, and was approved.

Cerebral Palsy.—The Subcommittee on Cerebra Palsy has the following membership:

George G. Deaver, M.D., *Chairman*	New York Cit
Austin J. Canning, M.D.	West Haverstraw
Alfred L. Lane, M.D.	Rocheste

During the year a Cerebral Palsy program wa submitted by Dr. Morton Levin of the State Healt Department for study by the Subcommittee. Rec ommendations were made by them and returned t Dr. Levin, with the understanding that the fin plan with its various modifications as recommende by the Medical Society of the State of New Yor would be submitted to the Committee on Publ Health and Education for referral to the Council fo action. To date the final plan has not been r ceived.

Special Committee to Study the Absorption of State-Aided Laboratories into County Health Departments.—At the October 20, 1949, meeting of the Council Committee on Public Health and Education with the New York State Health Department, the subject of the absorption of State-aided laboratories into county health departments was discussed. It was felt that the implications of the problem were so broad that a more detailed study should be made by groups other than the State Department of Health and the Medical Society of the State of New York. It was suggested that a special committee be formed for this purpose with representatives appointed from the State Department of Health, the Medical Society of the State of New York, the New York State Association of Public Health Laboratories, and the New York State Society of Pathologists. Upon this recommendation the Council approved the appointment of the joint committee.

Subsequent to this meeting the Council of the New York State Association of Public Health Laboratories, at its November meeting in Albany, took occasion to discuss the recommendations of the State Health Department relative to the formation of a common board. This Council expressed the opinion that the plan would prove detrimental to the laboratory.

At the meeting of the Joint Committee held at the State Medical Society offices on December 21, 1949, the matter was fully discussed, with the result that a majority resolution was prepared for presentation to the Council of the State Medical Society as follows:

> *Resolved*, that the State-aided public health laboratories in New York State, while acting in close cooperation with, should be independent of the county health departments; that they should have separate boards of managers and separate budgets; and be it further
>
> *Resolved*, that, in consultation with representatives of the county medical societies, the county health departments, and the county hospitals—where they exist—ways and means of close and effective collaboration be worked out.

The representatives of the State Department of Health did not concur in this resolution. Later correspondence with the Commissioner of Health led to the submission of a minority report.

The entire matter was presented to the Council at its January 12, 1950, meeting, at which time the Council approved the majority report of the Joint Committee.

PART VI

Economics

The Council Committee on Economics has the following membership:

Renato J. Azzari, M.D., *Chairman* .... New York City
Dan Mellen, M.D. .... Rome
Morris Weintrob, M.D. .... Brooklyn

The Committee submits this report on all matters referred to it by the Council.

The recommendations of the Committee to the Council are based on a careful study of the subject matter referred, followed by discussion and the reasons for the recommendations.

The first subject for our consideration was a communication from the United Medical Service asking our endorsement for raising the income ceiling limits for service benefits from $1,800 to $2,500 for an individual and from $2,500 to $4,000 for a family. After study it seemed to the Committee that the request was a reasonable one, since the contemplated increased income ceilings, in both categories, represented about the same value or slightly more in purchasing power today as did the prevailing income ceilings that were set when United Medical Service was first sponsored. It is noted with satisfaction that increased remuneration to physicians (an increase of 25 to 30 per cent) who render service under its contracts is contemplated, and that considerable progress at this writing has already been made toward that goal. To make this possible, however, premium rates will have to be increased about 25 to 30 per cent.

The Committee feels that the request of the United Medical Service is justifiable on the basis of the economics of the present time and further feels that the medical profession should do everything it can to promote the rapid growth of all voluntary medical plans, as this certainly seems to be a great factor in opposing compulsory health insurance.

The Committee recommended that this request be endorsed in principle until such time as the matter received due consideration by the county societies. At the January meeting it was voted that the Council approve raising the income ceilings for service benefits from $1,800 to $2,500 for an individual and from $2,500 to $4,000 for a family, in medical care plans.

In accordance with the instructions of the House that all "Blue Cross and Blue Shield plans in New York State be notified that the Medical Society of the State of New York recommends that Blue Cross discontinue offering medical services in pathology, radiology, anesthesiology, and physical therapy, and that Blue Shield plans should pay for these expenses," the Committee recommended that this directive be carried out, and it was approved by the Council.

The directive of the House regarding medical indemnity payments—"Recognizing that contract restrictions under certain voluntary insurance plans tend to deny or restrict the free choice of physicians," the House endorsed in principle. Legislation to preserve free choice, especially in cases where there are indemnity payments under voluntary medical insurance plans, was recommended for approval and was adopted by the Council.

The directive of the House urging the Blue Cross and the Blue Shield to devise plans to offer to the public, particularly the low-income segment, comprehensive medical and hospital coverage, including preventive and diagnostic services, was recommended for approval and was adopted.

A communication dated July 29, 1949, from Dr. Joseph A. Lane, regarding the action taken by the Comitia Minora of the Medical Society of the County of Monroe on the "Linowitz Plan," was referred to our Committee for study and report to the Council.

The theory back of this proposal is that, if we should have a compulsory health insurance program, it would cost the government somewhere in the neighborhood of ten to twelve billion dollars annually. This revenue would be derived from one and one-half per cent tax on payrolls, both on employer and employe, and the balance from general revenue. In this proposal, Mr. Linowitz is primarily interested in the so-called middle class, earning from $3,000 to $4,000 annually, and not in the person who is indigent or wealthy. He believes that, if the proper incentive is offered to the middle class group, by offering them a proper tax credit (not a deduction), they would voluntarily provide for their own health insurance. The amount of credit allowed any individual tax payer might vary from 40 to 85 per cent of the premium paid for this health insurance. A definite percentage was not designated, since the precise size of the tax allowance would necessarily be determined by those charged with forming the required legislation—if this plan receives enough support. For example, if the total tax for an individual amounts to $200, and the premium for his hospital and medical expense insurance is $100, and assuming that in this particular income bracket the credit would be 40 per cent of the premium paid, then he would deduct from his total tax of $200, the sum of $40.

Mr. Linowitz calculates that the government would *not* receive about a billion and a half to two billion dollars in taxes if this credit was allowed However, he points out that the public would be voluntarily insuring themselves through this incentive, whereas, if it were done by the compulsory method, it would cost the government general revenue money for the administration of a compulsory program many times more than it would lose from the tax credit plan. He also feels that many people, such as veterans or those who do not believe in insurance of any kind, will then not be taxed under a program of this kind for something they do not want or need. Of particular interest is the following statement regarding the plan: "The government will provide that every person who insures himself and his dependents against the cost of medical (including hospital) care under an approved plan with a commercial or noncommercial group, may claim a special and separate tax allowance (or credit) for the cost of such insurance."

We do not know who is going to establish the standards for an approved plan, or, in other words, would the medical and hospital care provided under any plan have to meet standards set up by State or Federal authorities? Mr. Linowitz did not commit himself on who should set up the standards of approval.

It is the feeling of the Committee that, before any recommendation can be offered, all phases and implications that may result, particularly in regard to how much the State or Federal government would be injected into the picture, should have very careful consideration.

A communication from the Group Health Insurance, Inc., was addressed to the President, requesting approval of its medical and surgical care insurance plan by the Medical Society of the State of New York. This was referred to our Committee, together with the Group Health Bylaws, standard contract with the various riders now being offered for sale on a group enrollment basis, the contract under an experimental plan open to individuals but restricted to members of cooperatives in Manhattan, the contract with participating physicians, a directory of participating physicians, lists of members of the Board of Directors, and the Medical Advisory Board.

The Committee, after study, made no recommendation, following the established policy of referring such groups to the respective county societies first, for endorsement. We feel that this is the proper policy, because these different groups need the endorsement of the doctors of the counties in which they wish to operate, and any prior approval by the Council might be interpreted as pressure on the county societies. Accordingly, it was voted that the Group Health Insurance, Inc., be notified that the proper procedure for them to follow would be to request the county societies in the areas in which they wish to operate to give endorsement.

Another resolution by the House referred to our Committee was that in which it was directed that:

1. Attention of hospitals and teaching institutions be drawn to the State Society's opinion that such bodies should not practice medicine in any of its branches for pecuniary gain.
2. A conference be held with deans of medical colleges and representatives of hospitals and teaching institutions to formulate a program which is in the public interest.
3. Such institutions be requested to take no further action toward entering the practice of medicine until after such policy has been formulated.

This resolution was given very careful and continuous study throughout the year. The Committee could not in its best judgment recommend to the Council that the first paragraph of this resolution be approved. The Committee feels that the implied practices complained of do not legally constitute the practice of medicine. Hospitals do not practice medicine; their staff doctors do this for them, and the hospitals simply sell these services. In this view we are supported by our Counsel. This does not mean that the Committee is sympathetic to these practices. On the contrary, we are cognizant that this problem has been with us for a number of years, has affected all of us, and that every effort should be made to correct this and other practices which are making inroads in the sphere rightfully allocated to the licensed medical practitioner.

It was the opinion of the Committee further that a conference as suggested would in all probability prove fruitless. These representatives of hospitals and teaching institutions are well organized, are convinced that their practices do not infringe on the practice of medicine, and have known for years the attitude of the medical profession. Unofficial interviews by members of the Committee and others with some of the hospital representatives confirm the futility of the proposed conference. Indeed, it was felt that the result of such a conference might result in an attempt at legislation legalizing these practices as well as antagonizing a group who are for the most part against compulsory health insurance. It should be emphasized right here that we must not lose sight of the fact that our main problem is still that of compulsory health insurance and we should concentrate on it, subordinating all other matters if necessary.

During this study it occurred to your Committee that while we were trying to solve this problem we were always directing our attention to the hospital administration end and entirely forgetting the part our own colleagues play—can it not be said that they are at least in part responsible? It has become evident that this is a national problem, and your Committee feels that for this and the above-stated reasons it can best be solved on a national level.

At its November meeting your Committee recommended the application of the Hess formula as adopted by the A.M.A. House of Delegates at Atlantic City. However, the whole matter was deferred until after the meeting of the delegates at the interim meeting of the American Medical Association in Washington.

Following this meeting we learned that it had been voted to reconsider the whole matter, inasmuch as it had been found impracticable to apply some of the provisions of the Hess report.

As a result, your Committee, at the Council meeting in January, recommended that the Council defer action on this resolution until clarification and resubmission of the Hess report at the next A.M.A. meeting in San Francisco in June. This recommendation was adopted by the Council.

Public Medical Care.—The Subcommittee on Public Medical Care of the Council Committee on Economics is composed of the following members:

Howard P. Webb, M.D., *Chairman*	Utica
James I. Farrell, M.D.	Utica
Charles F. Rourke, M.D.	Schenectady
William R. Donovan, M.D.	Geneva

The Committee has held no meetings.

Referred to the Committee by the House of Delegates, *Section 97*, was the following recommendation: "That the Federal or State governments assist the indigent, including all those who are eligible for old age assistance, to obtain medical care by purchasing adequate insurance from existing prepayment hospital and medical care plans provided that all voluntary health insurance programs will be entirely in the hands of the State agency acting in consultation with the State Hospital and Medical Care Council and Regional Hospital and Medical Care authorities set up in health regions within the State."

The late Dr. Stephen R. Monteith, Chairman, recommended approval of the second edition of the Drug Manual by the Onondaga County Department of Welfare. The Council approved.

The Chairman of this Subcommittee, Dr. Stephen R. Monteith, died suddenly in December, 1949. The succeeding Chairman has not had an opportunity to call a meeting at the time of filing this report.

Joint Committee of the Medical Society of the State of New York and the Hospital Association of the State of New York

The Joint Committee of the Medical Society of the State of New York and the Hospital Association of the State of New York consists of the following:

Medical Society	
Leo F. Simpson, M.D., *Chairman*	Rochester
Luther B. MacKenzie, M.D.	New York City
Benjamin M. Bernstein, M.D.	Brooklyn
Hospital Association	
Carl P. Wright, Sr.	Syracuse
Carl P. Wright, Jr.	Utica
Lawrence E. Kresge	Auburn
Moir P. Tanner	Buffalo
Bernard McDermott	Brooklyn

A meeting of the entire Committee was not held during the year, primarily because there were no resolutions from the House of Delegates or from the Council that demanded it.

The first resolution from the House of Delegates was that "The Medical Society of the State of New York should urge strongly that all hospitals proceed with the fulfillment of the requirements as outlined in Regulation 35 of the Sanitary Code of the State of New York as rapidly as possible."

This was referred to the Subcommittee of your Council Committee, but at the date of going to press your Committee had not received a report. Dr. Carlton E. Wertz, Chairman of that Subcommittee, will, no doubt, report on this either in a supplementary report or from the floor of the House.

The second resolution, introduced by Dr. Thomas F. McCarthy, Bronx, stated:

> "Whereas, any increase in hospital bed capacity, either through the construction of new hospitals or extension of existing facilities, will be largely through the allocation of governmental funds, Federal or State; and
>
> "Whereas, rapid expansion of voluntary hospitals and medical insurance plans may be anticipated in the immediate future; and
>
> "Whereas, such expansion will multiply the number of patients that will require semiprivate and private hospital beds; and
>
> "Whereas, such accommodations are proportionately small in voluntary hospitals and totally lacking in government hospitals; therefore be it
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York request the Council through its appropriate committee to present these pertinent facts to the proper authorities concerned with hospital planning; and be it further
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York request the Council to take whatever action it may consider feasible in the correction of present restrictive regulations in voluntary and municipal hospitals."

Your Chairman addressed a letter with this resolution to Dr. Marcus D. Kogel, Commissioner of the Department of Hospitals of New York City, and asked him for an opinion. His reply follows:

> "This is in reply to your letter of January 20 referring to the advisability of placing private and semiprivate patients in municipal hospitals, to be charged for services by physicians treating them.
>
> "I should prefer not to be drawn into a controversy on this matter. However, the discussion is purely academic, because:
>
> 1. We cannot find sufficient hospital accommodation for the indigent sick.
> 2. Our new construction is fundamentally for the replacement of obsolescent and outmoded facilities, some over a hundred years old.
> 3. The City Charter defines our hospital facilities as being primarily for the care of the indigent.
>
> "It is my feeling that private and semiprivate accommodations should be provided by the voluntary hospitals, except under unusual or extraordinary circumstances.
>
> "I trust this answers your questions."

Your Committee is also of the opinion that it is illegal for a physician to accept fees or other gratuities in a municipal hospital in New York City.

The third resolution—"An appropriate committee working in conjunction with other interested groups, such as the New York Hospital Association, initiate studies to define just and uniform standards for dealing with problems relating to tenure of hospital staff appointments," and "it was voted that proper and equitable hospital administration should include provisions in hospital bylaws to protect staff appointments from capricious or summary termination."

Your Committee is heartily in accord with the motives that actuated this resolution, but certain practical difficulties stand in the way of its complete fulfillment.

Although we are sure that the reasons for this that would be advanced by your portion of the Committee would be welcomed by the physicians of the State, that portion of the Committee composed of members of the State Hospital Association could not speak for their individual hospitals, or for the State hospitals, with any degree of authority.

This is primarily so because in New York State the appointing and terminating of medical staff members rest entirely in the lay boards of trustees, and they cannot of themselves limit their legal rights.

The recent decision of the Court of Appeals of New York State in the case of Van Campen vs. Olean General Hospital, which received editorial comment in the New York State Journal of Medicine of August 1, 1949, clearly defines this issue.

Your Committee is of the opinion, however, that the boards of trustees of the various hospitals throughout the State are interested primarily in everything that would be of benefit to their respective institutions, and experience has proved that they willingly cooperate with the medical staff and, in general, heed the recommendations of the latter in regard to appointments or dismissals from the medical staff. They cannot legally surrender their right to a final decision. This applies to all so-called voluntary, nonprofit institutions. In veteran, State, county, or municipally controlled institutions, it is our opinion that the final decision rests with the authorities in legal control.

It is suggested by your Committee that, in addition to the present Council Committee, a special committee be set up in each county society in counties that have hospital facilities. One member of this committee should be a general practitioner. This committee should join with the committee from the boards of trustees of local hospitals. This joint committee could work with sympathetic understanding for the benefit of all. Individual problems could be discussed—areas of friction could be explored—and they could each aid in the study of functional activities of the hospitals, making medical care more efficient and less expensive.

Your Committee realizes that, in addition, there is a vast difference in the problems that exist in Greater New York City and those upstate. The complexity of the problem in the greater city makes it impossible to prescribe any single remedy. It suggests, however, that if the rule of professional conduct* as outlined in our code of ethics were observed, and if the county societies unswervingly defend that position, a start would be made in the right direction.

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* "Groups and Clinics—*Section 3*—These principles of Professional Conduct shall apply to physicians as individuals, or as members of staffs of hospitals, clinics, colleges schools, foundations, companies, or groups, by whatsoever name they may be known."

PART VII

Medical Care Insurance

The Subcommittee on Medical Expense Insurance is composed of the following members:

A. H. Aaron, M.D., *Chairman*	Buffalo
Leo E. Gibson, M.D.	Syracuse
John E. Heslin, M.D.	Albany
F. M. Miller, Jr., M.D.	Utica
John B. D' Albora, M.D.	Brooklyn
C. Otto Lindbeck, M.D.	Jamestown
Charles S. Lakeman, M.D.	Rochester
Milton J. Goodfriend, M.D.	New York City
M. J. Fein, M.D.	New York City
Mrs. Mary Madden, Liaison with Woman's Auxiliary	Albany

This Subcommittee has held one meeting, on November 30, 1949. The Presidents and Executive Directors of the medical care insurance plans approved by the Medical Society of the State of New York were invited. Also in attendance were: Dr. Renato J. Azzari, Chairman of the Committee on Economics, representatives of the Public Relations Bureau, Dr. David J. Kaliski, Director of the Bureau of Workmen's Compensation, and Mr. William C. Gould, Chief of the Mutual and Fraternal Bureau of the State of New York Insurance Department.

The purpose of the meeting was to discuss further various aspects of a uniform State-wide contract to be offered by local plans.

It was agreed at a Subcommittee meeting on February 25, 1949, that the State-wide contract should include surgery in the hospital and in part in the home or doctor's office; in-hospital medical care and obstetrics; and that it should embrace service and indemnity features with salary limits for service benefits tentatively set at $2,500 for an individual and between $4,000 and $5,000 for a family.

Comparative statements of contract provisions and fee allowances (including compensation and proposed allowances for the State-wide contract) were prepared by the Bureau and submitted to Subcommittee members for study prior to the meeting.

Motions on the following were carried:

Type of contract:	Service.
Benefits:	Surgical (hospital, home, and office) and in-hospital medical care. Obstetrics (hospital or home) on an indemnity basis; complications of pregnancy to be covered in the hospital or home if followed by hospitalization.
Income Ceilings:	$2,500 for an individual and $4,000 for a family (husband and wife and unmarried children under 18 years).
In-Hospital Medical Calls:	Limit of 20 calls per member in any one illness or injury at $5.00 for the initial visit and $3.00 for each subsequent visit. (Decision deferred on multiple daily visits.)
Consultation Fee:	$10 in medical and surgical cases.
X-ray:	Action deferred pending study and report by Joint Council representing pathology, radiology anesthesiology, and physical therapy.
Anesthesia:	Deferred decision pending report from the President of the New York State Society of Anesthesiologists.
Maternity:	All inclusive (whateve services are rendere except surgical procedures); indemnity of $75

Fee Schedule: Allowances proposed were designed to cover contract provisions as agreed upon, on a service basis with income ceilings annually of $2,500 for an individual and $4,000 for a family, and are to be submitted to Presidents and Executive Directors of each plan for consideration and study at area meetings composed of county medical society presidents, economic committee chairmen, and key members in the counties served by each plan. (Mr. Farrell would be available to meet with these groups to assist in any way desired.)

Contract Provisions Cited and Approved: That the respective amount of benefits set forth in the schedule of benefits shall be deemed to include both the primary and surgical procedure and also all incidental surgical procedures in the same field of operation supplementing the primary surgical procedures. (Illustrations of incidental procedures are appendectomy at time of cholecystectomy, appendectomy or salpingectomy or ovariotomy at time of uterine suspension.)

That in cases involving two distinct surgical procedures performed in different operative fields during one operative period (as distinguished from cases involving primary and incidental surgical procedures in the same field of operation) the amount of benefits shall be the respective amount set forth in the schedule of benefits for the operation constituting the major surgical procedures plus one half of the respective amount set forth in the schedule of benefits for the operation constituting the other surgical procedures with a maximum payment of $300 in multiple operations by the same surgeon in any one operative period.

The Chairman stated that the Subcommittee has no power and that matters discussed and acted upon at this meeting should be presented before local area meetings for study. He advised that final decisions rest at the local level, and any changes should be developed to the best advantage of local communities.

Additional suggestions for consideration at area meetings are as follows: (*a*) Income ceilings—over-all $3,500 and $5,000; $3,000 or $3,500 for an individual; (*b*) Settlement of a physician's claim where a case is referred to a surgeon whose fee includes aftercare, and aftercare is assumed by the referring physician; (*c*) The matter of surgical fees while hospitalized, where no fee is applicable; (*d*) Further thought to income ceilings, because contracts have been designed for those in low income brackets, and, if ceilings are too high, premiums would have to be increased more than the low income groups could afford to pay.

The Subcommittee recommends, through the Committee on Economics, that the Medical Society of the State of New York extend continued approval of the six New York State plans for another year, as follows: United Medical Service, Inc., New York City; Western New York Medical Plan, Inc., Buffalo; Genesee Valley Medical Care, Inc., Rochester; Central New York Medical Plan, Inc., Syracuse; Medical and Surgical Care, Inc., Utica, and Northeastern New York Medical Service, Inc., Albany. This recommendation is in accordance with the *Standards of Acceptance for Approval*.

The Subcommittee wishes to express its thanks to the officers of the Medical Society of the State of New York, and to Dr. Renato J. Azzari, Chairman of the Committee on Economics, for their interest and attendance at meetings.

Bureau of Medical Care Insurance.—The Bureau of Medical Care Insurance, George P. Farrell, Director, reports as follows:

The activities of the Bureau have been carried on under the direction of the Subcommittee on Medical Expense Insurance of the Committee on Economics.

The 1949 House of Delegates authorized by resolution that steps be taken toward the establishment of a uniform State-wide contract on a service basis, to be offered by local plans approved by the Medical Society of the State of New York. A recommendation that the Bureau proceed as authorized by the House was adopted by the Subcommittee on Medical Expense Insurance, as outlined in its 1949 report.

The major activity of the Bureau has therefore been the preparation of comparative statements of present contract provisions, fee schedules and other data on the six approved plans now operating in the State, for the study and consideration of the Subcommittee. This material was presented to the Subcommittee at its meeting November 30, 1949. (See report of the Subcommittee on Medical Expense Insurance).

Suggested provisions adopted by the Subcommittee were transmitted by your Director to each plan for consideration by local plan representatives, presidents, and economic committee chairmen of the county medical societies and other key members in each plan area.

Area meetings have been held in Rochester and Syracuse with resulting actions as follows:

Rochester, December 29, 1949—That a service type contract be approved; that the minimum income ceiling under a service contract be $4,000 annually; that in-hospital medical care be approved in principle, to be made available in conjunction with the surgical contract as soon as a plan is able to do so; that the contract provide for obstetric delivery, including prenatal and postnatal care on an indemnity basis in the amount of $75, cesarean section excepted; that obstetric delivery in the home or hospital be included, and complications of pregnancy and abortions be paid for if followed by hospitalization; that nonoperative abortions be excluded, and that the inclusion of x-ray and pathology be given further study. It was also decided not to include consultation fees due to lack of control.

Also discussed at this area meeting were suggested changes in the present contract offered by the Rochester Plan. It was unanimously agreed that a service type contract in lieu of indemnity, with an annual income ceiling of $5,000, be considered. The inclusion of in-hospital medical care was deferred because of scarcity of hospital beds.

Syracuse, January 17, 1950—Presidents and economic committee chairmen from each county medical society in the plan's operating area attended the meeting. The following motions were unanimously adopted: That the proposed contract be on a service basis; that subscriber income ceilings per annum should be between $4,000 and $5,000 for the family and individual subscriber; that the contract cover surgery in the hospital, home, or office, and in-hospital medical care; that the present New York State Workmen's Compensation Minimum Fee Schedule be used as a basis for establishing a surgical fee schedule, and that maternity care be included on a service basis with a fee of $75, in the home or hospital, excluding x-ray and anesthesia.

Dr. Dwight V. Needham, President of the Syracuse Plan, asked that this summary of actions be sent to county medical societies in the area for presentation to members, in order to obtain approval of these contract principles and to proceed as soon as possible in the formulation of a contract.

In addition to attending these area meetings, your Director has conferred with groups throughout the State on the various aspects of a State-wide contract and other problems of the plans on the local level.

Progress has been made in Chautauqua County to establish a medical care plan locally, and in June your Director spoke at a meeting of the Chautauqua County Medical Society in Dunkirk, regarding the formation of a plan to be administered by the local Blue Cross Plan. A motion was carried that the economics committee of the local medical society present at a later meeting fee schedule and rates for an indemnity and service type plan.

At the December meeting, it was decided to go ahead with the formation of a medical plan, to include surgery and obstetrics and in-hospital medical care.

Your Director was invited to attend the Chautauqua County Society meeting held February 2, 1950, in Mayville, at which time it was voted to adopt a service type contract. A committee will work out a fee schedule and other details, and it is hoped to have the plan in operation as soon as possible. With the formation of this plan, to be known as the Chautauqua Region Medical Plan, all counties in the State will be served by a plan offering voluntary prepayment medical care insurance.

The Bureau has continued its policy of preparing quarterly progress reports on the six approved plans, covering membership, earned premium income, incurred claim and administrative expenses, reserves, and surplus. The semiannual report to June 30, 1949, contained a more detailed breakdown, comparisons, etc., and the Director's comments explained terminology and reasons for each statement, to facilitate interpretation of the report by the recipients. The regular mailing list for this material includes members of the Council of the State Society, Subcommittee, county medical society secretaries, plan directors and presidents, State of New York Insurance Department, the National Blue Shield office in Chicago, and others. A comprehensive yearly report as of December 31, 1949, has been completed for distribution.

Special comparative reports on membership and financial data for the years 1946 through June, 1949, were compiled for distribution at District Branch meetings.

A brief report on the progress of the plans at December 31, 1949, follows: Total membership (subscriber and dependents) 2,079,353; increase in enrollment during 1949, 540,094 or 35.08 per cent over enrollment of the year previous.

Following is a comparative membership statement of increase in Blue Cross Hospital and Blue Shield Medical Care plans in New York State for the year ending December 31, 1949:

LOCATION	MEDICAL	HOSPITAL
United Medical Service (New York)	418,705	529,590
Buffalo	51,506	18,623
Rochester	24,834	11,740
Syracuse	5,541	17,862
Utica	22,071	13,474
Albany	17,437	7,992
TOTAL	540,094	599,281

During 1949 the increase in Blue Cross enrollment identified with the above Blue Shield plans was 599,281, which represents 52.58 per cent of the combined increase in enrollment.

The Blue Shield medical care plans had an earned premium income during 1949 of $13,583,452, as compared to $9,283,387 in 1948, an increase of $4,283,784.

Incurred claims during 1949 amounted to $9,529,805, as compared to $6,362,498 during 1948, an increase of $3,167,307.

Your Director has noted in compiling his reports on membership activity that they are not always in agreement with the reporting of Associated Medica Care Plans, the National Blue Shield Association, o which five New York State plans are members. A joint study of this problem has been made by you Director and Mr. Lynn Doctor of the actuarial staf of the National office, and a satisfactory reporting method has been formulated to correct any discrepancies.

As a member of the Committee on Liaison with Veterans Administration, your Director has attended all meetings held by that committee during th year, as well as Council meetings. By invitation h has been present at meetings of the Planning Committee on Medical Policies and the Subcommitte on Medical Expense Insurance.

Your Director was present by invitation at Legislation Committee meeting and was requeste to make inquiries of specific plans and other plan throughout the country which include oral surger in their contracts, for all available information o the subject. Inquiries have been sent, and th Bureau appreciates the privilege of lending servic to the Legislative Committee.

Your Director attended the June meeting of th American Medical Association in Atlantic City an the interim session in Washington in December. H specific interest was the hearing held by the Counc on Medical Service regarding twenty suggested pri ciples for approval of lay-sponsored medical ca plans.

At a later meeting of the Correlating Committee of the A.M.A. Council on Medical Service, held at the interim session in December, representatives from other states expressed the opinion that the suggested principles be annotated by the Council on Medical Service for the guidance of state and county medical societies.

Your Director was present at the Fourth, Fifth, Sixth, Seventh, and Eighth District Branch meetings and was granted time on most of the programs for brief comment on the comparative progress reports prepared for distribution at these meetings. Dr. Kenneth T. Rowe, President of the Seventh District Branch, invited your Director to substitute for the scheduled speaker, who was unable to attend the Seventh District meeting, and he presented a paper on "National Health Insurance Coverage." This paper was later printed in the NEW YORK STATE JOURNAL OF MEDICINE, November 1, 1949, page 2585.

Health problems in Rockland County have been discussed widely in that county, and your Director was present at a meeting of the Community Health Council at Spring Valley, on November 9.

An interesting meeting of the Section on Medical Care Insurance of the American Public Health Association was attended by your Director, held at the Hotel New Yorker, on October 26. Dr. Dean A. Clark, Superintendent of the Massachusetts General Hospital, presided. Papers were presented on group health cooperatives, Blue Shield, commercial insurance company programs, and also on the United Mine Worker's Fund.

We have previously reported on the splendid cooperation the Bureau has received from the Woman's Auxiliary to the State Society. Again during the year the same cooperation has been extended to us. Your Director has been present at Executive Board meetings and offered the Bureau's help in any way desired to the Auxiliary in their proposed programs.

On November 15, the Director acted as moderator at a panel discussion on voluntary medical care plans arranged by Mrs. Mary Madden, Liaison with the Woman's Auxiliary to the Subcommittee on Medical Expense Insurance. The panel was held before the Conference of Auxiliary Presidents and Presidents-Elect. He arranged for representative discussants from the New York State plans, and following the program it was unanimously expressed by the discussants that all plans should offer service contracts within income limits in lieu of present indemnity contracts in some plans in order to meet public demands.

The trend of some plans has been toward the adoption of a service type contract, increasing income ceilings and benefits. At a meeting of United Medical Service, on November 14, attended by your Director on invitation of Dr. Chas. Gordon Heyd, President, the following matters were considered and discussed with representatives of county medical societies in the plan's operating area: (*a*) income levels for service benefits, (*b*) schedule of allowances to doctors, and (*c*) further participation of United Medical Service in extension of prepaid medical insurance.

Your Director has appeared before lay and professional groups presenting the various aspects of voluntary medical care insurance and its advantages compared to a compulsory system.

Your Director wishes to thank Dr. Azzari, Chairman of the Council Committee on Economics, and Dr. Aaron, Chairman, and members of the Subcommittee on Medical Expense Insurance for their continued cooperation and support.

PART VIII

War Memorial

The War Memorial Committee of the Council and Board of Trustees has the following membership:

James F. Rooney, M.D., *Chairman*	Albany
Fenwick Beekman, M.D.	New York City
Edward R. Cunniffe, M.D.	Bronx
Maurice J. Dattelbaum, M.D.	Brooklyn

As of January 31, 1950, payments to twelve beneficiaries have been inaugurated as indicated in Table 1.

The total number of beneficiaries receiving payments currently for the school year 1949–1950 are ten, five of whom have also received retroactive payments for the school year 1948–1949. Two beneficiaries received retroactive payments for the school year 1948–1949 but have completed their college courses and are no longer active beneficiaries. Nine of the individuals receiving payments currently are pursuing college or postgraduate professional courses, and one, a fourteen-year-old boy of great promise, is pursuing a college preparatory course. It is estimated that only one additional beneficiary will become eligible during the school year 1950–1951.

As of January 31, 1950, the total receipts for the War Memorial Fund from the authorized assessments and accrued interest on investments were $227,745.53, and the total expenditures up to that date were $8,000. The itemized statement of the financial status of the War Memorial Fund will be found in the report of the Treasurer.

Approximately 15 per cent of the members of the Medical Society of the State of New York liable for the War Memorial Fund assessment have not paid that assessment, and for this reason the total assets are approximately $38,000 less than that amount which it is calculated will be required to provide the proposed educational benefits for all of the children who will be eligible therefor.

There remain only three families of potential beneficiaries whose mothers or guardians have not yet furnished all of the information required by the regulations for the management of the Fund. Steps are being taken repeatedly, urging them to complete the necessary forms so that, when their children arrive at the age when they become eligible for the benefits, there will be no difficulty for them to receive the benefits which the Society has provided for them.

A supplementary report may be added hereto at the time of the Annual Meeting.

Veterans Medical Service Plan of New York, Inc.

This Medical Service Plan was set up by the Medical Society of the State of New York in 1946, at the request of the U.S. Veterans Administration. It was done so that the Veterans Administration could make a contract with the private practicing physicians of New York State for the care of service-connected disease or disability. It was designed to service the great load of patients awaiting care, which the Veterans Administration had not been able to provide for in its own facilities.

Two main features in the contract and plan were to provide an acceptable fee schedule under which veterans would receive high standard care in private practice, and also in which there was supervision of the services rendered by the licensed physicians of New York State. This supervision was performed

TABLE 1.—Payments to Twelve Beneficiaries

Beneficiary (Name, Date of Birth, School)	Father (Name, Branch of Service, Circumstances of Death)	Guardian (Name, Address)
Benfield, John Richard* Born June 24, 1931 Attending Columbia College, New York City (2nd year)	Capt. Richard Benfield Army Died October 8, 1945; Calcutta, India; myocardial infarction	Mrs. Charlotte Benfield 103 West 86th Street New York City
Buckmaster, Mary Jean** Born May 11, 1927 Graduated from U. of Michigan, 1949	Maj. De Forest W. Buckmaster Army Died February 3, 1945; Walter Reed Hospital, Washington, D. C.; carcinoma of urinary bladder	Mrs. De Forest W. Buckmaster 609 Spring Street Jamestown, New York
Brown, Franklin Born June 18, 1935 Attending St. George's School, Middletown, Rhode Island (prep school)	Comdr. Clyde H. Brown Navy Died April 12, 1945; Okinawa; enemy action	Mrs. Clyde H. Brown 33 Cranston Avenue Newport, Rhode Island
Haran, Lillian M.* Born August 1, 1930 Attending U. of Miami, Miami, Florida (2nd year)	Capt. Patrick S. Haran Army Died December 15, 1944; Regional Hospital, Fort Jay, New York; acute hepatitis	Mrs. Patrick S. Haran 846 Prospect Place Brooklyn, New York
Lyons, Arthur Edward* Born April 23, 1931 Attending Columbia College, New York City (2nd year)	Lt. Comdr. Alfred L. Lyons Navy Died April 28, 1945; hospital ship off Okinawa; enemy action	Mrs. Evelyn J. Lyons 164-03 Crocheron Avenue Flushing, New York
Milne, Robert J. Born March 29, 1930 Attending Hobart & William Smith Colleges, Geneva, New York	Maj. E. A. Milne Army Air Corps Died May 4, 1948; Strong Memorial Hospital, Rochester, New York; carcinoma of hepatic colon, acute myocardial infarction	Mrs. Evelyn Milne 23 Wolcott Street Le Roy, N. Y.
Picciotti, Gemma Louise Born April 21, 1931 Attending Nazareth College, Nursing School, Rochester, New York	Lt. Comdr. Joseph David Picciotti Navy Died August 17, 1945; Cavite, Manila, Philippine Islands; injuries	Mrs. Joseph David Picciotti 249 Culver Road Rochester, New York
Sachs, Lawrence G.** Born January 5, 1924 Finished 3rd year Law School May, 1949, Harvard, Cambridge, Massachusetts	Capt. Harold M. Sachs Army Died October 7, 1943; home; coronary thrombosis	Mrs. Harold M. Sachs 1648 Madison Street Brooklyn, New York
Schmiesing, Clifford A. Born July 8, 1931 Attending Loyola U., Los Angeles, California	Maj. Clifford A. Schmiesing Army Died January 21, 1944; Algeria, North Africa; compound fracture of skull due to accident	Mrs. Clifford A. Schmiesing 1117 S. Wilton Place Los Angeles 6, California
Smith, Robert* Born October 28, 1930 Attending Cornell College, Ithaca, New York (3rd year)	Maj. Bruce Taylor Smith Army Died September 19, 1944; Bray, Belgium; result of injuries received in airplane accident	Mrs. Elin M. Smith Fort Covington, New York
Stevens, Fay M.* Born April 3, 1931 Attending Elmira College, Elmira, New York	Lt. Comdr. Charles L. Stevens Navy Died November 19, 1943; U.S. Naval Hospital, Pensacola, Florida; malaria, malignant tertian (bilious pernicious malaria)	Mrs. Charles L. Stevens 636 West Gray Street Elmira, New York
Stevens, Charles L. Born September 22, 1929 Attending Pennsylvania Military College, Chester, Pennsylvania (2nd year)		

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* Received retroactive benefits for 1948–1949 academic year.

** Received retroactive benefits for 1948–1949 academic year only; no longer active.

by the Veterans Medical Service Plan of New York, Inc., acting for the Medical Society of the State of New York. The Plan called for the employment of four Coordinator physicians who were appointed by the Plan. The Coordinators receive salaries from the Medical Plan, and this expenditure is reimbursed on a quarterly basis by the Veterans Administration. All other expenses of the Veterans Medical Service Plan of New York, Inc., have been paid by the Medical Society of the State of New York.

In 1946 and 1947 the coordinators and physicians rendering services under the Plan were very busy in the project. In the latter half of 1948 and in 1949 there was considerable reduction in the number of cases authorized for treatment. The reasons for this reduction were mainly as follows:

Many patients with service-connected disease, who had been awaiting facilities, were finally taken care of by authorization for private medical services. After the first year, the Veterans Administration no longer accepted cases as service-connected on prima facie evidence, but demanded a military service record showing the veteran received care while in the service. Many of the patients were cured and no longer required or requested care from the Veterans Administration. Some did not wish to go through the further delay and annoyance of authorization and went to their own physicians privately. In 1949 the Veterans Administration added greatly to the physical properties and personnel of their outpatient clinics. In the large cities where these clinics became available to the veteran, the Veterans Administration insisted that the authorized private care be discontinued and that the veteran receive care in the government clinic. There was, at first, great objection to this change by both the veteran and his attending physician. However, for various reasons, the voicing of these objections became more and more obscure.

It should be noted that numerous physicians in the cities readily took part-time positions in the Veterans Administration clinics. As they did this, of course, private care demands subsided. In numerous instances the physician found himself giving medical service in a Veterans Administration clinic to his recent private patient. He had been paid on authorization on a fee basis; now he was on a part-time salary basis and his patient no longer on free choice. In both instances the physician was remunerated by the Federal government. The fundamental differences, however, are obvious.

The Veterans Administration is required by law to provide medical and hospital care for all service-connected disability or disease. Where clinics cannot be provided, as is the case in many suburban and rural areas, our fee basis plan contributes most of the medical services. When employment and other difficulties cause a "hardship," preventing the attendance of the veteran at a designated clinic time, the Veterans Administration usually authorizes fee basis work. The Veterans Administration clinics and their offices are closed all day Saturday and Sunday.

During 1949 variation in the number authorized has leveled off, and the fee basis performance is now quite steady. Official statistics are not freely available, but we can reasonably well estimate the fee basis funds expended in New York State in 1948 were roundly $2,650,000. In 1949 the figure was about $1,900,000. This represents a decline of 28 per cent, a fair indication of the amount of reduction in the work.

The contract now in effect between Veterans Medical Service Plan of New York, Inc., and the Veterans Administration (copy attached and made part of this report—Appendix A) expires in June, 1950, the end of the Federal fiscal year. Fee basis work at this time seems to be continuing at the 1949 level, and this will probably call for the renewal of the contract.

It should be pointed out that the Plan is limited to medical care for service-connected disability or disease only.*

When veterans receive fee basis or outside private care they must have prior authorization which is given by the Veterans Administration. If this authorization is granted the veteran has a free choice of physician or specialist. Payment for these services is according to the fee schedule contract between the Veterans Administration and Veterans Medical Service Plan of New York, Inc.

Qualifications for specialist rating are established wholly by the Plan. Supervision of the medical care, including penalties for nonethical practice, are the sole responsibility of the Veterans Medical Service Plan of New York. As stated in the contract, much of this supervision is in charge of the Coordinators, who are physicians appointed and employed by the Plan. Coordinators are responsible for fee basis work only. It is pleasing to note that, since the inception of this fee basis work in August 7, 1946, there have been practically no complaints on the part of the veterans receiving medical care.

Attention is called to the fact that the Veterans Administration has the right to provide for medical care for a veteran with a service-connected illness in its own facilities if these are adequate and available.

The Medical Society of the State of New York may very well be proud of its achievement in this large-scale venture in behalf of the veterans. The Directors and members of the Veterans Medical Service Plan of New York Inc., are as follows: Dr. Herbert H. Bauckus, Dr. James R. Reuling, Dr. W. P. Anderton, Dr. James F. Rooney, Dr. Thomas H. McGoldrick, Dr. Edward R. Cunniffe, Dr. William H. Ross, Dr. Arthur H. Stein, and Dr. Joseph P. Henry.

Appendix A

Copy of the contract follows:

September 26, 1949

To the Administrator of Veterans Affairs:

The Veterans Medical Service Plan of New York, Inc., a nonprofit organization, organized by the Medical Society of the State of New York (hereinafter called the "Contractor"), and the Veterans Administration, for the purpose of establishing and maintaining a close working relationship in order to establish a well-integrated service for providing medical care and treatment for veterans in the State of New York, beyond those services available to the Veterans Administration in existing Veterans Administration facilities and installations, do hereby mutually agree as follows:

1. The Contractor will arrange, through its member physicians (who have been duly licensed to practice medicine or surgery in the State of New York, and are citizens of the United States) for the following medical services to beneficiaries of the Veterans Administration; examinations (other than those for rating purposes except when specially authorized as provided in paragraph 4 hereof), and treatments and counsel in such cases as may be authorized by the Chief Medical Office of the Veterans Administration Field

Station having jurisdiction, or his designate; the physician reserving the right, however, to decline any particular case.

2. The contractor will submit to the Veterans Administration a list of its members who desire to provide service for eligible veterans in the home communities of such veterans. This list may be augmented from time to time as additional physicians may indicate a desire to participate in the program. The physicians so listed will be fee basis physicians of the Veterans Administration. By notice in writing, a physician may at any time request that his name be removed from the list of fee basis physicians.

3. The contractor will assist the Veterans Administration in establishing for examinations and treatment a list of competent specialists who meet the qualifications of specialist of the Veterans Administration.

4. Lists of physicians submitted by the contractor will be broken down by counties or districts in order that the veterans for whom services are authorized may select a physician practicing in his home community. The choice of physician by the veteran, as provided for in Paragraph 2, is not applicable to examinations for pension or compensation rating purposes. Examinations for such purposes may be made by member physicians of the contractor only when specifically designated by the Chief Medical Officer of the Veterans Administration Field Station having jurisdiction, or his designate, to make such examinations.

5. (*a*) Fees for medical services in authorized cases shall be paid by the Veterans Administration to the physician rendering the service in accordance with the fee schedule hereto attached, which is made a part of this agreement. The contractor warrants that the rates set forth herein are not in excess of the rate of fees charged other persons who are not Veterans Administration beneficiaries for the same or comparable services. It is mutually understood that the fees stated in the fee schedule represent the maximum amount that may be charged, and do not represent the amount to be paid in every case. The Veterans Administration will advise each physician of this provision and will require each physician to certify in submitting his statement of account that the fees charged are not in excess of the fees charged by him for comparable service rendered nonveterans. It is understood that unusually involved cases and services not scheduled will be subject to review and recommendation by the Veterans Medical Service Plan of New York, Inc., to the Veterans Administration for determination of the appropriate fee.

(*b*) It is mutually agreed that during the term of the contract any item in the fee schedule which is mutually found to be inequitable may be increased or decreased after review and final determination to that effect by the Veterans Administration.

6. The Veterans Administration will authorize examinations and treatments of New York veterans and will handle administrative and clerical details in connection with the authorization of examinations or treatments and the maintenance of records, and will arrange for the transportation of the veteran, if necessary.

7. When authorizing treatment, the Veterans Administration will furnish to the veteran proof of such authorization and a list of fee basis physicians in the county or district in which the veteran is located, in order that he may select his own physician for the services authorized.

8. The Veterans Administration will review reports of examinations and services to determine their adequacy. No fees will be paid by the Veterans Administration for reports which are not acceptable to the Veterans Administration or for services rendered in unauthorized cases.

9. It is agreed that the Veterans Medical Service Plan of New York, Inc., will engage four competent medical representatives to be stationed at and operate from the Veterans Administration Regional Offices at Buffalo, New York, and Syracuse, and the Veterans Administration Center at Albany, whose functions will be:

(*a*) To certify to the Veterans Administration a list of competent physicians throughout the State of New York for appointment as designates on a fee basis to render examinations and treatments of veterans referred direct to the designates by the Veterans Administration.

(*b*) To review, on behalf of the Veterans Medical Service Plan of New York, Inc., the work of the Fee Basis Physicians to the end that the treatments rendered and the examinations made professionally and satisfactorily conform to the authorizations as issued.

(*c*) To make such investigations and contacts as the Veterans Administration may request concerning complaints or deficiencies and inadequacies of reports made by fee basis examiners and to submit reports and recommendations thereon to the Veterans Administration and to the Veterans Medical Service Plan of New York, Inc.

(*d*) To serve as liaison officer or officers between the Veterans Medical Service Plan of New York, Inc., and the Veterans Administration, but not as supervisors of Veterans Administration activities or employes.

10. For the services rendered by the Veterans Medical Service Plan of New York, Inc., pursuant to this agreement, the Veterans Administration agrees to furnish office space, equipment and clerical assistance, and telephone service for the representatives of the Veterans Medical Service Plan of New York, Inc., not to exceed four in number, and will pay the Veterans Medical Service Plan of New York, Inc., the sum of twenty-five thousand five hundred dollars ($25,500) per annum payable quarterly in arrears provided, nevertheless, that the amounts so paid by the Veterans Administration shall not exceed the amounts expended or incurred by the Veterans Medical Service Plan of New York, Inc., for its services hereunder. The representatives of the Veterans Medical Service Plan of New York, Inc., agree to work half time, plus any additional time for consultations when so needed. The representatives of the Veterans Medical Service Plan of New York, Inc. will be reimbursed as follows:

Albany	$6,000 per annum
Buffalo	$6,000 per annum
New York	$7,500 per annum
Syracuse	$6,000 per annum

The amounts stipulated shall be subject to quarterly review.

11. Nothing in this contract shall preclude the right of the Veterans Administration to enter into contracts or agreements with other organizations or individuals in the State of New York for providing medical care to eligible veterans.

12. This agreement shall be effective from October 1, 1949, to June 30, 1950, and may be terminated by either party by giving thirty (30) days written notice to that effect.

13. This agreement, if mutually satisfactory, may be renewed indefinitely for periods of one (1) year each, upon notice in writing to the contractor at least sixty (60) days prior to the expiration of each period of one (1) year, and written statement from the contractor within thirty (30) days after such notification agreeing to the renewal.

14. No member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this agreement or to any benefit that may arise therefrom, unless it be made with a corporation for its general benefit.

15. The contractor agrees that, in performing this agreement, it will not discriminate against any employe or applicant for employment because of race, creed, color, or national origin, and that it will include a similar provision in all agreements entered into by it to effectuate this agreement.

PART IX

Legislation

The Council Committee on Legislation consists of the following:

Maurice J. Dattelbaum, M.D., *Chairman*	Brooklyn
Elton R. Dickson, M.D.	Binghamton
John C. Brady, M.D.	Buffalo
Kenneth T. Rowe, M. D.	Hornell
Joseph A. Geis, M.D.	Lake Placid
John A. Hollis, M.D.	Norwich
Aaron Kottler, M.D.	Brooklyn
Dwight V. Needham, M.D.	Syracuse
George J. Lawrence, Jr., M.D.	Flushing
Frederic W. Holcomb, M.D.	Kingston

Thomas O. Gamble, M.D.	Albany
John L. Edwards, M.D.	Hudson
Horace E. Ayers, M.D.	New York City
James A. Lynch, M.D.	Bronx
Robert R. Hannon, M.D., *Executive Officer*	Albany

The Council Committee on Legislation can submit only a preliminary report for publication of its activities at this early date.

The Council followed the recommendations of the House of Delegates at its annual meeting in May and enlarged the Committee on Legislation from a committee of three to a committee of fourteen, with members from all sections of the State. This Committee has had three meetings, on August 2, November 9, and December 2. At these meetings there were various persons invited as guests to present their views on matters being considered by the Committee. There was also appointed, as recommended by the House of Delegates, a person thoroughly familiar with legislative matters as legal counsel to the Executive Officer in Albany, to assist the Executive Officer in preparing and presenting to the legislators legislative matters in which the Society is interested. Mr. James J. Beasley, a practicing attorney of New York City, was appointed as this legal counsel. Mr. Beasley is thoroughly experienced in the field of legislative matters.

The Legislature has been in session for six weeks and is at about the middle of its session. Much of the Legislation Committee's work will be concerned with the legislative activities that will take place later in the session, and this will require a supplementary report to be made at a later date. At the time of writing this report the budget bills have not been cleared for the year, so action on many of the other bills has not progressed to any extent. Up to February 17 there have been 1,995 bills introduced in the Senate and 2,396 in the Assembly. During the session of 1949 a record number of bills was introduced. However, this year this number has been exceeded by approximately 500 bills on any date of the present session. There have been 84 resolutions introduced in the Senate and 154 in the Assembly.

There have been reported in the bulletins from the Albany office to the officers of the State Society, the officers of the county societies, and to the members of the county society legislative committees, 47 bills in the Senate and 62 in the Assembly. The Albany office has sent to the chairmen of the legislative committees of the county societies copies of 11 Senate bills and 11 Assembly bills. This makes a total of 22 separate bills which we have been particularly interested in following. Of these bills, there are two that have been introduced at the request of the House of Delegates. These bills are the x-ray bill and the injunction bill.

The x-ray bill, Senate Int. 1198, was introduced by Senator McGovern, and Assembly Int. 1717 by Assemblyman Dwyer, at our request. The draft of this bill was prepared for the Legislation Committee after a great deal of study and consultation with various members of the Society, and it was understood that this form was acceptable to those members of the Society interested in having this bill passed and would be supported by members of the roentgenologic societies of the State. After this bill was introduced, it was found that there was some objection from certain sources, particularly the hospitals, in regard to the inclusion of x-ray and radium therapy, so it was requested that this bill be amended, taking out of the bill that portion mentioning x-ray and radium therapy. It was hoped by such measure to remove the objection that had been received from certain groups. At the date of writing this report it is too early for this bill to have made any progress in committee or on the floor of either house. There was also introduced this year another x-ray bill, Assembly Int. 528, by Mr. Clancy. In view of the Society's request for the introduction of the other bill, it is understood that Assemblyman Clancy will not endeavor to advance his bill.

The second bill that has been introduced this year at our request is the injunction bill, Assembly Int. 2342, introduced by Assemblyman Demo. This bill, authorizing the Attorney General to apply to the Supreme Court for injunction to restrain violation of medical practice, not only amends the Medical Practice Act but also the articles governing the practice of dentistry, podiatry, and optometry in a similar manner. The amendments to these four articles of the Education Law were included in one bill, as it had been recommended by the Temporary State Commission on the Coordination of State Activities in its Second Interim Report of March, 1948, that, to obtain such injunctive relief, express statutory authority similar to that now contained in the Pharmacy and Veterinary Medicine Acts should be included in the proposed article supplementing the professional acts. This bill would include such injunctive relief proceedings in these four professional acts that at the present time do not have such a procedure in their statutes. It is too early in the session to report the reception that this bill may have.

At the meeting of the House of Delegates last May there were several other legislative matters discussed and suggestions made as to proposed legislation. These matters were referred from the Council to the Legislation Committee for its study and investigation. After study and investigation a report was made to the Council, and the chairman of the Legislation Committee, the Executive Officer, and his counsel have followed the direction of the Council on these matters.

A chiropractic bill has been introduced again this year, in the Senate by Senator Seelye, Senate Int. 1764, and in the Assembly by Assemblyman Noonan, Assembly Int. 1414. This bill is very similar to the bill introduced by Senator Seelye in 1948 and 1949.

It is interesting to note that this year, with the extremely large number of bills, the actual number of bills of particular interest to the medical profession has been less in number than heretofore. There have been a large number of bills introduced again this year for the purpose of extending both the time and amounts to be paid under unemployment insurance and also under the Disability Benefits Law. There have been a number of bills to extend unemployment insurance, disability insurance, and workmen's compensation to additional groups and classifications, and even to those employing less than four persons. It is appreciated, however, that this is a session immediately before a coming general election, and that members of both parties are going to be very careful on any actions they may take that will be held to be controversial matters.

It is too early in the session to predict or report on many of the legislative matters in which we are interested. It will be necessary, therefore, for the Legislation Committee to submit a supplementary report after the adjournment of the Legislature and after the final action of the Governor on bills in which we are interested.

PART X

Workmen's Compensation

The Council Committee on Workmen's Compensation under the change in the Bylaws of the Medical Society of the State of New York adopted at the 1949 meeting of the House of Delegates has been expanded and now consists of the following:

J. Stanley Kenney, M.D., *Chairman*	New York City
Stanley E. Alderson, M.D.	Albany
Fenwick Beekman, M.D.	New York City
Walter S. Bennett, M.D.	Granville
James Greenough, M.D.	Oneonta
Joseph P. Henry, M.D.	Rochester
Joseph A. Lane, M.D.	Rochester
Joseph A. Manzella, M.D.	Brooklyn
Dwight V. Needham, M.D.	Syracuse
Charles D. Squires, M.D.	Binghamton
Guy S. Philbrick, M.D.	Niagara Falls
David J. Kaliski, M.D., *Director*	New York City

The Committee has the honor to present the following report of its activities and the work of the Workmen's Compensation Bureau for the year 1949–1950.

1. Actions on Resolutions of the House of Delegates Referred by the Council.—(A) The resolution passed by the House of Delegates of the Medical Society of the State of New York advocating free choice of physician under the Federal Workmen's Compensation Law was introduced by Dr. J. Stanley Kenney at the American Medical Association meeting in June, 1949, and referred to the Reference Committee on Legislation and Public Relations which approved the resolution and referred it to the Board of Trustees. The latter, through Dr. Lull, requested further information from Dr. Kenney. This information was sent by him and additional information, as requested, by your Director on August 26, 1949, giving the reasons for urging an amendment to the Federal law to insure workmen covered under Federal laws free choice of physicians in New York State.

(B) Resolution re the simplifying of reports, especially the C-104 report. Although necessarily slow, we can report progress toward achieving the objects of this resolution. A great amount of time has been devoted to the preparation of a simplified form adopted for the reporting of claims by physicians under the Disability Benefits Law. The final draft of this form was accomplished only after numerous meetings of an all-physician subcommittee, and their experience should be most helpful in guiding those assigned to the task of simplifying the C-104 form. We have now prepared simplified forms for submission to the Chairman of the Workmen's Compensation Board for her consideration, and it is hoped that a committee will be appointed to study and approve these recommendations.

(C) Resolution recommending that the fees for general practitioners, radiologists, and physical therapy physicians be increased from the level set on May 1, 1947, and September 1, 1948, and as modified as of May 1, 1949. This resolution will be discussed separately under Chapter 5 of this report, subheading "Fee Schedule."

(D) Resolution re legislation regarding the method of settlement of disputed medical bills by the Medical Practice Committee in New York City. This resolution was referred by the Council to the Workmen's Compensation Committee and the Legislation Committee for whatever action they deemed appropriate. The Workmen's Compensation Committee approved the action taken by the House of Delegates and suggested the introduction of a bill similar to the one introduced last year. No action at the time of the writing of this report (March 1, 1950) has been taken, chiefly for the reason that the policy adopted by the Legislation Committee after due consideration was not to press at this session of the Legislature controversial legislation which appeared to have little chance of favorable action.

(E) The resolution requesting the Secretary of the Medical Society of the State of New York to inform the Chairman of the Workmen's Compensation Board that there should be established a specialty of *Thoracic Surgery*, with a special rating such as M-17. This resolution was promptly carried out by the Secretary. A special subcommittee of doctors engaged in this type of surgery was appointed by the President of the Medical Society of the State of New York and has met with the Chairman of the Workmen's Compensation Board. They have been instructed to draw up a statement of standards, types of special surgery involved, and other matters pertaining to the settlement of this question. The matter is still in the process of negotiation, and we have reason to believe that a satisfactory solution will be evolved.

(F) Resolution recommending that provisions
concerning group practice in the Workmen's Com-
pensation Law and the Education Law be brought
into conformity; this resolution entailed the intro-
duction of new legislation of a very controversial
character and also debatable interpretations of the
ethical procedures and practices concerned. Fo
the same reasons as given under section (D) above
this projected legislation was not introduced. This
matter of group practice is of general concern and i
discussed in greater detail in the current report o
the Planning Committee on Medical Policies.

(G) Resolution recommending that medical bill
disputed between insurance carriers and employer
should be arbitrated in the county in which th
medical service was rendered and not in the count
in which the employe resides. This resolution wa
approved by the Workmen's Compensation Com
mittee, and the reintroduction of a bill in the Legis
lature this year was recommended. The resolutio
involves amending Section 13-g(2) of the Workmen
Compensation Law. It appears that at the time
the writing of this report there probably will be n
action taken at this session of the Legislature f
the same reasons as stated in paragraph (D), a
though in our opinion this resolution is not of
controversial nature.

(H) Several resolutions of the House, to wi
(1) taking cognizance of the need for interpretati
and clarification of many items in the present r
vised fee schedule; (2) recommending that t
Chairman of the Workmen's Compensation Boa
meet with representatives of the State Society
that a reasonable opportunity to present its grie
ances and desires regarding the fee schedule may
afforded, and (3) requesting a revision of the f
schedule at regular intervals (two years suggeste
instead of the longer intervals as prevailed in t
past. Every effort has been and is being made
implement these resolutions.

A separate committee appointed by the Preside
of the Medical Society of the State of New York h
been set up at the request of the Chairman of t
Workmen's Compensation Board and has p
sented to her a prepared statement listing the St

Society's expressed convictions and desires. Negotiations are continuing, and the current status of these matters will be further recorded in Chapter 5, subheading "Fee Schedule," and if necessary in a supplementary report when the House of Delegates convenes in May.

2. Activities of the Committee, the Bureau, and the Chairman.—The Council Committee on Workmen's Compensation held a meeting in New York City on October 13, 1949, at which time were outlined the activities and policies to be pursued during this year. At this meeting the Committee discussed the resolutions adopted at the meeting of the House of Delegates and approved same. The Committee further discussed the provisions of the new Disability Benefits Law and made certain recommendations for revisions in the law.

Your Chairman and Director attended the Conference of Secretaries held in Albany on November 2, 1949. They also participated in the Conference of Legislatiors Chairmen in Albany on February 16, 1950.

Your Director appeared before the Joint Legislative Commission on Industrial and Labor Conditions at the New York City Bar Association held on December 7 and 8 and discussed the Disability Benefits Law and presented to the Commission the views of the Medical Society of the State of New York.

On February 19 and 20, 1950, the New York City members of the Council Committee, together with President Masterson and Secretary Anderton, participated in the meeting of the Committee on Industrial Health of the American Medical Association.

A number of conferences have been held with Miss Donlon by the Chairman and the President of the Medical Society.

Your Chairman and Director appeared at numerous other conferences devoted to workmen's compensation matters as representatives of the Medical Society of the State of New York.

The Bureau has had an active year in aiding physicians and county societies in many workmen's compensation problems and functions. The Bureau and its staff are available at all times for advice, counsel, and assistance in all phases of workmen's compensation matters as they affect the physician or the medical profession.

3. Rehabilitation and Physical Medicine.—This is a subject which has long held the attention of the representatives of both the Medical Society and the insurance carriers. Thinking has never been crystallized on this important phase of medical care due, largely, to inertia on the part of all concerned. The publicity attained for rehabilitative measures, because of their success in the armed services program and in certain urban areas in civilian practice, has focused attention on this subject anew. The Baruch Report on Physical Therapy has also given great impetus to this branch of medicine.

Your Committee took the initiative in bringing the question of rehabilitation to the attention of insurance carriers and employers through the Joint Medical Conference Committee at a meeting held on January 8, 1946. This matter has been the subject of a number of conferences since this time, and the subject was given further consideration at a meeting of the Joint Medical Conference Committee on June 12, 1946. On October 13, 1949, the representatives of the Compensation Insurance Rating Board, the Workmen's Compensation Committee, and the President and Secretary of the Medical Society of the State of New York, held a dinner meeting in New York City, at which time this subject received a broad review. A Joint Committee, consisting of representatives of our Council Committee on Rehabilitation, Workmen's Compensation, and representatives of the Joint Medical Conference Committee, met on January 19, 1950, and took steps to crystallize opinion on the subject of rehabilitation and physical medicine and outlined a tentative program of cooperation between the insurance carriers, employers, and the medical profession.

Both the insurance carriers and the medical profession fully recognize their obligations to furnish complete treatment until the injured worker is returned to full activity wherever this is possible. Employers too realize the need for doing the fullest job. The State of New York has recently evinced a deep interest in these programs.

Several members of the Joint Legislative Conference Committee on Labor and Industry have recently made a visit to Boston where they made a study of the rehabilitation program of one of the large insurance companies which is doing a constructive job for disabled employes of its policy holders. This Committee was greatly impressed, and undoubtedly, in the very near future, unless we do a thoroughly satisfactory job in cooperation with industry and insurance carriers, legislation will be introduced, and the State might take over this important activity.

At the hearing held by the Joint Legislative Conference Committee on Labor and Industry on December 7, 1949, on rehabilitation, at which representatives of labor and industry, insurance carriers, and the public were present, your Director testified on the value of rehabilitation to the injured worker and the possibility of achieving a suitable program of cooperation between employers, insurance carriers, and the medical profession. It was pointed out that these objectives could be achieved without the necessity of any modification of the free choice principle in the Workmen's Compensation Law by cooperation between the medical profession and the other interested parties including the Workmen's Compensation Board. It is our considered opinion that no amendments to the Workmen's Compensation Law are necessary to afford the injured worker the full benefits of rehabilitative treatment and at the same time not imperiling the position of the insurance carrier with respect to statutory provisions concerning improper transfer of patient or solicitation of patients.

This program imposes a grave responsibility on the Medical Society. It involves a considered and expanded educational program to acquaint doctors with the full possibilities of rehabilitative technics and the benefits to be derived therefrom. At the present time there appears to be a lack of understanding on the part of the average physician as to just what rehabilitation is and how it dovetails into actual medical practice.

Rehabilitation may be defined as the restoration of the handicapped as a result of accident or disease to the fullest physical, social, vocational, and economic usefulness of which they are capable by means available to the medical profession directly and indirectly through the assistance of persons trained in various allied fields. The physician must be informed that rehabilitation is good basic medical self-help, involving ambulatory and hospital care and vocational and psychologic therapy. It requires a broad knowledge and technic with which few doctors are familiar. Although some phases of rehabilitation may be carried out by the attending physician, either in his office or at the hospital, the attending physician must be willing to cooperate in certain cases by sending his patient, at the proper time, to the doctor who is better acquainted with these special technics and procedures. This can be done without disturbing the relationship between the doctor and his patient and without in any way depriving the patient of the full benefit of necessary medical and surgical care, which are essential in any program of rehabilitation.

The physician must further learn that rehabilitation in many instances must be instituted very early in the plan of treatment. It is a comprehensive method of treatment, involving study of the complete individual, his physical and mental makeup, and also a considered evaluation of all measures which should be undertaken to reinstate him in society as a useful and productive citizen.

Medical schools and teaching centers are recognizing the need for instruction in this subject, and courses are being offered in physical medicine and rehabilitation. Dr. Howard A. Rusk has stated that, at present, he has 22 men in training at New York University-Bellevue Medical Center. This is very few, yet represents more than half of those in training in the entire country. Rehabilitation centers at the Universities of Syracuse, Rochester, and Buffalo are about to be established. Much must be done to make better use of and to expand these existing facilities.

In this connection our own Committee on Public Health and Education can make its contribution on a State-wide level by increasing the number of its lectures and demonstrations on this topic.

We would recommend that a committee be set up immediately, consisting of representatives of the Medical Society Committee on Physical Medicine and Rehabilitation and the Council Committee and Bureau on Workmen's Compensation to confer with similar committees of insurance carriers, self-insurers, employers, and representatives of the Workmen's Compensation Board, to consider ways and means of bringing into being and implementing this important matter as a routine part of treatment under the Workmen's Compensation Law.

4. **Fee Schedule.**—A review of our reports to the House of Delegates for the past decade will indicate the steps taken by this Committee to obtain an upward revision of the Workmen's Compensation minimum medical fee schedule. This resulted in the Chairman of the Workmen's Compensation Board appointing an advisory committee in 1946 to give consideration to the request of the medical profession for a revision of the fee schedule and to study and advise her on the proposed new fee schedule which we had submitted to her previously. Dr. Nathan B. Van Etten and Dr. Walter P. Anderton were members of this advisory committee. Your Director appeared on one occasion before the Committee and presented the views of the State Medical Society. He also conferred by invitation on frequent occasions with the Chairman of the Committee.

Partial revision of the medical fee schedule became effective on June 1, 1947, and affected the fees for general practitioners and indicated an increase of about 25 per cent. On September 1, 1948, a more complete revision of the fee schedule became effective. This was a schedule of minimum fees for medical treatment and care established for the entire State. It included numerous upward revisions of fees for specialists, both for consultation and regular treatment, as well as for general practitioners. The Chairman of the Workmen's Compensation Board was informed soon after June 1, 1947, that the revision of general practitioners' fees was considered inadequate and not in conformity with the prevailing rates in private practice. There was no further revision of general practitioners' fees in the schedule promulgated on September 1, 1948, as had been requested by the Society. On May 1, 1949, there was issued a supplement to the medical fee schedule in which numerous changes and revisions were made, chief among these being a downward revision from $5.00 to $3.00 for aftercare visits to specialists and the reduction of the $15 first office visit to $10.00 for nonreferred patients to specialists. Fees for roentgenologists remained identical with those in the original fee schedule of 1935.

Following the release of these schedules, we received numerous complaints from general practitioners and specialists with regard to the fees set and numerous resolutions from county medical societies protesting the inadequacies of many of the fees in the fee schedule. At the same time copies of these resolutions of the county medical societies were sent by the societies directly to the Chairman of the Workmen's Compensation Board and also were transmitted by this office. In addition, owing to the language and format of the schedule, there have been innumerable disputes over the interpretation of certain fees, which we have pointed out to the Chairman of the Workmen's Compensation Board and which require decision and clarification on her part. Chief among these complaints was the practice of certain insurance carriers in interpreting the nonreferred case of a minor nature, although falling within the range of practice of the specialist, as one that could be treated by a general practitioner, and refusing to pay a specialist the proper fee for this service. The attitude of certain insurance carriers is, in our opinion, unjustified and has created numerous arguments and disputes as to whether certain minor injuries actually fall within the scope of the surgeon or the orthopedic surgeon.

In June of 1949, your Chairman met with the Chairman of the Workmen's Compensation Board and conferred with her on these protests and exhibited the correspondence which we had received. Shortly thereafter, in a letter sent to the President of the Medical Society of the State of New York, the Chairman agreed to reopen the matter and requested him to set up a committee consisting of two general practitioners and two specialists to consider the question of a differential fee in referred and nonreferred cases treated by specialists. Dr. Masterson appointed the following committee: Dr. Ignatius P. A. Byrne and Dr. Charles M. Reid, general practitioners, and Dr. Dwight V. Needham and Dr. Albert Vander Veer, II, specialists.

On instructions from the President, this Committee considered and prepared a schedule, not only on the subject of the differential fee but made general recommendations on disputed items of the fee schedule, which included an upward revision of fees for general practitioners. This letter was acknowledged by Miss Donlon on September 9, 1949, to the effect that she would submit to an advisory committee, representative of all groups, their report as a basis for recommendation with respect to these matters.

At the meeting of the Council Committee on Workmen's Compensation held on October 13, 1949, the above report was approved by the Committee before its transmittal to the Chairman of the Workmen's Compensation Board by Dr. Masterson. This Committee also recommended to the Council that the Chairman of the Workmen's Compensation Board be requested to widen the discussion on the fee schedule and permit the inclusion of numerous individual items which required explanation, clarification, or revision. The Committee also unanimously resolved the following statement should be included in the fee schedule following Item 9-a: "Where a specialist treats a case falling within his specialty, regardless of the nature, extent and degree of the injury, he should be paid a specialist's fee." It was further resolved that the differential fee paid to partial specialists, where stated in the schedule, should apply only to office visits, home visits, and hospital visits, not to any operative or surgical procedure; and that in no event shall the X specialist under this formula receive less than $3.00 for subsequent visits not included within a fixed period of aftercare.

Other resolutions acted upon and approved were that all subsequent visits to specialists should be restored to $5.00 whether the case is a referred case or one that goes directly to a specialist; that surgeons and orthopedic surgeons should receive a first-visit fee of $10.00 for a nonreferred patient but that all other specialists should receive a $15 first-visit fee where the patient is referred or nonreferred (neurologists $20); that X specialists should receive three fourths of the specialists' fees for office, home, hospital and other calls, but full specialist fees were to apply for all operative or surgical procedures or medical treatments falling within their specialty; that the claim of roentgenologists throughout the State for an increase in fees should be honored, and that such fees should be increased by approximately 30 per cent; and, finally, that the fees for physical therapists and anesthesiologists should be the equivalent of those paid to other specialists.

We are happy to report that recently the President of the Medical Society received a request from the Chairman of the Workmen's Compensation Board to comment on the above recommendations and to advise her as to what he deems to be adequate fees for general practitioners and specialists so that she may study the matter before submitting it to the other interested parties who, under the provisions of the Workmen's Compensation Law, are entitled to comment and express their views in this matter. We hope to be able to make a supplemental report to the House of Delegates should any action be taken by the Chairman of the Workmen's Compensation Board by that time.

5. Qualifications.—In respect to the duties of the county medical society workmen's compensation committees in the qualifying and rating of specialists, we would refer you to our recommendations on this subject in previous reports and urge the committees to exercise meticulous care in granting specialty ratings.

6. Medical Bureaus.—Attention is again drawn to the functions of the county society compensation committees in the recommendation of licenses for employers medical bureaus. This function should be carried out with great care, and, where the Committee is aware or suspects that any employer is operating a medical bureau without having obtained a license to do so, this fact should be reported to the Bureau and to the Chairman of the Workmen's Compensation Board so that a proper investigation may be made.

7. Legislation.—The subject of legislation as recommended by the House of Delegates at its last meeting has been discussed under a separate heading. Very few bills concerning amendments to the Workmen's Compensation Law have been introduced up to the time of this writing, and none requiring special attention by your Committee. Should any additional bills be introduced, they will be the subject of a supplementary report.

A Labor Department bill was introduced amending Section 19 of the Workmen's Compensation Law to permit part-time medical employes of the Department to treat their private patients under the Disability Benefits Law.

8. Disability Benefits Law.—The Workmen's Compensation Bureau has given careful attention to the provisions of the new Disability Benefits Law. The matter received consideration at the meeting of the Council Committee on Workmen's Compensation on October 13, 1949. It was felt by the Committee that a number of provisions of the law were such that it would be advisable to submit amendments to the Legislature which convened in January, 1950. The following questions were raised with respect to certain provisions of the Disability Benefits Law:

(A) The requirement that a physician must be authorized to treat compensation claimants in order to sign a certificate of disability for a patient. The Committee was not in accord with this provision of the law, believing that a physician legally licensed to practice medicine in this State should have authority to sign a disability certificate for his own patient. Furthermore, the requirement that a physician be authorized under the Workmen's Compensation Law would debar any physician not so authorized from treating his own patient covered by the new law since he could not sign a certificate of disability for him. This objection was raised before the Joint Legislative Commission.

(B) The Disability Benefits Law provides that a physician may be removed from the panel of physicians authorized to treat workmen's compensation claimants if he makes a report that is incomplete or untruthful. The wording of this law is such as to jeopardize the rights of a physician under circumstances over which he may have no control. It is felt that this provision is too loosely drawn and should be modified to remove the word "incomplete."

(C) While under the provisions of the Workmen's Compensation Law a physician who is accused of improper conduct or failure to comply with the statute is entitled to a formal hearing after notification and if adjudged guilty after such hearing is entitled to appeal before the Medical Appeals Unit of the Industrial Council, no such protective provisions are made in the Disability Benefits Law. A physician may be removed from the panel after an investigation by the Chairman of the Workmen's Compensation Board. It is felt that the same safeguards that apply under the Workmen's Compensation Law should also apply under the Disability Benefits Law.

(D) Under the provisions of the Workmen's Compensation Law a physician who testifies at a hearing is paid a fee in accordance with his rating and mileage fees in addition to the subpoena fee if his testimony is required. Under the provisions of the Disability Benefits Law only a subpoena fee is paid. It is felt that inasmuch as physicians may be required to testify under the Disability Benefits Law, involving loss of time and practice, the same provisions for the payment of physicians should apply as in the Workmen's Compensation Law.

The Committee recommended that consideration be given to the introduction of adequate legislation to correct these faults in the Law.

9. Anesthesia by Registered Nurse.—It was brought to our attention that a registered nurse *not* in the employ of a hospital was permitted to give anesthetics for one or more physicians on the staff of the hospital. The bill of the nurse for the rendering of anesthesia was submitted by the hospital on its billhead with the understanding that the fee, when collected, would be paid to the nurse. Your Director conferred with Counsel as to the legality of this procedure. It was the opinion of Counsel that the registered nurse was practicing medicine illegally in holding herself out as an anesthetist and rendering bills for services even though said bills were rendered through the hospital. The matter was referred to the local county medical society for investigation, but no further steps have been taken to clear up this situation. The House of Delegates and the Council have on a number of occasions held that anesthesiology is the practice of medicine. While it is true that a nurse employed by a hospital may under the direction and control of a licensed physician on the staff of said hospital give anesthetics, it is equally true that the registered nurse may not hold herself out as private individual to render anesthesia and charge a fee therefor. She then practices medicine. Such practice is not contemplated within the purview of the Education and Nursing Laws.

It is recommended that the House of Delegates take this matter under consideration and express an opinion as to the advisability of a registered nurse rendering anesthesia under the above circumstances.

10. Arbitration.—As in previous years, your Director, together with representatives of the Compensation Insurance Rating Board, attended a number of arbitration hearings throughout the State. In a number of instances he presented the physician's answers to the objections raised by insurance carriers or employers to the payment of medical bills. In all such instances the physician requested aid or appearance and agreed to abide by the decision of the arbitrators as though he were present.

The arbitration procedure is a set one for the settlement of disputed medical bills. The number of cases requiring and scheduled for arbitration is gradually diminishing because of the greater interest shown by local county medical societies in discussing disputes over medical bills with representatives of insurance carriers and employers.

In almost all instances the disputes are resolved to the mutual satisfaction of both parties, thereby reducing the number of disputed medical bills that require formal arbitration. It is expected that, with the creation of joint councils throughout the State for the discussion of numerous matters of mutual interest—among those disputes over medical bills—the need for formal arbitration will greatly diminish. It is felt, however, that the formal arbitrations in which five physicians decide the value of medical services are more satisfactory than the method now in effect in counties having a population of one million or more where one physician listens to the parties, arrives at a finding, and then has it reviewed or ratified by the three members of the Medical Practice Committee.

Many bills are objected to on grounds that require adjudication by a referee or Workmen's Compensation Board before the value of the doctor's services can be arbitrated. The arbitration committee can only decide the *value* of a physician's services. Such matters as failure or refusal to file reports or to report, on time, the necessity of medical care, authorization for medical care where required, questions of causal relationship between the condition billed for and the condition caused by the injury, all these and others require the attention of a referee or the Workmen's Compensation Board before they can be arbitrated. Provisions have been made by the Workmen's Compensation Board for the hearing and determination of these issues before the value of the physician's services can be determined by arbitration.

11. Radiology Examinations.—We continue to receive requests from county societies in the metropolitan area for the examination of candidates for rating in diagnostic roentgenology and radiation therapy where the counties are in doubt as to the competence of the applicant. In the course of the year, three examinations were held at New York University. The examining committee consists of Dr. Chas. Wadsworth Schwartz, Dr. John J. Masterson, Dr. Henry K. Taylor, Dr. Charles Gottlieb, Dr. Raymond Lewis, Dr. Ira Kaplan, and Dr. Robert P. Ball. We are indebted to the examining committee for their earnest endeavors in carrying out these examinations and also to New York University for putting the facilities of their x-ray department at the disposal of our Committee. During the past year we have not received any applicant for examination from the rest of the State. It is suggested that the county societies keep in mind the availability of similar examining committees throughout the State to which applicants may be referred by the county societies where the qualifications of candidates are not readily ascertainable.

12. Hospitals and Physicians Bills.—A matter of great concern is the practice of certain hospitals in regard to fees paid to physicians on the staff of said hospitals for the treatment of compensation claimants. Patients are frequently admitted in emergency to hospitals and assigned to physicians on the duly constituted staff for treatment unless the patient is sent in by a physician or referred by the employer to a certain physician on the hospital staff with the consent of the patient. The patient always has the right of free choice either initially or subsequently, even if he accepts the physician designated by his employer. The patient has the status of a semiprivate patient under the Workmen's Compensation Law and is not a public charge. Where the patient is brought to the hospital in an emergency and not able himself to select a physician, he would, of course, be assigned to one of the physicians on the staff of the hospital properly qualified to treat him. (An intern or resident may not render independent medical care to compensation cases, except and only in an emergency.) The patient may, if able, select any qualified physician on the staff to treat him for his injury either initially or subsequently. In closed staff hospitals his choice would be limited to physicians on the staff of the hospital assigned to the service to which the patient would be admitted in accordance with the nature of his injury. If not satisfied he may transfer to another hospital.

All bills for medical and surgical services to such patients are payable only to the doctor. All bills should be rendered on the billhead of the attending physician. If a hospital provides clerical assistants for making out the required reports and the bills, the physician should verify the reports and personally sign them. The hospital is not entitled to any part of the doctor's fees. If the hospital has obtained a license to conduct an x-ray laboratory, it may render bills for x-ray services performed by salaried roentgenologists. It may also accept from an unsalaried roentgenologist, who must render his own bill, up to $33^1/_3$ per cent of the fee paid to him for the facilities placed at his disposal by the hospital.

The hospital may not as a corporation practice medicine, even though it does, under certain conditions, employ physicians on a salary basis. Any physician assigning a fee, wholly or in part, to the hospital (except as noted above for x-ray service) is guilty of a violation of both the Education and Compensation Laws.

Physicians who assign to the hospital checks which they receive for medical and surgical services are guilty of improper practice in violation of the Workmen's Compensation Law, Section 13-d 2(g). In a specific communication dated May 4, 1949, sent out by the Chairman of the Workmen's Compensation Board in reference to this practice, these facts were set forth, and it was specifically stated that in some hospitals the practice does not conform to statutory requirements and requested the superintendents of such hospitals to conform to these statutes.

With the change in the Charter of the City of New York it has become legal for physicians on the staffs of municipal hospitals to render bills for compensation claimants, and, since the more recent amendment to the law, bills may also be rendered by physicians in liability or other insurance cases. Such fees are the property of the physician rendering the service.

In certain municipal hospitals where the services change frequently, it may be difficult to determine which physician or physicians rendered services in a given case and who is responsible for the forms and billing. The practices in operation in these hospitals for reporting and billing, while in conformity to an agreement reached some years ago with the Industrial Commissioner, require review and revision fully to conform with the statute.

13. Miscellaneous.—For the information of the membership, we would report that during this past year a new regional office has been set up by the Workmen's Compensation Board in Binghamton. The work of this office is continuously expanding and on the whole is functioning satisfactorily.

Sullivan and Chemung Counties have been transferred from the Albany regional office to Binghamton.

It is believed that there has been a general Statewide improvement in the method of conducting hearings. There are some 94 localities throughout the State where hearings, arbitrations, etc. are held, and in 88 of these accommodations must depend on local facilities. A real effort has been made to improve these, and the Chairman of the Workmen's Compensation Board has requested that any complaints regarding facilities be referred to her. Only in this way can concerted effort be made to better the service.

We feel that the medical profession is entitled to adequate remuneration for the service it renders. We believe that the ideal of a physician treating workmen's compensation claimants should be to render service comparable in every respect to his care of patients in private practice and not to overtreat or prolong treatment because someone other than the patient is responsible for the payment of medical bills. On the other hand, the responsibility imposed under the law and under the rules of professional conduct require that the physician afford treatment adequate to the injury or illness with the patient's welfare as the primary consideration. Fortunately, the law provides for the services of specialists as well as general practitioners, and an ethical physician will avail himself of consultation with a more experienced physician where and when necessary and even transfer the patient when the interests of the patient require it.

The keynote of our workmen's compensation program must be medical care of the highest quality to the injured worker. We must adopt in the fullest sense the philosophy of service and cooperation if we are to render the most approved and acceptable medical care of which we are capable to the compensable sick and injured. Our goal should be the returning of the worker to his job as early as is consistent with these ideals. We cannot divest ourselves either as individuals or as a profession of our over-all responsibility for these services.

The work of the Compensation Bureau and of the Council Committee could not be accomplished without the interested and skilled assistance of our office staff. Miss Elizabeth H. Wheeler and Miss Alice E. Wheeler, both of whom have been with the Bureau since its inception, have been assiduous in their duties and have given at all times full cooperation and assistance to both the Chairman and the Director. Their special training and familiarity with the complexities of workmen's compensation problems have made our task easier of accomplishment. We take this occasion again to express our appreciation and thanks to both.

And, finally, the Chairman again desires to take this opportunity to express his great appreciation of the services of the Director of the Bureau. Dr. Kaliski, at all times, has been cooperative and helpful, and his detailed knowledge of the law and its workings, together with his wise counsel, has been invaluable to the Committee in the discharge of its duties.

PART XI

Publication

The Publication Committee, in accordance with a resolution of the House of Delegates, was constituted as follows during 1949:

George W. Kosmak, M.D., *Chairman*	New York City
Walter P. Anderton, M.D.	New York City
Dwight Anderson	New York City
James R. Reuling, M.D.	Bayside
Laurance D. Redway, M.D.	Ossining
Edward T. Wentworth, M.D.	Rochester

The Committee met monthly except during the summer months, and the editorial group met almost weekly to discuss the JOURNAL contents and editorial matters.

Journal.—It should be noted that this is the fiftieth consecutive year of publication of the JOURNAL, and the Committee plans a special commemorative issue for January 1, 1951. The general makeup of the JOURNAL has continued unchanged, and we trust has met with approval by our readers. During the year a better quality of paper was secured, thus providing for a more satisfactory reproduction of illustrations, both in text and advertising pages. This will necessitate an additional outlay, for the cost of such paper alone is approximately fifty dollars per issue.

During the past year the technical office work has continued under the able administration of Miss Alvina Rich Lewis and her two assistants, Mrs. Anne Gibson Colahan and Miss Mary Elizabeth Vail. New office space has been provided, which is more comfortable but still restricted. Attention is called to the following statistical report furnished by Miss Lewis, with certain comparisons with previous years.

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In 1949, 24 issues of the JOURNAL and a supplement were published, totaling 3,120 pages, divided as follows: 7 issues of 112 pages; 16 of 128; 1 of 160 (April 1, the Convention number) and the supplement of 128, the House of Delegates proceedings. A total of 503 manuscripts were submitted, of which 97, or 19 per cent, were rejected. In 1948, 413 papers were received with a rejection rate of 66, or 16 per cent. The publication of 354 articles in 1949 is the highest total ever included in one annual volume. It should be noted, moreover, that the Annual Meeting papers were all printed in issues prior to February 15, as compared with April 1 of last year. In many instances previously, publication of these papers was not completed until after the meeting of the following year.

We are pleased to record great improvement in the conduct and efficiency of the editorial office which has to deal not only with the preparations of manuscripts for printing, proofreading, and the "makeup job," but handles a large correspondence and information service, and the orders for reprints, which last year totaled 354 for 369,250 individual copies.

The Committee desires to call attention to the following statistical summaries relative to JOURNAL publication (Tables 1 to 4):

TABLE 1.—STATISTICAL SUMMARIES FOR 1948 AND 1949

	1948	1949
Number of issues	24 1 supplement	24 1 supplement
Number of pages, total	2,984	3,120
Text	1,879	2,044
Advertising	1,105	1,190
Number of articles submitted	413	503
Number of articles published	303	354
Number of authors represented	435	527
Pages of scientific text	1,064	1,241
Pages of feature material	348	434
Pages of editorials	128	140
Annual reports, etc.	87	92
House of Delegates minutes	132	128

TABLE 2.—ANALYSIS OF TEXT PAGES FOR 1949

Scientific Articles	1,241
274 Articles	
68 Case Reports	
12 Special Articles	
Editorials	91
President's Page	7
Facts About Nutrition	26
Developments in Public Health	12
Advances in Physical Medicine	4
Medical News	91
Hospital News	30
Necrology (for 317 doctors)	36
Books Reviewed	48
Woman's Auxiliary News	15
Annual Reports and Annual Meeting Information	92
Council Minutes (10 meetings)	42
Index	24
Miscellaneous	63
Table of Contents, etc.	72

TABLE 3.—STATISTICAL SUMMARIES FOR 1945, 1947, AND 1949

	1945	1947	1949
Number of issues	24	24	24 1 supplement
Total pages	2,716	2,748	3,120
Advertising pages	1,291	1,248	1,190
Text pages	1,491	1,500	2,044
Number of articles submitted	221	324	503
Number of articles published	200	223	354
Number of authors represented	237	291	527
Pages of scientific text	778	839	1,241
Pages of features	438	278	434
Pages of editorials	117	137	140
Annual reports	76	84	92
House of Delegates minutes	82	100	128

NOTE: Of special interest may be the figures which show the increase in production in the past two years. For example, in 1947, 324 articles were submitted for publication and 223 published, whereas, in 1949, 503 were submitted and 354 published, an increase in the number published of 131. There is an increase of 154 in the number published over 1945.

TABLE 4.—MANUSCRIPTS RETURNED TO AUTHORS, 1949

Number of manuscripts returned (for possible revision, condensation, retyping, reduction of number of illustrations, etc.)	67
Number of manuscripts resubmitted and accepted	44
Number of manuscripts resubmitted and rejected	1
Number of manuscripts not resubmitted	22
Number of manuscripts withdrawn (at request of author)	4

The financial status of the JOURNAL should prove of interest to our members. Naturally, the costs of publication have increased in recent years, but we have aimed to conduct this activity within the limits of the income from advertising and cash subscriptions. The surpluses which could be credited in previous years no longer result. A brief statement of what it costs to publish the JOURNAL follows:

The total expense encountered in publishing the JOURNAL was $190,743. This amount was matched by a net income from advertising of $179,698, from cash subscriptions of $3,126, from reprint sales (net) of $3,010. It should be noted that for the first time in five years a deficit of almost $5,000 resulted before allocation of dues, which during 1948 amounted to $55,948. Previously a surplus had resulted before such allocation.

The advertising department constitutes one of the very important activities for which the Publication Committee assumes responsibility. Mr. Dwight Anderson continues in charge. During the past year, Mr. Gordon Marshall has left our staff, and additional representatives have been taken on: Mr. James M. Kelly and Mr. Joseph A. Mullaney, to cover the Eastern and Middle States, and Mr. John A. Bassett, the West Coast. Miss Grace I. West has continued her efficient supervision and handling of the advertising copy.

Directory.—A new edition of this work is contemplated for distribution early in 1951 by direction of the House of Delegates. In view of the deficit resulting from the 1949 volume, your Committee, following directions, is omitting from the present volume the New Jersey and Connecticut sections, no support for meeting costs having been secured from these sources. These omissions will total about 180 pages. In order to make the volume of greater value and with the expectation that it will be more frequently consulted, the Committee is including in the coming volume general information about a variety of topics which should be of value and interest to the physician. It is believed that more frequent recourse to the volume would increase its value to prospective advertisers. We hope that these changes in the production of the book will result in reducing the necessary deficit attached to its publication.

The cost of publication is summarized herewith:

The *Directory* was published in 1949 at a net deficit over two years for the total operation of $78,320.60, which must be attributed to the greatly increased cost of paper, printing, and other items. The net operating loss would have been much greater had it not been for an intensive mail campaign to sell copies at $15 each to other than members, resulting in an income of $33,425.

In conclusion, your Committee desires to express its appreciation of the faithful labors of Miss Lewis, technical editor, and her staff, Mrs. Colahan and Miss Vail, who have contributed greatly to the improvement of the JOURNAL in many ways, also to Miss West for her work in the advertising department, and to Miss Doris K. Dougherty and her staff for helpful assistance.

The only recommendation which is presented to the House of Delegates is for a continuation of the Committee and its membership, as prescribed by a previous resolution in 1941.

Public Relations

The Council Committee on Public Relations consists of the following:

Floyd S. Winslow, M.D., *Chairman*	Rochester
George W. Fish, M.D.	New York
Elton R. Dickson, M.D.	Binghamton

National Education Campaign.—The greatest single effort of the Public Relations Bureau was its participation in the National Education Campaign of the American Medical Association, which was launched February 12, 1949, at a meeting in Chicago. This meeting was attended by Dr. Winslow, and by Mr. Anderson, Mr. Walsh, and Mr. Miebach as representatives of the Public Relations Bureau. One year later, this past February 12, a similar meeting was held in Chicago to make plans for 1950. The Public Relations Bureau was represented at this meeting also.

In accordance with the outline of campaign strategy announced by Whitaker and Baxter, campaign managers, and to carry the campaign into the "grass roots" of New York State, the staff of the Public Relations Bureau was increased by the addition of three field representatives, Mr. Martin J. Tracey, Mr. Stephen K. Leech, and Mr. John E. Weinrich. The function of this enlarged field staff was to work for the cooperation of organized groups of every description in medicine's fight against political control, and to assist and stimulate the development of adequate public relations programs on the part of the component county societies. Mr. Tracey was assigned to Albany and the surrounding territory; Mr. Leech was stationed at Binghamton and the Central New York territory; and Mr. Weinrich was assigned to Buffalo and Western New York. Mr. Walsh, in addition to his duties in connection with the Woman's Auxiliary and Speakers Services, was assigned to New York Metropolitan Area. After the program was inaugurated, Mr. Miebach was assigned to coordinate the field activities, under the direction of Mr. Dwight Anderson.

The field program has been in continuous operation since April, 1949, except for a period during the summer months when the men were recalled to the New York office to spread information about the campaign among the employes of large utilities, insurance companies, banks, trade associations, and other organizations which have their headquarters in the New York City area. At all other times, the field representatives were at work promoting opposition to compulsory health insurance in every county in the State. They have arranged for the adoption of suitable resolutions by community and fraternal organizations, business groups, farm organizations, women's clubs, and veterans groups. They have stimulated the formation of speakers bureaus, not only within the county medical societies, but in other friendly organizations. They have organized displays of posters in drug store windows, encouraged the circulation of campaign literature, arranged for speaking engagements, assisted in the preparation and placement of news releases and radio programs, and in many other ways have brought an awareness of the doctor's point of view to the general public.

Hand in hand with their work in the National Education Campaign, they have been active in the application of public relations policies which, in the years ahead, should bear fruit to the benefit of the medical profession. These have involved the reactivation of public relations committees in many county societies where they had been allowed to become dormant, and a general reawakening on the part of many societies of the importance of long-term public relations programs. As an example, many of the county societies now maintain around-the-clock emergency medical services, and others are putting them into operation. Some societies are investigating the value of grievance committees.

An important part of the campaign was the distribution of printed materials on a large scale. Whitaker and Baxter gave the total of pieces of campaign literature distributed in New York State as 5,106,427 for the year 1949, or approximately 10 per cent of the national total of 55,000,000 pieces. This was independent of the leaflets and reprints distributed by the Public Relations Bureau of its own accord. Orders for pamphlets, posters and speakers' aids were encouraged by various issues of the *News Letter* and by the field representatives. As an example of the volume of materials which passed through the Public Relations Bureau, the delivery of pamphlets from campaign headquarters in one day weighed three tons.

A unique device to assist in the training of physicians as speakers in opposition to compulsory health insurance was the speakers training sessions, held in New York City on April 10 and in Rochester on May 14. These sessions, arranged by the Public Relations Bureau with the cooperation of county presidents and public relations chairmen, generated a great amount of enthusiasm, and the comments that followed left no doubt that they achieved the goal they set out to accomplish. They were conducted by Professor Richard C. Reager, of Rutgers University, who was able to communicate to his audiences the essentials of effective public speaking and forceful delivery, in a one-day session.

In connection with the speakers briefing sessions, sets of speakers' notes were issued, summarizing the principal arguments of the compulsory health insurance issue. These have since been revised, to adapt them to the new Administration Bill, *S. 1679*, and supplemental cards have been sent to all speakers who were issued the original cards. In addition, 1,000 new sets were printed for further use.

Several county societies followed the lead of the State Society in sponsoring speakers training sessions, employing the services of Professor Reager.

A major step in procuring resolutions from outstanding organizations in opposition to compulsory health insurance was taken during January, when the staff of the Public Relations Bureau cooperated with a representative of Whitaker and Baxter in personally visiting the leading executives of ten major State organizations in New York, Albany, Syracuse, Batavia, and Buffalo. The results were uniformly successful, which will lead to the adoption of a series of supporting resolutions by the local affiliates of these organizations.

The effect of the continuous campaign over the past year may be seen in the report of a recent Gallup poll, which indicated that the number of people who now feel that the Administration's compulsory health insurance bill is desirable are now in the minority. Another test of public opinion is the survey conducted by Representative Hall, whose district is the Binghamton area. He found his constituents opposing compulsory health insurance by seven to one.

The Public Relations Bureau issued a total of 97 news releases to the press during the past year. These were based on a variety of subjects, such as the growth of voluntary health insurance, the action of the Council in opposing compulsory health insurance, postgraduate education meetings, the War Memorial awards, and the annual and district branch meetings.

News Letters.—During the past year, the Public Relations Bureau issued ten *News Letters* to a list of 1,165 physicians. They were based on various subjects related to the National Education Campaign, the need for a greater concentration upon public relations and public speaking, and the appearance of new pieces of campaign literature.

Publications and Printed Matter.—Because of the National Education Campaign and the production of printed materials on a national basis, the output of printed pieces by the Public Relations Bureau was confined to materials which were supplementary to those issued at Chicago. There were, however, a number of pieces printed, one of them being a leaflet, "A Bitter Pill," which was given wide circulation.

Reprints were made of three editorials appearing in the New York *Daily News*. These were "Why Smear the Doctors?," "Uncle Sam, M.D.," and "Dr. John Bull." Reprints of two editorials written by Dorothy Thompson also were made and distributed. In addition, a leaflet was prepared entitled, "What People Are Writing to Their Congressmen," giving excerpts from letters from persons opposing compulsory health insurance. Another set of leaflets, "Dear Congressman," was printed, giving the name, district, and address of each of the Congressmen in New York State.

Annual Meeting.—The press room during the 143rd Annual Meeting of the Society was the center for daily coverage by the Associated Press, the United Press, the Buffalo papers, the New York *Times*, and several independent news-gathering agencies. Clippings received after the meeting indicated a heavy volume of stories in newspapers all over the State, stemming from the meeting. The Public Relations Bureau issued a number of advance releases prior to the meeting, and there also were a number of special releases, including the names of the doctors honored for fifty years of service. Photographs of newly elected officers also were distributed.

The press room at Buffalo was the center of distribution for campaign literature and served as a meeting place for county officers interested in public relations activities.

District Branch Meetings.—Each of the seven District Branch meetings was publicized by advance releases and by coverage at the time of the meetings. A member of the Public Relations Bureau attended each of the meetings to handle press relationships.

Speakers Service.—The Speakers Service, under the direction of Mr. Thomas E. Walsh, has continued to assist the county societies in interesting and training doctors to become members of the county societies' Speakers Bureaus. It arranges for doctors to speak on nonmedical subjects before State-wide groups, and on radio and television programs. Arrangements are also made for members of the Speakers Bureaus to speak in neighboring counties.

Although the beginning was small early in the year, the number of active Speakers Bureaus in the State has increased until now there are more than 28 county societies' Speakers Bureaus, whose members are prepared to discuss the National Health Act before public audiences in almost every section of the State.

The outstanding activities include the two seminars on public speaking, conducted by Professor Richard C. Reager of Rutgers University, previously referred to, and the preparation and distribution of speakers notes on compulsory health insurance, including an analysis of the Ewing Report and Senate Bills *5* and *1679*. Kits of prepared talks and suggestions, pamphlets, and other material are sent out periodically to the chairmen of the Public Relations Committees and Speakers Bureaus. Information on radio programs is also made available to county societies.

Arrangements have been made for members of the legal, dental, pharmaceutical, public accounting and allied professions, leaders in industry and commerce, and members of the Federal and State legislatures to cooperate with the members of the medical profession in giving public talks on the inherent defects of compulsory health insurance.

The speakers have progressed so well, and their speeches have been so well received by both the general public and the medical profession, that recently it was decided that a letter should be sent to a number of radio stations, directing their attention to the panel of leading physicians who have indicated a willingness to participate in either radio or television programs that are designed to portray the positive features of American medicine.

Woman's Auxiliary.—The Public Relations Bureau worked very closely with the Woman's Auxiliary in its plans for cooperating with national, State, and county societies in the execution of the National Education Campaign and in planning its established programs of health education, philanthropy, and nurse recruitment and scholarships.

The material employed in the second edition of the theme book, "The Ladder to the Auxiliary Success," was assembled, and a series of letters from the State chairmen of Public Relations and Legislation Committees to the 47 county chairmen was prepared and distributed, as were packets of pamphlets, reprints on compulsory health insurance, and other subjects of interest to the Auxiliary.

Requests for information of all kinds were honored. Speakers were secured; arrangements completed for meetings; and copies of the president's, secretary's and other officers' reports reproduced.

Upon invitation, Mr. Walsh, Mr. Miebach, and the members of the field staff attended State, District Branch and county meetings and discussed programs the Auxiliary might undertake to further the progress of the National Education Campaign and to help the patient understand the medical profession's program.

It is becoming more and more apparent that the Woman's Auxiliary is exerting an important influence in promoting the purposes of the Society, and that, by its numerous contributions to the medical profession, it has developed into a tower of strength and a source of inspiration.

Medical Film Review

The Subcommittee on Medical Film Review of the Council Committee on Public Health and Education has the following membership:

John L. Norris, M.D., *Chairman*	Rochester
Lee A. Hadley, M.D.	Syracuse
Edward C. Hughes, M.D.	Syracuse

ADVISERS

Granville S. Larimore, M.D.	Albany
David S. Ruhe, M.D.	New York City

This is a newly constituted Subcommittee, established by action taken by the House of Delegates following a report on this matter by the Subcommittee on Maternal Welfare on September 9, 1948. The first meeting of the Medical Film Review Subcommittee was held in Albany on August 2, 1949, with Dr. Granville Larimore, Director of Public Health Education, and Dr. David S. Ruhe, Director of the Medical Film Institute of the American Association of Medical Colleges. Dr. Norris recommended that the function of the Subcommittee be to establish policy in regard to both the selection and promotion of medical educational films, and that local film review boards be set up in Albany, Rochester, Syracuse, and New York City, each headed by a chairman who would determine the composition of his own group and select its members from the immediate locality.

The function of each local committee would be to review the titles already in our catalog in one or two specialties and select from this list those films which warrant reviewing. Following this review a report would be prepared evaluating the films. These reports would in turn form the basis for future selection of films for the library and for a catalog describing these films. On this basis six regional review boards have been appointed. Forty-two films have been reviewed by title, and three films have actually been reviewed by the Subcommittee.

The chairman reports as follows:

> We have spent a good deal of time during the year in exploring the field and discovering that there is no adequate evaluation data available on films which have been produced to date. This is recognized as a need by everyone with whom I have discussed the problem. We have been working in close cooperation with the Medical Film Institute of the Association of American Medical Colleges in trying to develop a technic of evaluation which would have permanent usefulness. This phase of the program has been accomplished.
>
> It is our definite opinion that a film review panel should include a senior and a junior specialist in the field which the film in question covers, a specialist in photographic technics who could evaluate the film photographically, one or two house officers interested in the field, a medical student or two, possibly a nurse (certainly a nurse where surgical technics are involved), and possibly a specialist in other related fields. In other words, we need to have different points of view represented in the evaluating group. We believe that this group should function as a unit, and that the opinion when stated should be agreed upon by the group as a whole. We believe that the membership of the group should be anonymous in order to avoid the criticism of prejudice. On these basic concepts six groups have been set up and are in operation. We have not yet proceeded far enough to have a stated evaluation of a substantial number of the films available in the library, but I expect that this will be substantially complete within the next three or four months.
>
> Coincident with this evaluation of the films already on hand, there will be proceeding an evaluation of other films with a view to further purchase so that our library may be of real value as a teaching instrument for our county societies. Our association with the Medical Film Institute will be extremely valuable as, from the nature of things, they will be notified whenever new films are produced and will act as a preliminary screening group so that a minimum of time will be wasted on inferior films by our own evaluation groups. We will in return aid them by our evaluations.
>
> This may be a program of national significance. It is probable that we will consider some of the films already purchased of inferior quality. This was inevitable, considering the complete absence of adequate evaluation data and the speed with which the list had to be made up.
>
> It would help our Committee as we look into the future, if we could know what the attitude of the Council is going to be in regard to this activity. Some members of the Committee have spent a good deal of time in travel in this project. It has been necessary to employ lay assistance at various points along the line. This obviously should not continue without reimbursement of the members of the Committee or the review boards for out-of-pocket expense. There has been a good deal of enthusiasm expressed wherever this program has been adequately presented, so that we feel that the project is eminently worthwhile, that the surface has not yet been really scratched, and that the possibilities of the use of films as a teaching method can be extremely valuable.

PART XII

MISCELLANEOUS

Convention

The Council Committee on Convention consists of the following members:

Andrew A. Eggston, M.D., *Chairman*	Mt. Vernon
W. P. Anderton, M.D.	New York City
Dwight Anderson	New York City

The 143rd Annual Convention of the Medical Society of the State of New York was held at the Hotel Statler in Buffalo from May 2 through 6, 1949.

Registration.—Close to 2,500 registrations were recorded. It is possible that some physicians who attended the scientific meetings on the lower floors did not avail themselves of the opportunity to register on the 17th floor of the hotel.

The registrants were as follows:

Physicians	1,609
Guests (medical students, interns, nurses, medical technicians, dietitians, and others)	538
Exhibitors (technical)	335
Total	2,482

House of Delegates.—The House of Delegates met in the ballroom. The size provided a maximum comfort for the delegates. Rows of tables were placed in front of the seats. The volume of work which came before the House necessitated an evening session on the second day of the meetings. This lasted until 11:30 P.M.

The technical editor of the NEW YORK STATE JOURNAL OF MEDICINE, Miss Alvina Rich Lewis, helped edit resolutions and reports.

Scientific Program.—The scientific program was planned under the chairmanship of Dr. Alfred P. Ingegno, who presided at the General Sessions. Approximately 125 papers were read at the Section and Session meetings. Several Sections held stimulating panel discussions and symposia. The JOURNAL has published many of the papers and discussions.

Scientific Exhibits.—The scientific exhibits were carefully chosen by Dr. J. G. Fred Hiss, Chairman of the Subcommittee on Scientific Exhibits, and limited because of lack of space. There were thirty exhibits, as compared with seventy the year before in New York City.

The Scientific Awards Committee conferred a First Award, a Second Award, and an Honorable Mention in two classes—Clinical Research and Scientific Research. Beribboned plaques were pinned on the winning exhibits, and certificates of award sent to the prize winners after the Convention.

The following were the recipients:

Clinical Research

First Award: David Lehr, M.D.
New York Medical College, Flower and Fifth Avenue Hospitals, New York City
"Low Toxicity of Sulfonamide Mixtures"

Second Award: Charles A. R. Connor, M.D.
American Heart Ass'n. Inc., New York City
"Etiologic Diagnosis of Heart Disease"

Honorable Mention: Charles LeRoy Steinberg M.D.
Rochester General Hospital, Rochester
"Gold Toxicology in Rheumatoid Arthritis"

Scientific Research

First Award: Nathan H. Woodruff, Ph.D.
G. William Morgan, M.A.
Carroll N. Bowman
Isotopes Division, United States
Atomic Energy Commission, Oak Ridge, Tennessee
"Radioisotopes"

Second Award: Sidney A. Gladstone, M.D.
New York Polyclinic Medical School and Hospital, New York City
"Sponge Biopsy: A New Method in Cancer Diagnosis"

Honorable Mention: Lewis E. Etter, M.D.
Western State Psychiatric Institute and Clinic, Pittsburgh, Pennsylvania
"New Method for Roentgen Anatomic Study of the Skull"

Scientific Motion Pictures.—The motion picture exhibit was again handled by the Medical Film Guild under the able supervision of Dr. Theodore J. Curphey, member of the Scientific Exhibit Subcommittee.

Technical Exhibits.—There were eighty technical exhibitors. More applications could not be accepted because of insufficient space.

Banquet.—The Banquet and Annual Meeting was held on Wednesday evening, May 4, in the main ballroom. Three hundred and sixty-five guests attended. Dr. Leo F. Simpson presided as President. Dr. W. P. Anderton, Secretary, made a motion that the reading of minutes be dispensed with. The meeting was then turned over to the very capable toastmaster, Dr. A. H. Aaron.

The guests enjoyed listening to the excellent addresses by our outgoing and incoming presidents, Dr. Leo F. Simpson and Dr. John J. Masterson; to Dr. Morris Fishbein, Editor of the *Journal of the A.M.A.;* and to the late Dr. Arthur D. Jaques, who was elected Outstanding General Practitioner of New York State. Dr. Rose Lenahan, Vice-President of the Women's Medical Society of New York State, presented the viewpoint of the woman physician.

Woman's Auxiliary.—The 13th Annual Convention of the Woman's Auxiliary to the Medical Society of the State of New York was held simultaneously with ours. A record attendance was established. We were glad to make available facilities for registration, meetings, and a supper party for this valuable adjunct to the Medical Society.

The ladies expressed their gratitude to the staff of the Society for the help tendered them.

A card of thanks was subsequently sent to each person who participated in the scientific work of the convention, at Dr. Alfred P. Ingegno's suggestion.

The chairmen and members of the committees expressed their thanks to the Society personnel who helped make the 143rd Annual Convention a success.

Review of 1949 Annual Convention.—A meeting of the Convention Committee was held at the offices of the Medical Society of the State of New York on June 29, 1949. Dr. Andrew A. Eggston, Chairman, presided. A review of the financial report of the 1949 Annual Convention was made. Each item was discussed in detail. It was noted that a deficit was incurred above the budget appropriation.

1950 Annual Convention.—On October 15, 1949, a meeting of the Convention Committee which included chairmen of Sections and Sessions was held at the Hotel Statler in New York City to discuss plans for the 1950 Annual Convention to be held May 8 to 12 at the Hotel Statler in New York City. Programs for scientific meetings were arranged.

At this meeting it was voted to recommend to the Council the establishment of a General Practice Section. This was approved by the Council.

On February 6, 1950, a meeting of the Convention Committee was held at the State Society offices, Dr. Andrew A. Eggston, Chairman, presiding. A television program was discussed. The television subcommittee, subsequently appointed by Dr. Masterson with Council approval, consists of Dr. Beverly Chew Smith, Chairman, Dr. Andrew A. Eggston, and Dr. Jacob Sarnoff. At a meeting of this subcommittee held on February 24 with Mr. Charles L. Baldwin of the State Society and Mr. G. L. Long of E. R. Squibb & Sons, plans were discussed in detail. Dr. E. Jefferson Browder of the Long Island College of Medicine agreed to televising operations and other subjects from the Kings County Hospital. It was suggested that notices be inserted in the JOURNAL and in the Program Booklet. When final details are completed, a daily program will be issued.

It was recommended at the February 6 meeting, and later approved by the Council, that the Woman's Auxiliary be permitted to have a reception sponsored by VanPelt and Brown Incorporated, a pharmaceutical firm. A credit line to this effect is to be printed in the JOURNAL and Program Booklet.

Medical Licensure

The Council Committee on Medical Licensure consists of the following members:

Harold F. R. Brown, M.D., *Chairman*	Buffalo
Ivan N. Peterson, M.D.,	Owego
Morris Maslon, M.D.	Glens Falls
Jacob L. Lochner, Jr., M.D., *Adviser*	Albany

During the year 1949 there have been no changes in the customary manner in which licenses were issued to practice medicine in New York State. There are four methods of obtaining licenses:

1. By passing the Medical Licensing Examination conducted by the State Board of Medical Examiners. In Table 1 will be noted the total number of candidates and the number who passed and failed.
2. Endorsement by the State Committee on Endorsement of those licensed by the National Board of Examiners. Seven hundred sixty-eight were so licensed in 1949.
3. Endorsement by the State Committee on Endorsement of those who have been licensed to practice in other states. One hundred ninety-five were so licensed in 1949.
4. Those licensed by Regents action. Eighty-nine were so licensed in 1949.

The Committee on Endorsement consists of the Chief of the Bureau of Professional Education, the Assistant Commissioner of Professional Education, and the Secretary of the Board of Medical Examiners. This Committee was established in 1940 when the Reciprocity Agreement was repealed. All endorsements by this Committee are made on an individual basis. They do not automatically endorse everyone who has passed the National Board examination and who applies for a New York State license. Of such a candidate they require not only that he has attained an average of at least 75 per cent, but also that he has not fallen below 75 per cent in more than one subject. If his grade is below 65 per cent in that one subject, he is no longer considered for endorsement.

The fact that the state from which the candidate comes does not endorse a New York State license plays no part in the action taken by the Committee on Endorsement. It is our understanding, however, that the policy of the Committee on Endorsement is to take no action on these candidates from states whose examinations are of less than three days duration. On this basis that Committee can endorse licenses from approximately 25 states. Incidentally, the examination in New York State is of four days duration. The applicants from the remainder of the states have to petition the Board of Regents for endorsement.

Candidates from Canadian schools and those with foreign licenses, obtained prior to 1915, also must petition the Board of Regents. Of the 89 who were licensed by the Regents in 1949 about 50 per cent were graduates of foreign schools.

It will be noted that the majority licensed during the past year were those who had passed the National Board examinations and were endorsed by the State Endorsement Committee. This is due largely to the fact that most of the graduates of the medical schools in the State of New York take the National Board examination rather than the examination of the New York State Board of Medical Examiners. In some schools this is mandatory. This also explains the fact that the total number of graduates in the nine New York State medical schools taking the New York State examinations was only 85. It will be also noted that the majority of those trying the State examinations were graduates of foreign schools, 604 out of a total of 1,080 falling in that category. Of this group, the results were similar to those of the past decade, i.e., 459 failed and 137 passed.

The number of physicians registered in New York State in 1949 was 29,088.

At a recent meeting of the Federation of State Medical Boards and the Council on Medical Education and Hospitals, a list of 28 foreign medical schools was submitted, with the recommendation that the graduates of these schools could be accepted for licensure. It might be of interest to know that a committee representing the Board of Regents is planning to go to Italy April 1 to inspect seven Italian medical schools with the idea in mind that these schools are possibly ready for approval.

Nursing Education

The Committee on Nursing Education has the following membership:

Elton R. Dickson, M.D., *Chairman* .... Binghamton

STATE BOARD OF MEDICAL EXAMINERS

TABLE 1.—Medical Licensing Examinations

School	Total Candidates	Passed	Passed First Review	Passed Board Review	Passed on Average	Total Passed	Total Failed	Per Cent Failed
February, 1949								
Albany	...	...	...	...	...	...	...	...
Buffalo	...	...	...	...	...	...	...	...
Columbia	3	1	1	...	...	...	1	0.33
Cornell	3	2	1	...	...	...	...	0
Long Island	4	1	...	...	...	...	3	0.75
New York Medical College	3	1	1	...	...	...	1	0.33
New York University	1	...	...	...	...	...	1	100
Rochester	3	...	1	...	...	...	2	0.66
Syracuse	3	1	1	...	...	...	1	0.33
Total	20	6	5	...	...	11	9	0.45
Chicago	28	8	10	...	...	18	10	0.36
Middlesex	36	7	10	...	...	17	19	0.53
Total	64	15	20	...	...	35	29	0.45
Other U.S.	61	14	14	...	...	28	33	0.56
Canadian	12	5	2	...	...	7	5	0.42
Foreign	219	21	27	...	...	48	171	0.78
Withdrew	4	..	...	...	...	...	...	....
Total	381	..	...	...	...	...	...	...
June, 1949								
Albany	...	...	...	...	...	...	...	...
Buffalo	1	...	...	...	...	...	1	100
Columbia	4	1	...	...	...	1	3	75
Cornell	5	3	1	...	...	4	1	20
Long Island	8	2	1	...	...	3	5	62.5
New York Medical College	7	1	1	...	...	2	5	72
New York University	9	2	3	1	...	6	3	33.3
Rochester	4	1	1	...	...	2	2	50
Syracuse	4	...	2	...	...	2	2	50
Total	42	10	9	1	...	20	22	52
Chicago	18	12	2	...	...	14	5	27
Middlesex	22	7	4	...	...	11	11	50
Total	40	19	6	...	...	25	16	...
Other U.S. Schools	84	16	14	1	...	31	52	62
Canadian	11	5	3	...	...	8	3	27
Foreign	207	22	17	...	...	39	168	81
Total	302	43	34	1	...	78	223	...
Crib	2	...	...	...	...	...	...	...
Total	386	...	...	...	..	123	261	...

John M. Hanford, M.D.....New York City
Norman S. Moore, M.D................Ithaca

This Committee represents the Medical Society of the State of New York by its participation in the activities of the Coordinating Council on Nursing Problems. Since the last meeting of the House of Delegates one meeting of this body was held, on January 11, 1950, after extensive correspondence with the interested agencies regarding agenda subjects. This assemblage was attended by representatives of all the nursing groups in the State, together with hospital administrators, the President and Secretary of your Society, and the Director of the Bureau of Medical Economic Research of the American Medical Association. Due to the rather lengthy agenda it was not expedient to invite interested lay members to represent the viewpoint of the patient at this meeting, but at subsequent meetings this problem will be rectified.

No decision was forthcoming at this meeting regarding continuance of an executive committee. It was left to the discretion of the chairman to call subsequent meetings to discuss pertinent subjects.

TABLE 1.—MEDICAL LICENSING EXAMINATIONS (CONTINUED)

October, 1949

School	Total Candidates	Passed	Passed First Review	Passed Board Review	Passed on Average	Total Passed	Total Failed	Per Cent Failed
Albany	...	...						...
Buffalo	...	...					...	...
Columbia	4	4	...	...	...	...	...	...
Cornell	3	3	...		...			
Long Island	4	1	...				3	75
New York Medical College	3	2	...	...	...		1	33.3
New York University	5	2				...	3	60
Rochester	1	1			...	...	...	...
Syracuse	3	2					1	33.3
Total	23	15			...		8	34
Chicago	19	16	...	...	...		3	16
Middlesex	11	6		...			5	45
Total	30	22	...		...	...	8	...
Other U.S. Schools	49	37	...	...	...	...	12	25
Canadian	7	5		...	...	...	2	28
Foreign	178	50	...	...	...	...	128	72
Withdrew	3	...	...			...	...	...
Total	313	129	...	...		...	158	...
PARTIAL—GROUP I								
Other U.S. Schools	...	17	...	...	...	...	6	26

The primary interest of the Coordinating Council was focused on a discussion of the proposed plan to have practical nurses receive training in vocational high schools. This very controversial subject is now under study by the Board of Regents as a practical measure to insure a continuing supply of practical nurses. The professional nursing groups are opposed to lowering the age limits for licensure, feeling that immature graduates would lack experience to assume the complex care of the sick patient, particularly if conducted in the home without professional supervision. It would also tend to divide the two fields of nursing, with resulting disruptions of the nursing patient relationship. On the other hand, there exists no objection to the use of vocational high schools on an adult educational level. There is no substitute for good judgment and experience in nursing care. A letter has been sent to the Commissioner of Education relative to this action of the Coordinating Council on Nursing Problems.

It was reported that a spot survey in December, 1949, of 192 out of 250 voluntary hospitals in New York State, showed that there existed a deficit of approximately three registered nurses and less than one practical nurse for all institutions replying. On December 5, 1949, the Bureau of Professional Education reported 75,154 professional nurses and 14,806 practical nurses currently registered in New York State. There are now 12,103 more professional nurses registered in New York State than on the same date in 1948. It is estimated that the present registration of practical nurses will be doubled before expiration of current biennium on August 31, 1950. It was felt that this shortage could be curtailed materially if nurses were permitted to do nursing, and "non-nursing" duties were allocated to those with non-nursing degrees. The team concept of all professional groups is most important, directed toward getting the patient well and teaching him how to maintain his recovery on discharge from the hospital.

The Joint Committee for improvement of nursing care proposed State-wide job analysis with institutes to train "nurse" analyzers and consulting services to assist nurses in analyzing duties and relocating functions. This program would aid in developing nurse care centers for centralization of nursing resources. By studies of past inadequacies of preparation and the use of high school equivalency tests, advanced courses of education could be organized to correct these deficiencies. In this overall setup, individual nurses could be trained for positions requiring particular preparation. Basic courses would be organized on basis of number and kind needed and for proper placement, both geographic and institutional. Your Committee will undoubtedly be consulted in the organization of this plan.

Another subject considered by the Council was the inducements and opportunities offered to young men by nursing as a profession. Many veterans, with special aptitudes along these lines and denied their ambitions to enter medical schools, are turning to the nursing profession as a dignified and remunerative calling. In the United States only 27 states have schools admitting men to a basic course in nursing education. New York leads with 22 schools. Eighteen of these schools are in State mental hospitals and the other four in general hospitals; 60 per cent of men professional nurses are in administrative positions, with the majority as head nurses. In addition to general and mental hospital vacancies, men nurses can be utilized in blood bank programs, physiotherapy, paraplegic and urologic nursing, alcoholic clinics, aviation, and a host of allied nursing activities. It was the opinion of the Coordinating Council that nursing is a challenge to the strength, mentality, and temperament of anyone so inclined, without regard to sex. Your Committee will stress this objective to local coordinating councils.

In the legislative field, major emphasis was centered on a possible amendment to the Nurse Practice Act and an amendment to the Employment Agency Law. An antidiscrimination bill as regards nursing has also been introduced. The Council recommended that these measures be brought to the attention of your Committee, who would relay them to the Society Legislation Committee for study.

Your Committee feels that there exists a cordial and cooperative spirit with all agencies of the Coordinating Council on Nursing Problems, and every effort will be made to further strengthen this mutual understanding.

Woman's Auxiliary

The Council Advisory Committee on Woman's Auxiliary consists of the following:

Fenwick Beekman, M.D., *Chairman*.......................................New York City
Nathan B. Van Etten, M.D............Bronx
R. Edward Delbridge, M.D..........Rochester

The activities of the Woman's Auxiliary for 1949–1950 have been arranged to supplement the programs of the national, State, and county societies in the execution of the National Education Campaign. Accordingly, the greatest emphasis has been placed on acquainting the public with the purpose and value of the voluntary medical and hospital care insurance plans, the inherent defects of the Federal Administration's proposal for a national health act, and in aiding their doctor-husbands to make known to their patients medicine's position on the vital issue of compulsory health insurance.

The implementation of these activities was achieved in many different forms. Some auxiliaries established study groups and speakers bureaus, and others prepared a discussion panel on the details of Senate Bill 1679 for presentation at local meetings of the Home Bureau, Professional and Business Women's Club, Parent-Teachers Association, and other women's groups. The radio and essay contests were employed, while almost every county auxiliary established personal education groups and committees for the distribution of literature to doctors' offices and organizations in which they hold membership. Individual auxiliaries organized membership letter-writing campaigns and established "Tell Twenty Committees" and teams to secure the adoption of resolutions by civic organizations. Wherever possible, press releases stressing the positive features of medicine's program were prepared to announce these activities. While the success of this work cannot be measured immediately, some indication of its value is reflected in the increasing number of women's organizations that are going on record against compulsory health insurance.

The important part our Auxiliary takes in the National Education Campaign is emphasized by the attendance at the Fall Conference of Presidents and Presidents-Elect, held at Albany, November, 1949, of Miss Mary McGinn, of the National Education Campaign staff, and Dr. Frank Dickinson, Director of the Bureau of Medical Economic Research of the American Medical Association. Miss McGinn spoke on "This Is Your Crusade, Too!," and stressed the Auxiliary's objectives, outlined in the brochure of the same name prepared by Whitaker and Baxter. Dr. Dickinson spoke on the accomplishments of medicine in the last half century.

The three outstanding events of the Auxiliary year were the Annual Convention, the second series of District Conferences, and the Winter Meeting of the Executive Board.

The Auxiliary committees that have cooperated very closely with the committees of the State Society include the Public Relations, Legislation, Physicians' Home, and Press and Publicity. The other committees that have been hard at work in the interest of medicine are Archives, Calendar, Clippings, Convention, Executive, Finance, Historian, *Today's Health* (formerly *Hygeia*), National Bulletin, Organization and Membership, Parliamentarian, Secretaries, and, last but not least, the Treasurer.

All doctors are invited to study the programs of these committees by consulting the Auxiliary's theme book, "The Ladder to Auxiliary Success." The positive approach our Auxiliary takes to the problems that face the medical profession is exemplified by the newest rung of the "Ladder," which contains the Auxiliary's President's theme for the year, "Expansion of Voluntary Medical Care Plans."

The *Distaff*, the Auxiliary publication, continues its progress under the direction of the new editor, Mrs. Adolph H. Emerson. Its value and popularity is attested to by the comments the editorial board receives from almost every state auxiliary.

The size and scope of the Auxiliary's activities are illustrated by the partial listing of the functions the President, Mrs. William J. Lavelle, was called upon to attend during the past year:

7 district branch meetings
1 Annual Meeting of the Woman's Auxiliary
1 Conference of State Presidents and Presidents-Elect (Woman's Auxiliary to A.M.A.)
2 executive board meetings
2 advisory meetings
1 conference on administration with Dr. Fenwick Beekman and Mr. Dwight Anderson
8 conferences with district councillors
1 conference with the chairmen of the standing committees
1 conference with the 45 county presidents
1 Convention of the Woman's Auxiliary to the Medical Society of the State of Pennsylvania (Pittsburgh)
2 county organization meetings (Yates and Cortland)
1 meeting of the Legislative Committee
6 conferences with the Liaison Officer, Mr. Thomas E. Walsh

A study of the expanding activities of the Auxiliary indicates the type of help they give to the parent societies and impels your Committee to point out that the Auxiliary is a very potent force in medical public relations because it can and does have access to reliable information about medical problems and attendant social and economic considerations that are not always available to the practicing physicians. Through the use of this information, the members are able to interpret the policies of the medical profession in a manner which the women of New York can accept with confidence. Therefore, each doctor whose wife is not a member is urged to direct her attention to the splendid work the Auxiliary is doing.

Your Committee wishes to express its sorrow at the untimely death of Mrs. Edgar M. Neptune, immediate past-president.

Finally, your Committee wishes to compliment the President, Mrs. William J. Lavelle, and each of the State and county officers and chairmen, and every individual member of the Woman's Auxiliary on the willingness with which they accepted the additional tasks assigned them as part of the National Education Campaign while continuing the faithful execution of their many established activities in the fields of health education, philanthropy, and nursing scholarships. Mention must also be made of the close cooperation the Auxiliary extends to each member of your Advisory Committee, and to our Liaison Officer, Mr. Thomas E. Walsh.

Each year the Woman's Auxiliary is doing more and more to assist the medical profession in its dealings with the Federal and State governments and the general public. Through these activities the Auxiliary has earned the good will of the medical profession as a monument of its endeavors.

Questions on Ethics

The Council Committee on Questions on Ethics has the following membership:

James R. Reuling, M.D., *Chairman*	Bayside
Morris H. Newton, M.D.	Little Falls
Charles C. Trembley, M.D.	Saranac Lake

During the year there have been no questions of ethics raised from any component society. However, the last House of Delegates referred to the Council the matter of the complete revision of our Principles of Professional Conduct (Code of Ethics). The Council in turn referred this matter to this Committee.

The Committee did its preliminary work by mail, which necessitated having only one meeting to accomplish its work. The Committee is indebted to the President of the Society, Dr. John J. Masterson; the President-Elect, Dr. Carlton E. Wertz; the Secretary, Dr. Walter P. Anderton, and to numerous other members of the Council for their valuable suggestions.

Appendix II of the Principles of Professional Conduct (the so-called medicolegal principles) of the Society was referred to the office of the Counsel, who reviewed, revised, and brought up to date this portion of the report. The proposed revised Principles of Professional Conduct and Medicolegal Principles are presented on the following pages of the JOURNAL.

The Council directed that this Committee endeavor to draw up for presentation to the House a framework under which grievance committees may be set up at the county or district branch level. It is the recommendation that the House adopt a framework under which they shall be formed and charge some committee to see to it that none of them go too far afield.

THE PRINCIPLES OF PROFESSIONAL CONDUCT

CHAPTER I

General Principles

Section 1. The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. Whoever chooses this profession assumes the obligation to conduct himself in accord with its ideals. A physician should be "an upright man, instructed in the art of healing." He must keep himself pure in character and be diligent and conscientious in caring for the sick. As was said by Hippocrates, "He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession and in all the actions of his life."

The Physician's Responsibility

Section 2. "The profession of medicine, having for its end the common good of mankind, knows nothing of national enmities, or sectarian dissensions. Disease and pain the sole conditions of its ministry, it is disquieted by no misgivings concerning the justice and honesty of its client's cause, but dispenses its peculiar benefits, without stint or scruple, to men of every country, and party and rank, and religion, and to men of no religion at all."*

Groups and Clinics

Section 3. These Principles of Professional Conduct shall apply to physicians as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, or groups, by whatsoever name they may be known.

Advertising

Section 4. Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, or by institutions or organizations is unethical. This principle protects the public from the advertiser and salesman of medical care by establishing an easily discernible and generally recognized distinction between him and the ethical physician. Among unethical practices are included the not always obvious devices of furnishing or inspiring newspaper or magazine comments concerning cases in which the physician or group or institution has been, or is, concerned. Self-laudations defy the traditions and lower the moral standard of the medical profession; they are an infraction of good taste and are disapproved.

Educational Information Not Advertising

Section 5. Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not easily accessible or readily understandable.

The medical profession considers it ethical for a physician to meet the request of a component medical society to write, act, or speak for general readers or audiences. The adaptability of medical material for presentation to the public may be perceived first by publishers, motion picture producers, radio or television officials. These may offer to the physician opportunity to release to the public some article, exhibit, or drawing. Refusal to release the material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation. In such circumstances the physician should be guided by the decision of official agencies established through component medical organizations.

A physician who desires to know whether, ethically, he may engage in a project aimed at health education of the public should request the approval of the designated officer or committee of his county medical society.

The most worthy and effective advertisement possible, even for a young physician, especially among his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced but must be the outcome of character and conduct. The publication or circulation of simple professional cards is approved in some localities but disapproved in others. Disregard of local customs and offenses against recognized ideals are unethical.

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* Sir Thomas Watson.

The promise of radical cures or boasting of cures or of extraordinary skill or success is unethical.

An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients accommodated.

PATENTS, COMMISSIONS, REBATES, AND SECRET REMEDIES

Section 6. An ethical physician will not receive remuneration from patents on or the sale of surgical instruments, appliances, and medicine, nor profit from a copyright on methods of procedures. The receipt of remuneration from patents or copyrights tempts the owners thereof to retard or inhibit research or to restrict the benefits derivable therefrom to patients, the public, or the medical profession. The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of patients is unethical. An ethical physician does not engage in barter or trade in the appliances, devices, or remedies prescribed for patients but limits the sources of his professional income to professional services rendered the patient. He should receive his remuneration for professional services rendered only in the amount of his fee specifically announced to his patient at the time the service is rendered or in the form of a subsequent statement, and he should not accept additional compensation, secretly or openly, directly or indirectly, from any other source.

The prescription or dispensing by a physician of secret medicines or other secret remedial agents, of which he does not know the composition, or the manufacture or promotion of their use is unethical.

EVASION OF LEGAL RESTRICTIONS

Section 7. An ethical physician will observe the laws regulating the practice of medicine and will not assist others to evade such laws.

CHAPTER II

DUTIES OF PHYSICIANS TO THEIR PATIENTS

STANDARDS, USEFULNESS, NONSECTARIANISM

Section 1. In order that a physician may best serve his patients, he is expected to exalt the standards of his profession and to extend its sphere of usefulness. A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience. All voluntarily associated activities with cultists are unethical. A consultation with a cultist is a futile gesture if the cultist is assumed to have the same high grade of knowledge, training, and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree in which it elevates the honor and dignity of those who are irregular in training and practice.

GUARDING THE PATIENT'S CONFIDENCE

Section 2. Every patient should be treated with attention and consideration, and the confidences which physicians receive should be guarded with the most scrupulous fidelity and honor. The obligation extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by physicians except when required by statute law or by the courts.

PROGNOSIS

Section 3. The physician should be a minister of hope and comfort to the sick; however, he should not fail to give timely notice of dangerous manifestations to the family or friends of the patient and also to the patient, when necessary.

THE PATIENT MUST NOT BE NEGLECTED

Section 4. A physician is free to choose whom he will serve. He should, however, respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service. Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving notice to the patient, his relatives, or his responsible friends sufficiently long in advance of his withdrawal to allow them to secure another medical attendant.

CHAPTER III

DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE

Article I—Duties to the Profession

UPHOLDING THE HONOR OF THE PROFESSION

Section 1. A physician is expected to uphold the dignity and honor of his vocation.

MEMBERSHIP IN MEDICAL SOCIETIES

Section 2. For the advancement of his profession, a physician should affiliate with medical societies and contribute of his time, energy, and means so that these societies may represent the ideals of the profession.

SAFEGUARDING THE PROFESSION

Section 3. Every physician should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education.

Section 4. A physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special duly appointed committees on ethical relations, provided such a course is possible and provided, also, that the law is not hampered thereby. If doubt should arise as to the legality of the physician's conduct, the situation under investigation may be placed before officers of the law, and the physician-investigators may take the necessary steps to enlist the interest of the proper authority.

Article II—Professional Services of Physicians to Each Other

DEPENDENCE OF PHYSICIANS ON EACH OTHER

Section 1. As a general rule, a physician should not attempt to treat members of his family or himself. Consequently, a physician should cheerfully and without recompense give his professional services to physicians or their dependents if they are in his vicinity.

COMPENSATION FOR EXPENSES

Section 2. When a physician from a distance is called to advise another physician about his own illness or about that of one of his family dependents, and the physician to whom the service is rendered is in easy financial circumstances, a compensation that will at least meet the traveling expenses of the visiting physician should be proffered him. When such a service requires an absence from the accustomed field of professional work of the visitor that might reasonably be expected to entail a pecuniary loss, such loss may, in part at least, be provided for in the compensation offered.

One Physician in Charge

Section 3. When a physician or a member of his dependent family is seriously ill, he or his family should select one physician to take charge of the case. The family may ask the physician in charge to call in other physicians to act as consultants.

Article III—Duties of Physicians in Consultations

Consultations Should Be Encouraged

Section 1. Physicians should request consultations in perplexing cases, and the attending physician should cheerfully consent to a consultation when desired by the patient or his representative.

Conduct in Consultations

Section 2. In consultations no insincerity, rivalry, or envy should be indulged. All due respect should be observed toward the physician in charge of the case, and no statement or remark should be made which would unjustly impair the confidence reposed in him.

Punctuality

Section 3. The utmost punctuality should be observed by physicians in meeting for consultation; only a rare emergency should interfere with such an engagement.

Patient Referred to Consultant

Section 4. When a patient is sent to a consultant and the physician in charge of the case cannot accompany the patient, the physician in charge should provide the consultant with a history of the case, together with the physician's opinion and outline of the treatment, or so much of this as may be of service to the consultant. As soon as possible after the consultant has seen the patient, he should address the physician in charge and advise him of the results of the consultant's investigation. The opinions of both the physician in charge and the consultant are confidential and must be so regarded by each.

Discussions in Consultation

Section 5. After the physicians called in consultation have completed their investigations, they and the physician in charge should meet by themselves to discuss the course to be followed. Statements should not be made nor should discussion take place in the presence of the patient, his family, or his friends, unless all physicians concerned are present or unless all of them have consented to another arrangement.

Responsibility of Attending Physician

Section 6. The physician in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. However, after such a change, it is best to call another consultation; then the physician in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the physician in charge, a consultant may assume authority until the arrival of the physician in charge.

Disagreement in Consultation

Section 7. It may happen that the attending physician and the consultant cannot agree in their views of the case or of the treatment to be pursued; with the consent of the patient another consultant may be called.

Consultant and Attendant

Section 8. When a physician has acted as consultant in an illness, he should not become the physician in charge in the course of that illness, except with the consent of the physician who was in charge at the time of the consultation.

Article IV—Duties of Physicians in Cases of Interference

Misunderstandings to Be Avoided

Section 1. A physician, in his relationship with a patient who is under the care of another physician, should not give hints relative to the nature and treatment of the patient's disorder, nor should a physician do anything to diminish the trust reposed by the patient in his own physician. In embarrassing situations, or whenever there seems to be a possibility of misunderstanding with a colleague, a physician should seek a friendly interview with his fellow.

Social Calls on Patient of Another Physician

Section 2. When a physician makes social calls on another physician's patient, he should avoid conversation about the patient's illness.

Services to Patient of Another Physician

Section 3. A physician should not take charge of, or prescribe for, another physician's patient during any given illness (except in an emergency) until the other physician has relinquished the case or has been formally dismissed.

Criticism to Be Avoided

Section 4. When a physician does succeed another physician in charge of a case, he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession, and the critic.

Emergency Cases

Section 5. When a physician is called in an emergency because the personal or family physician is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family physician. However, he should first report to the personal or family physician the condition found and the treatment administered.

Precedence When Several Physicians Are Summoned

Section 6. In cases of sudden illness or accidents when several physicians are summoned, the physician acting in such emergency should request that the family physician be called and, upon his arrival, should withdraw in his favor.

A Colleague's Patient

Section 7. Whenever a physician requests another physician to attend his patients during his temporary absence from his practice, professional courtesy requires the acceptance of such appointment if consistent with his other duties. The physician acting under such an appointment should give the utmost consideration to the interests and reputation of the absent physician. All such patients should be restored to the care of the latter upon his return.

Substitute in Obstetric Work

Section 8. When a physician attends a woman who is in labor because the one who was engaged to attend her is absent, the physician summoned in the emergency should relinquish the patient to the first engaged, on his arrival. The one in attendance is entitled to compensation for the professional services he may have rendered.

Article V—Disputes Between Physicians—Arbitration

Section 1. Whenever there arises between physicians a grave difference of opinion, or of interest, which cannot be promptly adjusted, the dispute should be referred for arbitration, preferably to an official body of a county medical society.

Article VI—Compensation

Limits of Gratuitous Service

Section 1. Indigency of a patient, and the obligation of physicians to attend one another and the dependent members of the families of one another, should command the gratuitous services of a physician. Institutions and organizations for mutual benefit, or for accident, sickness, and life insurance, or for analogous purposes should meet such costs as are covered by the contract under which the service is rendered.

Conditions of Medical Practice

Section 2. A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care.

Contract Practice

Section 3. Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision, or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.

Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Professional Conduct or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered.

Free Choice of Physician

Section 4. Every patient is entitled to free choice of physician. Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians.

Commissions

Section 5. When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, the giving or receiving of a commission by whatever term it may be called or under any guise or pretext whatsoever is unethical.

Purveyal of Medical Service

Section 6. A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group, or individual, by whatever name called, or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people.

CHAPTER IV

THE DUTIES OF PHYSICIANS TO THE PUBLIC

Physicians as Citizens

Section 1. Physicians, as good citizens, possessed of special training, should promote the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations.

Public Health

Section 2. Physicians should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the physician should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a physician must continue his labors without regard to the risk to his own life.

Pharmacists

Section 3. Physicians should recognize and promote the practice of pharmacy as a profession and should recognize the cooperation of the pharmacist in education of the public concerning the practice of ethical and scientific medicine and pharmacy.

CONCLUSION

These Principles of Professional Conduct have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community. The life of the physician, if he is capable, honest, decent, courteous, vigilant, and a follower of the Golden Rule, will be in itself the best exemplification of ethical principles.

Enforcement of the Principles of Professional Conduct

Component county medical societies should cooperate with the properly constituted authorities in the enforcement of the laws of the State of New York and of their respective localities, relating to the public health and to the practice of medicine and should report promptly to such authorities any evidence received by them indicating any violation of such laws. The commission of an act or acts by a physician which would subject him to reprimand or discipline or which would subject his license to practice medicine to revocation, suspension, or annulment shall constitute a violation of these Principles of Professional Conduct.

Amendments or Alterations

Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Constitution and Bylaws of the Medical Society of the State of New York.

ENFORCEMENT, DISCIPLINE, AND PUNISHMENT

Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws, provisions adopted in accordance with its own constitution and bylaws and in accordance with the Constitution and Bylaws of the Medical Society of the State of New York, shall (*a*) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (*b*) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction.

APPENDIX I

THE OATH

I swear by Apollo the physician and Æsculapius and Hygeia and Panacea and all the gods and goddesses that according to my ability and judgment I will keep this Oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents—to share my substances with him and relieve his necessities if required—to look upon his offspring in the same footing as my own brothers and to teach them this Art if they shall wish to learn it without fee or stipulation—and that by precept, lecture and every other mode of instruction, I will impart a knowledge of the Art to my own sons and those of my teachers and to disciples bound by a stipulation and oath, according to the Law of Medicine, but to none others.

I will follow the system of regimen which according to my ability and judgment I consider for the benefit of my patients and abstain from whatever is deleterious and mischievous. I will give no deadly medicine to any one if asked nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holiness I will pass my life and practice my art. I will not cut persons laboring under the stone but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick and will abstain from every voluntary act of mischief and corruption, and further from the seduction of females or males, of freemen and slaves. Whatever in connection with my professional practice or not in connection with it I see or hear in the life of men which ought not to be spoken of abroad I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath inviolated, may it be granted to me to enjoy life and the practice of the Art respected by all men in all times. But should I trespass and violate this Oath, may the reverse be my lot.

HIPPOCRATES
(460-357 B.C.)

APPENDIX II

MEDICOLEGAL PRINCIPLES

Practice of Medicine

Section 1. A person practices medicine who holds himself out as being able to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition and who shall either offer or undertake by any means or method to diagnose, treat, operate, or prescribe for any human disease, pain, injury, deformity, or physical condition.

Registration in County Clerk's Office

Section 2. Every license to practice medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office of the county where such practice is to be carried on.

Biennial Registration with Board of Medical Examiners

Section 3. On or before January 1 of each odd year every licensed practicing physician shall register with the Board of Medical Examiners, subject to the penalties for failure or neglect so to do. The certificate of registration issued by the Board of Medical Examiners shall be conspicuously displayed in the physician's office.

Revocation of License

Section 4. The Department of Education may revoke the license of a practitioner of medicine and annul his registration when such practitioner is convicted of a felony. The Department of Education may revoke, suspend, or annul the license or registration of a practitioner of medicine, or it may reprimand or discipline such practitioner if he is guilty of fraud or deceit in his practice, or was guilty of fraud or deceit in his admission to practice, or has been convicted of a crime, or is an habitual drunkard or a drug addict or has become insane, or has represented he can cure or treat disease by a secret method or by a means or method he refuses to divulge upon proper request, or has advertised for patronage by any of various means, or if he undertakes to procure or perform any criminal abortion or violates the law with respect to the use of ways and means for the prevention of conception or for causing unlawful abortion, or if he has been guilty of the division or splitting of a fee as defined by statute.

Unlicensed or Unlawful Practice

Section 5. A person who practices medicine without being lawfully licensed and registered or who so practices after conviction of a felony or who practices or advertises to practice medicine under a name other than his own or under a false or assumed name is guilty of a misdemeanor. A person is also guility of a misdemeanor who practices medicine under cover of any diploma, license, record, or registration illegally or fraudulently obtained or signed or issued unlawfully or under fraudulent representation or mistake of fact in a material regard.

Degree of Learning and Skill Required Duty to Patient

Section 6. A physician is deemed to possess that reasonable degree of learning and skill that is ordinarily possessed by physicians and surgeons in the locality where he practices and which is ordinarily regarded as necessary to qualify him to engage in the business of practicing medicine and surgery. A physician owes a legal duty to his patient to use reasonable care and diligence in the exercise of his skill and the application of his learning to accomplish the purpose for which he was employed and to use his best judgment.

Liability in Negligence or Malpractice

Section 7. A physician is liable for any injury to his patient resulting from want of the requisite knowledge and skill or the omission to exercise reasonable care or the failure to use his best judgment. He is bound to keep abreast of the times, and a departure from approved methods in general use, if it injures the patient, will render him liable, however good his intentions may have been. To render a physician liable there must be a want of ordinary and reasonable care leading to a bad result. This includes not only diagnosis and treatment, but also the giving of proper instruction to his patient in relation to conduct and exercise. Mere error of judgment does not make him liable, provided he does what he thinks is best after careful examination.

Duration of Contract of Employment

Section 8. When a physician engages to attend a patient without limitation of time, he cannot cease his visits except, first, with the consent of the patient, or second, upon giving the patient timely notice so that he may employ another doctor or, third, when the condition of the patient is such as no longer to require medical treatment, and of that condition the physician must be the judge at his peril. If the physician's services have been terminated in conformity with these rules, he may thereafter refuse treatment of the patient.

Termination of Employment

Section 9. When a physician is employed to attend upon a sick person, his employment continues while the sickness lasts and the relation of physician and surgeon continues unless it is put an end to by the assent of the parties or is revoked by the express dismissal of the physician.

Hurry No Excuse for Lack of Care

Section 10. Hurried work by a physician whether in a dispensary or with patients treated free or for compensation does not excuse the lack of ordinary care. The obligation of the physician to give instructions to his patient imposes upon the patient the obligation to obey such instructions, and if the patient disobeys such instructions he cannot hold the physician liable for the consequences of such disobedience or neglect.

Independent Contractor

Section 11. A physician who takes the place of another while he alone is treating the patient exercises his own judgment and his own skill and is an independent contractor and not an agent of the physician whose place he takes and is liable only for his own conduct of the case. When one physician sends another as his substitute to treat or perform an operation upon a patient and the services of the substitute are accepted, the patient will be presumed to have reposed confidence in the professional capacity of the substitute, not as an agent, but as the principal, and will be taken to have relied upon him as a physician to exercise his own knowledge, skill and discretion.

Consent to Operate

Section 12. Every human being of adult years and sound mind has a right to determine what shall be done with his own body, and a surgeon who performs an operation without his patient's consent commits an assault for which he is liable in damages. This is true except in cases of emergency where the patient is unconscious and where it is necessary to operate before consent can be obtained.

Operation Complications
Operations in Emergency

Section 13. Where the patient desires or consents that an operation be performed and unexpected conditions develop or are discovered in the course of the operation, it is the duty of the surgeon in dealing with those conditions to act on his own discretion, making the highest use of his skill and ability to meet the exigencies which confront him, and in the nature of things he must frequently do this without consultation or conference with anyone except, perhaps, other members of his profession who are assisting him. Emergencies arise, and when a surgeon is called it is sometimes found that some action must be taken immediately for the preservation of the life and health of the patient, where it is impracticable to obtain the consent of the ailing or injured one or anyone authorized to speak for him. In such event, the surgeon may lawfully and it is his duty to perform such operation as good surgery demands, without such consent.

Consent of Parent to Operate on Minor

Section 14. Where a person to be operated upon is a minor or incompetent, the consent of someone legally authorized to give such consent should be obtained. Parents or guardians of minors are persons legally authorized in cases of minors and a committee or guardian in case of an incompetent. This rule is likewise waived in cases of emergency.

Confidential Relation of Physician and Patient

Section 15. A physician shall not be allowed to disclose any information which he acquired in attending a patient in a professional capacity and which was necessary to enable him to act in that capacity, unless where the patient is a child under the age of sixteen, the information so acquired indicates that the patient has been the victim or subject of a crime, in which case the physician may be required to testify fully in relation thereto when such matter is the subject of inquiry. This rule applies even though the physician may be a witness under subpoena, unless the privilege which exists for the benefit of the patient be expressly waived by the patient or be deemed waived by operation of law.

History of the Medical Society of the State of New York

The Committee on the History of the Medical Society of the State of New York consists of the following:

Fenwick Beekman, M.D., *Chairman*	New York City
Nathan B. Van Etten, M.D.	Bronx
Walter P. Anderton, M.D.	New York City
Laurance D. Redway, M.D.	Ossining
George W. Kosmak, M.D.	New York City
Doris K. Dougherty, *Recorder*	Bronxville

We hope to be able to produce the history of the Medical Society of the State of New York from its beginning in 1807 to the present time, for publication in 1957, the 150th Anniversary. At present, plans are being made, and by next year we will be on our way in obtaining data for use in writing this important work.

REPORTS OF SPECIAL COMMITTEES

REPORT OF THE PLANNING COMMITTEE FOR MEDICAL POLICIES

To the House of Delegates, Gentlemen:

This is the seventh annual report of this Committee to the House of Delegates; the sixth consecutive one under the direction of the present Chairman. We restate, with your indulgence, that this is a special committee of the House of Delegates and not a standing or special committee of the Council. Its personnel and makeup are prescribed by resolution of the House and consists of the President, President-Elect, a Trustee, the Speaker, the Secretary of the Society, and six members-at-large appointed by the Speaker. Their tenure of office is for one year, and the selection of the six members-at-large is always made with due regard for regional representation. The following gentlemen now comprise its membership:

J. Stanley Kenney, M.D., *Chairman*	New York City
W. P. Anderton, M.D., *Recorder*	New York City
John J. Masterson, M.D.	Brooklyn
Carlton E. Wertz, M.D.	Buffalo
Albert F. R. Andresen, M.D.	Brooklyn
Edward R. Cunniffe, M.D.	Bronx
Abraham H. Aaron, M.D.	Buffalo
Theodore J. Curphey, M.D.	Garden City
Peter J. Di Natale, M.D.	Batavia
Norman S. Moore, M.D.	Ithaca
Walter W. Mott, M.D.	White Plains

The committee has held three general meetings this year up to the time of the writing of this report on March 1, 1950. As usual, subcommittees have given separate study to special problems and assignments, and the Chairman has represented the Committee at conferences and meetings of certain Council committees. At all times we have attempted to maintain close contact with the Society's executive officers and bureaus. In addition, the Chairman, as a member of the Advisory Council to the New York State Joint Survey and Planning Commission, has followed the developments of the work of this group, and has made appropriate report to the Council.

We have also participated in the semiannual meetings of the Middle Atlantic States Conference of the Council on Medical Service of the American Medical Association held in Philadelphia each spring and autumn, through the Chairman's presence there as the State Society's representative on its Executive Committee. These and other opportunities have afforded us valuable contact with similar planning groups, thereby bringing to our deliberations the benefit of these experiences.

It has been a privilege to have as guest participants at some of our meetings Dr. Frank G. Dickinson, Director of the Bureau of Medical Economic Research of the A.M.A.; Mr. George Cooley, Assistant Executive Secretary of the Council on Medical Service of the A.M.A.; Dr. John J. Bourke, Survey Director of the State Joint Hospital Survey and Planning Commission; Dr. Stanhope Bayne-Jones, President of the Joint Administrative Board of the Cornell University-New York Hospital Medical Center; Dr. William Crawford White and Dr. Charles F. McCarty, the president and secretary, respectively, of the First District Branch. Also, Dr. Robert Hannon, Dr. Laurance D. Redway, Mr. Dwight Anderson, Mr. George Farrell, and Mr. William Martin, of the State Society's central office staff. All of these gentlemen and others we have consulted have contributed generously to our deliberations, and the Committee expresses formally its appreciation and gratitude for their services.

The Committee's attention has been focused chiefly this year on a continuing study of matters relating to the reorganization of our district branches and, more particularly, on formulating suggestions and recommendations which might make them more effective instruments in the work of the Society; second, giving further study to the problems besetting group practice in this State and, again in particular, attempting to implement the most recent resolution of the House of Delegates on this subject. Neither of these assignments has been a simple task; many complexities, both ethical and statutory, involving wide differences in opinion, exist. Such fundamental conflicts with which we have had to deal do not lend themselves readily to the elaboration of specific standards.

District Branches.—While we have considered in detail the over-all requirements which would seem, in our opinion, to apply to the several district branches, we had referred to us by the President and the Council certain special difficulties that were apparent in the organization of the First District Branch. These, in essence, were embodied in a request to "formulate and recommend a policy regarding the matter of the functions, meetings, constitution and bylaws, and other aspects pertaining to the reorganization of the First District Branch."

This situation developed after Dr. William C. White had appeared before the Council by invitation and had raised certain questions of procedure, requesting suggestions and advice from the Council. Subsequently, Dr. White, together with Dr. Charles F. McCarty, presented the problem in more detail to the Planning Committee at its meeting on December 1, 1949. At this time the Committee requested a copy of the existing constitution and bylaws of the Coordinating Council of the 5 county medical societies of Greater New York for its information. We would remind you here that the First District Branch is now composed of the counties of New York, Queens, Kings, Bronx, and Richmond. Article XI, Section 2, of our present Bylaws states "Each district branch may adopt a constitution and bylaws for its government, and may amend the same; but before becoming effective they shall be approved by the Council. They shall be consistent with the Constitution and Bylaws of this Society."

With due regard for the rights and privileges of the individual component county societies and of the district branches themselves, and because the First District Branch had not as yet convened and organized or submitted their constitution and bylaws for approval by the Council, it was the considered opinion of the Planning Committee at this time that the Council request the President of the First District Branch to call a meeting of that Branch and that it proceed to organize in accordance with the present constitution and bylaws of the Medical Society of the State of New York. This action was so recommended and was accepted and approved by the Council.

At the meeting of this Committee on February 16, 1950, we had before us for our consideration a proposed constitution and bylaws for the new First District Branch which had been received only a few days prior to the meeting. We are unaware at the time of this writing (March 1, 1950) that this branch has held its organizational meeting; therefore, this proposed constitution was presumably forwarded for our study and suggestions in advance of their meeting.

The Planning Committee for the past two years has been following with genuine interest both the activities of the Advisory Council of Presidents and Secretaries of the Medical Societies of the Eighth Judicial District, and also of the Coordinating Council of the Five County Medical Societies of Greater New York. As already stated, these five county societies at present compose the First District Branch. In our annual reports for both 1948 and 1949, we recorded in great detail our considered thinking on the problem of activating the district branches and made specific recommendations for reorganization and other changes in the 1949 report. Many of these were approved by the Reference Committee and, with some modifications, recommended to the House of Delegates, which adopted them.

In the January 1, 1950, issue of the State Journal, page 97, there appeared a most appropriate article entitled "The District Branches and the State Society" by Dr. A. H. Aaron, a member of this Committee. In this paper he outlined in clear language the activities of the Advisory Council of the Eighth Judicial District as it has been functioning in that area. In the opening paragraph of that article he referred to the annual report of the Planning Committee in 1948, and it is quoted here in part as follows:

> "That appropriate publicity be given this Eighth District Branch pilot experiment movement in our State Journal, to the end that all district branches will become conversant with this progressive step to bring about closer relationships between district branches and the central government of our Society, and to establish improved and fruitful public relations in their own community."

The Committee feels that the present would appear to be a propitious time to include in the Constitution and Bylaws certain basic procedures for all district branches to follow. This could be implemented advantageously this year as the Council Committee on Constitution and Bylaws is undertaking a revision and will presumably report their proposed changes at the 1950 meeting next May in New York. With this fact in mind your Committee has transmitted to the Committee on Revision the following suggestions for their consideration:

1. The objectives of the district branches shall be to promote the scientific, social, and economic interests of the medical profession within the district and to cooperate with the Council of the Medical Society of the State of New York in any manner which that body may advise.
2. The activities of the district branches shall at all times be in conformity with the existing policies of the State Society. In all matters affecting such policies their function shall be of an advisory nature.
3. The district branch representatives shall meet at regular intervals to plan scientific or other sessions, to discuss such matters as are of particular concern to the county societies comprising the district.
4. The district branch activities shall be presented to each component county society for its consideration and action.

The Committee also favors the principle that the existing Advisory Councils, Coordinating Councils, or other such bodies be incorporated into the district branch organizations, preferably to become their executive committees, similar in concept to the Council of the State Society, with like functions pertaining to matters strictly concerning the District Branch. In such manner they would be carrying out principle 2 enunciated above. In addition, it is believed that such executive committees should be uniform in all the district branches and exercise comparable functions. They should be composed at all times of the elected presidents and secretaries of record of the medical societies of the counties comprising the district branch, with the duly elected officers, the president excepted, of the district branch invited to participate in an ex officio status. The president of record of the district branch shall at all times be the chairman of the executive committee.

We believe such proposed changes will make for uniformity of organization throughout the State without in any manner interfering with the autonomy of the component county societies or with the privileges and prerogatives which these units now enjoy. Their adoption would ensure at all times that the district branch activities would not be in conflict with the Constitution and Bylaws and policies of the State Medical Society.

We have recommended these proposals with a view to their incorporation into the basic framework of rules and procedures under which the State Society functions.

Group Practice.—Group practice continues to invite much discussion and very little agreement as to methods and standards of procedure. All are in accord on the Principles of Medical Ethics and Rules of Professional Conduct under which we all practice; all subscribe to the free choice principle which we cherish and recognize as fundamental, albeit some are advocating a more liberal interpretation of the currently accepted definition.

We have given this subject many hours of serious debate during the past few years and urge everyone to read again the detailed report of this committee submitted to the House of Delegates last year. Here are included those portions of the Code of Ethics, carefully annotated and quoted, which are pertinent to those engaged in practice in groups. Also in the 1948 report (Part II, State Journal, September 1, 1948) we stated those principles of group practice requiring elucidation and interpretation, especially as they relate to existing statutes in New York State. These difficulties and conflicts of opinion still persist.

"Group practice of medicine" has been defined by Dr. Franz Goldman, Associate Professor of Medical Care, Harvard School of Public Health, as "a system of cooperative practice of medicine by physicians for the purpose of pooling experience and skill, facilities and equipment, technical and other auxiliary personnel, and operating expenses if not also earnings. Under such a system a smaller or larger number of physicians and other members of the health professions work together in systematic association using a medical center as headquarters."

This is an extremely broad definition and goes considerably beyond the concepts of civilian group practice as we envisage it under our ethics and standards. Nevertheless, this type of group practice is the subject of wide experimentation, especially in the Midwest, and countless plans are under consideration in many parts of the country. It is this concept of group practice that is being pushed by nonprofit, cooperative health associations, voluntary hospitals and teaching centers, and to some degree by union groups, and also by a not inconsiderable number of private physicians. This brings the issue, in this State particularly, into focus because of the rapidly expanding voluntary prepayment medical care insurance plans.

The size and composition of the professional staffs in groups vary greatly, depending on locality, the internal organization, and the special needs which are conceived to be met. Specialists, general practitioners, and special service personnel make up such groups, particularly where the delivery of comprehensive service is provided. Such grouping requires smooth cooperation to realize all the possibilities of the services to be rendered. Only by such cooperation and integration of the services envisaged can the patient receive the optimum in quality and economy which are the desired objectives. Here is where the principle of free choice of physician aspect of group practice as it relates to prepayment insurance becomes endangered and threatened and presents the chief obstacle to an acceptable and ethical solution of the problem. Above all else would seem to be how to fit into such planning the place of the general practitioner, to accord him the recognition he deserves, and to prevent his relegation to an insecure or insignificant role in the setup. The integration of preventive with curative medicine presents another obstacle, and, in the final analysis, the methods of compensation and the pooling and division of fees raises the most serious and vexing question of all.

Obviously, these and many other facets of the group practice situation cannot be discussed in a report such as this. We are a planning committee for medical policies and are commissioned, insofar as we are able, to recommend principles and standards under which physicians practicing in groups are expected to operate.

The Council referred to this Committee the following resolution of the House of Delegates (Section 165, Proceedings of House of Delegates, 1949, NEW YORK STATE JOURNAL OF MEDICINE, Sept. 1, 1949, Part II, p. 104):

> "The Committee recommends that continued study of group practice be carried on. It also recommends that the Planning Committee approve a set of principles for group practice as soon as possible. In the meantime the members of our Society can be guided by the result of the Planning Committee study so far."

The development of standards for group practice units is still in the stage of infancy. The Council on Medical Service of the A.M.A. has discussed at length the possibility of setting standards for group practice and is hesitant to enter into such a project. Ethical concepts in some States are in direct conflict with existing statutes. This is notably so in our own State of New York. A great bone of contention is not the principle of group practice but the method of paying for such service. What has become a paramount problem now is the combination of group practice and group prepayment, and this continues to be a hotly debated and unresolved issue. Its solution is not easy but probably will be reached gradually by developing procedures which will correlate the work of the individual practitioner with that of group practice units in a given community.

With these generalizations in mind, the Planning Committee again this year gave further study to this whole problem of group practice. It has endeavored to bring into focus the Society's obligation to the many members who have entered group practice for the most ethical of reasons—better service to the patient. We have consulted with economists, sociologists, group organizers, group members, and hospital specialists, in addition to our own Committee membership. We have reviewed with satisfaction the achievements of group thinking and planning in the basic sciences which have furnished medical practitioners with such compounds as penicillin, streptomycin, folic acid, cortisone, and ACTH with their startling and revolutionary results.

Without retreating from the rules for ethical conduct recommended in our annual reports for 1948 and 1949, the Committee believes that group thinking is an important obligation of every physician. It would appear to be becoming more widespread. More doctors, especially the younger men, are increasingly more concerned with this type of practice. In the minds of many there would seem to be taking form, a trend if you will, a more liberal interpretation of the free choice principle, especially as it applies to group practice and group prepayment plans.

Weighing all these things carefully and after considered deliberation, the Committee recommends that it should be the policy of the Society to welcome and support groups which are formed with the objective of better service to patients. The Committee further believes that if such groups follow and abide by accepted ethical procedures, as set forth in our report for 1948, better patient service can result.

The Committee is just as strong in its convictions that groups established solely and chiefly for economic improvement of the doctors should not be condoned. Neither should groups be encouraged or approved which are subsidized in part or in whole by foundations or government to the extent that medical services of comparable professional quality in that area or any area are penalized or obstructed.

The Committee, furthermore, is of the opinion that a continuing and critical survey and reappraisal of all professional groups should be maintained and expanded to the end that these ethical standards be rigidly adhered to. This should include periodic assays of professional thinking on ethical group practice so that we may at all times be alerted to the changing attitude of our own members on this important and expanding method of medical practice.

We would recommend that this House of Delegates approve these principles and instruct the Council, through its appropriate mechanism, to further the accomplishment of these desired ends and objectives.

Hospital Construction and Planning—Progress Report.—A most informative, as well as interesting, report was released only recently by the New York State Joint Hospital Survey and Planning Commission. We refer to the booklet, *From Blue Print to*

Reality—Legislative Document, (1949) No. 47—A Description of the Hospital Plan for New York State and the Projects Approved for Federal Grants-in-aid. It is an unusually well compiled and edited report, published in attractive format and profusely illustrated. In scope, it discusses the Hospital Plan for New York State, the construction program, and the consideration of special problems such as affiliation among hospitals, standards and classification of hospitals, social and economic aspects of hospital finance, and the care of the chronically ill. We would invite every member of this House and Society to peruse carefully this excellent presentation. We can only in this report call attention to some of the highlights:

> There are at present under construction in New York State 2,600 hospital beds and many more authorized.
>
> Forty-seven projects on a State-wide basis have been approved.
>
> Thirty-eight million dollars have been expended to date, of which $12,000,000 represent the Federal government contribution.
>
> More than 80 per cent of the current projects are on a voluntary basis.
>
> Every effort has been put forth to avoid political pressures, and priorities have been granted where need has been shown, with a special preference for rural areas.
>
> All projects confirmed have been instituted without overruling or making any basic changes in the recommendations of the regional committees.
>
> An observation of note is that there has been a 20 per cent increase in welfare costs in this State and in the cost of medical care, in spite of high employment and good wages, because of illnesses of the breadwinners.

For your information, we call attention to some changes in Public Law No. 725 (the Hill-Burton Act) as the result of recent amendments:

1. Money available for New York State—approximately $5,900,000 per annum to 1955, which is double what the State previously received. New York State envisages over the next five years a $112,000,000 hospital expansion program under this law.
2. Research grants available through the Public Health Service for such studies as the betterment of hospital care, seminars for trustees, technics of affiliations, etc.
3. The so-called "hardship clause" under which the State agency can recognize a special situation and assist up to 33$^1/_3$ per cent. This is the cause of much concern to Dr. Bourke and his associates, because, if it were invoked, there are enough of such projects in upstate areas (Buffalo and Messina) to wipe out the entire State program. This problem has been referred to the regional committees for study and decision.

The Chronic Disease program is moving slowly. To date no work has been instituted on chronic disease medical and hospital centers. The fundamental unit in the working out of the various State programs remains with the regional councils. It is the opinion of the Joint Hospital Commission and those who have served on these councils that they have accomplished a very fine job. They are continuing to meet whenever necessary and will present for the Commission's consideration a yearly reevaluation of the State's requirements.

Just a brief word about the Mental Hygiene Program. The State has spent some $68,000,000 so far. No Hill-Burton money is diverted to the mental hygiene program. State institutions show 23 per cent overcrowding; 40 per cent of these admissions are for patients over sixty-five years of age—an increment of 2,000 to 3,000 per year, including 4,000 veterans. The State is conducting a borderline experiment in mental care at the Sampson Hospital.

It is the belief of Commissioner Frederick MacCurdy that the policies probably will be for more small hospitals integrated with general medical care programs for this type of case. He noted the serious shortage of trained psychiatrists. Of the 5,000 in the United States, 1,300 are in New York State. In spite of this the State still cannot get adequate personnel.

At the January 26 meeting of the Advisory Council of the Joint Hospital Survey and Planning Commission, Dr. Marcus Kogel, Commissioner of Hospitals of New York City, discussed the overcrowding problems in greater New York and outlined briefly some of his plans for the relief of this condition. He believed that, while inadequate to meet all the needs, much bed saving would be accomplished by the overhaul job instituted in the outpatient departments of the municipal hospitals. He called attention to the new building program; the establishment of the group clinic type of services, screening, diagnostic facilities, etc; the expansion of the home-care program, which has already proved its efficacy; the broadening of facilities for rehabilitation services, and the commissioning of the chronic disease hospitals now building.

Another most illuminating publication was the "Final Report, Recommendations and Findings of the New York State Hospital Study." This study was conducted by Columbia University under the capable leadership of Dr. Eli Ginzberg, Associate Professor of Economics, Graduate School of Business of that University. It was released in November, 1949, under the title, *A Pattern for Hospital Care*, by the Columbia Press. It is a book of 365 pages and is a most comprehensive study. It was financed by legislative appropriation. The complete report may be obtained from the Columbia University Press at a cost of $4.50, but the summary of the findings and recommendations as contained therein is available to interested individuals and groups by the Joint Hospital Survey and Planning Commission, Albany. This also should be read by every doctor concerned with hospital services in his or her community.

It is quite impossible to review adequately such a monumental study as this report. While one may not be in accord with all of the numerous proposals it sets forth, suffice it to say it is a thoughtful exposition of the many and intricate problems for which the report aims to suggest solutions. Its recommendations are summarized under three general headings: what the State should do, what local government should do, and what voluntary groups should do. Its findings follow a sane, middle-of-the-road approach and, on the whole, lean well away from Federal intervention.

It urges prompt and broad expansion of Blue Cross and Blue Shield plans, estimating that by the end of 1953 more than 75 per cent of the population of the State can be enrolled. In his opinion this would constitute satisfactory progress towards his defined goal of 85 per cent coverage. He believes that this is completely feasible but sounds a note of warning that, should a smaller gain take place, he would pro-

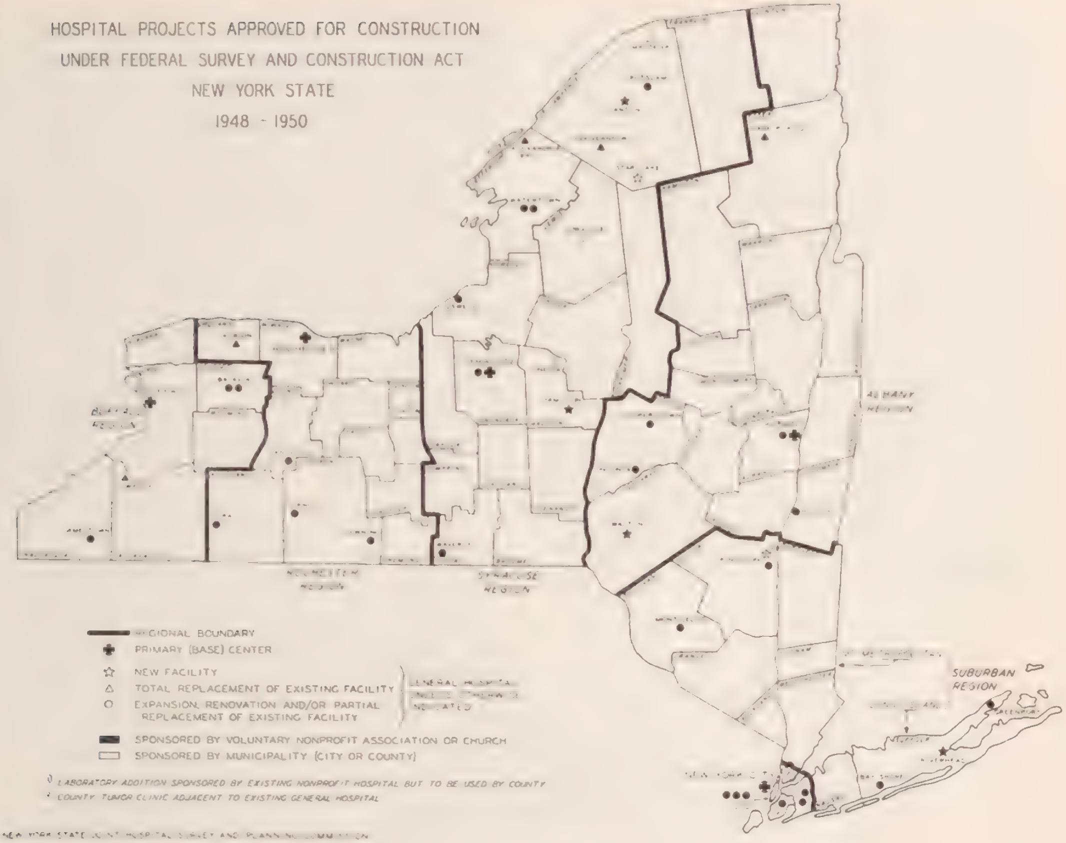
HOSPITAL PROJECTS APPROVED FOR CONSTRUCTION
UNDER FEDERAL SURVEY AND CONSTRUCTION ACT
NEW YORK STATE
1948 - 1950
ALBANY REGION
SUBURBAN REGION
SYRACUSE REGION
NEW YORK CITY
REGIONAL BOUNDARY
PRIMARY (BASE) CENTER
NEW FACILITY
TOTAL REPLACEMENT OF EXISTING FACILITY
EXPANSION, RENOVATION AND/OR PARTIAL REPLACEMENT OF EXISTING FACILITY
SPONSORED BY VOLUNTARY NONPROFIT ASSOCIATION OR CHURCH
SPONSORED BY MUNICIPALITY (CITY OR COUNTY)
LABORATORY ADDITION SPONSORED BY EXISTING NONPROFIT HOSPITAL BUT TO BE USED BY COUNTY
COUNTY TUMOR CLINIC ADJACENT TO EXISTING GENERAL HOSPITAL
NEW YORK STATE JOINT HOSPITAL SURVEY AND PLANNING COMMISSION

Fig. 1

claim voluntary insurance a failure and resort to compulsory insurance as the only possible alternative. With this belief we can honestly disagree.

Among other things it would establish a State hospital commission (there is a good beginning for this in the present Joint Hospital Survey and Planning Commission); it would have local government agree to pay reasonable fees to voluntary hospitals that provide good diagnostic and therapeutic services to ambulatory patients who are on public assistance rolls; it admonishes voluntary groups to recognize their responsibilities to make the facilities of voluntary hospitals as available as possible to all competent doctors in the community and not to permit the hospital to be used for the private advantage of a limited group of favored individuals; it would recognize the fact that no hospital can be self-sufficient, and act, therefore, to improve mechanisms, such as regional hospital councils, for promoting the coordination and integration of hospitals; it takes cognizance of the significant role of government in the provision of hospital care and realizes that a well-functioning and efficient hospital system for the community at large depends on the cooperation of voluntary and governmental groups working in the public interest.

The report rather frowns upon the need for beds for the care of chronic patients in general hospitals. We believe this is contrary to current and future planning, and we would emphasize the need for organized medical services for the chronically ill.

This unusual report raises many questions that it fails to answer. Its conclusions are necessarily tentative. On the whole, it is a remarkable study.

We believe that this important study deserves detailed analysis by the State Society. We would recommend that the House of Delegates authorize the Council to have such an analysis made by a special committee or group with the cooperation of a competent specialist, so that considered policies can be formulated which will establish unequivocally the position of the medical profession on all matters pertaining to hospital care.

A map is appended showing "Hospital Projects Approved for Construction Under Federal Survey and Construction Act, New York State 1948–1950" (Fig. 1).

Middle Atlantic States Regional Conferences.—The Spring meeting of the Conference will be held in Philadelphia on April 6. The Executive Committee has prepared a most interesting program and will cover the following topics:

1. "Broadening the Base of Voluntary Medical Care Insurance," with reports from the various states.
2. "The Washington Horoscope," a report by Joseph S. Lawrence, M.D., on activities in the Capitol.
3. "Possibilities of Expansion of Voluntary Care Plans Based on the Recent New York State Survey," an address by Eli Ginzberg, Ph.D.,

Professor of Economics, School of Business Administration, Columbia University.

4. "Stop the Welfare State," an address by the Honorable William S. Livingood, Secretary of the Interior, Commonwealth of Pennsylvania.

5. Projection of a plan to establish a replica of the American Medical Association in the medical colleges.

This information is published in the belief that many might be interested in attending this meeting. The Society is usually represented by the Executive Committee member, the Secretary, some of its executive officers, members of the public relations staff, and bureau chiefs. We further believe that these conferences serve a most useful purpose at an extremely low cost to the Society and are of real assistance to this Committee in its deliberations of the special State problems which are referred to us for study and action.

In closing, we would repeat that the reports of this Committee for the past three years be reviewed by the Reference Committee and others interested in those matters to which the Planning Committee has been giving continuing study. This is necessary if sound judgment is to be reached on the subjects herein reported. These are delicate and controversial issues in these times and will require well considered conclusions for the future guidance of those of us entrusted with the ultimate solution of the difficulties which now exist.

The Chairman again desires to take this opportunity to express his sincere thanks to all the members of this Committee for their patience, understanding, and cooperation. They have accepted all tasks willingly and graciously, and their contributions have been invaluable. This report could not have been prepared without the earnest support the Chairman has been accorded.

The files of this Committee's work during these past seven years are available in the central office for consultation at any time by any of our members. They have become quite voluminous, and the mechanics of recording and filing have been considerable. To Miss Doris K. Dougherty and her staff we owe a large measure of appreciation and we extend our sincere thanks. To our stenotype recorder of the minutes, Mrs. Augusta K. Grimm, goes a special word of gratitude for her conscientious and diligent, and at all times cheerful, cooperation and assistance.

Respectfully submitted,

J. Stanley Kenney, M.D., *Chairman*

REPORT OF THE MALPRACTICE INSURANCE AND DEFENSE BOARD

To the House of Delegates, Gentlemen:

The Malpractice Insurance and Defense Board consists of the following:

Leo F. Schiff, M.D., *Chairman*	Plattsburg
Christopher Wood, M.D., *Vice-Chairman*	White Plains
Chas. Gordon Heyd, M.D.	New York City
John F. Kelly, M.D.	Utica
Thomas M. D'Angelo, M.D.	Jackson Heights
Walter P. Anderton, M.D., ex officio	New York City
James R. Reuling, M.D., ex officio	Bayside
William F. Martin, ex officio	New York City
Harry F. Wanvig, ex officio, *Secretary*	New York City

Introduction.—The activities of this Board during the past year have been devoted mainly to (*a*) the problems involved in transferring our group plan of insurance to a new carrier and (*b*) the development of plans and technics for reducing the cost of losses and the insurance rates.

Change of Carrier.—On July 1, 1949, the Yorkshire Indemnity Company discontinued writing our group plan of insurance, which was transferred to the Employers Mutual Liability Insurance Company of Wisconsin. The Yorkshire will, of course, continue to fulfill its obligations to members of this Society under the terms of all policies issued by it as long as any liability remains under them. It will be recalled that the Yorkshire was relieved as the carrier of our insurance at its own request. In complying with their wishes, we did so with a thorough appreciation of the splendid manner in which that Company had conducted our business and lived up to the spirit as well as the letter of its agreement with our Society. Its officers were most helpful to us in trying to find constructive solutions for our many problems.

New Carrier.—The Employers Mutual Liability is one of the largest mutual liability companies in the country. In addition to a splendid reputation for integrity and ability, it enjoys a very high rating by insurance authorities.

Although the advantages of our new agreement were outlined in the report of this Board to the House of Delegates in 1949, they are of sufficient importance to warrant repeating some of them here.

The Employers Mutual has accepted all of the Requirements for the Group Plan as adopted by the House of Delegates and amended by the Council.

The expense ratio has been reduced from 34 per cent to 31.5 per cent, which means that the portion of our premiums available for losses has been increased from 66 per cent to 68.5 per cent.

Provisions have been made for establishing each year a contingent loss reserve to cover unforeseen losses, chargeable against that year, which may arise in the future and to cushion the impact of such losses on the basic rates.

The policy term has again been returned to an annual basis. In the beginning it was necessary to issue six-month policies for some members to return them to their normal expiration dates, but that has now been accomplished, and as of January 1, 1950, policies of all members are now issued for the regular twelve-month period.

Reducing Costs.—Last year the House of Delegates approved the recommendation of this Board that a "professional committee" be set up in one of our counties as a pilot experiment to determine whether the claim prevention program of Alameda County, California, can be adapted to our situation in New York State. Westchester County was selected for the test, and the Comitia Minora has appointed the necessary committee who will be in charge of the undertaking. Our legal and indemnity representatives will act as advisors to the committee and will keep the Board informed as to all developments. The entire plan will be carried out with the close cooperation of the Employers Mutual.

The Board has received requests from other county societies that are anxious to set in operation programs of public relations patterned somewhat on the Alameda County Plan, including therein some malpractice claim prevention work.

The complete Alameda County program is a radical departure from our previous concept of public relations and medical economics. It required four or five years to develop, and strong leadership of a staff which now numbers thirty persons in a county society of only one thousand members. While thoroughly in favor of the principles underlying these activities, the Board urges against haste in adopting similar "plans," because in every case which succeeds it will be found that it has not been the "plan" alone, but also the personalities of the men who direct them and the cooperation of the physicians of the group that have made success possible. This Board will keep in contact with and assist in an advisory capacity the malpractice claim prevention aspect of this work.

The Elimination of Undesirable Risks.—Last year this Board was given the authority to limit the amount of insurance protection granted to members, to withdraw the privilege of renewal of insurance where such action might seem to the Board to the best interests of the group as a whole. In addition the Board was also authorized to apply a deductible clause in the renewal of insurance. Such a clause would have the same effect as similar provisions of automobile collision insurance whereby the policyholder is responsible for payment of some stated amount of any loss sustained by him, the company paying the remainder up to the limits of the policy.

Under this authority, the Board has denied the privilege of renewal of insurance in certain instances where the actions of the members indicated that they were, in fact, extrahazardous malpractice risks. In other cases the amount of insurance granted has been limited. No action of this kind was taken by the Board, however, in any case, before the members had been given due notice, or without thorough consideration of all the factors involved. Any member whose insurance is affected by such a decision of the Board has the right of appeal to the Council.

Advisory Committees.—In making these decisions, and in consideration of regulations to cover special aspects of medical practice, particularly of certain specialties, the Board has had invaluable assistance from two special advisory committees appointed by the Council at the request of the Board. These committees are on Plastic Surgery and on X-ray Therapy, with Dr. Gustave Aufricht and Dr. Harry M. Imboden, respectively, as chairmen.

Annual Audit.—The annual examination of the group plan by independent actuaries, in accordance with a directive of the House of Delegates, has not been completed at the time this report was written. It will be necessary, therefore, to refer to that, as well as other statistical data, in a supplementary report.

REPORT OF THE SPECIAL COMMITTEE ON PROBLEMS OF ALCOHOLISM

To the House of Delegates, Gentlemen:

The Special Committee on the Problems of Alcoholism has the following membership:

Milton G. Potter, M.D., *Chairman*	Buffalo
Henry W. Miller, M.D.	Brewster
Raymond F. Kircher, M.D.	Albany
John L. Norris, M.D.	Rochester
Irving J. Sands, M.D.	Brooklyn
Harry C. Guess, M.D.	Buffalo

This report deals with the activities of the Committee during its second year of existence. The membership of the Committee was unchanged. The goal remains the same, namely, acting as a catalyst in the areas of education, rehabilitation, and research.

Two meetings of the entire Committee were held, one in Buffalo and one in New York City. Additional meetings were not held because of the expense of assembling the members who were selected on a geographic basis. This necessitated delegating work to individual members with the Chairman carrying the brunt of the work.

The cooperation of the officers and the Council of the State Society with this Committee was excellent.

A survey of the teaching of this subject in all the medical schools of the State was carried out. The result revealed no uniformity of teaching. It is our recommendation that more emphasis be given to the treatment and rehabilitation of alcoholics in medical school curricula. Continued persuasion is necessary, as is more uniformity of teaching. How this can be accomplished is problematic. Perhaps a joint effort on the part of the State Society and the New York Academy of Medicine might be the answer.

The cooperation of the Committee on Public Health and Education on this subject has been and will continue to be helpful in offering lectures, panel discussions, etc. to the county societies.

The increased publicity in newspapers and periodicals on this subject demands that our efforts be redoubled in order that the profession can intelligently assume the leadership in the effort to solve the medical and public health problem of alcoholism.

Already, misguided lay people are attempting to invade the medical and hospital fields in various parts of the country. Through the activity of this Committee, some of these efforts have been guided. It would appear that the time is ripe for this Society to present a resolution to the A.M.A. at its next annual meeting to form a special committee on this problem, so that the profession will be in a position to assume leadership on a national level.

Many of the states are now groping, without proper medical leadership, in their attempts to do something about this problem. Our Committee feels that the approach being made in New York State is on firm ground and is sensible.

The Division of Chronic Diseases of the U.S. Public Health Service and the New York State Department of Health, recognizing alcoholism as a chronic disease, have entered into a cooperative agreement with the University of Buffalo School of Medicine to establish a research experimental center for the study of rehabilitating people suffering with chronic diseases. Alcoholism is to be included. This is a continuation on a broader base of the pilot experiment in alcoholism started in Buffalo last year.

The U.S. Public Health Service supplies the facility, the New York State Department of Health supplies the funds, and the University of Buffalo supplies the personnel and assumes the responsibility for the experiment. The activity of various members of this committee aided in the final solution of the approach to be made in New York State.

This approach is to evolve practical technics and procedures for the care of the patient in the acute phase, the convalescent phase, the clinic phase, and the terminal phase. The proved procedures will then be installed in centers in other key areas of the State. It is proposed that these centers will be identified with medical schools and be supported by the Department of Health of New York State. This approach involves a minimum expense to the State.

Our committee was able to persuade a subcommittee of the Public Health Relations Committee of the New York Academy of Medicine to approve of these principles.

Continued cooperation with interested groups on a county, State, and Federal level is recommended. We also recommend that delegates from the Medical Society of the State of New York introduce a resolution at the 1950 A.M.A. convention recommending that the A.M.A. form a national Committee on Problems of Alcoholism.

Note: Referred by Speaker to Reference Committee on Report of Council, Part III—Public Health Activities A.

REPORT OF COMMITTEE ON REVISION OF CONSTITUTION AND BYLAWS

To the House of Delegates, Gentlemen:

The House of Delegates at its last session directed the Speaker to appoint a committee to study and recommend changes for an over-all amendment of the Constitution and Bylaws. The Speaker appointed the following committee: Dr. A. H. Aaron of Buffalo, Dr. James F. Rooney of Albany, and Dr. Louis H. Bauer of Hempstead, Chairman. Before meeting, the committee asked for suggestions from the officers, the Trustees, the members of the Council, and each District Branch President. A large number of suggestions were received.

Following considerable discussion, the Committee recommends the following amendments to the Constitution and Bylaws:

CONSTITUTION

ARTICLE I

Name and Purpose

The Committee recommends deletion of the present Article and the substitution of the following:

> "The name and title of the Society shall be the Medical Society of the State of New York. The purposes of the Society shall be to federate into one organization the medical profession of the State of New York; to extend medical knowledge and advance the science and art of medicine; to promote the betterment of public health; and to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State."

ARTICLE II

Membership

The Committee recommends no change in this Article.

ARTICLE III

House of Delegates

The Committee recommends no change in this Article.

ARTICLE IV

Council

The Committee recommends that the present Article be deleted and that the following be substituted therefor:

> "There shall be a Council composed of the President, the President-Elect, the Vice-President, the immediate Past-President, the Secretary, the Assistant Secretary, the Treasurer, the Assistant Treasurer, the Speaker, the Vice-Speaker, the Chairman of the Board of Trustees, and nine other members elected by the House of Delegates.
>
> "In addition, each District Branch shall have representation on the Council every second year. During 1950 to 1951, the first, third, fifth, and seventh district branches shall be represented on the Council by their Presidents. In 1951 to 1952 the second, fourth, sixth, and eighth district branches shall have like representation. Follow-

ing that year they shall be so represented in alternate years."

ARTICLE V
OFFICERS

The Committee recommends changes in the first sentence so that the Article will now read as follows:

> "The Officers of the Society shall be a President, a President-Elect, a Vice-President, a Secretary, an Assistant Secretary, a Treasurer, an Assistant Treasurer, a Speaker, and a Vice-Speaker of the House of Delegates. They shall take office at the termination of the annual meeting at which they are elected."

ARTICLE VI
TRUSTEES

The Committee recommends the word "five" be changed to "seven," so that the Article will then read:

> "The Board of Trustees shall consist of seven members elected by the House of Delegates in accordance with the Bylaws. The President, the Secretary, and the Treasurer shall sit with the Board of Trustees with voice but without vote."

ARTICLE VII
BOARD OF CENSORS

The Committee recommends no change in intent of this paragraph, but recommends that it be reworded as follows:

> "There shall be a Board of Censors consisting of the President and Secretary of the Society and the President of each District Branch, as provided in the Bylaws."

ARTICLE VIII
MEETINGS

The Committee recommends no change in this Article.

ARTICLE IX
FUNDS

The Committee recommends no change in this Article.

ARTICLE X
REFERENDUM

The Committee recommends no change in this Article.

ARTICLE XI
DISTRICT BRANCHES

Section 1. The Committee recommends no change in this Section.

Section 2. The Committee recommends that the present Section be deleted and the following substituted therefor:

> "Each District Branch may adopt a constitution and bylaws for its government and may amend the same; but before becoming effective they shall be approved by the Council. They shall be consistent with the Constitution and Bylaws of this Society, and they must provide that the District Branch President shall have first served as a president of a component county society."

Section 3. The Committee recommends no change in this Section.

ARTICLE XII
COUNTY SOCIETIES

The Committee recommends no change in this Article.

ARTICLE XIII
AMENDMENTS

The Committee recommends no change in this Article.

BYLAWS
CHAPTER I
MEMBERSHIP

Section 1. The Committee recommends no change in this Section.*

Section 2. The Committee recommends no change in subsections (*a*), (*b*), and (*c*). Subsection (*d*): The Committee recommends that the period at the end of the subsection be changed to a comma and material added so that the entire section (*d*) will then read as follows:

> "*Section 2.* (*d*) Dues and State assessments of a member elected or reinstated after October 1 shall be credited to the succeeding year; all rights and privileges of membership, however, dating from the time of election, but no member dropped for nonpayment of dues and assessments shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped."

Section 3. The Committee recommends no change in this Section.

Section 4. The Committee recommends, to avoid contradiction in the Bylaws, the insertion of the following words at the end of the first sentence: "except as provided in Chapter XIV, Section 1(*a*) of these Bylaws," so that Section 4 will then read as follows:

> *Section 4.* A member of one County Society shall not be permitted to transfer to membership in another County Society until he has established a legal residence in the County to which he desires transfer, except as provided in Chapter XIV, Section 1(*a*) of the Bylaws. The question of legal residence or principal office shall be verified by the Board of Censors of the County Medical Society to which the member desires transfer."

Section 5. The Committee recommends no change in this Section.

Section 6. In the last sentence it is recommended that the words "dues or" be inserted before the word "assessment" so that the last sentence will then read:

> "Retired members shall not be subject to dues or assessment but shall be accorded all the rights and privileges of active membership except voting and holding office."

Section 7. The Committee recommends no change in this Section.

CHAPTER II
HOUSE OF DELEGATES

Section 1. The word "Session" appearing in the sentence "a representative from each Scientific Session to be elected by each such Section" is a typographical error. The word "Session" should read "Section." The Committee recommends that at the end of the paragraph the following be added:

---

* The Committee may bring in a supplementary report on this Section.

> "...Should the President of a District Branch be unable to serve as a District Delegate, the Vice-President of the Branch shall so serve.
>
> "Should the elected delegate of a Scientific Section be unable to serve, the Chairman of the Section shall designate a substitute.
>
> "In case either the President of a District Branch or the Delegate of a Scientific Section is to be replaced, the President of the District Branch or the Chairman of the Section, as the case may be, shall notify the Secretary of the State Medical Society, in writing."

Subsection A should be listed as subsection *(a)*.
Subsection B should be listed as subsection *(b)*.

Section 2. The Committee recommends no change in this Section.

Section 3. The Committee recommends that the Section be revised to read as follows:

> "The Annual Meeting of the House of Delegates shall be held at the call of the Speaker, at least two, and not more than four days before the annual meeting of the Society."

The balance of the section should remain as it is now written, except that in the last line the word "two-thirds" should be deleted and the word "unanimous" substituted so that the last sentence of this Section will then read:

> "No new resolution shall be introduced at the last scheduled session except by a unanimous vote of the House."

Section 4. The Committee recommends that the quorum be increased from sixty to one hundred. The Section will then read:

> "A quorum shall consist of one hundred duly elected or constituted members of the House of Delegates."

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

Section 7. The Committee recommends no change in this Section.

Section 8. It is recommended that item 3, "Roll Call by the Secretary," be deleted and that there be substituted "Report by Secretary as to presence or absence of quorum."

A new item should be interpolated which will now be item 4, "Remarks by the Speaker." The present item 4 will then be item 5 and will read: "Reading the minutes of the previous meeting by title."

Items 5 to 17 are retained, but will be renumbered 6 to 18.

CHAPTER III

ELECTION OF OFFICERS, COUNCILLORS, TRUSTEES, AND DELEGATES

Section 1. The Committee recommends no change in this Section.

Section 2. The Committee recommends that the Section be revised to read as follows:

> "The President, the President-Elect, the Vice-President, the Secretary, the Assistant Secretary, the Treasurer, the Assistant Treasurer, the Speaker, and the Vice-Speaker of the House of Delegates shall be elected for one year or until their successors have been duly chosen."
>
> "Three members of the Council shall be elected annually for a term of three years. In the event of a vacancy a Councillor shall be elected for the unexpired term.
>
> "No salaried employe of the Medical Society of the State of New York, with the exception of the Secretary, shall be eligible for election as an officer of the Society. For the purposes of this article honorarium shall not be considered as a salary."

Section 3. The Committee recommends that the Section be deleted and the following substituted therefor:

> "One Trustee shall be elected annually for a term of five years, but in 1950 one Trustee shall be elected for five years, one for four years, and one for three years. Thereafter, whenever the terms of two Trustees expire in the same year, two Trustees shall be elected each for five years. In the event of a vacancy, a Trustee shall be elected for the unexpired term. A person to be eligible for election as Trustee shall have served at least two years as an officer, or at least three years as a member of the Council, or at least five years as a member of the House of Delegates."

Section 4. The Committee recommends no change in this Section.

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

Section 7. In the last sentence wherever the word "delegates" appears, it should read "delegates and representatives" so that the last sentence of that Section will then read:

> "Delegates and representatives may be elected to other medical societies or similar bodies as the interests of the Society may require; and credentials shall be issued to all delegates and representatives signed by the President and Secretary."

The balance of the Section is unchanged.

CHAPTER IV

COUNCIL

Section 1. After these words there should be interpolated "*(a)*." The present section should remain unchanged except that in the last sentence the word "which" should be changed to "whom." A new subsection "*(b)*" should be added, and it is recommended that it read as follows:

> "The Council shall establish an Executive Committee to be composed of the President, the President-Elect, the Secretary, the Treasurer, and three additional members of the Council appointed by the President with the approval of the Council. This committee shall be appointed by the President immediately upon his assumption of the office of President and to serve during his tenure as President only. The Executive Committee shall have the authority to take action in case of emergency arising in the interim between the meetings of the Council in order to protect the interests and purposes of the Medical Society of the State of New York as set forth in this Constitution and Bylaws. In times of such emergency, the Executive Committee shall have all the powers and duties which are conferred upon the Council. Any action taken by the Executive Committee shall be reported in full to the Council at its next meeting."

Section 2. The Committee recommends no change in this Section.

Section 3. Wherever the word "Chairman" appears, it should be replaced by the word "President." In the last sentence the word "two" should be deleted and the word "three" substituted so that the section will then read:

> "It shall meet at regular intervals at times and places that shall be fixed by the President. Any four members of the Council may require the President to call a meeting for such time and place as shall be designated by them in writing. Members must receive at least three days' notice by letter or telegram from the Society's office."

Section 4. The word "nine" should be deleted and the word "fourteen" substituted so that the section will then read:

> "A quorum shall consist of fourteen members."

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

Section 7. The Committee recommends no change in this Section.

Section 8. It is recommended that this Section be amended by adding the words "officer or employe" so that the Section will then read:

> "No officer or employe, board, commission, or committee shall inaugurate or initiate any policy or commit the Society to any policy unless the same has been expressly approved by the House of Delegates or by the Council."

Section 9. The Committee recommends several changes in this Section, and it is recommended that the Section be amended to read as follows:

> "The duties of the Council shall also include the study and supervision of the following activities:
> (*a*) All Scientific Work presented at each Annual Meeting.
> (*b*) Scientific Exhibits.
> (*c*) Medical Education.
> (*d*) JOURNAL Management and Publication.
> (*e*) Medical and Related Research.
> (*f*) Arrangements for Annual Meeting.
> (*g*) Preventive Medicine.
> (*h*) Public Health.
> (*i*) Legislation.
> (*j*) Economics.
> (*k*) Workmen's Compensation.
> (*l*) Medical Publicity.
> (*m*) Cooperative Relationships with Federal and State Governments, Foundations, and other lay groups.
> (*n*) Medical Care Insurance.
> (*o*) Malpractice Defense and Insurance.
> (*p*) Any activities not otherwise provided for.
> (*q*) The Council shall also keep constantly advised of the activities of and collaborate with, the Health and Welfare Departments of the State and with hospitals, clinics, and Welfare agencies in furthering the health of the community.

Section 10. The Committee recommends no change in this Section.

Section 11. The Committee recommends no change in this Section.

CHAPTER V

BOARD OF TRUSTEES

Section 1. It is recommended that the present Section be deleted and the following substituted therefor:

> "At the first meeting of the Board of Trustees immediately upon the close of the Annual Meeting of the House of Delegates, it shall organize under the chairmanship of a senior member and fix the time and place of its regular meetings. Should two trustees have similar seniority, the Chairman of the Board shall be chosen from these two Trustees by lot. The Board of Trustees shall meet at least bimonthly, except in July and August. Any three members of the Board of Trustees may require the Chairman to call a special meeting at the office of the State Society for such time as shall be designated by them in writing and of which the members of the Board shall have at least five days' notice."

Section 2. The Committee recommends no change in this Section.

Section 3. The Committee recommends no change in this Section.

Section 4. The word "three" should be replaced by the word "four" so that the Section will read:

> "Four members of the Board of Trustees shall constitute a quorum."

Section 5. The Committee recommends no change in this Section.

CHAPTER VI

CENSORS

The Committee recommends no change in this Chapter.

CHAPTER VII

DUTIES OF OFFICERS

Section 1. The Committee recommends no change in this Section.

Section 2. It is recommended that the present Section be deleted and the following substituted therefor:

> "The President-Elect shall perform the duties of the President in the absence of the President. In the event of the President's death, resignation, removal, incapacity or refusal to act, President-Elect shall succeed him and shall serve for the remainder of the term of his immediate predecessor. If the time so served is less than six months, he shall also serve as President until the second annual session next following his original election as President-Elect. If the President-Elect succeeds to the Presidency six months or more before the following normal session, the House of Delegates at that following annual session shall select another eligible person to serve as President until the next annual session. If the President-Elect dies, resigns, is removed, or is unable or refuses to act, or if he succeeds to the Presidency, the office of President-Elect shall remain vacant, and at the next annual session the House of Delegates shall elect an eligible person to serve as President until the next annual session."

Section 3. The Committee recommends no change in this Section.

Section 4. The Committee recommends no change in this Section.

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

Section 7. It is recommended that the following sentence shall be added at the end of the paragraph:

"He shall be in complete charge of the administration of the headquarters of the State Society."

Section 8. The Committee recommends no change in this Section.

Section 9. The Committee recommends no change in this Section.

Section 10. The Committee recommends no change in this Section.

Section 11. It is recommended this Section be deleted and the following substituted therefor:

> "Substitutions in Office.—If there is a vacancy in the office of both President and President-Elect, the Vice-President shall act as President until the next annual session at which time the House of Delegates shall elect an eligible person to serve as President until the following annual session. The Assistant Secretary, the Assistant Treasurer, and the Vice-Speaker shall serve as the Secretary, the Treasurer, and the Speaker, respectively, whenever these senior officers are incapacitated for service by injury, ill health of themselves or families, important professional duties, or any other mandatory absences. This shall be construed so as to include duty at or during meetings of the Board of Trustees as well as the other official duties designated for the senior officer. The senior officer shall promptly notify the junior officer of his incapacity and request his attention to said duties."

Section 12. It is recommended that the Section be deleted and the following substituted therefor:

> "Each President of a District Branch shall visit the County Societies of his District at least once during his tenure of office and make a careful inquiry of the condition of the profession in each county in his District and shall report thereon to the House of Delegates. During the year prescribed in the Constitution and Bylaws, he shall serve as a member of the Council."

Section 13. The Committee recommends no change in this Section.

CHAPTER VIII

MEETINGS

Section 1. It is recommended that at the end of the first sentence the following be interpolated: "The Publication of such notice in the NEW YORK STATE JOURNAL OF MEDICINE shall be considered as complying with this provision." The Section will then read as follows:

> "The notices of the annual and special meetings of the Medical Society of the State of New York, and its House of Delegates, and of regular meetings of the Council, of the Board of Trustees and the Board of Censors, shall state the date, place, and hour and shall be mailed in securely postpaid wrapper to each member of the body holding such meeting at least seven days before said meeting. Publication of such notice in the NEW YORK STATE JOURNAL OF MEDICINE shall be considered as complying with this provision. The affidavit of mailing by the Secretary of the Society to the last recorded address of the member shall be deemed sufficient proof of the service upon each and every member for any and all purposes."

Section 2. The Committee recommends no change in this Section.

Section 3. The Committee recommends no change in this Section.

Section 4. Item 7 should be deleted as it is obsolete and the word "Adjournment" should be substituted as item 7.

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

CHAPTER IX

EXPENSES

Section 1. The only change recommended in this section is that the $200 now allotted to each District Branch be increased to $400. The sentence in that section beginning, "Each District Branch shall be entitled..." will then read:

> "Each District Branch shall be entitled to receive a sum not to exceed $400, exclusive of the work done by the Secretary regarding notices, programs, etc., to defray the expenses of holding the annual meeting of such District Branch, provided a proper statement of such expense shall have been presented to the Secretary."

CHAPTER X

REFERENCE COMMITTEES

The Committee recommends no change in this Chapter.

CHAPTER XI

SPECIAL COMMITTEES

Section 1. In the second sentence the words "officer presiding over" should be deleted and the following substituted therefor: "speaker or other officer presiding pro tempore over," so that the second sentence will then read:

> "They shall be appointed by the Speaker or other officer presiding pro tempore over the meeting at which the committee is authorized, if such committee is to conclude its work during said meeting of the House of Delegates."

The balance of the Section is to remain the same.

Section 2. The Committee recommends no change in this Section.

Section 3. The Committee recommends no change in this Section.

Section 4. The Committee recommends no change in this Section.

CHAPTER XII

SECTIONS

Sections 1, 2, 3, 4. The Committee recommends no changes in these Sections. It is recommended that an additional Section be added to be known as Section 5 which will read as follows:

> "*Section 5.* A Session is a single meeting of a group to discuss scientific, cultural, historical, or economic subjects. It shall have a Chairman and a Secretary appointed by the President with the approval of the Council."

CHAPTER XIII

DISTRICT BRANCHES

Section 1. It is recommended that Sections 1 and 2 should remain without change and that there be added two additional Sections, Section 3 and Section 4, to read as follows:

"*Section 3.* In the case of the inability of the President of a District Branch to serve as a Delegate, the Vice-President shall be designated to serve in his place, and the President shall so notify the Secretary of the Medical Society of the State of New York. In the case of the death of the President of the District Branch, the Vice-President shall serve as a Delegate."

"*Section 4.* The objects of the District Branches shall be to promote the scientific, social, cultural, and other interests of the medical profession within the district and to cooperate with the Council of the Medical Society of the State of New York in any way which that body may advise."

CHAPTER XIV

Component County Medical Societies

Section 1. The Committee recommends no change in this Section except to delete the words in italics at the end of the Section, "(*Adopted May, 1937*)."

Section 2. The Committee recommends no change in this Section.

Section 3. The Committee recommends no change in this Section.

Section 4. It is recommended in the last sentence that the word "sixty" be deleted and the word "ninety" substituted so that the second paragraph of the section will read:

"He shall forward said roster and information, together with the names and places of residence of each of the officers of said society and the names and residence of each delegate to the House of Delegates of said society, to the Secretary of this Society ninety days before the date of its annual meeting."

The balance of the Section remains unchanged.

Section 5. The Committee recommends no change in this Section.

Section 6. The Committee recommends no change in this Section.

CHAPTER XV

Miscellaneous

The Committee recommends no change in this Chapter.

CHAPTER XVI

The Committee recommends no change in this Chapter.

CHAPTER XVII

Amendments

The Committee recommends no change in this Chapter.

Respectfully submitted,
Louis H. Bauer, M.D., *Chairman*
A. H. Aaron, M.D.
James F. Rooney, M.D.

ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 A.M.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Identify your material carefully so that it may be returned.

REPORTS OF THE DISTRICT BRANCHES

First District Branch

To the House of Delegates, Gentlemen:

The First District Branch had no regular meeting this year, being in process of organization. Meetings of the officers of the five county societies comprising the First District have been held for this purpose. Bylaws have been prepared and submitted to the Council for approval. We expect to be organized and functioning in time for the 1950 meeting.

Respectfully submitted,
William Crawford White, M.D., *President*

Third District Branch

To the House of Delegates, Gentlemen:

A meeting of the officers and presidents or other representatives of each component county medical society of the Third District Branch was held on May 19, 1949, at the Stuyvesant Hotel in Kingston. Dr. Robert R. Hannon, executive officer of the State Society, and Dr. Frederic W. Holcomb, our immediate past-president, were also present. Arrangements were made to hold the annual meeting on Thursday, September 29, at Catskill.

The forty-third annual meeting was divided into two sessions. At the morning session at the Greene County Memorial Hospital, Catskill, those attending the meeting were given an opportunity to view a rural hospital in action. Later in the morning the staff of the Hospital arranged an excellent clinical program. At this session a motion picture film on the "Diagnosis and Treatment of Poliomyelitis" was shown and discussed by Dr. Robert F. Korns of the State Department of Health. This was followed by clinical presentations. Dr. M. K. Colle opened the presentations with a cardiovascular problem which had been observed in the Hospital over a long period of time until death. The autopsy material was presented and discussed by Dr. John K. Clemmer. Dr. William Wax and Dr. C. B. Esselstyn then presented a group of cases of carcinoma of the large bowel for whom various types of bowel resections were used. The surgical and clinical pictures were discussed by Drs. Wax and Esselstyn; x-ray diagnosis was discussed by Dr. E. A. Jacobs; and the pathology findings of the surgical material were discussed by Dr. J. J. Clemmer. This excellent clinical program was very well received and the Society owes a vote of thanks to Dr. William Rapp for attending to all the details and necessary arrangements.

Following this, the members proceeded to the Catskill Country Club where an excellent dinner was served to a crowd which overflowed the main dining room.

After dinner and the introduction of the State Society representatives, including Dr. W. P. Anderton, secretary of the State Society, Dr. Theodore J. Curphey, chairman of the Council Committee on Public Health and Education, and Dr. George W. Kosmak, chairman of the Publication Committee, talks were given by Mrs. William J. Lavelle, president of the Woman's Auxiliary, and Dr. John J. Masterson, president of the State Society.

At the scientific session that followed, an excellent program was presented and papers were read by Dr. John H. Powers, of Cooperstown, "Farm Accidents: Some Comments on Their Incidence and Etiology in Otsego County and Suggestions for Early Definitive Therapy"; Dr. Wardner D. Ayer, professor of clinical medicine, Syracuse University College of Medicine, Syracuse, "Neurologic Problems in General Practice," and Dr. Richard H. Lyons, professor of medicine, Syracuse University College of Medicine, Syracuse, "The Present Status of Focal Infections."

During the morning the members of the Woman's Auxiliary of the Third District Branch met at the Catskill Country Club as the guests of the Woman's Auxiliary of the Greene County Medical Society. After their meeting they joined the members of the District Branch at dinner.

The meeting was attended by eighty physicians, seventy from the District and ten from outside. It should be noted that our Executive Officer, Dr. Robert R. Hannon, assisted by Mr. Thomas E. Walsh from the State Society Public Relations Bureau, did his usual excellent job of attending to the arrangements at the meeting. The dinner committee, headed by Dr. M. H. Atkinson, deserve a vote of thanks for a fine job.

As president of the Third District Branch, I represented our District at the Symposium on Education, held under the auspices of the State University of New York, in Buffalo on January 27 and 28, 1950.

Respectfully submitted,
Harry Golembe, M.D., *President*

February 15, 1950

Fourth District Branch

To the House of Delegates, Gentlemen:

The annual meeting of the Fourth District Branch was held on September 15 and 16, 1949, at Saranac Lake.

On September 15, the following papers were read: "A View of the Problem of Arthritis for the General Practitioner," by Dr. Walter S. McClellan, director, Saratoga Springs Spa; "Activities of the American Medical Association," by Dr. Louis H. Bauer, chairman of the Board of Trustees of the A.M.A., and "Nausea and Vomiting of Pregnancy," by Dr. George B. Maughan of McGill University, Montreal, Quebec. This was followed by a motion picture of the Medical Corps of the U.S. Army exhibited by the Army.

Following these, a meeting of the Executive Committee was held. In attendance at this meeting were Dr. Walter S. Bennett, State Compensation Committee; Dr. Robert R. Hannon, Executive Officer, and Dr. W. P. Anderton, State Society Secretary; Mr. Dwight Anderson and Mr. George Farrell. Unfortunately, the presidents of five of the nine county societies were absent. A thorough discussion of compensation, legislative, and other matters was held. These were referred to the various counties for their action and will be discussed again at the spring meeting of the committee.

After this meeting there was a cocktail party and dinner at the Elks Club. Following the dinner inspiring talks were given by Mrs. William J. Lavelle, president of the State Woman's Auxiliary, and by Dr. John J. Masterson, president of the Medical Society of the State of New York.

On the morning of September 16, the following papers were read: "Tuberculosis from a General Practitioner's Viewpoint," by Dr John N. Hayes of Saranac Lake; "Etiology and Treatment of Postphlebitic Leg Ulcer," by Dr. J. C. Luke of McGill University, Montreal, Quebec; "The Role of County Society Members in Medical Legislation," by Dr. Frederic W. Holcomb, vice-speaker of the House of Delegates, of Kingston, and "Neurology in General Practice," by Dr. A. G. L. McNaughton of McGill University, Montreal, Quebec.

We are deeply grateful to the speakers who prepared and read these excellent papers and especially to the three men who took the time to visit us from Canada.

The attendance was as follows: Clinton County, 2; Essex County, 9; Franklin County, 20; Fulton County, none; Montgomery County, 3; Saratoga County, 2; Schenectady County, 7; Warren County, 4; Washington County, 3.

In this report I wish to thank Drs. Alfred Hartman and Aaron Davis for their help in arranging the program and also the Franklin County Committee on Arrangements, Drs. J. D. Murphy, Carl Merkel, and Donald Richter.

Respectfully submitted,
JOSEPH A. GEIS, M.D., *President*

February 1, 1950

Fifth District Branch

To the House of Delegates, Gentlemen:

The forty-third annual meeting of the Fifth District Branch of the Medical Society of the State of New York was held in Oswego, Tuesday, September 13, 1949.

The afternoon session was called to order at 2:00 P.M. in the Pontiac Hotel. One hundred and eight physicians were registered. The meeting opened with a motion picture film, "Hemorrhages of Pregnancy," with comments by Dr. Edward C. Hughes, professor of obstetrics, Syracuse University College of Medicine. Miss Mary Donlon, chairman of the Workmen's Compensation Board, delivered an informative address on the New York State Disability Benefits Law. Dr. Joe W. Howland, chief, Division of Medical Services, Atomic Energy Commission Project, University of Rochester, presented a paper on "Current Developments in the Use of Radioactive Materials for Medical Purposes." This paper was discussed by Dr. Robert C. Hall of Utica. Dr. Edward F. Hartung, chief, Division of Arthritis, New York Post-Graduate Medical School, presented a paper on "The Newer Aspects in the Treatment of Arthritis." Discussion was opened by Dr. Charles H. Hitchcock, associate professor of clinical medicine, Syracuse University College of Medicine. A paper on "The Establishment of a Regional Blood Bank" was then presented by Dr. Frederick N. Marty, assistant professor of clinical medicine, Syracuse University College of Medicine, in collaboration with Dr. Richard B. Jamieson of Syracuse. The discussion was opened by Dr. M. H. Gardner of Watertown.

During the business meeting, Mr. George P. Farrell, director, Bureau of Medical Care Insurance, spoke briefly on voluntary insurance plans.

The following officers were elected: Dr. Wardner D. Ayer, Syracuse, president; Dr. Arthur F. Gaffney, Clinton, first vice-president; Dr. Richard B. Cuthbert, Jr., Canastota, second vice-president; Dr. Donald C. Tulloch, Ogdensburg, secretary, and Dr. Olin J. Mowry, Oswego, treasurer.

At 6:00 P.M. there was a social hour for physicians and wives which offered an opportunity to meet and renew friendships.

The evening program consisted of a banquet which was attended by doctors and their wives. It was a pleasure to have with us Dr. W. P. Anderton, Dr. Laurance D. Redway, Dr. Robert R. Hannon, Mr. George P. Farrell, and Mr. Frederick W. Miebach.

An address was given by Dr. John J. Masterson of Brooklyn, president of the Medical Society of the State of New York. Remarks were given by Mrs. William J. Lavelle, president of the Woman's Auxiliary. Dr. Louis H. Bauer, secretary general of the World Medical Association, gave an informative address on this new organization.

An award of $25 was presented to the Auxiliary of Oneida County for having the largest percentage of physicians registered at the meeting.

During the afternoon the Woman's Auxiliary to the Oswego County Medical Society entertained members of the Fifth District Auxiliaries of the State in the Oswego County Historical House.

Respectfully submitted,
JAMES E. MCASKILL, M.D., *President*

January 30, 1950

Sixth District Branch

To the House of Delegates, Gentlemen:

In the absence of Dr. Pope, Dr. N. C. Lyster of Norwich, first vice-president, presided. The meeting was held at the Cortland Country Club, Cortland.

The meeting was called to order at 2:45 P.M. and the first number was a symposium on "Thoracic Diseases," given by Dr. N. Stanley Lincoln, director, Hermann M. Biggs Memorial Hospital, Ithaca; Dr. Richmond Douglass, and Dr. Frederick Beck, assistant director, Hermann M. Biggs Memorial Hospital. Dr. Lincoln discussed the differential diagnosis; Dr. Douglass, surgical procedures, and Dr. Beck, the use of antibiotics.

Dr. David Bloom, clinical professor of dermatology at New York University, gave a very interesting and well-illustrated talk on the more common dermatologic conditions of interest to the general practitioner.

A forum on public relations was then given. This forum was presided over by Mr. Frederick W. Miebach, of the State Society Public Relations Bureau, and was participated in by Dr. John Hirschfield of Ithaca and Dr. Bruce D. Lott of Binghamton.

Dr. Reginald Charles Farrow of Ithaca gave a paper on "The Nonunion of Fractures." The paper dealt with cases seen in military service and was very well illustrated with lantern slides. Following this a short business meeting was held at which the following officers were elected: Dr. Norman C. Lyster, Norwich, president; Dr. Elton R. Dickson, Binghamton, first vice-president; Dr. Gilbert M. Palen, Margaretville, second vice-president; Dr. James Palmer, Binghamton, secretary, and Dr. Robert Kerr, Cortland, treasurer.

Dinner was served and officers of the State Society were introduced.

Dr. Carlton E. Wertz, president-elect of the State Society, addressed the gathering, as did Mrs. William J. Lavelle, president of the Woman's Auxiliary to the Medical Society of the State of New York.

Mr. Robert Dineen, commissioner of insurance of the State of New York and chairman of the Doctors for Dulles Committee, spoke briefly.

Dr. Stuart Blakely of Binghamton spoke briefly on his observations made in the British Isles on the working of their National Health Insurance.

The evening paper was given by Dr. William A. Cooper, of New York Hospital, on "The Diagnosis of Tumors of the Gastrointestinal Tract."

The meeting adjourned at 10:00 P.M.

Respectfully submitted,

NORMAN C. LYSTER, M.D., *First Vice-President*

February 1, 1950

Seventh District Branch

To the House of Delegates, Gentlemen:

The eight component counties of the Seventh District Branch (Cayuga, Livingston, Monroe, Ontario, Seneca, Steuben, Wayne, and Yates) have expressed their interest in uniting their organizations into a unified District for the purpose of improving both medical relations and medical economics, and in general to pool their knowledge and experience to continue to render the best medical care possible. By this organization it is possible to unite ourselves against forces which would bring about destruction to the present progress of American medicine. It is with a great deal of credit to the progress of the Eighth District that the advancement in the organization of the Advisory Council of the Seventh District must pay tribute.

For several years the activities of the Eighth District through their Advisory Council have been observed and an expression of similar adoption in the Seventh District made even before the House of Delegates at Buffalo in 1949 requested that a similar organization be established in our District. At the May, 1949 meeting of presidents and secretaries of the Seventh District, definite plans were completed for a meeting the following month at which time Dr. Porter A. Steele, Eighth District president, and also Mr. Harold P. Jarvis, executive secretary, explained the development and working of the Advisory Council program which had then been carried out for several years. This meeting had 100 per cent representation from the counties of the Seventh District, which unanimously approved the plan to form an Advisory Council of the Seventh District patterned after that then in operation in the adjoining Eighth District.

The plan is briefly as follows: The Advisory Council is to be composed of the presidents and secretaries of each county, together with the officers of the Seventh District. The executive secretary of Monroe County, Miss Helen Guntert, would act as executive secretary for the Seventh District, and the offices and facilities of the Monroe County Medical Society would be used as headquarters for the offices. In order to finance payment for the extra help and time necessary, and to take care of the expense of mailing the Monroe County *Bulletin* to each member of the District, it was thereby resolved that a $3.00 per capita assessment be made each member of the county medical societies exclusive of Monroe County. Monroe County was contributing the office space and facilities and a large percentage of the salary for Miss Helen Guntert, executive secretary. The number of doctors in the Seventh District is approximately 1,400, with about 500 of these outside Monroe County, representing the rest of the District. It was thereby estimated that this would give approximately $1,500 for the budget to work out the plan, allowing $500 for the cost of the *Bulletin*, or $1.00 per person, $500 for supplementary salaries for the offices and the expense of maintaining this organization for the District, and $500 for incidentals such as telephone calls, printing, stationery, and minor incidentals, and for coordinating activities in the District pertaining to public welfare, workmen's compensation, public relations, etc.

It is the purpose of the Advisory Council to bring such important matters, as described, with their recommendations to the component societies for their action. This plan was submitted to each county for its individual approval and ratification. Many of the counties did not hold meetings during the summer and therefore the resolution could not be voted on until the fall of 1949. Each county has now approved this plan and the organization has had two important meetings, one in Rochester, December 15, and the other February 2, 1950, in Canandaigua.

At the December meeting the incoming county presidents as well as the retiring presidents and secretaries were included. Dr. Carlton E. Wertz, president-elect of the Medical Society of the State of New York, was guest speaker for the evening. By having such a joint meeting of the presidents and secretaries the continuity of activities in the county are maintained and the incoming presidents have an opportunity to become acquainted with the current problems relative to the District. At this meeting several issues were discussed, the important general topic was, "Each county medical society is responsible to set up a system whereby the people in their communities should be able to reach a doctor in emergency cases at all times." It was suggested in the smaller communities the arrangements be made with the doctors so that at no time would a community be left with no doctor available. The importance of alternating days the physicians take off as their holiday was brought out so as to prevent all doctors being away at the same time. In communities where hospital facilities existed it was suggested that the people could call the hospital in emergencies, and a doctor would be available through this means. The final working of this plan was to be left with each county medical society. The importance of this is of great magnitude at this time, since we know that the strongest argument for government control of medicine has been "inadequate medical care," with the emphasis on lack of the voluntary system covering communities in cases of such emergencies. Dr. Joseph Lane explained the sick-benefit clause of the compensation law with its many ratifications, and a very important summary of the Washington A.M.A. meeting was given by Dr. Floyd S. Winslow.

On February 2, a meeting of legislative chairmen of each county society was held at Canandaigua. The importance of this meeting was to have an opportunity to go over the pending legislation which may come up at Albany this year and to evaluate the effects the bills would have on the people in the State in regard to their medical aspects.

The annual scientific meeting of the District was held on September 22, 1949, at the Oak Hill Country Club in Rochester. This meeting had nearly a record attendance. The scientific program began at 10:00 A.M., a noonday luncheon was served at the Club, and a business meeting held at 4:00 P.M. with the election of officers for 1950. These include: Dr. George H. Gage, president; Dr. Samuel A. Munford, first vice-president; Dr. Glenn C. Hatch, second vice-president; Dr. James Yanick, secretary, and Dr. E. H. Wood, treasurer. Plans are now being made for the scientific meeting of the Seventh District to be held in September at the Clifton Springs Sanitarium in conjunction with the celebration of their centennial anniversary program.

Respectfully submitted,

KENNETH T. ROWE, M.D., *President*

Eighth District Branch

To the House of Delegates, Gentlemen:

The past year has been an eventful one for us in that we had the great pleasure of having the State Society recognize and approve our Advisory Council of Presidents and Secretaries of the Eighth District and the Central Conference Committee on Workmen's Compensation.

These organizations have met regularly, with an exceptional attendance and enthusiasm at each meeting. From time to time, guests have been invited to give us first-hand opinion on their reactions to problems involving kindred professions. These meetings have stimulated greatly a mutual respect and admiration between the dental, pharmaceutical, and medical professions and have laid the ground work for unified effort in attacking our reciprocal problems and difficulties. We look forward to continued cooperation between these groups, and we are now engaged in an attempt to correlate the activities of the Public Relations and Legislative Committees of the three professions. We have found that in a great many instances we could wholeheartedly support a mutual effort against a common threat, such as socialized medicine, or in backing a legislative measure of common interest. In the battle to safeguard the public health and to maintain the high standards of medical treatment that the American public has enjoyed, we need all of the allies we can find. We should not only welcome but assiduously cultivate the support of such closely allied organizations as the dental and pharmaceutical societies.

On Thursday, October 6, 1949, the annual meeting of the Eighth District Branch was held at Niagara Falls. Since this meeting was held in one of the border cities of the United States, the Program Committee, of which Dr. John C. Kinzly of North Tonawanda was chairman, issued an invitation to members of the Canadian medical profession in the adjacent Provinces to attend our meeting, and also invited some of our Canadian contemporaries to read papers. This invitation was graciously accepted by a delightful group of Canadian physicians. It was a great pleasure to have them with us, and we hope that in the future they will join with us in many more meetings.

The afternoon session consisted of three very interesting and stimulating papers with a discussion period following each one.

Dr. Dean McDonald, of St. Catharines, Canada, delivered a very unusual paper on, "Some Clinical and Practical Factors Concerning the Patient with Duodenal Ulcer," in which he brought out some frequently overlooked examinations that should be done and the implications of the findings in these examinations. The exacting scientific examination and careful attention to detail demonstrated in the cases presented should encourage all of us to make a more careful and exacting examination of these patients.

Dr. Lamar Soutter, of Boston, Massachusetts, gave a very interesting and instructive paper on, "The Newer Concepts of Traumatic Surgery," with particular reference to the abdomen and chest. Every physician is at times faced with an emergency involving these traumatic injuries, and this paper was designed particularly to be of help to us in meeting these situations. We were all very appreciative of the clear and concise presentation by Dr. Soutter and the generous expenditure of the time and effort he gave in coming from Boston to present it.

Dr. Erwin Neter, of Buffalo, presented a scholarly paper on, "The Use and Action of the Newer Antibiotics." His comprehensive discussion of this subject was welcomed by all. The progress in this field has been so rapid that every physician appreciates being brought up to date on their indication and uses. Dr. Neter made the subjects so clear that I am sure everyone present will use the antibiotics more intelligently and effectively since hearing his paper.

The discussions following the various papers were very ably presented and not only cleared up some of the dubious points but in many cases were excellent additions to the subject under discussion.

Following the scientific papers and discussions the annual business meeting and election of officers for the Eighth District Branch was held. The following officers were elected without opposition:

John C. Kinzly, M.D., *President*	North Tonawanda
Henry S. Martin, M.D., *First Vice-President*	Warsaw
Sydney L. McLouth, M.D., *Second Vice-President*	Corfu
Henry W. Ingham, M.D., *Secretary*	Jamestown
Laurence C. Older, M.D., *Treasurer*	Cuba

The election of these men of proved ability and enthusiasm assures the Eighth District of efficient and mature leadership, and we are looking forward to the coming year with confidence that the problems which arise will be ably met and solved.

The dinner meeting in the evening was very well attended, and we were happy to see so many of the ladies present. The Auxiliary was well represented and the State, District, and local officers were introduced. Mrs. William J. Lavelle, president of the State Auxiliary, responded with a gracious and eloquent talk on the work of the Auxiliary in its effort to combat socialized medicine and made a plea for the continued and greater support of the Auxiliary.

This was followed by the presentation of Dr. Carlton E. Wertz, president-elect of the Medical Society of the State of New York. He gave us an interesting talk on the problems facing the medical profession and a report on some of the progress that has been made in solving some of our difficulties. His enthusiasm and sincerity were contagious, and we were all stimulated to renewed and greater efforts to meet and solve the problems facing us in the coming year.

We then had the pleasure of listening to an address by the Honorable William L. Pfeifer, chairman of the Republican State Committee, Albany. He gave a masterly analysis of the trend of our government toward socialization, not only in medicine but also in all other fields. He brought home to us how close we were to losing our democratic form of government and our personal freedom and showed us the insidious methods being used to rob us of our heritage. His warning that we must fight to protect our "way of life" was very timely, and I am sure that we all left the meeting with a renewed determination to continue the battle.

On December 1, 1949, the early winter meeting of the Advisory Council was held in Buffalo. Our Executive Secretary discussed the coming legislative session and gave us some pointers about what to expect. Mr. Joseph J. Guariglia, secretary-attorney to the Workmen's Compensation Committee of the Medical Society of the County of Erie, discussed the new State Disability Benefits Program. Dr. Herbert H. Bauckus explained the Veterans Administration policies as they affect the private practitioners. Dr. Daniel M. Layer was present as a representative of the Dental Society and gave a talk on, "The Establishment of a Close Working Relationship Between Dentistry and Medicine in the Battle Against Political Medicine." Mr. Mearl D. Pritchard, a member of the Joint Conference Committee of the American Pharmaceutical Association and the United States Drug Administration, discussed the question of refilling of prescriptions.

In accordance with the action of the Medical Society of the State of New York last May, it was decided to ask for a contribution of one dollar per member from each of the county societies of the Eighth District to meet the financial needs of the District organization. The reaction to this plan was favorable, and we have every reason to believe that each county society will approve of this action and implement it.

The midwinter meeting was a joint meeting of the Eighth District Council, the Central Conference Committee on Workmen's Compensation, and the legislative chairmen from each of the county societies.

All of the bills of interest to the medical profession coming before the current session of the Legislature were discussed, and action taken on them. A report of the action taken was sent to the appropriate Legislators by Mr. Jarvis. Representatives of the Pharmaceutical Association were present and presented their views on the bills affecting both pharmacy and medicine.

In closing this report, I would be remiss in my duty if I did not call attention to the fact that the many successful activities of this District would have been impossible had it not been for the unselfish and enthusiastic support given by the many physicians in this and associated groups. And once again I want to pay tribute to the continued, untiring efforts of Mr. Harold P. Jarvis, our executive secretary, to make this group a successful organization. With the help of Mr. Joseph J. Guariglia, they have guided us with judgment and sagacity through the trials and tribulations of the past year.

Respectfully submitted,

ROBERT C. PEALE, M.D., *President*

SAVE THE DOGS

The perennial quarrel of the antivivisectionists with medical scientists, which has had many histrionic moments, reached an unprecedented height of melodrama at a recent public hearing in Baltimore, Maryland. The question before the house was whether the city pound should turn over unclaimed stray dogs to medical schools in the area for research work. More than 3,500 persons jammed Baltimore's largest auditorium for the city officials' hearing. Present were some of the nation's most ardent antivivisectionists, including the famous dancer Irene Castle and Mrs. Bennett Champ Clark, Jr., wife of the former Senator from Missouri. Also present were physicians of the Johns Hopkins Medical School and several exhibits of the value of animal research—children who had been saved by Alfred Blalock's "blue-baby" operation. The hearing quickly became noisy. The doctors were applauded, hissed, and booed. When the mother of one of the successfully treated children asked whether the antivivisectionists preferred to save the lives of babies or of dogs, several in the audience cried: "Dogs! Dogs! Save the dogs!"

Then the antivivisectionists played what they had announced in advance as a trump card. The blue-baby operation, they declared, was originated not at Johns Hopkins but by a British surgeon named Russell C. Brock, of Guy's Hospital in London—and he had accomplished it without experimenting on dogs.

Unfortunately for the antivivisectionists, Brock happened to be in the audience. The surgeon rose and firmly informed the hearing that Blalock had personally taught him how to perform the operation, and that he was himself using dogs for experiments in heart surgery. Said Brock: "I benefited from the technical details and skill worked out and acquired by Dr. Blalock and his associates on dogs ..... Without this preliminary animal research, the operation could never have been safely developed on human beings."

That was enough for the city officials. Soon after the hearing Baltimore became the 22nd U.S. city to decide to give its medical institutions the dogs they need.—*Scientific American, February, 1950*

Scientific Articles

AURICULAR FIBRILLATION WITH AND WITHOUT EMBOLIZATION

GAMLIEL SALAND, M.D., F.A.C.P., SEYMOUR L. FRANK, M.D., ABNER STERN, M.D., and MAX WEISS, M.D., NEW YORK CITY

(From the Medical Services of the Bronx Hospital)

THE catastrophic results of embolization, whether it occurs in the lungs or in the peripheral circulation, are well known. Only in the recent past have we been able to take steps either to avoid this accident or to treat a patient with any measure of success after the accident has occurred.[1-3] Auricular fibrillation with embolization was one particular condition in which, in the past, we stood by helplessly while patients suffered from the effects of embolization. The literature is replete with reports of pulmonary and systemic arterial embolic phenomena with the loss of limb and life.[3]

There have also been many reports showing that quinidine can restore regular sinus rhythm in auricular fibrillation in a large percentage of cases, with very little fear of further embolization or sudden death.[4,5] However, the profession at large has been reluctant to use the drug because doctors feared fresh embolization or sudden death.[6,7] Therefore, we conceived the idea that if we could minimize the danger of thrombosis or embolization by the use of anticoagulants, quinidine could be given with less fear.

Procedure

At first we treated only cases of auricular fibrillation with embolic accidents, either to the lung or the peripheral arterial system, or both. Later, we accepted all cases of auricular fibrillation in the hope of restoring them to regular sinus rhythm before embolic phenomena could occur.

If a patient was in failure or had a rapid ventricular rate, he or she received digitalis to keep that rate under control. If a patient required digitalization or a maintenance digitalis dose, this was given, regardless of the fact that quinidine was to be administered at the same time.

Regardless of whether or not digitalis was given, the patient was started on Dicumarol immediately on admission. The usual precautions of Dicumarol administration were observed with daily prothrombin times. We attempted to get the prothrombin time between 20 and 30 per cent of normal, and we tried to maintain the patient on Dicumarol at that level for about ten days before quinidine was given.

Quinidine therapy was then instituted in the following manner: The patient was given a test dose of 3 or 5 grains of quinidine, and, if there was no untoward effect in two hours, the patient was given 5 grains three times a day. The dose was gradually increased even up to 120 grains daily, if necessary, in an attempt to restore regular sinus rhythm, provided there were no toxic effects. When regular sinus rhythm was restored, the dose of quinidine was gradually reduced to a minimum maintenance dose of 9 to 15 grains daily.

The electrocardiogram was used first on admission to corroborate the fact that the patient was fibrillating and again before the exhibition of quinidine. When regular sinus rhythm was evident, this fact was again verified with the electrocardiogram.

Dicumarol was discontinued when a maintenance dose of quinidine had been reached in a patient who had been restored to sinus rhythm or when it was evident that regular sinus rhythm would not be re-established by the use of quinidine.

Results

Twenty-seven patients with fibrillation were presented for therapy. One patient with thyrotoxicosis was treated with propyl thiouracil and quinidine but was not given Dicumarol, and, although regular sinus rhythm was restored, we did not feel that this case should be included in our series. There were two other patients who received minimal doses of quinidine in whom vertigo, nausea, and vomiting were so marked that the drug had to be stopped soon after onset of therapy; these two cases were also excluded. Thus, 24 patients remained for evaluation, and analysis revealed the following:

Etiology.—There were 15 cases of rheumatic heart disease, seven of hypertensive heart disease, and two of arteriosclerotic heart disease.

Sex.—There were six males and 18 females. The males consisted of one hypertensive heart disease and five rheumatic heart disease patients. In the female group there were eight rheumatic heart disease, eight hypertensive heart disease, and two arteriosclerotic heart disease patients.

Age.—The ages varied from seventeen to seventy. The rheumatic group had one patient of seventeen years; the others were from thirty-five to forty-nine years of age. The hypertensive group varied from thirty-nine to sixty-two years of age, and the patients with arteriosclerotic heart disease were sixty-five to seventy years old. In our series, there was no relationship between the age of the patient and success in the conversion of fibrillation to regular rhythm.

Size of the Heart.—The heart was enlarged in 22 patients. Regular sinus rhythm was restored in 12 of the patients with enlarged hearts so that enlargement of the heart did not prove to be an obstacle to successful restoration of regular sinus rhythm.

Heart Failure.—Twenty of the patients were in heart failure. Eleven of the successful cases had failure at the time of quinidine exhibition. Heart failure in our series, therefore, did not prove to be a contraindication for the use of quinidine.

Duration of Fibrillation.—The duration of fibrillation prior to therapy was known in 17 patients. Six patients had fibrillated less than one year, and, of these, three were restored to regular sinus rhythm. Eleven patients had fibrillated one to thirteen years, and, of these, eight were restored to regular sinus rhythm. In fact, in two of these patients, one with rheumatic heart disease and the other with hypertensive heart disease, fibrillation had been present thirteen years. The duration of fibrillation, therefore, had no relationship to the success of the outcome.

Relation of Embolism to the Duration of Fibrillation.—There were nine patients with known duration of auricular fibrillation who had embolic phenomena. Of these, three had fibrillated three weeks or less, two had fibrillated one year or less, and four had had the arrhythmia six to thirteen years. Of the eight patients with known duration of auricular fibrillation and no embolic phenomena, two had fibrillated less than one month, two for a year or less, and four had had the arrhythmia one and one-half to thirteen years. Thus, in our series of 17 cases the duration of known fibrillation was not related to embolization.

Relation of Etiology to the Restoration of Sinus Rhythm.—Seven of the 15 rheumatic patients, six of the seven hypertensives, and none of the arteriosclerotic patients were restored to sinus rhythm. The hypertensive group, therefore, presented the greatest measure of success.

Embolism.—Embolism, present or past, existed in 15 cases. Ten were in the rheumatic heart disease group, four in the hypertensive heart disease group, and one in the arteriosclerotic heart disease group.

Relation of Success to Embolism.—Of the ten patients with embolism and rheumatic heart disease, three were restored to regular sinus rhythm, six failed, and one died. All four hypertensive patients with embolism were restored to regular sinus rhythm. The one patient with arteriosclerotic heart disease and embolism continued to fibrillate. Embolism seemed to be an obstacle to restoration of regular sinus rhythm in rheumatic heart disease but not in hypertensive heart disease. In the five cases of rheumatic heart disease without embolism, four were restored to regular sinus rhythm, both cases of hypertensive heart disease were successful, and again the arteriosclerotic heart disease patient failed to go into regular rhythm. It is seen, therefore, that the best results were obtained in hypertensive heart disease; the next best in rheumatic heart disease without embolization. Rheumatic heart disease with embolization proved more refractory, and the two patients with arteriosclerotic heart disease did not respond at all.

Digitalis.—Twenty-three patients received digitalis; the only patient who did not receive it failed to revert to regular rhythm. Digitalis, therefore, was not a factor in preventing restoration to regular sinus rhythm.

Electrocardiographic Findings.—All patients showed auricular fibrillation prior to quinidine therapy. After restoration to regular rhythm, five patients showed first degree auriculoventricular block (four rheumatics and one hypertensive). One hypertensive patient showed nodal rhythm with intraventricular conduction defect and is included in our series of restoration to regular rhythm. All of these patients were on digitalis therapy, and the first degree block may be ascribed to this drug.

Dicumarol.—The average period of administration of Dicumarol before the exhibition of quinidine or electrocardiogram was eight days. The daily dose varied between 0 and 100 mg., and the total dose varied from 400 to 2,300 mg. One patient received 400 mg.; eight patients received 500 to 1,000 mg.; ten patients 1,000 t

2,000 mg., and three patients were given 2,000 to 2,300 mg. There were no untoward effects.

Quinidine.—Thirteen patients of the 24 were successfully restored to regular sinus rhythm. The total doses required before regular sinus rhythm was restored were as follows: in six cases 10 to 50 grains; in two cases 50 to 100 grains; in three cases 100 to 200 grains; one case required 217 grains, and one patient received 715 grains. This last case received 120 grains daily before the effect was obtained.

Eleven cases were considered failures. One patient did not cooperate. Eight patients had toxic symptoms, and the drug was discontinued. The toxic symptoms complained of by the eight were tinnitus, vertigo, nausea, and vomiting. In only one patient was there no effect in spite of sufficient trial, and one case died. This patient died suddenly in less than twenty-four hours after the start of quinidine administration and for this reason will be reported in some detail.

Case Report

Mrs. M. W., age forty, was admitted to the gynecologic service because of metrorrhagia and abdominal pain of four months duration.

Present Illness.—The patient had had cardiac failure six years ago. Prior to this, the menses had occurred every twenty-five to thirty days with a scanty, three-day flow. For the past six years menses arrived every three or four months. Four months ago there had been profuse bleeding, lasting seven days. Since then there had been no menses, but she had bled daily per vagina, and had had mild lower abdominal pain.

Past History.—She had polyarthritis at two years with carditis and was in bed nine months. An embolic episode had occurred nine months before admission with paresis of the left upper extremity and the left face.

Physical Examination.—There were a few moist rales at the right base. The point of maximum impulse was in the fifth intercostal space in the anterior axillary line. The rhythm was totally irregular. A loud blowing systolic and an early diastolic rumbling murmur were heard at the apex, both transmitted over the entire precordium. The ventricular rate was 71, and there was no pulse deficit. The blood pressure was 140/70. The liver was felt two and one-half fingers below the costal margin in the midmammary line. A fluid wave and shifting dullness were present in the abdomen. A mass was felt in the right lower quadrant four fingers above the symphysis. There was no peripheral edema. Vaginal examination revealed a rounded mass movable with the uterus, the size of a three-months pregnancy.

Diagnosis.—Rheumatic heart disease, inactive; mitral stenosis and insufficiency; auricular fibrillation, class 4E; and fibroid uterus. Because of her cardiac condition and the fact that bleeding had ceased, the patient was transferred to the medical service. The venous pressure was 310 mm. of water which increased to 440 mm. on right upper quadrant pressure. The arm to lung time was fourteen seconds, arm to tongue fifty-five seconds. The x-ray of the chest showed marked heart enlargement, congestive edema, and calcific deposits, interpreted as probably in the pericardium over the region of the left heart shadow. The electrocardiogram showed auricular fibrillation and digitalis effect. The blood count was normal; the urine showed 1 plus albumin and a few red blood cells.

Course.—The patient ran a slight febrile course for about eleven days, and then her temperature was normal for six days before death. Dicumarol therapy was given for seven days, and then the patient was given a test dose of 3 grains of quinidine without any untoward effect. She was then given 5 grains of quinidine, and this dose was repeated in four hours. The next morning the patient was found dead in bed. She had received 13 grains of quinidine.

*Postmortem Examination**.—Autopsy was performed and revealed the following: adhesive pericarditis; calcific plaques in the pericardium and myocardium; enlarged left auricle with calcific plaques in the endocardium; mitral stenosis with calcification; thickening of mitral and aortic valves; slight atherosclerosis of the aorta and coronary arteries; chronic passive congestion of the liver, spleen, and kidneys; a large, old infarct of the left kidney; a small, scarred right kidney; right adhesive pleuritis; accessory spleen; ascites; bilateral tumors (adenocarcinoma) of the ovaries, and slight pulmonary edema and congestion.

The calcific deposit in the myocardium was in the region along the left border of the heart extending from the auriculoventricular septum for 5 cm. along the left border and widening to a thickness of 2 cm. At a distance of 2.5 cm. from the auriculoventricular node the calcification was adherent to the pericardium. No evidence of thrombi was found in any of the heart chambers.

It is, therefore, problematic whether this patient died as a result of quinidine administration. There was certainly enough pathologic background for sudden death without implicating quinidine. Even if we were to concede that death here was related to quinidine therapy, the mortality rate was still less than the usual 4 per cent quoted in the literature.

Embolism as a Result of Quinidine Therapy.—There was only one patient who had pulmonary infarction during the administration of quinidine, and that was one who had not been restored to regular sinus rhythm.

Follow-up

Of the 13 patients who were restored to regular sinus rhythm, 12 are still alive, one patient having died seven months after discharge. We were unable to ascertain the cause of death. Ten are still in regular rhythm, six of these on a maintenance dose of 3 to 5 grains of quinidine three times a day; the other four patients are in regular rhythm without taking quinidine, but we feel that even in these patients quinidine therapy should be continued. Three patients have been in regular rhythm for three months, two for six months, three for one year, one for sixteen months, and one patient has been regular for two years.

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* We are indebted to Dr. Joseph Felsen, Director of Laboratories, for the details of the pathologic findings.

Of the two failures, one patient was uncooperative. The other developed a rash eleven days after discharge from the hospital; on omission of the drug the rash disappeared, and fibrillation set in promptly. On re-exhibition of quinidine the rash reappeared, and the drug had to be discontinued.

Comment

The aim of our work was to restore regular sinus rhythm in fibrillation to avoid embolization or to prevent the recurrence of embolization. It is a known fact that the efficiency of the heart is improved tremendously when the ventricular rate is slowed in cases of fibrillation with rapid ventricular rates.[8,9] There seems to be doubt as to whether the efficiency of the heart is improved in those cases of fibrillation with spontaneously slow ventricular rates. However, as the prevention of embolization was our aim, the efficiency question was not germane to our study, as we did not feel that the restoration of regular sinus rhythm would ever decrease cardiac efficiency.

The real problem to be faced is whether we are justified in withholding quinidine because of the hazard of sudden death following its administration when we know it can be depended upon to restore normal rhythm and prevent embolization. The one factor to be considered, therefore, is that of sudden death, which may occur in any case of heart disease, particularly in auricular fibrillation. The percentage in various reports runs from 2.5 to 10.4.[10,11] The mortality rate after the giving of quinidine is about 4 per cent. This is the rate that most workers would agree to be a causal relationship.[12]

If our one sudden death is attributed to quinidine administration, the percentage conforms to the mortality rate quoted in the literature. However, we are not sure that quinidine was the cause in this instance. If we accept the statistics, therefore, there is no more danger of sudden death when we give quinidine to a patient with fibrillation than if we were to omit quinidine therapy. This statement, however, overlooks the high mortality rate as a result of embolization in cases where death is not sudden. A patient who fibrillates and sends emboli to major vessels often dies as a result of this accident ultimately. This brings us to the consideration of the second factor, namely, that of embolization.

The over-all frequency of embolization during auricular fibrillation as reported varies from 16 to 35.2 per cent.[13,14] It has also been shown that thrombi form in auricles or auricular appendages more often in cases dying of heart disease when fibrillation exists than when the mechanism is normal.[15–17] With the restoration of normal rhythm, fewer clots are prone to form in the auricles. If, therefore, one has done nothing more than to eliminate the possibility of embolization, he has performed a major service and probably prolonged the patient's life.

We feel that by the administration of Dicumarol the blood is prevented from forming thrombi for a period of time sufficient to make the exhibition of quinidine a safe therapeutic procedure. The auricles are thus regarded as a venous structure and anticoagulants are administered in the same manner as in peripheral venous thrombosis. We also feel that this method can be improved upon by giving heparin for the first forty-eight hours before the Dicumarol effect is obtained, and, as a matter of fact, we are now using this routine. Since the anticoagulant effect of Dicumarol is not manifested in the first forty-eight hours, and particularly in fibrillators with active embolization, immediate heparinization is of paramount importance.

Summary

Twenty-seven patients who fibrillated were given quinidine, and 26 of these were given Dicumarol prior to quinidine administration. Of these 27 patients, 15 had had embolic phenomena. Only one patient had an embolic episode during the course of therapy. There was only one death which might possibly be attributed to the exhibition of quinidine.

The age of the patient, the size of the heart, presence of cardiac failure, duration of fibrillation, and administration of digitalis were no contraindications to quinidine therapy. The incidence of embolism was not related to the duration of fibrillation. Thirteen of the fibrillators were successfully restored to regular rhythm.

The best results were obtained in hypertensive heart disease; the next best in rheumatic heart disease without embolization. Rheumatic heart disease with embolization was less amenable, and our two arteriosclerotic heart disease patients did not respond at all. We do not feel that the administration of Dicumarol increases the efficiency of quinidine in restoring auricular fibrillation to regular sinus rhythm. We do feel, however, that Dicumarol administration prior to the exhibition of quinidine produces a state during which the formation of platelet thrombi or clots in the heart chambers may be avoided. This procedure should be used particularly in those

patients who have had embolic phenomena and also in those who have not yet had embolizations. We also feel that, in patients who are actually embolizing, this purpose can be better served by heparinization for the first forty-eight hours.

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AN ANALYSIS OF THE EFFECTS OF AERIAL TRANSPORTATION ON PATIENTS

In an attempt to shed some light on the controversy over the relative merits of aerial transportation of patients which persists despite extensive use of the method during World War II, the air evacuation unit of the U.S.A.F. School of Aviation Medicine studied 1,860 patients transported by air from January 21, 1947, to February 29, 1948. Of the total number, 6.6 per cent showed some symptoms of air sickness or other discomfort. If the minor symptoms of headache, pallor, sweating, and chilliness are discounted, only 4.7 per cent suffered any appreciable discomfort. Included in the total were 564 cases selected particularly for study. While the smallness of the number in each of the diagnostic groups requires cautious interpretation of percentages, noteworthy percentages apparently occur in four groups—diseases of bones and organs of movement, diseases of genitourinary system, diseases of the digestive system, and wounds and injuries. In general, however, the data at hand do not contraindicate air transportation for any of the selected classifications in this study.

—Lt. Col. K. E. Pletcher, M.C., U.S.A.F., Lt. Col. F. L. Duff, M.C., U.S.A.F., and Sidney J. Cutler, M.D., The Journal of Aviation Medicine, August, 1949

A.M.A. COUNCIL SUMMARIZES RESEARCH ON VITAMIN E THERAPY

Protagonists of vitamin E therapy have not reported any results derived from critical clinical tests, says a report of the Council on Pharmacy and Chemistry of the American Medical Association.

The report, which appears in the February 18 issue of the *Journal of the A.M.A.*, says, in part:

"More than three years ago, stories appeared concerning a remarkable new treatment for patients with circulatory disease. The treatment was said to have been discovered by some investigators in London, Canada. It was alleged that large doses of vitamin E could effect remarkable recoveries in patients with a wide variety of cardiovascular disorders who had not been benefited by more orthodox therapy.

"The protagonists of vitamin E therapy have not reported any results derived from critical clinical tests, although medical and lay literature contain reports which, to the uncritical, might appear to lend support to the hypothesis that vitamin E is useful in the treatment of heart disease.

"It is regrettable that the hopes of sufferers from heart disease and other cardiovascular conditions, as well as those of countless diabetic persons, should be falsely raised by unbridled enthusiasm."

The A.M.A. report cites a number of "carefully conducted and adequately controlled" studies which, according to the Council on Pharmacy and Chemistry, failed to substantiate early reports of the usefulness of vitamin E in heart disease and diabetes.

COAL TAR THERAPY IN DERMATOLOGIC CONDITIONS

F. Philip Lowenfish, M.D., New York City

(From the Dermatologic Service, City Hospital, Welfare Island)

SINCE Fischel first reported the use of tar as a therapeutic agent in skin disorders in 1894, it has been employed in many dermatologic conditions with marked success.

The original coal tar preparations were black, pungent, sticky preparations which soiled the clothing, bed clothes, linens, and everything with which they came in contact. The pronounced odor of tar was, in many cases, offensive to the fastidious patient. The undesirable features, coupled with the fact that many sensitivities developed from the irritating substances found in the crude product, were not conducive to patient cooperation.

In recent years, extracts of the crude tar were made which eliminated many of the irritating substances, the color, and even the odor but which retained the active therapeutic ingredients. The result has been that tar is used more widely today than ever before, and the patient is no longer revolted by this treatment.

In our present study we selected a preparation, described by the manufacturer as a 5 per cent "special process" extract of tar, combined with menthol and lanolin in a vanishing cream base.* This special process, according to the manufacturer, produces a tar extract higher in tar solids (unsaturated hydrocarbons, sulfur, and light phenols) than the standard described in the National Formulary.

The 51 cases in this study were chosen at random from the wards of City Hospital and from the writer's private practice. Of these, 11 were suffering from psoriasis, five from neurodermatitis, eight from atopic eczema, six from seborrheic dermatitis, 11 from chronic recurrent contact dermatitis, three from allergic dermatitis, four from varicose eczema, and three from lichen planus.

With the exception of the psoriasis cases, the other patients received 50 r (100 kilovolts) unfiltered roentgen-ray therapy weekly following the application of the 5 per cent ointment. They were instructed to apply the ointment twice daily (morning and evening) between roentgen-ray treatments.

Results

In Table 1 we have listed 20 of our most interesting cases, and one is struck by the uniform results obtained in most instances. Of course, there were exceptions, such as Case 12, a psoriasis

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* The preparation used for these cases was Tarbonis, supplied by the Tarbonis Company, Cleveland, Ohio.

TABLE 1.—Observations in 20 Cases Treated with 5 Per Cent Coal Tar Ointment

Case	Sex	Age (Yrs.)	Occupation	Duration of Recurrent Eruption	Location	Diagnosis	Results
1	F	65	Teacher	10 Years	Palms, soles	Dermatosis of palms, soles	Little change
2	F	32	Housewife	$2^1/_2$ Years	Palms, backs of hands	Chronic recurrent contact dermatitis	Hands cleared (Fig. 1)
3	F	56	Housewife	10 Years	Elbows, knees, leg	Psoriasis	Cleared
4	M	27	Physician	3 Years	Buttocks, thighs, legs, arms	Neurodermatitis	Improved
5	M	35	Salesman	7 Years	Elbows, knees, scalp	Psoriasis	Improved
6	M	59	Tailor	12 Years	Scalp, ears, chest, back	Seborrheic dermatitis	Improved
7	M	29	Musician	3 Years	Arms, forearms, back, thighs	Neurodermatitis	Cleared
8	M	59	Electrician	25 Years	Right lower third of leg	Varicose eczema	Healed
9	M	32	Technician	6 Months	Back of right hand	Chronic contact dermatitis	Healed
10	M	56	Ward patient	10 Years	Generalized	Psoriasis	Improved
11	M	37	Lawyer	5 Years	Scalp	Seborrheic dermatitis	Cleared
12	F	39	Stenographer	3 Years	Scalp, elbows, legs	Psoriasis	No change
13	F	49	Housewife	10 Years	Generalized	Psoriasis	Some improvement
14	M	40	Plumber	4 Years	Arms, forearms, legs, thighs	Psoriasis	Improved
15	F	42	Housewife	7 Months	Left leg	Atopic eczema	Improved
16	F	47	Secretary	3 Years	Back, arms, thighs, legs	Neurodermatitis	Improved
17	F	56	X-ray technician	2 Years	Back of hands	Chronic recurrent contact dermatitis	Cleared
18	F	59	Cook	1 Year	Left lower third of leg	Varicose eczema	Healed but recurred
19	M	37	Insurance	4 Years	Generalized	Allergic dermatitis	Improved
20	M	27	Salesman	2 Years	Ears	Chronic contact dermatitis	Cleared

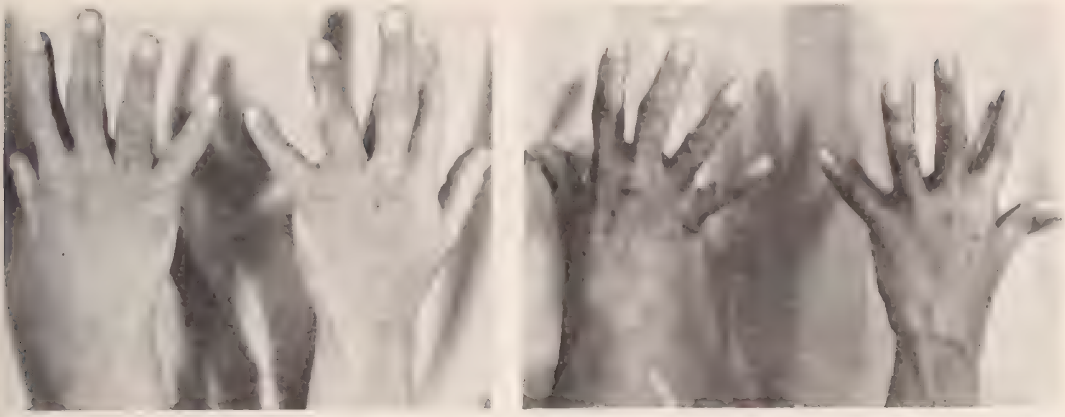


FIG. 1. Chronic recurrent contact dermatitis of two and one-half years duration. (Case 2). Left: Before treatment. Right: Complete clearing after five weeks of treatment.

TABLE 2 — RESULTS OF TREATMENT ACCORDING TO DERMATOLOGIC CONDITION

Condition	Number of Cases	Cleared or Marked Improvement	Moderate Improvement	Slight or No Improvement
Psoriasis	11	2	4	5
Neurodermatitis	5	3	2	..
Atopic eczema	8	6	1	1
Seborrheic dermatitis	6	5	1	..
Chronic recurrent contact dermatitis	11	9	1	1
Varicose eczema	4	1	1	2
Allergic dermatitis	3	..	2	1
Lichen planus	3	2	1	..
Total	51	28	13	10
Per Cent		54.9	25.5	19.6

which showed no change, and Case 13 which showed slight improvement, whereas the other eight cases showed improvement or cleared.

Other interesting features are the two varicose eczema cases which are listed in which one (Case 8) healed without recurrence, but another (Case 18) experienced a recurrence, after healing, which did not respond to the same treatment. Four cases of varicose eczema were treated with the aforementioned results.

The results obtained in all cases are listed in Table 2. In all, 51 cases are reported, of which 28, or 54.9 per cent, cleared or showed marked improvement and 13, or 25.5 per cent, showed moderate improvement. A total of 10, or 19.6 per cent, showed no improvement or improved slightly.

Summary

A series of 51 cases of various chronic skin conditions observed at the City Hospital and in private practice has been reported. Of these, 41, or 80.4 per cent, showed marked or moderate improvement.

It would seem from these observations that the ointment employed in conjunction with roentgenray therapy is of value in chronic dermatoses.

57 WEST 57TH STREET

A LETTER TO THE PRESIDENT OF THE A.M.A.

This letter did not come from a doctor. It was written by Mr. J. C. of Chicago and reads as follows:

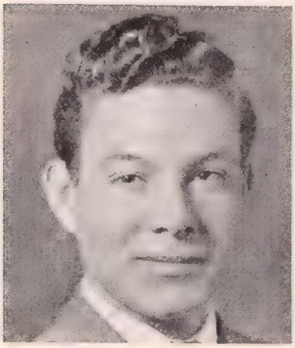
> I cannot put M.D. after my name, but I can, at least for a while, still put U.S.A. As a consequence please accept the enclosed check for $25 as a slight token of regard for my doctor and all his colleagues. These are my "dues" as a citizen, and I hope they will help in your fight against socialized medicine.
>
> A people without guts are soon a nation without guts, and, if it should become necessary to remove any part of mine, I want to pick my man and pay his charge without a precinct captain getting his nose in my anatomy.—*A.M.A. News Release, January 16, 1950*

WHO'S WHO

in the

State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the JOURNAL *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

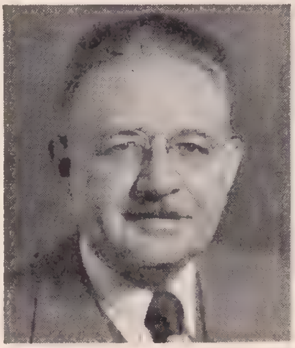


VICTOR R. FORESTIER joined the headquarters staff a year ago and is an assistant to Mr. Bonzer in the mail room. His duties consist of wrapping and mailing copies of the *Medical Directory*, packages, and orders of literature and materials for the National Education Campaign. He also helps with work for the mimeograph, graphotype, and addressograph machines. Before joining the staff, he worked for two years for Service Company, leather manufacturers.

A native of Porto Rico, where he attended high school, Mr. Forestier is now studying stenography and typing at night courses at the Washington Irving High School in New York City. He came to the United States in 1947 and now resides in Forest Hills. Interested in singing and in church activities, he is also a private, first class, in the medical detachment of the 259th AAA Gun Battalion of the New York National Guard.

JAMES M. KELLY is one of the advertising representatives for the NEW YORK STATE JOURNAL OF MEDICINE and the *Medical Directory*. He joined the staff in September, 1949, and has charge of the New York City and New York State territory. Before joining the staff, Mr. Kelly was associated with Standard Rate and Data Service, in New York City and Chicago, for twenty-four years, as Eastern advertising manager, and as vice-president for several years before his resignation. He attended New York University and is a graduate of Savage School of Physical Education in New York City. For two years he was a physical education instructor in the New York City schools.

A native of New York City, Mr. Kelly now lives in Richmond Hill with his wife and family, which includes two sons, James, Jr., and Michael, and three daughters, Kathleen, Marguerite, and Veronica. He is interested in singing and amateur theatricals.



KATHRYNE GALBRAITH joined the headquarters staff in October, 1949, and is secretary to Mr. Frederick W. Miebach, Director of Information in the Public Relations Bureau, in charge of press and radio relations for the State Society, and also coordinator of the work of the field representatives in the National Education Campaign. Miss Galbraith handles the secretarial duties connected with these. Before joining the staff, Miss Galbraith was secretary in the office of the *Natural History Magazine*, published by the Museum of Natural History, and secretary for Warwick and Legler, a New York City advertising agency. During the war she worked at the Naval Station in New Orleans, Louisiana.

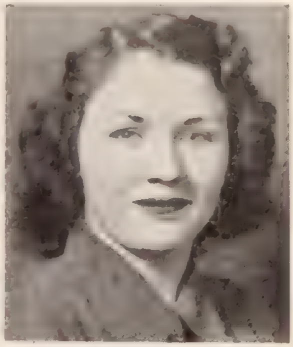
Born in Gulfport, Mississippi, Miss Galbraith received her Bachelor of Arts degree from the Mississippi Woman's College, where she majored in English. She now lives in New York City.

MRS. JANE D. CARRIER works in the *Directory* Department, having joined the headquarters staff in October, 1949. Her duties include answering telephone inquiries in regard to information about physicians listed in the *Directory*, working on copy cards for the new edition, and doing general clerical work in the department. This includes typing, checking registration of doctors, correspondence, and mailing. Before beginning her work for the State Society, Mrs. Carrier was employed at Commercial Solvents Corporation, in New York City. She is a graduate of the University of Georgia, in Athens, Georgia, where she received a Bachelor of Arts degree in journalism.

A native of Albany, Georgia, Mrs. Carrier now resides on North Brother Island, in the Bronx.

MRS. ALICE T. OTTARSKI joined the headquarters staff in October, 1949. She is the switchboard operator and receptionist, handling all telephone calls which come in over the ten trunk lines at MUrray Hill 3-0701 and routing them to the correct line of the thirty-one extensions in the headquarters office. As receptionist she greets all who call personally at the office at 292 Madison Avenue and either answers their requests or puts them in communication with the proper department. Before joining the staff, Mrs. Ottarski was a long distance operator for the American Telephone and Telegraph Company, in New York City.

Born in Pennsylvania, she attended Walton High School in the Bronx and now resides in Brooklyn with her husband, a Navy veteran employed by a book distribution company.



JOSEPH A. MULLANEY joined the headquarters staff in November, 1949, as advertising representative for the NEW YORK STATE JOURNAL OF MEDICINE and the *Medical Directory*. His territory is the Middle West and New York City, where he interviews potential advertisers and services accounts. Prior to joining the staff, Mr. Mullaney was in charge of advertising and public relations for the Federation Bank and Trust Company, New York City, and advertising manager for Kates-Boylston Publications, New York City. At one time, Mr. Mullaney played professional baseball and professional basketball.

Born in New York City, Mr. Mullaney now lives in Flushing with his family. He attended New York University School of Commerce. He has four sons, Joseph III, All-American in basketball at Holy Cross and now with the Boston Celtics; David, who is captain of the U. S. Naval Academy basketball team; Brian, and William.

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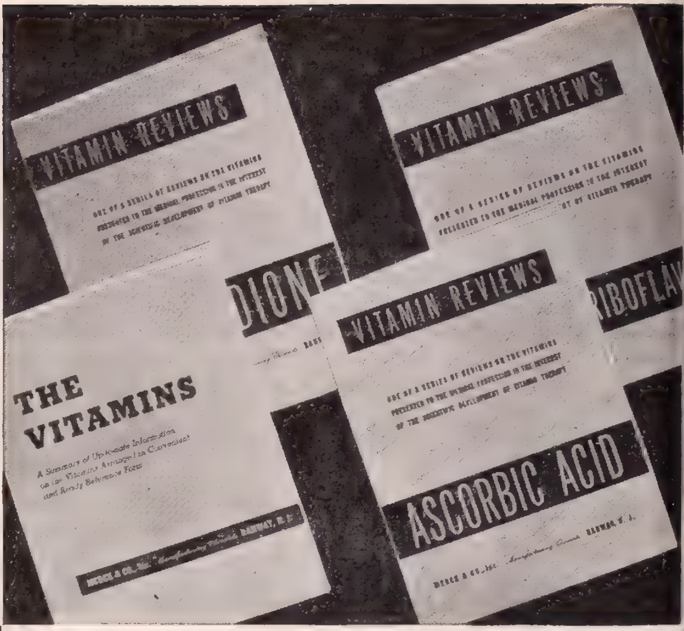
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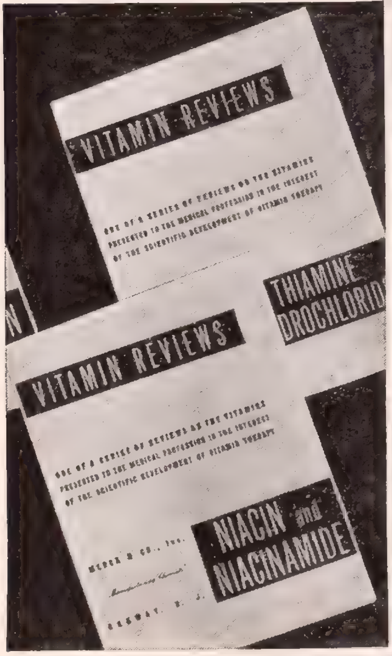
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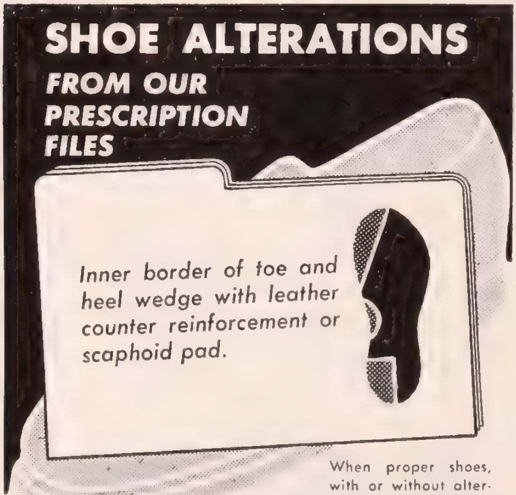
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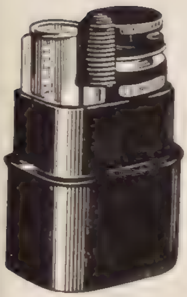

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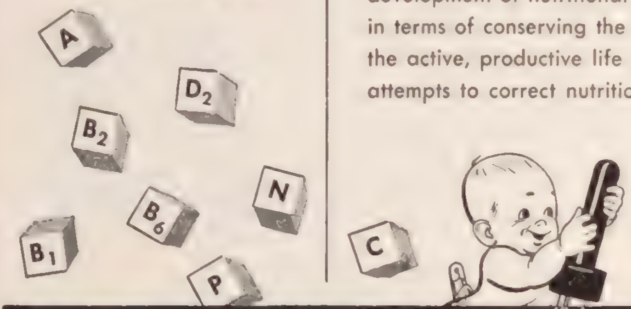

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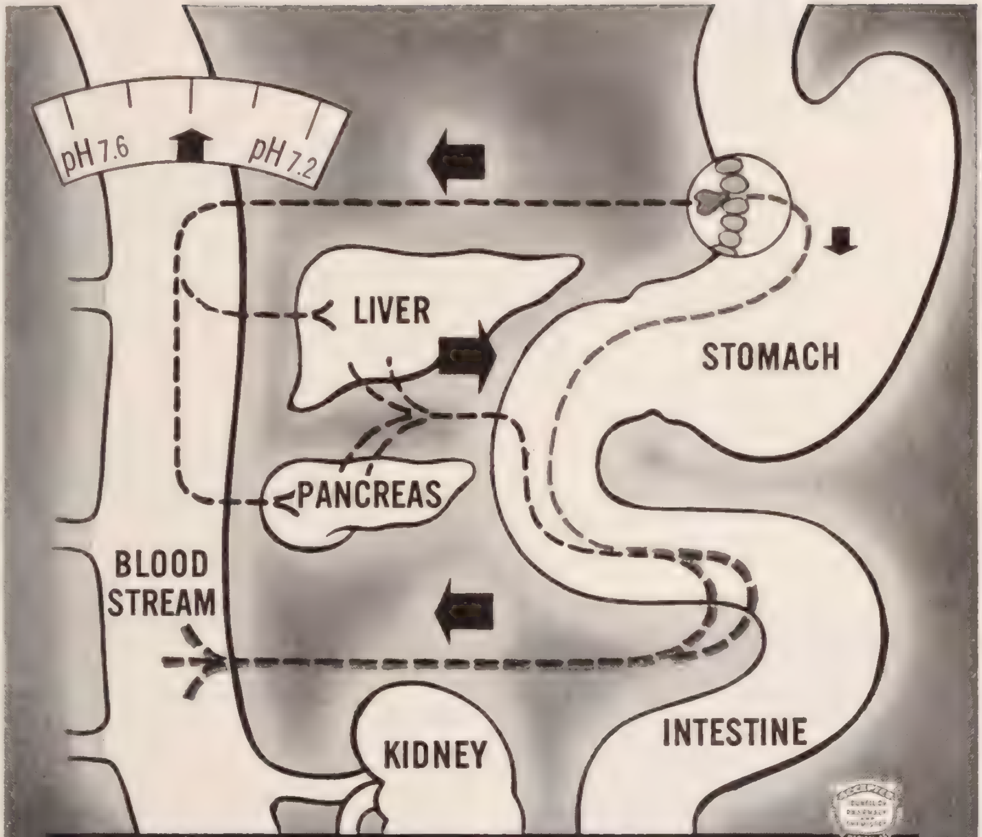
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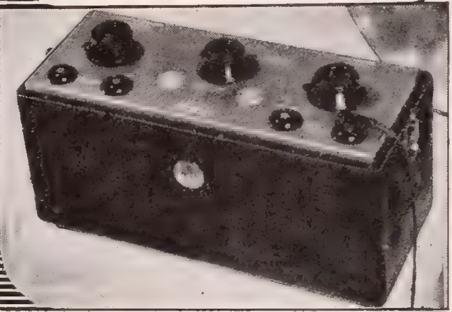

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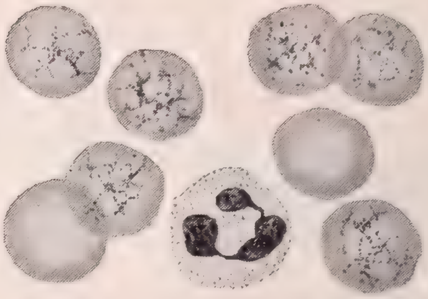

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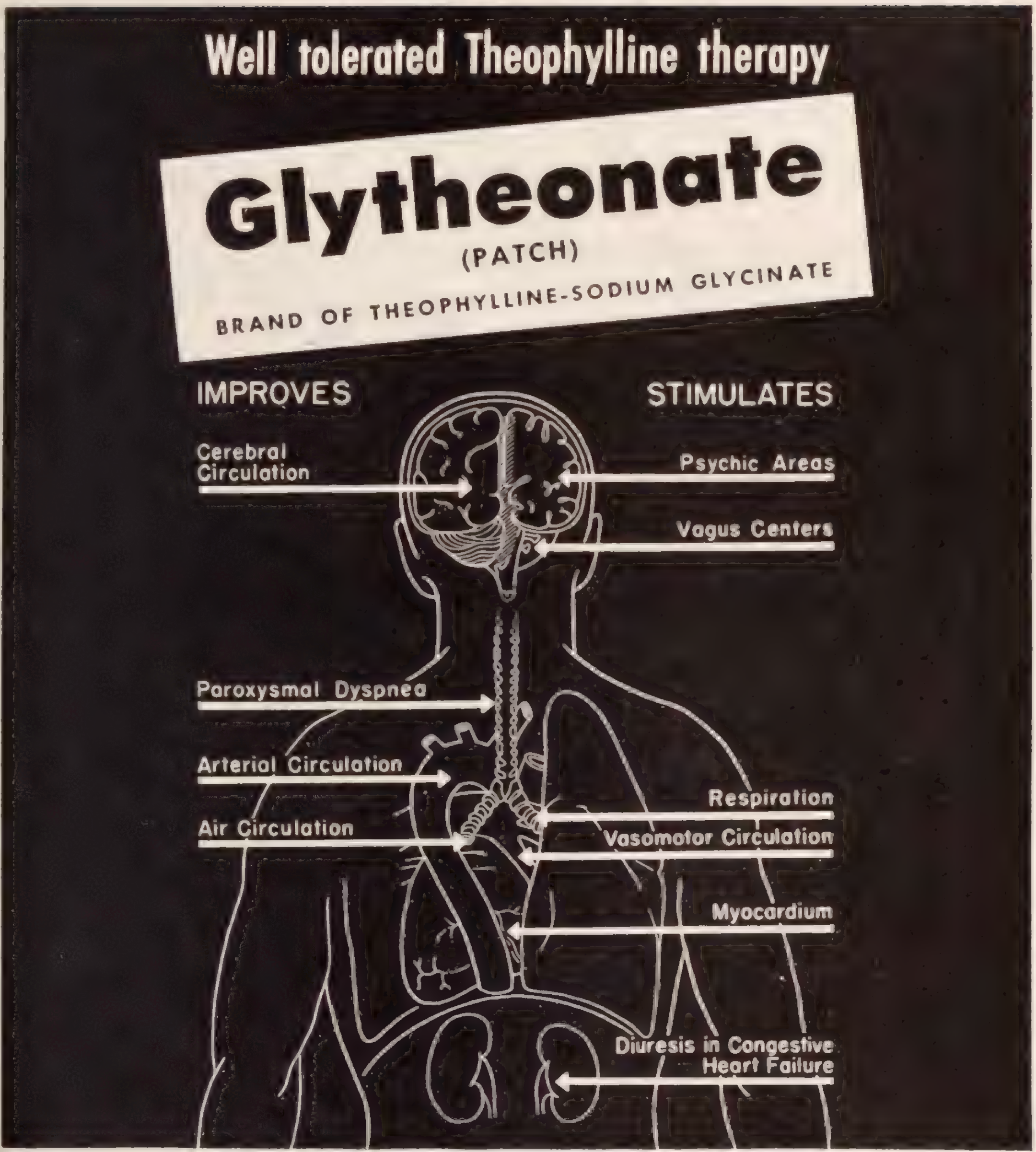
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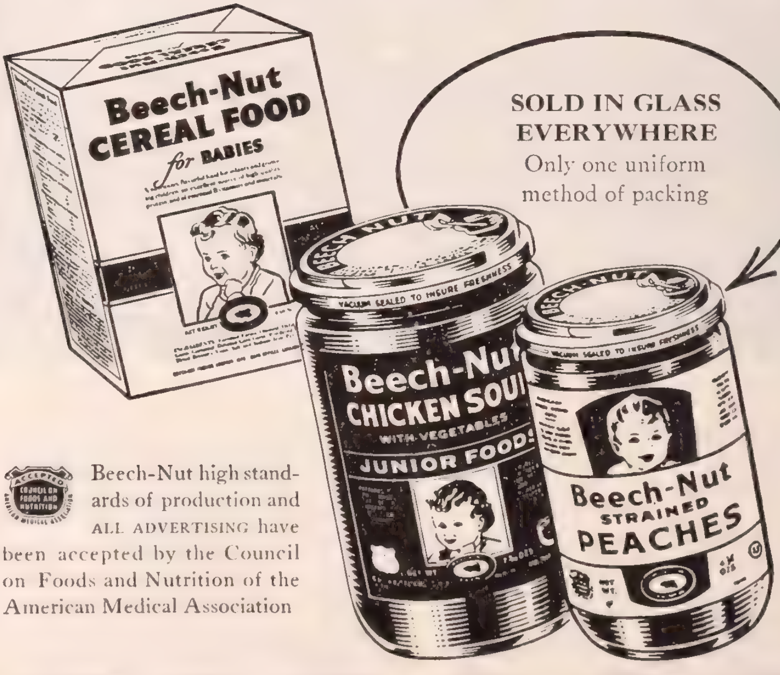
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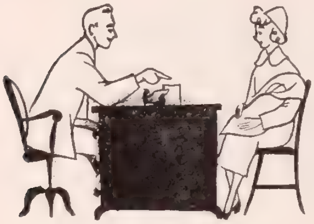

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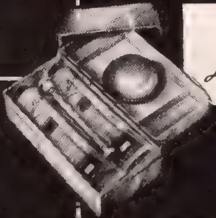

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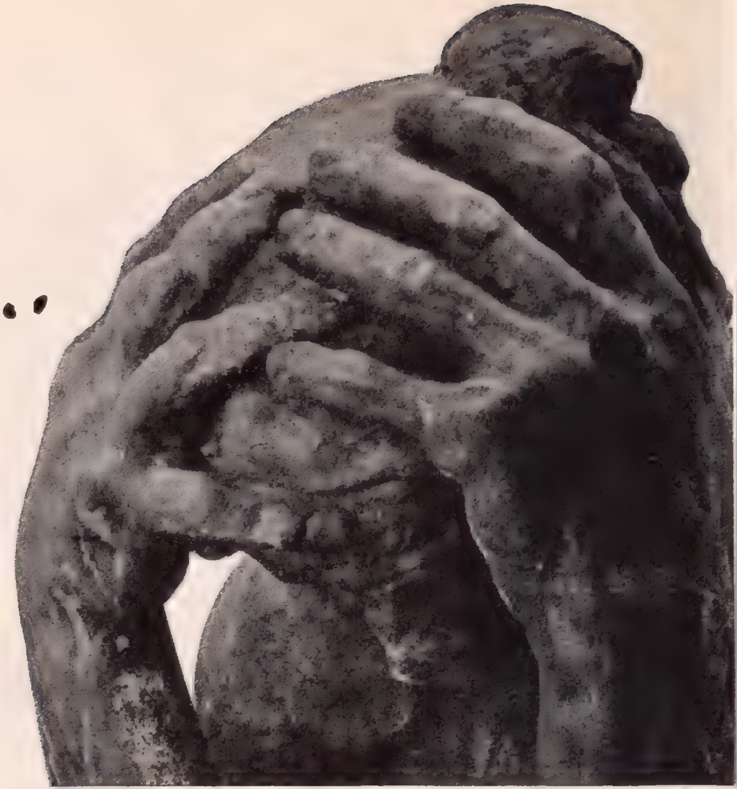

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*Comroe, B. I.: Arthritis and Allied Conditions, Philadelphia, Lea and Febiger, 1944, p. 187.

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Some rotation of the vertebral bodies, particularly in the upper lumbar region, is shown by the Roentgen Ray. The vertebral bodies and interspaces are of normal width.

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Patient wore a Camp prenatal support with same type of reinforcement during her pregnancy that terminated a few weeks before this orthopedic fitting.

Especial features of the lumbosacral side lacing support illustrated are as follows:
(a) Side lacing adjustments (two in number) the lower of which gives steadiness to the pelvis.
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Clinical experience proves value of Chloresium chlorophyll preparations in the treatment of burns

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"In both cases . . . the patients volunteered that the chlorophyll-treated hand was more comfortable. The chlorophyll hands produced granulations of better quality and more rapidly... In both cases, the final result after grafting has been better in the chlorophyll-treated hands."

From the Guthrie Clinic Bulletin, Jan., 1947—"Those (burn) patients who received Chloresium in the initial treatment showed the greatest beneficial effects. It was noticed that healing seemed to occur faster under chlorophyll therapy (*Chloresium*) than when other substances such as vaseline were used. In addition, secondary infection was kept at a minimum. In several cases having bilateral involvement of extremities, one extremity was used as a control and treated with vaseline while the other extremity was dressed with Chloresium Ointment. In each, the part treated with the water-soluble chlorophyll (*Chloresium*) healed more rapidly and with less infection than the control."

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Not only in burns, but also in wounds, ulcers and dermatoses—reports in more than 1150 published clinical cases show the majority of cases respond rapidly to treatment with Chloresium Solution (Plain) or Ointment.

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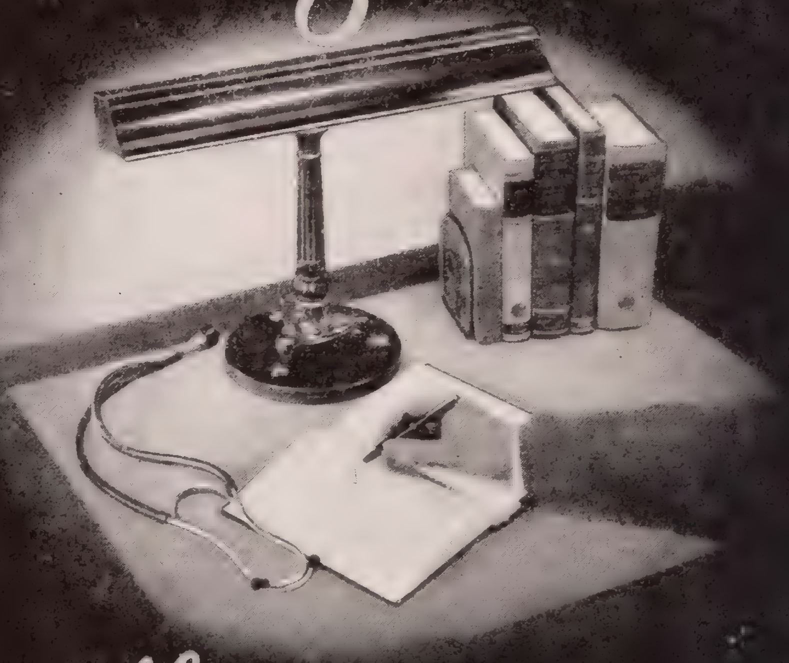

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1. Kasdon, S. C., and Cornell, E. L.: Am. J. Obstet. & Gynec. 56:853 (Nov.) 1948.

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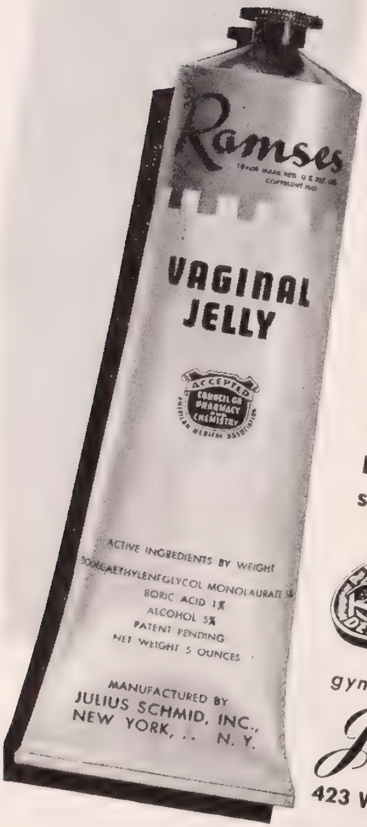
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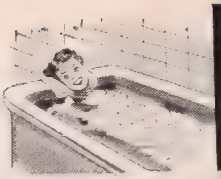

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Classified according to the American Heart Association 44 were in Class IIA (activity slightly limited) and 63 in Class IIB (activity greatly limited).

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Symptomatic Change According to Age Groups

Age group	No. Cases	Improvement Moderate	Marked	None
40-50	11	10	0	1
50-60	41	32	5	4
60-70	34	22	8	4
70-80	18	16	0	2
80-	3	3	0	0
	107	83	13	11

As reprinted from the New York State Journal of Medicine, 35:715, (July 15) 1935

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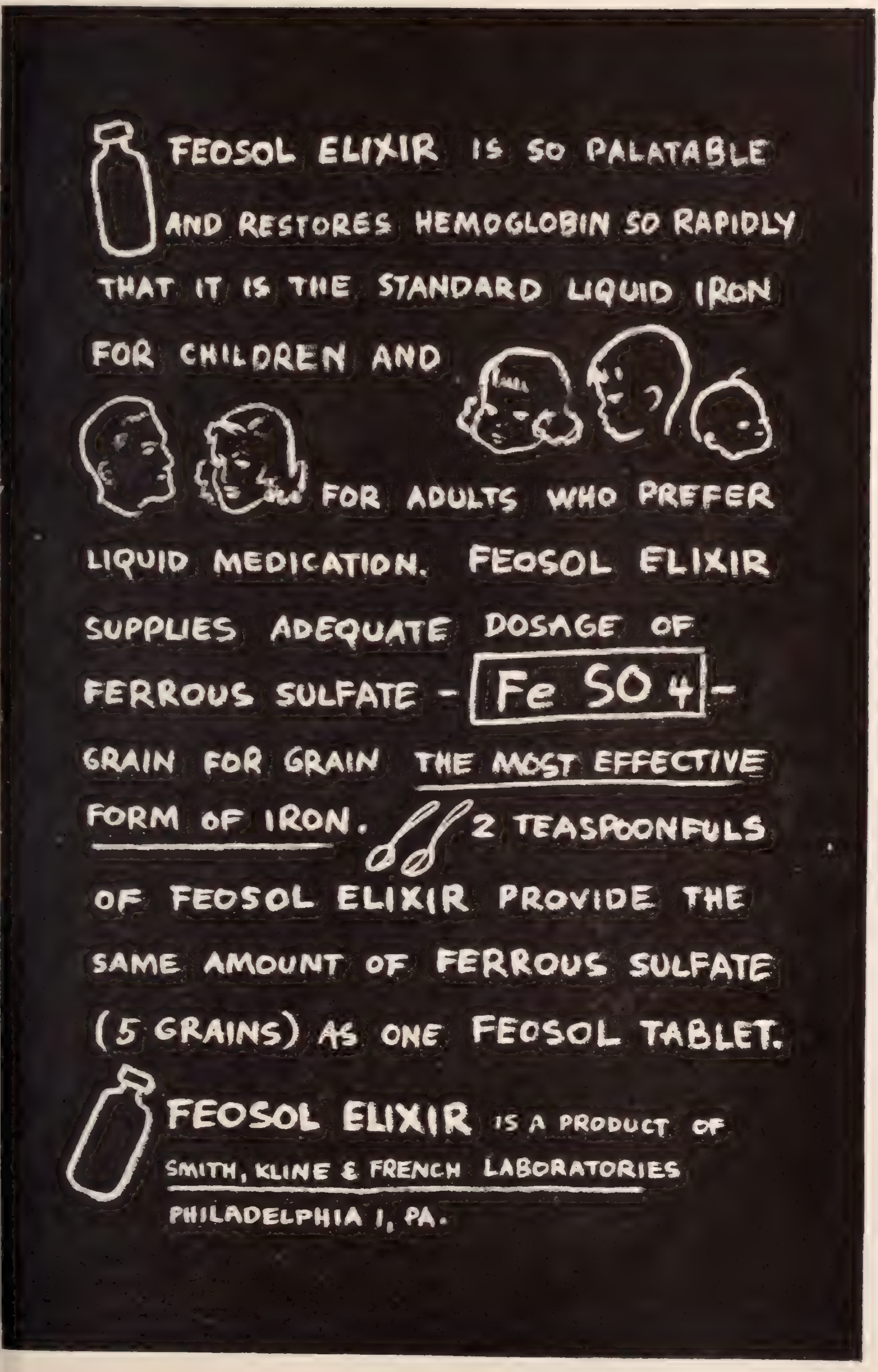
3 weeks at The Saratoga Spa will benefit, refresh, relax your patients with such chronic conditions as Heart and Digestive disorders, Arthritis and related ailments, and Hypertension. At your request, we will send list of local, private practicing physicians who will cooperate with you as to treatment, rest and diet. Address Medical Director, The Saratoga Spa, 155 Saratoga Springs, N.Y.

Listed by the Committee on American Health Resorts of the Council on Physical Medicine and Rehabilitation of the American Medical Association

The SARATOGA SPA

The Empire State's Contribution to the Medical Profession



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Literature on request. **EATON LABORATORIES, INC., NORWICH, N. Y.**

*Anderson, J. and Steele, C.: *Use of Nitrofuran Therapy in External Otitis*, Laryngoscope 58:1279, 1948 • Douglass C.: *The Use of Furacin in the Treatment of Aural Infections*, Laryngoscope 58:1274, 1948 • Reardon, H.: *Unpublished results.*

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Number of Cases Treated (by Type)		Number of Cases Benefited	Percentage of Cases Benefited
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INFECTIOUS	486	392	80.7%
RHEUMATOID	1146	958	83.6%
FIBROSITIS	96	79	82.3%
TOTAL	3634	3092	85.1%

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VOLUME 50 APRIL 15, 1950 NUMBER 8

Editorials

What of the Future?, II

In March we discussed editorially some of the problems, both social and economic, presented by our increased longevity and the increasing proportion of the aged in the population.[1] It was pointed out that improved health conditions since 1900 *due to medical and health progress* have produced this increased longevity, and have created the present situation that, with a doubling of the population in the half-century, the number of voting citizens sixty-five and over has quadrupled.

Medical science and health progress will never end; it can only improve. Sanitation, food, and housing, important adjuncts to medical care, can also only improve as scientific research results in better manufacturing processes and production methods. The question of social morality involved is a grave one: With the proportionate voting strength of the older population increasing, how far may that power be used to exploit youth?

The problem involves the whole field of social security and the "welfare state," apparently. A considerable emphasis seems to be placed on expanded health and welfare in the current Federal budget.[2]

> The Administration's proposed budget for the fiscal year beginning July 1, 1950, makes clear its intentions of widening the scope and coverage of government programs in public health and social security. Its emphasis of the need to stimulate training of greater numbers of physicians, dentists, and nurses is coupled with the President's renewed appeal for "legislation providing for a comprehensive system of prepaid medical care insurance," a juxtaposition that will hardly relieve the anxiety of those who, appreciating that many of the country's medical schools are in financial distress, are nevertheless apprehensive lest Uncle Sam's rushing to the rescue will only advance the health insurance clock.
>
> "Needed medical care is denied to millions of our citizens," said President Truman in his economic report to Congress, "because they have no access to systematic and adequate methods of meeting the cost." His recom-

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[1] NEW YORK STATE J. MED. **50:** 530 (March 1, 1950).

[2] Washington Report on the Medical Sciences, January 9, 1950.

mendations included legislation enacting health and disability insurance, support of medical education, and improving local public health services throughout the nation. The President's Council of Economic Advisors stated in its report: "The gap in social insurance resulting from our continued failure to provide a national system for the prepayment of the costs of medical care also creates hardship in many cases and is responsible for the fact that *millions of Americans remain without adequate medical care.* Health insurance, with the same nearly universal coverage as old age, survivors and disability insurance, would make an all-important contribution to the nation's health, with resulting long-range benefits to productivity and income."

The budget calls for expenditure of $2,714,000,000 next year on social welfare, health, and security, an increase of $417 million above this year's estimated outlay.

Again the supposition is stressed that millions of Americans remain without adequate medical care. Does this observation seem to coincide with the facts? Is there a physician shortage? According to Dr. James E. Buckley, President, Oregon State Medical Society,[3]

> Sponsors of *S. 1453* have told Congress that their bill not only would save the country's medical schools from financial ruin but would relieve the "acute shortage" of doctors. A Senate debater for *S. 1453* said that a chief cause of the "shortage" was a "hiatus of about six years when very few medical men were trained," but recently compiled figures indicate that there was no "hiatus." The augmented war program, in fact, graduated many more physicians than usual. In the five-year period 1937–1942 there was an increase of 6,920. In the succeeding five years (1942–1947) there was an increase of 16,442.
>
> Talks with state medical society secretaries indicate, moreover, that the scarcity of rural doctors, aggravated by the war, is rapidly being relieved. No one doubts the excessive number of physicians in some cities. But many of our medical societies are doing excellent work in showing young physicians the advantages of small-town practice and in helping them to become established in such towns. A leading statistician has spotlighted a related factor, and a frequently overlooked one: namely, the increased medical-care output of today's average physician.
>
> The statistician cited points out also that the total size of the freshman class in all medical schools averaged 6,016 for the ten years preceding the war. But with new schools and with increased enrollment in our older schools, the figure will soon exceed 7,000. He adds that during the years 1940–1948 the general population increased 12 per cent and the physician population 14 per cent—a relative increase of more than 16 per cent. He believes that, rather than the shortage predicted by Government planners, we will soon have an excess of physicians.

Assuming sufficient doctors and the necessary facilities and continuing improvement in medical science and health progress, which has so far been achieved without compulsory national health insurance, will not such health progress continue to increase the proportion of the aged in the population as a whole? Will not the demands of the aged voters eventually swamp the whole social security system?

With no apparent effort being exerted toward economy in government, with wasteful squandering of the taxpayers' dollars on subsidies to special groups continuing, while activities of other special groups undermine the nation's productivity for lack of coal or an honest day's work, will it be necessary to wait for the healthy aged to wreck the economy, a task for which some of our politicians and economic advisers seem so much better qualified?

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[3] "Our Medical Schools—Will They Be Next?"

Confusion

To doctors of medicine seeking to follow the injunction of Sir William Osler to cultivate equanimity, life should become more and more difficult. Dedicated to a rather practical service to humanity everywhere based on as exact scientific knowledge as is available, doctors cannot fail to look upon the turmoil of the nonmedical world with some misgiving.

Every time a workable improvement in the detection, treatment, or cure of some disease is painstakingly developed which may be of value to thousands, somebody thinks up some new device to kill millions, or at least to maim them as badly as possible without actually killing them.

Public health departments, researchers, and sanitary engineers work far into the night to keep water pollution, communicable disease, and sewage disposal at the lowest possible level, while, on the other hand, military establishments cudgel their brains to figure out practicable means to carry out bacterial warfare, pollute water supplies, and bomb sanitary installations to accomplish the maximum destruction with the minimum of effort.

Doctors labor at operating tables to patch up a few thousands who have punctured or broken themselves in one way or another, while politicians gather around statistical tables to figure out how to capture millions of votes with security gold bricks, state medicine, and assorted quack remedies of "grandiose vagueness." Some of them fall into the category of an "indefinable something which is to be done in a way nobody knows how, at a time when nobody knows when, in places nobody knows where, to accomplish just what nobody knows, and at a cost of nobody knows how much."[1] Bad grammar notwithstanding, it is no worse than the subject deserves.

Turning to fiscal affairs, the doctor can read almost daily the mention somewhere of the $253,770,359,860 (1949) public debt of the United States (about $1,695.46 per capita), and the fantastic $5,500,000,000 yearly interest thereon; "payments to individuals for direct relief (1948)—not including Social Security, pensions, unemployment insurance, and so on—by Federal, state, and local governments, $1,727,000,000."[2,3] Add to this the farm subsidies that accumulated (in 1949) 25,000,000–40,000,000 bushels of potatoes that nobody wants at one cent per bushel, the $3,343,000,000 invested in various farm products by the CCC, 2,000,000,000 eggs said to be warehoused in a Kansas cave, practically no coal being mined, and talk of more billions needed to save the world from communism.[4] And this is a mere part of the fantastic picture!

One is tempted to question, at odd moments, for whose benefit walls are built about asylums for the alleged mentally ill.

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[1] New York Med. 6: 14 (Feb. 5) 1950.
[2] World Almanac, 1950, p. 708.
[3] Saturday Evening Post, Nov. 5, 1949, p. 10.
[4] Daily News, Feb. 6, 1950, p. 25.

New York City Excise Tax on Gross Receipts

Physicians who practice in New York City, whose gross receipts from the practice of their profession exceed $10,000 annually, are required by a New York City tax law to file a special return. The necessary form may be obtained from the Office of the Comptroller, Bureau of Excise Taxes, 74 Trinity Place, New York 6. Income from sources not connected with a physician's professional activities is not mentioned.

FACTS ABOUT NUTRITION

Prepared by the School of Nutrition, Cornell University, Ithaca
Norman S. Moore, M.D., Editor

Protein Nutrition

II. Treatment of Protein Deficiency

In any consideration of protein depletion, the first thought must be to maintain adequate caloric intake. If sufficient carbohydrate and fat to maintain the daily caloric needs are not present in either food or body stores, then protein will be burned to supply this deficit in calories. It follows that, if not enough protein is fed to replace the amount burned, then the tissue proteins will be further depleted. It is possible to give protein as almost the entire diet, using it both for tissue replacement and caloric needs, but a diet consisting mainly of protein is expensive, monotonous, and often poorly tolerated by the sick person.

Peters emphasizes the need for careful consideration of the sick person's diet, with constant effort to satisfy his food habits, his likes and dislikes.[1] The food served a patient should, as far as is possible, be appetizing and appealing to the eye as well as the palate. It should be seasoned according to the patient's taste; the idea that seasoning is harmful for sick people is erroneous. The "bland" diet is, in most diseases, an anachronism and is not conducive to good eating. The physician must attempt to determine whether the patient is eating his food and to encourage him to do so. This is not a responsibility to be left entirely to a nurse or an orderly, or to a member of the patient's family—no one can replace the doctor in the matter of patient morale.

Most of the calories in the diet should be supplied as carbohydrate, because the usual fat intake recommended for well people is not well tolerated by the gastrointestinal tract of a person at bed rest. It is also important to supply both protein and carbohydrate at each meal rather than to have one meal predominantly protein and the other predominantly carbohydrate. This is because a larger percentage of the protein is burned up if there is not sufficient carbohydrate being absorbed into the blood stream at the same time—another application of the principle that carbohydrate spares protein. This has been shown experimentally by feeding persons their diets in two different ways. When all of the daily protein was given as one meal and then, later in the day, all the carbohydrate given as the other meal, the subjects were in negative nitrogen balance; then, when the two meals each contained half the daily protein and half the carbohydrate, they were in positive nitrogen balance.[2]

It is also important to supply the protein as a variety of different foods, especially if vegetable proteins are fed. The proportions of amino acids in various proteins differ and, thus, by giving several different kinds of protein in the diet, the amino acid deficiencies in one protein may be supplied by excesses of that amino acid in another.[3] This difference in amino acid constitution of proteins is the basis for the so-called "biologic value" of a food protein. Animal protein, such as meat and egg, has a higher biologic value than does vegetable protein. For example, the biologic value of egg white is 83 per cent, that of potato protein is 67 per cent.[4]

When a patient is in need of protein and has a good appetite, it is advisable to permit him to eat as much as he wishes, provided his gastrointestinal tract will tolerate it. Experience with liberated prisoners of war has shown that starved persons can tolerate rich diets supplying up to 9,000 calories and 300 Gm. of protein per day.[5]

An excellent way of providing adequate protein and calories to a sick person whose appetite is poor is to give a mixture of whole milk and powdered skim milk, 100 Gm. per quart, with suitable flavoring. This provides about 65 Gm. of protein and 980 calories per quart. Most patients, with coaxing and encouragement, can ingest two quarts of this mixture a day.[6] There is little indication that the oral protein hydrolysate preparations now available are of any more value nutritionally than ordinary food proteins. However, some patients seem to tolerate them better than food proteins. Hydrolysates are usually unpalatable and are best given by tube.

Oral feeding is by far the most satisfactory method of feeding a sick person. The gastrointestinal tract is the only route by which all the substances necessary for life can be introduced into the body in their naturally occurring forms. If the patient is too sick to eat, then the next choice is feeding through a tube inserted into the stomach or duodenum. By this method, frequent small feedings can be given both day and night, permitting continuous slow absorption from the intestine, and periodic glucosuria with water loss is thus prevented.

When tube feeding is initiated the daily intake should be small at first, with a gradual increase in amount over a period of three to four days, the gastrointestinal tract frequently being unable to tolerate a sudden large influx of food. Alternate feedings of skim milk and water, 100 to 200 cc. every two hours, is a suitable mixture when the regime is begun. Gradually cream, raw egg, and sugar may be added. It is usually less trouble for the patient and physician to leave the tube in place for three to four days, with removal only for cleaning.

Gastrostomy or jejunostomy is to be considered when feeding by mouth is not satisfactory. This situation usually occurs in senile, debilitated patients who are too weak and uncooperative to swallow a tube, or who persist in pulling the tube out frequently, or in cases having an obstructive lesion above the jejunum. The surgical procedure of gastrostomy or jejunostomy is relatively minor, is best done under local anesthesia, and is of little danger, even to seriously undernourished patients. It provides a means of easy and certain administration of adequate food and is less trouble and of far greater therapeutic value than prolonged intravenous feeding.

Intravenous feeding should be considered only when gastrointestinal feeding cannot be employed, as in cases in which it is desired to put the digestive tract at rest, when the tract is obstructed or edematous, or when it simply will not tolerate food. Parenteral feeding has been discussed in several previous editorials and will be briefly reviewed here with particular consideration to protein nutrition.[7] In parenteral as in oral nutrition, the first consideration is caloric requirement. Because physicians often fail to think of this, a large percentage of the intravenous protein mixtures being given in hospitals today had best not be given, with a saving of much discomfort and disturbance of rest for the patient and of trouble and time for the doctor and nurse. For example, it is quite common to see a patient on intravenous feeding receive daily 1,000 cc. of protein hydrolysate containing 40 Gm. of amino acids and 50 Gm. of glucose, plus another 2,000 cc. of 5 per cent glucose. This supplies a total of 150 Gm. of glucose, or about 600 calories, plus the 40 Gm. of protein. The average male adult's caloric requirement, at bed rest with no fever, is about 1,800 calories daily so that, if the above patient's body stores of fat and carbohydrate are depleted, he will burn up the 50 Gm. of protein plus another 250 Gm. taken from his body tissues, in order to supply his energy needs![8]

How much more sensible it would be to give attention and effort to the administration of more glucose. However, here, too, practical difficulties arise. The rate at which glucose can be introduced into the blood without glycosuria and diuresis is about 35 Gm. per hour so that to supply the caloric needs eleven or twelve hours are required.[9] Furthermore, if this amount of glucose were all supplied in a 5 per cent solution, then 9 L. of fluid would be required daily—enough to produce pulmonary edema in a healthy person, much less a sick one. Obviously, more concentrated solutions must be given. Ellison *et al.* report good results in malnourished surgical patients by giving 3 L. daily of 10 per cent glucose in 5 per cent Amigen, which supplies 113 Gm. of protein and 1,755 calories.[10] On this regime they obtained positive nitrogen balance, weight gain, and increase of serum proteins.

Human plasma, whole blood, and serum albumin are excellent preparations for intravenous maintenance of protein nutrition. They are, in general, better tolerated than are protein hydrolysates and are more efficient in replacing tissue protein, chiefly because they are less readily oxidized by the liver than are amino acid mixtures.[11] However, these solutions have the disadvantage of being costly and, in many places, not readily available. In the use of these whole-protein mixtures, as in any protein feeding, caloric requirements must be met.

Intravenous fat preparations will probably be available soon and will provide an excellent means of giving large amounts of calories and also of the essential fatty acids.[12]

When large amounts of fluid are to be given by vein, requiring many hours daily, consideration must be given to the comfort of the patient. Too often the prescribed amount of intravenous fluid is not administered because the patient becomes tired and stiff and demands that it be discontinued. This factor is sometimes the difference between therapeutic success or failure. Whenever possible, the needle should be inserted into the vein wall below the elbow, so that the arm is free. It is perfectly feasible for the patient, if able, to sit up in a chair while receiving his intravenous fluid. Small needles are preferable—they produce less trauma and thrombosis and are less painful.

CHARLES R. SHAW, M.D.

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The A.M.A. Membership Dues

The problems and misunderstandings arising from the collection of A.M.A. dues and assessments have been stated frankly in a recent communication from the Association's Secretary, Dr. George F. Lull. The following procedure should be followed:

1. Remittances for membership dues should *not* be sent direct to the A.M.A. by county societies or individuals. These should be channeled through the office of the State Society where member payments are recorded. Individual members' checks received will have to be returned to the state in which the member resides. This rule also applies to the 1949 assessment.
2. Who is exempt from paying A.M.A. dues? The county shall determine when the payment of dues is a hardship, but in no case will the A.M.A. dues be remitted unless the county and state society dues are likewise remitted. The dues of a physician who joins his county society after July 1 will be $12.50; if he joins before that date, $25.
3. A physician who transfers from one county society to another need not pay a second time, but he must pay once.
4. For this year only (1950), the A.M.A. will reimburse the state societies the accounting expense of collecting dues. After this year, the A.M.A. dues should be billed with state or county society dues.

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In the treatment of hypochromic anemia the new molybdenum-iron complex, Mol-Iron, is being found to possess *marked advantages* over equivalent dosage of ferrous sulfate alone, or combined with liver-stomach extract or folic acid.

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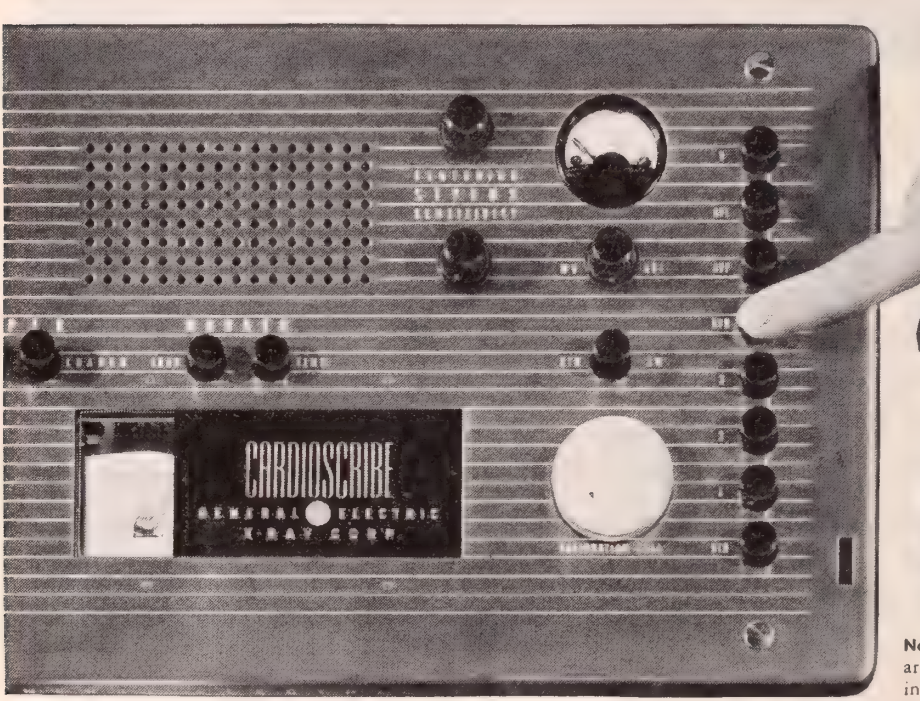

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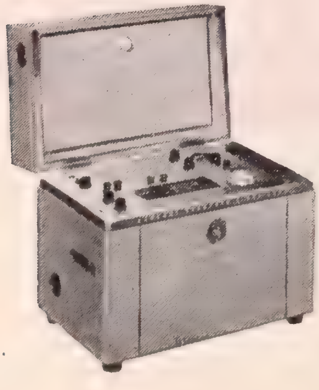

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Scientific Articles

TUBERCULOSIS FROM A GENERAL PRACTITIONER'S VIEWPOINT

John N. Hayes, M.D., Saranac Lake, New York

(From the Trudeau Sanatorium)

WITH the advent of the community x-ray survey many more cases of doubtful or incipient tuberculosis are being discovered and referred to the family physician. Furthermore, the lay population is becoming aware that early diagnosis is essential in tuberculosis, so that the general practitioner is being called upon more and more to deal with tuberculosis in all its stages. It is with these factors in mind that we wish to approach the problem of tuberculosis from the general practitioner's point of view.

Primary Infection and BCG Vaccine.—A first infection is often symptomless but not always so. When a person is tested repeatedly at intervals with tuberculin and finally reacts, some symptoms, usually minor, are often elicited. Among the symptoms which should lead to the suspicion of a primary tuberculous infection in children are irritability, failure to gain weight, repeated colds, and anemia which fails to respond readily to treatment. The family physician should use the tuberculin test more frequently. Fortunately, the patch test, which is so convenient to the doctor and to the child, is reliable in children in most cases. It is a very valuable test to apply to children after every respiratory infection, because the sudden appearance of a positive reaction would lead one to watch that child very closely for the appearance of any symptoms which would indicate the need of more rest periods. The tendency of a first infection in infants and children to develop into generalized disease is well known. That is the reason for giving a controlled first infection, as in smallpox, with an attenuated living vaccine. Some degree of resistance is then developed. The tubercles which form at the site of intracutaneous inoculation rarely ulcerate and cause very little inconvenience.

The administration of this vaccine demands certain precautions and restrictions. The subject must be negative to tuberculin given intracutaneously and in large doses. He must not be in contact with a known case of tuberculosis during the period of development of allergy. The vaccine is a failure if allergy does not develop afterwards. The vaccine is prepared with extraordinary precautions and must be fresh, and its use should be restricted to doctors of wide experience in tuberculosis.

This vaccine is indicated in individuals who have not had a first infection and who are in contact with an open case of tuberculosis, such as children or the mate of a tuberculous person, students of medicine and nursing, or those living in a community or area where tuberculosis is very common, such as Indians, in races of low natural resistance, and in persons living in slums or crowded conditions. The morbidity and mortality rates in several well-controlled experiments in Chicago and on Indian reservations in this country have been definitely lowered following the administration of BCG vaccine.

Diagnosis of Secondary Infection.—It is not necessary to detail the early symptoms of pulmonary tuberculosis. The important thing is to remember that tuberculosis is a general disease with constitutional symptoms. We should remember it then when a patient with digestive symptoms is not responding to the usual treatment, or if a diabetic is getting out of control or losing weight, or when a cystitis does not respond readily to the usual antibacterial drugs, or when hoarseness persists or recurs frequently, or when asthma is not relieved by bronchial dilators, or when fistula-in-ano develops. It hardly seems necessary to advise you to remember it in chronic bronchitis. Some of the profession share the false belief of the laity that tuberculosis does not occur in the elderly. Today we have more people over sixty years of age. and many of them have

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Presented at a meeting of the Fourth District Branch, Medical Society of the State of New York, Saranac Lake, September 16, 1949.

sustained an infection in earlier years which they have kept under control but which breaks down at this age. In many of them the disease is pneumonic in nature.

The x-ray surveys have taught us that, if this disease is recognized early, these patients present no more the appearance of phthisis than do the general population. In fact, one can find an extensive disease, especially if it has been gradually developing over the years or if it is of a subacute bronchopneumonic nature, in people apparently perfectly healthy. Now that we are using the roentgenogram instead of the stethoscope or the temperature chart to determine whether a pneumonia has completely cleared, many surprises are found.

It is an interesting fact that expensive x-rays are taken before the sputum is examined for tubercle bacilli. The latter costs nothing or very little. When one is looking for tuberculosis in a patient, it is important to explain what sputum is and that he should try to raise something from the trachea, preferably in the early morning. And we should not be satisfied with one or two examinations when the lungs are under suspicion. If the bacilli cannot be found on direct smear, then the specimen should be concentrated, and, if still negative, it should be cultured. If no sputum is available, several gastric aspirations should be cultured. Even with most thorough searching, the bacilli can be found in only 60 per cent of minimal cases.

The general practitioner should be warned against making too hasty a diagnosis that the disease is healed when a survey x-ray reveals a focus which does not appear to be inflamed. Frequently the only way to be sure that the lesion is healed is by repeated study by roentgenograms. If there are no active signs or symptoms and if the lesional shadow changes at all, even for the better, it is not healed.

Treatment.—The development of antibacterial agents and surgical measures has not changed the fundamental features of the treatment of pulmonary tuberculosis. Rest, at first in bed, and either strictly or for most of the twenty-four hours, is still an essential. Psychotherapy, fresh air, good food, education of the patient about how to live with his disease, and rehabilitation are not outmoded.

There is a temptation to advise streptomycin or its newer derivative, dihydrostreptomycin, alone or in combination with the newer drug, para-aminosalicylic acid, as soon as the disease has been diagnosed. This is a great mistake in most cases. They should not be used until an estimation has been made of the constitutional resistance of the patient and of the probable course of the disease. It is important to determine whether any form of collapse or resection of the lung may have to be employed. The reason for this delay in the use of antibacterial agents is that the bacillus may be made resistant to the drugs; an initial benefit resulting from their use may be followed by relapse, and the golden opportunity of the proper time to employ them may be lost. Usually after bacterial resistance has developed, the drugs confer no further benefit. If, after injudicious use of the drugs, a progression of disease follows an operation, one may have no good weapon to fight it. Ordinarily, therefore, these drugs are not advised if the patient can recover with the time-tried measures.

Many patients need the drugs, however, and having them has changed remarkably the treatment of this difficult disease. Tuberculous sinuses may close after one week's treatment; dysphagia and diarrhea of months duration disappear quickly; the wheeze of bronchial disease may cease in a few days; cough and expectoration may be reduced 50 to 75 per cent in a short time. Really miraculous results have been obtained in cases of meningeal and miliary tuberculosis compared with the previously hopeless condition. Unfortunately, a fair number of these patients who make initial improvement later relapse. Patients who formerly appeared to have hopeless disease, with extensive infiltrations and bilateral cavities, are sometimes healed, especially when the antibacterial treatment is combined with pneumoperitoneum or pneumothorax or phrenic nerve paralysis. In cases like these the duration of rest treatment is still very prolonged, and frequently after six or twelve months the disease in one lung has healed sufficiently to permit employing thoracoplasty on the worse side. The salvage in such severe disease is very encouraging, but the early hope that these new medicines would greatly shorten the stay of the patient in the sanatorium and open beds for other patients has not been fully justified. In fact, these patients, formerly apparently hopeless, are now living longer and with such hope that they are occupying beds longer than formerly.

Concerning these new drugs, there is still no uniformity about absolute dosage and duration of treatment. Reduction of the original dosage has reduced the frequency of the complications. In fact, harmful effects are very uncommon.

I cannot emphasize too strongly the advisability, in fact the necessity, of postponing the administration of these drugs until the practitioner has had the advice of a specialist skilled in the treatment of tuberculosis. One should turn a deaf ear to the importunities of the patient and his family to be allowed to have them immediately after diagnosis.

In recent years some changes have occurred in collapse and surgical treatment. Pneumoperitoneum is more frequently employed, especially in extensive bilateral infiltrations, usually in combination with antibacterial drugs. The complications of artificial pneumothorax have led to more restricted use of this valuable measure, and the results are, therefore, better. Resection of a lobe or a lung is much more frequently performed. With better trained anesthetists, more use of blood transfusions, improved surgical technic, and more skillful aftercare, the mortality rates for these resections have been greatly reduced.

Two periods of the treatment are often under the control of the family physician. On account of a shortage of beds in the sanatorium the patient often cannot be admitted immediately after the diagnosis has been made. During this period the patient should be in bed, probably with bathroom privileges, whether or not he has any symptoms. At this time all contacts should be examined, adults by x-ray and young children by the tuberculin test and, if positive, by x-ray also. The other period is after discharge from the sanatorium if the patient is not visiting an outpatient department. This is a most important phase of the treatment. The practitioner must supervise the daily activities of the patient and should demand that regular visits be made to his office. The first two years after discharge from the sanatorium is the dangerous time for relapse. The working patient should obtain the maximum rest which is possible: early to bed, weekends without marked physical activity. Steady loss of weight is an important sign. Checkup x-rays should be made every third month. During respiratory infections the sputum should be examined for tubercle bacilli, and an x-ray film should be made after recovery from the cold.

Differential Diagnosis.—It would be impossible to cover this subject in a short period. I will mention only two useful points. When pulmonary tuberculosis is accompanied by purulent sputum, it is rare not to be able to find tubercle bacilli in the sputum after at least several examinations. As to the roentgenologic appearance of a pulmonary infiltrate which is under suspicion of being tuberculous, there is no specific appearance in tuberculosis which is not imitated by a number of other diseases. The presence of old cortical disease at the apices makes strong the presumption that a fresher infiltrate in the midlung may be tuberculous also. An important roentgenologic feature is the speed with which the lesions change either for the better or worse, rather than the actual appearance of the lesion. In this era when many people attain the age of twenty or thirty years without having sustained a primary infection, a negative tuberculin test is valuable in eliminating tuberculosis.

I would make a plea to the general practitioner for more enthusiastic reception of the community x-ray survey. By this means many more incipient cases are being discovered than ever before. At this stage the disease can be more readily cured. When the report to the family doctor is indefinite it is necessary to perform a tuberculin test and, since sputum is often not available, to examine the gastric contents for the bacilli. Most important of all it is necessary to obtain the cooperation of the suspected person so that he will be willing to have repeated x-rays until the doubt is settled. To conceal from one apparently healthy person a doubtful condition, which may, through neglect, go on to active tuberculosis, is more harmful than to have aroused fears in a dozen others in whom the suspicion of tuberculosis is never later proved.

24 Church Street

RECENT ADVANCES IN THE TREATMENT OF NEUROSYPHILIS

Experience with 446 cases of neurosyphilis, of whom 377 were under follow-up, treated over a period of five years supports the general conclusion that: (1) Intramuscularly administered penicillin for a fifteen-day course, repeated when necessary, is the most effective single form of therapy; (2) fever therapy combined with penicillin in general paresis and primary optic atrophy frequently brings a better clinical response than penicillin alone in the first year or two after treatment, although they may be about the same after that; (3) prognosis improves with early treatment before irreparable damage occurs; (4) newer treatments have apparently reduced the number of cases admitted to psychiatric institutions.

Psychotherapy, especially electroshock, should be used in combination with antisyphilitic treatment when indicated. However, in regard to the problem of syphilis as a whole, the nature of the disease requires additional time before treatment results can definitely be evaluated. Consequently, an attitude of caution and preparedness should be preserved.—*Augustus S. Rose, M.D., North Carolina Medical Journal, September, 1949*

TRANSURETHRAL RESECTION FOR NEUROGENIC BLADDER

Leo S. Drexler, M.D., and Samuel H. Rothfeld, M.D., Brooklyn, New York

(From the Urological Service of the Jewish Sanitarium and Hospital for Chronic Diseases)

EMMETT, in approaching the problem of the neurogenic bladder, recognized that a contracted or spastic internal sphincter, with or without prostatic hypertrophy, acts as a barrier to the urinary flow.[1,2] He removed these obstructing tissues by means of a transurethral technic, thus permitting free urinary flow.

The present report concerns an attempt to combat the urinary disturbances in ten patients with neurogenic bladder in the course of various pathologic disorders of the nervous system.

Micturition is a reflex phenomenon. A sensory impulse initiated by stretch of the bladder wall causes a reflex contraction of the detrusor with relaxation of the internal urinary sphincter and subsequent reflex relaxation of the external urinary sphincter. The presence of inhibitory impulses from suprasegmental levels acts on the parasympathetic reflex arc, permitting vesical distention before reflex emptying of the bladder occurs. By voluntary contraction of the external urinary sphincter, the capacity of the bladder can be increased further. When micturition is desired, the inhibitory influences from the higher centers are voluntarily halted, and the reflex emptying of the bladder is permitted to occur. The external urinary sphincter serves as both a voluntary and involuntary muscle. The internal sphincter, while purely involuntary, is not essential for the normal act of micturition. Purposeful destruction by transurethral resection does not cause any appreciable change in urination.

McLellan described two types of abnormal micturition in the human according to the site of the pathology.[3] Supranuclear lesions interrupt cerebral inhibitory control over reflex detrusor activity, while nuclear and infranuclear lesions interrupt the detrusor reflex activity and end voluntary or reflex bladder evacuation. The latter results in overflow incontinence, while the former causes imperative or precipitate micturition.

Case Reports

Case 1.—S. G., a white man, age thirty-two, was admitted to the Hospital on January 22, 1940, with the clinical picture of hyperpituitary disease. He complained of the sensation of "losing his urine" and nocturnal enuresis.

On examination, the kidneys, bladder, liver, and spleen were not palpable, and the prostate was normal. In another institution, no tumor had been demonstrated by craniotomy. Routine laboratory studies were negative. The cystogram and intravenous pyelogram were normal. On cystoscopy, there was a contracted bladder neck; the mucosa was slightly inflamed, and there were 1 plus trabeculations. There was no residual urine. A cystometrogram revealed a hypertonic bladder with a capacity of 150 cc. and an involuntary contraction of over 80 cm. of water with expulsion of urine around the catheter.

Transurethral resection of the internal sphincter with removal of 2 Gm. of tissue was performed. The catheter was left in situ for five days. Following its removal, the patient voided voluntarily every two to three hours and remained dry at night. After more than one year observation at the Hospital since the operation, this excellent result has continued.

Case 2.—S. G., a white woman, age sixty-nine, was admitted to the Hospital on July 25, 1947. Since laminectomy, performed for intramedullary disease at the tenth dorsal vertebra, on February 24, 1947, she had had complete urinary incontinence.

Examination revealed a debilitated white female with hypertensive cardiovascular disease. Routine laboratory studies were negative (Neurologic diagnosis: intramedullary disease at the tenth dorsal vertebra). The kidneys, bladder, and spleen were not palpable. The liver could be felt about two fingers below the right costal margin. Cystogram and intravenous pyelogram were normal. Cystoscopy revealed a contracted bladder neck. Cystometrogram presented a hypertonic bladder with small capacity. Transurethral resection of the internal sphincter was carried out on April 22, 1948, with removal of $1^1/_2$ Gm. of tissue. The retention catheter was removed four days postoperatively. At this time, she could void voluntarily every four hours. There was occasional bed wetting if she could not obtain the bedpan when she desired to void. The improvement in her urinary symptoms was maintained until death due to bronchopneumonia which occurred on May 27, 1948.

Case 3.—B. H., a white man, age fifty-two, was admitted to the Hospital on December 9, 1946. A laminectomy, performed on February 18, 1945, revealed an arteriovenous angioma of the spinal cord from the eleventh thoracic to the first lumbar vertebrae. Since the operation, he had had urinary incontinence.

On examination, the prostate gland was normal The kidneys, bladder, liver, and spleen were no palpable. Neurologic opinion indicated paraplegia due to myelomalacia. Routine laboratory studies were within normal range. The cystogram and intravenous pyelogram were normal. Cystoscopy revealed a contracted bladder neck wit minimal prostatic hypertrophy. The residual urin was six ounces. A preoperative cystometrogram

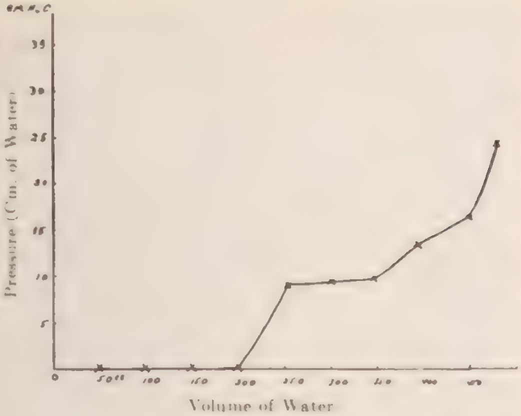

FIG. 1. Preoperative cystometrogram revealing a reflex neurogenic bladder progressing to atonicity (Case 3). There was a slight sensation of pressure at a volume of 250 cc. of water at a pressure of 10 cm. of water. Involuntary contraction of the bladder with expulsion of its contents occurred at a volume of 500 cc. of water.

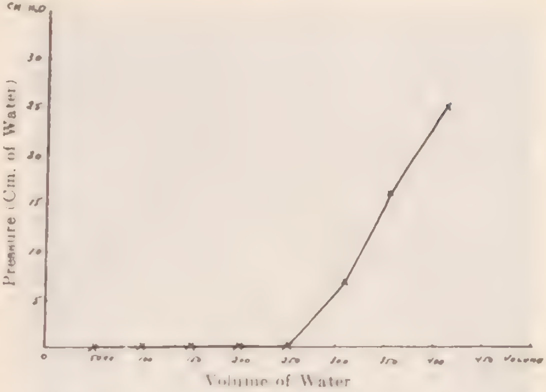

FIG. 2. Postoperative cystometrogram revealing minimal change from the preoperative graph (Case 3).

showed a reflex neurogenic bladder progressing to atonicity. Involuntary contraction of the bladder with expulsion of its contents occurred at a volume of 500 cc. of water at a pressure of 27 cm. water (Fig. 1). The postoperative cystometrogram presented little change (Fig. 2). Transurethral resection of the prostate and the internal sphincter with removal of 5 Gm. of tissue was done. The catheter was left in situ for four days. Upon its removal, the patient voided without difficulty.

Observation at the hospital since the operation on April 30, 1948, reveals that complete control of micturition has been maintained. There is no residual urine.

Case 4.—B. P., a white woman, age forty-three, was admitted to the Hospital on January 2, 1940. The diagnosis was multiple sclerosis since 1933. Her urinary complaint was complete incontinence since 1946.

On examination, the diagnosis of multiple sclerosis was confirmed. Kidneys, bladder, spleen, and liver were not palpable. Routine laboratory studies were negative. The cystogram and intravenous pyelogram were normal. Cystoscopy presented a contracted bladder neck. Cystometrogram revealed a markedly spastic bladder with a capacity of 150 cc.

On April 23, 1948, transurethral resection of the internal sphincter was done, 2 Gm. of tissue being removed. The retention catheter was maintained for five days. Upon its removal, she had complete control of micturition and voided every two to three hours. During the night, it was necessary to awaken her at periodic intervals. Nocturnal enuresis occurred if this was not done. This status continued until her death from bronchopneumonia February 20, 1949.

Case 5.—M. P., a white man, age forty, was admitted to the Hospital on March 22, 1938, with a diagnosis of multiple sclerosis. The onset of this disease occurred in 1928. He had complete urinary incontinence without retention.

On examination, the kidneys, bladder, spleen, and liver were not palpable. The prostate was normal. Routine laboratory studies were negative. The cystogram and intravenous pyelogram were normal. Cystoscopy revealed a contracted bladder neck with minimal lateral lobe hypertrophy of the prostate gland. There was no residual urine. Cystometrogram presented a mildly hypertonic bladder with a capacity of 450 cc. A transurethral resection was done on March 11, 1948. The results following this operation were poor. The patient continued to have incontinence. On April 1, 1948, the operation was repeated. The retention catheter was left in situ for four days. Upon its removal, all symptoms of incontinence had disappeared. He was able to remain continent for periods of three hours. At the end of the three-hour period, he could empty his bladder completely by manual expression. This status has continued until the present time.

Case 6.—V. Y., a white man, age forty-one, was admitted to the Hospital on January 15, 1946. The final diagnosis was multiple sclerosis. He complained of urinary incontinence for three years prior to admission to the Hospital.

On examination, the kidneys, bladder, liver and spleen were not palpable. The prostate was normal. Routine laboratory studies were normal. The cystogram and intravenous pyelogram were normal. Cystoscopy revealed a relaxed internal sphincter with a bladder of large capacity (over 600 cc.). There was a residual urine of 6 ounces. Cystometrogram revealed a bladder progressing to an atonic state. There were no emptying contractions up to 600 cc. Transurethral resection of the internal sphincter and prostatic tissue was done on April 1, 1948, with removal of 3 Gm. of tissue. After withdrawal of the retention catheter, he was able to remain continent

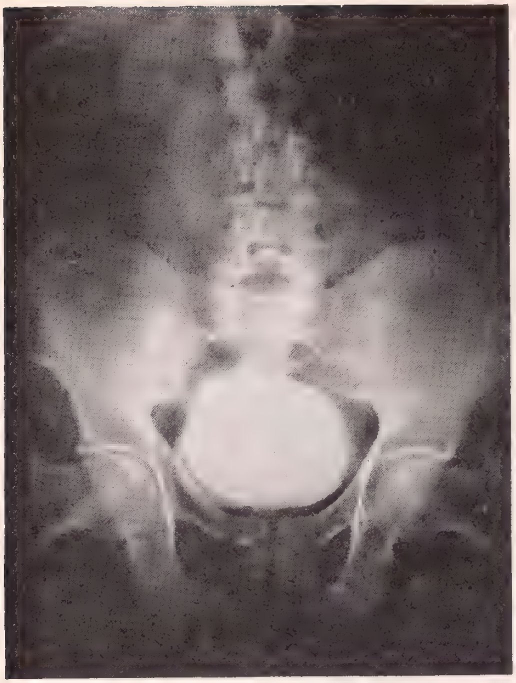

Fig. 3. Return to normal of marked atonic bladder following transurethral resection of internal sphincter (Case 8).

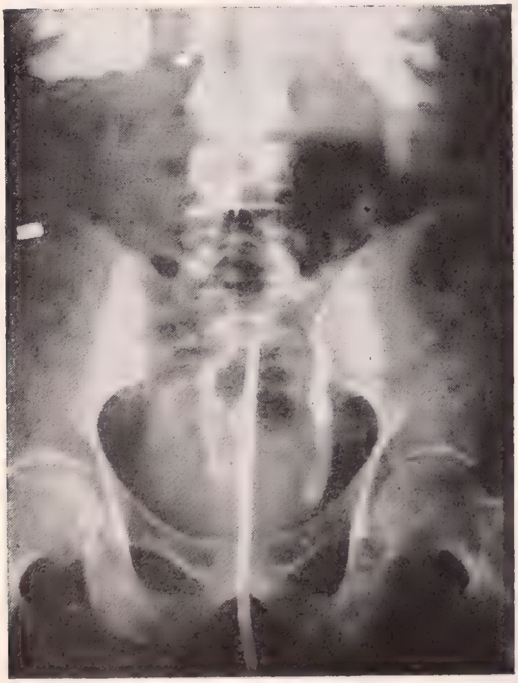

Fig. 4. Bullet lodged in spine, marked bilateral hydronephrosis, hydroureter, and atonic bladder with reflux (Case 9).

for periods of six hours, and he could void voluntarily. There was no residual urine. He experienced occasional urgency. The improvement in his urinary control was maintained until his death, on August 30, 1948, of bronchopneumonia.

Case 7.—H. S., a white man, age thirty-five, was admitted to the Hospital on October 27, 1944, with a diagnosis of multiple sclerosis. He had been completely incontinent since 1943. He was mentally deteriorated. On examination, the kidneys, bladder, liver, and spleen were not palpable. Rectal examination revealed a normal prostate. There was no residual urine. Routine laboratory studies were within normal limits. The intravenous pyelogram and cystogram were normal. Cystoscopy revealed a contracted bladder neck and cystometrogram indicated a mildly spastic bladder. Transurethral resection was done on April 30, 1948, with removal of $2^1/_2$ Gm. of tissue. Upon removal of the retention catheter, there was no improvement.

Case 8.—R. S., age sixty-two, was admitted to the Hospital on March 24, 1947, with urinary retention. The patient showed signs of chronic uremia. There was vomiting. The skin was dry. The patient was drowsy and complained of dribbling of urine.

On physical examination, there were signs of impending uremia. Tongue was dry and coated. The abdomen was distended. The bladder was palpable at the umbilicus. On rectal examination, the prostate was found to be small and flat. Blood pressure was 160/90. Neurologic examination revealed the absence of ankle jerks. There were diminished left knee jerks, bilateral extensor toe response. The gluteal muscles were flaccid. Neurologic opinion was cord pathology, etiology not known. Tidal drainage was advised. Blood count was 3,700,000 red blood cells, hemoglobin 72 per cent, and leukocyte count 9,000. The blood Wassermann negative. Blood chemistry findings were urea nitrogen 175, creatinine 5, and sugar 63.8.

An indwelling urethral catheter was inserted. Fifty ounces of purulent residual urine was removed. The patient was placed on sulfathiazole, 15 grains four times a day, and streptomycin, 2 Gm. daily, with the catheter left in situ for drainage; 2,500 cc. of Hartman's solution was administered intravenously daily. Transurethral resection of the bladder neck was decided on and performed on April 30. A minimal amount of prostatic tissue was noted and resected with a portion of the bladder neck. A total of 5 Gm. of tissue was removed. The catheter was left in situ for four days. Following the removal of the catheter, the patient voided without difficulty. The urine was clear. The blood urea dropped to 50 mg. on March 31 with a creatinine of 2, and on April 14, the urea nitrogen was 24.5, creatinine 2.4.

The patient was discharged on April 19, voiding a clear urine without any evidence of residual urine in the bladder. The patient has been under observation since his discharge from the Hospital and has no urinary complaints and is in good health. The exact nature of his neurologic disturbance has not been established, and there is no evidence of cord pathology at this time (Fig. 3).

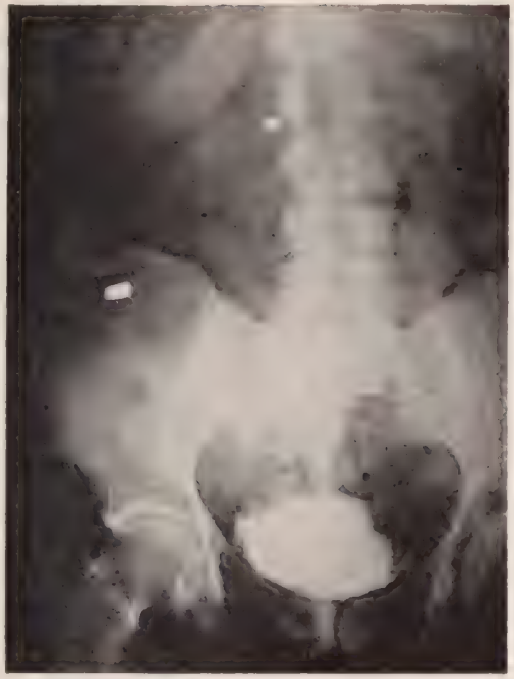

FIG. 5. Cystogram showing marked improvement in bladder tonus following transurethral resection of internal sphincter (Case 9). There is no reflux.

Case 9.—T. G. was admitted on February 25, 1949, with chief complaint of abdominal mass and dribbling of urine. The patient was shot in the back in 1932, and a bullet lodged in the spine. A laminectomy was performed at that time, but the bullet was not removed. X-ray shows the bullet between the second and third lumbar vertebrae. Partial spinal fusion between the first, second, and third lumbar vertebrae is noted (Fig. 4).

On examination, the bladder was palpable at the umbilicus, and the presence of an overflow incontinence was noted. Rectal examination revealed a small flat prostate. Cystoscopic examination revealed the presence of 40 ounces of residual urine in the bladder which was trabeculated. Only a small amount of prostatic tissue was noted at the bladder neck which was spastic and thickened. Bilateral retrograde pyelography revealed the presence of a marked bilateral hydronephrosis with marked bilateral dilatation of the ureters. A cystogram revealed a marked atonicity of the bladder. Blood chemistry findings were urea nitrogen 40 mg., sugar 110, acid phosphatase 1.5, alkaline phosphatase 2.1. A Foley catheter was inserted into the bladder and left in situ. He was placed on sulfathiazole, 15 grains every four hours, and streptomycin, $^1/_2$ Gm. four times a day.

On March 8, a transurethral resection of the small amount of prostatic tissue, together with resection of the internal sphincter, was performed. Three grams of tissue were resected. On the fourth day, the catheter was removed, and the patient voided without difficulty. He now voids without difficulty. There is no residual urine in the bladder. A follow-up urogram reveals a fairly normal upper urinary tract. The bladder has returned to its normal contour (Fig. 5). The patient has returned to work and is in good health.

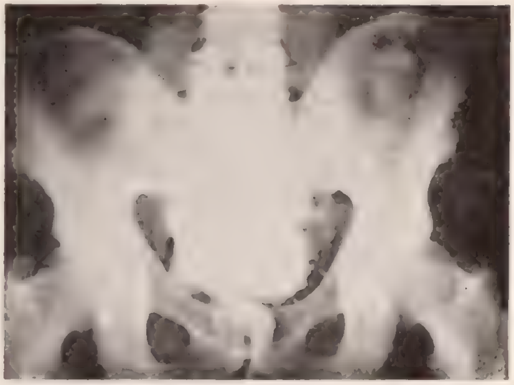

FIG. 6. Typical cord bladder associated with diabetes (Case 10).

Case 10.—J. M., age seventy-seven, was admitted to the Hospital on September 2, 1948, with chief complaint of urinary retention. A prostatectomy had been performed three years prior to admission. There was a history of diabetes of twenty years duration. Examination on admission revealed the bladder at the umbilicus, not tender (Fig. 6). On rectal examination there was no evidence of prostatic enlargement. Examination of the urine revealed a persistent 3 plus sugar with no acetone. Blood chemistry revealed urea nitrogen 33, blood sugar, 245.8; Wassermann was negative.

Cystoscopic examination revealed a trabeculated bladder. Forty ounces of residual urine in the bladder. No evidence of prostatic tissue. On September 12, under spinal anesthesia, the neck of the bladder was resected, 2 Gm. of tissue being removed. The catheter was left in situ for four days. The patient was placed on streptomycin, $^1/_2$ Gm. every six hours, and sulfathiazole, $7^1/_2$ grains every four hours. He was given daily doses of insulin, and the urine was carefully checked for sugar at four-hour intervals. Following removal of the catheter, the patient voided without difficulty. There was no residual urine in the bladder. He was discharged on November 4, 1948, voiding every three hours during the day and once at night. Condition was excellent.

Summary and Conclusions

Ten cases of so-called neurogenic bladder treated by transurethral resection of the bladder neck have been described. In five cases, the immediate results were spectacular. In each of these, only a small amount of hypertrophic prostatic tissue was present. Resection of a spastic internal sphincter together with the removal of this minimal amount of prostatic tissue restored the bladder function. The neurologic diagnoses in these cases were arteriovenous angioma of the spinal cord, multiple sclerosis, diabetic cord bladder, paralysis of the bladder due to a bullet lodged in the spine, and one case of spinal cord disease of unknown origin. Following transurethral resection of the bladder neck, there was complete emptying of the bladder, the dilatation of the upper urinary tract was relieved, and the associated pyelonephritis quickly subsided. The urinary complaints were almost completely eliminated.

The remaining five cases had a hypertonic type of bladder with diminished bladder capacity and with little or no residual urine in the bladder. The neurologic diagnoses in these cases were hyperpituitary disease, intramedullary disease, and multiple sclerosis. In four of these cases, marked improvement in vesical function was obtained. In one (Case 7), mental deterioration existed, and proper evaluation of the result was difficult. In each of these five cases, urinary continence was restored or improved. Their general condition has been greatly improved, and, although they remain institutionalized because of their primary neurologic pathology, their outlook on life has become more hopeful.

125 Eastern Parkway
890 Park Place

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ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 A.M.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Identify your material carefully so that it may be returned.

A SAFER METHOD OF X-RAY THERAPY FOR ACNE VULGARIS OF THE FACE

SAMUEL MONASH, M.D., New York City

(From the Department of Dermatology, New York Medical College and Flower and Fifth Avenue Hospitals)

ALTHOUGH it is true that a considerable percentage of cases of acne vulgaris can be improved by dietary measures, injections of various types, and ultraviolet ray therapy, it is the experience of most dermatologists that the x-ray is a most valuable adjuvant in treating many of the more severe cases. The occasional appearance of radiodermatitis in a patient treated with the x-ray has rendered many general practitioners antagonistic to this mode of therapy. A study recently made by Shafer, Braestrup, and Fisher included 25 cases of radiodermatitis of the face following treatment for acne vulgaris.[1] In most of these patients the injuries were chiefly in the middle part of the face, with the nose, lips, and chin showing the most decided changes. This location is due to a combination of factors, among which may be mentioned the alar exit dose, overlapping of fields, and the use of midface exposure technic, in addition to the customary treatment of the sides.

At the present time, the usual procedure in x-ray therapy of acne is to give two exposures to the face, one on each side, varying in dosage from 75 to 100 r at weekly intervals. The center of the face is not shielded during these exposures. Andrews, for example, recommends 100 r of unfiltered x-ray, 8 to 12 times at weekly intervasl, applied on each side of the face.[2] Most dermatologists in this section of the country use the above procedure but, instead of 100 r, give 75 r at weekly intervals for a total of 16 treatments or 1,200 r.

With this method of treatment there is bound to be considerable overlapping in the middle of the face, varying in amount with the center of focus, whether in the center of the cheeks or over the angle of the lower jaw. The dosage is also increased by the addition of exit dosage in the thinner nasal area. Moreover, when the forehead and chin are affected, an additional exposure is sometimes given to each or both of them. For these reasons and because of the uneven shape of the face, the dosage received by different areas from an applied dose of 75 r may vary from 50 r to as much as 150 r.

For the past fifteen years I have been using a different technic which gives a more uniform dosage and, in addition, precludes the possibility of a radiodermatitis. This method depends upon three factors: the treatment of comparatively uniform areas of the face, the use of smaller dosages than those usually recommended, and the avoidance of exit dosage. I have used this procedure or a slight variation in the treatment of more than 2,000 cases of acne vulgaris with good results and not a single case of radiodermatitis.

The face, neglecting the anterior extension of the nose, is divided into three planes, lettered A, B, and C in the diagram (Fig. 1). A is the anterior facial plane, subdivided into A1, the forehead plane, and A2, the central facial plane, comprising the chin and the anterior portions of the cheeks. B and C are the side planes of the face, taking in the outer parts of the cheeks and forehead. Planes B and C swing backwards from the anterior facial plane at almost a right angle.

Before the patient is treated, the dividing line between the anterior and side planes is marked with skin pencil or thin adhesive strips. With the central area shielded, each side plane is given a dosage of 50 r, either unfiltered or, preferably, filtered through 1 mm. of aluminum. The following factors are used: 95 kilovolts, 3 milliamperes, and skin target distance of 20 to 25 cm. The anterior plane is then treated in two sections; first the forehead area with the lower face shielded, then the lower face with the forehead, eyes, and nose shielded. The dosage in each instance is 50 r. When treating the lower face, the skin target distance is measured from the upper lip, not from the nose. The lips are drawn inward by the patient. The above procedure gives a comparatively uni-

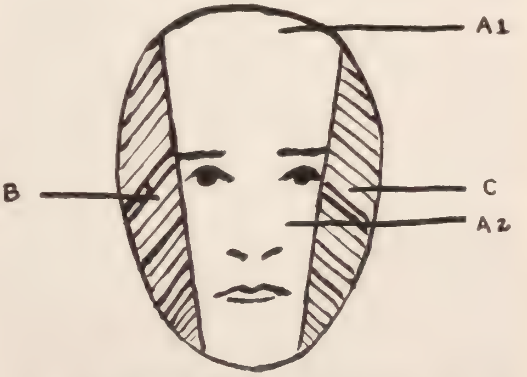

FIG. 1. Division of the face into three planes: A—anterior facial plane, (A1) the forehead plane, (A2) the central facial plane; B and C—the side planes of the face.

form dosage of 50 r to the entire face. It is repeated at weekly intervals for a total of 16 doses or 800 r.

An alternative method of treatment which I have also used with excellent results, especially where the cheek areas are badly affected, is to give the side planes a dose of 30 r and each portion of the anterior plane a dosage of 40 r. In this procedure the anterior plane is shielded when the lateral planes are treated, but the side planes are not shielded when the anterior planes are exposed. This results in overlapping on the cheeks, giving a dosage of 40 r to the central portion of the face and from 65 to 50 r to the outer plane.

1475 Broadway

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CHANGES IN MEDICAL SCHOOL AID BILLS RECOMMENDED

Changes in companion bills in Congress dealing with Federal aid to medical education—*S. 1453* and *H.R. 5940*—"to protect and preserve freedom and independence for medical schools," are urged in an editorial in the January 21 issue of the *J.A.M.A.*

Recommendations to that effect were made by the A.M.A. Coordination Committee on Legislation and approved by the Executive Committee of the A.M.A. Board of Trustees. As now written, the bills "do not provide a satisfactory solution for the problems associated with Federal aid to medical education," the editorial says.

"The suggested revisions call for incorporation of Federal aid to medical education in a separate title of the general bill, as many of the problems and needs of medical education are different from those for other health professions. Other changes that are suggested would reduce to a minimum Federal control over the medical schools, encourage the contribution of local support of medical education and eliminate certain inequitable provisions in the present bills. Specific recommendations include provisions whereby the money paid to any school for instruction would not exceed 30 per cent of the total amount reported as the cost by the school; grants for construction would be eliminated until the needs of all medical schools have been surveyed and a balanced long-range program developed in which the Federal government would not pay more than one third of the cost of construction projects; an objective formula for grants would be written into the bill; several conditions under which medical schools would qualify for grants would be specifically defined and would not give any Federal official the power to prescribe regulations and conditions as he sees fit; restrictive Federal control by any department or employe would be prevented. Furthermore, the study of the needs of the medical schools and the making of recommendations by a National Council on Medical Education would be made by a council on which there will be adequate representation of persons who are familiar with and interested in the problems of medical education. The recommendation by the American Medical Association Legislative Committee and Executive Committee of the Board of Trustees is for the creation of a National Council on Medical Education on which there would be ten "leaders in the field of the medical sciences, education, or public affairs and five of the ten shall be persons active in the field of medical education." The present bills provide that three of the ten appointed members shall be persons active in the fields of professional health education, which would be inadequate since the bills cover six professions. The right of appeal would be provided for any medical school dissatisfied with an action by the Surgeon General. This appeal if not acted on by the Surgeon General within ninety days could be carried to the United States District Court in which the medical school is located. The judgment of the court would be subject to review by the Supreme Court of the United States.

"*S. 1453* and *H.R. 5940*, as now written, do not provide a satisfactory solution for the problems associated with Federal aid to medical education. The above recommendations, stemming from the American Medical Association, are considered essential by the American Medical Association Council on Medical Education and Hospitals, Coordination Committee on Legislation and Executive Committee of the Board of Trustees if legislation providing for Federal aid to medical education is to protect and preserve freedom and independence for medical schools."

SUCCESSFUL SUBCUTANEOUS INJECTIONS OF A MERCURIAL DIURETIC*

RALPH M. SUSSMAN, M.D., and JULIUS J. STEIN, M.D., New York City

(From the Department of Medicine, Beth Israel Hospital)

THE degree of restitution experienced by many patients with congestive heart failure is more closely related to their response to the mercurial diuretics than to any other drug. For this reason, a safe method which would facilitate the administration of an organic mercurial without diminishing its diuretic effect would be desirable.

Since May, 1946, one of us (R.M.S.) has administered Mercuhydrin (methoxymercuripropylsuccinylurea) subcutaneously to a group of ambulatory cardiac patients. Single injections varying from 0.2 to 2.0 cc. were administered under the skin of the buttock or upper thigh without entering the muscle. A 25- or 26-gauge needle from $^1/_2$ to $^3/_4$ inch in length was routinely employed. At no time has there been any inflammation, slough, or necrosis at or near the site of injection. The subcutaneous tissues are as supple and elastic as they were before the Mercuhydrin was given by this means. Nodular remnants at the site of the injection do not occur. The excruciating pain accompanying accidental injury to nerves after deep injection is no longer a concern where this method is used. While patients have mentioned transitory stinging for five to fifteen minutes following needle insertion, these ephemeral sensations have not deterred them from accepting further treatment, since most of them report considerably less pain than that which accompanies intramuscular injection.

The experiences with 12 patients on the wards during 1948 who have received from 3 to 15 injections are outlined in Table 1. The usual dose of Mercuhydrin was 2 cc.; the average weight loss after subcutaneous injection was close to that which occurred following intramuscular injection, as illustrated in cases 1 to 7, 9, and 11.

Where possible, these patients were brought to what has been described as a resistant weight level, that is, one which fails to decrease following further administration of the organic mercurial. Some of our patients have been more comfortable when they have gained 2 or 3 pounds beyond this resistant weight. This is perhaps related to the observation of Lyons *et al.* that persons not in cardiac failure, whose state of hydration may be viewed as optimum, experienced a 3.8 pound weight loss following the introduction of 2 cc. of mercupurin.[1]

Sudden death following the intravenous exhibition of organic mercurial diuretics has prompted the use of the more painful but less dangerous intramuscular injection.[2-4] Successful oral therapy, as proposed by Batterman *et al.*, is sometimes followed by unpleasant side-reactions, such as nausea, vomiting, abdominal cramps, diarrhea, and sore gums.[5,6] Derow and Wolff record severe mercurialism in a patient who had received such oral therapy for three and one-half months.[7]

Since intravenous administration of the mercurial diuretics carries the greatest threat to the life of the patient, it should be abandoned, despite the various schemes that have been introduced to overcome dangerous accompanying reactions.[4] The relative painlessness of the subcutaneous method no longer justifies the use of the venous route as a means of avoiding painful intramuscular injections.

There are few other contraindications to the use of the recently introduced organic mercurial diuretics. Only those conditions associated with the most severe impairment of glomerular filtration or tubular dysfunction should dissuade one from employing these drugs. Prominent among these are primary acute diffuse glomerulonephritis or acute exacerbations of chronic glomerulonephritis, severe systolic hypotension with blood pressures of 70 or less accompanying cases of central circulatory failure in myocardial infarction, or peripheral circulatory failure of whatever origin and the necrotizing nephroses following various poisonings, transfusions, or severe crushing injuries.

Chronic renal disease secondary to hypertension or nephritis is no contraindication to the use of mercurial diuretics.[8] The recent literature documents only three cases of mercury poisoning due to intramuscularly administered mercurial diuretics.[7,9,10] Renal histologic studies in two of these leaves some doubt as to the actual cause of the kidney damage.[9,10]

Hypersensitivity to a particular diuretic should prompt a trial with one of the others, since the sensitivity is related to the whole molecule rather than to the mercury.[11]

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* An abstract of these findings was presented at the 22nd Scientific Session of the American Heart Association, June 4, 1949.

Aided by a grant from the Joseph and Helen Yeamans Levy Foundation in Memory of Miriam Levy Finn.

TABLE 1.—EXPERIENCES WITH 12 PATIENTS RECEIVING MERCUHYDRIN INJECTIONS

Patient	Diagnosis	Number of Injections to Achieve Dry Weight	Average Weight Loss per Subcutaneous Injection (Pounds)	Average Weight Loss per Intramuscular Injection (Pounds)
1	Arteriosclerotic heart disease Hypertensive cardiovascular disease Congestive heart failure	4	4.4 2 cc./injection	4.0 2 cc./injection
2	Arteriosclerotic heart disease Hypertensive cardiovascular disease Congestive heart failure Marked azotemia	4	2.5 2 cc./injection	2.7 2 cc./injection
3	Hypertensive cardiovascular disease Intercapillary glomerular sclerosis Congestive heart failure	17	3.2 2 cc./injection	3.2 2 cc./injection
4	Rheumatic heart disease Arteriosclerotic heart disease Hypertensive cardiovascular disease Congestive heart failure	3	3.75 2 cc./injection	3.5 2 cc./injection
5	Arteriosclerotic heart disease Bernheim syndrome	5	7.4 2 cc./injection	6.6 2 cc./injection
6	Rheumatic and arteriosclerotic heart disease Congestive heart failure Bronchopneumonia	6	2.7 2 cc./injection	2.7 2 cc./injection
7	Rheumatic heart disease	5	3.4 1 cc./injection	3.5 2 cc./injection
8	Intercapillary glomerular sclerosis Azotemia	2	2.4 2 cc./injection	no data available
9	Arteriosclerotic and hypertensive cardiovascular disease Diabetes mellitus Congestive heart failure	5	3.4 2 cc./injection	3.5 2 cc./injection
10	Rheumatic heart disease Arteriosclerotic heart disease Cirrhosis of liver Congestive heart failure	4	3.25 2 cc./injection	no data available
11	Arteriosclerotic heart disease Congestive heart failure	6	3.75	3.75
12	Arteriosclerotic heart disease Polycythemia vera	3	5.0	no data available

Because of the temporary action of the organic mercurials, repeated injections are often indicated for the successful management of heart failure, since salt restriction will implement but rarely entirely replace mercurial diuretic therapy. Where such treatment is needed, the use of Mercuhydrin subcutaneously will allow patients a greater degree of independence. In many instances doses of 0.5 cc. or less of Mercuhydrin are practical if sufficient sodium loss is achieved to prevent the recurrence of manifest or latent edema in the periphery or in the lungs.[12] We have found smaller doses particularly useful in elderly patients who experience a sense of exhaustion and depletion following larger doses.

Excluding the allergic and minimal local effects accompanying the subcutaneous administration of Mercuhydrin, there is little to deter even the most circumspect therapist in its use. Those ambulant patients who have found salt restriction a handicap when engaged in a relatively active business or social life have particularly welcomed the temporary release from almost complete salt abstinence by taking advantage of self-administered subcutaneous injections of Mercuhydrin.

Summary

1. Mercuhydrin has been successfully administered subcutaneously.
2. Its diuretic effect is equal to that which occurs after intramuscular injection.
3. Self-administration of Mercuhydrin is now practical.
4. Increased flexibility in the management of congestive cardiac failure has resulted from this mode of treatment.

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VENEREAL DISEASE IN PREGNANCY

Theodore Rosenthal, M.D., Edwin M. Gold, M.D., Helen M. Wallace, M.D., Jere B. Faison, M.D., and George Kerchner, B.S., New York City

(From the Department of Health of the City of New York)

THE past decade has witnessed the accumulation of considerable valuable statistical information on the prevalence and incidence of syphilis and gonorrhea in the general population. The Selective Service Act provided unusual opportunities for the collation of data, particularly on syphilis, as a result of the examination of millions of young men; the adoption of premarital and prenatal examination laws in many of the states has also resulted in data on syphilis in both sexes.

Review of Literature

There is an astonishing paucity of information, however, on the prevalence of syphilis and especially gonorrhea in pregnancy. One of the earliest reports on the discovery of positive serologic tests for syphilis in pregnant women is that of Williams in 1920, who found 2.48 per cent of positive serologic tests for syphilis in 1,806 pregnant white women and 16.2 per cent of 2,194 pregnant Negro women at the Johns Hopkins Hospital.[1]

Hemsath in 1931 reported that 4 per cent of 6,800 admissions to the New York Lying-In Hospital in twenty-one months of 1929 and 1930 showed positive serologic reactions; 884 of these patients were Negro, of whom the positive reactors comprised 12 per cent.[2]

Hillis in 1938 reported the results of the examinations of 10,016 prenatal patients in the Cook County Hospital; 418, or 4.17 per cent, had positive serologic reactions.[3] The most recent report of this nature is that of Speiser in 1941 who described the experiences at Bellevue Hospital.[4] Of 16,437 pregnant women, 790 (4.8 per cent) had positive serologic tests for syphilis.

The situation with respect to gonorrhea is best summarized by a quotation from Heller: "There never have been any reliable figures on the prevalence or incidence of gonorrhea in this country."[5] Search of recent literature has yielded some information on gonorrhea in prenatal patients. Brühl and Werter in 1933 reported the experiences at the University Clinic in Göttingen: Of a total of 15,015 women delivered in a period of twenty-five years, 319, or 2.12 per cent, had gonorrhea.[6] Spiegler and Hartung several years later reported the experiences in the Seitz Clinic in Berlin: Of 17,578 pregnant women examined, 260 (1.48 per cent) had gonorrhea.[7] Tucker, Trussell, and Plass examined 500 indigent antepartum patients and found 20, or 4 per cent, with positive gonococcus cultures.[8] The most recent report is that of Allen and Barrere who examined 531 pregnant women approximately ten days before delivery and found 8, or 1.5 per cent, with positive gonococcus cultures.[9]

Local Experience

The New York City Department of Health operates three prenatal clinics located in areas where the population is dense and on a very low economic level. Registrants receive their entire ante- and postpartum care at these prenatal clinics and are referred to hospitals for the labor, delivery, and immediate postpartum care. In an eighteen-month period, terminating July, 1949, 1,097 pregnant women were examined in these clinics; the examination included a serologic test for syphilis and cultures from cervix and urethra for gonococci. The results of these examinations are seen in Tables 1 and 2.

TABLE 1.—Serologic Tests for Syphilis in 1,097 Pregnant Women

Color Groups	Total Cases	Positive Test	Per Cent Positive
White	408	9	2.2
Nonwhite	689	64	9.3
Totals	1,097	73	6.6

TABLE 2.—Gonococcus Cultures in 1,041 Pregnant Women

Color Groups	Total Cases	Positive Culture	Per Cent Positive
White	399	0	0
Nonwhite	642	17	2.6
Totals	1,041	17	1.6

Other indications bearing on the general problem of the prevalence of syphilis in pregnancy are found in the vital statistics of the Department of Health. Each birth certificate has several questions concerning the serologic test for syphilis, required under the prenatal examination law, which are answered by the physician performing the delivery. Table 3 indicates the experience in a three-year period. In studying this table it should be borne in mind that, while the prenatal serologic test for syphilis is a mandatory one, no similar regulation compels the physician to reply to the questions on the birth certificate. The birth certificate must be filed within forty-eight hours, often preventing the physician who fills out the birth certificate from obtaining the result of the serologic test for syphilis, especially if it is performed prior to delivery. Many women are delivered by physicians or agencies which do not give them prenatal care. Because of this, it can be seen that for any given year of a total number of births ranging from 138,000 to 153,000, there are as many as 10,000 to 12,000 with "result not stated." While this does not permit the calculation of an exact percentage of seropositive cases, there is a significant difference in the proportion of "result not stated" in the two groups described in the tabulation.

Still another indication may be seen in Table 4, which shows prenatal serologic tests for syphilis made in the Serologic Laboratory of the Department of Health. These figures represent serologic tests, not individuals, and it must be remembered that in their interpretation there is a certain amount of unavoidable duplication. The striking difference between the white and nonwhite groups is in line with general experience both in this area as well as in the other parts of this country.

Comment

Efforts to ascertain venereal disease prevalence and incidence in the general population are not easy; with a group of pregnant women the problem becomes more complicated. The greater number of syphilis patients compared to those infected with gonorrhea in the prenatal clinic group may occasion some surprise. Medical and public health workers have commonly believed that the incidence of gonorrhea is much greater than syphilis. The fact that syphilis, even when treated, may become a chronic infection, as evidenced by a positive serologic test for syphilis, while gonorrhea is usually an acute, short-lived, and frequently self-limited infection, may possibly be one factor in this apparent discrepancy. Pregnant women, because of reduced sexual activity, may undergo spontaneous cure of gonorrhea. In addition, the possible influence of hormonal changes occurring in pregnancy may be a factor.

The decline in morbidity reporting of gonorrhea observed in many health jurisdictions, which probably represents a decline in the incidence of gonorrhea, may also be responsible for the small number encountered in this series. The 1.6 per cent incidence of positive gonorrheal cultures in this series parallels the decreased trend noted previously and points up the necessity for continuing search for this disease in pregnancy. Routine examination should employ the culture rather than the smear technic because of the

TABLE 3.—Serologic Tests for Syphilis on Birth Certificates—New York City, 1946 to 1948

	Number									Per Cent Distribution					
	Total			White			Nonwhite			White			Nonwhite		
	1946	1947	1948	1946	1947	1948	1946	1947	1948	1946	1947	1948	1946	1947	1948
Total live births	152,736	171,174	157,969	138,069	152,870	137,778	14,667	18,304	20,191	100.0	100.0	100.0	100.0	100.0	100.0
Result negative	138,745	153,992	140,392	129,736	143,080	128,417	9,009	10,912	11,975	94.0	93.6	93.2	61.4	59.6	59.3
Result positive	864	1,071	1,150	320	426	401	544	645	749	0.2	0.3	0.3	3.7	3.5	3.7
No test	1,493	1,898	1,723	1,125	1,302	1,209	368	596	514	0.8	0.9	0.9	2.5	3.3	2.5
Result not stated	10,292	12,700	12,905	5,782	6,916	6,358	4,510	5,784	6,547	4.2	4.5	4.6	30.7	31.6	32.4
Question not answered	1,264	1,452	1,714	1,072	1,124	1,365	192	328	349	0.8	0.7	1.0	1.3	1.8	1.7
Result doubtful	78	61	85	34	22	28	44	39	57	...	...	...	0.3	0.2	0.3

TABLE 4.—PRENATAL SEROLOGIC TESTS FOR SYPHILIS MADE BY NEW YORK CITY DEPARTMENT OF HEALTH LABORATORY

	Total	Positive Tests	Per Cent Positive
	1946		
White	74,433	431	0.58
Nonwhite	2,793	222	7.94
Color unknown	17,949	193	0.96
Total	95,175	826	0.86
	1947		
White	57,344	213	0.37
Nonwhite	1,845	127	6.88
Color unknown	8,950	53	0.59
Total	68,139	393	0.58

greater accuracy of the results with the former procedure.

The greater incidence of positive serologic tests for syphilis encountered in the small number of women in this prenatal group, compared to the city-wide figures, presents considerable food for thought. This group of pregnant women are all on the lowest socioeconomic level in the community. For both white and nonwhite patients the percentage of seropositivity is considerably higher than that for the general population.

Here exists a very special problem requiring concentrated effort. In this connection, a question recently posed by Bauer—"What is the meaning of the number of cases reported as congenital syphilis, which has remained constant for the past five and one-half years, during the period when the use of penicillin became widespread; . . . . if there is a reduction in the incidence of syphilis, we should expect fewer pregnant women to be infected with syphilis"—has special significance.[10]

Summary

The results of the venereal disease examinations of more than 1,000 pregnant women in three Department of Health prenatal clinics located in areas where the population is dense and on a low economic level are described. Comparisons are made, where possible, with similar information for the general population in New York City.

The incidence of gonorrhea discovered was below the expected number. The universal accessibility of treatment, the metabolic changes occurring in pregnancy, as well as the actual decline in the incidence of gonorrhea, may all be involved in this phenomenon.

Syphilis, despite encouraging reports of a reduced incidence both on a local and national scale, still exists as an important complication of pregnancy and is obviously directly related to congenital syphilis.

The time has not yet arrived when we can afford to relax our intensive venereal disease control activities; so long as syphilis in pregnancy and congenital syphilis occur in our communities, so long must we press forward in our control programs.

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IMPROPER USE OF THYROID EXTRACT FOR REDUCING

Excessive doses of thyroid extract may cause nervousness, insomnia, loss of weight, heart disturbances, damage to the liver, and protruding eyeballs.

Unfortunately, some of the laity, particularly obese women, have learned that the drug can cause a reduction in weight. Some of these women were treated originally with proper doses by physicians but have increased their daily intake without their physicians knowledge and consent. Others have heard of the weight-reducing property of the medicine and have purchased it without a doctor's advice either as thyroid or concealed under some fancy name in patent medicine.

None of the persons who resort to self-medication realize that the reduction in weight is due to disturbances in metabolism and is not a directly selective action.

There are several procedures that would aid in correcting the overuse of thyroid extract: laws in all states prohibiting the sale of this medicament except on a physician's prescription; general recognition that thyroid treatment should be begun with minimal doses, as thyroid acts slowly and cumulatively, and education of the public against the dangers of this potent substance.—*Editorial, Journal of the A.M.A., January 28, 1950*

SULFAMYLON IN THE TREATMENT OF CHRONIC VAGINAL DISCHARGE ASSOCIATED WITH STERILITY

Howard C. Moloy, M.D., New York City

(From the Departments of Obstetrics and Gynecology, Columbia University and Sloane Hospital for Women)

THIS preliminary report describes the use of an antibacterial agent for the treatment of chronic vaginal discharge in sterility patients and in others complaining of this common gynecologic symptom. This solution has a selective action upon the bacterial flora of the vagina. It destroys certain types of pathogenic organisms and fails to affect the growth and development of other forms apparently associated with a normal bacterial flora. This observation resulted from the trial and error use of the solution in the treatment of patients complaining of chronic nonirritating vaginal discharge. It has also been applied to advantage in sterility patients. Conception has occurred following use of this solution at the time of ovulation.

Methods and Observations

In most instances the cervix is the origin of the discharge, although occasionally the seropurulent character and the appearance of the vaginal wall suggests a true vaginitis. Inspection of the cervix may reveal a scanty to profuse mucopurulent discharge issuing from a patulous external os. The cervix may be otherwise normal in appearance or show mild erosion, with or without hypertrophy.

Some time ago, I began to use routine gram-stained smears of the discharge to study the bacterial flora, and I observed marked variation in the number and morphology of the bacteria and in the number of leukocytes. I found that office treatment by chemical cauterization or actual cautery reduced the amount of discharge in those cases demonstrating cervical erosion, but in the main the results of treatment were discouraging.

My attention was drawn to an antibacterial agent developed for local chemotherapy. Howes had conducted experiments with this solution which lead him to conclude that, "for local chemotherapy, Sulfamylon (5 per cent) seems to be superior to the six other antibacterial substances tested. It possesses the widest range of antibacterial activity and is relatively nontoxic. It is active in the presence of pus and blood and is not affected by changes in the acidity of the environment. It possesses rapid bactericidal activity."[1,*] Fowler used the solution in certain local ear infections with good results.[2] This preparation is dispensed in a combination package which contains one vial each of Sulfamylon, Hydrochloride, 5 per cent, and Dihydrostreptomycin Sulfate, 20,000 units. The Dihydrostreptomycin is dissolved in a few cubic centimeters of the Sulfamylon solution and returned to the large vial under sterile precautions. The following cases have been selected to show the effect of this solution upon the vaginal flora in patients complaining of a chronic vaginal discharge.

Case Reports

Case 1.—One of the first patients treated with this solution complained of an excessive nonirritating discharge. I applied the solution by means of a saturated tampon placed against the cervix. The excess discharge was removed from the vagina and cervix before insertion of the tampon. The patient was instructed to remove the tampon after forty-eight hours. The discharge was markedly reduced by one tampon treatment, and the patient returned for several "repeat" treatments. A few weeks later, she reported that she had missed her period. She was quite disturbed when I found presumptive evidence of pregnancy and failed to return for confirmation of the diagnosis.

I continued to use the solution in routine office practice, with varied success. The smears were difficult to interpret in view of the marked variation found in the morphology of the organisms. Patients would occasionally report a reduction in the amount of discharge, and a few observed no apparent improvement or failed to report the results of treatment.

Case 2.—Several months later, a sterility patient agreed to receive tampon treatments while awaiting admission for dilatation and curettage. She received several treatments at irregular intervals and missed the expected period prior to admission for operation. The pregnancy has continued uneventfully. The patient had moderate hypertrophy of the cervix, with slight erosion and a mucopurulent discharge. This favorable result offered encouragement, although I had failed to record the appearance of the pretreatment and post-treatment smears.

Case 3.—Shortly thereafter, another sterility patient reported for examination. In view of the results described in Cases 1 and 2, I was careful to obtain routine gram-stained smears before and after treatment. The patient gave a history of sterility after two years of marriage to a husband who had two children by a previous marriage. Vaginal

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[*] Sulfamylon is a product of Winthrop-Stearns, Inc.

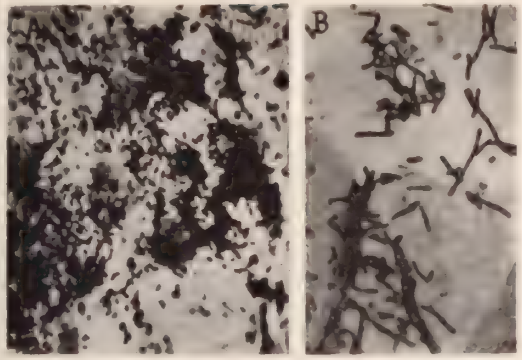

FIG. 1. A. Pretreatment Gram-stained smear (Case 3). Small gram-positive bacilli in great numbers predominate, occurring in clumps and within the leukocytes. Note absence of Döderlein-like bacilli. A few small gram-negative bacilli are present. (1050 ×)

B. Post-treatment Gram-stained smear. Döderlein-like organisms predominate.

examination revealed a small uterus, normal in position and movable without pain. The cervix demonstrated slight erosion with a scanty mucopurulent discharge. The pretreatment smear revealed numerous small gram-positive bacilli in great numbers, occurring in clumps and within the leukocytes (Fig. 1A). A few small gram-negative bacilli were also present, although Döderlein-like organisms were absent. The solution on a saturated tampon was inserted against the cervix and was removed two days later. The post-treatment smear, obtained upon an office visit shortly after removal of the tampon, is shown in Fig. 1B. The characteristic organism in this smear is a Döderlein-like bacillus, occurring singly and in chains, in distinct contrast to the morphology of the predominating organisms in the pretreatment smear. A remarkable reduction in the number of pus cells was apparent, and very few of the original gram-positive and gram-negative small bacilli could be found. The patient was supplied with a small amount of solution and was advised to repeat the treatment two days before ovulation the following month, under the direction of the local doctor. Treatment was carried out at the appropriate time and six weeks later she reported that pregnancy had occurred.

The contrast in the morphology of the organisms in the pretreatment and post-treatment smears, illustrated in Figs. 1A and 1B, led me to conclude that the former represented a pathogenic flora and the latter a so-called normal vaginal flora. I had observed similar smears in previous uncontrolled cases but had failed to recognize the one as distinctly characteristic and pathologic in type and the other as equally characteristic of a normal vaginal flora.

Case 4.—The second controlled experiment is illustrated in Figs. 2A and 2B. This patient, a forty-three-year-old Para 3, had complained of a chronic nonirritating vaginal discharge for many years. The cervix showed a mild erosion, slight hypertrophy and a mucopurulent discharge. The vaginal smear obtained before treatment reveals a picture similar to Case 3, except that small gram-negative organisms, rather than gram-positive bacilli, predominate in great numbers, in clumps and within the leukocytes (Fig. 2A). Döderlein-like bacilli are absent. A "repeat" smear, obtained after removal of the tampon and illustrated in Fig. 2B, shows a dramatic change in the bacterial flora, with numerous Döderlein-like bacilli and other large organisms which are comparable morphologically to the organisms found in the post-treatment smear of Case 3 shown in Fig. 1B. There was also a marked reduction in the number of pus cells and an increase in the normal epithelial cells.

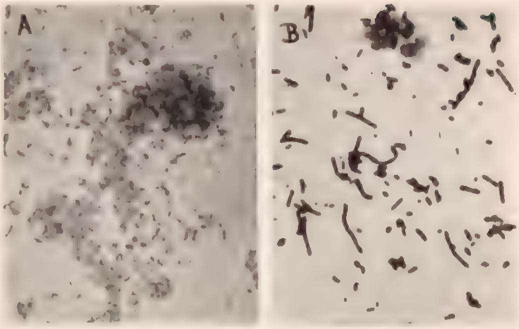

FIG. 2. A. Pretreatment Gram-stained smear (Case 4). Small gram-negative bacilli are present in great numbers, along with a few gram-positive organisms. Note absence of Döderlein-like organisms.

B. Post-treatment Gram-stained smear. Döderlein-like organisms predominate, as in Fig. 1B.

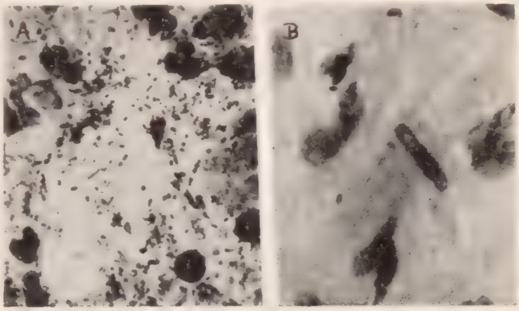

FIG. 3. A. Pretreatment Gram-stained smear (Case 5). Gram-positive small bacilli are present in great numbers, along with numerous pus cells. Note absence of Döderlein-like organisms.

B. Post-treatment Gram-stained smear. Bacteria and pus cells are absent. The smear shows a few epithelial cells.

The patient later reported a complete absence of vaginal discharge for the first time in many years. She returned for further tampon treatments, and the cervix showed a progressive improvement in the erosion, a reduction in size, and the development of a normal noninfected cervical mucus.

Case 5.—Smears from this case are shown in Figs. 3A and 3B. The patient, fifty-nine years old, reported for examination regarding a nonirritating discharge of several months duration. Artificial menopause occurred twenty years previously following radium treatments. The vagina showed senile changes, and the seropurulent character of the discharge suggested a primary vaginitis. The smear obtained before treatment is similar to the pretreatment smears of Cases 3 and 4 (Fig. 3A). The characteristic, small gram-positive bacilli are present in great numbers with pus cells. The smear obtained after treatment, illustrated in Fig. 3B, fails to show either bacteria or pus cells. Vaginal epithelial cells are present.

Comment

It has long been suspected that the toxic effect of the presence of certain bacteria in the endocervix in sterility patients can injure the sperm and prevent conception. These experiments support this contention inasmuch as pregnancy occurred in three patients by the use of an antibiotic solution, which converted a pathologic bacterial flora into a so-called normal flora at the time of ovulation.

The simplicity of the treatment would indicate that the cervical mucus or vaginal discharge should be examined by the Gram method in all sterility patients. The recognition of small gram-negative or gram-positive organisms in great numbers, in the absence of Döderlein-like bacilli, justifies the use of the antibiotic at the time of ovulation to change the bacterial flora into a nontoxic normal form. This change need only be temporary to allow conception.

The same principle of treatment applies to other gynecologic patients complaining of chronic nonspecific vaginal discharge. If a Gram stain reveals the presence of the characteristic pathogenic organism, along with pus cells, as illustrated in Figs. 1A, 2A, and 3A, treatment by the antibiotic solution is indicated to bring about and maintain a normal bacterial flora.

The rapid destruction of so-called pathogenic bacteria in the vaginal secretion represents clinical proof of Howes' contention that 5 per cent Sulfamylon possesses rapid bactericidal activity. The disappearance of the discharge and reduction in the degree of cervical erosion and hypertrophy, by the use of a solution applied to the vagina and not within the endocervix, was an unexpected observation. It has been assumed for many years that a mucopurulent discharge and erosion and hypertrophy are manifestations of a chronic cervical infection, presumably caused by a deep-seated infection in the endocervix. These observations would lead us to suspect that, in certain instances at least, pathogenic organisms develop in the vagina, penetrate into the mucus of the endocervix, and cause erosion and hypertrophy by the irritation of their toxic growth products, rather than by means of a primary cervical infection.

In another instance, a profuse vaginal discharge associated with a definite endocervicitis failed to respond to several treatments, despite the fact that the pretreatment smear revealed the characteristic pathogenic organisms in great numbers. However, the presence of slight prolapse and a relaxed pelvic floor prevented the maintenance of the tampon in position, and post-treatment smears revealed a persistence of the pathologic flora. In patients of this type, who have an excessive discharge, it is advisable to remove the mucopurulent plug from the cervix before applying the saturated tampon.

The selective antibiotic mechanism by which the solution brought about a change in the bacterial flora in the vagina in these patients is unknown. The characteristic organisms recognized in the pretreatment smears are also unknown. These factors await further investigation. However, this observation and the simplicity of the treatment was considered worthy of an immediate report to stimulate interest in the problem. *It is pertinent to suggest that the solution is thought to favor the growth of yeasts, and for this reason its use should be limited to patients complaining of nonspecific vaginal discharge.*

Since the examination of Gram-stained smears is an essential feature of this method of treatment, it is advisable for the physician to make smear-staining an office, rather than a laboratory procedure.

180 FORT WASHINGTON AVENUE

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Knowledge and timber shouldn't be much used till they are seasoned.—*Holmes*

HYPERTENSIVE VASCULAR DISEASE ASSOCIATED WITH QUADRILATERAL RAYNAUD'S SYNDROME

Irving Leinwand, M.D., New York City

(From the Peripheral Vascular Section, Department of Medicine, of the Post-Graduate Medical School and University Hospital of the N.Y.U.-Bellevue Medical Center)

The association of quadrilateral Raynaud's phenomena with hypertension is apparently an uncommon one. In the literature there is but one report, published in 1933 by Weiss and Ellis.[1]

In view of the prominence of the role of the autonomic nervous system in both hypertension and Raynaud's phenomena, it is surprising that these two conditions are not more commonly associated.

The classic description of what is commonly known as Raynaud's disease is a symptom complex in which the extremities become cold and pallid. This is later followed by cyanosis and redness with a gradual return to normal of the color of the skin.

It would be less confusing to designate these vasospastic symptoms, rather than to call them Raynaud's phenomena, since there is such a large variety of conditions having no relation to Raynaud's disease at all which can produce vasospastic symptoms. The true Raynaud's disease is very uncommon since it implies a condition where there is no apparent change in the blood vessels.[2] However, since such terminology has been generally accepted, I shall follow the same use of the descriptive terms in this present report.

The term hypertensive vascular disease as presented in the recent excellent article by Perera is admirably suited to the patients here described.[3] In addition to the peripheral vascular lesions, the manifestations which were present in all of these patients in varying degree are hypertension, cardiac hypertrophy, autonomic hyperactivity, and arteriolar sclerosis. In regard to the relation of hypertension to symptoms, it will be noted that in no instance were the presenting symptoms referable to the level of the blood pressure.

In regard to the mechanism of the vascular changes in Raynaud's disease, there have been many theories advanced. Raynaud originally contended that the fault was in the nervous system. Lewis advanced the theory that the changes in the digital arteries are due to a local fault. This abnormality displays itself in the hypersensitivity of the vessels to relatively low temperatures.

The present report is concerned with four cases, two of which were treated surgically.

Case Reports

Case 1.—This twenty-eight-year-old white woman was first seen December 5, 1947. Her chief complaints were ulcers on the tips of the left third and right fourth fingers with blueness, coldness, and numbness of all of her fingers of both hands except the thumbs. The patient stated that she had been in good health until the winter of 1946 when she first noticed blueness and numbness of the finger tips on exposure to cold. In September, 1947, she developed ulcerations of the finger tips which failed to heal, despite treatments with various antiseptic solutions and penicillin ointment. The patient stated that her feet also became cold and numb with peculiar mottling of the skin.

No abnormalities were noted during the eye, ear, nose, and throat examination. The lungs were clear. Heart sounds were of good quality, and there was regular sinus rhythm with no murmurs; pulse was 80. The abdomen was obese. Examination of the extremities showed the following: The distal digits of both hands, exclusive of the thumbs, were markedly cyanotic, cold, and moist. Ulcerations were present on tips of the right fourth and the left third fingers. There were scars of healed ulcerations on several of the fingertips and about the nails. The toes were cyanotic and cool without any ulcerations. There was 1 plus pretibial edema of both legs. The skin showed a peculiar mottling with slight cyanosis. The peripheral arteries were easily palpable and oscillometric readings were normal in all four extremities.

Blood pressures were as follows:

Lying—left 170/110; right 180/120; pulse 92
Sitting—left 170/115
Standing—left 160/110; pulse 104
Exercise—left 210/135

Sodium amytal test showed a decrease in blood pressure from an initial reading of 170/110 to 140/95.

Blood chemistry and blood count was normal. Urea clearance test was 57 per cent of average normal the first hour and 43 per cent of average normal the second hour. Newburgh concentration test was within normal limits.

Eyegrounds examination showed venous engorgement of the fundi, spasm of the arteries, arteriovenous nicking, and in the right fundus, at nine o'clock, there was a cotton wool exudate and a small recent hemorrhage.

X-ray of the chest showed a hypertensive aortic type heart. The lungs were clear. Electrocardiogram revealed pattern consistent with left ventricular hypertrophy.

It was decided to perform a right thoracic sympathectomy first to relieve the peripheral gangrene in the upper extremities, which was done on December 16, 1947. There was difficulty in visualizing the stellate ganglion, and consequently it was not removed. The left side was done six days later.

The patient had the usual postoperative course and was discharged in good condition on January 4, 1948. The mottling of the skin and the ulcerations were still present. The blood pressure in the left arm was as follows: lying 200/100, sitting 190/110, and standing 180/100.

The fingers of both hands became only slightly warmer and were still cyanotic. In fact, within the first forty-eight hours after each operation they appeared to be slightly worse. However, some definite improvement which was noted at the end of a week continued.

Within the next month on a 1,000-calorie diet, the patient's weight decreased to 150 pounds. The blood pressure fluctuated between 190/120 and 226/136 in the left arm. The fingertips healed slowly but completely. The patient felt very well. The fingers were still cold, but the condition had improved. The blood pressure was little affected by the thoracic sympathectomy, so that on February 3, 1948, the patient was readmitted for bilateral thoracolumbar sympathectomy. Her blood pressure was as follows:

Lying—right 196/122; pulse 64
Sitting—right 178/120
Standing—right 176/120
Exercise—right 194/128; pulse 88

Urine specific gravity was 1.023 with a faint trace of protein. Blood chemistry remained normal.

On February 6, 1948, a left and, six days later, a right thoracolumbar sympathectomy were performed. The patient's course following each procedure was a little stormy but followed the pattern of such postoperative cases. As usual, she received several blood transfusions. The hemoglobin rose to 17.2 Gm. and 5,700,000 red blood cells; the urea nitrogen to 20. This time she began to have severe "blackouts" which occurred even on raising her head. Gradually, they decreased in frequency and severity.

At the end of the first week the blood pressure lying down was 120/85, sitting 100/80, standing 60/40. Two months later, the blood pressure readings on the right were as follows: lying 120/70, sitting 126/84, and standing 96/85. Her fingers were well healed and appeared normal in color and temperature.

On August 5, 1948, six months after her last sympathectomy, the patient stated that she felt completely well. She had had no more blackouts, and there were no color changes in any extremity on exposure to cold. She complained only of extreme perspiration over her back. The fingers were completely healed, but the tips were a little cool. Her blood pressures were as follows:

Lying—right 128/80; left 134/84
Sitting—right 128/90; left 122/84
Standing—right 140/96; left 114/70

On December 21, 1948, the fingertips were still completely healed. The tips of the fingers became cyanotic only on exposure to cold. She has remained the same since then. Blood pressures were as follows:

Lying—right 146/90; left 140/90
Sitting—right 150/96; left 150/94
Standing—right 126/90; left 124/80

Case 2.—This forty-eight-year-old white woman had been suffering repeated attacks of pain, numbness, and coldness of the extremities whenever exposed to cold. This had begun with painful blanching in the left fifth finger eighteen years previously which gradually involved the whole hand. The same symptoms began shortly in the right hand and were soon followed by the same syndrome in the toes of both feet. Each year the attacks occurred with greater frequency until there was no time that she was completely free of the complaint, even in the summer. She had had an ulcer on the right index finger which had taken three years to heal. In 1942, when giving blood to the Red Cross, she learned that she had high blood pressure. In October, 1946, this patient had an ingrown toe nail excised. Following this, she developed an ulcer which failed to heal. This toe became painful on walking one or two blocks. On the other hand, pain sometimes came on at rest and was relieved by walking. She was admitted to the hospital on April 14, 1948.

Physical examination revealed the following: No gross abnormalities of the eyes, ear, nose, or throat. Fundus examination revealed marked arteriovenous nicking and arterial spasm in the right fundus. In the left was seen a classic corkscrew arteriole reaching into the macular area. There was tortuosity of the arterioles on both sides but no hemorrhage or exudate. Lungs were normal. Heart showed regular sinus rhythm. Rate was 100 with no murmurs and sounds of good quality. Abdomen was obese.

All the extremities were cool. On the left big toe there was an open ulcer which covered most of the distal phalanx. The peripheral arteries were palpable; the oscillometric readings were normal. The skin temperature was markedly reduced on the left foot.

X-ray of the chest revealed an aortic type heart without any gross enlargement.

Her urine had a specific gravity of 1.010 and a faint trace of protein. Amytal test showed a decrease in blood pressure from an initial 200/100 to 130/84.

Blood chemistry and blood count were normal. Sedimentation rate was 39, and urea clearance test was 67 per cent of average normal the first hour and 63 per cent of average normal the second hour. Mosenthal test showed a decreased ability to concentrate the urine.

On April 26, 1948, a left total sympathectomy was performed. Immediately following the operation the left foot and leg appeared cold. This continued for about forty-eight hours with only occasional intermittent improvement. The left foot continued to appear cool with marked pain in the left big toe. The toe appeared even more cyanotic than prior to the operation. On May 16, necrotic pustular blisters were noted on the tips of all the toes of the left foot. On May 17, a complete right sympathectomy was performed in essentially the same manner as the left side. (It should be noted that the patient developed a hemothorax after each operation and received oxygen and transfusions in addition to antibiotic therapy.) At this time, an abscess was noted in the right thoracic incision. A similar lesion appeared on the dorsum of the right wrist which was the site of a previous infusion. These were incised and drained. The hemoglobin on May 27 was 16.2 Gm. with a red blood count of 5,420,000. Urea nitrogen was normal. On June 2, the patient developed an abscess of the buttocks. This was incised and drained.

During this entire period the wounds had failed to heal, and the serum proteins were studied in order to ascertain whether a deficiency was in part responsible. However, the serum proteins were normal.

Following the second operation, the blood pressure ranged between 120/70 and 130/80. Two months later, the wounds in the chest and buttocks were healing slowly but had still failed to close completely, in spite of a clean wound and a high vitamin, high caloric diet. Her blood pressure at this time was 120/80 lying down and 110/68 sitting. The ulcer was still present on the left big toe and appeared larger than before the operation. The tips of the other toes also appeared cool and cyanotic.

Four months after the last operation, all wounds were completely healed including the areas of peripheral gangrene on the toes of the left foot. The skin temperature of the left foot was lower than the other three extremities. However, the toes were pink and not at all cyanotic. There was a variable amount of soft tissue defect present on all the toes of the left foot. There was no pain, nor was there any symptom referable to hypertension. There was no dyspnea on exertion or lying flat in bed. The blood pressures were as follows:

Sitting—right 92/66; left 88/62
Standing—right 74/55; left 64/50
Lying down—right 134/84; left 136/80

The patient stated that she had not felt so well for many years, although during the immediate postoperative period she had never been so miserable.

One year later the blood pressure was still normal, but the ulcer on the left toe had broken down.

Case 3.—This fifty-five-year-old white woman had had a history of heart disease since 1923. At that time a diagnosis was made of rheumatic heart disease. She was first known to have hypertension in 1937. In 1939, it was noticed that she was nervous, and there were coarse tremors of the hands. The basal metabolism on several occasions ranged between plus 20 and plus 30. A subtotal thyroidectomy was performed in that year. The blood pressure ranged between 180/100 and 200/80. After the thyroidectomy, she complained first of cold feet. This had not been noticed previously. The next year she complained of cold hands. Since that time, she complained of a typical Raynaud's phenomena in both hands and feet. During this period, she received Lugol's solution and then later thiouracil, and still later, propyl thiouracil. She had episodes of cardiac decompensation in 1943, 1946, 1947, and 1948.

On her last admission to the New York Post-Graduate Medical School and Hospital, her blood pressure ranged from 155/98 to 190/110. X-ray of the chest revealed aortic type heart without any gross enlargement. The electrocardiogram was abnormal without any definite diagnostic pattern.

Blood chemistry and blood count were normal. Urine showed a specific gravity of 1.010 and a faint trace of protein.

It was decided that the patient was in chronic heart failure, and she was transferred to a convalescent institution. The discharge diagnosis was hypertensive cardiovascular disease; Raynaud's syndrome; and rheumatic heart disease, inactive, with chronic auricular fibrillation, mitral insufficiency, and aortic stenosis. It might be suggested that the vasospastic symptoms were due to hyperthyroidism. It should be noted that, although the patient was treated for hyperthyroidism, the diagnosis was never really established. Moreover, angiospasm of thyrotoxic patients does not produce Raynaud's phenomena.

Case 4.—This man was admitted to the clinic with a history of painful ulcers of the tips of the fingers for the past ten years. The present complaint started with blanching of the hands which was followed by redness and then mottling of the skin. This was produced by exposure of the hands to either cold weather or cold water. The past history was essentially negative. Family history was negative. Habits were not remarkable.

Physical examination revealed a fifty-five-year-old, obese, white male whose height was 68 inches and who weighed 200 pounds. No gross abnormalities were noted during the eye, ear, nose, and throat examination. The lungs were clear to percussion and auscultation. The heart showed regular sinus rhythm with a systolic murmur audible at the aortic area. Blood pressure was 220/110. No palpable masses were present in the abdomen, and the liver, spleen, and kidneys were not palpable.

There were varicose veins present on both lower legs. The arterial pulsations were palpable, but the radial arteries appeared thickened and slightly resistant to obliteration. There was a varicose ulcer present on the left lower leg. There were scars of old ulcers present on the tips of the fingers. The hands and feet were cool and slightly cyanotic.

The laboratory tests revealed the following: Wassermann negative; complete blood count normal; sedimentation rate 15 mm.; specific gravity of urine 1.020 with faint trace of protein, red and white blood cells and granular casts in sediment.

The patient was seen once more, at which time 2 cc. of Etamon were given intravenously, but there was no rise in the skin temperature of the hands and feet. The blood pressure which showed an initial reading of 175/115 dropped to 120/80 but returned to the previous reading by the end of the test.

A diagnosis of (1) Raynaud's phenomena, (2) varicose veins with varicose ulcer, (3) generalized arteriosclerosis, and (4) hypertension was made.

The patient was not seen again in the clinic, and any attempts to follow this case were unsuccessful.

Comment

De Bakey and his group in a recent publication have stated that measures designed to produce dilatation of the entire vascular bed are of doubtful value.[4] They feel that effective therapy is based on increase in the blood supply to the affected part.

Sympathectomy for vascular disease has been most successfully used in the extremities where there is evidence of abnormal vasoconstriction. Sympathectomy in these cases has been rightly limited to the affected region. Certainly, total sympathectomy has not been used in the treatment of peripheral vascular disease. Thoracolumbar sympathectomy has been extensively used in the treatment of hypertension in those patients who have shown that such treatment might be effective. Some surgeons have done complete sympathectomies in order to preclude the possibility of residual pathways remaining with a lesser procedure.[5] The use of total sympathectomy is, therefore, a procedure which might be acceptable for the treatment of hypertension but would be contrary to generally accepted principles for surgical intervention in peripheral vascular disease. Yet, if one is to treat a quadrilateral vasospastic syndrome, then the sympathectic innervation of the four extremities must be severed. If the thoracolumbar sympathectomy is also performed, the patient must inevitably have a total sympathectomy. The indications for both surgical procedures were present in both of the operated cases.

In the immediate postoperative period of Cases 1 and 2, the local lesions became worse. In Case 1, this was for only a comparatively short period of time; in Case 2, the immediate result was poor and became progressively worse in the next two months.

Freeman has pointed out that the peripheral circulation has a dual function with dual control.[6] Not only does the blood supply of the extremity serve to meet the nutrient demands of the tissues, but it serves the purpose of regulating the body temperature. In accordance with the requirements for the conservation or disposal of heat, the circulation to the extremities is reduced or expanded. Following sympathectomy, the nutrient demands exert a more pronounced effect upon the circulation, although the direct effects of heat and cold are still maintained to a lesser degree. The reflex effects of temperature changes are apparently abolished.[7] Relief of arterial and venous spasm with increase in the collateral blood supply are undoubtedly responsible, in part, for improvement in the sympathectomized limb.

The exact manner in which the beneficial effects of sympathectomy are obtained is still in doubt. Although it would appear to defeat the purpose of the operation, it seems fairly well established that, whatever else may occur, there is an opening of arteriovenous communications which shunt the blood directly from the arteries to the veins without passing through the capillary loops. Freeman believes that destruction of vasomotor control over arteriovenous anastomoses by sympathectomy may abruptly deflect into the venous system the nutrient collateral flow to the capillaries.

Atlas was the first to suggest this phenomenon as the cause of the gangrene which occasionally follows sympathectomy.[8] Stein, Harpuder, and Byer reported that they have seen toes which merely appeared poorly nourished and cyanotic become gangrenous immediately after operation.[9] They felt that this was due to the diversion of blood from the local area, where it was needed desperately, to a large skin surface with detrimental effect on the area for whose benefit the sympathectomy was originally planned. They pointed out that evidence is accumulating for the existence of vasodilator fibers within the sympathetic system in man. If the sympathetic trunk is severed, such fibers which might play a beneficial role are removed with the vasoconstrictor fibers. De Bakey and his coworkers also mentioned that, if an effective agent were used with ability to produce maximum general vasodilatation, its effects would be dangerous, since the reaction would be shocklike and the original purpose of increasing the blood supply to the local part would be defeated. All of these conclusions are fully warranted and certainly theoretically sound.

There is no doubt that all of the mechanisms mentioned played a part in this poor result of the early postoperative period. The amount of vascular damage already present undoubtedly plays a major role in the postoperative results. In those cases where some peripheral gangrene is already present, I feel that the responsibility may be placed not only on the shock produced by the operative procedure but by the production of a shocklike vascular bed. The removal of active vasoconstriction results in a vascular system which has a much larger capacity than is necessary for the available blood volume so that a situation similar to shock is immediately apparent. In this respect, extreme vasodilatation may produce a picture seen in burns or frostbite Marked arteriolar dilatation delivering blood t dilated capillaries with increased capillary permeability would favor some exudation of fluid from the capillaries with consequent tendency to block the capillaries with clumped red cells acting as thrombi.[10] Peripheral resistance is gone, and the pressure falls so that the actual quantity of blood delivered to the tissues is decreased in the distal portions of the vascular system. In those areas where cyanosis or peripheral gangrene is already present, the anoxia become more pronounced due to curtailment of the blood flow. Anoxia in itself favors further vascular damage by maintaining endothelial anoxia and further increasing capillary permeability.[11] This may explain the extremely long period of healing of the wounds in the back and buttocks in the presence of normal protein and vitamin intake.

In regard to the hypertension, these patients had no complaints directly referable to elevated blood pressure so that no subjective change was apparent or expected. In the care of patients undergoing thoracolumbar sympathectomy, outlined by Lord and Hinton, one of the main problems is the shock following operation.[12] Treatment is directed toward the maintenance of an adequate blood pressure and combating the moderate anemia which develops after each procedure. In the experience of these authors routine transfusion is the best method of treatment. While this may be true of patients who are undergoing thoracolumbar sympathectomy for hypertension alone, I am not too sure that this should be used in the treatment of patients who have peripheral gangrene. It will be noted that blood counts done in these two cases after operation showed a very high hemoglobin and a high red cell count. I believe that there is some amount of hemoconcentration immediately after these operations due to shock and that the addition of the cellular elements tend toward increasing the hemoconcentration, giving a fertile field for thrombosis. It might be more advisable, in cases with peripheral vascular disease, to use other means of maintaining an adequate volume. Neo-synepherine is used to attempt to overcome the initial great drop in the blood pressure by decreasing the vasodilatation. This is of great importance, and suitable means of allowing a more gradual effect of the sympathectomy would be ideal. Further studies along these lines are certainly indicated. Since no biopsies or autopsies were obtained in this group, the underlying pathology cannot be demonstrated and remains unknown. I believe, however, that we may assume that both the hypertension and the quadrilateral Raynaud's syndrome are concurrent or concomitant symptoms of diffuse vascular disease.

The presence of Raynaud's phenomena in such a small percentage of cases of hypertensive vascular disease would seem to throw some doubt on the theory that the primary fault lies in the sympathetic nervous system. It would appear to favor Lewis' theory of local hypersensitivity of the blood vessels as the primary cause of Raynaud's disease. If increased sympathetic tone or hyperactivity were the primary cause of Raynaud's disease, one would expect to find it present in all cases when autonomic hyperactivity was present, i.e., all hypertensive cases selected for surgery.

Cases 3 and 4 were not operated upon. Case 3 is at present hospitalized in a city institution and is apparently doing fairly well under conservative medical management, although she is a bed patient. Case 4 did not return, and no follow-up could be obtained at this time.

Summary

1. Four cases of hypertensive vascular disease associated with quadrilateral Raynaud's syndrome are presented. There were three women and one man.

2. Two cases were treated surgically with good results in either the vascular symptoms or the hypertension, but not both.

3. The possible mechanisms for gangrene following sympathectomy are discussed. It was suggested that a postoperative situation, similar to that seen in shock, plays a role in producing gangrene following sympathectomy.

4. The presence of Raynaud's phenomenon in so few cases of hypertension tends to support the theory of Lewis that a local sensitivity of the blood vessels is essential in the production of the syndrome.

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LACTO-GEL TEST IN LIVER DISORDERS

THOMAS N. SHEEN, M.D., and PHILIP G. C. BISHOP, M.D., New York City

(From the Department of Medicine, St. Luke's Hospital)

BASED on the observations of Kopaczewski that certain acids and alkalies, when added to human blood serum, form a gel and that, when lactic acid is used, the gel time varies with different sera, the authors decided to investigate this lacto-gel test further.[1]

Preliminary trials in 1935 with various amounts and dilutions of lactic acid and with other acids related to lactic acid led to standardizations of the lacto-gel test as follows: 0.15 cc. of U.S.P. lactic acid is added to 1.0 cc. of patient's serum in a test tube, briefly shaken for mixing, and allowed to stand. The endpoint is reached when a gel is formed and tilting the test tube fails to spill the contents. This endpoint is clocked for time and recorded.

Normal lacto-gel time is two to five hours or more; under two hours is considered positive. In certain pathologic conditions this gel time is as short as three to five minutes. The test is done preferably on serum from fasting, centrifuged blood specimens at room temperature.

Certain physical factors influence the test with resultant variations in gel time. The following observations have been noted:

1. Increasing the temperature from 20 to 30 C. shortens the gel time without disturbing the relative gel time of different sera.
2. Storage of serum causes some increase in gel time, but after one hundred forty-four hours it becomes stabilized.
3. The gel time is accelerated if serum contains hemolyzed blood or a large number of red cells.
4. If the serum is added to the lactic acid, the gel time tends to decrease.
5. When the viscosity of the serum is increased by the addition of neutral insoluble substances, gelling is hastened. However, adding human immune globulin to the test serum does not decrease gel time.
6. Rapid, and at times immediate, gel is obtained by addition of a few drops of ether to the serum before adding the lactic acid.

For comparison with pathologic conditions the lacto-gel test was done on sera obtained from 600 consecutive St. Luke's Hospital admissions (ward and outpatients) whose blood had been submitted for routine Wassermann tests. Although correlation of the test results with the 600 case records presented practical difficulties due t lack of definite diagnoses and to insufficient laboratory findings, certain inferences could b drawn from this preliminary investigation:

1. Normal lacto-gel times were found i healthy individuals, including 50 profession blood donors.
2. Positive tests occurred in diseases othe than carcinoma (as suggested by Kopaczewski).
3. Chronic diseases and toxic states gav rather frequent positives.

Two hundred of these 600 sera specimens wer also subjected to a formol gel test for compariso While parallel results were obtained in severa instances, widely divergent results were found i many other cases, indicating that the two test are not identical and are probably due to differen mechanisms.

In subsequent publications Kopaczewski reported positive lacto-gel tests in such varied diseases as kala-azar, syphilis, cirrhosis of the live and tuberculosis.[2] He suggests that the conditio of the liver should be determined in order to avoi false positives when the test is used in carcinoma

In other reports the lacto-gel test was not foun reliable in diagnosis of cancer, since in prove cases positive results were obtained in only 50 t 85 per cent of sera tested.[3]

Since our continued use of the lacto-gel tes revealed that positive results were frequent i chronic toxic states and invariably positive i homologous serum jaundice and infectious hepatitis, further trial with this test in liver disorder seemed indicated (Table 1).

Prior to 1938, no reliable laboratory test fo liver disease was available for purposes of comparison. With the introduction of the cephali flocculation test by Hangar it was decided t employ this procedure whenever feasible in checking results of the lacto-gel test.[4] Our finding indicate that strongly positive results of bot

TABLE 1.—LACTO-GEL TEST IN LIVER DISEASES

Number of Cases	Condition	Lacto-Gel Time (Minutes)
40	Homologous serum jaundice	All less than 13
9	Infectious hepatitis	5 to 28
6	Cirrhosis of liver	4 to 50
10	Courtesy of Dr. Joseph Post	17 to 120
6	Toxic hepatitis	
	Metallic salts—4	23 to 45
	Infectious—2	10 to 17

Presented at a meeting of the New York Pathological Society, May 26, 1949.

TABLE 2.—LACTO-GEL AND CEPHALIN FLOCCULATION TESTS

Case	Lacto-Gel (Minutes)	Cephalin Flocculation (Plus)	Condition
1	5	4	Nonfilling gallbladder; hepatomegaly
2	5	4	Lymphatic leukemia; hepatomegaly
3	5	4	Diabetes; jaundice; hepatomegaly
4	5 to 7	2	Infectious hepatitis
5	10	4	Lobar pneumonia, type XIV; diabetes; acidosis
6	10	4	Infectious hepatitis
7	14	4	Cirrhosis of liver
8	15	3	Subacute bacterial endocarditis; cirrhosis (alcoholic)
9	17	3	Alpha streptococcus lobar pneumonia; hepatomegaly
10	17	4	Infectious hepatitis; "catarrhal"
11	20	4	Liver dysfunction; hepatomegaly
12	20	3	Diabetes; hepatomegaly
13	23	4	Toxic hepatitis; syphilis (arsenical therapy)
14	30	4	Rheumatoid arthritis (gold salt therapy)
15	30	4	Cardiac decompensation; pneumonia
16	30	4	Cirrhosis (alcoholic)
17	35	3	Cirrhosis of liver (alcoholic)
18	40	2	Outpatient Department case, diagnosis (?)
19	40	3	Obstructive jaundice (3 months)
20	45	2	Pernicious anemia; hypoproteinemia
21	45	2	Toxic hepatitis; syphilis (arsenical therapy)
22	50	3	Cirrhosis, biliary; early biopsy carcinoma of head of pancreas
23	60	4	Cardiac decompensation; diabetes
24	60	4	Laboratory Specimen, diagnosis (?)
25	60	4	Rheumatoid arthritis; no hepatomegaly
26	75	2	Carcinoma of breasts
27	80	2	Laboratory specimen, diagnosis (?)
28	80	0	Cirrhosis (alcoholic)—cephalin flocculation done after ten days intensive therapy
29	140	1	Laboratory specimen, diagnosis (?)
30	155	2	Liver dysfunction (?); no hepatomegaly
31	185	1	Liver dysfunction (?)
32	270	1	General arteriosclerosis; cholelithiasis

tests are almost invariably in agreement and negative results of both rarely at variance (Table 2). The many conditions in which both of these tests were found negative are not included in this report. However, a case with extensive liver damage and cachexia that gave a negative lacto-gel test but a positive cephalin flocculation test may be mentioned. This exception was not unexpected, because we have found that in cachectic states or in advanced nephrosis former lacto-gel positives may become negative apparently due to serum changes produced by hydremia and extreme loss of proteins.[3]

Comment

The altered factors in the serum proteins producing positive results are unknown and have not, so far, been clarified by comparison with the following:

1. Use of different acids and dilutions.
2. Liver function tests, such as bilirubin, Takata-Ara, cephalin flocculation, thymol turbidity, protein fractions and ratios, liver biopsy.
3. Electrophoretic patterns.
4. Other blood studies and tests, including blood counts, sedimentation rate, prothrombin time.

It is difficult to assume that positive lacto-gel tests are invariably due to liver damage alone. In conditions such as homologous serum jaundice and infectious hepatitis (and in kala-azar, 3 cases in India, and lymphogranuloma, 2 cases at St. Luke's Hospital), the lacto-gel test has given consistently positive results. Also, repeated tests during convalescence seem to reflect the improved clinical status of these patients as well as parallel results obtained with other liver function tests. Since positive results are found in some cases of cancer, syphilis, tuberculosis, etc., it is conceivable that positives may occur without evidence of liver damage.

It is realized that the lacto-gel test which we, in this preliminary report, presume to have diagnostic significance raises questions as to its mechanism and reliability and that larger test series and further documentation is needed to explain the reaction of the test and to confirm its value.

Because of the frequent positive results in carcinoma, further study of the lacto-gel test in the diagnosis of primary or metastatic lesions seem indicated. Meanwhile, the lacto-gel test is offered for trial in office practice as a simple, preliminary test in liver disorders, as a follow-up test in infectious hepatitis, and as a supplement to other standard procedures.

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The face that cannot smile is never fair.—*Martial*

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Case Reports

REGIONAL ENTERITIS INVOLVING THE JEJUNUM AND DUODENUM

PHILIP A. ZOLLER, M.D., New York City

(From the Department of Surgery, New York University-Bellevue Medical Center, University Hospital)

ALTHOUGH regional enteritis not infrequently extends proximally from the ileum to involve the jejunum and even the duodenum, primary jejunitis is rare. Brown and Donald, reporting on the experiences at the Mayo Clinic, found that of 178 cases of enteritis only five primarily involved the jejunum.[1] Brown and McHardy, in a comprehensive review of over 1,000,000 hospital admissions and 7,997 autopsies, found only one case of enteritis involving the jejunum alone.[2] Ravdin and Johnston, in a review of the literature in 1939, tabulated 462 cases of regional enteritis of which only 16 involved the jejunum alone.[3] Harris, Johnson, and Rees reported cases of chronic nonspecific jejunitis.[4-6] The frequency of involvement of jejunum in reported cases of regional enteritis according to these authors is shown in Table 1.

TABLE 1.—FREQUENCY OF INVOLVEMENT OF JEJUNUM IN REGIONAL ENTERITIS ACCORDING TO LITERATURE

Author	Total Number of Cases	Number Involving Jejunum Alone
Ravdin and Johnston	462	16
Brown and Donald	178	5
Johnson	...	1
Rees	...	1
Pemberton and Brown[7]	39	3

The following case is unusual because of the involvement of the distal duodenum and because of the presence of a high-grade obstruction.

Case Report

This was the second Post-Graduate Hospital admission of a white male jeweler complaining of periodic attacks of vomiting and abdominal distress of five years duration. The past history consisted of diphtheria and tracheotomy in childhood. Family history was essentially negative.

Present Illness.—Recurrent episodes of pain, nausea, and vomiting which started five years before admission were reported. These lasted one month with the intervals between episodes becoming shorter. He had cramplike pain around the umbilicus. Vomiting often relieved pain. He had occasional diarrhea but no bleeding. There was a weight loss of 40 pounds in two years, and he complained of easy fatigability. The patient had been on sulfathalidine medication and a bland diet for four months without relief. On January 9, 1947, patient underwent exploratory laparotomy at this hospital. The jejunum was involved in a diffuse inflammatory process for a distance of two feet beyond the ligament of Treitz, diffuse inflammatory process extending into the duodenum. In several areas marked fibrosis of bowel had occurred with partial obstruction. The mesentery of the bowel was edematous, greatly thickened, and contained numerous large lymph nodes which were soft. The serosa of the jejunum was thickened, lusterless, and roughened. An anterior gastroenterostomy was performed, excluding the pylorus by ligating with kangaroo ligature. Anastomosis was performed between the stomach and the midjejunum.

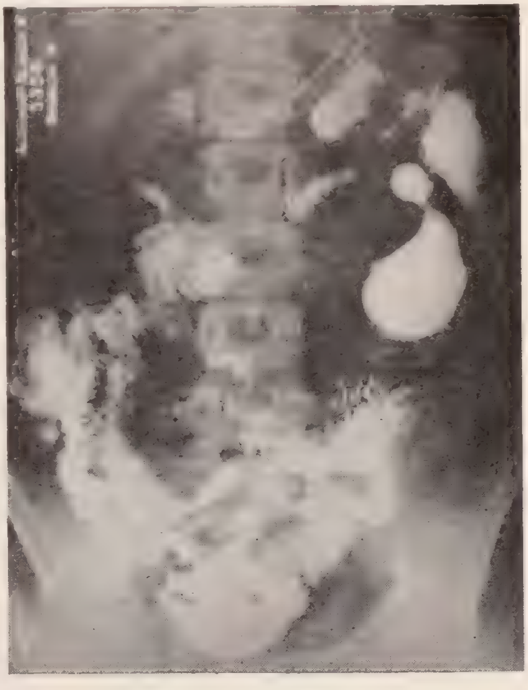

FIG. 1. X-ray showing dilatation and stasis of barium in small intestine in left upper quadrant

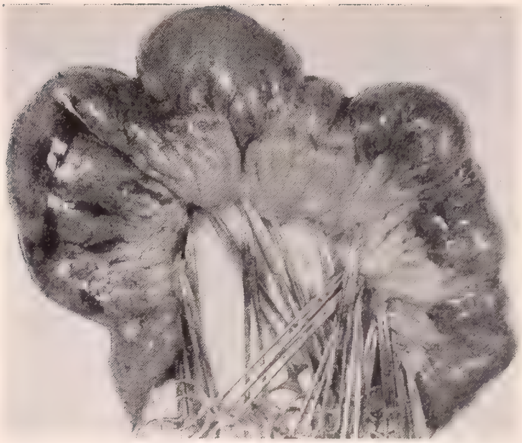

FIG. 2. Chronic nonspecific inflammation of small intestine with areas of duodenum and jejunum, showing dilatation and narrowing and edema of mesentery of duodenum and jejunum.

About four months later, the patient began to have a recurrence of his symptoms of nausea, vomiting of bile, and cramplike pains. He had gained some weight but was still 15 pounds under his normal weight. He had one or two bowel movements a day.

Physical Examination.—A right rectus scar about four inches long was noted. Abdomen was generally distended with some tenderness in both upper quadrants. There was no visible peristalsis, but borborygmus was present.

A gastrointestinal series revealed dilatation and stasis of barium in small intestine located in the left upper quadrant (Fig. 1).

A blood count revealed 5,750,000 red blood cells; 15.9 Gm. per cent hemoglobin; 13,150 white blood cells; 69 per cent polymorphonuclears, and 29 per cent lymphocytes. Blood chemistry revealed 14.5 urea nitrogen, sodium chloride 455, carbon dioxide 57, and total proteins 7.7.

Course.—The patient was prepared for operation with parenteral protein hydrolysate and vitamin therapy. On June 25, 1947, a resection of the jejunum and a portion of the duodenum with an end-to-end anastomosis and ligation of the pylorus, using the falciform ligament, was performed.

Pathology Report.—"Specimen of small intestine 54 cm. in length. In several places, however, there are constrictions to a minimal diameter of 2 cm. The serosal surface is slightly hyperemic, smooth, and glistening in some areas and covered with a fine fibrinous exudate in others. These exudate areas show fine, yellowish-white tortuous striae. Portions of the mesentery are attached to the specimen, and this is maximally 5 cm. in length. On opening into the lumen, a small amount of liquid was present. Four constrictions are identified. In these areas the wall of the bowel is 7.5 mm. in thickness. In the dilated portion of the wall, the bowel averages 3 mm. in thickness. One of the constrictions shows a hyperemic granular surface. The dilated segment next to this constriction shows a large area of mucosal flattening which is pinkish gray. The other constrictions show flat, scarred surfaces which are more hyperemic than the surrounding mucosa. One constriction is 3.5 cm. from the resected end to end, and the most distant constriction is 15 cm. from the opposite resected end. The most dilated portion is 15 cm. in circumference and the most constricted 2.5 cm. Mucosal ulcerations are grossly not identified.

"*Microscopic:* Serosa thickened by hyperemia and fibrosis. Muscular layer hypertrophied. Submucosa greatly thickened by fibrosis. Mucosa lining, seat of chronic inflammation, is intact with no areas of ulceration.

"*Diagnosis:* Chronic nonspecific inflammation of small intestine, duodenum, and small portion of jejunum" (Fig. 2).

Postoperative Course.—The postoperative course was smooth, and the patient was discharged on the ninth postoperative day.

Comment

This case first had a gastroenterostomy performed excluding the pylorus with the idea of diverting the gastric content away from the lesion. The result in this case was poor. However, the author has seen several cases of nonobstructive primary jejunitis at the operating table where a sidetracking gastrojejunostomy was done. In one of these cases, a fourteen-month follow-up study is available and reveals a satisfactory result. It is the author's opinion that cases in the hyperemic stage should be left alone and that in cases in the exudative stage a diverting gastroenterostomy may be of value. In this case, obstruction was the outstanding feature, and a good result was obtained only after resection of the lesion.

Summary

An unusual case of nonspecific jejunitis and duodenitis, extending from the ligament of Treitz for a distance of 54 cm. distally and 5 cm. proximally, in which an end-to-end anastomosis was performed, is presented.

2 EAST 74TH STREET

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To be honest, to be kind, to earn a little and to spend a little less, to make a family happier for his presence—here is a task for all that a man has of fortitude and delicacy.—*Robert Louis Stevenson*

EXCISION OF LARGE DESMOID TUMOR OF THE PELVIC OUTLET NECESSITATING ABLATION OF THE RIGHT LEVATOR ANI MUSCLE

Alexander Brunschwig, M.D., New York City

(From the Memorial Hospital Center for the Treatment of Cancer and Allied Diseases)

IN ORDER to excise a large neoplasm in the pelvic outlet in the patient to be described, it was necessary also to excise what remained of most of the right levator ani muscle. No untoward effects were observed following the procedure.

Case Report

C. O., white woman, twenty-seven years of age, was referred to the Memorial Hospital on January 28, 1949, because of a large tumor mass situated low in the pelvis.

Nine months previously, at the fourth month of gestation, the attending obstetrician palpated a firm mass low in the right pelvis. Cesarean section was performed (for twins) at the end of the ninth month because of the tumor which would have prevented normal delivery.

There were no symptoms except for occasional pain in the right lower quadrant radiating at times into the right hip.

An aspiration biopsy was performed after the Cesarean section and reported as "fibroma."

Physical examination revealed a slender, well-developed and nourished, young, white female patient apparently of stated age. Findings were essentially negative except in the lower abdomen and pelvis. Palpation of the lower abdominal quadrants revealed what seemed to be a rounded mass low in the right side; the surface was smooth.

Pelvic examination showed marital introitus, no developmental anomalies of the vulva. Bimanual pelvic and bimanual rectovaginal palpation revealed a very firm, rounded tumor mass filling the right side of the pelvis and absolutely immobile. The lower surface of the tumor seemed to rest on the right pelvic floor. The vaginal canal was compressed from the right and pushed upward in such a fashion that the examining digit, when passed into the vagina, was rather firmly pressed against the symphysis pubis. There was less encroachment upon the lower pelvic colon. The uterus was definable and was of normal size but pushed well to the left. Speculum examination of the cervix was not possible but by palpation seemed to be normal.

Laboratory examinations, including roentgenograms of the pelvis, were negative.

Operation under general anesthesia was performed through a low midline incision on February 1, 1949 (Fig. 1). Palpation and inspection of the upper abdomen were negative. The patient was placed in Trendelenburg position and the intestines retracted caudad. The upper surface of a rounded tumor mass occupying the right true pelvis was seen. The tumor was immobile. The right ovary was pushed to the left, as was the uterus. The peritoneum was incised parallel to but slightly below the external iliac artery and the mesial leaf retracted toward the midline. This carried with it the right ureter and the right uterine artery together with

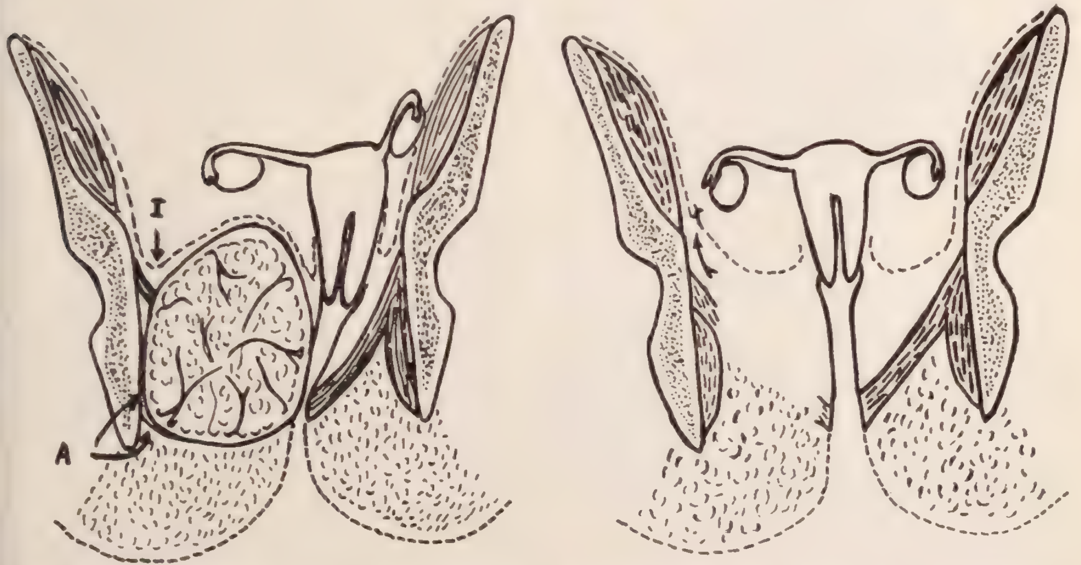

FIG. 1. *Left:* Diagram showing desmoid tumor in right pelvis with firm attachment to osseous brim of outlet (*A*). Uterus and vagina compressed to the left. (*I*) is level of incision of peritoneum for direct exposure prior to excision.

Right: Diagram showing condition of pelvis after excision of tumor. The right levator ani muscle was almost completely removed, and in this area the pelvic floor is composed of the fatty areolar tissue of the upper mesial region of the thigh and the lower mesial region of the buttock.

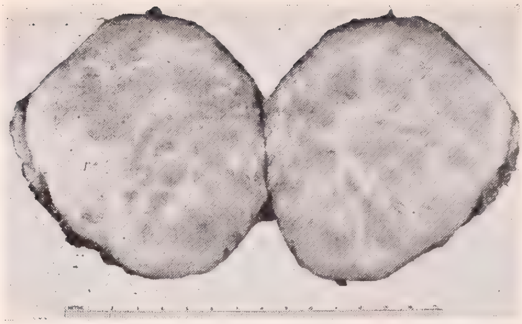

FIG. 2. Photograph of excised, bisected large desmoid tumor of pelvic outlet.

vesical branches. At this point it was possible to ascertain that the tumor mass was completely independent of the uterus, upper vagina, colon, bladder, and ureter. However, it was firmly attached to the right pelvic wall, and only after considerable difficulty was it possible to insert digits between the mass and the pelvic wall. Finally, it became apparent that the tumor had arisen from the bony ridge constituted by the inferior rami of the pubis and ischium. To liberate the tumor, scissors and then the scalpel were inserted between tumor mass and bony ridge and the firm tissues cut blindly in the bottom of the fissure between tumor and pelvic wall. When this attachment was finally severed, the tumor mass was liberated on its inferior aspect by digital dissection and was easily lifted out of the pelvis.

Inspection of the gaping cavity then revealed that the pelvic colon, vagina, bladder, uterus, and ureter were still intact and uninjured. The right floor of the pelvis was constituted by fatty tissue. Nowhere was there evidence of the levator ani muscle and its fascial covering. The situation was interpreted as showing that the right musculofascial floor of the pelvis had, to a large extent, been invaded and disintegrated by the tumor and that during the blind digital and sharp dissection of the deeper aspects of the tumor and its subsequent extirpation, all the musculofascial portion of the right pelvic floor had been removed.

There was surprisingly little hemorrhage. The uterus fell toward the right. The incision in the peritoneum was closed, a soft rubber drain inserted into the "dead space" in the right pelvis. Appendectomy was also performed. The abdominal wound was closed in layers, and a retention catheter was placed in the bladder.

Convalescence was uneventful, and the patient was discharged on the twelfth postoperative day. The postoperative course at home was uneventful.

Gross pathologic study revealed the following data: The dense, rounded tumor mass measured approximately 12 cm. in greatest diameter. The surfaces were smooth. The fresh surface made by bisection of the solid mass showed whitish, coarse trabeculations throughout with irregular mottled yellowish and light brown areas (Fig. 2).

Histologic study by Dr. F. W. Foote of the Department of Pathology was reported as follows: "This tumor is the counterpart of the ordinary abdominal dermoid" (Fig. 3).

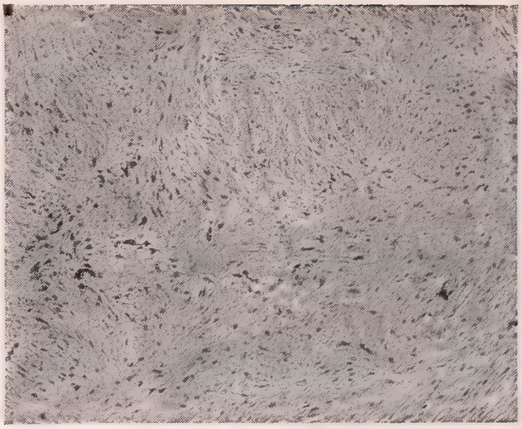

FIG. 3. Photomicrograph of tumor showing typical appearance of desmoid (infiltrating fibroma).

The patient was examined four months after operation, and there were no complaints. Inspection of the vulva revealed slight rectocele, no cystocele. The introitus appeared to gape slightly. The anal sphincter tone was normal, and pinprick elicited normal reflex constriction.

Upon digital examination of the vagina the muscular components of the left pelvic floor were palpated, but on the right side the finger extended easily to the inferior osseous ridge of the pelvic outlet. When the patient was requested to "bear down," no loops of bowel descended into the right paravaginal region. The uterus was of normal size and in normal position.

The patient was examined in erect position with legs abducted. Upon bearing down there was no evidence of cystocele and only slight exaggeration of the mild rectocele. There was no sensation of visceral descent.

Discussion

The occurrence of dermoid tumors in the lower anterior abdominal wall is a well-known clinicopathologic entity. The musculofascial pelvic floor is, in a sense, part of the abdominal parietes and the occurrence here of a desmoid tumor should not be surprising. When encountered in the patient described above, the area of firm attachment was the bony arch of the right pelvic outlet, but the apparent involvement of the levator ani muscle might indicate that its origin was in the musculofascial pelvic diaphragm and that the firm attachment to bone was a secondary event in the course of its infiltrative extension.

The most interesting feature of the case, however, and the principal reason for its being recorded is the demonstration that at least one levator ani muscle may be excised without producing functional disturbances.

Without frugality few would be rich, and with it, few would be poor.—Anonymous

SUCCESSFUL USE OF TRANSABDOMINAL TAP OF AMNIOTIC SAC IN TWO CASES OF HYDRAMNIOS

WILLIAM DICKSON, M.D., New York City

(From the Obstetric and Gynecologic Service (Third Surgical Division) Bellevue Hospital and the Department of Obstetrics and Gynecology, New York University College of Medicine)

PUNCTURE of the uterus through the abdominal wall in an effort to reduce the amount of amniotic fluid without terminating pregnancy was first advocated by Schatz in 1882 and first carried out by Henkel in 1919 and Wormser in 1920.[1-3] This procedure was advocated by Rivett in 1933 who referred to it as a rational method of treating hydramnios.[4] In 1947, he reviewed 50 cases and found that live babies resulted in over 25 per cent of the cases which required treatment before the viability of the fetus.[5] In all these cases rupture of the membranes via the cervix would have resulted in labor and death of the fetus. He asked that this method be given a fair trial. Mueller in 1948, after reviewing the cases of hydramnios at the New York Lying-In Hospital, although he apparently had not tried transabdominal taps himself, stated that abdominal aspiration should be reserved for those cases of acute hydramnios in which maternal distress is so great that intervention before the viability of the infant is indicated.[6]

In considering transabdominal tap of the amniotic sac, several complications may be anticipated: (1) hemorrhage from the abdominal wall, (2) hemorrhage from the uterine wall, (3) injury to the placenta, (4) injury to the distended bladder, and (5) injury to the fetus. The latter is most unlikely in the presence of a large excess of amniotic fluid with the mother in the dorsal position. Bladder injury can be obviated by catheterization immediately prior to the procedure. The site of puncture in the midline halfway between the symphysis and the umbilicus minimizes the remaining dangers. Accordingly, in carrying out this procedure the mother is catheterized and the lower abdomen prepared with merthiolate and draped with towels. An area of skin in the midline halfway between the symphysis and umbilicus is infiltrated with 1 per cent novocaine. The underlying fat, fascia, and properitoneal tissue is also infiltrated. A small incision is made in the skin through which a long Lindemann transfusion needle ($5^1/_2$ cm. from tip to hub) is plunged through the abdominal wall, across the peritoneal space and through the uterine wall into the amniotic sac. Withdrawal of the inner needle and cannula should be followed by a free flow of amniotic fluid which will alter in rate and force with the uterine contractions. As much fluid as possible should be withdrawn. When the flow of fluid ceases, the cannula is withdrawn and the skin incision closed with a single silk suture. It should be covered with a collodion dressing (Fig. 1).

Case Reports

Case 1.—Mrs. W. P., a twenty-four-year-old Negro multipara, developed acute hydramnios at thirty-four weeks gestation, which caused great difficulty in breathing and lying down. On admission to the hospital, examination showed a very large, tense uterus, and patient was having irregular uterine contractions suggesting early labor. The fetal position could not be outlined with certainty, and a flat plate of the abdomen was unsatisfactory because of the tremendous amount of fluid. Transabdominal tap of the amniotic sac was carried out, 3,600 cc. of fluid being withdrawn over a thirty-five-minute period. She was much relieved, and the contractions ceased. A flat plate of the abdomen at this time showed an apparently normal fetus. During the next six days the uterus increased slightly in size. A second tap was undertaken and 350 cc. removed. She was observed for a few days, and as there was no increase in the size of the uterus, she was discharged. Ten days later she returned in active labor. The membranes ruptured spontaneously shortly after admission, and after fourteen and a half hours of labor she was spontaneously delivered of a 6-pound, $15^1/_2$-ounce male child. The baby had a slight defect of the soft palate, and the fifth digits of the hands and feet were smaller than normal. The baby seemed normal in all other respects and went home with the mother on the seventh postpartum day, both in good condition.

Case 2.—Mrs. A. C., a twenty-six-year-old Puerto Rican primigravida, was admitted to the hospital at thirty-four weeks gestation, having irregular uterine contractions. Hydramnios had been diagnosed in the clinic two weeks prior to admission. Examination showed that the uterus was distended to term size, and there was a small fetus presenting in left occipitotransverse position. The fetal heart was normal. The contractions subsided shortly after admission, and a flat plate of the abdomen showed no fetal abnormalities. The hydramnios increased rapidly during the next two weeks, the patient be-

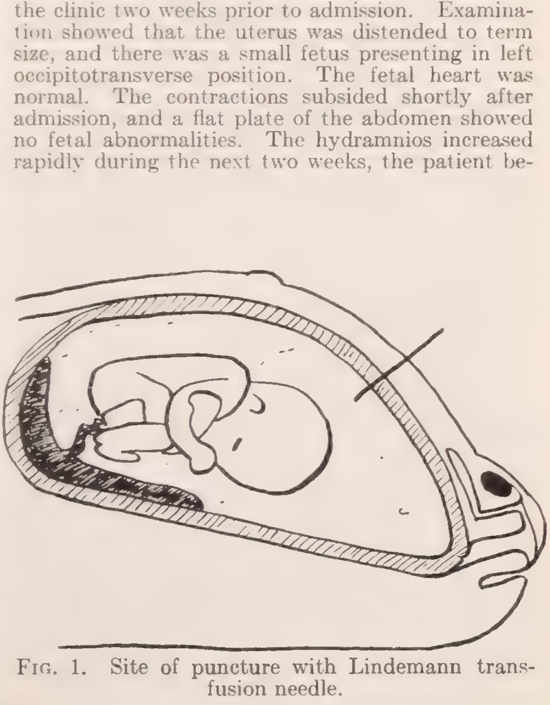

FIG. 1. Site of puncture with Lindemann transfusion needle.

coming quite uncomfortable. With return of uterine contractions the amniotic sac was tapped transabdominally with the removal of 600 cc. of fluid. The procedure was stopped because slight bleeding was encountered. She was considerably relieved, and the contractions ceased. During the next nine days the quanitity of amniotic fluid slowly increased, and uterine contractions began again. A second tap was done, and 750 cc. of fluid were withdrawn. The contractions ceased, and patient was comfortable until eight days later when the membranes ruptured spontaneously with liberation of about 2,000 cc. of fluid. After three hours of labor a low flap cesarean section was performed because of cephalopelvic disproportion and right mentum posterior position of the fetal head. At the time of operation a 4-cm. hematoma was found in the anterior abdominal wall extending to the parietal peritoneum. The baby was a 7-pound, $8^1/_2$-ounce normal boy. Mother and baby were discharged on the tenth postoperative day, both in good condition. At the age of one year the baby was living and well.

Conclusions

1. Transabdominal tap of the amniotic sac can be accomplished in the presence of large excess of fluid with little risk to the mother or fetus.

2. This procedure appears to be of value in diminishing the possibility of premature labor, a complication often arising in patients suffering from hydramnios.

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A.M.A. JOURNAL REFUTES CRITICS OF MEDICAL EDUCATION

The *Journal of the American Medical Association* in its January 21 number takes issue with recent attacks on medical education. In an editorial, the *Journal* cites inaccuracies in statements and omission of pertinent facts in charges levied by some members of the American Conference of Academic Deans.

The *Journal* says enrollments of freshmen medical students this year numbered 6,986, an increase of 298 over last year. The critics had reported "there were 6,387 places to fill in the freshman class." Failures, the publication says, run from 10 to 15 per cent, instead of only 3 to 5 per cent, as reported to the conference.

"While medical schools are working to lower this rate, a certain percentage of failures must be expected, or medical education will suffer from lack of critical screening and the public will receive medical care from physicians with inferior training," the editorial adds. "Certainly, one would not want to return to the deplorable situation that existed at the turn of this century when dilpoma mills were rampant."

The critics of medical education, the *Journal* also says, failed to point out that the physician population is increasing faster than the general population. "The medical profession is fully aware of its responsibilities and is striving constantly to effect improvements to meet the health needs of the nation. It was the medical profession that took the leadership in 1905 in raising the standards of medical education.

"Today, the profession is extending that leadership in many fields so that the public may benefit. One example is the survey of medical education now being made under the supervision of a committee appointed under the joint auspices of the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association. President Alan Valentine of the University of Rochester is chairman of this committee.

"This comprehensive survey will provide information on the preparation of students for the study of medicine, undergraduate work and graduate and postgraduate training. No one who truly is interested in the welfare of this nation would want to see the adoption of plans which might cause a return to the medical chaos that existed forty to fifty years ago. If medical advances are to be continued, they must be made on the basis of careful study, planning, and experience."

CARDIAC ARRHYTHMIA IN DEXTROCARDIA

BENJAMIN RICHMAN, M.D., Brooklyn, New York

(From the Cardiographic Laboratory, Mt. Sinai Hospital)

CONGENITAL dextrocardia has intrigued medical men since the days of Aristotle who observed transposition of the viscera in animals.[1] Fabricius in 1606 and Severinus in 1643 were apparently the first to describe dextrocardia in man, and Senac in 1749 classified dextrocardia into acquired and congenital types.[2] In 1889 Waller recorded two cases of dextrocardia with situs inversus.[2] He showed that in these cases lead 1 is inverted, and leads 2 and 3 are transposed.

Congenital dextrocardia with or without situs inversus is relatively uncommon. Le Wald reported one case in 35,000 physical examinations of recruits for the United States Army.[3] This congenital anomaly does not interfere with normal life, nor does it predispose to heart disease. Persons with dextrocardia are subject to the same cardiac diseases as normal individuals. Recently, one case of dextrocardia with ventricular ectopic beats was reported by Potts and Ashman.[4]

Two recently observed cases of dextrocardia with cardiac arrhythmia are reported in the present communication.

Case Reports

Case 1.—F. L., a girl, age eight and one-half years, was admitted to the Mount Sinai Hospital on June 10, 1948, and discharged July 16, 1948.

The child had been born at full term, weighing 8 pounds. Her development was normal, and her present weight was 79 pounds. One month prior to admission, she came home from school complaining of pain in the right knee and abdomen. Her throat was sore. She felt chilly, and her temperature was 104 F. She received only one tablet of aspirin; the fever subsided and she returned to school in two days. Five days later she complained of dyspnea, palpitation, pain in both knees and abdomen. The pain later migrated to various large and small joints. The temperature rose to 100.5 F., and the patient was admitted to the Hospital.

Physical examination was negative except for the presence of dextrocardia and chronic sinusitis. The blood count, urine analysis, stool examination, various agglutination and allergy tests, and blood cultures were negative. The teleoroentgenogram showed dextrocardia with situs inversus (Fig. 1). X-ray examination of the sinuses suggested the presence of infection.

The electrocardiogram showed regular sinus rhythm, with occasional nodal premature beats (Fig. 2). There was inversion of all the complexes in lead 1, as seen in dextrocardia, and, in addition, deep S waves in leads 2 and 3. The T wave was diphasic in lead 2 and inverted in precordial lead V_4. Serial tracings showed no change.

Medication consisted of sulfadiazine, sodium bicarbonate, and vitamins. The fever gradually subsided, and the child was discharged in good condition. Although a diagnosis of rheumatic fever could not be excluded, the clinical course and absence of serial changes in the electrocardiogram did not indicate that such was the case.

Case 2.—J. L., thirty-six-year-old man, was admitted to the Mount Sinai Hospital on February 13, 1942, and discharged March 1, 1942.

His past history was negative. He had learned that he had dextrocardia twenty-five years ago and knew of cardiac arrhythmia for fifteen years. Two months before admission to the hospital he began to complain of dizzy spells, weakness, and chest pain. A physician advised rest in bed and small doses of digitalis which was discontinued five days before admission.

Physical examination showed a well-developed and well-nourished male in apparent good health. The examination was essentially negative except for the following: The cardiac apex beat was palpable in the fifth right interspace just within the right anterior axillary line. The rhythm was regular with frequent coupled beats. A soft systolic murmur was audible over the entire precordium. The ventricular rate was 88, the radial pulse rate was about 52. The blood pressure was 115/65.

The blood count and sedimentation rate were normal. The arm-to-tongue circulation time measured twelve seconds, the arm-to-lung time nine seconds, and the venous pressure 13 cm. The basal metabolic rate, blood chemistry, urinalysis, and Wassermann tests were negative.

The teleoroentgenogram and angiocardiogram showed true dextrocardia with enlargement of the left ventricle, dextroposition of the aorta, and a persistent root at the site of the normal arch (Fig. 3). X-ray examination of the gastrointestinal

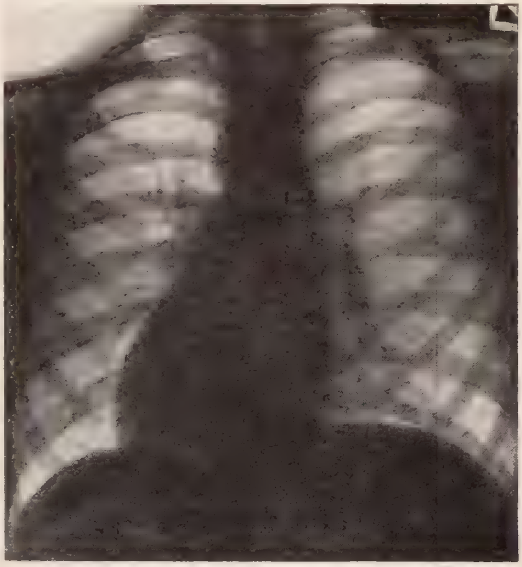

FIG. 1. Teleoroentgenogram showing dextrocardia with situs inversus.

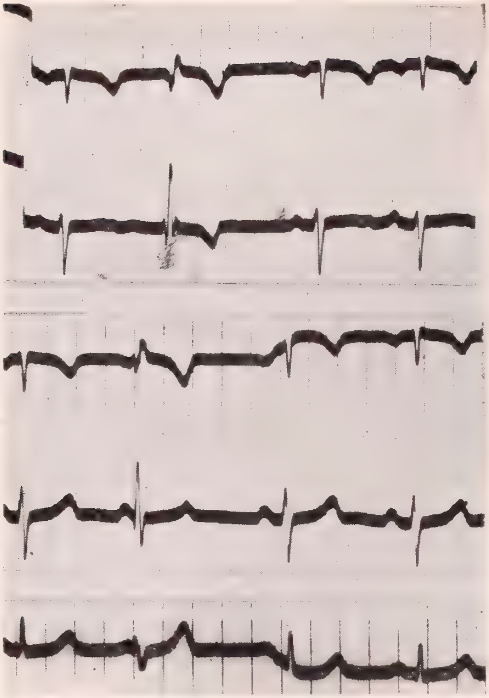

Fig. 2. Electrocardiogram showing regular sinus rhythm and inversion of all complexes in lead 1 as seen in dextrocardia.

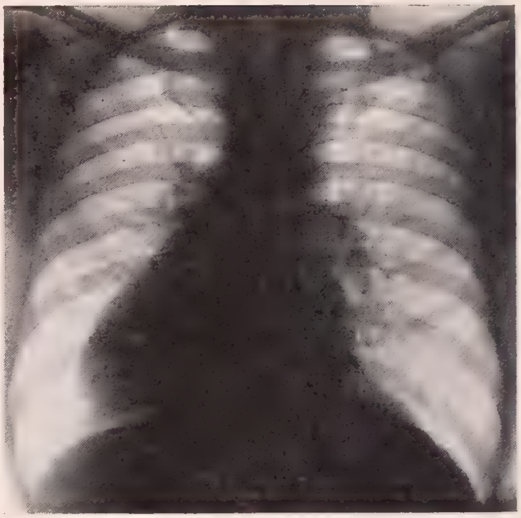

Fig. 3. Teleoroentgenogram showing true dextrocardia with enlargement of the left ventricle, dextroposition of the aorta, and a persistent root at the site of the normal arch.

tract showed transposition of the stomach and jejunum; the sigmoid and descending colon were in their normal position, but a portion of the transverse and ascending colon was also on the left side.

The electrocardiogram taken in the conventional manner revealed inversion of all the complexes in lead 1 and an unusual axis deviation (Fig. 4). There was nodal rhythm with the great majority of the P waves starting 0.28 to 0.36 second after the onset of QRS. These were followed by a ventricular complex showing intraventricular block. This usually resulted in coupled rhythm. The P waves occurring 0.08 to 0.10 second after the QRS were not conducted to the ventricles. The arrhythmia was not abolished by atropine or by the discontinuation of digitalis.

During his stay in the hospital the only medication the patient received was phenobarbital and belladonna or atropine. He was discharged in good condition. Follow-up examination on May 11 and November 9, 1942 showed the same irregular rhythm with frequent coupling and good cardiac reserve.

Discussion

The diagnosis of dextrocardia, with and without situs inversus, is based upon physical examination, x-ray, and electrocardiographic changes.[5] The latter consist of reversal in the direction of all the complexes in lead 1; leads 2 and 3 are transposed but otherwise normal. The chest leads are also normal except for the transposition of the characteristic levo- and dextrocardiograms, i.e., the

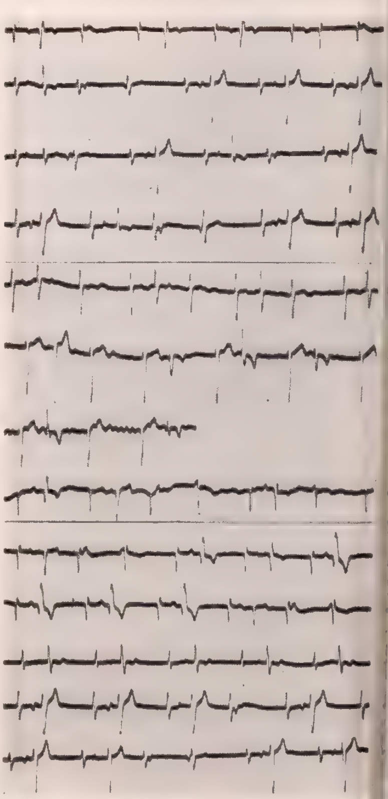

Fig. 4. Electrocardiogram showing inversion of all co plexes in lead 1 and an unusual axis deviation.

qR pattern of the left ventricle is found in the right chest, and the rS pattern of the right ventricle in the left chest.[6] Five types of dextrocardia have been described, depending upon the presence and degree of alteration in chamber relationship.[7]

The cases reported in this paper conform to the characteristic electrocardiographic and x-ray findings in dextrocardia. Case 1 presents, in addition, left axis deviation as evidenced by a deep S wave in leads 2 and 3. This was attributed to possible enlargement of the left ventricle, but this was not confirmed by the teleoroentgenogram. Case 2 presents an unusual axis deviation because of the presence of S waves in all standard leads.

The cases reported in this paper are examples of arrhythmias produced by nodal pacemakers, and I shall, therefore, dwell more fully upon this form of arrhythmia.

Nodal rhythm is an infrequent disturbance in which the impulse arises in some part of the AV node. It is encountered in organic heart diseases, excessive digitalization, quinidine, or, rarely, congenital malformation. This rhythm may be one of four types, namely, coronary, upper, middle, or lower nodal. In the first type P_1 and P_2 are upright, but the PR interval is 0.1 second or less. P in the second type is usually inverted, and the PR interval also is 0.1 second or less. In type 3 the P is invisible and may be buried in the QRS complex because of simultaneous activation of both auricle and ventricle. In the fourth type there may be a negative PR interval, that is, the P wave follows the QRS complex by a period from 0.1 to 0.2 second, and the P wave is inverted. It is assumed that the impulse in the lower node reaches the ventricles first and then the auricles unless there is a unidirectional block. However, absence of P may be found in any one or all of these types because of retrograde block preventing the impulses from reaching the auricles or in cases of auricular fibrillation.[8]

Case 1 is an illustration of regular sinus rhythm with occasional nodal premature beats. They conform to type 3 as described above, because of the absence of P waves. These ectopic beats may be explained on the basis of sporadic activity of an ectopic nodal pacemaker, or parasystole. Under ordinary conditions ectopic pacemakers have a slow frequency of discharge and are thus suppressed by the primary pacemaker. This suppressive mechanism may fail because the ectopic rhythm is accelerated so that its rate exceeds the primary pacemaker or because of a temporary local area of unidirectional block in the region of the ectopic focus which prevents the primary pacemaker from reaching it, thus permitting the latter to build up to the point where it can discharge an impulse. Parasystole presupposes an ectopic pacemaker in the center of a local region too small to be registered by the electrocardiogram, except when circumstances allow its influence to be spread. It further presupposes unidirectional block, or protection block, which prevents the sinus impulse from discharging it but does not prevent the latter from spreading out and activating the heart when the refractory phase and local block do not interfere.[8]

Case 2 illustrates the arrhythmia known as reciprocal rhythm or recaptured rhythm which may rarely be seen in nodal rhythm, in idioventricular rhythm with a premature ventricular systole, or in some cases of paroxysmal ventricular tachycardia. In this arrhythmia the nodal or ventricular beat has a retrograde P wave which is followed by another ventricular complex. As Case 2 clearly demonstrates, reciprocal rhythm is a form of re-entry of a retrograde impulse into the ventricles.[8] The retrograde conduction is generally delayed, and the RP interval may be prolonged to 0.2 second or longer. It is seen in Case 2 that, whenever the retrograde P wave follows the QRS complex by less than 0.28 second, the ventricles are still refractory, and no response is elicited. When the RP interval is prolonged to 0 28 to 0 36 second, the retrograde P wave finds the ventricles in a nonrefractory phase, and a ventricular response follows, usually producing coupling. The bizarre appearance of the ventricular complex evoked by the re-entry stimulus is due to aberrant conduction in the ventricles. The re-entry phenomenon, as seen in this case, is invoked only when the premature systole occurs at a fixed time interval following the dominant beats.

Reciprocal rhythm with coupling must be differentiated from so-called pseudoreciprocal rhythm, which occurs in sinoauricular block and nodal escape. The nodal escape is followed by a normal P wave and ventricular response. The P wave is identified as of sinus origin by its resemblance to the other sinus P waves and the uniformity of the PP interval.

It is our impression that the nodal arrhythmia in Case 2 was of congenital origin. It had been known to be present for at least fifteen years prior to hospitalization and appeared to be a permanent irregularity, uninfluenced by any form of therapy. Furthermore, no evidence of any other acquired cardiac lesion was elicited. In Case 1 the occasional nodal extrasystoles were transient and were probably associated with the acute systemic infection.

Summary

Two cases of dextrocardia with nodal arrhythmia are presented, consisting of one case of regular sinus rhythm with occasional nodal ectopic beat and one case of reciprocal rhythm. The mechanism of the nodal arrhythmia is discussed.

I wish to express my appreciation to Dr. A. M. Master and his staff for their kind assistance and suggestions in the preparation of this paper.

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PAROXYSMAL NODAL TACHYCARDIA COMPLICATING ACUTE MYOCARDITIS OF UNKNOWN CAUSE

STANLEY AUGUST, M.D., and BURTON L. ZOHMAN, M.D., F.A.C.P., Brooklyn, New York

(From the Department of Medicine, Kings County Hospital, Long Island College Division)

IN RECENT years a number of reports have described the presence of myocarditis as a complication or sequel to various infections. One of the most significant is that of Gore and Saphir in which 1,402 cases of myocarditis are reported.[1] These were selected from material submitted to the Army Institute of Pathology during World War II. Only 130 of the cases had rheumatic carditis and 144 diphtheritic. Thus, the two diseases, usually thought to comprise most of the cases of myocarditis, actually accounted for only about 20 per cent. If rheumatic fever and diphtheria are excluded, myocarditis was found in a wide variety of infections with viruses, bacteria, rickettsia, protozoa, and animal parasites. Myocarditis was also found in noninfectious diseases and intoxications, such as glomerulonephritis, sulfonamide hypersensitivity, carbon monoxide poisoning, and heat stroke.

While it is a common occurrence to see cases of auricular paroxysmal tachycardia, it is a rare event to encounter patients with auriculoventricular nodal paroxysmal tachycardia. Electrocardiograms simulating those of coronary thrombosis after cessation of paroxysmal tachycardia are becoming a well-recognized and familiar phenomenon and have been reported by many authors.[2-6] The following case of paroxysmal nodal tachycardia, followed by inversion of the T waves and demonstrating myocarditis on pathologic examination, may, therefore, be of interest.

Case Report

This concerns two Kings County Hospital admissions of a fifteen-year-old white boy because of "rapid beating of the heart." One week prior to final entry, the patient ingested 25 to 40 bananas for no reason except that he liked bananas. Two days later, he vomited three or four times. The vomitus consisted mainly of white, semisolid material without blood. Several hours later, after he had gone to bed, he was suddenly awakened and noted rapid beating of his heart but no chest pain. Shortness of breath caused by lying flat was also noted, and he was first admitted to the Kings County Hospital on October 26, 1946. His past history was noncontributory except for an attack of measles during his early childhood.

Examination revealed blood pressure 110/85, pulse 210, temperature 98 F., and respiratory rate 22. The patient was well developed and well nourished. He had moderate dyspnea and cyanosis. Positive findings included rapid pulsation of the veins of the neck, rales and dullness at the lung bases. The ventricular rate was 210 with a regular rhythm. The apex impulse was in the sixth intercostal space slightly outside the midclavicular line. No murmurs were audible. No electrocardiogram was available at the time of admission when a clinical diagnosis of paroxysmal auricular tachycardia was made. The patient was started on quinidine, 3 grains initially followed by a second dose of 6 grains. Five hours after entry, the patient was "signed out" of the hospital by his father against the advice of the house physician.

At home he was treated by his own physician, receiving 21 grains of quinidine (3 grains every three hours for seven doses) daily for two days, with no effect on the sensation of rapid beating of the heart. No tinnitus or vomiting were noted during the administration of quinidine. Sensations of weakness and shortness of breath upon lying recumbent persisted until the second admission. No joint pains were noted during this illness and none at any time prior to the onset of the present symptoms. There was no past history of chorea, scarlet fever, diphtheria, chest pain, cyanosis, palpitation, heart murmur, swelling of the abdomen, or syncope. The mother, father, and eight siblings were alive and well. There was no history of any familial heart disease.

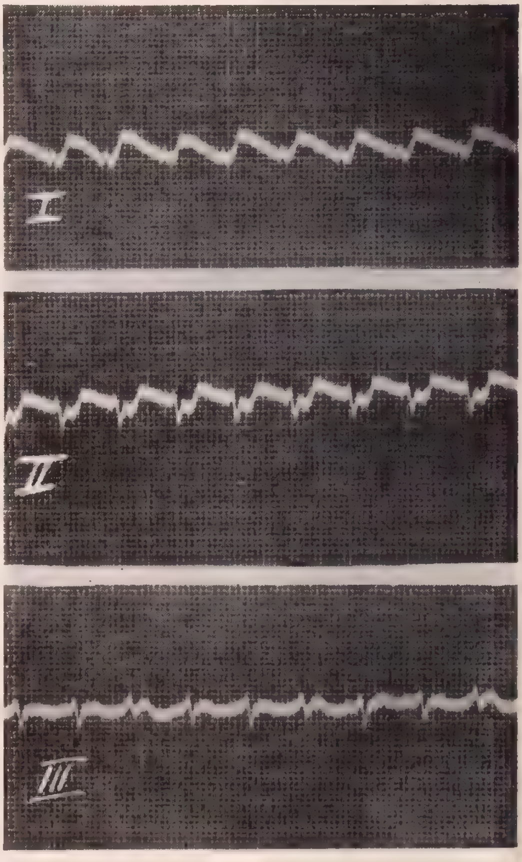

FIG. 1. Electrocardiogram before quinidine therapy showing nodal tachycardia.

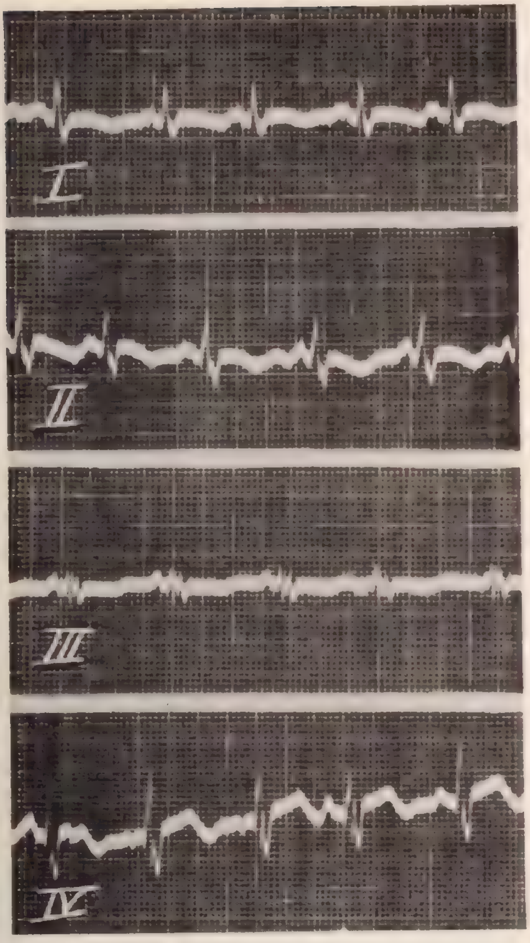

Fig. 2. Electrocardiogram after quinidine therapy showing inversion of T waves in limb leads.

Because of the persistence of rapid beating of the heart, the patient was brought to the hospital for the second time on October 29, 1946. On admission his blood pressure was 85/70. The apical beat and radial pulse were 162 per minute; temperature was 99.8 F., and respirations 20. He appeared well hydrated, alert, and cooperative. Positive findings included pea-sized right cervical glands and slightly dilated neck veins with rapid pulsations at a rate of about 160. The lungs were clear to percussion and auscultation. The cardiac rhythm was regular, and the sounds were of fair quality. No murmurs were heard. The liver was percussed two fingerbreadths below the right costal margin, but the liver edge could not be palpated. Knee jerks were absent. There was no peripheral edema. A clinical diagnosis of paroxysmal auricular tachycardia was again made.

Laboratory Data.—The urine was clear, yellow, and acid, showing three plus albumin and no glucose. There were no cells or casts on microscopic examination. The white blood count was 6,900 with no abnormal cells. The hemoglobin was 13 Gm. The sedimentation rate was 8 mm. in one hour.

Hospital Course.—Carotid sinus pressure, ocular pressure, stimulation of the posterior pharynx, and syrup of ipecac were not effective in reducing the rate. The patient was started on quinidine sulfate, 6 grains every three hours. During the early morning, he walked out of bed, fell flat on his face and head, and sustained a small laceration of the occipital region of the scalp and the right lateral aspect of the nose. Neurologic examination was negative. The pulse rate was found to be 145 and regular. A gallop rhythm was heard at the third left interspace. An electrocardiogram was taken and interpreted as "paroxysmal nodal tachycardia" (Fig. 1).

Mecholyl, 25 mg., was given by hypodermic injection in 5-mg. doses over a twenty-minute period. The heart rate remained at 144 beats per minute with a regular rhythm. Increasing the dose of quinidine by 3 grains every three hours until a level of 15 grains was reached or until the tachycardia was converted to a normal rate was advised. The patient received 9 grains and then 12 grains. Thirty minutes after this last dose which was approximately twenty-two hours after admission, the pulse was found to be 94 with occasional extrasystoles. Accordingly, the dosage was reduced to 6 grains every three hours. Pulse recordings within the next two hours were 81 to 88 on three examinations. The blood pressure rose to 95/75. Quinidine was to be maintained for two days and then discontinued.

The following morning (second hospital day), the patient was completely asymptomatic and continued so during the remainder of his hospital course. At no time was there any tinnitus, blurred vision, diplopia, nausea, vomiting, skin rash, headache, confusion, syncope, or shallow respirations. Impaired resonance at the lung bases with diminished breath sounds and a pulse of 84 with regular rhythm were noted on examination. A second electrocardiogram revealed a wandering pacemaker, a rate of 82, and inversion of the T waves in the limb leads (Fig. 2). The possibility of coronary arteritis or pericarditis was entertained. X-ray of the chest showed no cardiac enlargement. There was slight congestion of the lung fields but no pleural effusion. In the evening the patient was asymptomatic, and the pulse rate was 80 with a regular rhythm. The patient had a special nurse who remained with him until 7:30 A.M. At this time his pulse was 84 and regular. He ate his breakfast with apparent appetite and appeared to be comfortable, sitting up in bed. One hour later, he suddenly "gasped four times," turned blue, and was found to be pulseless. All attempts to revive him were to no avail, and he expired on the morning of the third hospital day.

Postmortem Examination.—The body was that of a white male of fifteen years, measuring 67 inches and weighing approximately 150 pounds. There was an abrasion 2 cm. in length over the right side of the nose. The calvarium was normal; the dura and meninges were intact. There was no evidence of fracture or any abnormality of the brain. The abdominal cavity contained approximately 500 cc. of clear, yellow fluid. All serosal surfaces were smooth and glistening. The liver extended 10 cm. below the costal margin. The pleural cavities contained about 750 cc. of clear, yellow fluid.

The heart was markedly dilated; the pericardial

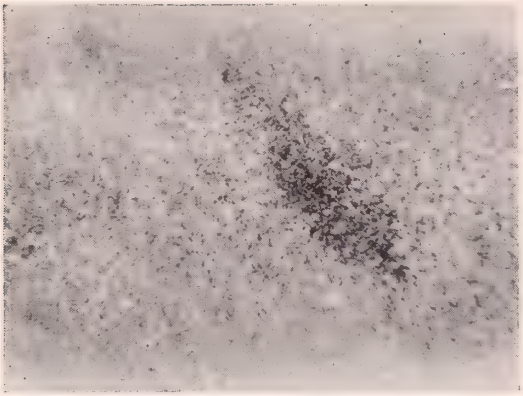

FIG. 3. Section through interventricular septum showing myocardial necrosis and infiltration of inflammatory cells (low power).

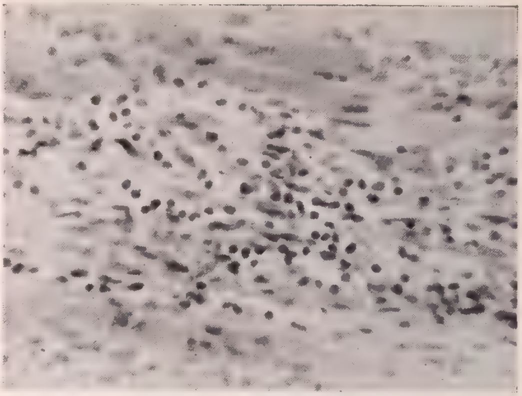

FIG. 4. High power magnification of Fig. 3.

sac contained approximately 50 cc. of clear, yellow fluid. The organ weighed 300 Gm.; all chambers were markedly dilated, and no antemortem clots were present. The myocardium showed slight yellowish mottling in the region of the left ventricle which was not discrete. There were minute, irregular, atypical verrucae on the margins of the foramen ovale in the right auricle. Coronary vessels were patent throughout.

The right lung weighed 410 Gm. and the left 370 Gm. On section, both exuded a small amount of pink, frothy fluid. The liver weighed 1,800 Gm. and on section was markedly congested. The spleen weighed 240 Gm.; the capsule was tense, and on section Malpighian corpuscles were seen to be prominent. The pancreas weighed 10 Gm. and appeared normal. Each kidney weighed 200 Gm., and their architecture was normal. The urinary bladder was normal, as was the entire gastrointestinal tract.

Anatomic Diagnoses: Acute myocarditis, bilateral pleural effusion, acute passive congestion of the liver and spleen, acute gastritis, cerebral congestion and edema, endocarditis, and acute, bland, verrucous, foramen ovale.

Microscopic Examination: Sections of myocardium showed an extensive inflammatory process predominantly present in the subpericardial myocardium of the left ventricle and the left ventricular side of the interventricular septum (Figs. 3 and 4). The process consisted of myocardial necrosis, replacement of same by fibroblasts, and infiltration of lymphocytes, plasma cells, occasional polymorphonuclear leukocytes, and rare eosinophils. In proximal areas in which myocardial fibers remained, symplasmic type of giant cells was seen. The myocardial fibers had a waxy appearance. Focal collections of lymphocytes, plasma cells, and fibroblasts were noted in other parts of the heart than those noted above, but they did not have the same density or confluency. The right ventricle showed minimal changes. Section of the membranous part of the interventricular septum showed focal changes similar to those noted above in the myocardial fibers. Cellular infiltration of the adipose subepicardium was present. A laminated verrucous nodule on the foramen ovale did not contain bacteria.

Final Diagnoses.—Chronic diffuse myocarditis and pericarditis; focal myocardial necrosis; focal fibrosis of myocardium; cardiac dilatation (right and left ventricles); terminal verrucous endocarditis of foramen ovale; acute and chronic passive congestion of liver, lungs, and spleen; bilateral pleural effusion.

Discussion

Until the microscopic examination was performed, it was difficult to exclude quinidine as a possible cause of death in this case. In view of the absence of any clinical signs of cinchonism, such as tinnitus, nausea, vomiting, skin rash, headache, syncope, visual disturbance, or impaired vision, and because of the presence of extensive inflammatory changes and necrosis of cardiac fibers in the left ventricle and interventricular septum, it is unlikely that quinidine was responsible.

With no previous history of rheumatic fever, chorea, diphtheria, typhoid, tuberculosis, trichinosis, or septicemia, the etiology of the myocarditis must remain unknown in this case. The marked damage to the conduction system and to the cardiac fibers could readily be accepted as an adequate explanation for the original tachycardia and conceivably for the sudden death by asystole or sudden ventricular fibrillation.

Summary

A case of paroxysmal nodal tachycardia followed by inversion of T waves in a boy of fifteen years is presented. Postmortem examination revealed focal myocardial necrosis, chronic diffuse myocarditis, and cardiac dilatation. Clinical and pathologic findings failed to establish the cause in this case.

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ADDITIONAL ANNUAL REPORTS

MEDICAL SOCIETY OF THE STATE OF NEW YORK

1949–1950

REPORT OF THE COUNCIL

PART III

Public Health Activities A

Rural Medical Service.—The Council Committee on Rural Medical Service has the following membership:

Leo E. Gibson, M.D., *Chairman*	Syracuse
Peter J. Di Natale, M.D.	Batavia
Homer J. Knickerbocker, M.D.	Geneva

There was no meeting of the Committee. Dr. Gibson, Chairman, reports as follows:

The Chairman of your Committee on Rural Health attended the fifth national Conference on Rural Health arranged by the American Medical Association at Kansas City, Missouri, February 2, 3, and 4, 1950. This conference was attended by about four hundred persons and was addressed by leaders of farm organizations, editors of farm papers, the president of the University of Arkansas, the dean of the University of Kansas School of Medicine, and the president of the American Medical Association, Ernest E. Irons, M.D.

The primary discussion was divided into five groups. The discussion in these separate groups was carried on by individuals interested in that particular phase of aid to rural health. The groups were as follows:

Group I.—Rural Medical Facilities at the Local Level: The discussion under this group concerned the aid which might be obtained from the Federal government under such laws as the Hill-Burton Act, as well as aid from local organizations.

Group II.—The Relation of Agricultural Extension Service to Rural Health Problems: Under this group a discussion was carried on in regard to the aid which might be obtained through further education of the farm population through the extension department of colleges maintaining Agricultural Extension Services.

Group III.—The Community Responsibility for Health Services in Rural Areas: In this group the matter of the organization of a Community Council to plan methods of stimulating community interest and action in educating the farm population to care for their children as well as they would for their stock was discussed.

Group IV.—Methods of Prepayment for Health Services in Rural Areas: Under this group there was a great deal of discussion as to what constitutes the indigent and medically indigent persons among our population, and how much if any of the tax dollars should be paid out for medical care in either of these groups. The consensus of opinion was that tax funds should be used to provide medical care for the indigent, but, above that, group medical care should be provided by the individual together with the aid he might derive from local organizations.

Group V.—The Responsibility of the Medical Schools in the Rural Health Programs: This discussion involved the primary education of physicians in relation to disease that occurs in rural populations and how this education might be improved. Considerable discussion was devoted by Dean Murphy of the Kansas Medical School to the fact that few medical students are going into general practice. He also brought forth the regulation instituted at the University of Kansas Medical School where all medical students are obliged to spend eleven weeks with some approved general practitioner doing some or all rural medicine.

I gained the opinion that there would be a great deal more activity on the part of leaders of farm organizations, extension schools, and some medical schools toward developing more suggestions to promote rural health, particularly in the midwestern states. One interesting fact brought out was that under the Hill-Burton bill some localities might attempt to establish more hospitals than they could staff adequately and that they might be an obstacle rather than an advantage to the improvement in rural health. Efforts should be made on the part of all organizations concerned with rural health to obtain a thorough survey of the need for such hospitals.

PART XII

MISCELLANEOUS

Office Administration and Policies

The Committee on Office Administration and Policies of the House of Delegates consists of the following:

Edward R. Cunniffe, M.D., *Chairman*	Bronx
W. P. Anderton, M.D.	New York City
James R. Reuling, M.D.	Bayside
Laurance D. Redway, M.D.	Ossining
George W. Kosmak, M.D.	New York City
Dwight Anderson	New York City

This Committee formerly met immediately after meetings of the Publication Committee. The reason for holding these sessions together was that the personnel of both committees was practically identical. During the past year this procedure was found unsatisfactory due to the limited time for careful consideration of many important problems coming before each committee. Therefore, it was decided to hold these meetings on separate days.

The rapid increase in the work of the office force with its many departments seemed to our Committee to demand a meticulous supervision in order that the work might be carried on as economically and efficiently as possible. A decision was made to place one person in complete control of the office force who would assume sole responsibility for the work and submit a monthly report on office affairs to the Committee. After careful consideration, Mr. Thomas E. Alexander was promoted to the position of Office Manager.

An indication of the increased activity during the year may be shown by the following changes which have been adopted and are in operation, together with plans for the future.

Improvements Made in 1949

Membership Department

1. *Careful Check of Membership Dues.*—Previously there was not any proof of cash records from members' dues nor any comparison made between the membership and the accounting department records. This lack of proof left much to be desired, since there never was any real test of the accuracy of the records.

The present procedure now requires: (*a*) A monthly balancing of cash records between these two departments; (*b*) A monthly proof by county of the postings to members' cards (to determine the accuracy of the amounts used), and (*c*) An annual accounting of all payments by counties.

At the close of 1949 a full check of membership cards was made to determine if the records of both departments were in agreement. We are very happy to report that a review does not disclose any discrepancy.

2. *Recording of Members' Full Names on Stencil Records.*—Prior to this a member's first and second initials only were shown on the stencil used for printing the member's name and address on his Journal envelope. The absence of the complete name made the stencil of little value when first or middle names or both were needed to identify the individual. The new procedure will correct this condition as new stencils are prepared.

Directory Department

1. *The Principal and Most Far-Reaching Change Has to Do with Job Training.*—First, four of our employes who are in the class of subsupervisors each handle a specific phase of the compilation work. The drawback was that no one supervisor was reasonably familiar with the work of any of the others. Second, from neither the 1947 nor 1949 *Directory* temporary staff did any good personnel develop.

The first difficulty has been overcome to some extent by having these supervisors work in some of the other divisions of the *Directory* department. In addition, we have had some outside instruction in the handling of the media cards. These two factors have resulted in a better understanding of the whole *Directory* picture as well as a closer coordination between these individuals.

The second difficulty has been overcome to some extent by a careful screening of applicants for temporary jobs. Of four such employes, each appears after further experience to be able to fill vacancies as they may occur in the better positions.

2. *The Method of Verifying State Society Membership for Directory Purposes.*—Heretofore, in order to determine whether a doctor was entitled to the "star" signifying State Society membership, a cumbersome method was used. It required about six weeks work by two persons to make the comparison. Through the mechanics of our media cards, it is estimated that this same job will take not more than two to three weeks, thus saving about $250.

3. *Pasting Up New Copy Cards.*—The former method called for sending out two copies of the last *Directory* to a mailing house, whose employes would cut up every name listed and paste it on a new copy card. An envelope would also be addressed to the doctor for mailing the card.

This completed job had to be carefully checked, thus consuming much valuable time. Names were frequently omitted. Cards were often stuck together by the overabundant use of paste. Names were sometimes spelled incorrectly. In short, the results were so unsatisfactory that we have decided, as soon as the 1951 *Directory* is published, to do the work ourselves. A conservative estimate of the saving of this latter course will be about $75.

Accounting Department

For the 1949 *Directory*, the Accounting Department set up new records to control accounts receivable due from *Directory* advertisers and purchasers of single copies. In addition, we knew the exact status of our inventory of books at all times. This had not been done in the past.

A new procedure was followed in shipping the 1949 *Directory*. A record was kept in the office of the names of all doctors who received the book. In addition, the membership files were checked to determine that the member's dues for the year had been paid. Also, retired members were contacted prior to shipment to determine whether the book would be of value to them. There was a fairly large saving in this whole connection.

In setting up the 1950 budget, the Finance Committee called for certain facts and figures having to do with past financial history. The result was the production of certain records which should be o material aid to future Finance Committees in thei work of preparing the budget.

Mail Room

Sorting of Journal *Wrappers.*—In order to obtai lower postal rates for mailing the Journal, it i necessary to sort those wrappers addressed to certain towns and cities when they are over a specifie quantity and tie them in bundles. There are fou such groups.

Previously we alphabetized the wrappers for ever town in the State, a job consuming over three days sorting time. The new method installed early in th fall takes a little more than one day to complet The resultant saving is more than $500 per year.

Purchase of Collator

For some time, the need of a mechanical collat has been evident. Much time is consumed by th staff in hand-collating large numbers of pages mimeographed material into complete sets. Whi savings cannot be accurately computed at this tin because of the very recent purchase of such a m chine, a fair estimate would be about four days sa ing per month, equaling a saving of something ov $400 per year. The machine, which should la more than ten years, cost the Society less than $50

The Board of Trustees has renewed the lease f the present office space for one year with the pri lege of a renewal for an additional year. However, the need for more room so that our employes may work more efficiently is very urgent. It was found that removing a wall and installing two fluorescent lighting fixtures would give us additional desk room. The cost, estimated at $283, was approved by the Board of Trustees and the alterations recommended.

Future Plans

The greatest single effort should be in connection with reducing substantially the over-all cost of compiling and publishing the *Directory*, without a loss in accuracy. The groundwork is now being prepared in the way of obtaining a higher quality of personnel, of developing a greater interest in the compilation work, of examining and testing various methods and procedures which might be put into effect, and of studying the possibility of using entirely new methods.

Obviously, this is a slow process. Each step must be taken in consideration of what its outcome might be. The final effect should, over the years, result in a reduction of the cost of production per book.

The Disability Benefits insurance law became effective January 1, 1950, and it was found advisable to take advantage of the provisions of this act and so insure our employes. The Council approved this recommendation, providing we can qualify for its benefits. It is necessary for 50 per cent of our employes to express their intention of accepting this coverage, and they are being polled at present. Deductions from salaries became effective January 1. If the situation develops that we do not participate in this insurance, a refund will be made.

This Committee is composed of representatives from the Board of Trustees, the Publication Committee, the Public Relations Committee, the Secretary, and the Treasurer of the Society. The members are especially experienced in the work of the office force. We recommend that the House of Delegates follow the directive adopted at the annual meeting in 1941 that a committee of similiar composition on Office Administration and Policies be reappointed for the coming year.

REPORTS OF THE DISTRICT BRANCHES

Second District Branch

To the House of Delegates, Gentlemen:

The annual meeting of the Second District Branch was held at the Hotel Gramatan, Bronxville, Wednesday, October 26, 1949. At the afternoon session, Dr. Harry Gold, professor of clinical pharmacology, Cornell University Medical College, and Dr. Ralph R. Tompsett, associate professor of medicine, Cornell University Medical College, presented a symposium entitled, "Newer Drugs." The second paper, by Miss Mary Donlon, chairman of the New York State Workmen's Compensation Board, was entitled, "The New York State Disability Benefits Law."

The following officers were elected to serve until the adjournment of the 1951 House of Delegates: Dr. Stephen R. Monteith, Nyack, first vice-president; Dr. Austin B. Johnson, Cedarhurst, second vice-president; Dr. John F. Rogers, Poughkeepsie, secretary, and Dr. Reid R. Heffner, New Rochelle, treasurer. Dr. Charles C. Murphy, Amityville, continues as president.

At the evening session after dinner, Dr. John J. Masterson, president of the Medical Society of the State of New York, addressed the meeting. Then Dr. James R. Reuling, Jr., Bayside, vice-speaker of the House of Delegates of the American Medical Association, spoke on "The National Education Campaign of the American Medical Association." The final topic, "Socialized Medicine in England," was delivered by Dr. Ralph J. Campell, formerly of Manchester, England.

Respectfully submitted,
John F. Rogers, M.D., *Secretary*

MAKE YOUR PLANS NOW TO ATTEND THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, MAY 8 TO 12, 1950, HOTEL STATLER, NEW YORK CITY

RÉSUMÉ OF INSTRUCTIONS OF THE 1949 HOUSE OF DELEGATES AND ACTIONS THEREON BY THE COUNCIL, BOARD OF TRUSTEES, AND OFFICERS

Expenditures—Public Relations and Legislative (*Section 195*).—It was voted that the House of Delegates "memorialize the Council and Board of Trustees to appropriate all necessary funds for a successful public relations and legislative campaign, even if a deficit should develop at the end of the year." The Council and Board of Trustees increased the Public Relations and Legislative Committees' budgets as directed by the House.

Tenure of Hospital Staff Appointments (*Section 93*).—The House of Delegates voted that "an appropriate committee, working in conjunction with other interested groups such as the New York Hospital Association, initiate studies to define just and uniform standards for dealing with problems relative to tenure of hospital staff appointments, and other pertinent matters relating to staff appointments." It was voted that proper and equitable hospital administration should include provisions in hospital bylaws to protect staff appointments of physicians from capricious or summary termination. The Council referred this matter to the Joint Committee of the Hospital Association of New York and the Medical Society of the State of New York. (See Annual Reports, Part VI, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 869.)

Bed Facilities in Municipal and Voluntary Hospitals (*Section 85*).

> "WHEREAS, any increase in hospital bed capacity, either through the construction of new hospitals or extension of existing facilities, will be largely through the allocation of governmental funds, Federal or state; and
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> "WHEREAS, rapid expansion of voluntary hospitals and medical insurance plans may be anticipated in the immediate future; and
>
> "WHEREAS, such expansion will multiply the number of patients that will require semiprivate and private hospital beds; and
>
> "WHEREAS, such accommodations are proportionately small in voluntary hospitals and totally lacking in government hospitals; therefore be it
>
> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York request the Council through its appropriate committee to present these pertinent facts to the proper authorities concerned with hospital planning; and be it further
>
> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York request the Council to take whatever action it may consider feasible in the correction of present restrictive regulations in voluntary and municipal hospitals."

The Council referred this to the Joint Committee of the Hospital Association of New York and the Medical Society of the State of New York. (See Annual Reports, Part VI, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 869.)

Practice of Medicine by Hospitals and Colleges (*Section 164*).—The House voted (1) that the attention of hospitals and teaching institutions be drawn to the opinion of the State Society that such bodies should not practice medicine in any of its branches for pecuniary gain; (2) that a conference be held with deans of medical colleges and representatives of hospitals and teaching institutions to formulate a program which is in the public interest; (3) that such institutions be requested to take no further action toward entering the practice of medicine until after such policy has been formulated. The Council referred this to the Committee on Economics. (See Annual Reports, Part VI, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 867.)

Friedman Bill (*Section 164*).—That the Council sponsor and support the introduction of the 1949 Friedman Bill in the 1950 Legislature. The Friedman Bill declared practice of medicine by charitable hospitals to be illegal. The Council referred this to the Committee on Legislation for study. The Council decided it would be inexpedient to introduce this type of legislation now, as we are confronted with forces who are trying to change the practices of medicine. Also it was reported that the funds collected would not be put into the general hospital expenses but would be used for teaching and experimental purposes only. (A bill amending the General Business Law in regard to hospitals, similar to the Friedman Bill of 1949, was introduced by persons not representing the Medical Society of the State of New York.)

Group Practice (*Section 165*).—That the Planning Committee approve a set of principles for group practice as soon as possible. The Council referred this to the Planning Committee for Medical Policies. (See Annual Report, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 899.)

District Branches (*Section 163*).—The House voted that several district branches employ an executive secretary to coordinate activities such as public relations, legislation, workmen's compensation, etc., and that his remuneration and expenses be met by the county societies in the district branch undertaking such secretary's employment. The Council voted to refer this to the presidents of the district branches for consideration, and the Secretary sent a letter July 6, 1949, to these presidents. The matter is receiving careful consideration by several county societies and district branches.

Blue Cross and Blue Shield Plans (*Section 164*).—The House voted that all Blue Cross and Blue Shield plans in New York State be notified that the Medical Society of the State of New York recommends that Blue Cross discontinue offering medical services in pathology, radiology, anesthesiology, and physical therapy, and that Blue Shield plans should pay for these services. The Council voted this be referred to the Committee on Economics which has a Subcommittee on Medical Expense Insurance. The Committee recommended that this directive be carried out. The Council approved, and the Plans were notified.

Report of the President (*Section 74*).—(1) It was voted that the Council should refer to the appropriate committee power to draft an amendment to the Constitution which would lighten the duties of the President, such as addressing all district branch meetings each year, and allot certain of the President's duties to the President-Elect. The Council referred this to the Special Committee on Revision

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Sections referred to are from the House of Delegates Minutes of the Annual Meeting, NEW YORK STATE JOURNAL OF MEDICINE, September 1, 1949—Part II.

of Constitution and Bylaws. (See Annual Report, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 906.)

(2) It was resolved that the Speaker of the House be required to refer a re-evaluation of our policies on blood banks to the proper policy-making body for study and recommendation. The Council referred this to the Committee on Public Health and Education which has a Subcommittee on Blood Banks. (See Annual Reports, Part IV, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 863.)

(3) It was voted that the Chair (Speaker) appoint a committee of three members of the House of Delegates to study the needs for enlarging the business quarters of the Society and make recommendations to the Council. A committee was appointed, and this matter has and is receiving consideration.

Problems on Alcoholism (*Section 147*). (1) It was recommended "that the State Society be officially represented on" the Board of Directors of the Rehabilitation Center (for Alcoholism) as administered by the University of Buffalo. At the September meeting of the Council, it was voted that Dr. Milton G. Potter, Buffalo, represent the Medical Society of the State of New York at meetings of the Board of Directors of the Mental Hygiene Clinic for the Study of Alcoholism, University of Buffalo School of Medicine.

(2) It was recommended "that the activities of the Committee on Problems of Alcoholism. . . be closely coordinated with those of the Subcommittee on Problems of Alcohol of the New York State Interdepartmental Health Council."

At the June Council meeting the Secretary was requested to write to the Subcommittee on Problems of Alcohol of the New York State Interdepartmental Health Council the name of the Chairman of our Committee on the Problems of Alcoholism when he was appointed. Dr. Milton G. Potter's appointment was so transmitted.

(3) Also, "that the Council Committee on Public Health and Education, the Special Committee on the Problems of Alcoholism, with the State of New York Department of Health, arrange a Symposium on the Problems of Alcoholism to be held on the 'Teaching Day' at the next annual meeting of the Medical Society of the State of New York." This was referred by the Council to the Public Health and Education Committee, and proper action was implemented. (See program of Teaching Day, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 810.)

Section on General Practice of Medicine (*Section 196*).—The House of Delegates voted that a suggestion to form a Section on General Practice for the Scientific Program of the Society be referred to the Council. This was referred to the Subcommittee on Scientific Program for study and report. The Council accepted the recommendation of the Subcommittee that a Section on General Practice is desirable.

Directory (*Section 124*).—In approving the report of the Reference Committee on the Supplementary Report of the Board of Trustees, the House referred to the Council a recommendation that the *Directory* be published every three years, "omitting publication of any supplement," and the recommendation that the next *Directory* be confined to physicians of New York State. After discussion, the Council voted to disapprove this recommendation. (See *Section 133*.)

Directory (*Section 133*).—In connection with the preceding action of the House, it was also recommended that the *Directory* be published every two years, and that the Publication Committee investigate the cost of publishing Connecticut and New Jersey sections. After discussion, the Council voted that the *Directory* be published every two years and that the decision be left to the Publication Committee whether to include the New Jersey and Connecticut doctors. For financial reasons the Committee decided to confine the *Directory* to New York State physicians. (See Reports, Part XI, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 883.)

Directory (*Section 136*).—The House voted "that only those hospitals, clinics, and other institutions which comply with the intent and the spirit of the code of ethics of the Medical Society of the State of New York as it applies to the practice of medicine be listed in the *Directory*." This was referred by the Council to the Publication Committee in June.

Code of Ethics (*Section 127*).—The House recognized "the need for a complete revision of the code of ethics with particular reference to the subject of advertising," and recommended that the Council Committee on Ethics propose changes at the 1950 meeting. This was referred by the Council in June to the Committee on Questions on Ethics. Revised Principles of Professional Conduct are being submitted to the House. (See Annual Reports, Part XII, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 893.)

Medical Indemnity Payments (*Section 117*).—Recognizing that contract restrictions under certain voluntary insurance plans tend to deny or restrict the free choice of physicians, the House endorsed in principle legislation to preserve the patient's free choice of physician, especially in cases where there are indemnity payments under voluntary medical insurance plans. Upon recommendation of the Economics Committee in September the Council voted such action.

Prepaid Medical Insurance (*Section 182*). The House voted to extend to county medical societies "the necessary assistance to increase doctor participation in the plans," meetings to be arranged through district branches for a program to increase enrollment through cooperation of county medical societies and approved voluntary medical care plans. Letters so stating were written to Dr. Carlton E. Wertz, President-Elect, and Dr. Robert R. Hannon, Executive Officer, by the Secretary, and several county society and district branch meetings included this topic in their programs.

Voluntary Sickness and Hospital Insurance (*Section 118*).—The House voted to urge Blue Cross and Blue Shield to offer to the public, particularly the low-income segment, comprehensive medical and hospital coverage, including preventive and diagnostic services. The Committee on Economics recommended that this be carried out. Approval was voted by the Council.

Committee on Legislation (*Section 105*).—The House resolved to instruct the Council "to increase the number on the Legislative Committee and that this Committee be geographically distributed." The Council referred this to the President with power. A committee of fourteen was created with geographically representative membership.

Legislative News Releases (*Section 109*).—To "make available to our State Legislators 'to-the-point' brief monthly news releases of dynamic, pictorial, and verbal descriptive value which will serve to keep our legislators constantly and effectively informed of the cogent reasons underlying medicine's requests for the various bills in which it is concerned from the viewpoint of the public interest and that of the practitioners of medicine who serve them." This was referred to the Legislative and Public Relations Committees. The Legislative Committee recommended that all news releases be cleared through Dr. Hannon's office, and the Council voted that this be accomplished by the Committee on Legislation, working in conjunction with the Public Relations Committee.

County and State Committees on Legislation (*Section 105*).—(1) The House recommended that the Council devise ways and means to secure improved relationship between County Legislation Committees and the State Legislation Committee; that there be improved correlation between these bodies and that approved legislation should be supported by all the appropriate committees throughout the State; and it voted (2) "that the staff in Albany be augmented, preferably by someone well versed in legislative matters and in public relations, in order that a closer and more effective contact with the legislators may be maintained." The Council referred this to the Committee on Legislation for study and report.

In November the Committee on Legislation recommended to the Council that Mr. James Beasley be retained as counsel to our Executive Officer, Dr. Robert R. Hannon, "for a period of one year at a stipend of $7,500 a year." Upon recommendation of the Council the Board of Trustees employed Mr. Beasley beginning in December, 1949.

Section 105.—The Committee on Legislation recommended in September that the Council suggest to the county societies the importance of appointing to their legislation committees only members interested in the work and that each committee have a vice-chairman trained to assume the duties of chairman if for any reason the latter could not continue to serve.

The Committee also recommended that the county societies be notified that a special meeting on legislation should be held once a year by each county society, after the annual meeting of the chairmen of county society legislation committees. It was recommended that each county legislation committee chairman should draw up an agenda and discuss the most important bills at such meetings. The Council voted approval.

Workmen's Compensation (*Section 185*).—Recognizing that the New York State Workmen's Compensation Board has medical records giving results in terms of disability at end periods of time varying from one to three years, which have not been made available to the medical profession, the House voted to request "the Chairman of the New York State Workmen's Compensation Board to attempt to obtain the necessary funds needed for study and tabulation of such medical records, so that these end results may be published and made available to the medical profession." The Council referred this to the Committee on Workmen's Compensation and the Secretary sent a copy of the resolution to Miss Mary Donlon, Chairman of the Workmen's Compensation Board.

Section 114.—The House approved the proposal that Workmen's Compensation report forms be simplified and recommended that the Council request a committee, consisting of its Director, insurance carriers, employers, and Workmen's Compensation Board, to study and recommend such simplification.

Section 114.—The House voted to urge the Chairman of the Workmen's Compensation Board to issue a statement about disputed points in the new fee schedule as soon as possible; that the fees of the general practitioner, radiologist, and the physical therapist be increased. It was recommended that the Chairman of the Workmen's Compensation Board be requested to revise the fee schedule at from one to two-year intervals. These recommendations were referred by the Council to the Workmen's Compensation Committee. (See Annual Reports, Part X, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 878.)

The House urged the Council to have legislation introduced which would effect a method of arbitration of disputed medical bills in the four counties having a population of over one million inhabitants which would be "based upon the method in vogue throughout the rest of the State."

The House recommended that the Council (1) have legislation introduced to amend Section 13 (g) 2 of the Workmen's Compensation Law to provide for arbitration of disputed medical bills in a county where the medical services were rendered; and (2) have introduced and vigorously push a bill to abolish the medical practice committee and to transfer its functions to the county societies. These recommendations were referred by the Council to the Workmen's Compensation and Legislation Committees.

The Legislation Committee reported that the three suggested amendments to the Workmen's Compensation Law, presented to the Legislation Committee in regard to (1) the Medical Practice Committee, (2) place of arbitration, and (3) the method of settlement of medical bills with the Medical Practice Committee, have been considered favorably, but on further investigation it would not appear that there is much likelihood of such suggested legislation being passed this year; and that it would not be expedient to introduce these bills under the present situation. The Council approved this report on February 9, 1950.

It was recommended that the Council request the Chairman of the Workmen's Compensation Board to list the subspecialty of thoracic surgery under the symbol M17. As instructed, the Secretary so wrote to the Chairman of the Workmen's Compensation Board. On November 21 a special committee appointed by President Masterson to confer with Miss Donlon relative to the M17 designation (Thoracic Surgery) met at the office of the Chairman of the Board. This matter continues in negotiation.

The House recommended that the Workmen's Compensation Law be amended to harmonize with the provisions of the Education Law concerning group practice. This was referred by the Council to the Workmen's Compensation and Legislation Committees.

It was reported that the Committee on Legislation will inform the House of Delegates that, after serious consideration, it was decided not to be wise at this time to introduce the type of legislation proposed.

Fee Schedule. (*Section 112*).—The House resolved that the Society "take all the necessary steps to recommend at least a 30 per cent increase in all items in the fee schedule pertaining to x-ray" and that a letter regarding the raising of radiologists' fees be sent to the Chairman of the Workmen's Compensation Board.

Section 111.—The House voted that the Society take all the necessary steps to recommend a substantial increase in all items of the fee schedule pertaining to physical medicine and that the Bureau of Workmen's Compensation should acquaint the Chairman of the Workmen's Compensation Board that (1) increases were granted under the recent fee schedule for all other specialties but not for Physical Medicine, and (2) that the cost of office equipment and maintenance has greatly increased in this specialty and that therefore the fees for physical therapy physicians should be increased.

The Council requested the President to write to the Chairman of the Workmen's Compensation Board enclosing copies of these resolutions. President Masterson did so and with Chairman Kenney conferred with Miss Mary Donlon on this subject. (See Annual Reports: Report of President and Part X, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 878.)

Section 173.—The House recommended that the Committee on Workmen's Compensation, with such other members as the President may appoint, should meet with the Chairman of the Workmen's Compensation Board or her designated representative to urge correction of inequities in the Workmen's Compensation Minimum Fee Schedule, as soon as possible. This was referred to the Workmen's Compensation Committee. (See above, *Section 111.*)

Legislation—Injunction (*Section 108*).—The House voted that the Society should request reintroduction in the 1950 New York State Legislature of the 1949 bill, Senate Intro. 94 (To amend the Education Law, in relation to authorizing the Attorney General to apply for relief by injunction to restrain the commission of any act which is illegal under article 131 of such law.) This was referred to the Committee on Legislation, and the desired bill was introduced in the New York State Legislature.

Blood Banks (*Section 168*).—The House voted that the Blood Bank Subcommittee of the Public Health and Education Committee be continued or a new committee be appointed to devise a sound blood bank program to be developed jointly by the New York State Department of Health, the Medical Society of the State of New York, and its component county medical societies. The Council referred this to the Committee on Public Health and Education, Subcommittee on Blood Banks. (See Annual Reports, Part IV, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 863.)

X-ray Treatment and Radium Treatment (*Section 151*).—The House voted to request the reintroduction in the 1950 New York State Legislature of the 1949 bill entitled, "To Amend the Education Law, in Relation to the Practice of X-ray Diagnosis, X-ray Treatment, and Radium Treatment," to take effect July 1, 1950. The desired x-ray bill was introduced into the State Legislature.

Lien Law (*Section 150*).—The House voted that our Society should request reintroduction of Senate Intro. 2045 of 1949 in the 1950 Legislature, with active work for its passage; and that endorsement of the New York Bar Association be solicited. This bill relates to liens for physicians for treatment or care of injured persons. The Council referred this to the Committee on Legislation, and a bill was introduced.

Maternal and Child Welfare (*Section 91*).—In accepting the Committee report the House voted that the "Medical Society of the State of New York should urge strongly that all hospitals proceed with the fulfillment of the requirements as outlined in Regulation 35 of the Sanitary Code of the State of New York, as rapidly as possible."

The Committee also recommended that a report on this matter be made to the House of Delegates in 1950. Regulation 35 of the New York State Sanitary Code appears on p. 788, 789, of the NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1949, Vol. 49, No. 7. This was referred to the Joint Committee of the New York State Hospital Association and the Medical Society of the State of New York. (See Annual Reports, Part VI, NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950, p. 869.)

Public Medical Care and Medical Service (*Section 97*).—The House recommended "that the Federal or State Government assist the indigent, including all those who are eligible for old-age assistance, to obtain medical care by purchasing adequate insurance from existing prepayment hospital and medical plans, provided that all voluntary health insurance programs will be entirely in the hands of the State agency acting in consultation with a State Hospital and Medical Care Council and Regional Hospital and Medical Care Authorities set up in health regions within the State." This was referred by the Council to the Committee on Economics for its Subcommittee on Public Medical Care. The matter was referred to the Chairman of the Subcommittee on Public Medical Care, Dr. Stephen R. Monteith. Because of Dr. Monteith's death further action was delayed and cannot yet be reported.

A.M.A. Resolutions

The nine resolutions entrusted to your delegation by the House of Delegates of the Medical Society of the State of New York were introduced. The resolution regarding voluntary health insurance introduced by Dr. Rawls was reported unfavorably by a reference committee because another similar resolution was reported favorably. The resolution regarding Free Choice of Physicians for Government Employes Under the Workmen's Compensation Law was approved by the Reference Committee on Public Relations and Legislation. It was voted by the House that this resolution should be implemented by the proper agency of the American Medical Association. A resolution regarding Admission to Examinations by Medical Specialty Boards was introduced by Dr. Edward Flood and referred by the House of Delegates for further study. Dr. Scott Lord Smith's resolution endorsing the National Diabetes Detection Drive was adopted.

Action on our resolution regarding Assessments of the American Medical Association, introduced by Dr. Andrew A. Eggston, was postponed until the interim meeting, when the A.M.A. Bylaws were amended to include annual dues, up to $25. (See *J.A.M.A.* 141: 1250 (Dec. 24) 1949.) The proposed amendment to the Constitution of the American Medical Association as introduced by Dr. Stephen Monteith was ruled to be out of order by the reference committee to which it was sent. Our resolution regarding displaced physicians from European countries received the approval of the House of Delegates and was referred to the Board of Trustees. A resolution about General Practitioners which was introduced by Dr. Peter Di Natale was amended and passed. The resolution regarding various uses of Sir Luke Fildes' painting, "The Doctor," was passed. The Trustees reported that much advocated in this resolution was already in practice. The feasibility of stamps bearing this picture was questioned, because the picture has appeared on U.S. postage stamps.

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on February 9, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of illness for 6 for 1950; 5 for 1949, and 2 for 1948; 6 War Memorial assessments were remitted on account of illness, and 2 were remitted on account of service with the armed forces.

World Medical Association, United States Committee.—Last month you recommended to the Board of Trustees that they vote a donation to the World Medical Association. This was referred back to you by the Board, and the Secretary was instructed to obtain certain information from Dr. Louis H. Bauer, Secretary General of the World Medical Association. This information was presented and

It was voted to recommend to the Board of Trustees that an appropriation of $1,000 be granted to the World Medical Association.

The Board of Trustees at their last meeting appropriated the sums recommended by you for legal expenses.

Bills for the American Medical Association 1950 dues will be sent from your office as soon as possible. These will be preceded by an explanatory letter to the treasurer of each county medical society to the effect that payments will be made to them for transmission to the Medical Society of the State of New York and thence to the American Medical Association.

Your Secretary has been requested by the Malpractice Defense and Insurance Board to convey to you its recommendation of January 11, 1950, that Dr. A. Benson Cannon, New York City, be added to its Advisory Committee on X-ray Therapy.

Approval of the recommendation *was voted.*

Copy of your resolution regarding the late Dr. Stephen R. Monteith was sent to Mrs. Monteith.

At the last meeting of the Council, it was voted to advise the Medical Society of the County of Orange to amend its Bylaws in toto. In looking into this matter, your Secretary has learned that the Bylaws of the Medical Society of the County of Orange were revised in 1948 and need very few changes. It is, therefore, suggested that the Council rescind its action regarding the Bylaws of the Medical Society of the County of Orange.

Your Secretary wishes to report that on January 25, 1950, he attended a dinner given by the Medical Society of the County of Kings in honor of Dr. Irwin E. Siris, retiring president. At that dinner, the President's Medal and a Scroll were presented to Dr. Siris by Dr. John J. Masterson, President of the Medical Society of the State of New York, after a most appropriate speech. Your Secretary also attended committee meetings and endeavored in other ways to fulfill his duties.

Communications.—1. Associate Fellowship in the American Medical Association: Letters were received from the following retired members, requesting nomination to Associate Fellowship in the American Medical Association: Dr. B. A. Barney, Hornell; Dr. John F. Timmes, Richmond Hill; Dr. Herman G. Wahlig, Mineola, and Dr. M. L. Pinco, California.

It was voted to grant these requests.

2. Letter from Dr. Martin Weiss, Treasurer, Broome County Medical Society, to Dr. James R. Reuling, as follows:

> "At a regular meeting of the Broome County Medical Society held January 10, 1950, it was voted that the 1950 dues of Dr. J. E. Ryan, 87 Oak Street, Binghamton, be rescinded due to illness, and that the State Medical Society be requested to do the same. Dr. Ryan contracted poliomyelitis a few months ago and at present is not able to carry on his practice."

It was voted that the dues be rescinded.

"Can you inform us of the procedure for requesting remission of 1950 dues from the American Medical Association?"

It was voted that the American Medical Association be petitioned to remit Dr. J. E. Ryan's dues for 1950, and that word be sent to the American Medical Association that his county and State dues and assessments have already been remitted.

3. Letter from Dr. B. Wallace Hamilton, Secretary, Medical Society of the County of New York:

> "At a meeting of the Comitia Minora of the Medical Society of the County of New York held January 9, 1950, the 1949 dues of Dr. Alfred Hess were remitted because of indigency and illness in the family.
>
> "It is recommended that the State Society take similar action."

After discussion, *it was voted* that Dr. Anderton obtain more information from Dr. Hamilton about the situation.

4. Letter from Dr. William Benenson, Secretary, Medical Society of the County of Queens:

> "In going through our records we find that Dr. Edward Royal Kurz paid his 1948 Society dues when he was entitled to remission because of service in the armed forces from 1942 to July 1, 1947. We therefore request that you apply the State Society dues of $15 forwarded you in March, 1948 to the year 1949."

It was voted that Dr. Edward Royal Kurz' dues be remitted 1942 through 1948, and that the payment received be applied to his 1949 dues.

5. Letter from Dr. William Benenson, Secretary of the Medical Society of the County of Queens:

> "We are enclosing our check no. 678 for $12 in payment of Dr. Edward L. Gainsburgh's War Memorial Assessment. At the last meeting o Comitia Minora, it was voted to pay this assessment from our Visiting Committee funds. We trust that remission of Dr. Gainsburgh's 1949 dues and application for retired membership are now in order since he passed his seventieth birthday las year."

It was voted that Dr. Edward L. Gainsburgh's due for 1949 be remitted and that the county medica society be notified that he is eligible for retired membership.

6. Letter from Dr. Irving L. Ershler, Secretary

Onondaga County Medical Society, enclosing newspaper advertisement for "Imdrin."

After discussion, *it was voted* that it be suggested to Dr. Ershler that he communicate with the Pure Food and Drug Bureau of the Department of Agriculture, and also that he communicate with the Better Business Bureau of Syracuse.

7. Letter dated January 31, 1950, signed by Secretary and Chairman of Session on Physical Medicine, requesting the State Society to establish a Section on Physical Medicine and Rehabilitation to take the place of the Physical Medicine Session.

After discussion, *it was voted* to refer this to the Subcommittee on Scientific Program.

8. Letter dated January 27, 1950, from the American Medical Association National Conference of County Medical Society Officers, requesting the Society to appoint a chairman to assist in making arrangements for the conference on June 25, 1950.

It was voted that Dr. Charles F. McCarty of Brooklyn be appointed Chairman.

9. Letter dated February 1, 1950, from Dr. Christopher Parnall, Jr., Secretary of the Medical Society of the County of Monroe, re establishment of Grievance Committee in that County:

> "This will acknowledge your communication of January 27, 1950, indicating the action of the Council in recommending the establishment of a Grievance Committee by the component county medical societies.
>
> "As a matter of the record, the Comitia Minora of the Medical Society of the County of Monroe authorized the establishment of a Grievance Committee on June 20. The committee was endorsed by the membership at large in regular session October 18, 1949.
>
> "Its plan of procedure might be of some interest to you.
>
> I. Executive Secretary office level:
>   - (*a*) Hear the complaint, record data;
>   - (*b*) Telephone the physician involved, asking his active participation in adjusting the difference;
>   - (*c*) Telephone or write to complainant attempting to complete the adjustment, always leaving the door open for him to complain to the office further, if not satisfied;
>   - (*d*) Secretary's Office must have easy access to committee members advice at any state.
>
> II. Committee level—On failure to make satisfactory adjustment of the difference, Secretary to obtain:
>   - (*a*) Detailed complaint in writing and data on the complainant. Letter of complaint sent to physician named.
>   - (*b*) A detailed statement from the physician who is obligated to submit all pertinent information.
>   - (*c*) The entire committee then must meet and with the authority and moral support of the whole Society attempt to work out a solution and carry out action which will be to the best interests of all concerned.
>   - (*d*) If the assembled data appear to have malpractice implications, the Committee must turn all the assembled evidence over to appropriate designated authority. (Board of Censors)
>
> "The motivating force necessary for such a Grievance Committee to function must be that this Monroe County Medical Society is dedicated to accepting the responsibility to see that every person in the community will have adequate medical care at a cost he can afford to pay. This is a plan designed for the good of the public and for the good of the individual physician as well.
>
> "It is not desired to police the Society but rather to prevent and settle differences that may arise between a patient and his physician.
>
> "Already the Committee has handled a number of complaints, in addition to those settled amicably by telephone discussions between the complainant and the Executive Secretary. The results have been very worthwhile, and it is already felt that this Committee has won back many friends for the profession and has seen justice rendered.
>
> "We therefore congratulate the Council on this forward recommendation and we hope that every county society will implement it."

10. Letter dated February 4, 1950, from Dr. R. E. Isabella, Secretary, Medical Society of the County of Schenectady:

> "In your release of January 27, 1950, in which you suggest the establishment of a Grievance Committee . . . the functions of this committee have been performed by the Board of Censors.
>
> "Is it still necessary to appoint such a committee?"

It was voted that Dr. Anderton write Dr. Isabella stating that the formation of a Grievance Committee was a suggestion from the Council (and the American Medical Association) and that each county medical society has the right to decide to do so or not.

11. Letter dated February 2, 1950, from Dr. R. W. Howard, Secretary of the Medical Society of the County of Warren:

> "In establishing a Grievance Committee by our County Society certain questions will be discussed and considered. For example, will the decisions that are made be final, or will there be recourse to a State Committee in contested or unusual cases? Should a public announcement of this Committee be made in the newspapers stating its function, etc.?
>
> "Could you give us more details and perhaps an outline of the workings of such committees elsewhere."

It was voted that the Secretary be instructed to send Dr. Howard a copy of the letter received from Monroe County Medical Society, which is constructive; that he suggests Dr. Howard write to the Colorado State Medical Society and to Mr. Rember of the American Medical Association for information on the subject.

12. Letter dated February 3, 1950, from Dr. Goodlatte B. Gilmore, Secretary, Bronx County Medical Society:

> "Dr. Barnett I. Edelsack of 588 East 138 Street, was elected a retired member of the New York State Medical Society in 1946. The doctor is again in active practice and wishes to have his retired membership rescinded. He has already paid his County and State Society assessments for 1950. Will you be kind enough to attend to this matter."

It was voted that Dr. B. I. Edelsack's retired membership be rescinded.

13. Letter dated February 3, 1950, from Dr. A. J. Carlson, President, National Society for Medical Research, reported upon the activities of the society and requested a subscription of $500.

After discussion, *it was voted* to recommend to the Board of Trustees an emergency appropriation of $500 to the National Society for Medical Research.

14. Letter dated February 1, 1950, from Dr. Robert R. Hannon, Executive Officer, enclosing lease for the Albany office for the next three years at an increased rental of about $300. This had been submitted to the Counsel, Mr. Martin, for his opinion. He reported the lease was in correct order and recommended approval by the Council.

It was voted that the Council recommend to the Trustees that they sign the proposed new lease for the Albany office.

15. Letter dated February 3, 1950, from Bureau of Health Education, American Medical Association:

"The Report of the Second National Conference on Physicians and Schools is enclosed. This Conference was sponsored by the American Medical Association to promote the cooperation of physicians, educators, and public health personnel in improving the health of the school age child.

"New York was represented at Highland Park by William E. Ayling, M.D., of the State Medical Society, Ellis H. Champlain of the State Department of Education and V. A. Van Volkenburgh, M.D., of the State Department of Health. The names of other representatives giving New York as their residence may be found on the attached list.

"A national conference cannot insure productive cooperation at the local level. This comes only from working together at the grass roots level until mutual understanding is reached. The New York Medical Society is the ideal sponsor for a state conference on physicians and schools, since the same pattern of medical leadership has operated on two occasions at the national level.

"The American Medical Association suggests and encourages such state conferences. Those from New York who attended the Second National Conference could serve as the nucleus for the organization of your state conference. Their interest and experience would make them valuable consultants or discussion leaders. In addition, the services of the Bureau of Health Education are at your disposal in planning an effective conference.

"We hope you will have your own Conference on Physicians and Schools soon."

It was voted that this be referred to the Committee on Public Health and Education.

16. Letter dated February 8, 1950, from Mr. John F. McCormack, Vice-President, United Medical Service, Inc.:

"This is to advise you, at the request of Dr. John J. Masterson, Chairman of the Nominating Committee, that the Committee has approved the nominations of the following doctors for three years' service on the Board of UMS: Dr. Thomas M. D'Angelo, Jackson Heights; Drs. M. J. Fein, David J. Kaliski, M. DeM. Touart, John J. H. Keating, New York City.

"Before UMS takes action on these nominees, it is necessary they be approved by the Medical Society of the State of New York.

"Accordingly, may I request that this matter be given consideration and that I be advised of the action taken at your earliest convenience."

It was voted that the above nominations be *approved.*

17. Letters from the Medical Society of the State of New Jersey announcing that their annual meeting will be held May 22 to 24, 1950, at Haddon Hall, Atlantic City; and the Connecticut State Medical Society, announcing that their 158th Annual Meeting will be held on May 2, 3, and 4, 1950, at Waterbury. Each of these Societies requests that the Medical Society of the State of New York send delegates to their meetings.

It was voted that the Council empower the President to appoint delegates from this Society to the Annual Meetings of the Medical Society of the State of New Jersey and the Connecticut State Medical Society.

18. Letter dated February 7, 1950, from Dr. John J. Bourke, Secretary of the New York State Interdepartmental Health Council, to Dr. Masterson:

"Attached for your consideration are copies of the Majority and Minority Reports submitted to this Council by its Advisory Committee on Nursing Services. The Interdepartmental Health Council is considering both of these communications but has not yet approved either of them.

"Since the Council has received numerous requests for copies of these reports, it is releasing them at this time for discussion purposes.

"It is desirable to emphasize, as noted within the Majority Report, that the report has been prepared by a small group of individuals not fully representative of all the interests involved and that the advice of a considerable number of additional persons is desirable before determining the final form of the recommendations.

"It would be greatly appreciated if you could find it possible to review these reports and give the Interdepartmental Health Council the benefi of your suggestions, criticisms, and advice."

It was voted that these reports be referred to the Committee on Nursing Education.

19. Letter from Dr. Jacob L: Lochner, Jr. Secretary of the New York State Board of Medica Examiners, dated February 3, 1950, to Dr. Masterson:

"I am enclosing a copy of the physiotherapy bi as it will be introduced. The only change is i the material under paragraph 7, Section 650 where the Department decided to limit equivalen training to January 1, 1952, which I thin strengthens the bill."

It was voted to refer this to the Committee on Legislation.

20. Letter from Dr. Jacob L. Lochner, Jr Secretary of the New York State Board of Medic Examiners, to Dr. Masterson, dated February 1950:

"As you undoubtedly know, it has been th aim of this Department to attempt to clarify th part of the Medical Practice Act having to c with physiotherapy so that the 2,500 unlicense physical therapy technicians now working in th metropolitan New York area could qualify f admission to the physiotherapy licensing e amination.

"A large majority of these unlicensed techn cians were trained in schools approved by th

Council on Medical Education and Hospitals of the American Medical Association, many of them at New York University and Columbia.

"About two years ago the Council Committee of the State Medical Society did considerable work on this subject and arrived at what appeared to be a solution, only to have the matter dropped. The Committee considering the problem this year included Dr. William B. Snow of Columbia, Dr. George C. Deaver of New York University, Miss Elizabeth C. Addoms of New York University, and also the American Physical Therapy Association and Dr. Robert R. Hannon, representing the Medical Society of the State of New York.

"After considerable thought and much discussion, a proposed bill was agreed upon. This bill would change the present law by three amendments in which the definition of physiotherapy would be more precisely stated. Second, the change in Section 6506, paragraph 7, whereby the education requirements were modified so that graduates of New York University, Columbia, and other schools approved by the American Medical Association could be admitted to the licensing examination. Thirdly, an amendment to Section 6512 in which a definition of prescription was stated. It is my belief that since these amendments were approved by this Committee, which includes two recognized specialists in physiotherapy, one of whom is Chairman of the Section on Physical Medicine of the State Medical Society, it is almost an obligation of the Medical Society of the State of New York to actively support these amendments.

"Please be advised that these amendments do not in any way, in my opinion, lower any standards but simply make it possible to qualify the present physiotherapy technicians.

"It should be of great interest to the State Medical Society to know that I have received a letter from the lawyer representing the chiropractors stating that, if this bill is introduced, the chiropractors will definitely oppose it. This letter is sent to you for your information only and is not to be considered in any way an attempt on my part to pressure the Society."

This was referred to the Committee on Legislation.

21. Dr. Anderton stated: "There has come a communication from Dr. Irwin A. Conroe, Assistant Commissioner of Education for Higher Education, in regard to the proposed legislation which would license psychologists. There have been several meetings in regard to this proposed bill, attended by psychologists, by representatives of the Department of Education, and by representatives of our Society. In part, you will remember that this Council voted that it would not oppose the proposed bill if the words "diagnosis" and "therapy" were omitted. Dr. Conroe writes in part:

"Despite the fact that our colleagues in the field of medicine object to the use of the words 'therapy' and 'diagnosis' in a definition of the practice of psychology, we have found it necessary to include those terms in our proposed bill. It is exactly against the wrong kind of psychological therapy and against error of judgment in psychological diagnosis, which has been rampant, from which we hope to protect the public. We have used the descriptive word 'psychological' in each case. I can see no good reason why the physicians should object to the use of the terms 'psychological therapy' and 'psychological diagnosis' because neither of the terms, therapy and diagnosis, represent a monopoly of the practicing physician.

"We have tried to avoid making a cumbersome definition which might be subject to the whims of various interpreters according to their interests and inclinations. Furthermore, we have omitted any 'grandfather's' clause which might legalize the practice of persons now practicing psychology when they are without the necessary qualifications for such practice. The bill which we are presenting is honest and straightforward. If it is defeated, the continued harm which will result from the undisciplined and unlicensed practice of psychology upon the public by unqualified practitioners must be entirely on the conscience of those who secure the defeat of the bill.

"May I express my personal and official appreciation for the constructive suggestions which each of you has made in this tremendous task now being terminated.

"A meeting has been arranged for Dr. Maurice J. Dattelbaum, with practicing psychiatrists and myself, to meet with Dr. Conroe and Dr. Wendt, on Friday at 12 o'clock at the Town and Country Restaurant."

After discussion, *it was voted* that the Council go on record as opposing the bill as it has been presented today.

The Treasurer's report was accepted.

Report of Executive Officer

Dr. Hannon, Executive Officer, presented the following report:

"Your Executive Officer has spent January in Albany following closely legislative matters and making contacts with those who are interested in legislation pertaining to medical practice or public health.

"It is understood by the Council that under the new arrangements this year, with a larger Legislative Committee and a legal counsel to the Executive Officer, that the procedures of the Albany office and the activities of the Executive Officer have been considerably changed from former years. This is not understood by many members of the medical profession and has resulted in some confusion. It is apparently thought by some members of the medical profession that in view of these changes a much greater volume of bulletins, reports, and bills to be introduced at the request of the Society would result.

"The actual plan that has been laid out has been that there be fewer bulletins, less material from the Albany office, and the number of bills requested to be introduced be diminished, for the purpose of concentrating our efforts on those bills. It would seem desirable to clear this misunderstanding so that later disappointment on the part of members of the medical profession may not result.

"At the time of writing this communication the x-ray bill requested by the State Society has been introduced by Senator McGovern (Senate Int. 1198). A chiropractic bill was introduced on January 31 (Assembly Int. 1414—Mr. Noonan).

"The budget bills were introduced on February 1, and until these bills are cleared from the calendar there will be very little action in which we are particularly interested."

He supplemented this report by reading the following letter received from Dr. George J. Lawrence, Jr., of the Coordinating Council of the Five Metropolitan County Societies:

> "At a meeting of the Legislative Committee of the Coordinating Council, held on January 27, 1950, there was considerable discussion about the fact that our County Legislative Committees have not received any Legislative bulletins from the Legislative Bureau in Albany this year. The following motion was voted unanimously: 'That this committee request the Legislative Bureau of the State Society to provide County Society Legislative Committees with frequent and up-to-date bulletins on all proposed legislation pertaining to medicine and public health.'
>
> "The committee was also informed that the Council of the State Society had decided not to have the Friedman and Panken bills reintroduced this year. 'The Committee voted to recommend to the Coordinating Council that it advise the State Society's Council that the Friedman and Panken bills be introduced and supported by the New York State Medical Society. The Coordinating Council should also remind the State Society's Council that the House of Delegates in May, 1949, instructed the Council to support such legislation.'
>
> "As acting secretary of the Legislative Committee of the Coordinating Council, I have been instructed to inform your office of these actions by the Committee.
>
> "Expecting to see you on February 16 and with kindest regards, I remain . . . "

He also read a letter from Mr. Louis L. Friedman, dated February 7, 1950, as follows:

"I have reintroduced the hospital bill this year. As might be expected, letters have been written to Senator Henry A. Wise, Chairman of the Committee on General Laws, Senate, Albany, New York, by almost every hospital in the state, in opposition to the bill.

"If you want any action on it at this session, I suggest that all of the doctors who are interested in its passage send letters to Senator Wise. A copy of each of those letters should be sent to me.

"Knowing doctors as I do, and knowing that they are as bad as lawyers in protecting their own interests, I don't suppose that many of them will even take the trouble to write. However, as you are Chairman of the Legislative Committee of the Medical Society and knowing how active you are in protecting the interests of the doctors and the public in general, I am calling this matter to your attention."

Reports of Committees

Legislation.—Dr. Dattelbaum, Chairman, submitted the following report:

There was a meeting of the chairman and members of the Council Committee on Legislation, the chairman and members of the Council Committee on Public Relations, the Executive Officer, the counsel to the Executive Officer, and members of the Public Relations Bureau, on January 12. The purpose of this meeting was to arrange for cooperation in connection with legislative matters during 1950. It was outlined at this meeting that a great deal of publicity is not desired on legislative matters, unless some particular emergency arises; also that there should be fewer "blue" bulletins sent out, and news letters on legislative matters would not be sent out from the Public Relations Bureau unless requested by the Legislation Committee.

It has been thought that the best procedure for the Legislation Committee this year would be to concentrate its efforts on a few pieces of legislation that it is desired to have passed, and not dissipate its energy by having a very large number of bills introduced; also to concentrate its opposition on the most important bills that may be introduced to which we are opposed.

There apparently has grown up a misunderstanding among members of the profession that under our new arrangement a great deal more legislation would be introduced at our request and a great deal more literature would be sent out from the Albany office and from the Public Relations Bureau. There have been quite a number of requests from other organizations for the State Society to draw up and sponsor the introduction of bills in which it was thought that there might be a joint interest. There has been some disappointment when these requests have not been complied with.

Mention is being made of the above because it is thought that the Council should understand that the Legislation Committee is proceeding along the above suggested plans and should confirm the course of plans taken by the Legislation Committee or recommend such changes as deemed advisable.

Note is taken by the Legislation Committee of the Council action in deciding that the 1949 Friedman bill, in relation to the conduct of hospitals, and the 1949 Panken bill, amending the Insurance Law in regard to free choice of physicians, should not be introduced this year.

An x-ray bill has been introduced, and an injunction bill will be introduced. It has been thought advisable that the bill introducing the words "nervous and mental disease" in the definition of the practice of medicine in the Medical Practice Act not be introduced this year, and the Legislation Committee would appreciate if the Council would express an opinion on this matter.

It was voted that this bill not be introduced this year under the auspices of the Society.

Four amendments to the Disability Insurance Law have been suggested and approved by the Council, but after consultation with the chairman of the Workmen's Compensation Board it is understood that there will be a correction of the word "incomplete" in regard to physicians' reports; that there will be consideration given in regard to fees for attending an arbitration meeting, and also to appeals for a physician in cases of disciplinary action. Also it was thought that the number of physicians who are not qualified under the Workmen's Compensation Law is diminishing so rapidly that it is not necessary to amend the law permitting the issuance of certificates by those physicians not qualified under the Workmen's Compensation Law. After these interviews it would appear desirable that the Society not sponsor legislation amending that section of the law this year. The Legislation Committee would like the opinion of the Council on this matter.

The three suggested amendments to the Workmen's Compensation Law that have been presented to the Legislation Committee this year in regard to (1) the Medical Practice Committee, (2) place of arbitration, and (3) the method of settlement of medical bills with the Medical Practice Committee, have been considered favorably by the Legislation Committee, but on further investigation it would not appear that there is much likelihood of such legislation being passed and that i would not be expedient to introduce these bills under the present situation. The Legislation

Committee would appreciate an expression of opinion or approval of the Council on this matter.

The Council *voted approval.*

After further study of the question of introducing a lien bill, it appears that such a bill would not be acceptable to the legislators and have any chance of passing unless the maximum fee should be stated in such a bill. As it is thought that it is not advisable to introduce a bill at this time giving the maximum fee that could be charged under such a situation, it would appear advisable not to introduce a bill of this nature this year. The Committee on Legislation would appreciate the opinion of the Council on this matter.

The Council *voted approval.*

It is wished to call to the attention of the Council that a bill to license the practice of chiropractic has been introduced this year (Assembly Int. 1414–Mr. Noonan). Also a bill has been introduced qualifying the practice of podiatry under the Workmen's Compensation Law (Assembly Int. 1026–Mr. Wilson). A bill amending the General Business Law in regard to hospitals, similar to the Friedman bill of last year, has been introduced (Senate Int. 1107–Mr. Friedman). The introduction of this bill was not requested by the State Society.

Any directions from the Council in regard to these matters should be received at an early date by the Legislation Committee in order that action may be taken as soon as possible.

It is planned to have a meeting of the chairmen of the legislation committees of the county medical societies in Albany on Thursday, February 16, to take up bills that have been introduced up to date.

Convention.—Dr. Eggston, Chairman, reported: "The Convention Committee is making an effort to arrange a television presentation under the auspices of E. R. Squibb & Company. Difficulty has been encountered in finding both physical space and a place on the program.

"The suggestion has been made that the period from 12:00 NOON to 2:00 P.M., Wednesday, Thursday, and Friday, May 10, 11, and 12, be offered. It is expected that the show could continue after 2:00 P.M. on Friday. Squibb is willing to sponsor the program. We would like to have the action of the Council on that.

"There is one further supplement to that, and this is from Mr. Charles L. Baldwin to Mr. Anderson:

> 'Mr. Long of Squibb called me this afternoon concerning a new idea they have. They want to work in a medical television show in conjunction with RCA at the Fox Theatre in Brooklyn. This, of course, would be in conjunction with their show at our convention . . . . on a larger scale.
>
> 'They would like to get the opinion of our Society and specifically the Committee formed to work on the TV show. Would the doctors look with favor upon it?'"

The Council *voted approval.*

Dr. Eggston continued: "It is proposed that approval be given to the request of the Woman's Auxiliary to have the expenses of its reception Sunday afternoon before the annual meeting paid by VanPelt & Brown, Inc., advertisers in the JOURNAL and exhibitors at the annual meeting, with the understanding that it be stated in the Woman's Auxiliary program that the reception is sponsored by this company. The Council is asked to approve this plan."

The Council *voted approval.*

Dr. Eggston stated: "An additional appropriation is requested for a Medical Society exhibit in the sum of $150, and also an additional appropriation of $150 is requested for shadow boxes."

> In discussion, it was the consensus of opinion that these expenses fell within the budget and that a motion for additional appropriation was unnecessary.

Economics.—Dr. Azzari, Chairman, submitted the following report:

Following is the report of the Bureau of Medical Care Insurance, George P. Farrell, Director.

On invitation of Dr. J. Stanley Kenney, Chairman of the Planning Committee on Medical Policies, Mr. Farrell attended a meeting of his committee at the Hotel Roosevelt, January 11, 1950.

January 17, 1950.—In accordance with the request of the Subcommittee on Medical Expense Insurance, at its November 30, 1949, meeting, that suggested recommendations for the establishment of a State-wide contract be considered by presidents and economic committee chairmen of the county medical societies in each plan operating area, Mr. Farrell attended a meeting called by Dr. Dwight V. Needham, President of Central New York Medical Plan, in Syracuse. Representatives from the ten county medical societies of the area were present. The purpose of the meeting was to review proposed principles of the State-wide contract on a service basis with income limits, providing benefits for surgical and in-hospital medical care.

The following motions were unanimously approved:

1. That the proposed contract should be on a service basis;
2. That subscriber income ceilings per annum should be between $4,000 and $5,000 for the family and individual subscriber;
3. That the contract cover surgery in the hospital, home, or office;
4. That the contract provide for in-hospital medical care;
5. That the present New York State Workmen's Compensation Minimum Fee Schedule be used as a basis for establishment of a surgical fee schedule;
6. That maternity care be included in the contract on a service basis with a fee of $75, maternity care to be provided in the home or hospital, excluding x-ray and anesthesia.

Dr. Needham asked that the minutes of the meeting be sent to county medical society presidents in the plan operating area, for submission to county society members as soon as possible, in order to obtain county society approval of these contract principles.

He further asked that the local county medical societies take action if possible by the first of March, 1950, so that the plan could formulate a contract as soon as possible.

Subcommittee on Medical Expense Insurance.—The Subcommittee held a meeting jointly with Presidents and Executive Directors of the six plans in New York State (approved by the Medical Society of the State of New York), November 30, 1949.

In the January report of the Bureau of Medical Care Insurance, Mr. Farrell covered the actions taken by the county medical society presidents and representatives in the area of the Rochester plan, and includes therein the actions taken by representatives in the Syracuse plan operating area.

The report *was accepted.*

Ethics.—Dr. Anderton stated: "The revised Principles of Professional Conduct were submitted by the Committee on Questions of Ethics, and they are in the last minutes of the Council. I would like to make one minor suggestion; that in the minutes of the last meeting on page 19, after the word 'producers' a comma be inserted and 'or' taken out, and after the word 'radio' 'or television' be inserted. In other words, insert television as one of the matters considered as advertising. Then in the last section of that same paragraph the words 'through component and constituent medical organizations' are used. That is taken from the A.M.A. Ethics, but we have no constituent medical organizations, only components, and it would be correct to have the words 'and constituent' deleted. I take the liberty of moving those two changes."

The changes *were approved.*

Medical Licensure.—Dr. Brown, Chairman, reported as follows:

"I have a preliminary report on the figures for licensure. I might say it is a fragmentary report because, as you know, the method of licensing doctors in this State is by four different mechanisms: passing the State board examinations, endorsing the men who have passed the national boards—and incidentally New York does not automatically endorse everyone who has passed the national boards, they endorse those only who have obtained an average of 75 per cent in every subject rather than an average of 75 per cent—endorsement of graduates or licensees of other states under Section 211; and they have the power to license graduates of foreign schools. Up to one week ago the figures available were confined to one group; those who had taken the examinations by the State Department of Education. There were 1,080 who tried these examinations during 1949, of which number, 386 passed and 674 failed. There were three such examinations, and the total number of graduates from the nine medical schools in New York State was only 85. Of these 39 failed, and 46 passed; 30 graduates of Canadian schools tried, and 10 failed; 604 graduates of foreign schools took the examinations, and 459 failed and 137 passed. It is interesting to note that 34 out of 69 graduates of the former class B Middlesex School passed. That school is now out of existence. Quite revealing to me was the Chicago Medical School accomplishment. This was formerly a B school and now has an A rating. It had 65 graduates take the examination and 52 passed. Percentagewise, this is the best record attained by any of the abovementioned groups (80 per cent).

"The pattern for these examinations that were taken in New York State is similar to what has existed for the past several years, namely, the bulk of those who took the examination were graduates of foreign schools. Over 600 out of the 1,000 who tried the examinations were graduates of foreign schools, and of those only 137 passed. I expect to meet Dr. Lochner today or tomorrow, and, while these figures are not available for the public as yet, I expect that by the time the deadline for submission to the Publication Committee arrives we will have the figures on the other three categories I mentioned and bring the report up-to-date."

Nursing Education.—Dr. Dickson, Chairman, presented the following report:

"The Committee on Nursing Education was host to the Coordinating Council on Nursing Problems at the Society offices on January 11, 1950. All sponsoring agencies were represented, in addition to attendance by the President and Secretary of our Society and Dr. Frank G. Dickinson, Director of the Bureau of Medical Economic Research, American Medical Association.

"Primary discussion at the meeting was the proposal to utilize vocational high schools for training of practical nurses, a subject now under study by the Board of Regents. Concern was expressed by members of the professional nursing groups that many graduates of this training would be too immature to engage in the complex care of the sick, especially if no adequate provisions were made for home care supervision. It would also tend to remove education of the practical nurse away from the hospital, where professional personnel can keep a constant check on the type of service rendered, and tend to split training of the two nursing categories. No opposition was expressed to the use of vocational high schools on an adult educational level.

"It was unanimously moved that the New York State Commissioner of Education be notified that 'In the opinion of the Council, we go on record as approving, for the present, the continuing of the three types of existing basic programs for professional and practical nurses to meet immediate patient needs.' "

> Dr. Dickson read a letter he proposed to send to the Commissioner, and the Council of the Medical Society of the State of New York *voted approval.*

"The promotion of the team concept in caring for patients, and a paper on nursing as a profession for men, along with an interesting paper on research work in nursing, supplemented by a chart illustrating manners of preventing overlapping in hospital routine, with resulting economies, and the liberation of professional nurses for their main function—furnishing service to the sick patient—were presented at the meeting.

"Legislative matters considered were amendments to the Employment Agency Law and a possible amendment to the Nurse Practice Act. It was agreed that these matters would be brought to the attention of your Legislation Committee on written request to the chairman.

"Your Committee recently forwarded a letter to the directors of the six society-approved prepayment medical plans calling their attention to the request from the New York State Nurses Association for participation in the Society-sponsored plans. Any action in this matter was left to the discretion of the boards of directors of the plans.

"Further conferences are contemplated with these professional groups for consideration of mutual problems, and your Committee will endeavor to restimulate interest in Coordinating Councils for nursing problems on the county level.

"At a meeting of the nursing groups in Syracuse, February 8, Dr. Leo Gibson, member of the Council, will represent the Society. Dr. Norman Moore, a member of the committee, will address the meeting.

"It is the opinion of your Committee that a cordial relationship exists between all participating members of the Coordinating Council, and every attempt will be made to cement and strengthen this bond."

At the Syracuse meeting, February 8, Dr. Leo

Gibson represented the Society. He reported as follows:

"The meeting was very well attended. There were about 250 people representing registered professional nurses and practical nurses, and hospital administrators. Dr. Norman Moore spoke, and Dr. Knoll of Rochester General Hospital, as well as Sister Eucharista of Niagara Falls. My impression was that there was some criticism of present nursing education and a great deal of criticism—I think constructive—of hospital administration. Mrs. Holliday, one of the speakers, a lay person, who has been in the hospital for six major operations, was very critical of hospital administration from the standpoint of the hospital and the nursing care she received, and I think the nurses, as well as hospital administrators, thought they received correct and constructive criticism."

Office Administration and Policies.—Dr. Anderton reported for Dr. Cunniffe who was unable to attend:

"The Office Administration and Policies Committee met the day before yesterday. It was voted to grant permission to the Salvation Army to accept voluntary contributions from employes, as arranged by Dr. Anderton with Mr. Raymond M. Hilliard, Chairman of the Social Service Agencies Division of the Salvation Army, for this year, without establishing a precedent.

"The Committee voted disapproval of the compulsory U.S. Savings Bond payroll plan. It voted to encourage voluntary purchases of U.S. Savings Bonds.

"Approval was voted to have a wall at the west side of the general office removed, to have two lighting fixtures installed, with a recommendation that the Council request the Board of Trustees to vote a sum not to exceed $283 therefor. I move that this recommendation to the Board of Trustees be made today."

The Council *voted to approve* this recommendation.

"Lastly, Mr. Alexander described the collator, a labor-saving device, which had previously been inspected by all members of the Committee. The Committee voted to recommend to the Council the purchase of a collator, which would cost $484.50, plus the expense of shipping to New York, and a 2 per cent sales tax, and which would presumably amount to less than $500. That is for your information, because it is within the budget."

The report *was approved.*

Planning Committee for Medical Policies.—Dr. Kenney, Chairman, reported that, as a representative of the Council on the State Advisory Council to the Joint Hospital Survey Planning Commission, he had attended a meeting of the Council in Albany on January 26: "The two subjects that were discussed were the findings and recommendations of the Study of Hospital Finance recently completed by Columbia University—the so-called 'Ginzberg Report,' entitled *A Pattern for Hospital Care*—second, the current activities in which the Commission is now engaged. All these reports and comments will be published by the State Commission.

"The Executive Committee of the Middle Atlantic States Regional Conference of the Council on Medical Service of the A.M.A., on which your chairman is the New York member, met in Washington on December 5, and has approved a tentative program for the meeting which will be held in April."

After discussion, *it was voted* to send four representatives from the Medical Society of the State of New York to attend the Middle Atlantic States Conference, preferably the executive member, one member of the Public Relations Committee, one member from the Medical Care Insurance Subcommittee, and the Secretary.

Publication.—Dr. Redway reported for Dr. Kosmak: "The first item of JOURNAL business which comes before the Council is the matter of resolutions from the Medical Society of the County of New York. They are two, condemnatory of editorial comment which appeared in the JOURNAL, the first one in the issue of August 15, 1949, and the other in the issue of September 15, 1949.

"Yesterday the Publication Committee considered these resolutions. The Committee recommends that the Council acknowledge the interest of New York County and its desire that the publications of the Medical Society of the State of New York maintain the highest possible standards. The Committee admitted the possibility of misinterpretations that may have been placed by individual readers upon certain excerpts abstracted from the context of the editorials in question."

It was voted to approve this part of the report.

"There were some suggestions made for the inclusion in the *Directory* of informative material which is being gathered from various sources: Dr. Kaliski's bureau and other places, provisions of the Sanitary Code, the Workmen's Compensation Law, and the Disability Benefits Law.

"The Committee voted that the usual listing in the *Directory* be supplemented by this additional information, if such is your pleasure."

It was voted to adopt the report.

Public Health and Education.—Dr. Curphey, Chairman, reported that he had attended various meetings and arranged postgraduate instruction and Teaching Days for several counties.

1. Meeting on January 19, 1950, with Dr. Hilleboe and representatives of the State Health Department. Dr. Edward R. Schlesinger, on behalf of the Health Department, presented an outline of a projected epidemiologic study of retrolental fibroplasia in New York State, emphasizing the existence of this condition in premature children in as many as 20 per cent under a birth weight of 1,500 Gm. and from 2 to 15 per cent in the weight range of 1,500 to 2,000 Gm. The relatively high frequency of the condition in this group suggested the value of and the need for such a study. It was proposed that this matter be referred to the Subcommittee on Child Welfare of the Council Committee on Public Health and Education.

The Council *voted approval.*

As an outcome of the discussion, Dr. Kosmak suggested a later study to determine the cause of prematurity itself.

Another point was the matter of reporting complications of pregnancy and labor on birth certificates. A modification of the existing certificate was suggested, whereby a confidential medical report listing the various complications would be placed on the reverse side. It was voted to refer the suggested report to the Maternal Welfare Committee.

The Council *voted* this referral.

2. The Council, at its December 1 meeting, referred to this Committee a request from Dr. Haven Emerson, member of the Committee on En-

demic Goiter of the American Public Health Association. He asked the State Medical Society to sponsor legislation requiring that "table salt sold in the State of New York should include the necessary iodide of soda to provide the indispensable minimum quota of iodine to maintain or establish normal nutrition, growth, development, and physiologic functions." The Committee decided to hold the same course they had previously adopted, i.e., favorable to educational procedures—not objecting to requirements as to labeling salt sold in New York State as containing or not containing the proper amount of iodine—but not in favor of compulsory sale of only iodized table salt.

The Council *voted to approve* this stand.

Cancer.—Publication of the cancer manual agreed upon by the State Society with the Health Department has been postponed because the American Cancer Society will probably prepare such a manual for the entire nation in the near future.

Film Review Board.—Since the matter was referred to this Subcommittee by the Council on December 1, we have found that the film, "Medical Insurance; The Pathway to Health," shown to organizations in Schenectady, was apparently circulated by the Department of Education, rather than the Department of Health, as originally reported at the Woman's Auxiliary meeting in Albany in November. Dr. E. MacD. Stanton of Schenectady has brought the matter to the attention of the State Medical Society, and he has helped the withdrawal of the film. Our Subcommittee wishes to procure a print for its own information. Dr. Norris raises the question of reimbursing the members of the various panels for reviewing films, for secretarial expenses, and for the occasional hiring of a projectionist.

Industrial Health.—At his meeting with your Chairman on January 12, Dr. Greenburg urged that physicians of the State utilize all laboratory facilities of the Department of Labor in clinical and fatal cases in which an industrial hazard might be involved.

Mental Hygiene.—The Mental Health Program Plan proposed by the State Department of Health and studied at a joint meeting of the Subcommittees on Mental Hygiene, Child Welfare, and Maternal Welfare in October, has been revised by the Department as of January, 1950, and has received the approval of the Subcommittees. Your Committee recommends approval by the Council of this program.

Dr. Curphey attended, on February 6, the 46th Annual Congress on Medical Education and Licensure in Chicago: "The meeting was very instructive. It developed that a survey of the medical schools will be completed in the next few years. There was one panel that was particularly interesting about the place of specialties in undergraduate medical education.

"I should like to report that progress is being made on the *Course Outline Book,* and we hope to present the material to the printers within the next month or so."

The report *was adopted.*

Public Relations.—Dr. Winslow, Chairman, reported on the activities of the Bureau:

The Public Relations and Legislation Committees held a joint meeting on Thursday, January 12, to determine policy in connection with the current session of the State Legislature.

It was decided that, in the absence of a direct mandate from either the House of Delegates or the Council, matters of policy with regard to specific bills will be determined by the Legislation Committee, in conjunction with Dr. Robert R. Hannon, Executive Officer, and Mr. James J. Beasley, Counsel to the Executive Officer. Furthermore, all publicity and appeals for "grass roots" action, either for or against any measure, is to originate with the Executive Officer. The Public Relations Bureau, under this arrangement will give assistance when requested by the chairman of the Legislation Committee and the Executive Officer, and will not work for or against any measure unless so requested.

It was unanimously decided at this meeting that there will be no compromise with the chiropractors in their attempt to win licensure.

The field representatives are continuing their efforts to promote the National Education Campaign throughout the State and to assist county medical societies with their public relations programs.

A major step in procuring resolutions opposing compulsory health insurance was taken during the past month by the Public Relations Bureau, working in conjunction with Mr. Roy Nisja of Whitaker & Baxter.

The Public Relations Committee has considered the request of Dr. Joseph C. Bunten, President of the Association of American Physicians and Surgeons, Inc., to have the State Medical Society sponsor a State-wide essay contest among junior and senior high school students on the subject "Why the Private Practice of Medicine Furnishes This Country with the Finest Medical Care." It is the recommendation of this Committee that the Council approve the objectives of the essay contest, which are to educate the nation's youth and their parents on the advantages of private practice and the evils of government-controlled medical care. It is further recommended that the Council recommend to the various component county societies that they give consideration to the sponsorship of such essay contests, whenever these can be accomplished with the complete approval and consent of local education authorities.

News releases were issued about postgraduate education meetings in six counties.

Progress is being made in the development of Speakers' Bureaus in county societies. An increasing number of doctors are volunteering to talk to groups in counties adjacent to their own.

Efforts of the Woman's Auxiliary are concentrated on the following phases of the Public Relations program: personal education through study clubs; distribution of literature through doctors' offices and organizations in which they hold membership; speakers to women's groups; appeals for resolutions; preparation of news articles about Auxiliary activities stressing the positive features of the National Education Campaign.

Rural Medical Service.—Dr. Gibson, Chairman reported that he had attended the fifth nationa meeting on Rural Health arranged by the American Medical Association at Kansas City, Missouri, February 2, 3, and 4, 1950:

"This conference was attended by about four hundred people and was addressed by leaders o farm organizations, editors of farm papers, the president of the University of Arkansas, the dean of the University of Kansas School of Medicine, and the President of the American Medical Association Ernest E. Irons, M.D.

"The primary discussion was divided into five groups. The discussion in these separate group was carried on by individuals interested in each particular phase of aid to rural health."

The report *was adopted.*

Woman's Auxiliary.—Dr. Beekman, Chairman, reported that the Woman's Auxiliary had been active this winter and that they had accomplished much. He read a letter from the President, Mrs. Lavelle, and requested the opinion of the Council on the following paragraph:

> "Would you think it advisable to try to work out some plan whereby we might invite the wives of doctors who practice in New York County or the Bronx, but who maintain residence in other counties, to become auxiliary members in the county in which they reside?"

The Council *voted* that they had no objection to the Woman's Auxiliary inviting wives of doctors who live in another county from where the doctors practice to join the county auxiliary where they are living, providing they contact the county medical society where the husband practices.

Workmen's Compensation.—Dr. Kenney, Chairman, reported on the activities of the Committee.

The Compensation Committee of the County Medical Societies of New York, Kings, Queens, and Bronx continue to record their dissatisfaction with the degree of cooperation afforded by the Medical Practice Committee in the rating of physicians.

Certain insurance carriers still continue to refuse to pay a consultation fee on a first office fee claimed by surgeons for preoperative examination of a referred patient subsequently operated upon.

Dr. Kenney attended a meeting with Drs. Wertz, McGoldrick, and Eggston, of the Disability Benefits Committee, with the Advisory Committee of the Workmen's Compensation Board, which stressed the importance of cooperation for development of ways and means for an educational program to inform the doctors of their functions and duties under this law. The President and Secretary were also present at that meeting.

New Business

Representation at the annual meeting of the United Medical Service was considered. Under the existing circumstances our President would represent two bodies. It was suggested that he be empowered to designate an alternate to represent him as President of the State Society.

It was voted that Dr. Chas. Gordon Heyd be requested to become the proxy for Dr. Masterson for the State Society.

Disability Benefits Law.—Mr. Martin reported as follows:

"Without reading the pregnant provision of the law in full, Section 212 of the Workmen's Compensation Law, title 'Voluntary Coverage' under this Disability Benefits Law, provides if such an organization as the State Medical Society wishes to carry this insurance on its help—and I interrupt to state that that involves no peril of opposition that it is a tax-exempt organization if we wish to do so—we must get the approval and the signed consent of 50 per cent of our help, and then request Miss Mary Donlon's permission to do this."

It was voted that this question be referred to the Office Administration and Policies Committee, with the hope that they will obtain an expression from the employes concerning it.

Letters of Sympathy

It was voted that the Secretary be instructed to write a letter to Dr. Holcomb, expressing the hope of the Council that he will soon regain in full his good health.

It was voted that the Secretary be instructed to write a letter of sympathy in the name of the State Society to Dr. Cunniffe whose wife died a few days ago.

It was voted that the Secretary be instructed to write a letter of condolence in the name of the Council to Mrs. Ann Roetger, a trusted and valued employe, who lost her mother recently.

Extraordinary Legal Expenses

The Council *voted* to request the Board of Trustees to make an appropriation not to exceed $2,700 for extraordinary legal expenses which may occur during February, 1950.

144th Annual Meeting, Medical Society of the State of New York

TELEVISION BROADCAST

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CORRESPONDENCE

ANTIHISTAMINIC DRUGS TO INHIBIT DIODRAST REACTIONS

To the Editor:

In the November 1 issue of the JOURNAL, Crepea, Allanson, and de Lambre reported the failure of antihistaminic drugs to obviate untoward reactions due to Diodrast. They stated that premedication with 100 mg. pyribenzamine or 50 mg. Trimeton by mouth one hour prior to the administration of Diodrast did not seem to have any effect on the incidence, severity, or type of reactions to Diodrast.

The writer tried to prevent the not infrequently seen untoward effects of Diodrast by the premedication of antihistaminic drugs, and in November, 1949, presented a preliminary report of his observations before the Swedish Association of Radiologists. As his observations argue against those reported by Crepea, Allanson, and de Lambre, they will be briefly reported here.

A number of adult patients referred to the Roentgendiagnostic Department for excretion urography were given an injection of 2 ml. Antasten "Ciba" subcutaneously or intramuscularly thirty minutes to one hour before the intravenous administration of Diodrast (Umbradil "Astra," and Dijodon "Leo," Swedish preparations chemically identical with Diodrast). For control purposes a similar number of patients were not given premedication.

TABLE 1.—INHIBITION OF DIODRAST REACTIONS WITH ANTIHISTAMINIC DRUGS

	Total Patients	Group I (No Reactions)	Group II (Slightest Reactions)	Group III (Other Reactions)
	Umbradil (35 Per Cent)			
Controls (20 cc. Umbradil)	50	7	8	35
Patients preinjected with Antasten*	50	22	22	6
	Dijodon (35 Per Cent)			
Controls (20 cc. Dijodon)	25	8	3	14
Patients preinjected with Benadryl**	25	16	7	2

* 20 cc. of 35 per cent Umbradil given one-half to one hour after a preinjection of 2 ml. of Antasten.

** 20 cc. of 35 per cent Dijodon given with 20 mg. of Benadryl.

The patients were classed into three groups (Table 1). Those without untoward reactions were assigned to Group I, those who experienced very slight reactions such as a mild feeling of warmth in the face, abdomen, or small pelvis, to Group II, and those with any other objectively recordable reactions in the form of nausea, vomiting, or urticaria, or the like, to Group III. It should be observed that these reactions were as a rule mild, too.

As it seemed expedient to give the contrast medium and the antihistaminic drug by means of a single injection, a specially prepared contrast medium containing 20 mg. Benadryl (Desentol "Leo") was used. Guinea-pig tests failed to show that the addition of contrast medium interfered with the antihistaminic effect of the drug.

It is apparent that in the premedicated patients the reactions were both less frequent and less severe than in not premedicated controls.

These results seem to be encouraging. Continued experience has hitherto confirmed this impression. Studies are in progress with other antihistaminic drugs and other kinds of examinations, and the results will be published in the near future.

OLLE OLSSON, M.D.

University Clinics
Lund, Sweden
February 21, 1950

COMMENT BY DR. CREPEA

To the Editor:

The facts in this type of work speak for themselves. Our series was larger than Dr. Olsson's and the types of Diodrast reactions tabulated in somewhat different forms. Furthermore, we used an oral antihistamine whereas Dr. Olsson is using an injectable product. If the subcutaneous, intramuscular, or intravenous use of antihistamine drugs is of value in obviating Diodrast reactions it would be quite important. However, in view of the difficulties involved in evaluating the milder reactions and the sparsity of serious or fatal reactions, it seems to me that series of cases measured in thousands rather than small groups will be necessary in order to give a true picture of the effects of antihistamines.

SEYMOUR CREPEA, M.D

State of Wisconsin General Hospital
Madison, Wisconsin
March 12, 1950

WHO'S WHO

in the

State Society's Office Staff

For the administration of its varied activities, the Medical Society of the State of New York requires a large staff of employes in the central office in New York City. It is believed that the members of the State Society would be interested in becoming acquainted with our associates through the medium of these pages. Accordingly, we are presenting in successive issues of the JOURNAL *brief biographical sketches of members of the office staff, with an account of their duties in the organization. They will be published, with few exceptions, in the order of their priority of service.—(Photographs by Joseph Merante, Jr., New York City, Official Photographer, American Medical Association.)*

MISS SUSAN V. BAKER became secretary to the Council Committee on Public Health and Education, of which Dr. Theodore J. Curphey is chairman, in September, 1949. Her work includes scheduling speakers for programs of postgraduate instruction for county medical societies, hospital staffs, and other groups in the State, and working with the chairmen of the Committee's fourteen subcommittees, arranging meetings, recording minutes, and attending to much of the correspondence. A yearly responsibility is organizing and revising the *Course Outline Book*, which lists the postgraduate education speakers and their subjects.

A native of New York City where she now resides, Miss Baker is a graduate of Smith College and is secretary of The Association of Former Juniors-in-France of the College. Prior to joining the staff she was for seven years secretary to the Executive Director of the Young Women's Christian Association of the City of New York.

MISS KATHLEEN JOAN KEENAN joined the headquarters staff in November, 1949, and is in the *Directory* Department. Her duties include writing copy for the new edition of the *Medical Directory* which is now in process of preparation. When copy cards are received from physicians with changes and additions indicated, the copy must then be written in the standard form used in the *Directory*. This lists the physician's name, address, office hours, telephone number, medical school, year of graduation, national boards, workmen's compensation rating, specialty colleges, national societies, local societies, alumni societies, and hospital appointments. Each word of copy must be checked carefully for accuracy and completeness.

Born in the Bronx and now a resident of Manhattan, Miss Keenan attended Hunter College for two years, majoring in English literature. She was formerly head of the incentive payroll department for Consolidated Laundries Corporation in New York City.

MISS EVELYN GRACE RAND is a member of the *Directory* Department, having joined the staff in November, 1949. Her first duties in this department, which is now busily preparing the new edition of the *Medical Directory* for publication, was in preparing the *Directory* cards for mailing. Miss Rand is now working on copy for the *Directory*, which involves the writing of information concerning each physician listed in the style used in the *Directory*. This copy is written on the copy cards which have been returned by each physician with current listings checked and changes and additions indicated.

A native of Brooklyn, Miss Rand now resides in Freeport, Long Island. She holds a Bachelor of Arts degree from Tusculum College, Greeneville, Tennessee, where she majored in English and history. Before joining the headquarters staff, Miss Rand was with the Reuben Donnelley Advertising Company in New York City.

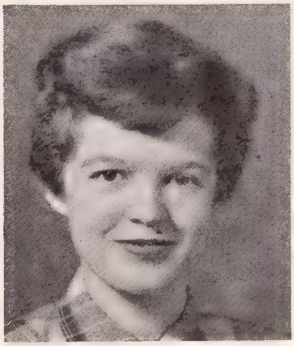
JOURNAL EDITORIAL DEPARTMENT

EDITORIAL AND PRODUCTION WORK of the New York State Journal of Medicine involves accessioning about 500 manuscripts; editing, proofreading, and dummying over three-fifths of these for publication, including the papers presented at the Annual Meeting of the State Society; writing medical and hospital news, necrology, and other filler items, and preparing all the editorials and special department articles for inclusion in the Journal. During 1949, for example, 24 issues and one supplement were published, for a total of 3,120 pages, of which 2,044 were text. The supplement, first printed in 1948, makes possible the publication of the complete Minutes of the House of Delegates in one compact volume.

In addition to processing material for publication, the editorial department handles a large correspondence and information service and last year, in reprints of articles, had 354 orders for a total of 369,250. Work of the department is supervised by Dr. George W. Kosmak, managing editor of the Journal, and Dr. Laurance D. Redway, assistant managing and literary editor.

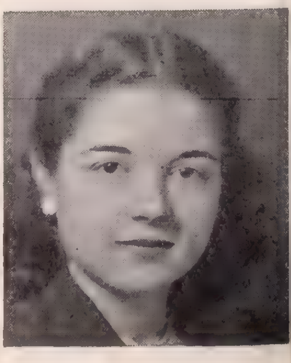
MISS ALVINA RICH LEWIS, production editor of the Journal, is in charge of the editorial department, planning each issue, supervising the work of two assistants, and writing news and special material. Miss Lewis joined the staff in September, 1947, after having been an English and journalism instructor at the Ossining High School and the School of Journalism, New York City, a free lance writer, and editor of several newspapers and magazines, including the *Croton-on-Hudson News* and the *Ossining Courier.* Miss Lewis was graduated from the New York State College of Teachers, in Albany, where she received a Bachelor of Arts degree in English and social studies and a Bachelor of Science degree in librarianship, and from New York University, with a Master of Arts degree in English.

Interested in radio and theater work, she is a director for the Croton Players and chairman of the Radio Division of the Westchester Drama Association, producing a weekly play over WFAS, White Plains, and teaching a course in radio scriptwriting. Miss Lewis was born in Atlantic, Massachusetts, and now resides in Croton-on-Hudson.



MRS. ANNE GIBSON COLAHAN joined the Journal editorial staff in December, 1947, and is in charge of processing and editing manuscripts for publication. This includes editing and preparing for the printer most of the scientific articles, case reports, and special articles which appear in the Journal. In addition, Mrs. Colahan assists Miss Lewis in writing medical news, county news, necrology, and in editing House of Delegates and Council minutes, as well as doing part of the proofreading and dummying of material for each issue. Mrs. Colahan, who attended Concordia College in Bronxville and Temple University in Philadelphia, Pennsylvania, received a Bachelor of Arts degree with a major in zoology from Barnard College of Columbia University.

Before joining the Journal staff, she had been assistant editor of the *Yorktown Herald* and laboratory assistant for the Interchemical Corporation in New York City. Mrs. Colahan was married last December to Thomas Seery Colahan, a history student at Columbia College, and the couple now reside in Brooklyn.



MISS MARY ELIZABETH VAIL is the third member of the Journal editorial department, having joined the staff in September, 1948. Miss Vail is in charge of all reprint orders of articles published, handling purchase orders, invoices, and correspondence with authors, in addition to forwarding all requests for reprints to the authors. She also assists with proofreading for each issue, maintains the manuscript records and correspondence files, as well as having charge of all periodicals received in exchange, books received for reviews, and clearing the material in each issue after its publication.

A native of New York City where she now resides with her family, Miss Vail was graduated from Oberlin College in Ohio with a Bachelor of Arts degree in English literature. She has worked at the New York State Library in Albany, in the Periodical Room and at the Library for the Blind. She plans to be married in June to David Wright Varley, a graduate student at the University of Michigan.

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The most recent Reference to this Brewer specialty is:
Armbrust, Chas. A. Jr. and Levine, Samuel A.: Paroxysmal Ventricular Tachycardia: A study of One Hundred and Seven Cases: Circulation, Vol. I; 28-39 (Jan.) 1950

Further Information Available On Request.

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NECROLOGY

Charles L. Antony, M.D., of the Bronx, died on December 10, 1949, at the age of seventy-four. Dr. Antony was graduated from the College of Physicians and Surgeons, Columbia University, in 1899.

John James Basso, M.D., of Brooklyn, died on November 17, 1949, at the age of fifty-seven. Dr. Basso received his medical degree from Boston University Medical College in 1929 and had formerly served as assistant attending surgeon at the Greenpoint and St. Mary's Hospitals. He was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Paul John Bauerberg, M.D., of Yonkers, died on March 11 at his home at the age of seventy-eight. Dr. Bauerberg, who was born in Russia, was graduated from the New York University Medical College in 1898. He was consulting physician at the Yonkers General Hospital and former president of its medical board. Dr. Bauerberg had practiced in Yonkers for fifty-one years. He had organized the medical staff of the Hebrew Orphan Home in Yonkers and was former president of the Jewish Community Center. Dr. Bauerberg was a member of the Yonkers Academy of Medicine.

William Christopher Burke, M.D., of Brooklyn, died on January 4 at the age of forty-five. Dr. Burke received his medical degree from the Dublin Medical College in 1927. He was assistant attending obstetrician and gynecologist at the St. Mary's and Kings County Hospitals. Dr. Burke was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sophy Page Carlucci, M.D., of Endicott, died in the Ideal Hospital, in Endicott, on February 23 at the age of seventy. Dr. Carlucci was graduated from the University of Buffalo School of Medicine in 1902 and interned at Lafayette Hospital in Buffalo. She first began practice in Binghamton, moving to Endicott in 1917 after she had completed postgraduate work at the Lying-In Hospital, New York City. Dr. Carlucci was a member of the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herbert Sperry Du Cret, M.D., of Brooklyn, died on February 27 while on vacation in Tucson, Arizona, at the age of sixty-three. Dr. Du Cret received his medical degree from the New York Homeopathic Medical School in 1912 and was consulting surgeon at Cumberland Hospital, where he had formerly served as chief surgeon. During World War I Dr. Du Cret was a captain in the U.S. Army Medical Corps and was reattached to the British army as a lieutenant colonel. He was awarded the Purple Heart and the British Military Cross. Dr. Du Cret was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Emmett Chandler Fitch, M.D., of New York City, died on December 9, 1949, at the age of fifty-four. Dr. Fitch received his medical degree from Tufts Medical School, Boston, Massachusetts, in 1920.

Nathaniel F. Flater, M.D., of Latham, died on February 26 at the age of forty-eight while skiing at North Creek. Dr. Flater received his medical degree from the University of Alberta, Canada, in 1927 and interned in Memorial Hospital. During World War II he served in the European Theatre with an Army antiaircraft unit, with the rank of captain. Dr. Flater was a member of the Albany County Chapter of the American Academy of General Practice, the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Andrew Henry Hangarter, M.D., of Brooklyn and Forest Hills, died on March 10 at his home in Forest Hills at the age of sixty-six. Dr. Hangarter was graduated from the College of Physicians and Surgeons, Columbia University, in 1908. He was consulting physician at St. Catherine's and Evangelical Deaconess Hospitals, both in Brooklyn. A Fellow of the American College of Physicians, Dr Hangarter was a member of the Brooklyn Society of Internal Medicine, the Kings County Medical Society, the Medical Society of the State of New York and the American Medical Association.

George A. Himmelsbach, M.D., of Buffalo, died on January 16 at the age of eighty-three. Dr Himmelsbach was graduated from the University o Buffalo School of Medicine in 1891. He was consulting physician at the Buffalo General Hospital Dr. Himmelsbach was a member of the Buffalo Academy of Medicine, the Erie County Medica Society, the Medical Society of the State of New York, and the American Medical Association.

Harold Carlton Ingraham, M.D., of New Rochelle died on February 25 at his home at the age of sixty Dr. Ingraham was graduated from the New York University and Bellevue Medical College in 1914 and in 1915 became the first resident in obstetrics and gynecology, as well as an attending physician, a the Woman's Hospital, New York City. He was director of gynecology and obstetrics at Lincoln Hospital in the Bronx and had served on the staff o the New Rochelle Hospital. Dr. Ingraham was a member of the New York Obstetrical Society, the Westchester County Obstetrical and Gynecologica Society, the Westchester County Medical Society the Medical Society of the State of New York, and the American Medical Association.

Raymond F. McAloon, M.D., of Massena, died on March 5 at his home at the age of sixty-seven. Dr McAloon was graduated from the Albany Medica College in 1913 and had practiced in Massena eve since. For more than twenty years he had served a school physician for the village. Dr. McAloon was a member of the St. Lawrence County Medical Society the Medical Society of the State of New York, and the American Medical Association.

William Gansevoort Mack, M.D., of Skaneateles died on February 23 in Highland Hospital, Rochester, at the age of eighty-four. Dr. Mack wa graduated from the Albany Medical College in 1900 and took postgraduate work at the Universities o Heidelberg and Vienna. Dr. Mack practiced in Rochester until his retirement in 1945. For many years he was a staff member of the Highland and Rochester General Hospitals.

[Continued on page 1038]

FIRST THOUGHT IN HYPOCHROMIC ANEMIAS

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*J.A.M.A. 141:500 (Oct. 15) 1949.

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Thiamine Hydrochloride	3 mg.
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FOUNDATION OF ANTIANEMIA THERAPY

[Continued from page 1036]

Otto Maier, M.D., of New York City, died on March 9 at the Lenox Hill Hospital at the age of eighty-four. Dr. Maier received his medical degree from the Bellevue Hospital Medical School in 1891 and was formerly on the staff of St. Mark's Hospital. A Fellow of the American College of Physicians, Dr. Maier was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Walther Neuberg, M.D., of Jackson Heights, died on August 11, 1949. Dr. Neuberg received his medical degree from the University of Freiburg in 1906. He was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Luman Nichols, M.D., of Philmont, died suddenly on February 20 at his home at the age of fifty-seven. Dr. Nichols was graduated from the Albany Medical College in 1915 and had practiced in Philmont and vicinity ever since. Dr. Nichols was a member of the Columbia County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John W. Parrish, M.D., of Brooklyn, died on November 27, 1949, at the age of eighty-four. Dr. Parrish was graduated from the College of Physicians and Surgeons, Columbia University, in 1887 and retired from practice in 1940. He was consulting pediatrician at the Brooklyn, the Brooklyn Eye and Ear, and the Kings County Hospitals and was one of the founders of St. Christopher's Hospital in Brooklyn. Dr. Parrish was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Atkins Payne, M.D., of East Setauket, died on March 10 at his home at the age of seventy-five. Dr. Payne received his medical degree from the New York Homeopathic Medical School in 1902. During World War I he served as a major in the U. S. Army Medical Corps and then started his practice in East Setauket. He retired in 1940.

George Truett Riley, M.D., of Binghamton, died on November 29, 1949, at the age of forty-five. Dr. Riley received his medical degree from the Baylor University School of Medicine in 1930. He was associate attending physician at the Binghamton City Hospital. Dr. Riley was a member of the American Society of Anesthesiology, the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Karl Rosenthal, M.D., of New York City, died on October 21, 1949, at the age of fifty-nine. Dr. Rosenthal received his medical degree from the University of Cologne in 1919 and was formerly senior clinical assistant in pediatrics at the Mount Sinai Hospital Outpatient Department. Dr. Rosenthal was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jacob Sachs, M.D., of Brooklyn, died February 23 in the Fort Hamilton Veterans Administration Hospital after a long illness, at the age of sixty-one. Dr. Sachs was graduated from the Cornell University Medical College in 1910 and interned at Mount Sinai Hospital. During World War I he served overseas as a captain in the U.S. Army Medical Corps. For thirty years Dr. Sachs was attending physician at the Israel Zion Hospital in Brooklyn. A Diplomate of the American Board of Internal Medicine, Dr. Sachs was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Mary Newman Sloan, M.D., of Buffalo, died suddenly on February 25 at her home at the age of seventy-three. Dr. Sloan was graduated from the University of Buffalo School of Medicine in 1900 and interned in Lafayette General Hospital in Buffalo before opening her practice there. In addition to her private practice she served as physician for the Young Women's Christian Association and for the New York Telephone Company. During World War I, Dr. Sloan lectured on social hygiene through New York and New England under government auspices. She was a member of the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ernest Stengel, M.D., of New York City, died on December 23, 1949, at the age of fifty-two. Dr. Stengel received his medical degree from the University of Vienna in 1924. He was assistant adjunct orthopedic surgeon at the Hospital for Special Surgery in New York City. Dr. Stengel was a member of the New York Society of Physical Medicine, the American Congress of Physical Medicine, the American Society of Physical Medicine, the New York Rheumatism Association, the American Rheumatism Association, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank Bonnell Voght, M.D., of Buffalo, died on December 28, 1949, at the age of eighty-four. Dr. Voght received his medical degree from Niagara University in 1889 and had practiced in Buffalo for more than fifty years.

Luvia Mildred Willard, M.D., of Jamaica, died on March 8 in the Mount Vernon Hospital at the age of sixty-eight. Dr. Willard was graduated from the Cornell University Medical College in 1909 and had been director of pediatrics at the Jamaica Hospital. Dr. Willard, an automobile racing enthusiast, won fame for her victory in 1928 in an automobile race from New York to Chicago, sponsored by the New York Women's Automobile Club to demonstrate the ability of women drivers. A Licentiate of the American Board of Pediatrics and a Fellow of the American College of Physicians, Dr. Willard was a member of the American Academy of Pediatrics, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Maximillian Zigler, M.D., of New York City, died on January 6 at his home at the age of sixty-five. Dr. Zigler was graduated from the College of Physicians and Surgeons, Columbia University, in 1905. He was an instructor in urology at the New York Post-Graduate Hospital and Medical School and was associate urologist at the Lebanon Hospital. A past president of the Bronx County Medical Society, Dr. Zigler was a member of the American Urological Society, the New York Urological Society, the Bronx Surgical Society, the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

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Hematinic capsules for hypochromic anemias.

HEMOSULES* 'Warner' are high-potency, vitamin-rich capsules which also contain liver concentrate and highly absorbable ferrous sulfate.

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In Anemias of Acute or Chronic Blood Loss—*Hemosules* 'Warner'*
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Dosage Two HEMOSULES* Capsules t.i.d. in well defined hypochromic anemias. One to three HEMOSULES* Capsules for prophylaxis and/or maintenance.

Formula Each capsule contains:

Ferrous sulfate, Dried U.S.P. 162.0 mg....(2.5 grs.)
Liver concentrate (1:20) 162.0 mg....(2.5 grs.)
*Folic acid**...0.75 mg.*
Thiamine hydrochloride (vitamin B_1...1.0 mg.
Riboflavin (vitamin B_2)...1.0 mg.
Niacinamide...4.0 mg.
Pyridoxine hydrochloride (vitamin B_6)...0.5 mg.
*Calcium pantothenate**...0.5 mg.*
Ascorbic acid (vitamin C)...15.0 mg.

Package Information

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New York St. Louis

**Trade Mark*
***The need for pyridoxine hydrochloride, calcium pantothenate and folic acid in human nutrition has not been established.*
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ANNOUNCEMENTS

The following notices have been received from Dr. Jacob L. Lochner, Jr., secretary of the New York State Board of Medical Examiners, University of the State of New York, State Education Department, Albany.

Licenses Canceled

The Board of Regents, at its meeting held July 15, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Elizabeth Miller Mac Naugher, New York City, be accepted and sustained; that, in compliance with the recommendation of said committee, medical license No. 26475, issued under date of October 1, 1931, to said Elizabeth Miller Mac Naugher, permitting her to practice medicine in the State of New York, be revoked, annulled and canceled, and that her registration or registrations as a physician, wherever they may appear, be ordered annulled and canceled of record; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to accept the determination of said Committee on Grievances and to carry out the terms of this vote.

Dr. Mac Naugher was registered from 115 East 61st Street, New York City, for the years 1947–1948. The order of revocation was served on Dr. Mac Naugher's attorney on August 2, 1949. Therefore, her license was revoked as of that date.

The Board of Regents, at its meeting held October 21, 1949,

> Voted, That, pursuant to the provisions of subdivision 1 of section 6514 of the Education Law, medical license No. 36419, issued under date of July 10, 1939, to Cyril B. Babb, through indorsement of his Tennessee medical license, permitting him to practice medicine in the State of New York, be revoked, annulled and canceled, and that his registration or registrations as a physician, wherever they may appear, be ordered annulled and canceled of record; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Babb was registered from 123 West 118th Street, New York City, for the years 1949–1950. The order of revocation was served on Dr. Babb on November 14, 1949. Therefore, his license was revoked as of that date.

The Board of Regents, at its meeting held October 21, 1949,

> Voted, That the determination of the Medical Grievance Committee in the matter of the application for the revocation of the medical license heretofore granted to George J. Bookstein, Greenwich, be accepted and sustained; that, in compliance with the recommendation of said committee, medical license No. 18282, issued under date of June 26, 1924, to said George J. Bookstein, permitting him to practice medicine in the State of New York, be revoked, annulled and canceled, and that his registration or registrations as a physician, wherever they may appear, be ordered annulled and canceled of record; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to accept the determination of said Medical Grievance Committee and to carry out the terms of this vote.

Dr. Bookstein was registered from 42 Main Street, Greenwich, New York, for the years 1949–1950. The order of revocation was served on Dr. Bookstein on November 1, 1949. Therefore, his license was revoked as of that date.

The Appellate Division, Third Department, under date of January 4, 1950, in pursuance of the decision made by the court on December 29, 1949, confirmed the original action of the Board of Regents in revoking the medical license of Dr. Bernard Candib.

Therefore, medical license No. 22198, issued under date of December 30, 1927, to Bernard Candib, stands revoked.

Censure and Reprimand

The Board of Regents, at its meeting held July 15, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Herman F. Ahrens, New York City, be accepted and sustained; that, in compliance with the recommendation of said committee, said Herman F. Ahrens be censured and reprimanded; that said Herman F. Ahrens be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Herman F. Ahrens by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

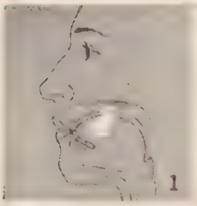
Dr. Ahrens is registered for the years 1949–1950 from 578 West 183rd Street, New York City. The order of the Commissioner was served on Dr. Ahrens on August 2, 1949.

The Board of Regents, at its meeting held July 15, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Nathan Block, New York City, be accepted and sustained; that, in compliance with the recommendation of said committee, said Nathan Block be censured and reprimanded; that said Nathan Block be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Nathan Block by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

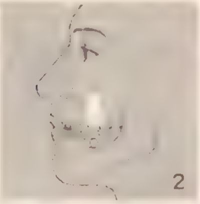
[Continued on page 1042]

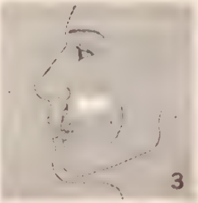
new trend in hormone therapy



transmucosal administration

1. sublingual
2. buccal
3. labial





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[Continued from page 1040]

Dr. Block is registered for the years 1949–1950 from 1082 Park Avenue, New York City. The order of the Commissioner was served on Dr. Block on August 2, 1949.

The Board of Regents, at its meeting held July 15, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Arthur A. Rosenthal, New York City, be accepted and sustained; that, in compliance with the recommendation of said committee, said Arthur A. Rosenthal be censured and reprimanded; that said Arthur A. Rosenthal be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Arthur A. Rosenthal by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Rosenthal is registered for the years of 1949–1950 from 322 Central Park West, New York City. The order of the Commissioner was served on Dr. Rosenthal on August 1, 1949.

The Board of Regents, at its meeting held July 15, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Isidore M. Turner, South Fallsburg, be accepted and sustained; that, in compliance with the recommendation of said committee, said Isidore M. Turner be censured and reprimanded; that said Isidore M. Turner be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Isidore M. Turner by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Turner is registered for the years 1949–1950 from South Fallsburg, New York. The order of the Commissioner was served on Dr. Turner's attorney on July 27, 1949.

The Board of Regents, at its meeting held September 16, 1949,

> Voted, That the determination of the Medical Grievance Committee in the matter of the application for the revocation of the medical license heretofore granted to Raymond Chaitin, Brooklyn, be accepted and sustained; that, in compliance with the recommendation of said committee, said Raymond Chaitin be censured and reprimanded; that said Raymond Chaitin be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Raymond Chaitin by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Chaitin is registered for the years 1949–1950 from 1877 Ocean Avenue, Brooklyn, New York. The order of the Commissioner was served on Dr. Chaitin on October 6, 1949.

The Board of Regents, at its meeting held September 16, 1949,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Leander G. Rymph, Bloomington, be accepted and sustained; that, in compliance with the recommendation of said committee, said Leander G. Rymph be censured and reprimanded; that said Leander G. Rymph be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Leander G. Rymph by said Commissioner; and that the Commissioner of Education be empowered and directed to execute for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Rymph is registered for the years 1949–1950 from Bloomington, New York. The order of the Commissioner was served on Dr. Rymph on October 7, 1949.

The Board of Regents, at its meeting held September 16, 1949,

> Voted, That the action taken by the Board of Regents on December 19, 1947, in suspending the medical license of Lee R. Tompkins for a period of six months be rescinded, and that said Lee R. Tompkins be censured and reprimanded; that he be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Lee R. Tompkins by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Tompkins is registered for the years 1949–1950 from 184 North Main Street, Liberty, New York. The order of the Commissioner was served on Dr. Tompkins on October 7, 1949.

The Board of Regents, at its meeting held September 16, 1949,

> Voted, That the determination of the Medical Grievance Committee in the matter of the application for the revocation of the medical license heretofore granted to Emanuel Modeste Viscusi, Brooklyn, be accepted and sustained; that, in compliance with the recommendation of said committee, said Emanuel Modeste Viscusi be censured and reprimanded; that said Emanuel Modeste Viscusi be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Emanuel Modeste Viscusi by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Viscusi is registered for the years 1949–1950 from 70 Grove Street, Brooklyn, New York. The

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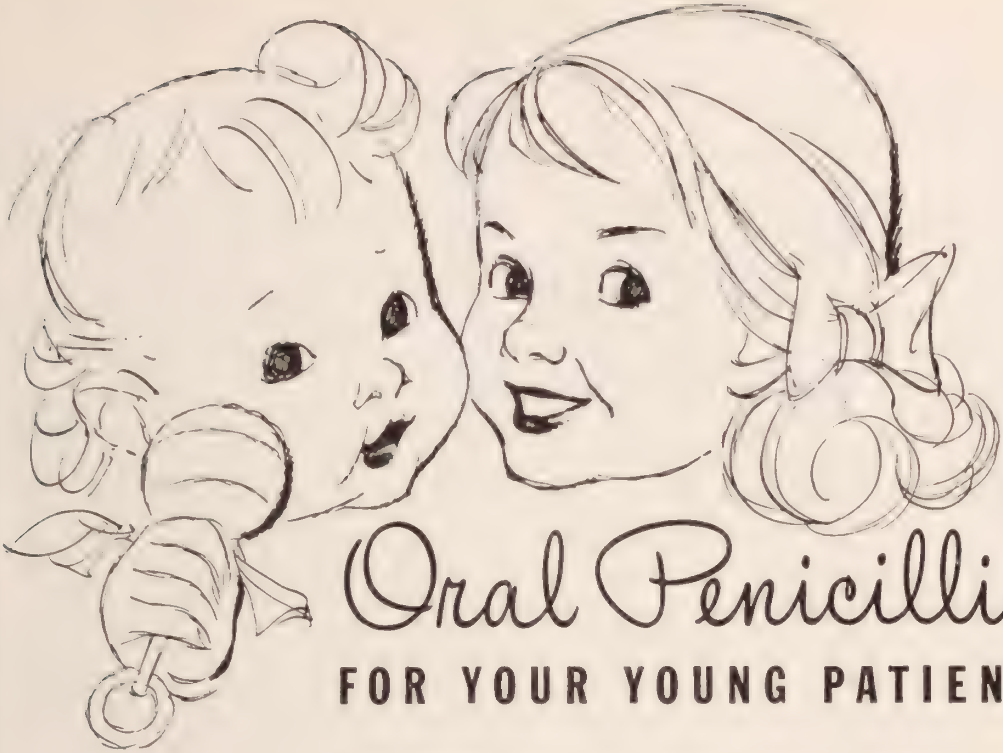

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[Continued from page 1042]

order of the Commissioner was served on Dr. Viscusi on October 10, 1949.

The Board of Regents, at its meeting held October 21, 1949,

> Voted, That the determination of the Medical Grievance Committee in the matter of the application for the revocation of the medical license heretofore granted to Louis T. Fricke, Brooklyn, be accepted and sustained; that, in compliance with the recommendation of said committee, said Louis T. Fricke be censured and reprimanded; that said Louis T. Fricke be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Louis T. Fricke by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Fricke is registered for the years 1949–1950 from 2101 Avenue T, Brooklyn, New York. The order of the Commissioner was served on Dr. Fricke on November 4, 1949, and Dr. Fricke appeared before the Regents for censure and reprimand at their meeting on November 18.

The Board of Regents, at its meeting held January 20, 1950,

> Voted, That the determination of the Medical Grievance Committee in the matter of the application for the revocation of the medical license heretofore granted to Edwin Perry Hall, Oneonta, be accepted and sustained; that, in compliance with the recommendation of said committee, said Edwin Perry Hall be censured and reprimanded; that said Edwin Perry Hall be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Edwin Perry Hall by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Hall is registered for the years 1949–1950 from 76 Chestnut Street, Oneonta, New York. The order of the Commissioner was served on Dr. Hall on February 10, 1950, and Dr. Hall has been notified to appear before the Regents for censure and reprimand at their meeting on February 17, 1950.

The Board of Regents, at its meeting held February 17, 1950,

> Voted, That the determination of the Medical Committee on Grievances in the matter of the application for the revocation of the medical license heretofore granted to Abraham Schonholtz, New York City, be accepted and sustained; that in compliance with the recommendation of said committee, said Abraham Schonholtz be censured and reprimanded; that said Abraham Schonholtz be ordered to appear for such censure and reprimand before the Board of Regents at a time and place to be determined by the Commissioner of Education, notice of which shall be given to said Abraham Schonholtz by said Commissioner; and that the Commissioner of Education be empowered and directed to execute, for and on behalf of the Board of Regents, all orders necessary to carry out the terms of this vote.

Dr. Schonholtz is registered for the years 1949–1950 from 331 East 17th Street, New York City. The order of the Commissioner was served on Dr. Schonholtz on March 9, 1950, and he was notified to appear before the Regents for censure and reprimand on March 17, 1950.

Licenses Restored

On December 20, 1946, the Board of Regents voted that the New York medical license No. 27445 issued September 22, 1932, to Joseph E. Fudell be annulled and canceled of record.

Dr. Fudell has applied to the Board of Regents for restoration of his medical license and the Commissioner of Education has ordered that license No. 27445 be restored as of August 5, 1949. Dr. Fudell is registered for the practice of medicine from 1473 Sterling Place, Brooklyn, New York.

On April 18, 1947, the Board of Regents voted that the New York medical license No. 15420, issued May 21, 1920, to Nicholas A. Tonis, be annulled and canceled of record.

Dr. Tonis has applied to the Board of Regents for restoration of his medical license and the Commissioner of Education has ordered that license No. 15420 be restored as of August 5, 1949. The present address of Dr. Tonis is 600 West 142nd Street, New York City.

The Board of Regents, at its meeting held November 18, 1949,

> Voted, That the application of Irving Epstein, New York City, for the restoration of his license to practice medicine in the State of New York, No. 15343, issued under date of January 30, 1920, to said Irving Epstein, be granted.

Dr. Epstein was registered for the period 1947–1948 from 59 East 54th Street, New York City. The order of restoration was served on Dr. Epstein on February 24, 1950, and his medical license was restored as of February 28, 1950.

The Board of Regents, at its meeting held November 18, 1949,

> Voted, That the application of Alexander Nechamkin, New Rochelle, for the restoration of his license to practice medicine in the State of New York, No. 7386, issued under date of June 5, 1923, under the name of Alexander Nechamkin, be granted.

Dr. Nechamkin was registered for the year 1944 from 411 West End Avenue, New York City. The order of restoration was served on Dr. Nechamkin on December 15, 1949, and his medical license, therefore, is restored as of that date.

The Board of Regents, at its meeting held January 20, 1950,

> Voted, That the application of Anne Elizabeth Kuhner, New York City, for the restoration of her license to practice medicine in the State of New York, No. 17809, issued under date of June 28, 1923, to said Anne Elizabeth Kuhner, be granted.

Dr. Kuhner was registered for the period 1947–1948 from 52 Gramercy Park North, New York City. The order of restoration was served on Dr. Kuhner on February 1, 1950, and her medical license, therefore, is restored as of that date.

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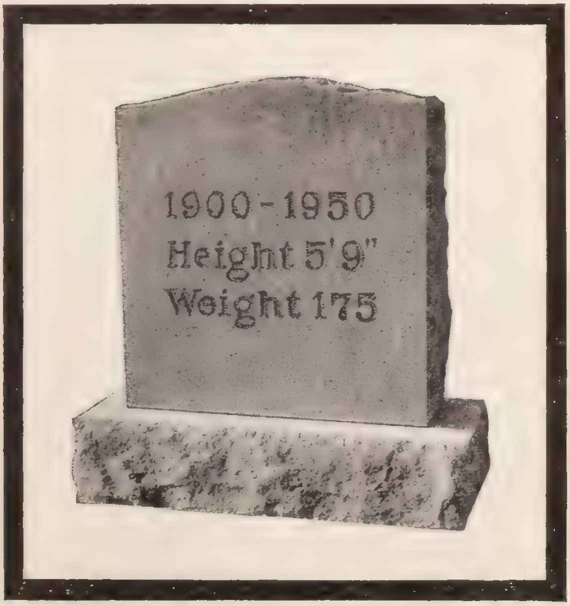


*T.M. Reg. U.S. Pat. Off. for dextro-amphetamine sulfate, S.K.F.

MEDICAL NEWS

Committee to Study Italian Medical Schools

A COMMITTEE of three doctors, appointed by the New York State Board of Regents, left New York City on April 1 to visit medical schools and colleges in Italy and to make recommendations in connection with licensing graduates from these schools to practice medicine in New York State. Serving on the committee are Dr. Dominick F. Maurillo of Brooklyn, a member of the Board of Regents, who is chairman of the committee, Dr. Donald Sheehan of the New York University Medical Center, and Dr. Irwin A. Conroe, Assistant State Commissioner of Education in charge of professional education and licensure. The tour will include visits to the Universities of Milan, Bologna, Pavia, Turin, Florence, Rome, Palermo, and Padua.

Italian medical degrees were recognized in this State before World War II. After the signing of the friendship treaty between the two countries in 1948, James C. Dunn, American Ambassador in Rome, and Count Sforza, Italian Foreign Minister, discussed the possibility of re-establishing the educational ties between the two nations.

MEDICALLY SPEAKING—

Physicians for Palestine—Physicians intending to go to Palestine, permanently or for a visit, may obtain necessary information on application to Dr. I. Zusmanovitz, c/o American Committee of OSE, 24 West 40th Street, Room 303, New York 18, New York (Telephone: LOngacre 5-3904). Dr. Zusmanovitz is the Secretary General of the Israel Medical Association.

Roswell Park Medal Awarded—The Roswell Park Medal has been awarded to Dr. Dallas B. Phemister for outstanding achievement, according to an announcement by the Buffalo Surgical Society. Dr. Phemister presented the Roswell Park Memorial Lecture at an invitation dinner at the Hotel Statler, Buffalo, on March 30, 1950. His subject was "Changes in the Treatment of Infections of Bones and Joints Since the Introduction of Antimicrobial Drugs."

Proceeds of Christmas Seal Sale Higher—The 1949 Christmas Seal Sale in New York, outside of New York City, passed the final sale figures for the previous year. This statement came from the State Charities Aid Association's State Committee on Tuberculosis and Public Health and its 62 local affiliates which were conducting the campaign.

On February 1, the total was $1,343,660, an increase of 6 per cent over the figure at the same time last year. The drive was expected to reach its goal of $1,400,000 by April 1, the closing date of the campaign.

Multiple Sclerosis Clinic—A research clinic to investigate multiple sclerosis and related disorders was opened on March 13, 1950, with its headquarters in Bellevue Hospital. The new clinic was made possible by a grant of over $100,000 from the National Multiple Sclerosis Society to New York University Post-Graduate Medical School, a unit of the New York University-Bellevue Medical Center, and will be staffed by members of the School's faculty. The purpose of the new clinic is to study multiple sclerosis in an effort to develop means of treating and controlling the disease.

The Clinic is now open every Tuesday and Thursday from 1 to 5 P.M., and will soon function on a daily basis. It will be available for selected patients in the Metropolitan New York area without regard to race, color, or creed. Selected bed patients will be admitted for diagnostic purposes and special investigations. Patients admitted to Bellevue and Goldwater Memorial Hospitals must meet qualifications for admission to city clinics. Other eligible patients will be admitted to University Hospital.

Information concerning the Clinic may be obtained by writing the Multiple Sclerosis Research Office, New York University-Bellevue Medical Center, 477 First Avenue, New York City.

First Army Medical Reservists at Medical Symposium—First Army Medical Reservists are being offered something different in the way of training with the announcement of a three-day symposium on Governors Island, New York, where top medical people in all fields of medicine will conduct panel discussions on medical problems in the light of the current national and international situation. Invitations are open to members of all corps of the Medical Department to attend the three-day session from April 26 to 28. Col. C. F. St. John, First Army surgeon, is in charge of the conference.

Nutrition of Cooper Union Freshmen Studied—Cooper Union's Health Service, in cooperation with the School of Nutrition at Cornell University, is conducting a research study among 357 freshmen students at Cooper Union. Purpose of this study is "to learn the nutritional status of the incoming students, and to determine effectiveness of medical consultation among those students showing nutritional deficiencies," Prof. J. Clinton Hollinger, in charge of the study, has announced.

Last September, as part of the regular admission health examination, 1 cc. of blood was taken from each of the 357 students. In addition, each student was asked to keep a daily record of his diet for the following seven days.

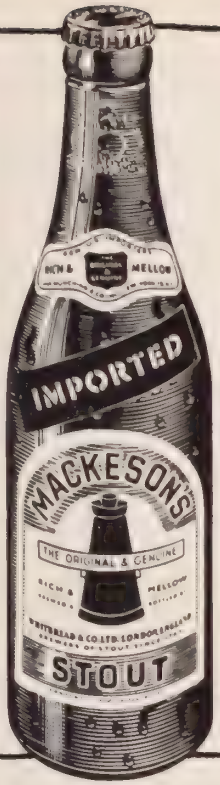
To date, the blood samples have been analyzed, and the diet records have been rated. A preliminary report shows that 49 per cent of those sampled have satisfactory nutritional analyses, 38 per cent are classified as "fair," and 12 per cent show a decidedly poor nutritional status.

The next step will be to work with the students showing significant deficiencies. A retest will be conducted in the spring.

Cooper Union's Health Service has also just completed x-ray examinations of 1,262 students and 35 staff members in the school's seventh annual free tuberculosis chest survey.

Last year's survey uncovered but one case of tuberculosis out of 1,445 x-rays taken. The 1948 survey also revealed one active case. This, how-

[Continued on page 1048]



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Smooth – mellow – no bitterness.

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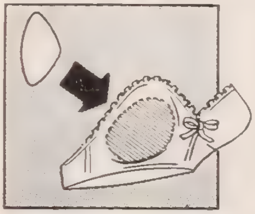

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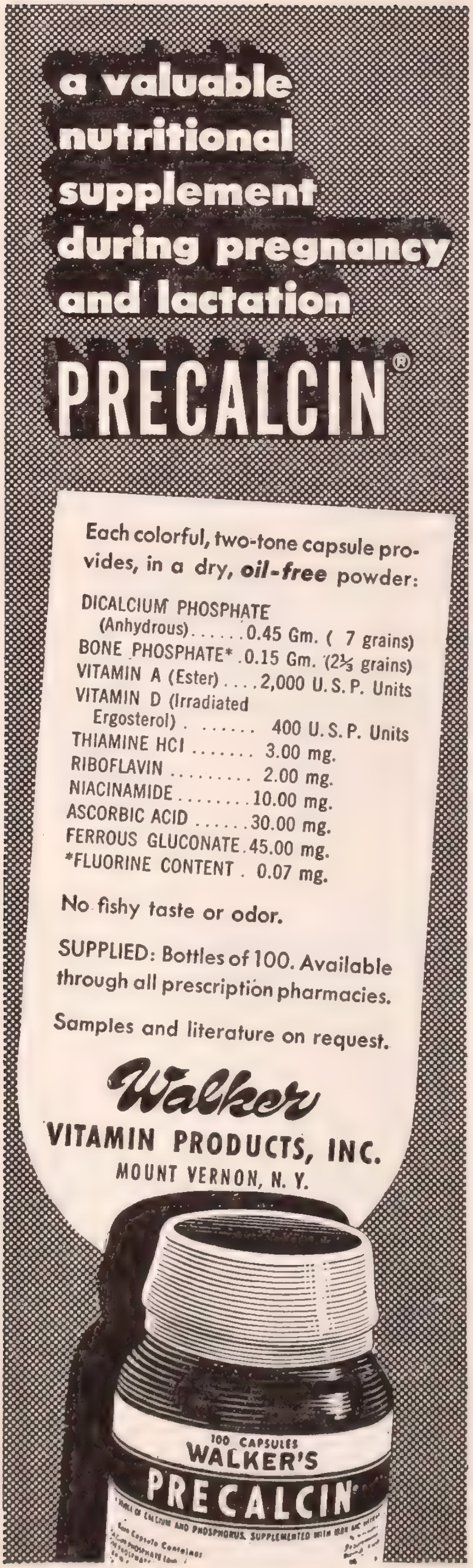

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DICALCIUM PHOSPHATE (Anhydrous)	0.45 Gm. (7 grains)
BONE PHOSPHATE*	0.15 Gm. (2⅓ grains)
VITAMIN A (Ester)	2,000 U.S.P. Units
VITAMIN D (Irradiated Ergosterol)	400 U.S.P. Units
THIAMINE HCl	3.00 mg.
RIBOFLAVIN	2.00 mg.
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[Continued from page 1046]

ever, was an improvement over 1947, when three active cases of tuberculosis were discovered out of the 1,610 x-rays made.

Special Train for 1950 A.M.A. Meeting in San Francisco—An invitation has been issued by the Illinois State Medical Society to join them on their special train enroute to the San Francisco A.M.A. convention in June.

In brief, the special train leaves Chicago at 11:15 A.M. June 21; stopover at Denver the following day to partake in an attractive sightseeing program, thence to Salt Lake City. Several hours will be spent in and about Salt Lake on Friday, June 23.

Special train will leave Salt Lake at three in the afternoon enroute to San Francisco but will stop at Elko, Nevada, for two hours that evening, permitting those interested a visit to the western cattletown, arriving in San Francisco on Saturday, June 24, at 5:00 P.M.

There will be a postconvention trip as follows: Leave San Francisco by motor on Friday, June 30, to Monterey and the 17-mile drive. Party will proceed by train to Los Angeles for a two day stopover, returning to Chicago by way of the Grand Canyon.

For complete information on the schedule and attractions enroute, as well as the costs involved, write to: W. M. Moloney, GAPD, Burlington Route, Room 711, 105 W. Adams Street, Chicago 3.

Series of Lectures on Diabetes Given in East New York—The Brownsville Division of the Health Council of Greater New York in cooperation with the East New York Medical Society presented, as a public service, a series of weekly lectures on diabetes and its detection, at the Brownsville Health Center. Among the physicians who spoke on the different phases of the disease, answered questions, and demonstrated the use of a simple self-detector were the following:

February 16—Drs. Harry Block and Samuel Brusilow, "Diabetes in Children."

February 23—Drs. Benjamin Sakin and Morris Ant, "Prevention in Diabetes."

March 2—Drs. A. Koplowitz and B. Diamond, "Women's Diseases and Diabetes."

March 9—Drs. Sam Blaustein, Carl Pier, and Julius Wisoff, "Dental Problems of Diabetics."

March 16—Drs. David Kirschner and M. B. Shapiro, "Gangrene in Diabetes: The Surgeon's Point of View; The Podiatrist's Point of View."

March 23—Dr. George Rosen, "Psychologic Problem of the Diabetic as It Affects the Whole Family."

Mental Health Week in New York City—The Department of Health and the Department of Hospitals of New York City have joined forces with the New York Academy of Medicine and the State Charities Aid Association to sponsor the observance of Mental Health Week in New York City, April 23 to 29. Mental Health Week will be observed in New York City and the rest of New York State and will focus attention on mental health resources which are available for all persons. Emphasis will be placed on the help that may be obtained from such sources as the family doctor, the pastor, the teacher, the nurse, and the social worker.

Codiscoverer of Insulin Delivers Christian A. Herter Lectures—Dr. C. H. Best, codiscoverer of insulin, delivered the forty-seventh annual Christian A. Herter Lectures at New York University College of Medicine. Dr. Best, Professor of Physiology at the University of Toronto, spoke on March 20 on the subject, "Hormonal and Dietary Factors in the Control of Fat Deposition," and on March 21 on the subject, "Recent Work on Insulin."

The Herter Lectureship was established by Dr. Herter, former professor of chemical pathology, in 1904, to provide annual lectures on advances in medical science.

MEETINGS

PAST

Syracuse Academy of Medicine

A symposium on "Cytologic Diagnosis of Malignancy" was presented at the February 21 meeting of the Syracuse Academy of Medicine held at the University Club. Drs. Martin F. Hilfinger, Charles H. Lynch, Charles V. Demong, and Norbert B. Reicher took part in the discussion which was opened by Dr. Herman J. Dick and Dr. James H. Bennett.

New York Council of Surgeons

Dr. Henry Matez, from the ophthalmologic service of the Harlem Eye and Ear and the Bronx Eye and Ear Hospitals, spoke on "Ophthalmologic Problems of Aged" at a meeting of the New York Council of Surgeons on March 21 at the Parkchester General Hospital, Bronx.

Cancer Teaching Day

Under the auspices of the Syracuse University College of Medicine, the Medical Societies of the State of New York and the County of Onondaga, the Fifth District Branch of the State Medical Society, the Syracuse Academy of Medicine, the Syracuse Department of Health, and the New York State Department of Health, Bureau of Cancer Control, a Cancer Teaching Day was held on March 30 in the auditorium of the Syracuse University College of Medicine.

Afternoon speakers included Dr. Leon Berman, Syracuse University College of Medicine, on "Cancer Detection in the Physician's Office," and Dr. George T. Pack, Cornell University Medical College, on "The Diagnosis and Treatment of Sarcoma of Soft Tissue." Also presented were a sound film, entitled "Cancer: The Problem of Early Diagnosis," and a Tumor Board Conference led by Dr. Pack and Dr. Ira T. Nathanson. Dr. Nathanson, of Harvard Medical School, was the featured speaker on the evening program and delivered a lecture on "The Management of Advanced Carcinoma of the Breast."

New York Cardiological Society

The seventy-fifth regular meeting of the New York Cardiological Society, in conjunction with the Rudolf Virchow Medical Society in the City of New York and the New York University X-ray Group, was held on April 5. The program consisted of a symposium on "The Diagnosis of Congenital Malformations of the Heart" with the following speakers participating: Dr. Helen B. Taussig, Baltimore, on "Anatomic Aspects," Dr. Arthur Grishman, on "Angiocardiography," Dr. Aaron Himmelstein, on "Physiologic Aspects," Dr. Charles E. Kossmann, on "Electrocardiography," and Dr. Taussig, on "Symptomatology and Prognosis."

Eastern New York Eye, Ear, Nose, and Throat Association

Dr. Walter S. Atkinson, Watertown, was the guest speaker at the April 6 meeting of the Eastern New York Eye, Ear, Nose, and Throat Association. Dr. Atkinson addressed the members on the topic, "Some Observations on Anesthesia and Akinesia."

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FUTURE MEETINGS

New York State Regional Fracture-Trauma Day

The New York and Brooklyn Regional Fracture Committee of the American College of Surgeons will sponsor a New York State Regional Fracture-Trauma Day on Saturday, April 29, 1950. The all-day program will be held in the auditorium of the Lenox Hill Hospital, New York City from 9:30 A.M. to 12:30 P.M. and from 1:30 to 5:00 P.M. Papers to be presented are as follows:

Dr. Edgar M. Bick, New York City—"The Healing of Fractures."

Dr. J. William Littler, New York City—"The Primary Management of Flexor Tendon Injuries."

Dr. Jere W. Lord, Jr., and Dr. Lester Breidenbach, both of New York City—"Trauma to the Arterial Insufficient Foot."

Dr. Harrison L. McLaughlin, New York City—"The Injured Ankle." This is the Clay Ray Murray Memorial Lecture.

Dr. Barbara Stimson, Poughkeepsie—"Highway Injuries."

Dr. Herbert Parsons, New York City—"Management of Fractures in the Presence of Severe Head Injuries."

Dr. David M. Bosworth, New York City—"Fractures of Surgical Neck of Humerus with Open Reduction and Internal Splint Fixation."

Dr. Preston A. Wade and Dr. Robert Kennedy, both of New York City—Discussion of problems of the Regional Committee.

American Congress of Physical Medicine

The spring session of the American Congress of Physical Medicine, Eastern Section, will be held on April 29 at the George Washington University Hospital, Washington, D. C. The program will include afternoon and evening sessions and dinner at 6:30 P.M. at the Willard Hotel. Further information may be obtained from Dr. Herman L. Rudolph, Secretary, 400 North Fifth Street, Reading, Pennsylvania.

Long Island College of Medicine Alumni Association

Speakers for the Scientific Session of the annual Alumni Day of the Long Island College of Medicine to be held in the Polhemus Clinic from 11:00 A.M. on April 29 have been announced as follows:

Dr. Joseph R. DiPalma, assistant professor of medicine, "New Antifibrillatory Drugs," Dr. Charles B. Ripstein, associate professor of surgery, "Surgical Treatment of Congenital Heart Disease," and Dr. Jean R. Oliver, professor of pathology, "The Kidney in States of Shock."

Practical Nurses of New York

The tenth anniversary meeting of the Practical Nurses of New York will be held from May 10 to 12, 1950, at the Hotel New Yorker.

PERSONALITIES

Honored

Dr. Abraham M. Rabiner, director of neurology of the Jewish Sanitarium and Hospital for Chronic Diseases, at a testimonial dinner on March 12 given by the medical staff of the Hospital in honor of his twenty-five years service. The establishment of the Dr. Abraham M. Rabiner Research Fellowship was also announced at this time . . . Dr. Ernest Witebsky, professor and head of the department of bacteriology and immunology at the University of Buffalo School of Medicine, received the Chancellor's Medal on February 22 at the University's midyear convocation.

Appointed

Dr. Maurice J. Dattelbaum, Brooklyn, as a member of the Legislative Coordinating Committee of the A.M.A., an advisory group to the Board of Trustees which meets jointly with the Executive Committee . . . Dr. Beeckman J. Delatour, New York City, as medical director of the American Hospital in Paris . . . Dr. Carlos E. Fallon, as a member of the Board of Trustees of Washington's Headquarters at Newburgh, pending confirmation by the State Senate . . . Dr. Carlyle Jacobsen, executive dean of the division of health sciences and services at the University of Iowa, as executive dean for medical education of the University of the State of New York.

Dr. John J. Loughlin, president of the surgical staff at St. Vincent's Hospital and a Police Department surgeon since 1923, as chief surgeon of the New York City Police Department, to fill the vacancy left by the death of Dr. Joseph S. Baldwin on January 8 . . . Dr. Theodore Rosenthal, former director of the Bureau of Social Hygiene, New York City Department of Health, as director of the Bureau of Adult Hygiene of the Health Department, and Dr. Adolph Jacoby, formerly in charge of the venereal disease clinics of the Bureau of Social Hygiene, named director of that Bureau.

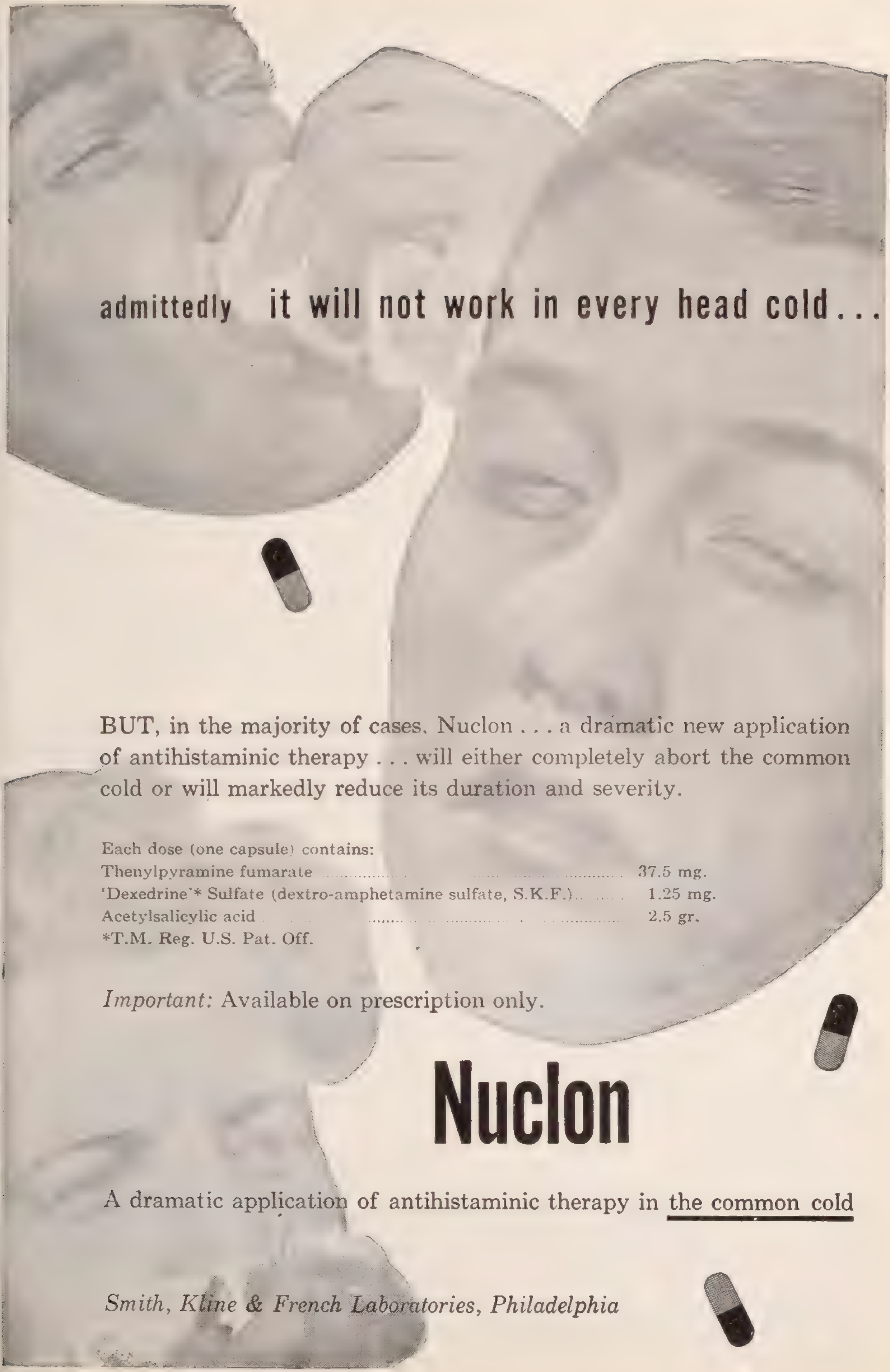
Elected

Dr. William G. Childress, physician in charge of the Tuberculosis Division of Grasslands Hospital, re-elected chairman of the Tuberculosis Sanatorium Conference of Metropolitan New York . . . Dr. Richard H. Bennett, medical director of Triboro Hospital, Jamaica, Long Island, re-elected vice-chairman of the Conference . . . Dr. Harris J. Levine, New York City, unanimously chosen president of the Jewish National Fund of America . . . Dr. Leonard J. Goldwater, Columbia University School of Public Health, and Dr. James H. Sterner, Rochester, as secretary and member of the board of directors, respectively, of the American Academy of Occupational Medicine for the year 1950.

Speakers

Dr. George Baehr, New York City, on civilian defense at the tenth annual Congress on Industrial Health on February 20 . . . Dr. Morris E. Fuller, Schenectady, at a meeting of the Kiwanis Club on the subject, "Why Medical Missions?" . . . Dr. K. G. Hansson, Cornell University Medical College, on "Physical Medicine in the Treatment of Shoulder Disabilities," at the spring session of the American Congress of Physical Medicine, Eastern Section, to be held at the George Washington University Hospital on April 29 . . . Dr. James C. Harberson, Watertown, at the fiftieth anniversary meeting of the American Proctological Society in Columbus, Ohio, on "Surgical Principles in the Treatment of Pilonidal Cyst and Its Complications."

[Continued on page 1052]



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[Continued from page 1050]

Drs. Karen Horney, Alexander Reid Martin, Muriel Ivimey, and Frederick A. Weiss, participating in a forum on "Psychoanalysis and Moral Values" at a public meeting held at the Henry Hudson Hotel, New York City, on April 5 . . . Dr. Charles D. Kochakian, associate professor of physiology of the University of Rochester School of Medicine, participating in the Ciba Foundation conference on "Steroid Hormones and Enzymes" in London, England, on March 8 to 10 . . . Dr. John McClintock, professor of surgery at the Albany Medical College, on "Socialized Medicine" at a meeting of the Twentieth Century Club on February 24 . . . Dr. Elmer T. McGroder, vice-president of the Erie County Medical Society, on "Socialized Medicine," at a luncheon sponsored by the Public Affairs Committee of the Buffalo Junior Chamber of Commerce on February 16.

At a meeting of the Woman's Club of Albany on March 2, Dr. Lyle Sutton, assistant professor of gynecology at Albany Medical College . . . Dr. George Miller, Buffalo General Hospital, on February 21 at a dinner meeting of the Lions Club in Lockport . . . Dr. George T. Pack, New York City, on "The Choice of Treatment for Cancers of Different Types" at a meeting of the Richmond County Medical Society on March 8, and on "Recent Advances in the Treatment of Cancers of Esophagus and Stomach" at the Southeastern Surgical Congress in Washington, D. C., on March 9 . . . Dr. George M. Raus, Syracuse University College of Medicine, on rehabilitation at a meeting of the Knights of Columbus on February 21 . . . Dr. Samuel Silbert, of Mount Sinai and Montefiore Hospitals, at the February 1 meeting of the Rockland County Medical Society, on peripheral vascular disease . . . Dr. Frederick B. Streeter, Glens Falls, at a meeting of the West Mountain Parent-Teachers Association on March 6 on the topic, "Our Community Schools, Then and Now."

New Offices

Dr. Joseph Brudny, formerly associated with Cumberland Hospital, Brooklyn, a native of Poland who emigrated to the United States in 1948 from Germany, in Fabius, general practice . . . Dr. Harold Brown, formerly of Brooklyn, general practice in Hannibal . . . Dr. Thomas N. Graham has taken over the practice of the late Dr. Ray H. Rulison in New York City . . . Dr. Frank S. Janas, formerly an instructor in obstetrics and gynecology at the University of Rochester School of Medicine, practice of obstetrics and gynecology in Ithaca . . . Dr. Joseph A. LePener, a former member of the staff of the Hospital for Joint Diseases, New York City, general practice in Hicksville.

COUNTY NEWS

Albany County

Dr. C. Stuart Welch, professor of surgery, Tufts College Medical School, was guest speaker at the March 22 meeting of the Albany County Medical Society. His topic was "The Indications for Splenectomy and the Results of Operation in the Blood Dyscrasias."

An around-the-clock emergency medical service, sponsored by the County Society, has gone into effect, Dr. Thomas J. O'Donnell, president, announced. The plan, intended for persons who have no family doctor or are unable to reach their physician in an emergency, will operate as follows: A panel of more than 125 general practitioners, surgeons, pediatricians, obstetricians, and others will rotate on duty, and may be reached through calling the Society telephone number.

Broome County

Dr. Myrtle M. Wilcox, of Binghamton, was elected president of the Broome County Chapter of the American Academy of General Practice, at a recent organization meeting.

Other officers include: Dr. Anthony R. Kritkausky, vice-president; Dr. Morris Eber, secretary; Dr. John Mallory, treasurer; Dr. Ray W. Peterson, Dr. Werner Lipman, Dr. Raymond S. McKeeby, and Dr. Mallory, delegates and alternates, and Dr. Florence Warner, Dr. Anthony Meloro, and Dr. Louis Danish, directors.

Bronx County

The regular meeting of the Bronx County Medical Society was held March 15 at the Concourse Plaza Hotel. Following the executive session, Dr. Alfred T. Lieberman presented a paper on "Recognition, Treatment, and Prevention of Deafness."

Cattaraugus County

Preliminary plans toward setting up a program under which medical care would be available at all times in cases of emergency were adopted at the meeting of the Cattaraugus County Medical Society held March 9 in Olean. Guest speaker at the meeting was Mr. John Weinrich, field representative of the State Society Public Relations Bureau, whose topic was compulsory health insurance.

Delaware County

Dr. T. Campbell Goodwin, chief of the pediatric staff of the Mary Imogene Bassett Hospital, Cooperstown, spoke on "Cortisone and ACTH in the Treatment of Rheumatic Fever in Children" at the meeting of the Delaware County Medical Society held March 14 in Walton.

Further plans were discussed concerning the County Society's cancer and blood bank programs.

Dutchess County

Guest speaker at the March 8 meeting of the Dutchess County Medical Society, held at the Hudson River State Hospital, Poughkeepsie, was Dr. Florindo A. Simeone, assistant professor of surgery at Harvard Medical School. His topic was, "The Role of Sympathectomy in Some Diseases and Lesions of the Arteries."

Plans were announced that the County Society would award $100 in prizes for an essay contest among high school students in Dutchess County, to be sponsored by the Woman's Auxiliary on the subject, "Why the Private Practice of Medicine Furnishes the Country with the Finest Medical Care."

• • •

The annual meeting of the Dutchess County Branch of the American Cancer Society was held March 11 at the Hotel Campbell in Poughkeepsie. Dr. George C. Adie, chairman of the Cancer Committee of the Medical Society of the State of New York, was guest speaker and gave a survey of the work done by the State Society in cancer control.

Jefferson County

Two programs of postgraduate instruction have

[Continued on page 1054]

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[Continued from page 1052]

been arranged for the Jefferson County Medical Society by the State Society Council Committee on Public Health and Education with the cooperation of the State Department of Health.

On Tuesday, April 18, at 6:30 P.M. at the Black River Valley Club, Watertown, Dr. George P. Heckel, assistant professor of obstetrics and gynecology, University of Rochester School of Medicine, will speak on "The Practical Applications of Endocrines in Gynecology."

On Tuesday, May 16, at the same time and place, Dr. Mario Tagliagambe, assistant surgeon, University Hospital, New York City, will give a paper on "Bursitis: Sprains and Strains."

Kings County

The regular meeting of the Kings County Medical Society was held March 21 in Brooklyn. Dr. Alvan L. Barach, assistant attending physician, Presbyterian Hospital, New York City, gave a paper on "The Treatment of Infarctions in the Respiratory Tract, with Special Reference to the Use of Antibiotic Aerosols," and Dr. Vernon Knight, research fellow in medicine, Cornell University Medical College, gave a paper on "Urinary Infections."

A special meeting will be held at the Kings County Society Building on Monday night, April 17, under the auspices of the Child Health and Welfare Committee, to launch a campaign for the reduction of premature mortality in Brooklyn. A pilot study of the problem has recently been completed under the joint auspices of the Committee and the Maternity and Newborn Division of the New York City Health Department, findings from which will be presented at the meeting. Dr. Julius H. Hess, Chicago, and Dr. Leona Baumgartner, associate chief of the U.S. Children's Bureau, will discuss the results of the investigation.

The report has been prepared by Dr. Helen Wallace and Dr. Hilda Knobloch of the City Health Department and Dr. Henry Rascoff, chairman of the Kings County Medical Society Child Health and Welfare Committee.

Monroe County

Dr. Murray H. Bass, consulting pediatrician at Mount Sinai Hospital, New York City, was guest speaker at the meeting of the Rochester Academy of Medicine, held March 7 in Rochester. His topic was, "The Effect on the Offspring of Virus Diseases of the Pregnant Mother."

Nassau County

The Nassau County Medical Society has appointed a three-man committee to study plans for a round-the-clock emergency medical service scheduled to cover the county. Dr. Walter Freese, Baldwin, Society president, has appointed the following committee: Dr. Gerard V. Farinola, Roosevelt, chairman, Dr. Leo T. Flood, Hempstead, and Dr. Lou Schneider, East Rockaway.

New York County

A panel discussion on "Carcinoma of the Lung" was presented at the regular meeting of the New York County Medical Society held March 27 at the New York Academy of Medicine. Dr. William L. Watson, associate professor of surgery, New York University-Bellevue Medical Center, introduced the topic; Dr. Louis H. Clerf, professor of laryngology and bronchoesophagoscopy, Jefferson Medical College, Philadelphia, Pennsylvania, spoke on "Bronchoscopic and Cytologic Diagnosis," and Dr. Edward D. Churchill, professor of surgery, Harvard Medical School, spoke on "Treatment and Summary."

Niagara County

Dr. A. H. Aaron, professor of internal medicine, University of Buffalo School of Medicine, spoke on "Ethics and Allied Subjects" at the meeting of the Niagara County Medical Society held March 14 in Lewiston.

Oneida County

Dr. Paul C. Clark, clinical associate professor of medicine, Syracuse University College of Medicine, spoke on "Virus Pneumonia" at a meeting of the Oneida County Medical Society held April 11 at the Utica State Hospital, Utica. The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

A program of postgraduate instruction will be presented for the Utica Academy of Medicine on Thursday night, May 18, at 8:00 P.M. at the Hotel Utica in Utica. Dr. Henry T. Randall, instructor in surgery, College of Physicians and Surgeons, Columbia University, and assistant attending surgeon, Presbyterian Hospital, New York City, will present a paper on "Shock."

Onondaga County

At the regular meeting of the Onondaga County Medical Society, held March 7 in Syracuse, Dr. I. Arthur Mirsky, of the May Institute for Medical Research, Cincinnati, Ohio, spoke on "The Patient with Diabetes Mellitus."

On April 4, in Syracuse, a program of postgraduate instruction was presented for the County Society, arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health. Dr. Harold G. Wolff, associate professor of medicine (neurology), Cornell University Medical College, spoke on "Headache Mechanisms."

Queens County

Three programs of postgraduate instruction have been arranged for the Queens County Medical Society by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

On March 17, Dr. L. Corsan Reid, associate professor of physiology, New York University College of Medicine, spoke on "New Concepts of Protein Metabolism of Clinical Significance."

On March 28, a paper on "The Action and Use of the Adrenal Cortical Steroids Including Cortisone" was presented by Dr. George A. Perera, assistant professor of medicine, College of Physicians and Surgeons, Columbia University.

On Friday afternoon, April 21, at 4:00 P.M. in the Queens County Medical Society Building, Dr. Howard T. Behrman, assistant clinical professor of dermatology and syphilology, New York University College of Medicine, will speak on "Diagnosis and Treatment of Common Skin Diseases." The talk will be illustrated with lantern slides.

Rensselaer County

Dr. Samuel Kleinberg, lecturer in orthopedics New York University Medical School, will speak on "Back Pain" at a meeting of the Rensselaer County Medical Society, to be held Tuesday night, May 16 at 8:30 P.M. at the County Court House, in Troy

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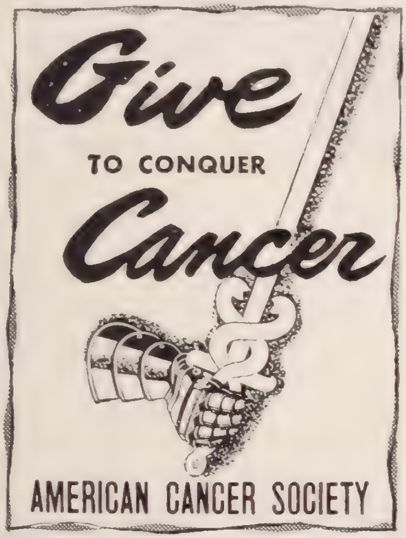

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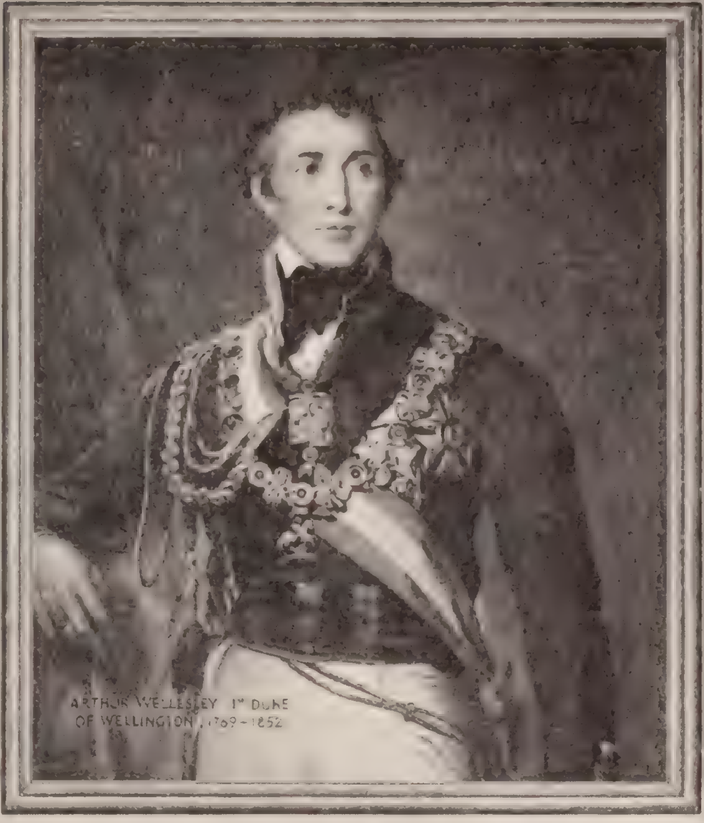

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*Orent-Keiles, E., and Hallman, L. F.: The Breakfast Meal in Relation to Blood-Sugar Values, Circular No. 827, United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, Dec., 1949.

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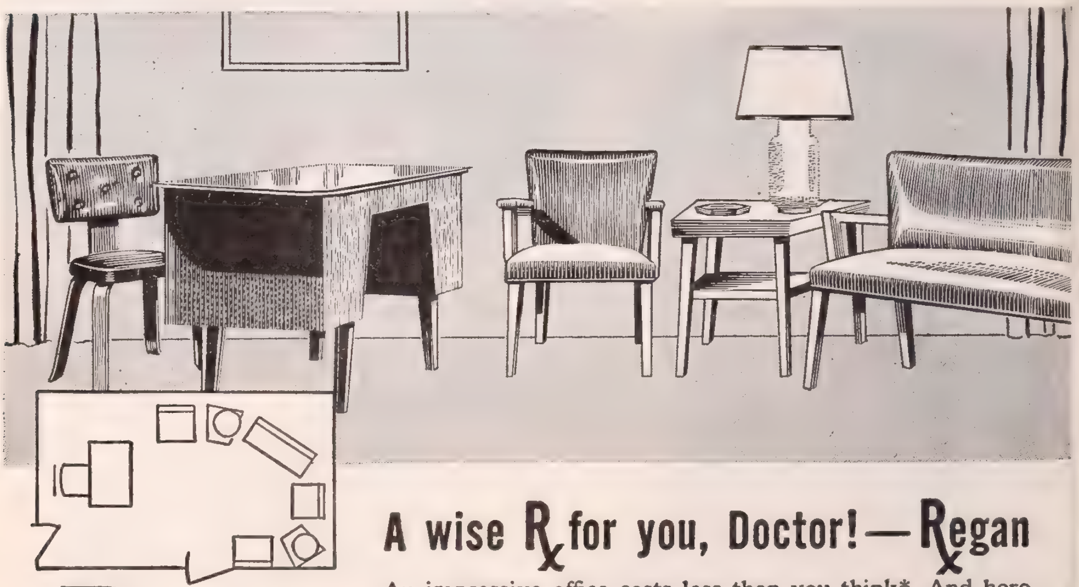

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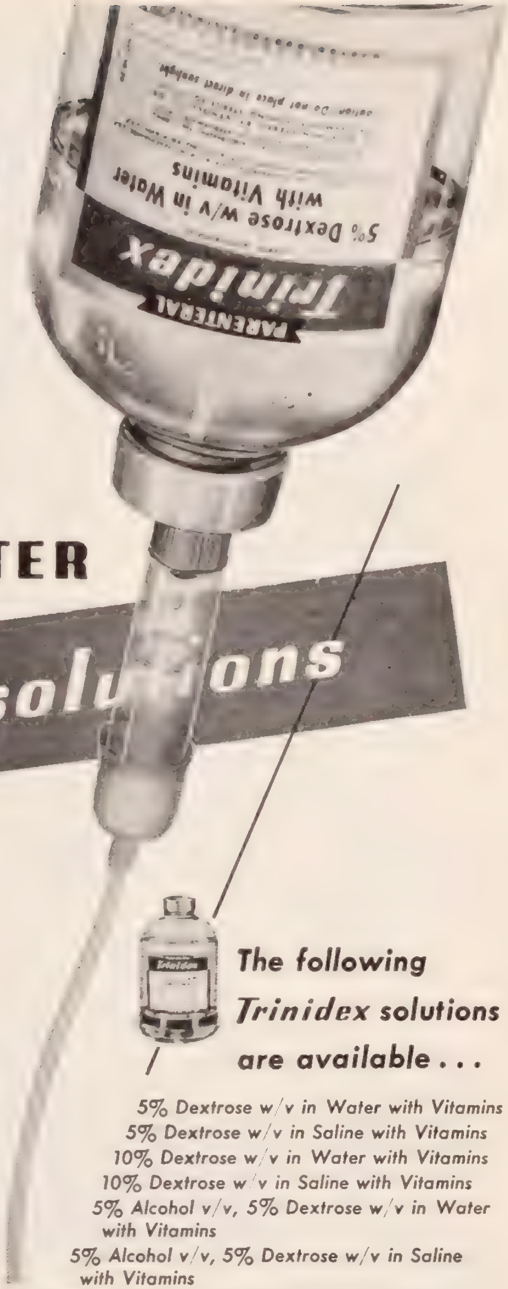

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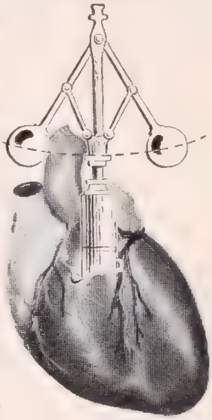

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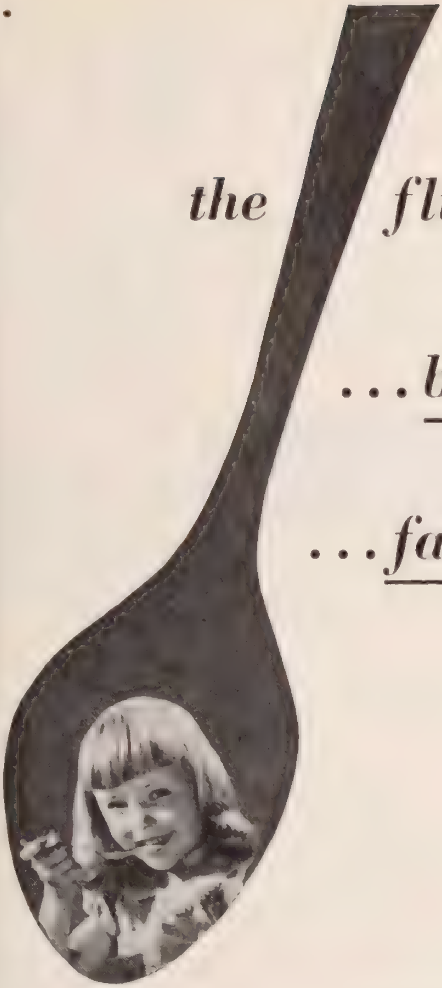

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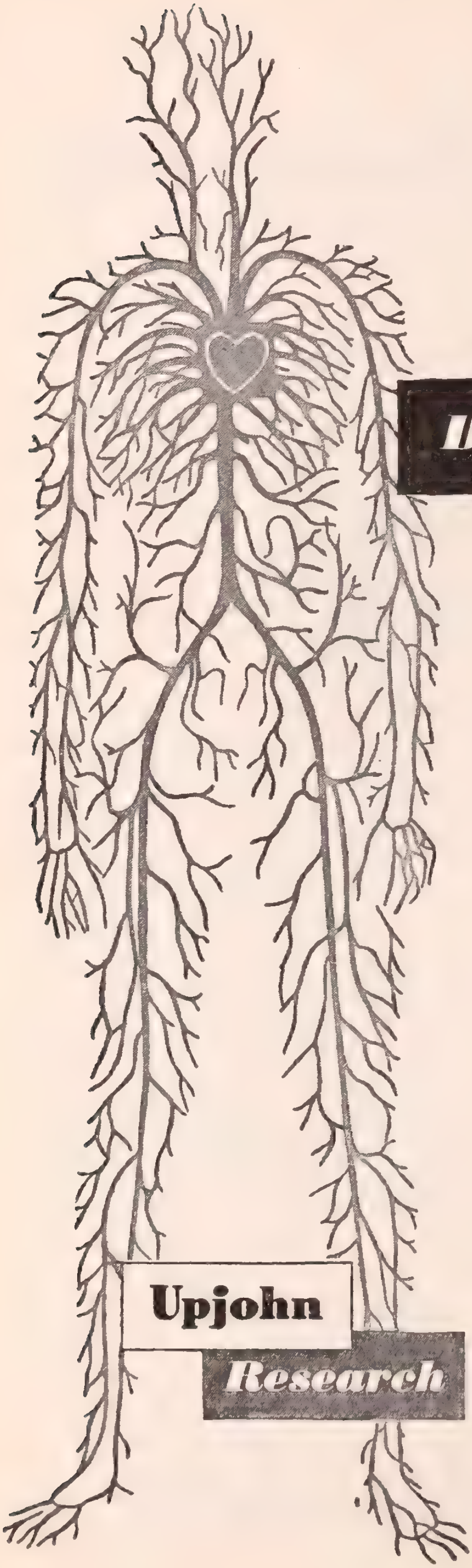

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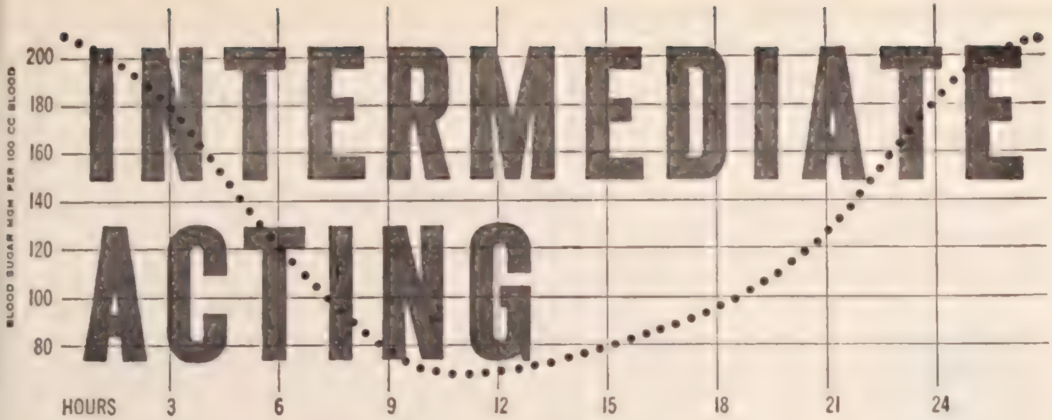

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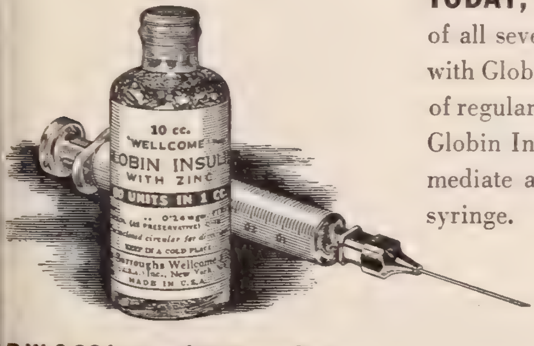
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1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.

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IN SEVERE HYPERTENSION

complicated by cardiac failure

The effects of VERTAVIS (veratrum viride, Irwin-Neisler) in severely hypertensive patients, including some with cardiac failure, now "warrants the hope that such patients may receive lasting benefit from this therapy."[1] In resistant cases, VERTAVIS was responsible for more normal and efficient myocardial action, relief of exertional dyspnea and palpitation . . . and the most marked reduction in blood pressure of all drugs previously used in essential hypertension.[1,2] "Prolonged therapy in some cases resulted in a diminution in cardiac size and reversal of electrocardiographic changes toward normal."[1]

VERTAVIS contains in each tablet: veratrum viride Biologically Standardized, 10 CRAW UNITS. The CRAW UNIT of potency is an Irwin-Neisler research development. For more complete information, see pages 439-440 of your 1950 Physicians' Desk Reference (PDR).

(1) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (2) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948.

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(IRWIN-NEISLER)

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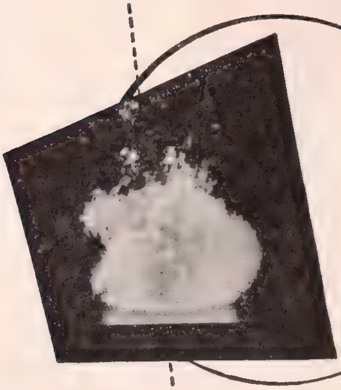

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AUREOMYCIN HYDROCHLORIDE LEDERLE

in Rickettsial Infections

The discovery of aureomycin marked an epoch in antibiotic specific therapy. The rickettsiae, lying midway between the bacterial and the viral infections are immediately inhibited or killed by this antibiotic. Rocky Mountain spotted fever, Q fever and typhus fever all respond dramatically to aureomycin, without reference to the stage of the disease at which therapy is begun. The ability of this agent to penetrate the cell membranes and attack the intracellular rickettsiae is an important factor in producing its highly specific effect.

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Aureomycin has also been found effective for the control of the following infections: African tick-bite fever, acute amebiasis, bacterial and virus-like infections of the eye, bacteroides septicemia, boutonneuse fever, acute brucellosis, Gram-positive infections (including those caused by streptococci, staphylococci, and pneumococci), Gram-negative infections (including those caused by the coli-aerogenes group), granuloma inguinale, *H. influenzae* infections, lymphogranuloma venereum, peritonitis, primary atypical pneumonia, psittacosis (parrot fever), Q fever, rickettsialpox, Rocky Mountain spotted fever, subacute bacterial endocarditis resistant to penicillin, tularemia and typhus.

Capsules: Bottles of 25, 50 mg. each capsule.
Bottles of 16, 250 mg. each capsule.
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PHILIP MORRIS ARE LESS IRRITATING!

YOU KNOW of the published clinical and laboratory studies* which have shown PHILIP MORRIS Cigarettes to be less irritating. BUT NOW—in seconds—YOU CAN MAKE YOUR *OWN* TEST . . . simple but convincing. Won't you try it?

HERE IS ALL YOU DO:

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Take a puff — DON'T INHALE. Just s-l-o-w-l-y let the smoke come through your nose. AND NOW . . .

2 . . . light up your present brand

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With proof so conclusive, would it not be good practice to suggest PHILIP MORRIS *to your patients who smoke?*

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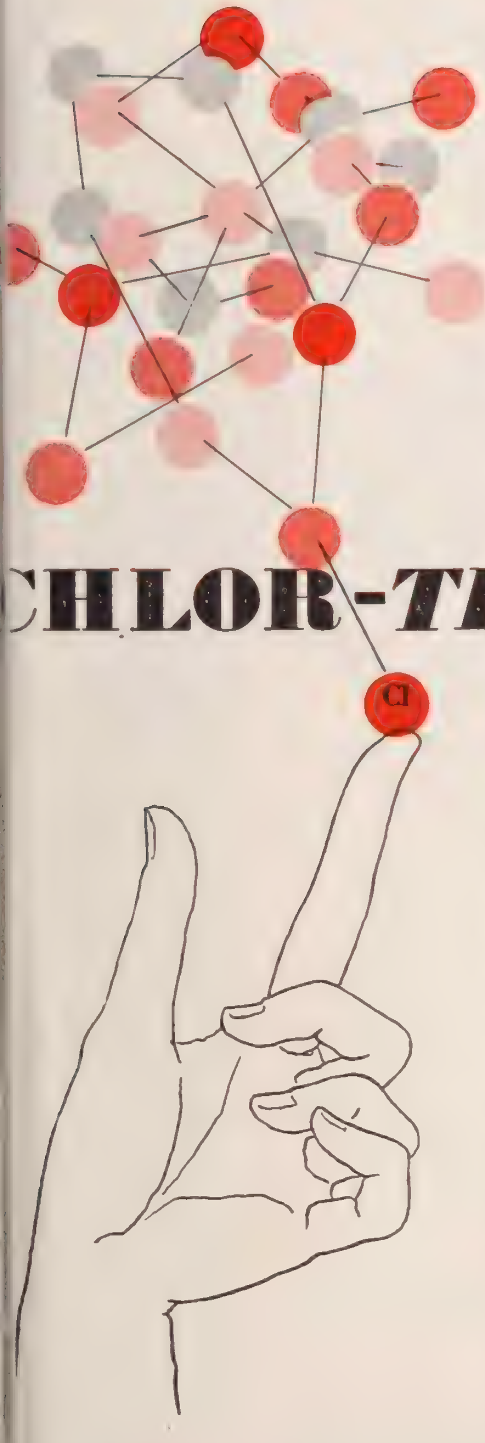
Proc. Soc. Exp. Biol. and Med., 1934, 32, 241-245; *N. Y. State Journ. Med., Vol.* 35, 6-1-25, *No.* 11, 590-592; *Laryngoscope, Feb.* 1935, *Vol. XLV, No.* 2, 149-154; *Laryngoscope*, 1937, *Vol. XLVII, No.* 1, 58-60



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By scientific rearrangement of molecular configuration our chemists have produced the most potent antihistamine known. So effective that only 2 to 4 mg. are required, Chlor-*Trimeton** Maleate brings to the allergy sufferer more rapid and more prolonged relief. Because so small a dose is needed for a therapeutic effect, side actions are relatively infrequent.

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MALEATE

(brand of chlorprophenpyridamine maleate)

Chlor-*Trimeton* is indicated for symptomatic control of hay fever, perennial allergic rhinitis, urticaria, angioedema, atopic eczema and dermatitis, and antibiotic sensitivity reactions. It is valuable as an adjunct to specific hyposensitization procedures where it should be given one-half hour prior to injection. Chlor-*Trimeton* allows higher dosage of antigen to be administered and also serves to minimize possible constitutional reactions.

CHLOR-*TRIMETON* MALEATE (brand of chlorprophenpyridamine maleate) 4 mg. tablet. In bottles of 100 and 1000 tablets.

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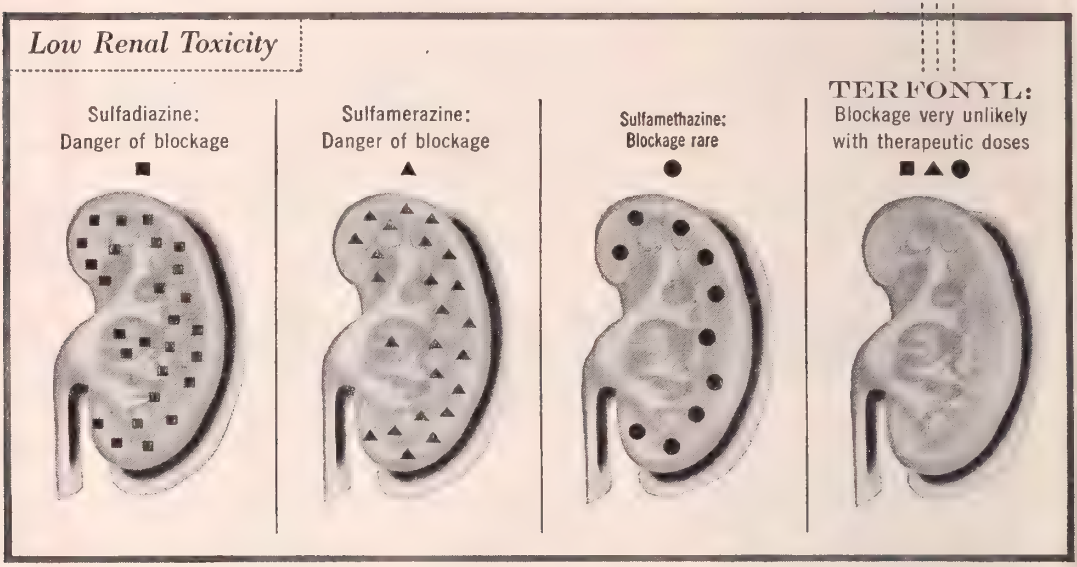
SCHERING

TERFONYL

Sulfadiazine
Sulfamerazine
Sulfamethazine

FOR SAFER SULFONAMIDE THERAPY....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Sulfadiazine: Danger of blockage ■
Sulfamerazine: Danger of blockage ▲
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With usual doses of Terfonyl the danger of kidney blockage is virtually eliminated. Each of the three components is dissolved in body fluids and excreted by the kidneys *as though it were present alone*. The solubility of Terfonyl is an important safety factor.

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Terfonyl Suspension, 0.5 Gm. per 5 cc.
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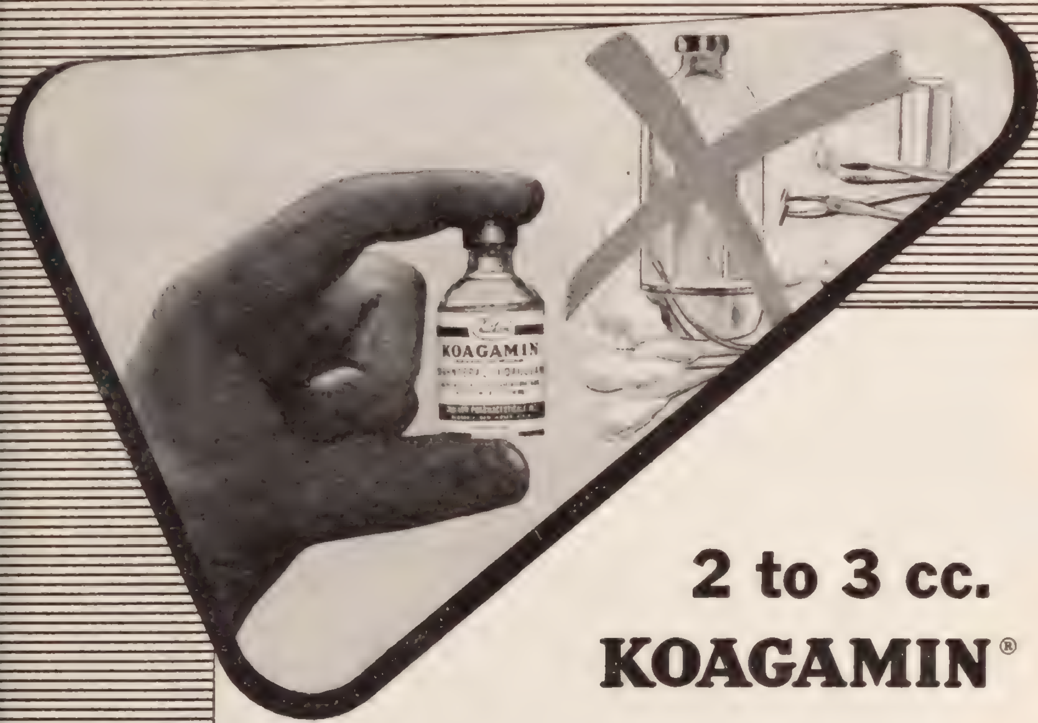

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KOAGAMIN's prompt action—a matter of minutes—differs from that of vitamin K, which must first be converted to prothrombin in the liver—a matter of hours. Vitamin K is useful *only* in cases where prolonged prothrombin time is a factor. *Even in these cases,* KOAGAMIN should also be used for its rapid action.

Supplied in 10 cc. diaphragm-stoppered vials.
Write for comprehensive dosage chart and literature.

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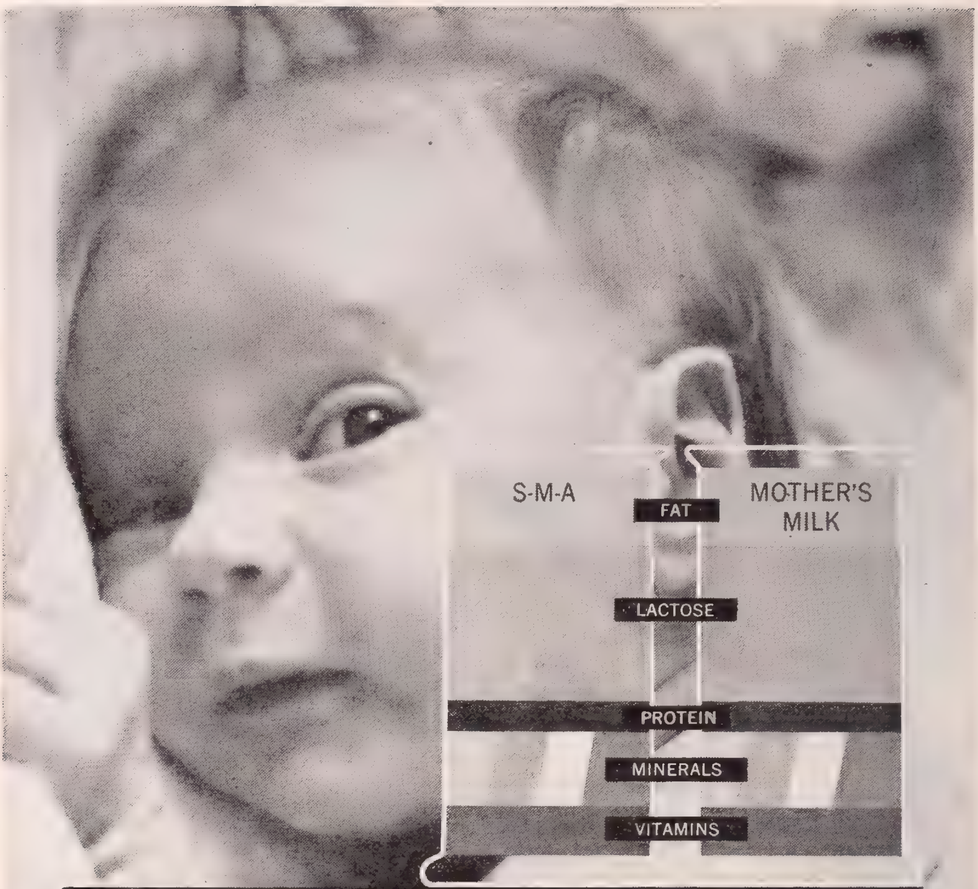

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husky
babies

Ready-to-use S-M-A
is patterned after human milk

... with respect to quantity and quality of essential nutritional factors. The nutritional history of S-M-A infants is similar to that of breast-fed infants.

S-M-A babies are well developed, with firm tissue; they are happy and contented.

The stools of S-M-A infants closely resemble those of breast-fed infants in color, odor, consistency and bacterial flora.

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S-M-A Concentrated Liquid—
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S-M-A Powder—1 lb. cans

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Hail the hardy perennial POISON IVY

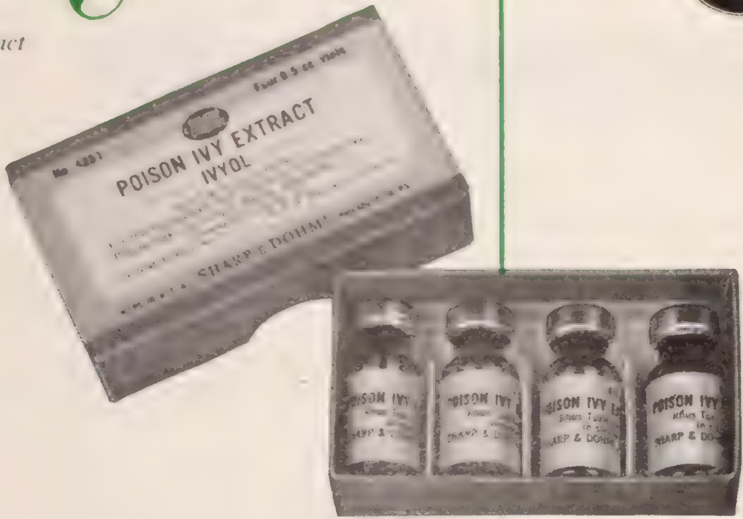
(and Poison Oak)

with prophylactic injections of

Ivyol®

Poison Ivy Extract

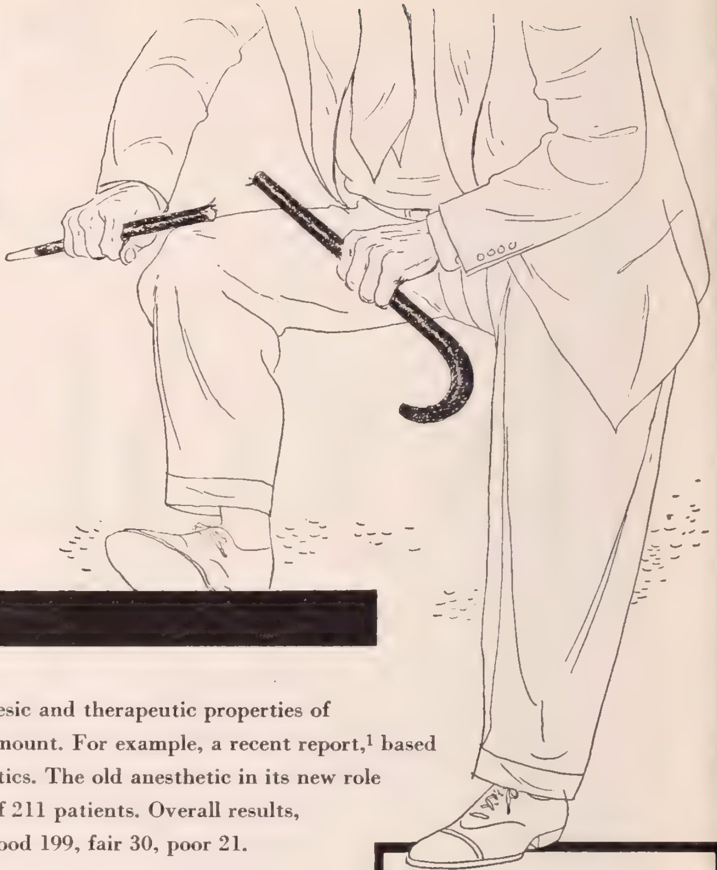
SHARP & DOHME



It's the same story every year: poison ivy grows where least expected, grows luxuriantly, green and glossy, and produces its characteristic inflammation and dermatitis in about 50% of all contacts; and not necessarily the same individuals each year either, for sensitivity varies. IVYOL extract may help protect your patients against the discomfort of *rhus dermatitis.* Reports from many sources show the advantage of using a desensitizing extract such as IVYOL which contains the active principle of poison ivy. *Prophylaxis:* Contents of one IVYOL vial (0.5 cc.) intramuscularly, each week for four weeks. *Treatment:* Contents of one vial (0.5 cc.) intramuscularly, every 24 hours until symptoms are relieved. IVYOL extract is a 1:1,000 solution of the toxic principle derived from poison ivy, in sterile olive oil, and is supplied in packages containing one or four 0.5-cc. vials. Sharp & Dohme, Philadelphia 1, Pa.

New Relief Potential in Arthritis

—and many other conditions

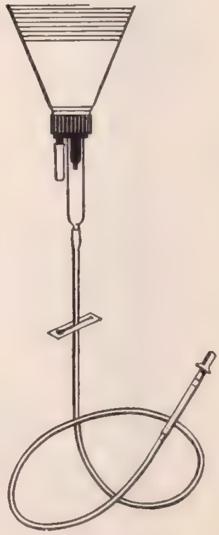


Evidence of the remarkable analgesic and therapeutic properties of intravenous procaine continues to mount. For example, a recent report,[1] based on a three-year study of 250 arthritics. The old anesthetic in its new role was able to increase the mobility of 211 patients. Overall results, as classified by the authors, were good 199, fair 30, poor 21. There was no mortality or morbidity.

Other conditions in which intravenous procaine (a 0.1 or 0.2% solution in isotonic sodium chloride) has proved highly effective: controlling postoperative pain, easing edema and pain of trauma, contact and exfoliative dermatitis, asthma, pruritus caused by jaundice, serum sickness. Relief is usually prompt, prolonged, profound.

If you haven't investigated the dramatic possibilities of i.v. procaine, start now by writing us for literature. Then, when you administer the drug, insist that the Abbott label—representing 30 years of pioneering leadership in procaine products—appear on the container you use. Abbott Laboratories, North Chicago, Illinois.

[1] Graubard, D. J., and Peterson, M. C. (1949), Intravenous Use of Procaine in the Management of Arthritis, J. Amer. Med. Assn., 141:756, November 12.



ABBOTT'S *Intravenous*

PROCAINE

HYDROCHLORIDE, U.S.P.
0.1% and 0.2%
In Isotonic Sodium Chloride Solution

Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

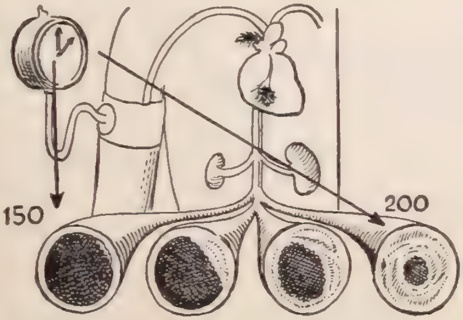
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages, diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

Phenobarbital	15 mg.
Sodium Nitrite	30 mg.
Nitroglycerin	0.25 mg.

With the equivalent of Veratrum Viride Tincture 4 minims (containing 0.1% alkaloids)

RAY-TROTE IMPROVED is effective in dosages of one capsule every three hours. It is contraindicated when renal insufficiency is present, or if pulse becomes abnormally slow following treatment.

For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

Bibliography

1. Sollmann: A Manual of Pharmacology, W. B. Saunders Co. (1942).
2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

Send for a liberal clinical supply of RAY-TROTE IMPROVED Capsules and descriptive literature today to Raymer Pharmacal Company, N.E. Cor. Jasper and Willard Streets, Philadelphia 34, Pa.

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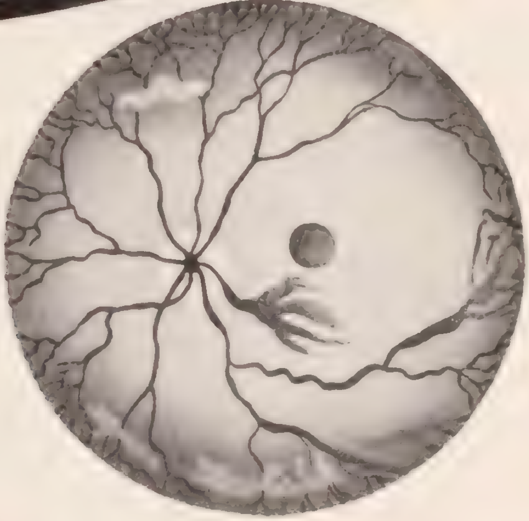

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May 11

Noon to 12:30 p.m.	Dr. Joseph DiPalma: Cardiac arrhythmia.
12:30 to 1:30 p.m.	Dr. Morris Glass: Operation: Caesarean section.
1:30 to 2 p.m.	Dr. Lambert Krahulik: Treatment of miliary tuberculosis in children.

May 12

Noon to 12:30 p.m.	Dr. Milton Plotz: Myxedema.
12:30 to 1:30 p.m.	Dr. Raymond K. J. Luomanen: Operation: Peptic ulcer.
1:30 to 2 p.m.	Dr. Jefferson Browder: Parkinsonism: its surgical treatment.

The television program will also be included in the official program of the convention.

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VOLUME 50 MAY 1, 1950 NUMBER 9

Editorials

Warning

Any thoughtful reader of the recent speech of General Dwight D. Eisenhower of Columbia University, a lecture directed to promoting the cause of international peace, must be impressed and should be guided by his realistic approach to a desired goal.[1]

Particularly the speech should appeal to doctors of medicine, since it comprehends the philosophy of their education and the purpose of their practice; namely, to strive for an ideal, proceeding always upon a realistic, scientific appraisal of people and modalities.

In the frightful holocaust that would be the inevitable consequence of atomic warfare, the personnel and institutions of medicine would be among the first to suffer possibly irreparable loss. The very forces contemplated to be let loose destructively seem to offer the greatest expectations of benefit to mankind if directed constructively and controlled wisely by well-informed and farsighted statesmanship.

The rugged, self-reliant, purposeful, resourceful, fluid force which we designate American medicine has properly and of necessity devoted its principal impact to the solution of problems of the diseased and injured. This singleness of purpose has earned the doctors the reputation for professional seclusion. In simple justice it should be mentioned that physicians have no exclusive rights in the ivory towers they are said to occupy; they share them with others.

Now, however, as General Eisenhower points out, the time has come for intelligent statesmanship to be exercised if humanity is not to lose everything. His plea for adequate armaments, in our view, includes the essential materiel of common sense and the spiritual fire power of dedicated statesmanship.

The pact of Munich was a more fell blow to humanity than the atomic bomb at Hiroshima. Suffocation of human freedom among a once free people, however quietly and peacefully accomplished, is more far-reaching in its implications and its effects on their future than the destruction of their homes, industrial centers, and transportation facilities. Out of rubble heaps, willing hands can rebuild a better city,

---

[1] March 23, 1950.

LIBRARY OF THE

> but out of freedom lost can stem only generations of hate and bitter struggle and brutal oppression.
>
> Nor can we forget that, as Professor Lyman Bryson of Teachers College recently said: "There are even greater things in the world than peace." By greater things, he meant the ideals, the hopes and aspirations of humanity, those things of the soul and spirit which great men of history have valued far above peace and material wealth and even life itself.
>
> Without these values, peace is an inhuman existence. Far better risk a war of possible annihilation than grasp a peace which would be certain extinction of free man's ideas and ideals.

Behind such a call for service in the cause of peace must stand the united professional leadership of the nation. Ivory towers make excellent targets for bombs.

Also, from another source comes a warning we could well heed. To provide the sufficient strength and armaments, the sinews of security we must have, the threat of the welfare state domestically must be realized and combated, as contemptible to free men.

> There impends today a stupendous threat... in the fact that our country, without opportunity for conscious choice on the part of its people, is rapidly drifting toward the consummation of a false concept—contemptible to free men—the socialized state. . . .
>
> Tokens of this danger are everywhere and undeniable. The growing power and expansion of a wasteful Government . . . colossal public debt . . . heavy burden of taxation . . . ridiculous attempt—by dictating wages, hours of labor, prices, etc., and by innumerable other false expedients—to substitute an artificial economy for the natural economy which alone can function in freedom . . . gradual assumption by the state of financial responsibility for every hazard incident to life, labor, infirmity, and old age . . . alignment of economic and social groups one against the other . . . .
>
> The present semblance of "prosperity" is only the byproduct of the most terrible and destructive war that ever afflicted the world, and is now maintained only by artifice implemented by folly, fear, and dire forebodings.
>
> . . . we call on all patriotic Americans to denounce them (these policies and politicians who support them) and to work energetically and courageously for the re-establishment and maintenance of free and competitive enterprise and the restoration of the Republic.[2]

---

[2] New York Daily News, March 27, 1950.

Putative Doctor's Dilemma

We note with curiosity a dispatch from Moscow, U.S.S.R., concerning a purge in Soviet medicine presently being conducted.[1] The purpose is reported to be the elimination of "the influence of antirevolutionary, antimaterialistic, and idealistic positions in the pathology of Virchow, Ehrlich, Pasteur, Koch, and others." Academician A.D. Speransky is reported to be leading this movement by the Soviet Academy of Medical Sciences with the purpose of purging Soviet medicine of tendencies said to be the counterparts of the influences already eliminated from Soviet biology under the leadership of T. D. Lysenko.

The attack is reported to be directed particularly against the "cellular theories" of Virchow, and "the associated principles of Pasteur, Koch, and Ehrlich." Since the ideas and work of these hitherto respectable, certainly scientific, and frequently brilliant gentlemen is to be scrapped in the U.S.S.R. for no better reason apparently than that they are "antirevolutionary, antimaterialistic, and idealistic," we are afforded a very real glimpse of what goes on in medicine behind the Iron Curtain.

What concepts will supplant these erroneous "bourgeois" notions? Possibly a "single unitary theory of medicine rooted in such concepts as Pavlov's 'nervism' "; the biology of Timirayzev, Michurin, and Lysenko; the physiology of Sechenov and Pavlov, and the clinical work of Botkin. Thus, Soviet medicine—revolutionary, materialistic, and nonidealistic—will increasingly cleave to the revolutionary party line.

Without detailed consideration of the conflicting concepts of cellular pathology described in the *Medical Worker* by Prof. A. Strukov, said to be a corresponding member of the Academy, as an "area of the fierce struggle of idealism and materialism," one can perhaps speculate on the predicament of a putative communist party member, or fellow traveler, or communist fronter who might happen to be, by some chance, a practicing physician in this alleged imperialistic country. Not, of course, that there is such, but supposing there were for the moment.

---

[1] New York Times, February 28, 1950

He would, unless his practice were exclusively among party liners, be compelled for practical purposes to separate the imperialistic sheep from the nonidealistic goats, perhaps by dividing his waiting room by a line or maintaining two sets of office hours. But in this country that would be the equivalent of discrimination, would it not? Or segregation? Could a "liberal" countenance that?

However, that is not all by any means. Suppose our putative party line physician found it necessary to do a biopsy on one of his nonidealistic goats. He would have to be very careful where he sent the specimen for a laboratory report because the hypothetical nonidealistic goat would be also a party liner who could not accept any diagnosis based on a "bourgeois" concept; if, on the other hand, the specimen were from a patient, an imperalistic sheep for example, then the doctor could not accept the laboratory diagnosis unless the pathologist were a party liner also, in which case the doctor might have considerable difficulty in explaining to his patient the findings based on a "single unitary theory of medicine rooted in such concepts as Pavlov's 'nervism' "; the biology of Timirayzev, Michurin, and Lysenko; the physiology of Sechenov, and the clinical work of Botkin.

We touch lightly on this item from behind the Iron Curtain in the belief that our physician readers, most of whom probably feel indebted to the classic work of Virchow, Pasteur, Koch, Ehrlich, and their followers, may appreciate more keenly the advantages of medical education and practice in a free community.

Current Editorial Comment

Man Versus the Good Earth. *The New England Journal of Medicine* turns a searching and penetrating eye on the problems of population and agriculture.[1] In a dignified, though somewhat belated obit, the *Journal* informs us:

> The Reverend Thomas Malthus died suddenly of heart disease at sixty-eight a little over a hundred years ago. He was much abused, though a gentle character personally, because of his ominous warning that "population has a tendency to increase faster than food."

In spite of improved agricultural science and technology in the last century, the

> fear of world-wide hunger, however remote, has been present ever since. Neo-Malthusians can point to the threefold increase in world population in the past hundred years (at the moment, possibly at the rate of 20,000,000 a year), and to the 1,000,000,000 underfed of the earth's 2,250,000,000 people. Here in the United States, although the divorce rate and the fertility per family are viewed with alarm, and worry about letting in or keeping out displaced persons and disagreement about birth control are widespread, the government has been aggressively wooing the friendship and seeking to influence a man and a nation with a real population problem. If Nehru's India continues to increase its present 355,000,000 at a rate of several million a year, its problem will be that of the United States as well, to say nothing of a 12,000,000 increase in the European population despite an estimated total war loss of 30,000,000. Furthermore, world-wide sanitation, production of new and better antibiotics, and new antimalarial drugs are eliminating "nature's pruning hooks."

> Some astonishing and somewhat unpleasant facts are submitted by Calder in a British country newspaper.* The British are strictly dependent upon food from overseas and are therefore properly concerned about wastage anywhere, whether in Africa or Australia or the United States.

It is perhaps as well to see ourselves as others view us. We are not immune from natural disasters. Drought and various types of erosion are with us as elsewhere. But, in addition, many of our practices respecting agriculture, forests, and wild life, for example, have been wasteful, and some of our political theories have not been wholly sound as they have affected the national economy—as, for instance, the slaughter of the little pigs under the unconstitutional A.A.A., the encouragement of crop surpluses by government subsidy, and now the Brannan direct Federal subsidy proposals opposed even by the American Farm Bureau Federation.

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[1] New England J. Med 241: 946 (Dec. 8) 1949

* Calder, R.: World food resources, The Field, London (August 27) 1949.

The famous methods of production of this country are, in some agricultural cases, infamous methods of waste: " . . . . soil unbroken for a thousand years in Oklahoma was lost in a single generation." Americans are chagrined to be reminded of their erosion problem and its absence in countries intensively cultivated for generations. It is chastening to learn, moreover, that a British farmer can get twice as much wheat from an acre as an American farmer and four times as much as an Australian. For the American and for the Australian the problem is too few persons on the land. Erosion is not "due to overworking but to undernursing." In India, where the problem is too many on the land, the anticipated industrialization will draw people from the land and not only offer but also demand modern methods of intensive cultivation and conservation, since modern medicine and sanitation are committed to increase the life expectancy at birth in Eastern countries, which is now only half that in the United States.

Medical scientists need to familiarize themselves with some new terms, such as "biotic potential" (soil yield in terms of living growth for the use or comfort of man) and "environmental resistance" (unfavorable climate or man's abuses, or both). As world citizens, Americans applaud the Nobel committee for its award of the peace prize to John Boyd Orr, the distinguished Scottish agricultural economist. He is reported as one of those "who say that with science and common sense the world could feed twice and twice again, its present population." Perhaps, as Calder hopefully adds, if biotic potential can be made to match environmental resistance, "the world can nourish, clothe, and house as many people as the human race can produce." Should this end be achieved, men of Lord Orr's stamp will be needed, since, aside from guiding the United Nations Food and Agricultural Organization, he is head of the World Federalists.

The A.M.A. Membership Dues

The problems and misunderstandings arising from the collection of A.M.A. dues and assessments have been stated frankly in a recent communication from the Association's Secretary, Dr. George F. Lull. The following procedure should be followed:

1. Remittances for membership dues should *not* be sent direct to the A.M.A. by county societies or individuals. These should be channeled through the office of the State Society where member payments are recorded. Individual members' checks received will have to be returned to the state in which the member resides. This rule also applies to the 1949 assessment.
2. Who is exempt from paying A.M.A. dues? The county shall determine when the payment of dues is a hardship, but in no case will the A.M.A. dues be remitted unless the county and state society dues are likewise remitted. The dues of a physician who joins his county society after July 1 will be $12.50; if he joins before that date, $25.
3. A physician who transfers from one county society to another need not pay a second time, but he must pay once.
4. For this year only (1950), the A.M.A. will reimburse the state societies the accounting expense of collecting dues. After this year, the A.M.A. dues should be billed with state or county society dues.

FACTS ABOUT NUTRITION

Prepared by the School of Nutrition, Cornell University, Ithaca
Norman S. Moore, M.D., Editor

Protein Nutrition

III. Protein Nutrition and Its Relation to Resistance to Infection

Leyton, of Cambridge, in describing the effects of semistarvation on Russian prisoners-of-war, concludes, "Eventually the fully developed picture [of starvation] ensued, and continued without change until either an improvement in the rations led to recovery, or an intercurrent infection (generally a rapidly advancing tuberculosis) to a speedy death. Only a few patients died of inanition due to lack of food without evidence of any other disease."[1]

Leyton's report is but one of many to come out of the areas of starving populations which indicate that disease and malnutrition go hand in hand.[2] Conclusions should not be drawn from these reports without some reservation, because factors other than nutrition are undoubtedly implicated, such as sanitation, crowding, and medical care. However, some of the studies, such as Leyton's, offer reasonably well-controlled data, and compare two groups in which the chief difference is their food intake.

Experimental studies on the relation of nutrition and infection have been, of course, chiefly restricted to animal work. Various factors in diet have been investigated, and a mass of evidence is accumulating that protein is the primary limiting factor. Some of the B vitamins have been shown to affect certain of the immune reactions, but since these vitamins are generally concerned, in one way or another, with protein metabolism, they may influence immunity in this way.[3,4]

It is now an established fact that specific antibodies play an important role in the body's defense against infectious diseases. Cannon states, "One needs only to survey the effects of active immunization in relation to smallpox, diphtheria, tetanus, yellow fever, typhoid fever, and hog cholera to realize that the antibody mechanism needs no defense in terms of its paramount importance to the health of man."[5] It has been further established that antibodies are proteins, and that, in the blood, they occur mainly as part of the plasma gamma globulin. This has been shown by the fact that the gamma globulin fraction of human pooled plasma contains 15 to 30 times the concentration of antibody to the antigen tested as does the complete plasma protein.[6] Other work with animals has demonstrated that removal of pneumococcus and egg albumin antibody from hyperimmune plasma produces a quantitative diminution of the gamma globulin, with no significant change in the other plasma proteins.[7]

No one doubts that plasma gamma globulin may be diminished in undernutrition; however, it does not necessarily follow that the antibody portion of the globulin is concomitantly lowered, or that the ability of the animal continuously to produce antibodies in response to a continuously growing inoculum is impaired. Numerous experiments have therefore been carried out to determine various antibody responses in protein-deficient animals. The results are conflicting, but careful analysis of the data warrants the conclusion that antibody response is appreciably impaired in protein deficiency. Cannon *et al.* and Berry *et al.* demonstrated a marked depression of the serum agglutinin titers to Eberthella typhosa in protein-depleted rabbits and rats.[8,9] Cannon also showed that sheep-cell hemolysins (antibodies) were markedly diminished in rats which had been depleted of body protein.[10] The work of Metcoff *et al.* is at variance with the above studies.[11,12] They found no evidence of a decreased antibody response in protein-depleted rats to inoculations with miliary tuberculosis and Salmonella typhimurium. Their results, however, are not conclusive, because their periods of protein-depletion were short, and the antibody determinations were done at noninformative times. In humans, it has been shown that typhoid H-antigen agglutinins are produced in lessened amounts in patients with hypoproteinemia.[13,14] Corroborative evidence in man is the observation that in starved tuberculous prisoners of war, the tuberculin skin tests were usually negative.[2] The same phenomenon is a familiar clinical finding in cases of rapidly progressing pulmonary tuberculosis associated with marked inanition.

Another of the mechanisms of defense against infection, phagocytosis, has been studied with respect to nutrition. Here again, protein appears to be of primary concern. Rats on protein-deficient diets were found to have markedly diminished leukocyte counts, and the phagocytic activity of the cells was impaired.[9] Decreased phagocytic activity also seems to occur in mice with severe deficiencies of vitamin C and several of the B vitamins.[4] Studies on humans are not conclusive, but it has been observed that leukopenia and an impaired leukocytic response to tuberculous infection occurs in undernourished people.[1,2] Furthermore, the bone marrow and reticuloendothelial cells are known to atrophy following a period of prolonged protein deficiency.[15]

Over-all resistance to infectious diseases, which is, after all, the subject of most practical concern to the physician, appears to be dependent upon adequate nutrition, and especially protein nutrition. Sako showed that protein-deficient rats died much more rapidly than the controls, following experimental pneumococcus infection.[16] Whipple observed that protein-depleted dogs showed an increased susceptibility to various infections.[17] Tuberculosis appears to be the most common infection in undernourished humans. Keys states that, among the persons rescued from German concentration camps in World War II, from 25 to 60 per cent had tuberculosis.[2] The acute infectious diseases were not widespread, but Leyton observed that, when acute infections did occur, recovery from them was markedly slowed.[1] Surgical patients are considered by some workers to be more susceptible to postoperative infection if their body proteins are depleted.[18] It is a common observation that pneumonia is a frequent complication of prolonged malnutrition and debility, although pulmonary stasis is unquestionably an additional causative factor.

Well-controlled experiments on humans relating nutrition and infection have not been done thus far, so that our knowledge depends chiefly on applications of animal experiments, together with general clinical impressions. The problem is a complex one, and factors other than protein nutrition are involved in resistance to infectious disease. The extreme degrees of specific deficiencies imposed on experimental animals are probably not met with in human subjects, and the effects of the less severe degrees of protein depletion most often seen clinically have not yet been accurately determined

The problem is, therefore, far from solved at this time, but, until it is, it seems that the recent words of Cannon best express the present situation: "It would appear that, on the basis of experience and careful assessment of currently available data, accumulating evidence indicates that dietary protein constitutes a major immunologic contribution to antimicrobic defense whenever there is severe protein depletion and a concomitant impairment of the mechanisms of immunity. However, if dietary protein is to be effectively utilized, it should be accompanied by an adequate intake of other dietary essentials, including calories, vitamins, and salts. Finally, until it is shown that the antimicrobic defenses can operate effectively in the absence of an adequate intake of dietary protein, it would seem to be the part of wisdom to furnish a liberal supply of dietary protein in the treatment of all serious infectious processes."[5]

CHARLES R. SHAW, M.D.

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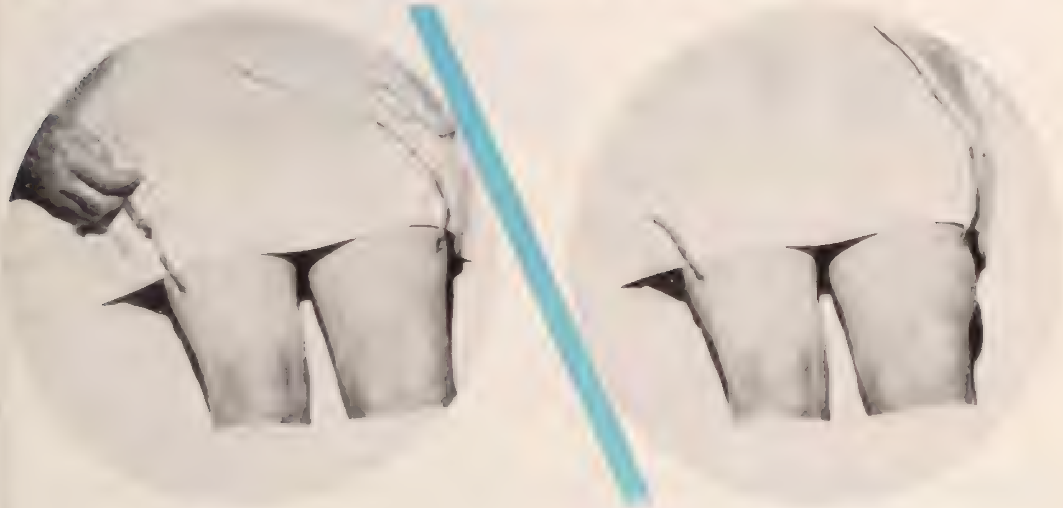

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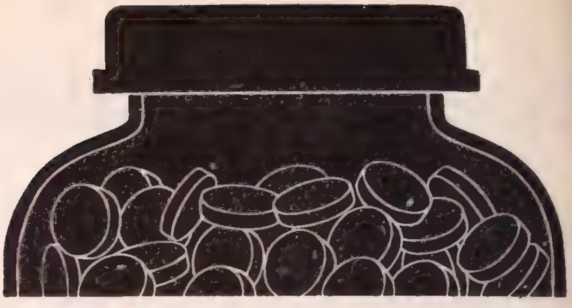

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Scientific Articles

DIABETES COMPLICATED BY PREGNANCY

Bruce A. Harris, M.D., and Rosario A. Fisichella, M.D., Brooklyn, New York

(*From the Department of Obstetrics and Gynecology, Norwegian Hospital*)

THERE are approximately 100,000 women diabetics of child-bearing age in the United States alone. Of this number 10,000 will have pregnancies, and of the 5,000 expected living births, 500 will succumb two months prior to term, 510 are liable to die in the first twenty-four hours, and 1,250 are liable to develop diabetes later. In view of these appalling statistics there has been continued and increasing interest in this subject, as evidenced by more than 60 articles on diabetes complicated by pregnancy appearing in American and British journals in the last ten years.

Our study is a thirteen-year statistical survey presented to enumerate the complicating factors of diabetes in pregnancy as they occurred in the Norwegian Hospital and to compare our findings with those of other observers.

During the thirteen-year period, 1936 through 1948, there was a total of 13,121 deliveries. Of these, 19 pregnancies (0.144 per cent) were complicated by diabetes involving 14 individuals (Table 1). Rike and Fawcett from the Elizabeth Steel Magee Hospital studied 31,544 cases, of which 55 pregnancies were complicated by diabetes (0.174 per cent).[1]

TABLE 1.—Number of Patients

Year	Number
1936	2
1937	1
1938	1
1939	1
1940	4
1941	2
1942	0
1943	0
1944	2
1945	2
1946	1
1947	0
1948	3

Interval of Pregnancies

One patient had three and three patients had two pregnancies. The interval between pregnancies varied from one to ten years. Eight of the patients had a one-year interval. Four patients had two-year, two patients three-year, three patients four-year, one patient eight-year, and one patient a ten-year interval. The tertigravida had two-year intervals.

Age and Gravidity

The age group ranged from twenty-two to thirty-eight years of age. Eleven were in the third decade and eight in the fourth decade. The average age was twenty-eight years. Joslin states that, to get the true age of the diabetic, the chronologic age should be added to the duration of the disease.[2]

TABLE 2.—Gravidity

Gravida	I	II	III	IV	V	VI
Number of patients	7	7	2	1	1	1

Bill and Posey report 13 primigravidas in their series of 44 patients.[3] Gravidity in our patients is shown in Table 2.

Hospitalization

Antepartum hospitalization ranged from admission on the day of labor to eighteen days. One patient was hospitalized for ten days prenatally for control of diabetes. Another patient was admitted on two occasions at three and one-half and seven months gestation, both times in acidosis. She remained fifteen and fourteen days in the hospital on these occasions. Another patient was hospitalized for eight days in the seventh month and eighteen days in the eighth month, once with pyelitis and once with ureteral colic. The total hospitalization ranged from six days in a patient who was delivered of a macerated stillborn to thirty days in a patient who developed pneumonia and a pelvic abscess following cesarean section. The average stay was twelve and six-tenths days. The distribution is as follows:

10 days or less................	10 patients
11 to 15 days................	6 patients
18 days......................	1 patient

22 days	1 patient
30 days	1 patient

Weight Gain

The initial weight gain was not recorded in four patients. One of these four had a therapeutic abortion at eight weeks and one a late spontaneous abortion at twenty-four weeks. The recorded weights varied from a 10-pound weight loss to a 35-pound weight gain.

Weight Gain	Number of Patients
1 to 15 pounds	6
16 to 25 pounds	3
26 to 35 pounds	5

White believes that excessive weight gain is usually due to water retention and is important since it manifests itself in maternal edema, hydramnios, and fetal edema.[4]

Duration of Diabetes

The onset of diabetes in these pregnancies varied from initial appearance during pregnancy to eight years prior to pregnancy (Table 3). The duration of diabetes prior to pregnancy averages three and one-tenth years. Rike and Fawcett had an average of six and three-tenths years.[1] The distribution is as follows:

TABLE 3.—Discovered Before Pregnancy

Years recognized before pregnancy	1	2	3	4	5	6	7	8
Number of patients	2	0	0	2	3	2	1	2

The seven cases discovered during pregnancy make up 36.8 per cent of the diabetic group. This figure is comparable to those of other maternity departments but differs from White's figures of only 8 per cent occurring during pregnancy.[5] Perhaps a number of these patients were potential diabetics until gestation when the disease became aggravated and was readily diagnosed. Diabetes should be looked for as early as possible in order to eliminate the danger of unrecognized diabetes in these patients. Of the seven patients found to be diabetic during pregnancy two had symptoms of polyuria, polydypsia, and polyphagia. The remaining five patients were asymptomatic.

Sugar Level

All the patients except two showed sugar in the urine at some time during hospitalization. Six patients whose blood sugar was within normal limits had sugar spill in the urine. This was probably due to an abnormally low renal threshold. The cause is most likely hormonal in origin. Because of lowered renal threshold it is safer therapeutically to regulate the patients according to fasting blood sugar.

The blood sugars taken before delivery averaged 165. The lowest was 75 and the highest 500. The postpartum blood sugars averaged 156. The lowest was 77 and the highest 320. On the average our patients were well controlled at the time of delivery.

Control

Fourteen of the women were controlled diabetics before and during pregnancy. Four cases were not controlled, and in one no record of control was available. Diet ranged from 1,180 calories to 2,297 calories. The average caloric intake was 1,600 calories. The evaluation of caloric intake is difficult since diets changed with the time and course of pregnancy and the type of treatment. Four of the patients were controlled with diet alone. The remainder were on insulin, including regular, protamine, and globin either alone or in combination. The highest amount of insulin recorded for daily administration was 70 units. Stander and Peckham point out that some diabetes improved during the latter part of pregnancy, possibly due to the increased output of fetal insulin.[6] However, Reuter showed that only 10 per cent of cases improved, 40 per cent showed no change, and 50 per cent became worse.

Helwig studied infant pancreases and found that, in general, there was an hypertrophy—hyperplasia of insular tissue in the infant—but this was not a constant finding, and there was no correlation between amount of insular tissue and the infants' blood sugar level.[7]

Shock and Coma

Two of the patients had a history of insulin shock antepartum, and there were three cases postpartum. Two of the patients had a history of coma antepartum and one postpartum. One patient had both shock and coma antepartum and shock postpartum. There was no fetal disturbance in this case. One of the cases with antepartum coma aborted at twenty-four weeks gestation. One of the cases with antepartum shock had premature separation of the placenta with delivery of a macerated stillborn at thirty-two weeks gestation. Evidence of premature separation was noted following delivery, in that one half of the maternal surface of the placenta was covered with old clots. White states that the diabetic emergencies of coma and hypoglycemia play no role in the unfavorable fetal outcome.[4,5]

Complications

The complications present in these pregnant diabetics were as follows: placenta previa, one; pre-eclampsia, three; pyelitis, one; ureteral colic, one; threatened abortion at four months, one;

polyhydramnios, two; premature separation of placenta, one; and generalized pruritic dermatitis, two. Of these, only the cases of polyhydramnios and dermatitis can possibly be attributed to diabetes. Rike and Fawcett had three cases of polyhydramnios in their series, and Bill and Posey had one case.[1,3]

Toxemia

Toxemia is much more frequent in pregnancies complicated by diabetes than in uncomplicated pregnancies. Three, 15.7 per cent, of the patients in our study developed pre-eclampsia (Table 4.) There were no cases of eclampsia.

Review of the literature reveals the following incidence of toxemia:

Author	Per Cent
Rike and Fawcett[1]	32.0
Bill and Posey[3]	27.0
White[4]	36.0
White and Hunt[5]	42.0
Wilson[8]	31.7

The average age of these toxic patients was thirty years or two years older than the average pregnant diabetic. Gravidity ranged from I to V. One case was first diagnosed as being diabetic during pregnancy. The other two cases were known diabetics for five and six years. One of the three was not controlled during pregnancy. There were no stillbirths. There were two neonatal deaths, one a twenty-four-week premature and one due to atelectasis and patent ductus arteriosus.

The duration of pregnancy was twenty-four, thirty-five, and thirty-nine weeks. White and Hunt report 20 per cent of toxemic patients delivered before the thirty-sixth week.[5] One case was classified as a late spontaneous abortion, and two cases were delivered by cesarean section. In both, cesarean was performed for reasons other than pre-eclampsia. None of these patients had hormonal assays or treatment with estrogen or progesterone. White and others have attempted to forestall impending toxemia with hormonal assays and by the use of estrogens and progesterone to try to carry the infants to viability.[4,5,9,10] Some day, on the basis of work by Smith and Smith and others, it may be possible to have hormone determinations on all pregnant diabetics with treatment determined on the results of such assays. In the meantime estrogens and progesterone should be given when the earliest signs of toxemia are recognized.

Duration of Pregnancy

The periods at which pregnancy was terminated were as follows:

1 at 8 weeks
1 at 24 weeks
2 at 32 weeks
1 at 33 weeks
2 at 34 weeks
1 at 35 weeks
3 at 37 weeks
2 at 38 weeks
3 at 39 weeks
3 at 40 weeks

The average duration of pregnancy was thirty-four weeks. Seventeen cases, 89.4 per cent, were thirty-two weeks gestation or over.

Delivery

In our series there were eight cesarean sections, two low forceps deliveries, six spontaneous deliveries, one assisted breech delivery, one spontaneous abortion, and one therapeutic abortion. Eleven, or 57.8 per cent, were vaginal deliveries. Our one breech shows a low incidence, since breech presentation is a frequent complication of diabetic pregnancies. Joslin reports 33 per cent and White 33 per cent.[11,4] Eight cases, or 42.2 per cent, were delivered by cesarean section. Titus believes that the diabetic's child is so important that cesarean section cannot be considered a radical procedure.[12] Besides the usual indications for section, he includes history of previous stillbirths, importance of child to mother, and uncontrollable diabetes. He states that the optimum time for section is three weeks from term as the infants of diabetics are mature at this age.

Prolonged difficult labor produces in these patients early exhaustion of glycogen reserve,

TABLE 4.—SUMMARY OF TOXIC PATIENTS

Patient	Age	Gravida	Para	Duration of Diabetes (Years)	Controlled	Duration of Pregnancy (Weeks)	Type of Delivery	Weight of Fetus (Gm.)	Maternal Mortality	Fetal Mortality
D. R.	22	I	0	6	No	24	Spontaneous abortion (late)	1,260	0	Premature
F. H.	38	V	0	5	Yes	35	Low flap section	3,209	0	Atelectasis and patent ductus arteriosus
E. R.	31	I	0	Discovered during pregnancy	Yes	39	Low flap section	2,812	0	0

danger of hyperinsulinism both exogenous and endogenous, and danger of acidosis.

Rike and Fawcett report 65.4 per cent vaginal deliveries and 25.8 per cent cesarean sections.[1] Bill and Posey report 68 per cent vaginal deliveries and 32 per cent sections.[3] White and Hunt and other authors agree that diabetes alone is not an indication for therapeutic abortion.[5] One case, gravida III, Para 1, had tubal ligation at time of section. Bill and Posey and most authors agree that section for ligation is not sound.[3] When ligation alone is performed, it should be done in the first few hours of the puerperium so as to keep operative risk at a minimum. White and Hunt state that sterilization should be performed on diabetics after they have had two or three children.[5]

The anesthetic agents used were spinal, two cases; local, seven cases; local nitrous oxide and oxygen, two cases; gas-oxygen-ether, one case; chloroform, three cases; ether, two cases, and two cases delivered without anesthesia.

Cesarean Section

Eight cases, or 42.2 per cent, were delivered by cesarean section. Three cases were in their twenties and five in their thirties. There were three primiparas. The period of gestation ranged from thirty-two to thirty-nine weeks. Two cases were under thirty-five weeks. Serial spinal anesthesia was used in two cases, local in four cases, gas-oxygen-ether in one case, and ether in one case. Fifty per cent of the infants were 50 cm. or more in length at birth. Most of the infants weighed more than the average for infants from nondiabetics for the period of gestation. There were two neonatal deaths, or 25 per cent fetal mortality. One died in twenty-four hours of atelectasis and patent ductus arteriosus. One died on the thirteenth day (prematurity and bronchopneumonia). There were no maternal deaths. Two of these cases were complicated by pre-eclampsia, two by postoperative insulin reactions, one by placenta previa, one by pelvic abscess and postoperative pneumonia, and one by pyelonephritis and thrombophlebitis.

Fetal Weight

Seven infants were above the average normal term fetal weight of 3,405 Gm. ($7^{1}/_{2}$ pounds). One had no recorded weight, this being the therapeutic abortion. The 1,260-Gm. infant was the spontaneous abortion, and the 750-Gm. infant was a macerated stillborn at thirty-three weeks. The following are the birth weights recorded in this series:

Weight	Number of Infants
Over 4,200 Gm.	3
3,100 to 3,700 Gm.	9
2,000 to 2,800 Gm.	4
1,260 Gm.	1
750 Gm.	1
No recorded weight	1

Wilson reported 18 of 41 infants with a weight of 3,635 Gm. or over.[8] Bill and Posey found that 20 per cent of fetuses weighed over 4,000 Gm. and attributed this to hormonal derangement.[3] Miller found that the fetus of 5 Kg. or more to be 80 times more frequent in diabetic pregnancies.[13] White and Hunt found that all infants who died exceeded the expected weight for their probable age but that the oversized infant had eight chances in ten to survive.[5] White reports that a birth weight above normal for the time of gestation in 80 per cent is due to obesity, edema, and splanchnomegaly.[4] The incidence of fetal death is increased by the mechanical difficulty of labor with a large baby.

Three, or 15.7 per cent, of the babies reported were delivered at term and averaged 3,771 Gm. (Table 5). The weight ranged from 3,493 to 4,200 Gm. The weights of the thirty-five to thirty-nine-week babies conform more closely to those of the average normal term infant (3,405 Gm.). There were six infants in the nonviable period delivered by the vaginal route. The lowest weight was 750 Gm. and the highest 4,200 Gm., with the average being 3,034.5 Gm. Three of these, including both extremes of weight, were macerated stillborn infants.

Fetal Mortality

There were 8, or 42.1 per cent, fetal deaths among the 19 deliveries (Table 6).

The corrected fetal mortality, omitting all the deaths up to the seventh month period of viability, is a total of six deaths (31.4 per cent), or 68.6 per cent fetal viability. Ten and one-half

TABLE 5.—Fetal Weight in Terms of Period of Gestation

Period of gestation (weeks)	40	39	38	37	35	34	33	32
Weight (Gm.)	3,493	4,232	3,610	4,217	3,209	2,783	750	3,140
	3,620	3,294	...	3,351	...	2,073	...	3,635
	4,200	2,812	...	2,550	...	...	...	...
Average Weight (Gm.)	3,771	3,446	3,610	3,372.6	3,209	2,428	750	3,387.5

TABLE 6.—Fetal Mortality

Gestation (Weeks)	Weight (Gm.)	Type of Delivery	Stillborn	Neonatal Death
40	4,200	Spontaneous	Macerated	....
37	3,351	Spontaneous	Macerated	....
37	2,550	Cesarean section	.....	Died in 13 days: prematurity, bronchopneumonia
35	3,209	Cesarean section	.....	Died in 24 hours: atelectasis, patent ductus arteriosus
33	750	Spontaneous	Macerated	....
32	3,635	Assisted breech	Macerated	....
24	1,260	Spontaneous abortion	.....	....
8	..	Therapeutic abortion	.....	....

per cent of all the pregnancies were terminated by early abortion. Abortion occurs in 10 per cent of normal pregnancies. Of the corrected mortality two cases were due to neonatal deaths, and four were intrauterine deaths. Rike and Fawcett report 28.8 per cent fetal deaths, corrected to 17.3 per cent mortality, or 82.7 per cent fetal viability.[1] Miller shows a 29.4 per cent mortality.[13] These figures compare favorably to our gross mortality of 42.1 per cent.

Bill and Posey found 16 per cent stillbirths, Rike and Fawcett 11 per cent, and our figures 10.5 per cent.[3,1]

It is the opinion of most authors that many diabetics probably have early abortions and receive no medical attention. Fetal death usually occurred after the thirty-sixth week. There were two fetal deaths among the eight cases delivered by cesarean section. Rike and Fawcett had no deaths in 14 sections, and White and Hunt report that nine of their 17 deaths were in those cases delivered by section.[1,5]

Maternal Mortality and Morbidity

There were no maternal deaths in our series.

There were three cases of morbidity postpartum (15.7 per cent). One case developed pyelonephritis and thrombophlebitis, one case developed pneumonia and a pelvic abscess, and the third had a fever of undetermined origin. All three cases were delivered by cesarean section.

Chemical Management of Diabetic Pregnancy

With the knowledge that adequate dietary control and insulin have not lowered fetal mortality, White studied imbalance of sex hormones, noting the fall of serum estrogen levels and a fall of progesterone levels as indicated by lowered excretion of sodium pregnandiol glycuronate and a compensatory rise of serum chorionic gonadotropin.[9] An abnormal rise of chorionic gonadotropin after the twentieth week to a level of 200 rat units per 100 cc. of blood predicts premature labor, stillbirth, and neonatal death. These accidents are due to a failure of production or of metabolism of progesterone and estrogen. Her plan was to supply the missing estrogen and progesterone in an attempt to lower the incidence of pre-eclampsia and premature delivery and increase the fetal survival rate. She proposed the following regime:

1. Restrict sodium chloride and sodium bicarbonate.
2. High protein diet.
3. Ammonium chloride, 60 to 120 grains daily, if the patient is edematous.
4. Intramuscular stilbesterol and progesterone, daily dose of each as follows:

Up to 20 weeks	5 mg.
20 to 24 weeks	10 mg.
24 to 28 weeks	15 mg.
28 to 32 weeks	20 mg.
32 to 36 weeks	25 mg.
36 to delivery	30 mg.

5. Delivery at thirty-seventh or thirty-eighth week by section, preferably under serial spinal anesthesia without preliminary sedation.

Inheritance

The potentiality for developing diabetes is inherited as a Mendelian recessive trait.[2] The child cannot inherit diabetes from one diabetic parent alone but only from two diabetics, a diabetic and a hereditary carrier, or two hereditary carriers. The children of these diabetics will all be hereditary carriers. With 0.3 per cent diabetics in the general population it is estimated that already 25 per cent of the entire population must be carriers so that in random mating the chances of the offspring of diabetics eventually developing diabetes are 1 in 4.

Summary and Conclusions

1. At the Norwegian Hospital, during the thirteen-year period studied, there were 19 cases, or 0.144 per cent, of diabetes complicating pregnancy.
2. The average age of pregnant diabetics was twenty-eight years.
3. Only five patients had excessive weight gain, probably due to water retention.

4. Discovery of the diabetic condition was made during pregnancy in one of the cases. In others it was known to exist from one to eight years preceding pregnancy.

5. Because of lowered renal threshold, pregnant diabetics should be treated on the basis of their blood sugars.

6. Three, or 15.7 per cent, of the cases developed toxemia. There were no cases of eclampsia.

7. The average duration of pregnancy was thirty-four weeks; 89.4 per cent of cases were thirty-two weeks gestation or over.

8. Two thirds of the cases were delivered vaginally. There was only one breech delivery in the series. Eight cases were delivered by section.

9. Diabetes alone is no indication for therapeutic abortion.

10. The average weight of term infants was above normal. The weight of infants of thirty-five to thirty-nine weeks gestation approached the normal average weight of term infants.

11. The over-all fetal mortality was 42.1 per cent. If all deaths up to the seventh month are excluded, the corrected mortality is 31.4 per cent. There were two neonatal deaths among the cases delivered by cesarean section.

12. There were no maternal deaths in our series.

13. There was 15.7 per cent postpartum morbidity.

14. An attempt to lower incidence of fetal death and premature delivery by the recognition and correction of hormonal imbalance in pregnant diabetics as outlined by White is suggested in the management of future cases.

15. An outline of the chemical management of diabetes complicated by pregnancy is offered.

16. The medical and obstetric services should cooperate closely in order to arrive at the best form of treatment and the most suitable type of delivery.

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ISLET CELL ADENOMA OF THE PANCREAS WITH INCREASED INSULIN EXCRETION IN THE URINE

Victor Willner, M.D., and Vernon A. Weinstein, M.D., New York City

(*From the Mount Sinai Hospital*)

Islet cell tumors of the pancreas are not common. Since the first case published by Nicholls in 1902, there have been only about 300 recorded in the literature.[1] The first case of a benign islet tumor with marked hypoglycemic symptoms, proved by autopsy, was published in 1929 by McClenahan and Norris.[2] In the same year Roscoe Graham (mentioned in report by Howland *et al.*) successfully removed an islet cell adenoma and obtained a complete cure with disappearance of all symptoms of hypoglycemia due to hyperinsulinism.[3] Following these reports, general clinical interest and knowledge of this condition became more widespread, and many additional cases of islet cell tumors with hyperinsulinism began to appear in the literature.

This case is being recorded because it illustrates with unusual clarity the complexities of diagnosis and management of this most interesting condition.

Case Report

The patient was a forty-nine-year-old white woman whose illness began five years ago with attacks of restlessness, confusion, loss of bladder control, and fainting spells, followed by partial amnesia.

At the onset of the disease these spells occurred rather infrequently (every three or four weeks), usually early in the morning or late in the afternoon, but later on at any time, and as often as two to three times a day. The patient soon noticed that food intake ended an attack quickly. A few months after the onset she also started to complain of persistent numbness in both legs, feet, and hands.

A clinical diagnosis of hypoglycemia was made at the onset by her family physician and confirmed by laboratory studies. At that time the patient was given frequent high carbohydrate feedings with improvement in that the attacks of disorientation and restlessness became less frequent and severe. The patient, however, gained a great deal of weight, and subsequently the attacks began to occur more often.

She was hospitalized in December, 1944, for study as to the cause of her attacks. Physical examination was reported as essentially negative. The low fasting-blood sugar levels were confirmed. A sugar tolerance test showed low fasting and five-hour levels (Table 1). Hematologic studies revealed red blood cells 4,300,000; hemoglobin 75 per cent; white blood cells 9,500; segmented 48; nonsegmented 2, and lymphocytes 50. Urinalysis was negative, cephalin flocculation 1 plus. Basal metabolic rate was 9 per cent. X-ray of the skull showed an unusually deep sella turcica, but since the floor was not thin and the clinoid processes not eroded, no significance was attached to the x-ray findings.

TABLE 1.—Blood Sugar Tolerance Tests

	Blood Sugar (Mg. Per Cent)				
	Preoperative		Postoperative		
Date	December 15, 1944	May 23, 1947	June 3, 1947	July, 1947	September, 1947
Fasting	50	10	115	112	127
One Hour	105	120	190		
Two Hours	170	130	300		
Three Hours	140	100	300		
Four Hours	130	120	230		
Five Hours	65	40	160		
Six Hours	. .	. .	155		

A presumptive diagnosis of islet cell adenoma of the pancreas was made. The patient was advised to have an exploratory operation, but she refused. The discharge diagnoses were (1) hypoglycemia, islet cell adenoma of the pancreas (?) and (2) peripheral neuropathy.

After leaving the hospital the patient continued for some time on a high carbohydrate diet, but because of rapid weight gain, the diet was changed in July, 1946, to a high protein, moderate carbohydrate, and moderate fat regime. After about six weeks on this diet, the patient noted that she required less food to avoid the attacks, but weakness and numbness in both legs and feet became so marked that she could barely walk.

Several consultants were seen, and a number of diagnoses were made. These included hypothyroidism, obesity of pituitary origin, hypoglycemia of primary liver origin, and brucellosis. Intravenous B complex was given with some benefit to her peripheral neuritis but did not influence the attacks. Brucella vaccine injections increased the attacks and induced abdominal cramps and diarrhea. The only therapeusis of real value was the administration of orange juice, which would invariably terminate an attack in five to ten minutes.

The patient was seen by one of us (Willner) for the first time April 15, 1947. She was referred for evaluation of her gastrointestinal complaints, namely, abdominal cramps and diarrhea. Physical examination at that time revealed a well-developed, obese woman, not acutely ill. She had a paretic gait reminiscent of myopathies but no ataxia. Eye, ear, nose, and throat examination was negative. The thyroid was not enlarged, trachea in midline, no cervical lymphadenopathies. Chest was symmetric and examination of the breasts negative. The lungs were clear. The heart was slightly enlarged to the left; the sounds of good quality, regular rhythm, and rate 88. At the apex there was a definite accentuation of the first sound but no murmurs. At the base a soft, high-pitched, blowing systolic murmur was heard. The second pulmonic sound was greater than the second aortic sound. Blood pressure was 112/72.

The abdominal wall was soft. No masses were felt. Some tenderness was present along the entire colon. Pelvirectal examination revealed only a small fibroma of the uterus. The extremities showed no cyanosis or edema. Peripheral pulses were palpable.

Neurologic examination showed cranial nerves intact and biceps reflexes sluggish bilaterally. Other deep reflexes were absent. Superficial abdominal reflexes gave only a sluggish response. Babinski, Chaddock, and Oppenheim were positive bilaterally. Position sense was slightly impaired in the toes but normal in the fingers. Vibration sense was not impaired. Light touch and pain sensations were normal. Some neurotic manifestations were noted, namely, emotional instability and immaturity.

Laboratory tests revealed the following: fasting blood sugar of 40 mg. per cent which fell to 27 mg. per cent during a hypoglycemic attack and half hour after ingestion of a glass of orange juice returned to 62 mg. per cent; serum nonprotein nitrogen 38.2 mg.; serum urea nitrogen 19.2 mg.; total proteins 6.5 Gm.; albumin 4.0 Gm; globulin 2.1 Gm.; cholesterol 224 mg. per cent; esters 46 mg. per cent; chloride as sodium chloride (serum) 590 mg. per cent; serum sodium 339 mg. per cent; bilirubin 0.15 mg. per cent. Bromsulfalein test showed no dye present in blood serum one hour after injection. Calcium measured 9.05 mg. per cent; phosphorus 3.6 mg. per cent; alkaline phosphatase 1.1 Bodansky units; pyruvic acid 1.71 mg. per cent. Stool examinations were negative for parasites and ova. The Guaiac test was positive with many undigested starch granules, muscle fibers in moderate number, no neutral fats or soaps, some fatty acid crystals. Gastrointestinal series was negative, and x-ray of the gallbladder was normal.

The patient entered Mount Sinai Hospital May 22, 1947. On the day after admission, early in the morning, she suddenly became disoriented, unresponsive, and agitated. There were profuse perspiration, tachycardia, and incontinence of feces and urine. Patient was then given 140 Gm. of glucose and 3 glasses of water, and within ten minutes she returned to complete normalcy. Blood sugar levels taken every hour for the next five hours showed the following values: first hour 120 mg. per cent; second hour 130 mg. per cent; third hour 100 mg. per cent; fourth hour 120 mg. per cent, and fifth hour 40 mg. per cent. Pancreatic enzyme studies were done with secretin and revealed normal external secretion of the pancreas. The total volume of duodenal contents after one hour was 180 cc.; pH 8.30; bicarbonate maximum 89 meq. per L.; amylase 878 units. Other laboratory analyses gave the following results: blood amylase 120 mg. per cent; urine amylase 283 mg. per cent; hemoglobin 64 per cent; red blood cells 3,150,000; white blood cells 11,600; polymorphonuclears 61 per cent; lymphocytes 32 per cent; eosinophils 3 per cent; basophils 1 per cent; sedimentation rate (Westergren) 15 mm. per hour. Urinalysis showed specific gravity 1.030, trace of albumin, rare red blood cell, and an occasional white blood cell. Gastric analysis revealed the following data: Rehfus test, no free hydrochloric acid, 10 units forty-five minutes after histamine; cephalin flocculation 1 plus. Bromsulfalein showed 5 per cent retention after twenty minutes. Urine was collected for insulin concentration studies.*

The entire chemical picture and laboratory findings, particularly the low blood sugar levels during the attacks together with the low fasting blood sugar levels and the five hours sugar tolerance curve, indicated that her attacks were precipitated by hypoglycemia, most probably the result of an islet cell tumor of the pancreas. Accordingly, the patient was advised to have an exploratory operation performed. This was done on May 27, 1947 by Dr. Ralph Colp.

The abdomen was opened through a transverse upper abdominal incision. The body and tail of the pancreas were exposed through the gastrocolic omentum and the head of the pancreas by incising the lateral peritoneal reflection of the second portion of the duodenum and retracting that organ medially. No abnormality or tumor of the pancreas could be found. It was then decided that a hemipancreatectomy should be done for reasons to be discussed below. Most of the body and all of the tail of the pancreas, as well as the spleen, were removed. The pancreatic stump was closed with interrupted silk sutures. A liver biopsy was taken. A drain was placed to the pancreatic stump and the abdomen closed in layers.

Pathology Report.—The specimen consists of a large portion of pancreas and spleen. The pancreas comprises the better part of the body and the tail which measures 10 cm. in length and 3 cm. in width. Its surface shows a distinctly lobular pattern. Its consistency is moderately firm. One centimeter within the tip of the tail there is a slightly raised nodular area covered by the capsule showing a red discoloration. This area measures 6 mm. in diameter, and on sectioning an encapsulated node is encountered. This node consists of solid, glistening, moderately firm tissue which has a yellowish-tan color and shows multiple tiny red areas (Fig. 1). The remainder of the pancreas on section shows the normal lobular architecture. The duct is not dilated.

Pathology diagnosis was island cell adenoma of pancreas; liver and spleen normal.

Postoperative Course.—The patient made a quick recovery. A pancreatic fistula drained for three weeks and then closed spontaneously. The hypoglycemic attacks ceased completely.

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* Upon the suggestion of Dr. Henry Dolger, a preoperative urine was examined by Dr. I. A. Mirsky of Cincinnati who performed a biologic assay for insulin.[11] He found an insulin content of 1.56 units (calculated twenty-four-hour excretion). The normal average value is 0.18 unit. A similar determination done two weeks postoperatively revealed a twenty-four-hour output of 0.16 unit.

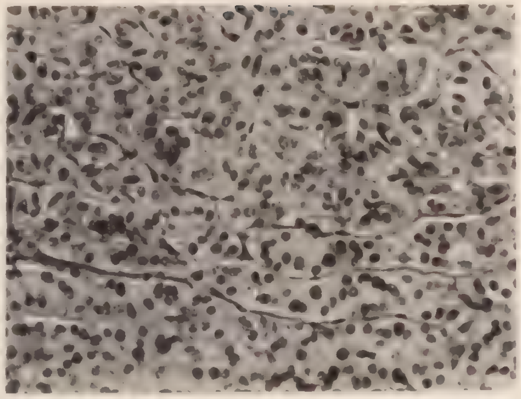

Fig. 1. Representative area of islet cell adenoma of pancreas.

A sugar tolerance test was done on the seventh postoperative day. Fasting blood sugar was 115 mg. per cent; first hour 190 mg. per cent; second hour 300 mg. per cent; third hour 300 mg. per cent; fourth hour 230 mg. per cent; fifth hour 160 mg. per cent, and sixth hour 155 mg. per cent. This was a rather typical diabetic curve. Urine showed sugar in all specimens.

Fasting blood sugar level taken two months postoperatively was reported as 112 mg. per cent. Urine was negative for sugar. Fasting blood sugar levels four months postoperatively were reported 127 mg. per cent, with urine negative for sugar.

The patient at present is feeling well, completely changed from an invalid who did not dare to remain alone because of fear of attacks to an efficient housewife leading a normal life. The gastrointestinal complaints subsided completely. The numbness and paresthesias of the legs, feet, and fingers subsided markedly although there have been no changes in the neurologic signs from those found before operation. It is probable that irreversible damage has occurred in the nervous system, and not much improvement can be expected.

Comment

Pancreatic islet cell tumors may or may not produce hyperinsulinism. The latter behave like other pancreatic tumors and manifest themselves according to their size, position, and benign or malignant character. From a histologic section it is impossible to determine with any degree of certainty whether an islet cell tumor has produced hyperinsulinism or not. The tumors are most common in the pancreatic tail and in about 12 per cent of cases are multiple. They may be found wherever aberrant pancreatic tissue occurs, e.g., the wall of the duodenum, stomach, jejunum, ileum, mesentery, omentum, spleen, or gallbladder. They are usually small (1 to 2 cm.), encapsulated, and pink to bluish in color.

The clinical manifestations of these tumors depend upon the overproduction of insulin with a resulting hypoglycemia and its general systemic effects which are of great variety and include a wide range of neurologic, psychiatric, and gastrointestinal symptoms.

Whipple has classified the clinical picture according to the system involved as follows:[4]

1. Vegetative nervous system: Sweating, pallor, flushing, nausea, syncope.
2. Central nervous system: Restlessness, muscle spasms, convulsion, numbness, and paresthesias.
3. Psychic: Apprehensiveness, mania, coma.
4. Gastrointestinal: Abdominal pains and digestive disturbances.

At the onset the clinical picture resembles one seen in individuals suffering from neurologic and psychiatric disturbances, but in the early stages the symptoms are only transitory. Their appearance is precipitated usually by prolonged periods of fasting, marked excitement, or emotional upsets, and symptoms are completely relieved by intake of carbohydrates. Between the attacks the patient feels perfectly well and has no complaints. During the attack the blood sugar is usually below 50 mg. per cent, and some investigators reported figures as low as 10 mg. per cent. The neurologic symptoms vary in their intensity and frequency from mild and bizarre manifestations (mental and physical retardation, crying spells, fainting spells, periods of apathy, increased lassitude, or restlessness), appearing only every three to four weeks, to very severe ones, characterized by marked confusion, restlessness, stupor, coma convulsion, delirium, and mania, occurring daily. Recovery may be spontaneous but usually occurs only after the ingestion of food. During the attack, neurologic signs, such as changes in deep reflexes, motor palsies, and aphasia, may be present, but most of them disappear once the individual is over the hypoglycemic state. If the hypoglycemic periods are prolonged, severe changes may appear in the nervous system.

Abdominal pains of varying degrees of intensity are frequent in the hypoglycemic state. They are probably the result of increased gastrointestinal motility and secretion that occurs when vagus centers in the brain stem are stimulated by hypoglycemia. Gastrointestinal bleeding may occur and is thought to be due to capillary damage. The disturbances of the vegetative nervous system (sweating, pallor, flushing, etc.) are undoubtedly the result of excessive epinephrine output incident to blood-sugar regulation. Space does not permit more than this brief note on the pathologic physiology involved in this disease. Reference is made to a number of excellent reports in the literature in which the physiologic mechanisms responsible for these symptoms are discussed.[5,12]

The diagnosis is often difficult. A hypoglycemic state must be established as the cause of the attacks by blood sugar determinations during the attacks, by fasting blood sugar levels and by six-hour sugar tolerance test. Levels of 50 mg. per cent or below are significant. Snapper has stressed the importance of taking blood sugar levels during the attack in establishing the diagnosis of hypoglycemia due to hyperinsulinism rather than depending upon the fasting blood sugar levels, which may often be normal or never reach levels as low as those seen during an actual episode.[13] Other causes of hypoglycemia must then be ruled out. These include diseases of the pituitary, adrenal, thyroid, liver, and central nervous system. Consequently, the patient should have x-rays of the sella turcica, visual field examinations, blood sodium and chloride determinations, basal metabolism, liver function tests, and electroencephalographic studies as part of their laboratory workup, in addition to clinical evaluation of these possibilities. Quantitative insulin excretion in the urine has been done and is said to be diagnostic when positive.[14]

Once the diagnosis is made, the treatment is surgical. On dietary management alone, the patient often becomes markedly obese because of the need for frequent feedings. There are two other reasons for prompt surgical treatment. One is the deleterious effect of prolonged hypoglycemia on the nervous system, which may result in mental deterioration. The other is the possibility of malignancy. In Whipple's series, there were 106 benign tumors, 15 malignant, and 28 questionably malignant.[4]

At the time of operation a most thorough planned exploration must be made. Even if one adenoma is found, the surgeon must not be content until he has explored the entire pancreas lest he be dealing with multiple adenomata. If, as in this case, an adenoma is not found, one should resect that portion of the pancreas to the left of the superior mesenteric vessels for two reasons: These tumors are most frequent in the pancreatic tail, and a nodule that cannot be made out by palpation at the table may be subsequently found in the specimen, as happened in our case. The other reason is that one may be dealing with a diffuse hyperplasia of the islets of Langerhans, and the patient may benefit by removal of a large portion of the gland (at least 40 Gm. of pancreatic tissue). David and Campbell mention 25 such cases found in a review of the literature in which no definite pathology was found in the resected specimen, and yet, in 15 of these, cures were obtained.[15]

Summary

1. A case of islet cell adenoma of the pancreas is presented which illustrates many of the difficulties in the diagnosis and therapy of this condition.

2. The pathology, physiology, differential diagnosis, and surgical management are briefly discussed.

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MAKE YOUR PLANS NOW TO ATTEND THE ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK, MAY 8 TO 12, 1950, HOTEL STATLER, NEW YORK CITY

SUGGESTIONS ON ADULT CIRCUMCISION

Allan K. Swersie, M.D., New York City

(*From the Department of Urology, New York Polyclinic Medical School and Hospital*)

Since circumcision is probably the most common of minor operations, several variations in the technic of its performance have been described. The incentive for variation in some methods seemingly may be a desire to do it differently. In the method described here, there is no claim to originality of principles. I have used it in about one hundred adult cases, and its advantages over the customary dorsal slit procedure lie in its comparative bloodlessness, greater accuracy in demarcation of the skin segment removed, cleaner, more rapid healing and lessened disability. The added five or ten minutes of operative time required may save many days in convalescence.

Anatomically the basic principle is a "lifting off" of the epidermal layer only, leaving behind the loose, vascular areolar tissue (usually inaccurately referred to as mucosa) to which it is loosely attached. Figure 1 with foreskin retracted indicates the area lying between borders BB′ and AA′ as the cylinder of skin to be removed. These borders are accurately outlined as follows: When the foreskin is drawn down in its natural state, a circular incision at the level of the prominence of the corona around the entire circumference outlines AA′. The foreskin is then retracted, and an incision, $^1/_4$ inch proximal to the sulcus and slightly greater at the frenum, outlines BB′.

Removal of the integument is begun with the foreskin drawn down. The incised skin margin is held taut with a mouse-tooth forceps or mosquito clamp, and by blunt scissors spread in a superficial plane, separation from the areolar layer is performed as far distally as possible around the circumference (Fig. 2). As the dissection proceeds, it may be necessary at times to separate away missed fragments of areolar tissue by gauze wipe to maintain the cleavage plane. When this is complete, the foreskin is retracted, and working similarly from border BB′, further separation is performed in a proximal direction. It is then possible to introduce a scissors under the separated layer and cut transversely across (Fig. 3). The newly formed margins C and C′ are then picked up and held taut laterally as the procedure is completed under good vision around the circle (Fig. 4). The skin edges are united over the areolar layer with several interrupted fine silk sutures. There may appear to be redundant heaped up areolar tissue. This levels off well in healing, and it is not necessary to resect any part of it for ease of skin apposition.

The wound is covered with a strip of vaseline gauze which is *not* tied within long ends of the sutures. Such procedure only impedes drainage and enhances infection and malodor. It is also undesirable to use a mattress or figure-of-eight suture about the frenum, as is commonly done for purposes of preventing bleeding from the frenular

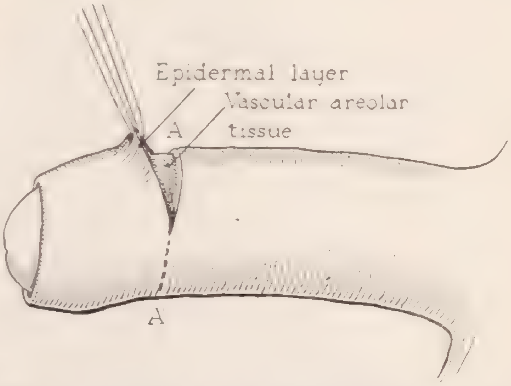

Fig. 2. Foreskin drawn down. Separation performed in distal direction.

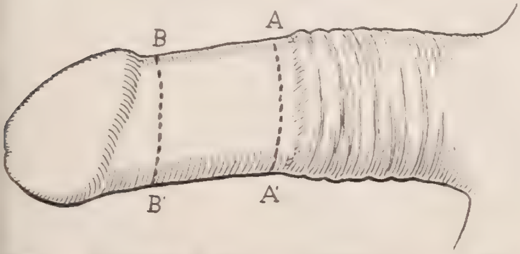

Fig. 1. Segment of skin removed lies between BB′ and AA′. This should be proportionately wider.

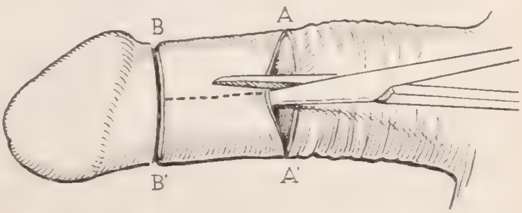

Fig. 3. Undermining from both borders frees the entire width of the skin segment to be removed so that it may be cut transversely.

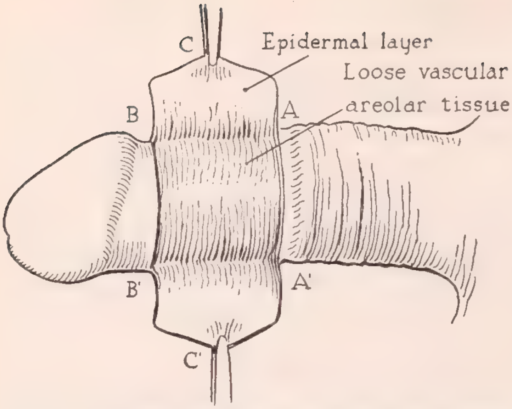

FIG. 4. Formation of flaps which are freed around the circumference, completing circumcision.

artery. If there is bleeding locally as a result of maltechnic, the bleeder should be clamped and tied in the usual way. Running a needle across the midline almost always will manage to pierce the vessels and cause bleeding. The well-circumcised organ is finally covered with a 4 by 8-inch gauze pad, one extremity of which is pierced by a small opening which is fitted over the penis to its base. This leaves a longer flap which is brought over anteriorly and fixed by a strip of adhesive over the pubis. The penis then rests in a pouch from which it can readily be brought out laterally for observation.

In the postoperative phase, troublesome erections are best controlled by immersion of a hand or foot in cold water. The dilatation of the cavernous spaces is reflex in origin and the control thereof by such method counteracts it reflexly. I will not attempt to trace the nerve pathways. The use of estrogens is ineffectual and bromides and chloral hydrate little better. Sutures are removed on the fifth day. The patient is admonished to confine the function of the operated appendage to micturition only for two weeks after operation. After that period, if he is so disposed, he may, without pain, expand its field of usefulness.

390 WEST END AVENUE

ANNOUNCEMENT

Section on Radiology, Quiz Program

Quiz Program to "stump the experts," using x-ray film, at the Annual Meeting, Thursday, May 11, 1950, 10:00 A.M.

Please send problem films in which a diagnosis has been established, with brief résumé of relevant information, including pathologic findings, to:

Dr. Ramsay Spillman
115 East 61st Street
New York 21, New York

Identify your material carefully so that it may be returned.

A STUDY ON THE TREATMENT OF THE COMMON COLD WITH AN ANTIHISTAMINIC DRUG

Charles R. Shaw, M.D., and Henry B. Wightman, M.D., Ithaca, New York

(From the Department of Clinical and Preventive Medicine, Cornell University)

THE common cold and its treatment is one of the main problems where groups of people are together in large numbers, as in the Army, in industry, or in classrooms. Any means of reducing the duration of the symptoms would be of great benefit. As a result of several recent articles in the literature, the use of antihistaminic drugs in the treatment of the common cold has become widely accepted by both the public and the medical profession. Because a university community is plagued with the problem of the common cold, this study was undertaken to assay the merits of this most recent method of treatment.

Brewster was the first to note the effects of antihistaminic drugs on the treatment of the common cold.[1,2] He described studies made on naval personnel at a naval training station. He concludes that 90 per cent of colds treated in the first hour by an antihistaminic drug were cured. The objection might be raised that the definite diagnosis of a cold within an hour of its onset is not possible. Furthermore, the control groups in the studies were much too small to be of statistical value. Murray treated 510 factory employes with an antihistaminic drug within the first forty-eight hours of the onset of symptoms of a cold.[3] Results of the treatment were based on the patients' impressions as to whether the drug had helped their colds. One hundred and two reported excellent results: complete cure within twenty-four hours. Two hundred and four reported that symptoms disappeared within two to three days. No control studies were done.

Of greater significance are the reports by Arminio and Sweet and Phillips and Fishbein.[4,5] The first of these describes studies done on a group of subjects in a penitentiary and on another group from a convent and girls' school, in which the value of the drug was determined both in the prophylaxis and the treatment of colds. Large control groups were used and were given placebos which resembled the drug in appearance. The authors found that, of the subjects receiving the drug prophylactically in daily doses of 1 to 3 tablets for six months, only one tenth as many contracted colds as did the control group. Blood counts, urinalyses, and bleeding and clotting times were done frequently on the subjects receiving the drug and showed no pathology. Incidentally, one might wonder if these tests would have indicated to the subjects that they were the ones receiving the drug and not the placebo. In their studies on the treatment of colds, also using controls, they found that colds disappeared more than twice as rapidly in those receiving the drug if the treatment was begun within the first forty-eight hours of onset, but there was no apparent benefit if it was begun after forty-eight hours.

The report of Phillips and Fishbein presents data obtained from a group of 221 factory employes, 121 of whom received an antihistaminic drug, while the other 100 received aspirin in an identically appearing tablet.[5] The average duration of colds in those taking the drug was two and seven-tenths days and in those taking aspirin five and three-tenths days.

Material

The present study was done at the Cornell University Student Medical Clinic, using as subjects college students who volunteered to take the drug and who had come to the Clinic in the usual manner for routine cold treatment. A special Cold Clinic has been maintained as part of the General Clinic for several years. This is under the supervision of a nurse who has had special training and experience in the diagnosis and treatment of colds. Here, students have temperatures and brief histories taken, examination of the pharynx made, and they are given symptomatic treatment, such as nasal sprays, gargles, steam inhalations, and aspirin. If there is any indication that their illness is more than a common cold, such as the presence of fever, severe sore throat, unusual duration of symptoms, etc. the student is referred to one of the staff physicians.

For this study, the nurse in the Cold Clinic selected from among her patients those who had only the usual symptoms of a common cold and whose symptoms had been present for no more than forty-eight hours. These were given whatever routine treatment was indicated, and were then referred to a second nurse, specially employed for this study, who took a careful history of the present illness as to the duration and severity of symptoms, together with a brief past history concerning the usual number of colds

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This study was made under a grant from Winthrop-Stearns Co., New York City.

per year, usual duration and severity of colds, and a history of known allergy. Each patient was then given an envelope containing four tablets, and was told to take them at four-hour intervals and to return the following day. Most of the students received a total of three days medication and were followed for a total of four days. Half of the subjects got tablets containing 50 mg. of the antihistaminic drug (2-phenylbenzylaminomethylimidazoline hydrochloride), and the other half received a placebo of identical appearance containing chiefly glycerine and lactose. The tablets were alternated, one patient receiving the drug and the next receiving the placebo. During the early days of the study, the students were not aware that some of them were receiving placebos, but, as news of the experiment pervaded the campus, it soon became recognized that some received tablets with a bitter taste, some with a sweet taste. Soon thereafter, a bitter substance was incorporated into the placebos, and the subjects were told that they might or might not be receiving the medicine. This latter measure was deemed necessary in order to retain the good will and cooperation of the students, and, since they could no longer distinguish between the drug and the placebo, it could not alter the validity of the experiment.

On each of three subsequent days, the patients were questioned regarding each of their symptoms, and the data were recorded on a card. Every effort was made to contact those who failed to return for a total of four days, because it was felt that those not returning were likely to be the ones who were cured, and failure to include all subjects in the final data would reduce the significance of the results. In addition to noting the progress of symptoms, each subject was asked for a general opinion as to the effect the drug had on the cold. This latter type of information is obviously of little scientific value but would form a basis of comparison with some of the other studies.

Results

Four hundred and forty-three subjects were followed for the entire four days. Three hundred and fourteen of the 443 took the tablets for three days; 114 took them for two days; and 25 took them for only one day. Two hundred and fifteen of the subjects received the placebo, and 228 received the drug.

Of those who received the placebo, 107 (50 per cent) believed that the tablets had been of benefit, while, of those who received the drug, 122 (53 per cent) thought it had helped them.

TABLE 1.—EFFECT OF DRUG AND PLACEBO ON VARIOUS SYMPTOMS

	Per Cent Cured	
	Drug	Placebo
Sore throat (246)		
Second day	13	14
Third day	45	34
Fourth day	27	26
Total	120	126
Running nose and nasal congestion (276)		
Second day	8	2
Third day	9	14
Fourth day	27	27
Total	138	138
Cough (127)		
Second day	12	3
Third day	22	10
Fourth day	31	22
Total	68	59
Malaise (210)		
Second day	5	8
Third day	26	21
Fourth day	26	31
Total	101	109

Table 1 compares the effect of the drug and the placebo on the various symptoms, showing the percentage of subjects in whom the symptoms were cured on the second, third, and fourth days of observation. It is seen that there is little difference in rate of cure in any symptom except cough, in which about twice as many cures occurred each day in the group receiving the drug.

Other data obtained in the study, but not presented in detail here, include the number of symptoms improved but not cured in each of the three days and also the new symptoms appearing or those getting worse. In all these there was no essential difference between the two groups. Another tabulation compared the duration of symptoms before medication; they were divided into four groups of twelve, twenty-four, thirty-six, and forty-eight hours duration, and in all groups the placebo was of as much value as the drug in relieving the symptoms.

A special study was made of the subjects who gave a definite history of allergy, it being thought that these people would be the most likely to receive benefit from the drug. Of 111 patients giving a history of allergy, 54 received the drug, 62 per cent reporting benefit therefrom, and 57 individuals received the placebo with 46 per cent reporting that they had received benefit. From these figures it is seen that about 20 per cent more of those receiving the drug thought they were helped than of those receiving the placebo. In addition, the toxic reactions of drowsiness, vertigo, etc., occurred in 41 receiving the drug and in 31 receiving the placebo.

Comment

There is no obvious reason why the results of this study are in such contradiction to previously reported studies of a similar nature. Two of those referred to are controlled experiments so that a comparison with the present findings should be valid.[4,5] Several reasons are suggested:

1. The common cold is a very variable entity. The number of people who spontaneously recover from the initial symptoms of a cold is not known; certainly a great many do. What is thought to be the initial symptoms of a cold by one is regarded by another as of no importance.

2. The appraisal of symptoms is a variable, whether it be done by the individual suffering from the cold or by a trained person. Any improvement by the sufferer is welcome and may easily be exaggerated. Leading questions by the examiner must be avoided.

3. It might be said that the particular antihistaminic drug used here was of no value but that some other antihistaminic would be. Extensive laboratory investigations made by the manufacturer indicate that this product is of comparable potency in antihistaminic activity to other drugs in common use. These include reaction experiments using an ileal strip, protection of animals from lethal doses of histamine, administered by vein and also by inhalation, and protection from anaphylactic shock. In clinical trial, this drug improved 57 per cent of 687 patients suffering from hay fever and 78 per cent of 103 patients with acute urticaria.

The effect of another more potent antihistaminic is now being studied. A report will be made at a later date. Impressions after its use on 200 cases, half using the drug and half the control, are that it is of no more value than the drug used in this study.

Summary

1. To appraise the effect of an antihistaminic drug in treatment, 443 cases of colds in a university community were studied; 215 received a placebo, and 228 received an antihistaminic drug.

2. Fifty per cent of those receiving the placebo and 53 per cent of those receiving the antihistaminic drug thought their symptoms had been helped by the medication.

3. In an analysis of the individual symptoms, sore throat, running or congested nose, and malaise were aided equally by the placebo and the antihistaminic drug. Cough was benefited more by the drug.

4. Those patients with a history of allergy appeared to receive somewhat more benefit from the drug than from the placebo.

5. *As a result of this study, beneficial effect of the antihistaminic drug in the treatment of the common cold appears questionable.*

The authors wish to express their appreciation to Janet Eby, R.N., and Beatrice Griffin, R.N., for their valuable assistance during the investigation.

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"DOCTOR JONES" SAYS—

You probably wouldn't recall the patent medicine vendors that used to come around every now and then. They'd have a horse-drawn outfit, more or less like the old tin-peddler's only painted up fancy. They'd set up alongside the park and, when a likely looking crowd'd accumulated, the "doctor"—he'd begin to orate about the dope he was selling: Swamp Bitters, Somebody's Snake oil, Dr. Stingem's Kidney Cure, and so on.

When he'd got 'em persuaded they had some disease that'd probably be fatal if they didn't use his stuff, he'd make 'em a special offer of fifty cents a bottle "just for tonight" and they'd begin to bite. I was just a kid then, but I remember thinking, even then, what a bunch of easy-marks they were.

That picture came back to me, one night, when I was listening to a commentator orating, along with his news comments, on the wonders of "Imdrin." I usually aim to avoid that kind of stuff but I'd just seen the full-page Imdrin ad in my Sunday paper and read an article about it in *Hygeia*. I was curious to see what he'd say. Well, it was substantially the same as the printed ad—plus the benefit, if any, of oratory.

Sufferers from rheumatism and arthritis can "start a more normal, more active life." Now available to them is an "Amazing New Discovery," "developed after years of extensive clinical tests." The discussion, in *Hygeia*, of this "Amazing New Discovery" is headed "Aspirin has the New Look." Acetylsalicylic acid (aspirin) apparently is the most active ingredient, according to their 1949 label, as quoted in the article. Aspirin is a useful drug, but it's scarcely what you'd call an "Amazing New Discovery."

People suffering from serious and progressing forms of arthritis (and it is real suffering, mental as well as physical) are ready to "grasp at straws." Cortisone, a new and even "amazing" discovery, offers great hope for the future. Unfortunately, it is not yet on the market. Aspirin—there's plenty of that but, even when it's called acetylsalicylic acid, it's after all just aspirin.—*Paul B. Brooks, M.D., February 13, 1950*

HERPES ZOSTER TREATED WITH CHLOROMYCETIN

Byron D. St. John, M.D., F.A.C.P., Manhasset, New York

(From the Manhasset Medical Center)

At the 1949 Spring meeting of the American College of Physicians in New York, the use of some of the new antibiotic drugs against viral-like organisms was discussed. Accordingly, it seemed that herpes zoster should respond to treatment with these drugs. The four cases herewith reported were treated with chloromycetin.

Case Reports

Case 1.—This fifty-four-year-old man developed pain between the shoulder blades on May 14, 1949, which became very severe and required aspirin, codeine, and an electric pad for relief. Four days later on May 18, a patch of vesicles, 2$^1/_2$ cm. in diameter, was discovered over the fourth dorsal vertebra in the midline with two tiny patches of vesicles appearing along the course of the fourth dorsal nerve on the right.

The patient was started on 50 mg. of chloromycetin per Kg. of body weight every twenty-four hours. In this particular patient, who weighed 200 pounds, the dosage was four capsules every six hours around the clock. Each capsule contained 250 mg. of chloromycetin. He received 32 capsules in the first forty-eight hours; the dosage was then reduced to four capsules every eight hours around the clock, and at the end of seventy-two hours the dose was two capsules every twelve hours until the total of 48 capsules were taken. There was complete relief of pain after thirty-six hours of medication with only a vague itching sensation remaining. No new vesicles developed. It took six weeks for the crusts to disappear from the involved areas.

Case 2.—This forty-five-year-old man developed pain over the lower rib on the right side in the axillary line on May 30, 1949. On June 2, four days later, the diagnosis of herpes zoster was made. This patient had an extensive vesicular lesion along the course of the seventh rib on the right. The pain was excruciating. He was put on the same dosage of chloromycetin as Case 1 with a little more sedation. At the end of thirty-six hours the pain was greatly relieved, and the rash had stopped spreading. By the end of forty-eight hours he was free of pain. This patient weighed 145 pounds and took 36 capsules for his entire treatment.

Case 3.—This was a fifty-year-old man weighing 200 pounds. He first felt pain in the left chest posteriorly on June 2, 1949. It became steadily more severe, and a crop of vesicles broke out on June 9. The pain steadily became worse and was not relieved by sedation. I first saw him on June 12 and started him on chloromycetin, 50 mg. per Kg. of body weight in each twenty-four hours, which equaled four capsules every six hours for two days. The dose was then reduced to two capsules every six hours for forty-eight hours, making a total of 48 capsules.

The rash was very extensive, reaching from the vertebral column around to the midline anteriorly and varied from 3 to 7 cm. in breadth. It was spreading at the time treatment was started. At the end of thirty-six hours the pain was greatly relieved, and the rash spread no further. At the end of forty-eight hours the pain was gone. However, in this patient the pain recurred spasmodically, and on June 22, six days after treatment was stopped, the patient had a severe spasm of pain which lasted a few hours with no spread of the vesicles.

Case 4.—This case was a seventy-four-year-old woman patient of Dr. L. A. Newman. This patient weighed 160 pounds and had a vesicular rash with pain diagnosed as herpes zoster. She was given a loading dose of six capsules of chloromycetin, 1$^1/_2$ Gm., and two capsules every six hours for three days for a total of 30 capsules or 7$^1/_2$ Gm. On the third day her pain had stopped, and there was no further spread of the rash. She has remained free of her symptoms.

Summary and Conclusions

Four cases of herpes zoster are presented that were apparently greatly helped, if not aborted, by the use of chloromycetin. The twenty-four hour dose was 50 mg. per. Kg. of body weight. It is my impression that the dosage used was excessive. Case 3 would probably have done better if treated earlier. The use of an initial, large or loading dose is probably advantageous as demonstrated in Case 4.

It is gratifying to see this stubborn pathologic entity apparently overcome quickly and thoroughly by a relatively nontoxic oral medication.

This paper was submitted for publication on July 13, 1949.

No man is useless in this world who lightens the burdens of someone else.—*Charles Dickens*

EXPERIMENTAL STUDIES ON HEADACHE: PAIN ORIGINATING IN NASAL AND PARANASAL STRUCTURES

Gervais Ward McAuliffe, M.D., George Christopher Mueller, M.D., and Harold G. Wolff, M.D., New York City

(From the Department of Surgery, New York Hospital)

OTOLARYNGOLOGY has undergone a decided evolution during the past ten years. Radical surgery of the nose and paranasal structures has become increasingly limited in its application. This change in the trend of otolaryngology has been brought about by a complete re-evaluation of the physiology and pathologic anatomy of the nasal and paranasal structures. Dr. Arthur Proetz and Dr. Ralph Fenton have contributed a new chapter to our knowledge in this field. The present trend stresses the importance of conserving the original structure of the nose and nasal accessory sinuses in so far as possible. While radical surgery still has definite indications and is of value, it can only be applied to a surprisingly small number of cases when compared to its broad application in the past. A clearer understanding of the physiology of the nose has also given us a new concept in the interpretation of pain arising from the nasal and paranasal areas. The "sinus headache" so frequently described is an outstanding syndrome finding its direct origin in the nose and indirectly from the paranasal structures. Simpler office procedures supplemented with occasional home remedies have almost completely replaced the knife, snare, and trocar. We are no longer prone to elect surgical measures for the relief of pain arising from these areas, and this trend has become firmly established because of its encouraging results.

A variety of mechanisms of headache have been defined.[1] It is not our purpose to discuss the differential diagnosis of these entities but to confine ourselves to a briefer discussion of the management of headache which can be directly attributed to the nose or paranasal structures.

An investigation was recently carried out to determine the sensitivity of the nasal structures and the paranasal structures and to observe the sites of pain induced by them.[2] It is evident from these studies that the linings of the sinuses are relatively insensitive, as compared with their extremely sensitive ducts and ostia and the turbinates. Even though with inflammation the threshold for pain in the sinuses is lowered so that they become more pain-sensitive, the situation is relatively little altered, since inflammation causes the ostia, ducts, and turbinates to become even more pain-sensitive.

Although the term "sinus headache" is commonly assigned to those headaches associated with sinus disease, proof that the major portion of the pain has its source in the paranasal structures is lacking. The issue has been confused by the fact that sinus inflammation rarely occurs without concomitant inflammation of the nasal structures. The rare exception is sinus infection secondary to periapical abscess, but this type of sinus disease causes but minor discomfort until the nasal structures are directly or indirectly inflamed as well. The vast majority of instances of sinus disease pain have associated inflammation and engorgement of the nasal structures.

It is inferred, therefore, that the site of the headache is related chiefly to the region of the nose that is most diseased. Disease of the superior nasal structures causes headaches primarily in the front and top of the head and in and between the eyes. Disease of the middle and inferior nasal structures causes headaches primarily over the zygomas and temples and in the teeth and jaws. It has not been proved that disease of the paranasal sinuses underlying these areas of headache makes important contributions to the intensity of the pain.

Mechanism of Headache from Disease of Nasal and Paranasal Structures

Variations in Venous Pressure.—Variations in venous pressure modify the intensity of the headache. Unilateral pressure on the jugular veins, both internal and external, increases turgescence of the turbinates on the homolateral side. When the turbinates are inflamed and engorged, the effect is more striking than when they are normal. When the turbinates are already moderately painful, the pain is augmented by further turgescence and is still further augmented by shaking the head and by lowering the head between the knees. When a subject with turgescent turbinates rests in a horizontal position on his side, there is a momentary slight increase in pain as the swollen, reddened turbinates are displaced. Gradually, the uppermost turbinates shrink slightly, whereas the dependent turbinates become more turgescent and occlude the air passages.

On the other hand, venous pressure is not a factor of the first importance in "sinus headache," since intensity is usually greatest when the subject is in the erect position and the cranial venous pressure is lower.

Exudate in the Sinuses.—The presence of purulent secretion in the sinuses is not in itself a basis for headache. The installation of lipiodol or penicillin solution does not cause any painful sensations. In the horizontal position, when the opportunity for drainage is least and for filling maximal, the pain experienced is least.

Negative and Positive Air Pressure.—The fact that the headache is usually worse in the upright position and better when the patient is lying down has been used as evidence that pain is due to negative or positive air pressure in the sinuses, resulting from the draining out or filling up with purulent secretion. However, since changes in pressure have been demonstrated to be inadequate stimuli for producing serious discomfort from these cavities, other factors must be more important as causes of pain.

Irritants on the Nasal Mucosa.—It has been shown that many substances in common use and with apparent therapeutic value are irritants to the nasal mucous membranes. It is known that nasal secretions associated with upper respiratory infection, when they fall on the skin of the upper lip, excoriate tissue. It is conceivable, therefore, that the discharge of fluids or semisolid materials from the sinuses is augmented by the upright position and that these substances may irritate the inflamed nasal structures inducing pain. However, it has not been proved that these substances are irritating to the mucous membranes or that they are capable of inducing pain.

Vasomotor Changes in the Nasal Linings.—Local vasomotor changes in the erectile tissues of the nose as accompaniments of stress, exhaustion, anxiety, sexual excitement, and various emotional states have been observed. Ordinarily, such variations are not associated with symptoms, but, if there is inflammation due to infection, these changes induce awareness.

Occipital and Neck Headache.—Although a common site of headache with disease of the nasal and paranasal structures is in the back of the head and in the neck and shoulders, pain in these regions was never induced by experimental stimulation for short periods of any of the nasal or paranasal structures. It has been shown, however, that noxious stimuli from any part of the head, of sufficient duration and intensity, cause secondary contraction of the muscles of the scalp, neck, and shoulders. Moreover, such contraction, if sufficiently sustained, becomes in itself a source of pain and produces pain on top and in the back of the head and neck. In this manner painful stimuli originating about the nose may secondarily cause painful contractions about the neck. This secondary pain may then become the prime complaint of the patient.

Excessive or sustained contraction of the muscles of the scalp and neck is secondary, not only to noxious stimuli from the nasal and paranasal cavities, but may also result from noxious stimuli from other parts of the head and, most important, may be an accompaniment of prolonged anxiety, emotional conflict, or tension. Hence, if in the presence of disease of these nasal structures there is, in addition, a disturbing life situation with conflicting emotions, there may follow a summation of effects with those from the nose, with severe headaches resulting at times when the evidence of nasal disease is little different from that of headache-free periods.

Since the pain-sensitive structures in the nose, more especially the turbinates, the ducts, and the ostia, are five to six times more capable of producing pain and headache than the linings of the paranasal spaces—whether diseased or "healthy"—and since the linings of the paranasal spaces, even when inflamed, are only slightly more sensitive than the tip of the healthy tongue, it is apparent that efforts in the direction of alleviating headache from nasal and paranasal disease will be more rewarding when directed to the nasal structure.

A vasoconstrictor agent or pressure applied to the engorged mucous membranes shrinks them and alleviates symptoms. This reduction in the intensity of the headache has been falsely ascribed to the subsequent drainage of watery and purulent secretions from the sinuses. The all too common return of headache and pain is associated with secondary vasodilatation or reactive hyperemia of the nasal structures and not to the reaccumulations of sinus secretions. Similar results are achieved by local anesthetization of the surface of the mucous membranes.

Empyema, polypoid degeneration of the mucosal lining, new growth, and osteomyelitis may necessitate puncture, lavage, dilatation, or excision, but such procedures do not improve the ability of the paranasal mucosa to deal with disease. In short, there are important reasons for direct manipulation of the sinuses, but, as far as relief of pain is concerned, manipulation of the sinuses is of little value and is to be avoided.

Results of Experimental Study

The following is a summary of and conclusions drawn from an experimental study of 80 patients at New York Hospital in 1943 in an attempt to ascertain the nature of pain originating in the nasal and paranasal sinuses:

1. The mucosa covering the approaches to the paranasal sinuses was found to be the most pain-sensitive of the nasal and paranasal struc-

tures and cavities, whereas the mucosa lining the sinuses was of relatively low sensitivity. When a given faradic stimulus to the tongue was experienced as a 1 plus pain, the same stimulus applied to the septum elicited about a 1 plus to 2 plus pain; the same stimulus applied to the turbinates elicited a 4 plus to 6 plus pain; when applied to the nasofrontal duct a 5 plus to 7 plus pain; when applied to the ostium, a 6 plus to 9 plus pain; and when applied to the lining of the frontal or maxillary sinuses, a 1 plus to 2 plus pain.

2. Most of the pain arising from faradic, mechanical, and chemical stimulation of the mucosa of the nasal and paranasal cavities was referred pain, i.e., it was felt at a site other than stimulated. It was diffuse, sustained, of a deep, aching nature, and nonpulsatile. It was associated with lacrimation, photophobia, erythema, and hyperalgesia. The pain and its associated effects outlasted the period of stimulation.

3. The pain thus induced experimentally was referred chiefly to those regions of the head supplied by the second cranial nerve and, to a less extent, to those supplied by the first division of the fifth cranial nerve. When severe enough or of sufficient duration, the pain spread over most of the region supplied by the division of the fifth cranial nerve to which it was initially referred and sometimes spread from the region of the second to that of the first division.

4. Pain in the back of the head or neck never resulted directly from stimulation of the mucosa of any of the nasal or paranasal structures. Such pain was due to the secondary effects of prolonged contraction of the cervical and scalp muscles.

5. The stimulation of several different sites resulted in pain referred to the same region. Thus, stimulation of the nasal structures near the midline resulted in the same area of referred pain as did stimulation of the ostium and the more lateral wall of the maxillary sinus.

6. Section of the fifth cranial sensory nerve root in most instances caused the mucosa of the aforementioned spaces to be insensitive, with the exception of the pharynx, the tonsils, the fossa of Rosemuller, the eustachian tubes, the external auditory canal, and the ear drum.

7. Inflammation and engorgement of the turbinates, ostia, nasofrontal ducts, and superior nasal spaces are responsible for most of the pain emanating from the nasal and paranasal structures.

8. If a headache is not associated with turbinate engorgement and inflammation, in all probability it is not the result of disease of the nasal or paranasal structure.

9. If a zygomatic, frontal, temporal, or vertex headache is not greatly reduced in intensity or eliminated by shrinking or local anesthetization of the nasal structures, in all probability it is not due to disease of the nasal or paranasal structures.

Treatment

In the production of this type of nasal headache we recognize four main factors: the turbinate bodies, the ostia of the nasal accessory sinuses, the nasal septum, and, finally, the paranasal sinuses, named in the order of their pain-producing potentialities. The management of this type of headache is included naturally in a discussion of the treatment of abnormalities of these structures.

The Nasal Turbinates.—The turbinate bodies are subject to the following variations from the normal: (1) acute infectious rhinitis, (2) acute hypertrophic rhinitis, (3) hypertrophic rhinitis, (4) allergic rhinitis, and (5) polypoid degeneration.

In acute infectious rhinitis and acute hyperplastic rhinitis the local treatment should be directed toward the relief of the obstructed nasal breathing by a reduction of the turbinates. This should be accomplished by the mildest medications possible and by the least trauma. Two important results are obtained: proper aeration and removal of the obstruction to the ostia of the sinuses. Drainage of the secretion is then assured by removing a cause of irritation. The turbinates are erectile tissue capable of expansion and contraction. In the presence of infection this function is interfered with, and they become distended and injected. Mild vasoconstrictors, preferably in isotonic solution, will effect their reduction. In the latter stages saline irrigations of the nasal chambers will tend to restore their ciliary action. Exposure to the infrared ray is helpful in restoring the normal pH index of the nasal secretion. The use of anesthetizing agents is not indicated. Relief from pain can be afforded by control of the relaxed turbinate. These measures are supplemented by the following instructions for home care:

1. Rest in bed in a warm, well-humidified room.
2. Combat fever with antipyretics.
3. Increase the fluid intake.
4. Elimination by enema rather than cathartics.
5. Use of heat, preferably infrared lamp.
6. Chemotherapy to eliminate secondary infection.

Hypertrophic Rhinitis.—As a general rule, the inferior turbinates are the first to suffer permanent enlargement or hypertrophy. Here we find that vasoconstrictors have little or no effect in reducing this type of turbinate.

There are several nonsurgical measures for effecting a reduction. The most simple is chemical cauterization under anesthesia. Nitric acid, silver nitrate, or chromic acid can be used to draw a line on the turbinate. This causes a chemical burn with the formation of an eschar. Invagination then occurs with a concomitant reduction in the size of the turbinates. Very little of the normal structure of the turbinate is destroyed in comparison with surgical resection. Effective relief is usually obtained. Submucous electrocoagulation is another method that can be used to advantage without surface destruction.

Allergic Rhinitis.—The normal inflamed erectile tissue of the turbinates will contract following the use of a vasoconstrictor. The turbinate swollen by an allergic irritant is not reactive. The response is sluggish, and secondary reaction is much greater. Identification of the allergic irritant or desensitization is the method of choice. Local measures are ineffectual. The pale boggy appearance of the turbinates, covered by profuse watery secretion, is characteristic. Smears of the secretion will reveal a high eosinophil index. Temporary relief may be obtained in this type of rhinitis, particularly the seasonal type, by use of one of the antihistamines.

Polypoid Degeneration.—Polypoid degeneration follows long-continued irritation and is found more frequently in allergic rhinitis. A bilateral involvement is the rule. Surgical removal is the method of choice. Every effort should be made to conserve the normal mucosa.

THE OSTIA OF THE NASAL ACCESSORY SINUSES.—The ostia of the nasal accessory sinuses, with the exception of the sphenoid sinuses, open into the middle meatus of the nose. In the majority of instances they are easily accessible to treatment. Vasoconstrictors can be applied directly in the form of cotton tampons to obtain reduction of the inflammatory reaction. With this reduction aeration of the sinuses is obtained. The use of direct suction to remove the irritation of stagnant secretions is an important adjunct in maintaining patency. This is most effectively carried out by a malleable metal cannula. Total suction has been found to be irritating and produces a secondary reaction. If the ostia are found to be inaccessible because of an overhanging middle turbinate, infraction of the turbinate can be carried out under local anesthesia to render them accessible to treatment. If vasoconstriction fails to afford relief, small pledgets of cotton can be gently inserted over the ostia saturated in a mild anesthetizing agent. The use of the infrared ray and warm saline irrigations will promote a more rapid return to normal.

THE NASAL SEPTUM.—Abnormalities of the nasal septum are the most frequent cause of pathologic changes of the turbinate bodies. The turbinates reflect the changes brought about by abnormalities of the septum, and, when found to be a definite source of obstruction, a corrective surgical procedure should be done. A submucous resection properly carried out can be one of the most difficult procedures to accomplish. It fails to afford relief only when improperly done and a true correction of the septal deformity is not achieved. Surgery is the method of choice.

THE PARANASAL SINUSES.—The paranasal sinuses are bony cavities lined with mucous membrane having one or more normal openings. These openings furnish ventilation and drainage. There is a ciliary action possessed by this membrane which is most highly developed in the region adjacent to the ostium and which moves in the direction of the ostium. This ciliary action, when functioning, removes the contents of the sinus. In the presence of infection the process is impaired or ceases entirely. Treatment of a sinus infection is directed toward keeping the normal opening of the sinuses clear, the mucous membrane secreting normally, and the ciliary action in motion. Continued observation of the behavior of both acute and chronic sinus infections have led to the belief that as a pain-producing factor they have an indirect rather than direct action. Circulatory changes which occur are reflected in the nasal chambers, and secretions pour out from the sinuses irritating an already inflamed mucosa. If the ostium becomes sealed, the secretion stagnates and rapidly becomes purulent. This secretion, in turn, accentuates the nasal reaction from absorption. Treatment should first be directed toward the reduction of the turbinates, restoring the patency of the ostium and aiding the return of the ciliary action. This will give relief from pain of the so-called "sinus headache." In acute sinusitis which is so often an exacerbation of chronic sinusitis there are two general types of pain—neuralgic and constant—more or less localized in the region of the involved sinus or sinuses. This localized area of pain arises from the irritation and changes of the adjacent nasal structures and not the sinus or sinuses. Chronic sinus infections have pain of a low order of intensity. Treatment of these nasal areas adjacent to the involved sinus or sinuses will give relief from the so-called "sinus headache."

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MODIFIED NASAL DIPHTHERIA IN IMMUNIZED PERSONS

Warren Winkelstein, Jr., M.D., Albany, New York

(From the New York State Health Department, Bureau of Epidemiology and Communicable Disease Control)

RECENTLY an outbreak of diphtheria, presenting several noteworthy characteristics, occurred in an upstate New York community. Nine cases were reported, of which four were diagnosed as exclusively nasal affections. Six of the nine cases had previous immunization experience and were clinically mild, while two of the remaining three nonimmunized patients experienced severe clinical courses. The most striking feature of the outbreak appeared to be the relatively high incidence of anterior nasal diphtheria, occurring exclusively in children with previous immunization experience.

Many years ago it was pointed out that cases of nasal diphtheria frequently escape diagnosis because of their mild nature and that due to their chronicity they may be responsible for considerable propagation of infection in the community.[1] Rolleston has confirmed the frequent benign clinical course of anterior nasal diphtheria and has indicated its rare occurrence, reporting 55 cases from a series of 3,000, an incidence of 1.5 per cent.[2] Godfrey, attempting to explain the decrease in diphtheria morbidity subsequent to adding 30 per cent immunization of the preschool population to the immunized 50 per cent of school age, intimated that nasal diphtheria did not occur in immune individuals and thus might be eliminated as a factor in the spread of the disease in "adequately" immunized communities.[3] Subsequent studies of diphtheria outbreaks in well-immunized communities have not dealt specifically with the subject of anterior nasal diphtheria.[4] However, prior to Godfrey's observations, Iams had indicated that, in certain instances, cases of nasal diphtheria had been responsible for the infection of a great many secondary cases over long periods of time and that, subsequent to the discovery and isolation of these nasal cases, diphtheria morbidity had promptly declined.[1]

Recognizing that diphtheria has become a relatively rare clinical entity in upstate New York and that future outbreaks are likely to be mild in nature, so long as a high degree of herd immunity is maintained, these four cases are presented as representing a modified and characteristic form of the disease, possibly more common than previously supposed and perhaps responsible, in certain instances, for the propagation of the infection in so-called "adequately" immunized communities.

Case Reports

Case 1.—M. J. B., an eight-year-old schoolgirl, subject to frequent colds and sore throats, developed, on October 15, a persistent mucoid nasal discharge accompanied by a shallow ulcer, approximately 0.5 cm. in diameter, at the mucocutaneous junction of the right external nares. The patient experienced no systemic symptoms and continued to attend school during the entire duration of her affection. She was not examined until November 12, at which time nose and throat cultures were negative for Corynebacterium diphtheriae and the ulcer had almost completely healed. This child had received two immunizing doses of diphtheria toxoid four years previously and a "booster" dose of toxoid five months prior to the onset of her lesions. Her recovery was entirely spontaneous. She was considered to be the primary case in the outbreak, since her onset antedated by seven days the second case, a contact of hers.

Case 2.—D. V. H., a five-year-old girl, pupil in the kindergarten of a rural centralized school, lived next door to Case 1 and was a frequent playmate of hers. During October they were frequently together. On October 22, seven days after onset of symptoms in Case 1, this child was noted to have a mucoid nasal discharge accompanied by shallow ulcers at the mucocutaneous junction of both external nares. Other than mild irritability, the child exhibited no generalized symptoms. She continued to attend school until November 12, at which time her nose and throat were cultured with the isolation, from the nose, of an almost pure culture of diphtheria bacilli, morphologically identical with a proved virulent strain isolated from a severe laryngeal case, a classmate of hers. She received antitoxin on November 13 and was free of lesions and negative for C. diphtheriae on nose and throat culture by December 1. She had received one immunizing dose of diphtheria toxoid four years previously. Subsequent to her onset of symptoms on October 22, four cases and one carrier developed in her classroom, in addition to a further case in her household.

Case 3.—J. V. H., a thirteen-year-old schoolgirl, the sister of Case 2, was actually the fifth case, by onset, in the outbreak, the intervening two cases having been severe laryngeal cases occurring in nonimmunized classmates of Case 2. J. V. H.'s symptoms began fourteen days after those of her sister and consisted of a mucoid nasal discharge with a shallow ulcer, 0.5 cm. in diameter, at the mucocutaneous junction of the left external nares. C. diphtheriae were readily cultured from this ulcer.

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The patient had no systemic symptoms. She had received two immunizing doses of toxoid two years prior to her illness. Recovery was uneventful; she received antitoxin November 13 and was culturally negative with lesions healed by December 1.

Case 4.—N. B., a five-year-old girl, classmate of Case 2, suffered onset of symptoms November 7, while D. V. H. was still present in the classroom. Her lesions were more pronounced, with a bilateral profuse purulent discharge and bilateral ulcerations and encrustations of the external nares. She also exhibited a moderate degree of irritability as her most pronounced systemic manifestation. Culture of her nose was positive for C. diphtheriae on first examination on November 16. She had received one immunizing dose of alum-precipitated toxoid five months prior to onset of her illness. Her recovery was spontaneous.

Comment

These cases present a similar and distinctive symptom complex, characterized by varying degrees of mucopurulent nasal discharge, accompanied, in all cases, by small ulcerations 0.5 to 1 cm. in diameter, and occurring at the mucocutaneous junction of the external nares. The most characteristic systemic symptom was mild irritability, occurring in two of the four cases. Fever was not a prominent symptom. In three cases, C. diphtheriae, morphologically identical with a proved virulent strain, were cultured from the nose. In none of the cases was throat culture positive for the diphtheria bacillus. In Case 1 nose cultures were repeatedly negative, but examination was performed late in the course of the illness. This case has been included, since clinical and epidemiologic data leave little doubt as to the cause of the lesions. In no cases were membranes recognizable, nor were excoriations of the upper lip noted. None showed the sanguine rhinorrhea of classic nasal diphtheria. To date, five months after the outbreak, none have exhibited any signs of postdiphtheritic complications, such as paralysis or myocarditis. Nevertheless, experience has shown that even in the most benign cases antitoxin should be administered in order to forestall the occurrence of any untoward complications. All four cases had received previous immunization with diphtheria toxoid, although the experience was varied as to dosage and interval since immunization.

The occurrence of these cases seems to indicate that anterior nasal diphtheria can occur in persons with previous immunization experience, though not not necessarily possessed of antitoxic immunity. Their mild and apparently modified nature makes them difficult to diagnose and allows them to continue in contact with the general population without discovery. Furthermore, the character of these lesions and their location at the external opening of the respiratory tract make them highly infective. This has been shown most recently by Hamburger and others in relation to the increased infectivity of nasal streptococcus carriers as compared with pharyngeal carriers.[5] The inclusion of such modified cases among tabulations of carriers may, in the past, have served to emphasize the importance of the carrier. Although 18 carriers were discovered in the present outbreak, only one case could be attributed to contact with a carrier.

That these cases were extremely mild bears out the observations of other investigators and parallels the experience of the New York State Department of Health in several recent upstate outbreaks.[3,6,7] However, the occurrence of a modified form of nasal diphtheria in an immunized group indicates its possible clinical importance for the future when herd immunity will presumably be held at a high level due to extensive immunization programs and more efficient local health organization. These cases are easy to miss and are potentially dangerous as foci of infection for more susceptible individuals. It is, therefore, emphasized that the occurrence of persistent nasal discharges in children, accompanied by any ulceration of the external nares, continues to call for prompt culturing and close follow-up.

Summary

1. Four cases of interior nasal diphtheria occurring in immunized persons are reported.

2. These cases present a typical syndrome, unlike classic nasal diphtheria, difficult to diagnose unless a high degree of "suspicion" is maintained, and capable of disseminating infection widely.

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A person has, in general, a disposition towards contradiction in proportion to his ignorance.—Anonymous

POLIOMYELITIS IN NEW YORK CITY, 1949*

Morris Greenberg, M.D., Morris Siegel, M.D., and M. Catherine Magee, M.D., New York City

(From the Bureau of Preventable Diseases, New York City Department of Health)

In June, 1949, 12 cases of poliomyelitis were reported in New York City, an incidence four times the normal expectancy. There were grounds for suspicion, therefore, that an epidemic might occur in the summer. At the beginning of July, this could not, however, be said with any degree of certainty, since in previous years a high incidence in June was not necessarily followed by high rates in the rest of the year. In the first week of July, 12 cases were reported, and it was clear that an epidemic was in the offing. This opinion was strengthened at the end of the second week in July when 61 cases were reported for the week. A plan was drawn up, therefore, to take all necessary measures to meet the situation. This included the setting up of a division of poliomyelitis in the Bureau of Preventable Diseases, detailed epidemiologic investigations, planning for the early and late care of patients, and the use of such control measures as were justified by the state of scientific knowledge of the disease. Advice was sought from a small scientific advisory committee, information was exchanged, and discussions were held between the City Health Department, the State Health Department, and the Federal Public Health Service, and generous cooperation was received from the Commissioner of Hospitals as well as from such voluntary organizations as the Greater New York Chapter of the National Foundation for Infantile Paralysis.

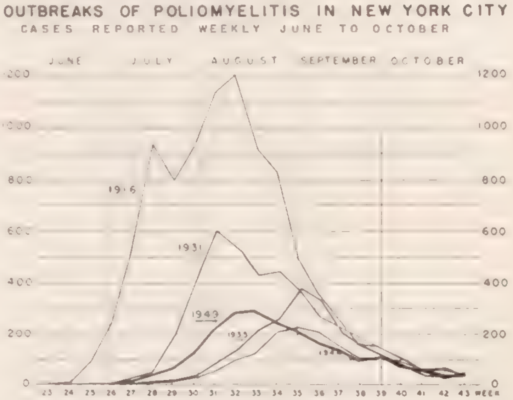

Fig. 1. Outbreaks of poliomyelitis in New York City—cases reported weekly from June to October.

Epidemic Years

New York City has had five epidemics of poliomyelitis (Fig. 1).[1] The largest was in 1916 with 9,023 cases, and the next was in 1931 with 4,138 cases. The two later epidemics occurred in 1935 and 1944, with 2,054 and 1,890 cases, respectively. The curve of the present epidemic falls between the two groups, with 2,446 cases reported for the year. It will be noted in Fig. 1 that the severer epidemics tended to start earlier and have their peak earlier than the milder epidemics. The down curves of all the epidemics are fairly close together. It should be stressed that, although the drop is fairly steep, a normal incidence is not reached until some time in December.

Age, Sex, and Color Distribution

The age and sex distribution of cases is given in Table 1. The largest percentage of cases is in children under ten years of age. The group twenty years of age and older accounts for 13.4 per cent of the total cases. Few in this group were older than forty years. As in previous

TABLE 1.—Cases by Age and Sex

Age (Years)	Total		Male		Female	
	Number	Per Cent	Number	Per Cent	Number	Per Cent
Total	2,446	100.0	1,412	100.0	1,034	100.0
0 to 4	718	29.3	405	28.7	313	30.3
5 to 9	784	32.1	494	35.0	290	28.0
10 to 14	415	17.0	239	16.9	176	17.0
15 to 19	202	8.3	128	9.1	74	7.2
20 and over	327	13.4	146	10.3	181	17.5

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* This preliminary report was released to the press at the end of 1949. Much of the gathered material is still being studied. During the entire epidemic we received the constant advice of Dr. Harry Mustard, Commissioner of the New York City Department of Health, Dr. Samuel Frant, Deputy Commissioner, and Dr. Ralph S. Muckenfuss, Assistant Commissioner. Mr. Karl Pretshold gave sound advice on relationship with the press and assumed most of that burden.

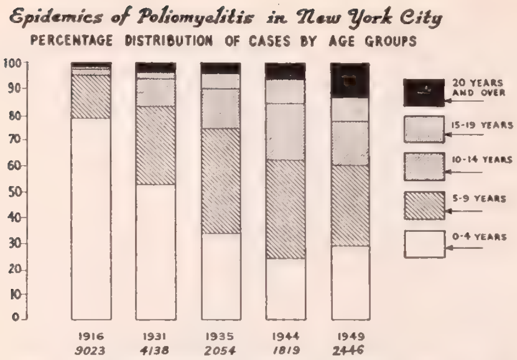

FIG. 2. Epidemics of poliomyelitis in New York City—percentage distribution of cases by age groups.

epidemics in the city, males predominated, accounting for 58 per cent of the total.

A shift in the age distribution of cases of poliomyelitis has been noted in this city as well as elsewhere. This is shown in Fig. 2 which indicates the percentage distribution of cases in the five epidemics in New York City. It will be noted that there has been a consistent increase in the percentage of adults and a consistent decrease in the percentage of children. Nevertheless, it should be emphasized that even in this year 78 per cent of the cases occurred in children under fifteen years of age and 61 per cent in children under ten years of age. Poliomyelitis is still predominantly a disease of children.

TABLE 2.—DISTRIBUTION OF ESTIMATED POPULATION AND OF CASES BY BOROUGH

Borough	Population Number (Thousands)	Population Per Cent	Cases Number	Cases Per Cent
City	8,067	100.0	2,446	100.0
Manhattan	1,932	23.9	434	17.7
Bronx	1,532	19.0	328	13.4
Brooklyn	2,881	35.7	1,110	45.4
Queens	1,529	19.0	493	20.2
Richmond	193	2.4	81	3.3

White persons were attacked in a comparatively larger percentage than nonwhites. In this year's epidemic the nonwhite cases of poliomyelitis made up about 6 per cent of the total cases, whereas the estimated nonwhite population of the city is about 10 per cent of the total population. The lower incidence of poliomyelitis in Negroes has been noted before in this city and in many other communities.

Distribution by Borough and Health District

Although cases occurred in each borough of the city, the distribution varied. Table 2 indicates the percentage distribution of cases and of estimated population. It will be noted that Manhattan and the Bronx had a smaller percentage of cases than of population, Brooklyn and Richmond had a larger percentage, and Queens had approximately the same percentage of cases as of population. Variations occurred also in the different health districts. In Brooklyn, for instance, Bay Ridge, Flatbush, Gravesend, and Sunset Park had a much larger percentage of cases than of population. The reverse was true for the Williamsburg-Greenpoint Health District. Similar differences were noted in the other boroughs.

Distribution by Paralysis

The percentage of paralytic cases varies from year to year and has also varied in epidemic years. In 1949, there were 1,501 known paralytic cases or 61 per cent of the total reported and confirmed cases. Of the total cases 1,109, or 45 per cent,

TABLE 3.—CASES ACCORDING TO PARALYSIS

Age (Years)	Total Cases	Nonparalytic Number	Nonparalytic Per Cent	Spinal Paralytic Number	Spinal Paralytic Per Cent	Bulbar Paralytic Number	Bulbar Paralytic Per Cent
Total	2,446	945	38.6	1,109	45.3	392	16.0
0 to 4	709	200	38.2	426	60.1	83	11.7
5 to 9	775	339	43.7	306	39.5	130	16.8
10 to 14	434	204	47.0	150	34.6	80	18.4
15 to 19	202	75	37.1	83	41.1	44	21.8
20 and over	326	127	39.0	144	44.2	55	16.9

TABLE 4.—DEATHS AND CASE FATALITY BY AGE AND SEX

Age (Years)	Cases Total	Cases Male	Cases Female	Case Fatality Number	Case Fatality Per Cent	Male Number	Male Per Cent	Female Number	Female Per Cent
Total	2,446	1,412	1,034	179*	7.3	101	7.2	78	7.5
0 to 4	718	405	313	30	4.2	15	3.7	15	4.8
5 to 9	784	494	290	48	6.1	31	6.3	17	5.9
10 to 14	415	239	176	22	5.3	14	5.9	8	4.5
15 to 19	202	128	74	35	17.3	19	14.8	16	21.6
20 and over	327	146	181	44	13.5	22	15.1	22	12.2

* Does not include ten deaths of individuals from out of town who were hospitalized in New York City and died there.

TABLE 5.—DEATHS BY TYPE OF CASE

Type of Case	Cases		Deaths	
	Number	Per Cent	Number	Per Cent
Total	2,446	100.0	179*	7.3
Nonparalytic	945	38.6	0	0
Paralytic	1,501	61.4	179	12.0
Spinal	1,109	45.3	26	2.4
Bulbar	392	16.1	153	39.2

* Does not include ten out-of-town deaths hospitalized in New York City.

showed a spinal type of paralysis and 392, or 16 per cent, a bulbar or bulbospinal type. By bulbar is meant a case with paralysis of cranial nerves or clinical findings indicative of lesions in the brain. The data according to age groups are listed in Table 3.

Mortality

The deaths from poliomyelitis numbered 179 for the year.* This represents a case fatality of 7.3 per cent. It was 27.1 per cent in 1916 when mild cases were seldom reported; 12.2 per cent in 1931; 4.4 per cent in 1935, and 5.4 per cent in 1944. It will be noted from Table 4 that the case fatality rate rises with the age groups. It is considerably lower in the age groups under fifteen years than in those over fifteen years. Most of the deaths occurred early in the course of the disease and chiefly in bulbar cases. Table 5 indicates mortality by type of case. It will be seen that 39 per cent of all bulbar cases died and that there were no deaths in the nonparalytic type of poliomyelitis.

Errors in Diagnosis

A considerable percentage of cases originally reported as poliomyelitis was later dropped for insufficient evidence. Of the total reported for the year 22 per cent were dropped as not fulfilling the criteria for a diagnosis.

Relation to Tonsillectomy

Sheppard, in 1911, first called attention to the relationship between cases of bulbar poliomyelitis and recent tonsillectomy.[2] Since then a number of authors have shown that the incidence of poliomyelitis, and particularly of bulbar cases, is higher in those that have had recent operations in the mouth and nose regions than in controls.[3-7] Anderson analyzed the cases in Utah during an epidemic and a nonepidemic period.[8] From his figures, Faber has calculated the attack rates for the general child population and for those children that had a recent tonsillectomy.[9] The incidence in the latter was 2.6 times greater for poliomyelitis and 16 times greater for bulbar or bulbospinal types than in the former. The recognition of the harmful effects of recent tonsillectomies has led to the abandonment of tonsillectomies during a time when poliomyelitis is prevalent. This view has been challenged by Cumming, who concludes, on the basis of surveys, that no causal relationship exists between tonsillectomy and bulbar poliomyelitis.[10-12] Faber has shown that even Cumming's figures indicate that the ratio of bulbar poliomyelitis to all types of poliomyelitis was more than twice as great in children that had had a tonsillectomy within two months of onset of illness as compared with those that had had no tonsillectomy.[9]

It should be pointed out that, experimentally, cynomolgus monkeys that have had a recent tonsillectomy are more susceptible to poliomyelitis when fed poliomyelitis virus than are controls.[13] Of tonsillectomized cynomolgus monkeys 93 per cent developed poliomyelitis when fed virus as compared to 13 per cent of control animals not operated upon.

In order to evaluate the effect of tonsillectomy on poliomyelitis, data have been obtained on all tonsillectomies performed in New York City hospitals in 1949. Information is also available about all cases of poliomyelitis that have had a tonsillectomy performed during the year. When these data are analyzed, information should become available on the relative risk in children that have had their tonsils removed and in those that have not. In view of the preponderant evidence that a causal relationship does exist between tonsillectomy and the occurrence of poliomyelitis, physicians should be cautious and advise against elective operations in the mouth and nose regions during increased incidence of poliomyelitis.

Relation to Exercise

Monkeys subjected to exhausting exercise during the incubation period of experimental poliomyelitis developed a higher incidence and a more severe paralysis than controls.[14] Monkeys that were severely chilled showed a similar increased incidence to paralytic poliomyelitis. Russel presents evidence to indicate that active exercise after onset of symptoms causes a high incidence of paralytic cases.[15] These findings have been confirmed by Hargreaves and more recently by Horstmann, who emphasize that active exercise *preceding* the onset of symptoms does not influence the course of poliomyelitis.[16,17] These investigations indicate the wisdom of allowing children freedom of play during an outbreak of poliomyelitis if they are well, putting them to bed at the first onset of illness, however, so that, if the illness turns out to be poliomyelitis, the advantages of early bed rest will have been obtained.

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* There are excluded ten deaths in persons from out of town who were hospitalized in New York City and died there.

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TABLE 6.—SECONDARY ATTACK RATES IN FAMILIAL CONTACTS*

Age (Years)	Number of Family Contacts	Secondary Cases	Secondary Attack Rate (Per 100,000)
Total	8,256	37	450
0 to 4	1,125	8	710
5 to 9	985	10	1,020
10 to 14	674	9	1,340
15 to 19	415	3	720
20 and over	5,057	7	140

* Onset of secondary case in family more than five days after onset of first case.

Secondary Attack Rate

It has been realized for some time that the risk of contacts to a case in the home is greater than the risk of persons in the community at large. This is true in most communicable diseases. The risk varies, however, with different diseases and with different age groups. In Table 6 are listed the number of household contacts to the cases of poliomyelitis by age. Where two or more cases occurred within five days, the assumption has been made that they were primary cases. There were 8,256 family contacts to primary cases, and among them 37 secondary cases developed, an attack rate of 450 per 100,000 persons so exposed. This is about 15 times the attack rate for the city as a whole, which was 30 per 100,000 estimated population.

Multiple cases occurred in 80 families. In 75 families, two cases occurred, and in five families three cases occurred. There were none in which more than three cases occurred.

Opening of Schools

Considerable apprehension was expressed by some physicians and lay people that the opening of schools would cause an increase in reported cases. Pressure was brought to bear to delay such opening for one or two weeks. The Commissioner of Health, however, advised that schools should be opened on schedule. This was done because previous experience in the city and experience elsewhere indicated no increase in poliomyelitis as a result of the opening of schools and no greater decrease if the opening of schools was delayed. Furthermore, as has been stated above, an increased incidence above the normal expectancy continues as late as December.

The percentage distribution by age of cases of poliomyelitis before and after the opening of schools was studied. The five to fourteen age group made up 49.6 per cent of the total cases prior to the opening of schools and 47.2 per cent after schools opened. In the 1916 epidemic the opening of schools was delayed for two weeks, yet the percentage distribution of cases in the six to sixteen years age group was approximately the same in the two weeks preceding the opening of schools and in the three weeks following the opening. Furthermore, there was no change in the trend of the descending curve of the epidemic.[18]

Bacteriology

The diagnosis of poliomyelitis was made on clinical grounds and in the vast majority of cases was confirmed by positive spinal fluid findings. Although the recovery of virus from patients is an established procedure, it involves a special laboratory organization, expert technical personnel, and sufficient space, particularly for the housing of animals. Monkeys are expensive and not readily obtainable so that they cannot be used in large numbers. About 1,000 specimens of stool and of blood were collected from patients in different stages of the disease, and these were frozen and stored. Autopsy material, particularly brain and spinal cord, was obtained and stored in 50 per cent glycerine. These will be used in future studies.

In the past year a new factor has been introduced in the bacteriologic investigations of poliomyelitis. Dalldorf reported the finding of a virus differing from that of classic poliomyelitis in two cases of clinical poliomyelitis in Coxsackie, New York, in 1947.[19] This virus is pathogenic for suckling mice but does not grow in monkeys or in adult mice. It has been obtained from cases in other parts of New York State and from widely scattered sections of the country.[20,21] It has been recovered from pharyngeal washings, stools, sewage, and flies. Its distribution parallels, therefore, the virus of classic poliomyelitis. Unlike the latter, however, it causes lesions chiefly in the muscles of the animals studied. It has been recovered from cases resembling poliomyelitis, chiefly of the nonparalytic type but also from some that were paralyzed, from contacts to such cases, and from normal people. It has also been recovered from individuals suffering from such diverse conditions as the common cold and epidemic pleurodynia. Its relationship to the clinical forms of poliomyelitis has not yet been established. Specimens of stools from 70 cases in the New York City epidemic have, so far, been passed in suckling mice, and two recoveries of Coxsackie virus have been obtained.

Summary

An outbreak of poliomyelitis occurred in New York City in 1949, with a total of 2,446 cases and 179 deaths. About 75 per cent of the cases were in children under fifteen years of age, and 58 per cent of the cases were in males. There were 45 per cent of spinal paralytic cases and 16 per cent

of bulbar cases. The distribution of cases varied in the five boroughs and in the different health districts. The secondary attack rate in homes where a case had occurred was 15 times the attack rate for the city as a whole. Schools opened on schedule, and the ratio of cases in school children to total cases did not increase after the opening. Reports indicate that recent tonsillectomy appears to predispose to the development of poliomyelitis and especially to the bulbar type and that exercise during the onset of poliomyelitis adversely affects its course.

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A.M.A. COUNCIL WARNS OF NEED FOR INFORMATION ABOUT PESTICIDES

Unless certain information about new agricultural poisons is supplied before they are released for general distribution, accidents may occur which will offset the potential benefits of these new materials. The introduction of numerous new synthetic organic pesticides offers promise for increasing the nation's food supply and improving health through the control of insects and other pests. Past experience, however, indicates that poisons cannot be used safely on food crops without the development of certain fundamental knowledge concerning the poison.

What these materials will do to pests and food crops and to the workers who handle them must be known, and there must be developed, also, a knowledge of what these materials will do to warm-blooded animals and man when small amounts of residue are incorporated in their foods. Furthermore, practical methods of analysis should be available to permit identification and measurement of residue that may persist on or in consumer products. Such essential information is undeveloped for many of the agricultural poisons now in use.

It is the opinion of the Council on Foods and Nutrition that the information on the following factors should be supplied before pesticides that may contaminate food or forage crops are released for general use:

1. Chronic as well as acute toxicity tests. These should be carried out in such a manner as to demonstrate satisfactorily the toxicologic effects of pesticides on warm-blooded animals and man.
2. Accurate methods of isolation and quantitative determination of pesticide residues in biologic material. These methods must be sufficiently rapid as to be of practical use in the examination of perishable foods.

Thorough pharmacologic investigations and practical quantitative methods are two of the most vital and pressing current needs in this field. The fundamental requirement for the orderly development of needed information must not be ignored. Unless this information is supplied, safe methods for handling and use cannot be developed. Furthermore, unless this information is supplied before new agricultural poisons are released for general distribution, accidents may occur which will offset the potential benefits of these new materials and cause delay in their adoption.—*J.A.M.A., January 28, 1950*

Case Reports

TOTAL PANCREATECTOMY FOR ADENOCARCINOMA OF THE PANCREAS

BERNARD MARRAFFINO, M.D., New York City

(From the Surgical Service of Gouverneur Hospital)

SINCE 1935, when Whipple, Parsons, and Mullins first published a practical approach to the problem of cancer of the head of the pancreas and the ampulla of Vater, great interest has been stimulated among surgeons in the practicability of the surgical approach to the pancreas.[1] Partial pancreatectomy for carcinoma of the pancreas and the ampulla of Vater, in the absence of evidence of inoperability as demonstrated by liver metastases and extensive local infiltration of surrounding structures, has become an accepted procedure. The operative mortality has decreased to a reasonable level due to a progressive improvement in surgical technic and an increased knowledge of pre- and postoperative management. Follow-up reports in the literature are also encouraging. There is enough evidence at present to warrant the hope that with earlier diagnoses, before invasion of the walls of the portal vein and superior mesenteric vessels has resulted, carcinoma of the pancreas may be brought into the group of cancers with eventual five-year cures. The experience with total pancreatectomy as reported in the literature to date is a very limited one, with a high operative mortality and, because of the few survivals, a lack of knowledge with regard to the altered metabolic and physiologic mechanisms that result therefrom. The practicability of total pancreatectomy has been demonstrated by the survivals, even though few, reported in the literature to date.

The present case report is that of a total pancreatectomy for adenocarcinoma of the pancreas. In this operation the entire pancreas was removed, together with the entire duodenum, the lower third of the common bile duct, the distal third of the stomach, and the spleen.

Case Report

M. S., a sixty-five-year-old white man, was admitted to the hospital on August 18, 1948, complaining of abdominal pain and vomiting of one month duration. The present illness began about one month prior to admission, at which time he noticed constant sharp pain in the epigastrium; the pain was increased by all foods which also caused abdominal distention. Vomiting occurred soon after the intake of all foods except milk, cream, and eggs. His stools had become light in color three weeks before entering the hospital, and two days before his admission he had noticed tarry stools. There had been longstanding constipation and no diarrhea. Anorexia had been prominent during his present illness. There had been marked weight loss. Three weeks prior to his admission to the hospital he had noticed progressive jaundice associated with a dark urine.

He had had no serious medical diseases. A right inguinal hernia had been repaired twenty years ago, and a left inguinal hernia had been operated on fifteen years ago. Five years before this present illness, surgery had been done for a perforated peptic ulcer. His history revealed no familial diseases.

Physical examination revealed an elderly white man, deeply jaundiced, but not acutely ill. The sclerae were markedly icteric. There were no supraclavicular glands palpable. Heart and lungs were within normal limits. The abdomen was soft and not distended. There was moderate tenderness in the right upper quadrant and midepigastrium. There were no masses felt, and the liver, spleen, and kidneys were not palpable. There was a scar in the upper midabdomen from a previous laparotomy. Genitalia, extremities, and reflexes were normal. Rectal examination revealed no masses, and the prostate was only slightly enlarged.

Temperature, pulse, and respiration were normal. Blood pressure was 148/88.

Red cell count was 3,500,000, hemoglobin 13.5 Gm., and white cell count was 7,200 with 60 per cent polymorphonuclears, 4 per cent transitionals, 26 per cent lymphocytes, 8 per cent monocytes, and 2 per cent eosinophils. The specific gravity of the urine was 1.020 with an occasional pus cell. Sugar and protein tests were negative; there was bile in the urine. Stool examination was negative for the presence of blood and urobilinogen. Blood chemistry was as follows: sugar 99 mg. per cent; nonprotein nitrogen 30 mg. per cent; icteric index 60; prothrombin twenty-seven seconds (control fifteen); cephalin flocculation negative; total cholesterol 266 mg. per cent; cholesterol esters 183 mg. per cent; serum bilirubin 8.7; albumin 4.9; globulin 2.5; total proteins 7.4; van den Bergh, direct and indirect, positive; repeated urine examinations positive for crystalline bilirubin and traces of urobilinogen; alkaline phosphatase 6.8. Blood Wassermann was negative. No bile was obtained by duodenal drainage even after stimulation with magnesium sulfate and olive oil. Scout film x-ray of abdomen on August 18, 1948, showed numerous fluid levels in the small bowel suggesting obstruction. Gastrointestinal series with a barium meal on August 26,

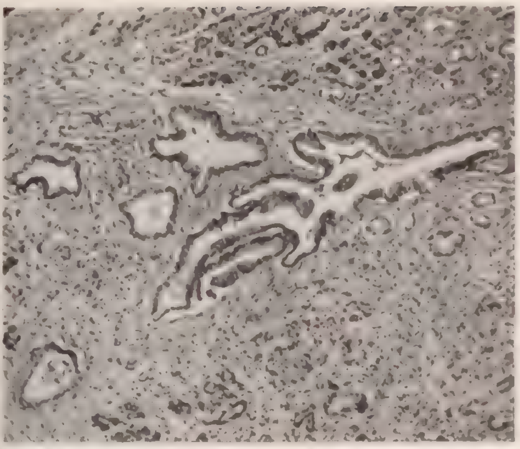

FIG. 1. Section of biopsy taken at first operation from head of pancreas showing chronic pancreatitis and no cancer cells.

1948, was suggestive of duodenal ulcer and para-esophageal hiatus hernia.

On August 31, 1948, thirteen days after admission and after appropriate and thorough preparation for operation had been accomplished, an exploratory laparotomy was performed with the preoperative diagnosis of carcinoma of the pancreas or of the ampulla of Vater. At operation, the gallbladder and common bile duct were found to be greatly distended with thick dark bile. The stomach and duodenum were normal with no evidence of old or recent active or healed ulcers. The pathology was limited to the pancreas, which was greatly enlarged throughout its entire extent. The head of the pancreas was enlarged three times its normal size and was hard and irregular. A similar condition existed in the body and tail of the pancreas. In view of the marked enlargement of the entire pancreas, it was thought that the lesion might be severe pancreatitis and not adenocarcinoma. For this reason a biopsy of the pancreas was done, and a cholecystojejunostomy was performed (Fig. 1). Postoperatively the icterus cleared rapidly, and the stools became brown in color within a very few days.

On September 21, 1948, three weeks after operation, the icterus index was 15, serum bilirubin was 0.5 mg. per cent, and the cephalin flocculation test negative. The biopsy of the pancreas was reported "chronic pancreatitis." The patient did well following the cholecystojejunostomy until the sixteenth postoperative day when he again began to complain of severe abdominal pain, sour eructations, and vomiting of undigested food retained in his stomach for from eight to twenty-four hours. At this time it was felt that the patient was suffering from pyloric or duodenal obstruction. This was confirmed by a gastrointestinal x-ray series done on September 25, 1948, which showed nearly complete pyloric obstruction due to a large extragastric mass; the duodenal curve was clearly widened; the gastric residue at six hours was about 85 per cent. In view of the great increase in size of the duodenal loop and the extragastric mass as compared to the first x-ray studies done prior to the cholecystojejunostomy, and in spite of the biopsy report of chronic pancreatitis, the conclusion was reached at this time that the lesion probably was carcinoma of the pancreas, and a second laparotomy was decided upon.

The second operation was performed on October 6, 1948, under nitrous oxide, oxygen, ether anesthesia. The peritoneal cavity was entered through an upper abdominal transverse incision. Due to the previous laparotomy, there were extensive adhesions of the transverse colon, stomach, duodenum, liver, gallbladder, and loops of small bowel to each other and to the anterior parietes. After dividing all the adhesions by sharp dissection and freeing all of the viscera involved from each other and the abdominal wall, exploration revealed a well-established and functioning cholecystojejunostomy. The wall of the gallbladder was thin and glistening; the choledochus was now only about $^1/_2$ cm. in diameter. There was no gross evidence of liver metastases. The pancreas was greatly enlarged from head to tail. The head of the pancreas was nodular, hard and irregular, and about 3 inches in diameter; the nodular, irregular enlargement extended throughout the entire pancreas, and it was apparent that the carcinoma involved the entire pancreas. A total pancreatectomy was decided upon.

The descending portion of the duodenum was mobilized medially. The jejunum was then divided immediately distal to the ligament of Treitz. The divided end of the jejunum at the ligament of Treitz was closed with one layer of continuous, through-and-through, atraumatic Dulox chromic catgut suture and two inverting layers of interrupted seromuscular atraumatic Dulox chromic catgut suture. The third portion of the duodenum was then mobilized to the right under the superior mesenteric vessels. The gastrohepatic omentum and the gastrocolic omentum were then divided, permitting transection of the stomach at the junction of the middle and distal thirds. The common bile duct was then dissected free from the portal vein and divided between ligatures in its supraduodenal portion. The distal third of the stomach, first, second, and third portions of the duodenum, and the head of the pancreas were then dissected free from the structures in relation to the posterior surface of the head of the pancreas; the superior mesenteric and portal veins were not invaded by the surrounding carcinoma. After the head and uncinate process of the pancreas had been completely mobilized, the body was divided at its midportion; the specimen removed at this point consisted of the distal third of the stomach, the entire duodenum, and the head, neck, and part of the body of the pancreas. The remaining portion of the body and the tail of the pancreas were then dissected free and removed, at which time the splenic vein was accidentally injured. After repairing the small opening in the splenic vein it was thought best to remove the spleen. An anterior Polya type gastrojejunostomy was done, using a loop of jejunum proximal to the existing cholecystojejunostomy because of the distance of the latter from the ligament of Treitz. The bed of the pancreas was drained by four Penrose drains, two from each angle of the transverse incision. The abdomen was closed in anatomic layers.

The entire operation required five and one-half hours. During this time, the patient received 1,500 cc. of whole blood, 500 cc. of plasma, and 1,000 cc. of normal saline infusion. At the end of the operation, the blood pressure was 90/55 and the pulse 110.

The temperature was 102.4 F., with pulse of 90 on the first postoperative day. On the fourth post-

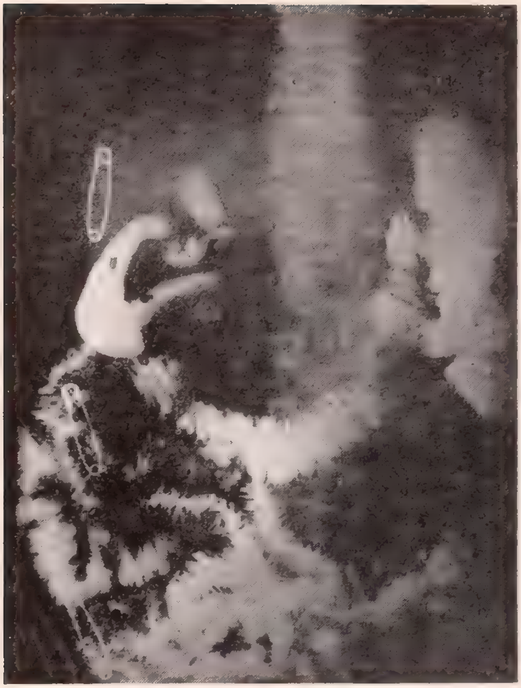

Fig. 2. Barium meal x-ray five weeks after total pancreatectomy, showing gastrojejunostomy, cholecystojejunostomy, cystic duct, and common bile duct.

operative day, the temperature was normal. Penicillin, 100,000 units, and streptomycin, 200 mg., were given every three hours intramuscularly until the seventeenth postoperative day. Each day the patient received by intravenous route 1,000 cc. of 5 per cent glucose in normal saline, 1,000 cc. of 5 per cent glucose in water, and 1,000 cc. of amigen with 500 mg. of ascorbic acid and B-complex vitamins added. These infusions were covered by regular insulin; hourly urine sugar and acetone determinations guided the amount of insulin given the patient. On the second postoperative day insulin shock developed but was promptly controlled with intravenous glucose. The blood sugar reached a high of 400 mg. per cent on the second postoperative day and gradually dropped to 222 mg. per cent on the eighth day.

By the sixth day, a soft diet, consisting of protein 120 Gm., carbohydrate 60 Gm., and fat 10 Gm., was given, and protamine zinc insulin, 20 units, with 10 units of regular insulin were sufficient to cover this diet. On the tenth day, with a diet of protein 120 Gm., carbohydrates 120 Gm., and fat 30 Gm., using 20 units of protamine zinc insulin and 10 units of regular insulin, mild insulin shock occurred; urine sugar and acetone were negative. At this time all insulin was discontinued for three days. On the fourteenth day, the urine remained negative for sugar and acetone with a diet of protein 240 Gm., carbohydrate 200 Gm., and fat 60 Gm. with 20 units of protamine zinc insulin. The carbohydrate in the diet was increased to 250 Gm. on the seventeenth day. On the twentieth day, the blood sugar was 59 mg. per cent, and the protamine zinc insulin was cut to 10 units until the patient's discharge from the hospital on the thirtieth postoperative day when his fasting blood sugar was 117 mg. per cent.

His blood carbon dioxide varied between 68 per cent on the eighth day to 44 per cent on the twenty-sixth day. The blood nonprotein nitrogen varied between 33 and 48 mg. per cent. The blood chlorides varied between 440 and 490 mg. per cent. On the eighth day, the total serum proteins were 5.9, albumin 3.5, and globulin 2.4. On the nineteenth day, the total serum protein was 7 mg., with albumin 3.5 and globulin 3.5. Nine days after operation blood cholesterol was 112 mg. per cent and cholesterol esters 64 mg. per cent, a normal ratio, with alkaline phosphatase of 4.1 Bodansky units, and 2 plus cephalin flocculation. On the ninth day, 6 tablets of pancreatin daily were given, divided into three doses; chemical examination of the stools at this time revealed only traces of undigested protein and fat. The patient was discharged on the thirtieth postoperative day in good condition. His diet at this time was protein 250 Gm., carbohydrates 250 Gm., fat 60 Gm., with 10 units of protamine zinc insulin daily; urine was negative for sugar and acetone. Figure 2 illustrates the x-ray results of a barium meal five weeks after the second operation.

Examination of the tissue by Dr. Moses Kopel, pathologist, was reported as follows:

Gross Examination.—Specimen consists of spleen, the entire pancreas in two pieces, the duodenum, the antrum, and pylorus of the stomach.

Spleen measures 8 by 7 by 6 cm. and appears normal. On section it has a normal consistency and on scraping shows the usual amount of pulp on the knife.

Pancreas consists of two portions. One portion measures 14 by 1 by 7 cm. and is in close contact with the duodenum. The other portion measures 10 by 4 by 3 cm. and is evidently the tail. On section both pieces of the pancreas are hard, dense, and fibrous and show some yellow areas of degenerated pancreatic tissue.

The duodenum as previously described is wrapped around the head of the pancreas. The terminal phalanx of the antrum, the pylorus, and the first, second, and third portions of the duodenum are

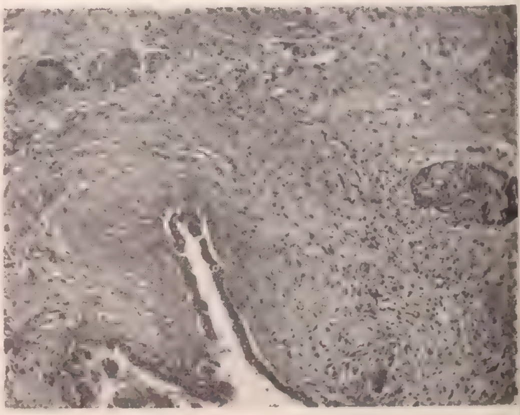

Fig. 3. Section from tail of pancreas showing masses of cancer cells and dilated pancreatic duct.

included in the specimen and extend for a distance of 24 cm. On section it is normal.

Microscopic Examination.—The appearance of the pancreas varies in different areas. In some areas the ducts and glands are dilated and cystic. The interstitial tissue shows an increase in fibrous tissue plus a round cell infiltration.

In other areas, numerous carcinomatous glands are present varying in size and shape. In some areas invasive columns and strands of abnormal, irregularly shaped epithelial cells are present, surrounded by very dense connective tissue. Carcinomatous cells and glands are present in the head, body and tail of the pancreas (Fig. 3).

Pathologic Diagnosis.—Adenocarcinoma of head, body, and tail of the pancreas and chronic inflammation.

Comment

This patient lived three months after total pancreatectomy. He developed a mild diabetic status requiring 10 to 20 units of protamine zinc insulin to maintain adequate nutrition. The development of only mild diabetes after total pancreatectomy in man has been reported in all cases published thus far. Insulin shock may develop on small doses of insulin, as happened in this patient, and may be due to a hypersensitivity to insulin. Disturbance in lipoid metabolism with fatty infiltration of the liver did not occur to any appreciable extent. There were no remarkable changes in blood cholesterol and cholesterol esters. The only evidence of liver function impairment was a fall in the serum albumin on the twentieth postoperative day resulting in a 1:1 albumin-globulin ratio. Blood chlorides and nonprotein nitrogen remained normal during his thirty days in the hospital after operation. Fat and protein digestion in the gastrointestinal tract is impaired because of the loss of pancreatic lipase and protease but can be readily controlled with oral administration of pancreatin, as was the case in this patient. The patient's general condition and nutrition remained good until four weeks before his death when he began to lose weight and strength and manifested clinical evidence of metastases.

Because of the pancreatitis associated with carcinoma of the pancreas, biopsy reports may be misleading, as was the case in this patient in whom extensive carcinoma of the entire pancreas was present.

Gaston in March, 1948, reviewed the reported cases of total pancreatectomy and noted an operative mortality of 73 per cent in cases of cancer (11 operations, three operative survivals) and 50 per cent in benign lesions.[2] Of the three survivals with carcinoma, one died in three and one-half months of metastases, one was alive after four months without known recurrence, and one was alive after fifteen months with probable recurrence. In 1948, Waugh reported six cases of total pancreatectomy with one death, a mortality of only 17 per cent; three of these cases were islet cell tumors, and two were pancreatitis with calcification.[3]

By earlier diagnosis, improved surgical technic, and increased knowledge as to the biochemical and metabolic changes which occur after total pancreatectomy, surgical mortality should reach reasonable levels, and follow-up results should improve. At the present time, radical surgery is the only therapy available for patients with carcinoma of the pancreas.

Summary

A successful case of total pancreatectomy for diffuse carcinoma of the entire pancreas is reported. The patient lived three months after total pancreatectomy and died with the clinical picture of metastatic carcinomatosis.

135 East 47th Street

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SAYS MEDICAL SCHEME ABROAD IS "ROTTEN"

For some time the A.M.A. has been using a reproduction of the famous Fildes painting, "The Doctor," on its business envelopes, with the admonition: "Keep Politics Out of This Picture." One of these envelopes, bearing A.M.A. centennial stamps issued in 1947, came to the attention of an architect surveyor in Leicester, England, through philatelic correspondence.

The Englishman wrote as follows:

"I think the idea of yours regarding the Fildes reproduction on your envelopes is a great scheme, and I am so pleased to think you are putting up a fight against socialized medicine. We are well in it. The whole scheme is rotten to the core and should be repealed. In this country it is a fearful flop, and to my mind it is degrading to men who are undoubtedly of high intellect and ability."—*Secretary's Letter, A.M.A., January 23, 1950*

RECURRENT IRREDUCIBLE VENTROUMBILICAL HERNIA CONTAINING AN ACUTE SUPPURATIVE APPENDIX

Gabriel P. Seley, M.D., F.A.C.S., and Vincent A. Nardiello, Jr., M.D., New York City

From the Surgical Service of Gouverneur Hospital)

ACUTE infections of the appendix have been reported occurring in hernial sacs. However, the presence of an acute suppurative appendix in the sac of a recurrent, irreducible ventroumbilical hernia is most unusual if not unique. A careful search of the recent literature failed to reveal a similar case. No mention of this type of case is made in the latest edition of *Hernia* by Leigh Watson.[1] In a personal communication with the latter, I was informed that this was a very unusual and rare case and that he too was unable to find a similar case in the literature. A detailed description of the case history with the operative management is given below.

Case Report

R. G., a white married woman, aged fifty-two, was admitted to the hospital on July 27, 1947, with chief complaints of nausea, vomiting, and abdominal pain of three days duration.

About fifteen to eighteen years before the present admission the patient had been admitted to another hospital where an abdominal operation had been performed. The reasons for this operation were unknown to the patient and her family. In September, 1942, operation was performed for an incarcerated umbilical hernia which was partially an incisional hernia, present since 1937. Both hernias were repaired. The only other pertinent data included 16 pregnancies with 14 live babies and two stillbirths.

Three days prior to admission the patient developed mild, diffuse abdominal pain followed by nausea, vomiting, and obstipation without passage of gas by rectum. The pain became more severe as the days passed and was sharpest in the herniated area. On admission the pain was very severe and constant.

Physical examination revealed an obese, acutely ill, middle-aged female with sallow complexion. Blood pressure was 115/80, pulse 80, and respirations 20. Temperature was 99.4 F. Head was normal; eyes reacted to light and accommodation. Tongue was dry and coated; breath was fetid. Breasts were pendulous but otherwise not abnormal. Lungs were clear to percussion and auscultation. Heart sounds were distant, but no irregularity or murmurs were present. The abdomen was obese and distended. The umbilicus was absent. There was a right paramedian scar 20 cm. in length. In the right upper quadrant there was a 15 by 15 cm. hernial mass with visible and palpable small bowel movements noted. Increased bowel sounds could be heard over the general abdomen. Distended loops of bowel were palpable in the hernia.

Laboratory examination revealed the following: Urine was amber, specific gravity 1.020, acid, 2 plus albumin, negative for glucose and acetone, and microscopically showed large amounts of bacteria, up to five red blood cells and ten to thirty white blood cells per high power field. There were 5,500,000 red blood cells, 15 Gm. hemoglobin, 5,200 leukocytes, polymorphonuclear leukocytes 51 per cent, transitional forms 18 per cent, lymphocytes 28 per cent, and monocytes 3 per cent.

A diagnosis of recurrent incisional and umbilical hernia with incarceration and possible strangulation of small bowel was made, and operation was performed three hours after admission.

Preoperative medication consisted of morphine sulfate, $^1/_4$ grain, and atropine sulfate, 1/150 grain. Procaine, 150 mg., was used for spinal anesthesia. A transverse incision was made over the hernial mass and carried down to the sac; the latter was opened and was found to contain loops of small bowel and the cecum. The loops of small bowel, normal in color and in peristalsis, were returned to the peritoneal cavity. The cecum could not be released at one point, and in dissecting in this region it was noted that the appendix was attached to the sac. There was a fair amount of omentum wrapped around the appendix, and, when this was dissected off, the appendix was noted to be swollen, hyperemic, and tense due to an acute inflammatory process. The mesenteriolar vessels were clamped and ligated, the base of the appendix tied, and the appendix ablated with a carbolized knife. The peritoneum was closed with the fascia by a series of buried interrupted figure-of-eight sutures of number 28 silver wire. Retention sutures of silk and interrupted silk for the skin edges completed the closure. Two rubber dam drains were inserted subcutaneously and at each angle of the wound.

Penicillin, 30,000 units every four hours, was administered after an initial dose of 100,000 units given preoperatively. Wangensteen nasal suction, intravenous fluids, and morphine were employed. On the second postoperative day the patient was out of bed and taking a soft diet. The drains were slowly shortened and removed when the drainage stopped. There was a very mild superficial wound infection which cleared spontaneously. At the time of discharge on the twenty-fifth postoperative day the wound was well healed and the patient symptom-free.

The pathology report was acute suppurative appendicitis and chronic fibrosis of hernia sac.

Comment

The diagnosis in this case was not entirely clear. There was definite evidence of an irreducible hernia with a history suggestive of small bowel obstruction. However, the patient did not appear sick enough for a strangulated hernia of three days duration, and the hernial sac was not as tense as one would expect. When the sac was entered without encountering evidence of compromised bowel, one had to be certain that all the pathology had been demonstrated. The adherent omentum and irreducible cecum pointed to some inflammatory process within the sac. When the acutely inflamed appendix was visualized, the explanation for the clinical course became clear. The postoperative course was smooth, and the mild superficial wound infection did not interfere with good wound healing.

Summary

1. A unique case of acute suppurative appendicitis in a recurrent, irreducible ventroumbilical hernia is presented.
2. Caution should be exercised in the management of an irreducible hernia to be certain that the operative findings explain the clinical picture.
3. All the contents of the hernial sac should be freed and returned to the peritoneal cavity before repair is attempted.

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RUPTURE OF A HEMORRHAGIC CORPUS LUTEUM OF PREGNANCY WITH SPONTANEOUS DELIVERY AT TERM

Samuel S. Rosenfeld, M.D., F.A.C.S., New York City

(From the Department of Obstetrics and Gynecology, Jewish Memorial Hospital)

WHILE rupture of a corpus luteum or of a corpus luteum cyst in the nonpregnant state is not rare, rupture of such a structure in the pregnant state is quite uncommon. A careful perusal of the literature for the last fifty years revealed only one case of rupture of a hemorrhagic corpus luteum of pregnancy with symptoms similar to those presented by the patient whose history is the basis of this report.[1]

Case Report

Mrs. P. B., age thirty-nine, was admitted to the hospital in shock. She was unconscious, and the history was obtained from her family physician. The family and previous medical history revealed no facts of importance. Surgical history included an appendectomy, a tonsillectomy, and a dilatation and curettage for menometrorrhagia three years ago, and the pathology report at that time was moderate endometrial hyperplasia, follicular phase.

The obstetric history showed her to be a gravida VI, Para 3. Three children were alive and well, and three pregnancies terminated in spontaneous abortion, all the abortions occurring within the first six weeks of pregnancy.

The menstrual history disclosed that the menarche commenced at thirteen, that she was of the thirty-three to thirty-five day type, and that the duration of the flow was five days. She had always been regular except for the abovementioned episode of menometrorrhagia.

Her last period was stated to have commenced on August 30, 1948, but further inquiry brought out the fact that this period lasted only two days and that the flow was very scant. Intercourse had only taken place on one occasion in the month of August, on August 16.

The acute symptoms began two days prior to admission and consisted of slight vaginal bleeding and abdominal cramps. These symptoms persisted, and on the morning of admission the abdominal pain became very severe, so much so that the patient fainted, fell to the floor, and sustained a laceration over the left eye.

Physical examination revealed a well-developed and nourished adult, white female. The skin was cold and clammy, the pulse weak and thready, respiratory excursions shallow and rapid, and the face pale and anxious. There was neither jaundice nor cyanosis. The blood pressure was 50/30. Abdomen was flat, the skin loose and flaccid. There was no abdominal tenderness or rigidity and no palpable masses. The liver, spleen, and kidneys were not palpable. No hernias were noted.

On pelvic examination the uterus was found to be enlarged to the size of ten weeks pregnancy and was moderately soft. Movement of the cervix evoked pain. There were no palpable adnexal masses. No masses were felt in the cul-de-sac.

Laboratory data were as follows: The blood count on admission showed hemoglobin 15.4 Gm.; red blood cells 4,780,000; white blood cells 13,100, and polymorphonuclear leukocytes 76 per cent, of which 6 per cent were band forms. The blood group was O, Rh positive. The urine showed a trace of albumin, a few white blood cells, and an occasional red blood cell.

The patient presented all the classic signs of ruptured ectopic pregnancy. In view of the presence of an enlarged and softened uterus the coexistence of an intra- and extrauterine pregnancy was considered.

The patient was examined under general anesthesia. A soft mass was now palpable in the region of the left ovary. This was taken to be an ectopic pregnancy. The cul-de-sac was punctured and aspirated, and a syringe full of noncoagulated bloody fluid was obtained. Celiotomy was then performed and revealed a pregnant uterus, with a small amount of free blood in the peritoneal cavity. The left ovary contained the corpus luteum of pregnancy, and a cystlike area the size of a lemon occupied about one half of the ovarian surface. There was a small perforation at the outer pole of the cystlike area with a slight and continuous ooze plainly visible from this perforation. The right ovary was normal in size and contained a minute retention cyst near its outer pole.

Since the flow of blood from the perforation in the left ovary was not profuse, a small piece of starch sponge, used for hemostasis, was applied to the perforation.[2,*] The area was observed for a few minutes, and, when the oozing ceased, the abdomen was closed. The blood transfusion which was commenced at the beginning of the operation was continued, and the patient was returned to bed in fairly good condition. During the course of the operation special care was taken to avoid manipulation of the uterus.

Postoperative treatment consisted of the usual sedation plus 10 mg. of progesterone twice daily by intramuscular injection and 5 cc. of a 50 per cent solution of sodium glycerophosphate four times a day orally.[3] This therapy was continued until the patient's discharge from the hospital, and thereafter she received injections of 25 mg. of progesterone three times a week for six weeks. The intervals were gradually lengthened and discontinued at the end of the eighth week.

There was slight vaginal bleeding for a few days after operation, but at no time were there any recognizable uterine cramps. Convalescence was uneventful, and she was discharged on the eleventh postoperative day. The prenatal course from then on was uneventful. Labor commenced spontaneously on June 18, 1949, and she was delivered normally of a male infant weighing 8 pounds (3,656 Gm.)

Comment

On the basis of the menstrual cycle, the history of the single coitus in August, the duration of previous labors, and the size of the uterus at operation, it is probable that this patient was about nine weeks pregnant when the rupture of the corpus luteum occurred.

There are numerous reports in the literature where the ovary containing a corpus luteum of pregnancy was resected.[4] Progesterone was not administered, and yet pregnancy continued to term.

Summary

A case is reported in which the patient exhibited the classic signs and symptoms of an intra-abdominal hemorrhage and in whom operation disclosed a rupture of a hemorrhagic corpus luteum of pregnancy with free blood in the peritoneal cavity.

Rupture of a hemorrhagic corpus luteum of pregnancy is a rare condition and can easily be confused with ruptured ectopic pregnancy or other conditions capable of producing intra-abdominal hemorrhage.

A helpful diagnostic point is the presence of a gravid uterus whose size more or less corresponds to the history of gestation. This point should prove especially helpful after the seventh or eighth week of pregnancy when the incidence of ectopic pregnancy rapidly declines.

In all cases exhibiting grave symptoms, operation and exploration are probably the safer course to pursue, even if the correct diagnosis is surmised.

While it has been known that patients in whom the corpus luteum of pregnancy has been resected can proceed to term and deliver normally without the administration of progesterone, nevertheless, it would appear wiser to administer adequate amounts until the critical progesterone time has been established.

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[*] Material obtained from the United States Department of Agriculture.

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A MEDICAL SCHOOL DEAN IN BRITAIN'S NATIONAL HEALTH SERVICE

A "loss of the sense of personal responsibility" by general practitioners for the welfare of their patients has been one of the principal effects of Britain's National Health Service program, Dr. Willard C. Rappleye, dean of the Faculty of Medicine at Columbia University, declared. In an address at the forty-sixth annual Congress on Medical Education and Licensure, Dr. Rappleye cited "a reduction in the initiative and incentive for self-development" on the part of many general practitioners. Dr. Rappleye studied the British medical program firsthand in a visit to England last fall.

A recent significant development has been an increase in private practice which had "largely disappeared" after the Service was inaugurated. Individuals are more frequently seeking private practitioners to avoid the long delays, the crowded and hurried office calls, and the impersonal medical attention which is given to so many patients on the Health Service lists.

INFECTIOUS MONONUCLEOSIS AND ACUTE THROMBOCYTOPENIC PURPURA: REPORT OF TWO CASES WITH RECOVERY

MAX KUTZER, M.D., and ELLERY G. ALLEN, M.D., Syracuse, New York

(From the Department of Medicine, Syracuse University College of Medicine)

ALTHOUGH infectious mononucleosis is usually considered a benign disease of relatively short duration, its protean clinical manifestations may at times make diagnosis extremely difficult. This is especially true when the atypical lymphocytes are not abundantly present and the heterophil agglutination reaction is negative. Whenever there is an associated purpura with or without anemia, the diagnosis of infectious mononucleosis may be only lightly entertained, since these findings are more usually regarded as secondary manifestations of a leukemic process. Recently, we have had the opportunity to observe two patients with infectious mononucleosis, both of whom presented themselves with acute thrombocytopenic purpura as the major symptom. Since rather few instances of infectious mononucleosis with thrombocytopenic purpura have been recorded, the added description of our two cases may be of interest.

Case Reports

Case 1.—A seven-year-old schoolgirl was examined on January 4, 1949, because of generalized ecchymoses of five days duration. Sore throat, cough, fever, headache, and vomiting were noted on December 27, 1948. Examination revealed an ill-appearing child with an oral temperature of 99.2 F. A striking finding was the presence of multiple ecchymoses on the arms, thighs, iliac crests, and legs, varying in diameter from $^1/_2$ to 3 inches. There were, in addition, multiple purpuric spots on the thighs. Nontender lymph nodes, measuring $^1/_4$ to $^1/_2$ inch in diameter, were palpable in the neck, axillae, and groins. A nontender liver and spleen were palpable one finger below the costal margin on deep inspiration. A grayish-white membrane was present on the throat.

During the following two weeks, the hemorrhagic manifestations gradually faded, and no new lesions were evident. The spleen was no longer palpable after January 21.

Laboratory studies on January 4, 1949, showed the following: 12.5 Gm. hemoglobin (photoelectric method); 4,660,000 red blood cells; 12,600 white blood cells; polymorphonuclear leukocytes 17 per cent; lymphocytes 30 per cent; monocytes 2 per cent; eosinophils 1 per cent, and atypical lymphocytes, such as are usually seen in infectious mononucleosis, were 50 per cent. Only an occasional platelet was seen on the stained blood films. The bleeding time (Duke) was longer than eight minutes on two tests, the clotting time (Lee and White) was nine, ten and one-half, and twelve minutes on three tests. No clot retraction was evident at the end of twenty-four hours. The sedimentation rate was increased to 23 mm. in one hour (Cutler), and the prothrombin time was normal. The blood Wassermann and throat smear and culture for streptococcic and diphtheria were negative. On January 11 the red blood count and hemoglobin were unchanged, but the white blood count was 6,900 with 3 per cent polymorphonuclear leukocytes, 50 per cent lymphocytes, and 47 per cent atypical lymphocytes. The platelets now appeared only moderately reduced in the blood smear. The bleeding time was now one minute and three minutes on two tests, and clot retraction was complete in three hours. All subsequent studies for hemorrhagic tendency were negative. On February 25, the red blood count was 4,850,000; hemoglobin 13.4 Gm.; white blood cells 16,300 with 51 per cent polymorphonuclear leukocytes, 40 per cent lymphocytes, 2 per cent monocytes, 1 per cent eosinophils, and 6 per cent atypical lymphocytes. Platelets appeared in normal numbers on the stained blood films. The Paul-Bunnell test on January 4, 1949, was positive in a final dilution of 1:128. It remained positive in this dilution until March 1, 1949, when it was reported negative.

Case 2.—A twenty-seven-year-old machinist was admitted to the Syracuse Memorial Hospital on February 10, 1949, complaining of anorexia, sore throat, malaise, and bleeding gums of ten days duration. On the previous day he had observed the appearance of numerous small "red spots" over both lower legs. The past history and system review contributed no relevant information. The physical examination showed an oral temperature of 100 F., pulse rate 88, respiration 18, and blood pressure 105/65. Numerous purpuric lesions were noted over the lower legs and back. There was no striking adenopathy. Two conjunctival hemorrhages were noted in the right eye. Purpuric lesions were present in the buccal mucous membrane, the gums, and in the hard and soft palate. The remaining physical findings were insignificant.

Laboratory studies showed the following: hemoglobin 14.3 Gm.; erythrocytes 4,690,000; leukocytes 7,600; polymorphonuclear leukocytes 30 per cent; lymphocytes 60 per cent; monocytes 3 per cent, and atypical lymphocytes 7 per cent. No platelets could be found in the stained blood films. Bleeding time (Duke) was seven and one-half minutes (average of two tests); tourniquet test (Rumpel-Leede, four minutes at 90 mm. Hg) showed six purpuric, spots in a 1-inch circle; clotting time (Lee and White, 8-mm. tubes) was ten minutes. No clot retraction was evident after twenty-four hours. The sedimentation rate and icterus index were normal. The Paul-Bunnell test (February 10 and 16) was positive in a final dilution of 1:256. Cold agglutinins were not demonstrated in the blood serum. Urine examinations and blood Wassermann were negative. Bone marrow biopsy was performed, and the sections showed "numerous megakaryocytes and a normal myeloid and erythroid picture" (Dr. Herman Dick).

Without treatment the purpuric manifestations gradually subsided, and on March 8 the tourniquet test (Rumpel-Leede) was negative. The Paul-Bunnell test showed a doubtful reaction on March 3 and was negative on March 10 and 17. The bleeding time remained prolonged for five weeks, reaching thirteen minutes on March 1 and returning to four minutes on March 15. The clot retraction was very slight in twenty-four hours on March 1 but was good within two hours on March 8. The atypical lymphocytes increased from the level of 7 per cent on February 16 to 51 per cent on March 1 and were no longer evident on March 15. The platelets remained markedly decreased for about five weeks and were still found to be moderately reduced on March 15. Anemia never developed. A final examination on May 18 disclosed no hematologic abnormalities, and the patient declared himself asymptomatic.

Comment

As recently as 1922, Longcope, discussing the differential diagnosis between leukemia and infectious mononucleosis, stressed the absence of anemia and purpura in the latter and the relative frequency with which one might expect to find them in leukemia.[1] Blackfan supported this belief, citing his experience with children, while Kracke emphasized the infrequency of purpura and anemia in infectious mononucleosis.[2,3] In 1923, Downey and McKinlay described a purpuric eruption of insignificant degree in two cases, one being confined to the oral mucous membrane, the other generalized.[4] The purpura was not explained, and the absence of anemia was stressed. Cottrell subsequently described petechiae on the palate in one case in 1927.[5] Tidy and Williams recorded Williams' own illness four years later, during which he exhibited purpura and a markedly positive tourniquet test.[6] The bleeding time was prolonged, and Williams theorized that thrombocytopenia might be present, although a platelet count was not done.

To Minot in 1929 should be given the credit for definitely establishing the occurrence of acute thrombocytopenia and anemia in infectious mononucleosis in an article aptly entitled, "A Nonfatal Case Simulating Acute Leukemia with Anemia and Thrombopenic Purpura."[7] This patient was a young man who developed an anemia of 55 per cent hemoglobin (Sahli), 3,300,000 erythrocytes, and 12,000 leukocytes, 75 per cent of the cells being pathologic lymphocytes. The platelet count was 25,000 per cu. mm. The blood clotted normally, but the clot was soft and friable and did not retract in twenty-four hours. He added three more probable cases of infectious mononucleosis with thrombopenic purpura in 1936, in only one of which was the heterophil agglutination test done, with negative findings.[8] Of some significance in each case was the fact that anemia became so profound that transfusions with whole blood were required, one patient receiving nine transfusions in ten days. The bleeding ceased in all cases in ten to twelve days.

In 1942, Magner and Brooks described the first case of infectious mononucleosis with thromobcytopenic purpura in which the Paul-Bunnell test was significantly positive.[9] Subsequently, single case reports with positive Paul-Bunnell tests have been reported by Tager and Klinghoffer, Lloyd, Dameshek and Grassi, and Custer and Smith.[10–13]

Studies of the bone marrow in infectious mononucleosis with thrombocytopenic purpura were first described by Lloyd who noted the presence of numerous atypical mononuclear cells, although he made no comment regarding the megakaryocytes and platelet formation.[11] Dameshek and Grassi's case is of unusual interest because of the uncontrolled bleeding despite repeated transfusions, recovery occurring only after emergency splenectomy.[12] The bone marrow in their case showed a slight increase in lymphocytes, normal islands of nucleated red blood cells and granulocytes, and increased numbers of megakaryocytes showing diminished platelet production.

Our two reported cases of infectious mononucleosis with thrombocytopenic purpura make the published total seven if diagnosis is restricted to those showing a positive heterophil reaction. The prognosis is usually excellent, once the diagnosis of infectious mononucleosis is established and leukemia definitely eliminated. In some instances, however, bleeding has been such a menace to life as to require multiple transfusions, and, in fact, emergency splenectomy has been performed at least once as a lifesaving procedure.

It seems important to emphasize the fact that the old dictum regarding the association of anemia and thrombocytopenic purpura as indicating probable leukemia is no longer tenable, since several cases with these findings have definitely been proved to be benign infectious mononucleosis. The exact mechanism of the thrombocytopenia in infectious mononucleosis is not entirely clear, although temporary hypersplenism may be the likely explanation. Although several of the reported cases required transfusions because of the anemia secondary to the purpura, in neither of our cases was it necessary to resort to this, since anemia did not develop and the purpura was not an urgent therapeutic problem.

Summary

Two additional cases of infectious mononucleosis with associated thrombocytopenic purpura and positive heterophil agglutination tests are described, bringing the total number of cases of this type to seven.

Even though purpuric manifestations were extensive and alarming, both patients recovered spontaneously without specific therapeutic measures.

Despite the rarity of their association, acute thrombocytopenic purpura may be the presenting manifestation of infectious mononucleosis, a fact not generally appreciated.

We are indebted to Drs. John Settineri and John W. Rowlingson for the privilege of studying these patients.

508 State Tower Building

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INTRAVENOUS QUINIDINE: SUCCESSFUL USE IN A CASE OF PAROXYSMAL VENTRICULAR TACHYCARDIA COMPLICATING ACUTE POSTERIOR WALL MYOCARDIAL INFARCTION

Milton R. Beyers, M.D., and Gerald J. Fisher, M.D., Brooklyn, New York

(*From the Medical Service of Kings County Hospital*)

EXCEPT in those relatively rare benign cases with no demonstrable cardiac pathology, paroxysmal ventricular tachycardia is indicative of severe ventricular muscular damage, such as diffuse fibrosis, myocardial infarction, and digitalis toxicity.[1,2] It is particularly common in the course of acute myocardial infarction and, when it does arise, presents a true medical emergency.[3] If allowed to persist unabated, the decreased diastolic filling resulting from the tachycardia is often enough to throw the already severely damaged myocardium into irreversible failure. Continued paroxysmal ventricular tachycardia may also be the precursor of fatal ventricular fibrillation.[4]

Quinidine, by virtue of its marked depressant action on the cardiac musculature, is considered by many authorities as the drug of choice in the treatment of ventricular tachycardia.[5-7] The majority of reports to date have been concerned with the use of oral quinidine. We wish to present a case of acute posterior wall myocardial infarction with paroxysmal ventricular tachycardia successfully treated with intravenous quinidine lactate (Lilly).

Case Report

D. D., a fifty-four-year-old white man, was admitted to Kings County Hospital on April 29, 1949. At approximately 9:30 that evening, "three hours after a very heavy meal," while playing cards, the patient stated that he was having difficulty in breathing and that "the air was stuffy." Shortly thereafter, he began to vomit the previously eaten meal, complained of pressing precordial pain and weakness, and appeared to be very pale and sweating profusely. He was seen within twenty minutes by an ambulance physician who made a diagnosis of myocardial infarction, administered morphine sulfate 1/4 grain subcutaneously, and admitted the patient to the hospital.

Physical examination revealed an acutely ill, pale, cyanotic, semicomatose, moribund, well-developed, well-nourished white male, lying in bed in the orthopneic position and vomiting undigested food particles every twenty to thirty minutes. The radial, carotid, and temporal pulses were not palpable, and the blood pressure was unobtainable. The temperature was 98.4 F., and respirations were 34. The physical findings of note were confined to the chest. The lungs were clear to percussion and auscultation. Examination of the heart revealed no palpable apical beat. The borders of the heart were not percussible, probably due to marked gastric dilatation. The heart rate was approximately 200 per minute, and there was a definite gallop rhythm heard most distinctly in the fourth and fifth intercostal spaces, 2 cm. to the left of the left sternal border. The heart sounds were of poor quality, and the aortic second sound was of greater intensity than the pulmonic second sound. There were no thrills or murmurs. There was no hepatomegaly and no peripheral edema, and the patient was arreflexic.

Oxygen therapy and a slow infusion of 150 cc. of plasma were started immediately. An electrocardiogram taken at 10:45 P.M. revealed ventricular tachycardia with a rate of 200 per minute (Fig. 1A). Because of the patient's moribund condition and the known consequences of ventricular tachycardia complicating myocardial infarction, it was decided to use intravenous quinidine lactate.* At 11:50 P.M., 2 cc. of the undiluted quinidine lactate solution (equivalent to 2 grains of quinidine) were given intravenously while a continuous direct-writing electrocardiogram was running. Forty seconds after the injection, the electrocardiogram revealed a ventricular rate of 90 per minute with several normal sinus beats interspersed with multifocal ventricular extrasystoles (Fig. 1B). At 11:55 P.M. the ventricular tachycardia resumed, and, therefore, another 2 cc. of quinidine lactate were given intravenously five minutes later. By 12:03 A.M. (April 30) the ventricular rate had dropped to 60 per minute, and there was a regular sinus rhythm with

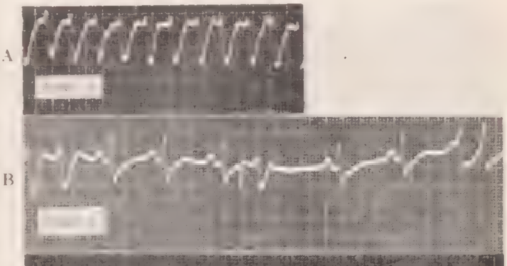

Fig. 1. (A) Ventricular tachycardia, rate 200. (B) Forty seconds after first injection: normal sinus beats with multifocal ventricular extrasystoles. (C) Three minutes after second injection: regular sinus rhythm with numerous extrasystoles; QT pattern of posterior wall infarction. (D) Eight minutes after third injection: normal sinus rhythm with occasional extrasystoles.

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* The intravenous preparation is supplied in ampules, each containing 0.65 Gm. of quinidine lactate dissolved in 10 cc. of saline.

numerous ventricular extrasystoles (Fig. 1C). By this time a definite QT pattern of posterior wall infarction was noted in standard lead III. At 12:12 A.M., because of the occurrence of very frequent ventricular extrasystoles, another 2 cc. of quinidine lactate were given intravenously. Eight minutes after this (12:20 A.M.) the electrocardiogram revealed a regular sinus rhythm with a rate of 54 per minute and occasional ventricular extrasystoles (Fig. 1D). At 4:00 A.M. the blood pressure was obtainable for the first time and was 90 mm. Hg systolic and 70 mm. Hg diastolic. The electrocardiogram was unchanged.

At 9:00 A.M. (April 30) the patient was sitting up in bed and asking for breakfast. The blood pressure was 90/70 and the pulse 72 per minute. The electrocardiogram remained the same as that taken at 4:00 A.M. During the remainder of his hospital stay the patient was maintained on bed rest, mild sedation, and oral quinidine sulfate, 3 grains four times a day. Repeated electrocardiograms revealed persistence of the posterior wall infarction pattern, with regular sinus rhythm and occasional ventricular extrasystoles, and a ventricular rate of 64. The patient made an uneventful recovery and was discharged on May 27 to convalesence at home on a daily maintenance dose of oral quinidine sulfate, 3 grains three times a day.

Comment

Intravenous quinidine has been used previously in the treatment of paroxysmal ventricular tachycardia. Hepburn and Rykert reported its successful use in eight of nine cases of this arrhythmia, employing a slow intravenous drip of 50 to 60 grains of quinidine sulfate dissolved in 500 cc. of 5 per cent glucose.[8] Herrmann and Hejtmancik used quinidine by the intravenous route in two cases of myocardial infarction with ventricular tachycardia.[1] One of these cases responded favorably to intravenous quinidine sulfate, given as Hepburn and Rykert did in their series, after three days of unsuccessful therapy with intravenous morphine and oral quinidine. Their other patient was admitted in shock and failed to respond to the intravenous administration of 0.6 Gm. of quinidine sulfate which had been dissolved in 10 cc. of distilled water. In our case, we used the undiluted prepared ampule of quinidine lactate (Lilly) in doses of 2 cc. (2 grains) every ten to fifteen minutes, the number of doses depending upon the patient's condition.

Katz has stated that quinidine by the oral route exercises its maximum effect in two to four hours, whereas intravenous quinidine produces its effects in one-half to one and one-half hours.[7] In our case, as in several others as yet unreported, the effects of intravenous quinidine were demonstrable electrocardiographically in less than sixty seconds.[9]

Because of the striking, apparently lifesaving action of intravenous quinidine in the case presented above, we feel that this mode of administration should be employed more widely in those instances in which it is imperative to terminate a ventricular tachycardia.

Summary

1. A case of acute posterior wall myocardial infarction with paroxysmal ventricular tachycardia is reported.

2. Quinidine lactate was employed by the rapid intravenous route in this case because of the patient's moribund condition. An immediate favorable response was obtained.

3. It is suggested that this mode of therapy be more widely employed in similar cases.

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THE CLINICAL MANAGEMENT OF THE ANEMIAS OF PREGNANCY

Hemoglobic content and erythrocyte count are normally lower in pregnant women because the 25 per cent increase in blood volume during gestation is entirely due to plasma content. In such cases, bone marrow studies have shown that erythropoiesis remains normal, whereas in true anemias there is a primary bone marrow disorder or bone marrow response to the alterations in the peripheral blood. Where the physiologic anemia of pregnancy alone exists, administrations of iron, liver, copper, and allied drugs is useless and may actually do harm. On the other hand, the true anemias increase the hazards of pregnancy and childbirth. These facts underline the importance of accurate differentiation and treatment.

The use of blood transfusions, where indicated, as a therapeutic agent in the anemias of pregnancy is recommended, but complications can be avoided only by adequate teamwork among physician, nurse, and laboratory technician in seeing to it that correctly typed blood is properly administered in sufficient quantity.—*John R. Wolff, M.D., and Louis R. Limarzi, M.D., American Practitioner, April, 1949*

NORMOGLYCEMIC GLYCOSURIA BECOMING DIABETES MELLITUS

JULIUS POMERANZE, M.D., New York City

(From the Second Medical Service, City Hospital)

RENAL glycosuria is defined as a benign condition characterized by the excretion of glucose in the urine in the presence of a blood sugar constantly within normal limits. The capacity of the renal tubules to reabsorb glucose is deficient. This is comparable to the state produced by the injection of phlorizin.[1] After the administration of glucose the blood sugar rises no further than normal and sinks again to the normal concentration within the usual time. This indicates that the utilization of glucose by the tissues is probably unimpaired. Glycosuria, however, begins when the blood sugar level reaches 140, 130, or even 110 mg. per cent. In severe cases glycosuria may be present even when the blood sugar is at or below the normal postabsorptive concentration. Many observers limit the term "renal glycosuria" to this group.

A review of the literature reveals a marked variation in the reported incidence of normoglycemic (renal) glycosuria. Study of 28,000 consecutive cases of glycosuria in Joslin's clinic revealed only 75 cases of renal glycosuria.[2,3] Friedman in a much smaller clinic easily found five cases for study of renal function.[4] A report by Smith and Smith cited only three cases to point out the differentiation of normoglycemic glycosuria from diabetes mellitus.[5] The largest part of these differences is undoubtedly due to varying diagnostic standards. A proper appraisal of the significance of glycosuria necessitates determination of the rates of glomerular filtration and tubular reabsorption as well as concentration of blood sugar.[6]

The emphasis in most reports is on warning against mismanagement of these cases by classification as diabetics and treatment with restricted diets and sometimes insulin.[3,5] It is generally considered that treatment with restricted diets is not indicated in renal glycosuria. On the other hand, numerous examples have been cited of patients whose glycosuria with normal blood sugars was ignored and who later returned with frank diabetes mellitus.[7]

Whether or not the renal glycosuric is a potential diabetic is controversial. This is easily explained by the lack of uniformity of diagnostic criteria, the inadequacy of knowledge of renal function and its metabolic implications, and the lack of lengthy follow-up of many of these cases. Marble, after defining renal glycosuria, says "...the occurrence in the same family group of an individual with diabetes mellitus, of another with renal glycosuria, and perhaps others with transient or cyclic glycosuria is enough to make one wonder as to the possible association of the various types."[3]

This paper presents a case of normoglycemic glycosuria which became diabetes mellitus. It is desired to emphasize the equivocal nature of the diagnosis of renal glycosuria and the danger in not considering these cases as potential diabetics. Glycosuria, even if found on only one occasion, is important.[8]

Case Report

N. W., a twenty-eight-year-old white woman, was first observed for glycosuria in January, 1934, at the age of fourteen in Binghamton, New York.

She suffered an infection of the eyelids and both axillas following an attack of "grippe." There had been no polyuria or nocturia and no loss of weight or appetite. The family history disclosed marked obesity but no diabetes mellitus. A 4 plus glycosuria and a 230 mg. per cent postprandial blood sugar was reported. She was given a diet of 70 Gm. of fat, 90 Gm. of protein, and 120 Gm. of carbohydrate. Four weeks later, the blood sugar one hour after breakfast was reported as 98 mg. per cent and one hour after lunch 138 mg. per cent. Repeated urine examinations during the next nine months revealed glycosuria varying from negative to 4 plus. Blood sugars done repeatedly during this time, chiefly after breakfast, ranged from 69 mg. per cent to 105 mg. per cent. At the end of this period all dietary restrictions were lifted.

The next examination was done in Paris in 1936. The fasting blood sugar was 95 mg. per cent. The urine showed a trace of sugar.

During July, 1936, the patient developed an acute parotitis. The fasting blood sugar at that time was 111 mg. per cent.

On January 16, 1943, the patient suffered an acute appendicitis necessitating operative removal. The fasting blood sugar was 86 mg. per cent, and there was a trace of sugar in the urine. The postoperative course was uneventful, and the wound healed by primary intention.

On January 2, 1945, the patient delivered a 7 pounds, 3 ounces baby, three weeks prematurely induced. Induction of labor was considered necessary because of a severe toxemia of pregnancy—hypertension, albuminuria, and marked edema. Following delivery all of these symptoms and signs disappeared. There was at no time a glycosuria.

On March 6, 1947, the patient delivered a 9 pounds, 5 ounces female child. Labor was prematurely induced for toxemia of pregnancy. There was no glycosuria, and the blood sugar was reported within normal limits.

On September 12, 1947, the patient consulted her physician because of increasing fatigue and severe pains in the left leg. The fasting blood sugar was 187 mg. per cent, and there was a 3 plus glycosuria. The diet was immediately restricted, and insulin was started. On a mixture of 20 units of regular insulin and 10 units of protamine zinc insulin, the patient now spilled less than 10 Gm. in twenty-four hours. However, the fasting blood sugar remained high, between 200 and 250 mg. per cent with a negative urine.

In August, 1948, blood chemistry studies showed interesting changes indicative of liver dysfunction. Total cholesterol was 362 mg. per cent. The cephalin flocculation test was 2 plus in forty-eight hours. The thymol turbidity was 8.4 and the quantitative van den Bergh 1.2. The patient was started on a high protein, low fat diet and given a high vitamin intake including large amounts of choline, methionine, and inositol. One year later, the blood chemistries showed marked changes, as reported elsewhere.[9] Total cholesterol was 214 mg. per cent. The thymol turbidity was 4.1, and the cephalin flocculation test was negative. The quantitative van den Bergh was 0.22.

Comment

This case which fairly closely met the rather rigid criteria for renal glycosuria of Smith and Smith developed a true severe diabetes mellitus.[5] Previous to this there had been two toxemias of pregnancy. Subsequently, chemical evidence of liver dysfunction was found. Earlier recognition of the disease could have prevented these complications and the severity of the disease.

Diabetes mellitus is not a disease of glycosuria and hyperglycemia alone. These are only a few manifestations of a metabolic disorder extending into every organ and tissue, leaving pathologic changes in its wake. One may indeed postulate a remote metabolic defect which may touch first at the point of least resistance in the individual body—the kidney, the liver, the arteries, the pancreas, or whatever organ is most susceptible. The first symptom of the disease depends on the organ affected first. It may be that in renal glycosuria the initial sign of a metabolic disorder is failure of the enzymatic process of glucose reabsorption. There are so-called prediabetic manifestations: toxemias of pregnancy, large and malformed babies, peripheral neuropathy, obesity, impotence, recurrent skin infections.[9-14] Polyuria and nocturia may be warnings long before the glycosuria and hyperglycemia are discovered. Patients with early diabetes often show abnormal glucose tolerance curves which temporarily, and sometimes for long periods, revert to normal. Glassberg has labeled this recurrent diabetes.[15] This is really a true diabetes mellitus masked by a normal glucose tolerance curve.

A nutritional factor is in some way related to the degenerative changes in diabetes mellitus. Meticulous chemical control is still the best prophylaxis. Mellituria at any time provides a warning of a probable metabolic disturbance. This warning must be respected and treated from a nutritional point of view, according to our present evolving concept. It would be well to classify a patient with glycosuria, especially with a family history of diabetes and/or pathology usually associated with diabetes, as a potential diabetic.

This patient should be brought to a proper weight for age, habitus, and occupation and should be maintained at this with a suboptimal diet low in fat and with supplementary vitamin and mineral intake. Observation of this patient must be maintained for a lifetime.

Summary

1. A case of normoglycemic glycosuria is presented which evidenced itself as a true diabetes mellitus fourteen years later.
2. In the intervening period, this patient suffered two toxemias of pregnancy, bore two large babies, and developed a peripheral neuropathy prior to the onset of the "true" diabetes mellitus.
3. Evidence of liver dysfunction was found after the onset of the diabetes mellitus.
4. It is suggested that the anticipation of the renal glycosuria, the toxemias of pregnancy, and the large babies as diabetic manifestations and their early treatment might have prevented the present severity of the diabetes and the probable concomitant complications.

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FROM ENGLAND

The banks report a big demand from housewives for silver threepenny-bits for their Christmas puddings. People are finding they work out cheaper than raisins.

• • •

Applicants for secret service work should note that false beards cannot yet be obtained through the National Health Service.

• • •

The Government is determined to stop people buying food parcels from Ireland. It is expected that everything short of increasing the rations will be tried.

—*Punch, November 16, 1949*

SUPPURATIVE ECTOPIC KIDNEY WITH ABDOMINAL FISTULA

Sidney Grossman, M.D., F.A.C.S., and Richard D. Felmus, M.D., New York City

(From the Surgical Service of Bronx Hospital)

THE purpose of this article is to emphasize the unusual complications which may arise from ectopic kidneys. Although reports of ectopic kidney are not unusual, the authors believe that the following case is of sufficient interest to be reported.

Case Report

A. A., twenty-three-year-old white man, was first admitted to the Bronx Hospital on February 23, 1945. The patient had had an appendectomy in 1932. He developed intestinal obstruction due to adhesions in 1939 and was operated upon. Two weeks later, the patient developed a residual abscess in the right lower quadrant which was opened. There was a long convalescence, and the patient was apparently well until February 22, 1945, when he was awakened at 4:00 A.M. with severe lower abdominal pain associated with nausea. The patient took orange juice and vomited. The pains became very severe in the suprapubic region. There were no urinary symptoms. A small bowel movement resulted with an enema.

The patient's temperature was 102 F., and he appeared acutely ill. A large, ovoid mass was palpated in the suprapubic region, extending from the pelvis to the umbilicus and producing a rounded, distended appearance in the lower abdomen. There was an old, healed scar in the right lower quadrant site of the previous operation. The mass was tense and cystic. Bladder catheterization produced 500 cc. of clear urine, but the mass persisted. Rectal examination was essentially negative. The mass was relatively fixed in the pelvis and was felt abdominally. Admission diagnosis was (1) intestinal obstruction due to recurrent postoperative adhesions and (2) retroperitoneal cyst.

Laboratory data were as follows: Urine on February 23 was cloudy with specific gravity of 1.016 and alkaline, 1 plus acetone, 5 to 10 white blood cells per high power field, and a trace of albumin. Three days later, on February 26, the urine was loaded with red blood cells, 3 plus albumin, and 2 plus acetone with a specific gravity of 1.026.

An exploratory laparotomy was done on February 23 through a midline incision from the symphysis pubis up to and beyond the umbilicus. A few omental bands and adhesions were readily separated. The intestines were collapsed. In the midline retroperitoneally there was a large cyst which extended from the umbilicus down to and over the promontory of the sacrum and for a short distance into the pelvis. The right kidney was palpated and found in normal position. The left kidney could not be found. Posteriorly, the cyst was fixed, extending to both sides of the midline and intimately adherent to the aorta and vena cava. The right ureter was demonstrated, but the left ureter could not be found. It was believed that a retroperitoneal cyst had developed in the course of a congenitally anomalous kidney. The cyst was aspirated, and clear watery fluid, slightly blood-tinged, was obtained (150 cc.). The cyst was too firmly attached posteriorly so that it was deemed expedient to do a marsupialization. The cyst was opened, the inside being velvety, red, smooth, and multilocular. The index finger in the cyst encountered large vessels intimately adherent to the posterior aspect. Biopsy of the wall was taken, and the cavity was packed. The wall was then sutured through an opening in the mesentery to the peritoneum, and the remainder of the peritoneal cavity was closed, catching the cyst wall at each angle. The fascia was closed down to the marsupialized area above and below with interrupted chromic catgut sutures.

The pathology report was as follows: Gross pathology—specimen is a flat hemorrhagic portion of tissue measuring 4 by 2 cm. Microscopic diagnosis—section consists of hyalinized, hemorrhagic fibromascular tissue which is infiltrated with round cells.

The area continued to drain a slightly blood-tinged, profuse discharge. Two tubes were introduced into the cavity. The drainage lessened considerably. The tubes were removed, and the patient was discharged on March 20 with the wound healed except in the center of the marsupialization where there was a moderate, thin, watery discharge.

The patient was readmitted on April 10, 1945, with a draining sinus tract in the abdomen. Daily irrigations were done with acriflavine 1:4,000 into the sinus tract. Drainage was profuse and cloudy in appearance. Culture showed Staphylococcus aureus. On April 10, the urine was loaded with red and white blood cells; specific gravity was 1.020, alkaline with no albumin. Red blood cells numbered 4,500,000; hemoglobin was 88 per cent, white blood cells 8,000, polymorphonuclear leukocytes 62 per cent, lymphocytes 28 per cent, and monocytes 5 per cent. Bleeding time was one and one-half minutes; coagulation time was three minutes.

On April 25, 1945, removal of ectopic left kidney was done under spinal anesthesia. A pelvic kidney was found which had degenerated and formed a large pus sac extending from the fourth lumbar vertebra to the fifth sacral segment. A sinus tract connected this mass to the abdominal wall. The mass was separated from the aorta, the iliac vein, and the inferior vena cava to which it was intimately attached.

This specimen was reported as follows: Gross pathology—specimen consists of an evacuated cystic piece of tissue measuring 7 by 4 cm. received open. Also received is a piece of tissue measuring 3 by 2 cm. which appears to be kidney. This shows no gross pathology. The first piece of tissue shows a hyperemic wall. Microscopic diagnosis—section of the kidney reveals considerable extensive damage to the parenchyma. Many of the glomeruli are congested. Some are completely hyalinized. There is encroachment on Bowman's space. The convoluted tubules present cloudy swelling and some degeneration. Many of the lumina contain hyaline and cellular material. The stroma has diffuse and focal infiltration with round cells. Another section apparently represents the wall of a cyst. This consists of hyalinized edematous areolar and adipose tissue. Some round cell infiltration is present.

Postoperative course was uneventful; the patient was discharged in good condition, but there was a slight amount of drainage from the wound.

The patient was admitted for the third time on June 9, 1946, with a draining sinus tract of the abdomen midway between the umbilicus and the pubic symphysis. On June 12, exploration of the sinus tract was done under spinal anesthesia. The sinus tract extended about 7 cm. This was excised. It was cartilaginous in character. The sinus was carbolized and treated with alcohol. It was packed with iodoform gauze and left open.

One week postoperatively, a fecal fistula developed. Cystogram study showed no abnormality. The right kidney and ureter were well visualized. Small intestine study showed a small projection of barium, springing from a loop of ileum lying anterior to the lumbosacral junction and extending downward and to the left. This suggested the sinus tract in view of the consistency of this finding over a period of sixty minutes. Barium enema showed no organic lesion of the colon.

On August 23, 1946, the patient was operated on again under spinal anesthesia supplemented with pentothal sodium and gas-oxygen. An elliptic incision was made from above the umbilicus downward, surrounding the umbilicus and fistulous opening in the midabdomen. The incision was deepened above the umbilicus and the abdomen entered in that region. Adherent omentum was separated from the old incisional scar and the elliptic flap removed, leaving it attached to the fistulous tract. The latter led to a loop of terminal ileum about 10 cm. from the ileocecal junction. Dense adhesions in this area were separated. It was found that the distal sigmoid was also attached to the wall of the fistulous tract but apparently did not communicate with it. At the point where the fistulous tract entered the ileum the former seemed to attach itself to a cystic mass about 6 cm. in diameter. This was retroperitoneal, lying anterior to the distal end of the aorta just above the bifurcation. The small bowel was then cut away from the fistulous tract where it was seen to be attached to a small opening. This opening was closed with purse-string sutures which encroached upon the lumen. The sigmoid was then dissected away from its close proximity to the sinus tract, and at this stage the cyst was inadvertently opened. It was found to be multilocular and lined with many folds of mucosa, resembling intestine. About 30 cc. of milky, mucoid-like substance which had no apparent odor was spilled. The cyst was then dissected away from the iliac vessels, and the raw area thus left behind was peritonealized, except at its lower end where a rubber dam drain was inserted. The sigmoid was inspected and found to be undamaged.

An ileoileostomy was then done on the terminal ileum surrounding the place previously sutured, because on inspection it was felt that the lumen of the bowel might have been compromised. The abdomen was closed with number 1 catgut sutures reinforced with steel wire sutures through all the layers but the skin. The latter was closed with clips.

Postoperative course was uneventful. The wound healed by primary union. The patient was discharged well on the fifteenth postoperative day.

Follow-up of the patient on October 11, 1948, revealed that he had gained 40 pounds and had no urinary symptoms. Appetite was good, and general condition was very satisfactory.

Summary

A case of suppurative ectopic kidney with abdominal fistula is reported. When the cyst was first discovered on the operating table, it was treated by marsupialization. Subsequently, a fecal fistula developed which, we believe, may have been due to the effects of the phenol application into the sinus tract or may have occurred as a result of the inflammatory disease process of the cyst on the adjacent bowel.

The case presented a problem in differential diagnosis and in the seriousness of the complications that arose from the condition due to the proximity of the cardinal blood vessels.

1112 Park Avenue
315 East 167th Street

SUPPLY OF PHYSICIANS

The Council on Medical Education and Hospitals of the American Medical Association has made a study to determine the comparative enrollments in approved medical schools during the forty years since 1910, when the Council published its first list of approved medical schools.

This study reveals that in 1910 there were 66 class A medical schools with a total enrollment of 12,530 students; in 1920, there were 70 class A medical schools with a total enrollment of 12,559 students; in 1930, there were 76 approved medical schools with a total enrollment of 21,597; in 1940, there were 77 approved medical schools with a total enrollment of 21,271; in 1950, there are 79 approved medical schools with an estimated total enrollment of 24,800 students.

These data clearly show that the opportunities to study medicine in approved medical schools have practically doubled in the last forty years and have more than kept pace with the growth in population.

The number of physicians per 100,000 population in the United States declined from 149 in 1909 to 125 in 1929. Since 1929, the ratio has steadily risen to 137 in 1949. These new data, showing the increasing number of students enrolled in approved medical schools, reveal clearly that the decline in the physician-population ratio from 1909 to 1929 was due entirely to the closing of substandard medical schools. A physician-population ratio that included only physicians who were graduated from approved medical schools would reveal a steadily rising trend in the past four decades.

Even the poorest of the approved medical schools today have better staffs and facilities than most of the approved medical schools of thirty or forty years ago, and the leadership of the medical profession and the medical colleges has resulted in the training of a greatly increased number of well-qualified physicians to serve the American people.—*A.M.A. News Release, February 10, 1950*

CARCINOSARCOMA OF THE UTERUS

Milton J. Goodfriend, M.D., and Bernard Lapan, M.D., New York City

(From the Departments of Obstetrics and Gynecology and Gynecologic Pathology, Lebanon Hospital)

THE literature of the past sixty years or more contains only 42 authentic cases of coexisting carcinoma and sarcoma of the uterus, in addition to approximately 22 doubtful ones.[1] Over eighty published papers on the subject are listed in the references of Lisa and his associates.[1,2]

Saphir and Vass reviewed the topic of carcinosarcoma in general.[3] Of 153 cases, in their detailed review of the world literature from 1893 to 1938, the largest number (36) were in the uterus, two in the tube, seven in the ovary, and 32 in the breast. They believed, however, that only three or four could be designated as true carcinosarcomas, the remainder being considered probable carcinomas with atypical features. The incidence and other statistical features of multiple, primary, malignant tumors have been reviewed by Warren and Gates.[4] They found that multiple occurrence is more frequent than can be explained on the basis of chance.

Because of the rarity of carcinosarcoma of the uterus and its interest as a pathologic entity, we are reporting an additional case with clearly defined features which was followed closely from the original biopsy through operation and autopsy. It is the first such case observed at our institution in a period of at least thirty years.

Case Report

R. P., age sixty, was admitted on October 22, 1948, with the chief complaint of profuse vaginal bleeding and lower abdominal pain. Four weeks before admission, she began to "stain" vaginally and developed lower abdominal cramps. Five days before admission, she was seen by her family physician who found and removed what she called a "cervical polyp." The bleeding became constant, and at the time of her admission to the hospital it was profuse in spite of vaginal packing.

Family history and past medical and surgical history was not unusual. The patient's menarche was at twelve years of age, with normal cycles until her menopause at age fifty-two. There was no abnormal bleeding prior to the present episode. She was a gravida II, Para III with two normal deliveries twenty-seven and twenty-nine years prior to admission.

On general physical examination, there was marked obesity and moderate rigidity in the lower abdomen. Vaginal examination showed a uterus enlarged to the size of an eight weeks gestation. The cervix was patulous, and protuding from it there was a large, degenerating, foul-smelling tumor mass.

Biopsy.—In the operating room, on October 23, 1948, attempts to grasp the tumor resulted in its fragmentation into several large masses which were sent to the laboratory for examination. The cervical canal was packed, and hysterectomy was postponed because of the poor general condition of the patient and to furnish an opportunity to replace blood loss. A diagnosis of carcinosarcoma was made by the pathologist (Dr. J. C. Ehrlich). The microscopic sections showed distinct areas of spindle cell sarcoma and adenocarcinoma along with areas showing both.

Operation.—On October 28, 1948, a hysterectomy and bilateral salpingo-oöphorectomy were performed. Because of dense adhesions between the posterior surface of the cervix and the rectum, a small portion of the cervix was left attached to the serosa of the rectum. The postoperative course was not unusual, and the patient was discharged on the ninth day after operation.

Pathology Report.—Gross: "Specimen consists of a supracervically amputated uterus with tube and ovary attached. The other ovary is received separately. The uterus measures 7 cm. in length and 7 by 3 cm. in width and depth (Fig. 1). The endometrial cavity contains a large irregular polypoid tumor with areas of necrosis on the surface. The region of attachment is over the roof of the endometrial cavity. On section, the appearance varies from white to gray and reddish-brown. Typical invasion of the wall of the uterus can be recognized macroscopically."

Microscopic Findings: As in the original specimen the tumor tissue was found to be composed of large masses of sarcoma, spindle cell type, with some areas showing unusual atypism of the nuclei; in addition, there were large zones of adenocarcinoma and portions showing commingling of both tumors. Several sections showed squamous cell metaplasia of the adenocarcinoma. It was noted that sections from one side of the tumor consisted of adenocarcinoma (Fig. 2A), those from the opposite side consisted of sarcoma (Fig. 2C), and those taken from the central portion were mixtures of both (Fig. 2B).

Readmission.—The patient received a series of deep x-ray treatments over a period of four weeks after discharge from the hospital. About February 10, 1949, she developed abdominal distention and

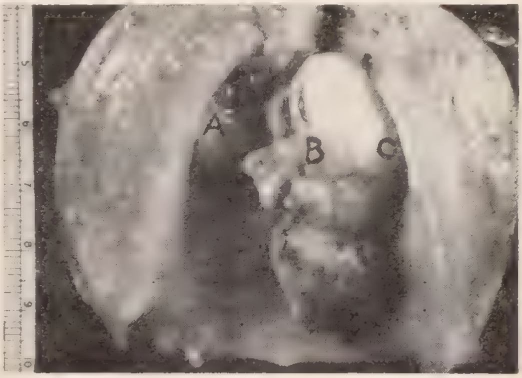

Fig. 1. The opened uterus showing the large, pedunculated tumor mass infiltrating the myometrium and filling the endometrial cavity. The letters A, B, and C indicate the areas from which the corresponding microscopic sections in Fig. 2 were taken.

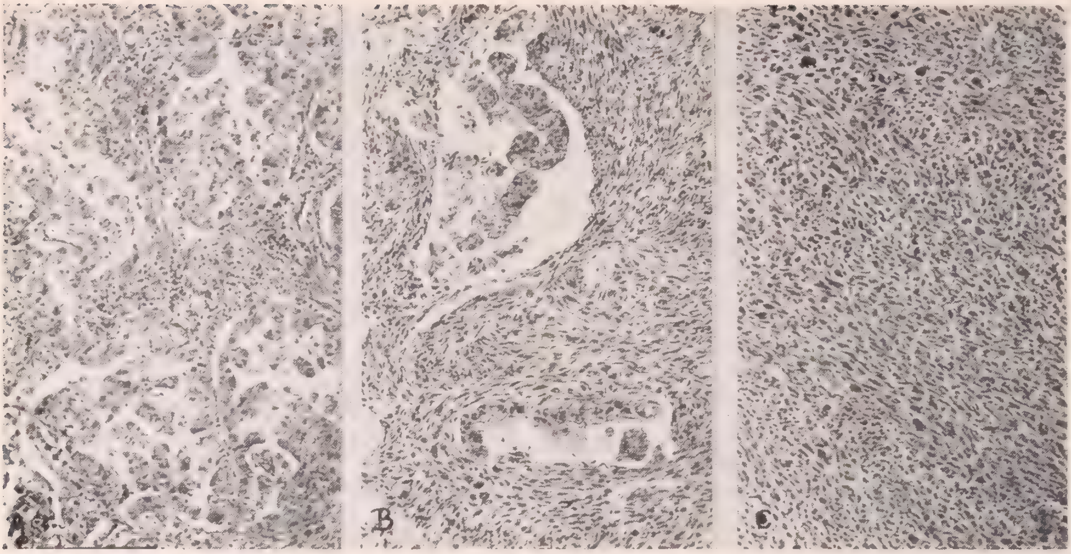

FIG. 2. (A) Distinct adenocarcinoma. (B) "Commingling" adenocarcinoma and sarcoma. (C) Sarcoma.

discomfort, anorexia, and vomiting, which increased up to the time of her second admission to the hospital on March 1, 1949. Examination showed an extreme degree of abdominal enlargement with nodular masses palpable through the abdominal wall. A paracentesis was performed with removal of over 6,500 cc. of clear, yellow fluid. Tumor cells were found in histologic preparations of the fluid. There was some symptomatic relief, but the patient expired three days after admission.

Autopsy Findings.—The abdomen was markedly distended and showed a well-healed midline scar in the lower abdomen and a recent paracentesis wound.

The peritoneal cavity contained about 2,500 cc. of turbid, amber fluid. Innumerable nodules were scattered over the parietal and visceral peritoneum, root of the mesentery, the omentum, and the abdominal surface of the diaphragm. They varied in size from 1 to 15 cm. in diameter. Some were confluent and formed large masses. They were composed of soft, gray tissue which in some areas had a hemorrhagic appearance.

The pleural and pericardial cavities showed no change. There were no pulmonary or mediastinal metastases. A small tumor nodule was adherent to the liver capsule. Numerous adhesions and tumor masses were present in the pelvis.

Microscopic sections of the metastatic masses consisted almost entirely of sarcoma with a few nests of adenocarcinoma. The sarcoma, generally, showed a greater degree of cellular atypism than the primary tumor.

Comment

The microscopic features of this case, as seen in the biopsy, surgical specimen, and autopsy material, have indicated without doubt the coexistence of carcinoma and sarcoma in a "commingling" tumor mass. Study of representative, topographically charted tissue sections showed that the carcinoma arose in one side of the tumor and the sarcoma in the other, with various degrees of mixing between. It is probable, from the gross appearance correlated with the microscopic findings, that the carcinoma arose in the endometrium, while the sarcoma arose in a small submucous fibroid. However, no attempt was made in this case to classify the origin of the sarcoma from muscle or fibrous tissue elements by special stains.

Several sections of the carcinomatous areas showed marked squamous cell metaplasia, while others showed anaplastic characteristics, none of which, however, resembled the sarcoma. It could not be interpreted that the entire tumor represented variations or atypical changes in either carcinoma or sarcoma.

The autopsy findings conform to the experience of previously reporting authors in that the metastases were primarily sarcoma. Apparently, the tendency of sarcoma to metastasize more rapidly and widely than carcinoma permits it to take precedence in regions apart from the primary tumors.

There were no pathognomonic symptoms or signs present in this case. The original presenting features of vaginal bleeding, lower abdominal pain, an enlarged uterus and a protruding cervical mass could be those of degenerating fibromyoma, carcinoma or sarcoma, or a simple cervical or endometrial polyp with degeneration and secondary infection. It should be noted, however, that in Lisa's summary of the previous literature, 17 of the 42 "authentic" cases showed polypoid characteristics of either the carcinoma, the sarcoma, or both. Lisa has conveniently classified the cases as those consisting of two entirely separate tumors of the uterus and those growing together, which he calls "collision" tumors. Our case falls into the second category.

Summary

A case of carcinosarcoma of the uterus is presented in which distinct carcinoma and sarcoma were found to arise from separate areas of the uterus and to grow together. The diagnosis was made on biopsy examination of a protruding "cervical" polyp and confirmed by surgical tissue and autopsy findings. The adenocarcinoma appeared to arise from the endometrium, the sarcoma from a submucous fibromyoma. The metastases were primarily sarcomatous. Leading references to the literature are given on the subject.

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ECZEMATOUS HYPERSENSITIVITY CAUSED BY TOPICAL APPLICATION OF STREPTOMYCIN

William Saunders, M.D., Watertown, New York

(From the Department of Dermatology and Syphilology, New York University-Bellevue Medical Center, Third Medical (New York University) Division, Bellevue Hospital)

RELATIVELY few cases of contact dermatitis have been produced by the topical application of streptomycin if we are to judge by the paucity of clinical reports on this subject. Most of the reported cases have been noted in persons handling the drug. Dermatitis venenata was noted in workers manufacturing the antibiotic.[1] Paine and his group found, in a review of 291 papers on streptomycin, that no reactions were reported following its ingestion, inhalation, or local application.[2] Strauss and Warring, Canizares and Shatin, Rauchweiger, Erskine, and Nalla, and Johnson and Davis have noted cases of dermatitis venenata occurring in nurses, usually after a protracted period of daily contact with the drug.[3-6] The location was usually on the hands and around the eyes. Goldman and Feldman had three cases of contact dermatitis in a total of 300 patients treated with streptomycin ointment.[7] The following case report is that of a patient with a coccogenous infection of the bearded region who developed a contact dermatitis after use of an ointment containing streptomycin.

Case Report

D. H., a twenty-five-year-old salesman, was first seen on March 29, 1949. He had an eruption of the cheeks and chin characterized by erythema, pustules, edema, and crusts of two weeks duration. He had used penicillin ointment with exacerbation after a few days use. He was put on wet dressings and streptomycin ointment. Improvement was noted after three days and continued for about three weeks. At that time there were only a few pustules visible. On April 25, after using a new ointment containing 25 mg. dihydrostreptomycin sulfate in 1 Gm. of hydrophilic ointment base, there developed anew an erythematous, crusted eruption of the chin area. Lanolin was substituted for four days with improvement. At that time he again applied the streptomycin ointment recently used. The crusting was again prominent in one to two days.

Patch tests were done with the hydrophilic base, dihydrostreptomycin sulfate, liquid petrolatum, white petrolatum, penicillin in powdered form, and an ointment containing gramicidin in a water-soluble base. A vesicobullous response was seen at the site of the dihydrostreptomycin sulfate when viewed after forty-eight hours. The other test areas were negative. The patient was then put on the gramicidin ointment, and uneventful recovery ensued after eight days use.

Summary

1. Few cases of dermatitis venenata, or eczematous hypersensitivity to streptomycin applied topically, have been reported.

2. A case is described in which dihydrostreptomycin sulfate in a hydrophilic base, applied topically for a coccogenous beard infection, produced dermatitis venenata.

531–535 Woolworth Building

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MULTIPLE GASEOUS LIVER ABSCESSES DUE TO ANAEROBIC STREPTOCOCCUS VIRIDANS WITH RECOVERY

Ernest M. Fuss, M.D., and Murray Fuhrman, M.D., Kew Gardens, New York

HEPATIC suppurations have been reported in detail by many authors.[1-15] However, there are only three cases on record in which the causal organism was identified as an anaerobic streptococcus. McDonald *et al.* in 1937 described the autopsy findings of a case of multiple liver abscesses and subphrenic abscess, secondary to a perforated duodenal ulcer, from which a nonhemolytic anaerobic streptococcus was isolated.[16] In 1942, St. John *et al.* recovered this organism from a solitary abscess of the right lobe of the liver of undetermined origin.[3] The patient recovered following transpleural drainage. Michel and Wirth found a similar organism in a case of diffuse suppurative hepatitis of obscure origin.[11] The patient ran a stormy postoperative course but eventually responded to penicillin therapy.

In only one instance was a Streptococcus viridans identified. In this case of suppurative hepatitis, reported by Jamieson, the organism was, however, an aerobe.[9] Our case of multiple abscesses appears to be the first on record in which an anaerobic Streptococcus viridans was found to be the causal agent. The case is of further interest because of the unusual and dramatic clinical course during which complete bacteriologic correlation was obtained and also because of the illuminating role played by repeated x-ray studies in the diagnosis and localization of the abscesses, and lastly because of the recovery of the patient following timely surgical intervention, supported by intensive chemotherapy and antibiotic therapy.

Case Report

C. C., a white man, aged forty-three, was admitted on June 7, 1948, with a five-day history of abdominal distress. At operation (E.F.), a ruptured gangrenous appendix with purulent peritonitis was found. Appendectomy with drainage was performed and 10 Gm. of sulfathiazole instilled intraperitoneally. Culture of the pus showed Streptococcus viridans, hemolytic Staphylococcus aureus, and nonhemolytic Staphylococcus albus. The postoperative course was very stormy. Penicillin, streptomycin, and sulfa drugs were administered for three weeks. Deep pelvic abscesses required drainage on the seventeenth, twenty-fourth, and thirty-eighth postoperative days. S. viridans was cultured on each occasion. The patient was discharged on the forty-fourth day apparently recovered.

He was readmitted on September 5 (ninety days after appendectomy) for incision and drainage of a large abscess overlying the descending colon and was discharged seven days later in good condition. S. viridans, S. aureus hemolyticus, and S. albus nonhemolyticus were cultured from the pus.

The patient was again admitted on October 8 (one hundred twenty-six days postappendectomy) with a one-week history of fever, malaise, anorexia, and loss of weight. He had a hacking, unproductive cough of three days duration. Physical and x-ray examinations of the chest and abdomen were essentially negative. Blood count showed the following: hemoglobin 86 per cent; red blood cells 4,200,000; white blood cells 16,000 with 88 per cent neutrophils (81 per cent segmented, 5 per cent staff, and 2 per cent myelocytes), 10 per cent lymphocytes, and 2 per cent monocytes. Repeated chills with a spiking temperature of 106 to 107 F. occurred on the following day. A picket-fence type of fever and severe shaking chills persisted for the next five weeks. The patient was repeatedly irrational and had to be fettered to his bed, and on several occasions he seemed on the verge of exitus.

Repeated physical and x-ray examinations of the chest and abdomen during the first ten days were negative. Even the indirect radiographic findings, commonly seen in liver abscesses, were absent.[17] The persistent hacking cough remained unexplained. The clinical picture was that of a pyemia or septicemia, which was corroborated by three positive blood cultures yielding an anaerobic S. viridans. An intra-abdominal septic thrombophlebitis with extension to the portal vein was considered the most likely diagnosis, but the patient's poor condition obviated any attempt at ligating the portal vein and thoracic duct. The response to large doses of penicillin combined with streptomycin and sulfa drugs was negligible, and repeated whole blood transfusions did not correct the progressive anemia and emaciation. On the ninth day, the liver became palpable and slightly tender and the spleen somewhat enlarged.

On the tenth day, x-ray studies revealed a large, irregular area of diminished density in the right lobe of the liver. In the erect positions a definite horizontal fluid level was demonstrable, which shifted in the different tilt positions (Figs. 1 and 2). The arch of the gas collection above the fluid presented a somewhat irregular, wavy contour, a frequent finding in pyogenic gaseous liver abscesses.[18] The abscess was situated posteriorly in the right lobe and appeared to have several loculations. The liver and spleen were moderately enlarged. Radiographic impression was multiloculated gas abscess of the liver.

Since the response to antibiotics and chemotherapy in anaerobic S. viridans infections is generally good, the patient was given a trial of intensive therapy. However, the chills and fever persisted, and both liver and spleen increased in size. On the sixteenth day, when a repeat x-ray study showed further loculations in the large cavity with several small gas collections nearby, surgical intervention was decided upon.

With the roentgen localization of the abscess as a guide, the posterior transthoracic extraserous approach through the peritoneum-free area at the posterior aspect of the right lobe of the liver was chosen for the drainage. The right twelfth rib was resected, the posterior serratus muscle split, and the diaphragm exposed by blunt dissection. It was thinned-out and adherent to the liver. A 14-gauge aspirating needle was introduced through the liver substance, and a thick, brownish-green, fetid pus was aspirated. With the needle as a guide, a blunt Kocher forceps was pushed through the liver into the abscess cavity into which a thick rubber drain was inserted and anchored to the skin. Bacteriologic studies of the pus showed anaerobic S. viridans in pure culture.

Antibiotics and chemotherapy were continued in

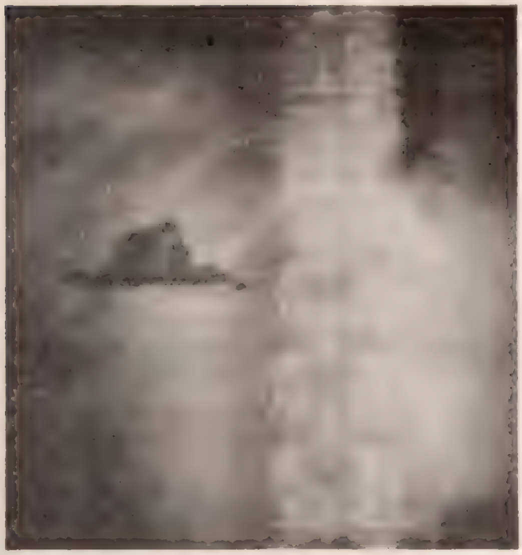

FIG. 1. X-ray taken on October 22, 1948, showing gaseous abscess of right lobe of liver (anteroposterior, erect position).

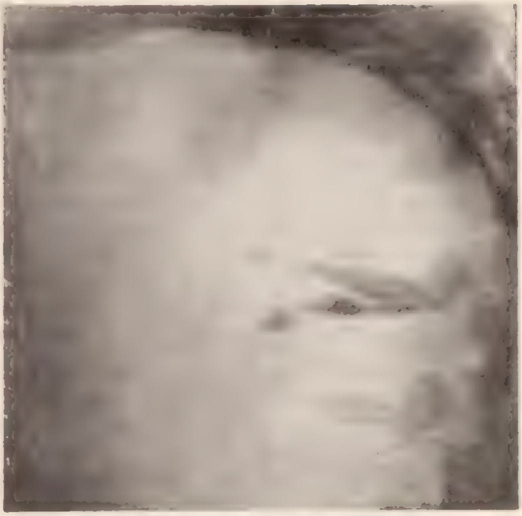

FIG. 2. Lateral view of Fig. 1.

reduced dosage. The fever gradually abated, except for an occasional spiking temperature coinciding with temporary stagnation of the drainage, and reached a normal level by the end of the third week. Enormous quantities of pus escaped through the drainage. The clinical improvement was very striking; the patient lost his debilitated, toxic appearance and started to gain weight. Both the liver and spleen regressed in size. At no time was there evidence of damage to the pleura or peritoneum.

Follow-up x-ray studies showed progressive diminution in size of the drained abscess. However, multiple small gaseous collections soon formed. On the thirteenth postoperative day, a cavitation of moderate size was demonstrated again in the right lobe of the liver in a somewhat more superior and mesial position to the drained abscess. We felt that we were now dealing with either refilling and expansion of a loculation of the former abscess or else coalescence of several of the small nearby abscesses. The cavitation gradually increased in size and thirty-two days after operation presented a multiloculated appearance (Fig. 3). The multiple small abscesses had diminished in extent in the interim.

Antibiotic therapy apparently had masked the progressive local suppuration, inasmuch as the patient's temperature remained normal and his general condition improved steadily. On the thirty-third postoperative day the temperature rose to 104 F., and a second drainage was done the following day. The granulation tissue of the wound was broken into with the finger and, while working deeply in the direction of the liver, a large amount of extremely foul-smelling pus was siphoned off. An isolated piece of necrotic liver tissue, the size of an adult hand, came away. Two large communicating cavities with well-defined walls were encountered, situated posteriorly in the upper half of the right lobe of the liver. A good-sized "T" and two Penrose drains were manipulated into the abscess cavities and secured to the skin wound.

The cavities were irrigated daily with a solution containing 25,000 units of bacitracin. After one week there was very little wound secretion so that the drains could be removed. The general condition of the patient remained excellent. A further roentgen study ten days after the second operation showed no evidence of residual gaseous shadows. The patient was discharged eleven days after operation 45 pounds below his original weight. The patient has remained completely well and has regained 40 pounds in two months. His last x-rays, two months after discharge, were negative except for slight residual enlargement of the liver and spleen.

Comment

The modern "wonder drugs," particularly the

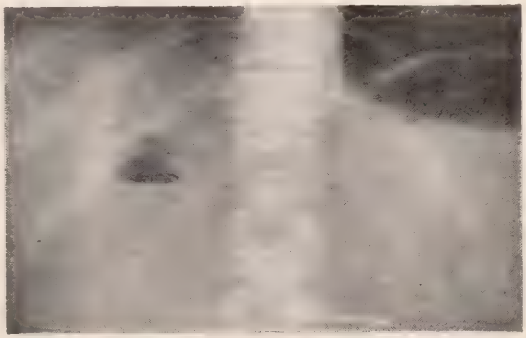

FIG. 3. X-ray taken on November 29, 1948, showing second abscess in right lobe of liver (anteroposterior, erect position).

antibiotics, have proved their effectiveness in combating severe infections by preventing complications and saving lives. It is well to remember, however, that the clinical picture may be so modified by their use that serious disease may be overlooked. Despite intensive antibiotic therapy our patient ran the gamut of the complications following a perforated gangrenous appendicitis and, finally, after four and one-half months developed a pylephlebitis and multiple liver abscesses. The favorable outcome, we feel, was due in great measure to the timely surgical interventions.

Fortunately, the gas in liver abscesses caused by a gas-producing organism like the anaerobic S. viridans can readily be recognized on routine x-ray studies. This enables early diagnosis and accurate localization. If the hepatic suppuration is not associated with gas production, then the direct roentgen demonstration is not possible unless a contrast medium is employed. Opaque liquid or air may be injected into the abscess following aspiration of the pus, or Thorotrast, which concentrates in the liver and spleen, may be administered intravenously.[19–21] This latter procedure, unfortunately, is not without dangers.[22,23] However, x-rays of the chest frequently show indirect signs of a hepatic suppuration which may suggest the diagnosis.[17]

After diagnosis and therapy repeated roentgen studies will serve as a control in evaluating the progress of the disease, particularly since the effective antibiotics and chemotherapeutic agents in use today may result in a misleading clinical picture by masking underlying disease.

Summary

1. A case of multiple gaseous abscesses of the liver caused by anaerobic S. viridans is presented with recovery following timely surgical interventions combined with chemotherapy and antibiotic therapy.

2. The hepatic suppuration was preceded by an episode of perforated gangrenous appendicitis with peritonitis and several pelvic and abdominal abscesses and later by septic pylephlebitis and pyemia.

3. The subject of liver suppuration with emphasis on gas abscesses and anaerobic streptococci as causative agents is briefly discussed.

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DANGER FROM CLEANING FLUID VAPOR

Severe poisoning may result from inhaling vapors of noninflammable cleaning fluids, according to a warning contained in the January issue of *Archives of Industrial Hygiene and Occupational Medicine.*

Carbon tetrachloride, a solvent used in the fluids, is highly poisonous when breathed as a concentrated vapor or taken internally as a liquid, Drs. W. D. Norwood, P. A. Fuqua, and B. C. Scudder of the Hanford Works, Richland, Washington, said.

The label on cleaning fluid sold for use in the home rarely states that the fluid contains carbon tetrachloride in a high concentration, and it was urged that action be taken on a national scale to provide for more stringent labeling of the compound.

Toxic reactions to carbon tetrachloride may result from a single brief exposure to a high concentration of the vapor; from prolonged or repeated exposure to a moderately high concentration or from regular daily exposure to low concentrations in excess of accepted safe limits; from repeated contact of the skin with the liquid, or from ingestion of the liquid.

During the last twelve months in two communities, two fatalities were observed, one near fatality, and four other cases requiring hospitalization.

The authors believe that the present label gives the user a greater sense of security than is warranted and that many deaths occur from domestic use where no warning label is required.

Carbon tetrachloride causes damage to the liver, and persons under the influence of alcohol during exposure usually sustain much more severe poisoning than persons not using alcohol.

Considerable amounts of carbon tetrachloride are used in fire extinguishers, in the manufacture of refrigerants and insecticides, and in degreasing of industrial equipment and extraction of oils.

Special Article

THE ESTABLISHMENT OF A REGIONAL BLOOD BANK

Frederick N. Marty, M.D., F.A.C.P., Syracuse, New York

(From the Syracuse University College of Medicine)

During the past decade human blood and its derivatives have assumed an increasingly important role in medical therapy. All phases of medical practice, whether surgery, medicine, or obstetrics, have found blood and its derivatives invaluable and their administration at times a lifesaving procedure.

Blood is a perishable item. It cannot be stored indefinitely nor handled like ordinary items of therapy. Blood cannot be manufactured in a pharmaceutical plant. It must be given by one individual for use by another. These factors can be quite definite handicaps or limitations to its use unless concrete plans of blood procurement, storage, and administration are devised. Transfusion in the average hospital a decade or two ago meant individual procurement of a donor for the particular patient. Relatives and friends of the patient, fraternal groups, and, particularly, municipal groups such as policemen and firemen were called upon. The laboratory facilities were taxed. A type B patient might require the typing of many donors before suitable blood was found. Instead of emergency treatment or planned therapy, transfusion was frequently an heroic procedure, and too often its value was lost because of the delay in administration.

To improve the situation came the professional donor lists or bureaus. These had their limitations and imposed a financial burden on the patient which often placed the therapy out of the financial reach of many of those who needed blood.

The availability of a "closed system" for blood collection and the use of various preservative anticoagulants rendered possible the creation of a blood bank in the average hospital of about 100 or more beds. Immediately preceding the last war and under stimulus of civilian defense during the war, many hospitals started their own blood banks. The reason for creation of any blood bank is, first, to have readily available at all times all types of blood for use as soon as cross-matching with the patient is assured and, second, to provide what blood derivatives can be prepared within the confines of the transfusion laboratory, usually liquid plasma.

Procurement of blood was maintained by requiring a donation from some interested person prior to the transfusion or charging a deposit fee for blood when available and allowing credits against the deposit fee when subsequent donations were made. Some hospitals and blood banks only operated on a cash basis, charging for all blood used and paying the donors. Frequently, a charge of approximately $15 to $25 was made for each pint used and donors were reimbursed at rates varying from $5.00 to $10.00 per pint upwards, at times allowing bonuses for Rh negative types. This procedure unfortunately placed hospital blood banks in the category of pecunious and mercenary institutions. Under these circumstances and arrangements it became difficult to secure "voluntary" donors. It is my belief that more people will voluntarily donate blood than will sell a pint of their blood, providing the solicitation is adequate.

Small hospital blood banks with one or two transfusions a day found it necessary either to secure a considerable excess of blood over the daily requirements to maintain adequate supplies of all types or attempt to fill in the short supply by the use of plasma. Outdated blood was converted to plasma or discarded. No unified procurement was available for the production of blood derivatives, save by commercial pharmaceutical houses who were forced to purchase blood from donors, making the cost of some derivatives prohibitive for the average patient at times.

Up to the present time our thoughts have been concerned with the average, peacetime, noncatastrophic needs of blood. What would happen in event of a local disaster, a severe fire, an industrial or transportation accident of disastrous proportions? Many a hospital administrator has also wondered but has dismissed these thoughts as being unwarranted. Yet the uneasiness of possibly failing the public in event of disaster should be real and rightly disturbing.

How can some of these shortcomings or inadequacies of the small or average hospital blood bank be met? The answer is obvious—by establishing regional blood banks. The region can be delineated by the confines of a municipality, a county, or part of a state. Many counties in this and other states have but one or two hospitals, and their combined resources of procurement and supply are still too limited to form a regional blood center. It has been found by previous experience that an area of population embracing at least 500,000 people is required to maintain efficiently a regional blood center, operating as an independent unit.

Regional blood centers have been established under the direction of various agencies: county medical societies, hospital councils, civic groups, such as veterans organizations, Rotary Clubs, Junior Leagues, etc., and Red Cross chapters. In several states the health department has sponsored them.

One must not be forgetful of the fact that, in

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addition to the scientific and laboratory control of a blood center, there always looms the larger aspect, the procurement of donors. If adequate blood and its derivatives are to be available for all who need it, the limitations of requiring the patient's family or friends to supply all the donors in any required transfusion should be removed. Therefore, the sponsoring agency must have adequate resources in terms of paid and voluntary help to secure donors. It should have a background or membership familiar to all people in all walks of life who recognize its humanitarian and charitable principles. Likewise, the organization should have representation in most communities of the region involved. Its financial support, if not derived from the operation of the bank, should come from contributions received from a large segment of the general population.

The preparation and utilization of blood and its derivations is a medical matter. Its control of scientific and technical procedure should be vested in the medical profession, the state and local health departments and laboratories, as well as the hospitals in the area concerned. The appointment and supervision of the technical staff should be at least partially under the direction of the physicians whom it is to serve.

In so far as the technical procedures are concerned, in many areas there exist hospital or county health laboratories which might be augmented to handle the needs of a small regional bank. However, the personnel and organization for donor recruitment, as well as the public appeal for donors, can best be handled by other organizations.

For the establishment of a regional blood center some agency must be willing and able to sponsor and support it, be it the county medical society, a local hospital council, or a nonprofessional group such as the Red Cross or Junior League. In any event, it must have representation of professional groups concerned. This can be organized by representation of hospitals concerned and by formation of blood bank committees in each county medical society. In addition, the sponsoring agency can best serve such a program if a consultant technical staff is available to aid in the development of new methods and technics as well as to direct and follow such research as may be compatible with the program.

Costs of medical care have always been a concern of our profession. To distribute such costs equitably, particularly in serious or catastrophic illness or prolonged disability, we have long recognized that public support is necessary. Public support is given most hospitals. Various disabilities, such as mental disease, tuberculosis, venereal disease, poliomyelitis, serious orthopedic defects, and many other disabilities or illness, are rendered public support when necessary and desirable. Many biologic products of proved worth are made available to the profession and the public of this State through the State Health Department Laboratories.

The costs of blood transfusion and the costs of blood derivatives can in some illnesses be beyond the means of many people as well as financially catastrophic to many others. If support for these products can be secured from public funds, whether obtained by charitable sources collected on a broad base or whether tax-supported, I believe this is desirable in order to lessen medical care costs and yet not interfere with patient-physician relationships.

The early availability of blood and its derivatives can be a great help to physicians in their practice. One must bear in mind, however, that transfusion, while reduced to a simple procedure at present, carries with it a distinct risk. The possibilities of error of a clerical or technical nature, while small, still carry the unfortunate possibility of fatal reaction. While donors are selected with care, the risk of homologous serum jaundice has been calculated at 0.5 to 1 per cent of a small pool plasma or slightly less for blood transfusions. Homologous serum jaundice carries a mortality rate of about 8 per cent. The dangers of overloading the circulatory system, as well as the danger of infusion of considerable sodium and other crystalloids in certain cases, are to be considered. These possibilities of untoward reaction should all be weighed in a physician's decision to use transfusion in the treatment of his patient. The overuse of blood and its usage in apparently hopeless cases where the maintenance of life to endure further suffering may appear to be the only gain, without partial rehabilitation of the individual, is to be discouraged. While the supplies of blood may potentially appear inexhaustible, its unnecessary use will delay production of the various blood derivatives as well as experimentation with them.

In summary, therefore, it appears that the medical needs of blood for transfusion and the preparation of its derivatives for therapeutic and diagnostic purposes can best be accomplished by the creation of regional blood centers. These regional centers are not intended to replace the individual hospital blood banks but rather to augment and furnish, as the demand arises, adequate supplies of the desired types of blood and its derivatives. In multiple or large emergencies it assures the smallest of communities or hospitals a larger reserve of blood or its products than they might efficiently maintain alone. A regional blood center also makes possible the collection of blood for processing to its derivatives such as plasma, serum albumin, and other desirable fractions more economically. When such a regional center is given support by either a broad-based charitable organization, such as the Red Cross, or by tax-supported funds of a state health department, it can lessen individual medical costs without disturbing physician-patient relationships.

713 East Genesee Street

Envy is like a sore eye that cannot bear a bright object.—Anonymous

DEPARTMENT OF MEDICAL CARE INSURANCE

Conducted by George P. Farrell, Director

The Fourth Annual Report on the six New York State voluntary nonprofit Blue Shield insurance plans, approved by the Medical Society of the State of New York, shows continuous growth in enrollment and benefits to members.

Membership.—Total membership as of December 31, 1949, was 2,079,353, representing the largest membership in any state. The increase during 1949 was 540,094 members, a 35 per cent gain.

Earned Premium Income.—Earned income on premiums received amounted to $13,513,785, an increase of $4,272,585, or 46 per cent.

Benefits to Members.—Incurred benefits to members were $9,569,057, an increase of $3,199,669 over the previous year, or 50 per cent.

Payments to Doctors.—Completed claim payments to doctors amounted to $9,224,164, an increase of $3,207,160 over the previous year, or 53 per cent.

Surplus and Maternity Reserve.—Total surplus as of December 31, 1949, amounted to $2,888,838, an increase of $823,145. Reserves for deferred maternity benefits as of December 31, 1949, amounted to $2,368,396, an increse of $754,957.

Claim Incidence.—There has been a steady increase in claim incidence during the past three years in practically all of the plans. If this trend continues, it will be reflected in the earnings after the necessary Reserve for Deferred Maternity Benefits and Special Contingent Surplus have been established.

This report has been made possible through the cooperation of the plans in submitting regular quarterly reports. Additional information has been compiled from these reports and is available upon request.

TABLE 1.—Comparative Membership (Subscribers and Dependents)—December 31, 1948 and 1949

Location and Name of Plan	1949	1948	Increase	Per Cent of Increase
New York				
United Medical Service, Inc.				
Subscribers	763,558	566,534	197,024	34.77
Dependents	784,114	562,433	221,681	39.41
Total	1,547,672	1,128,967	418,705	37.08
Buffalo				
Western New York Medical Plan				
Subscribers	83,023	62,793	20,230	32.21
Dependents	128,354	97,078	31,276	32.21
Total	211,377	159,871	51,506	32.21
Rochester				
Genesee Valley Medical Care				
Subscribers	39,150	29,131	10,019	34.39
Dependents	54,337	39,522	14,815	37.48
Total	93,487	68,653	24,834	36.17
Syracuse				
Central New York Medical Plan				
Subscribers	10,539	8,342	2,197	26.33
Dependents	15,108	11,764	3,344	28.42
Total	25,647	20,106	5,541	27.55
Utica				
Medical and Surgical Care				
Subscribers	62,579	52,574	10,005	19.03
Dependents	69,455	57,389	12,066	21.02
Total	132,034	109,963	22,071	20.07
Albany				
Northeastern New York Medical Service				
Subscribers	29,934	22,146	7,788	35.16
Dependents	39,202	29,553	9,649	32.65
Total	69,136	51,699	17,437	33.72
Grand Totals:				
Subscribers	988,783	741,520	247,263	33.34
Dependents	1,090,570	797,739	292,831	36.71
Totals	2,079,353	1,539,259	540,094	35.08

TABLE 2.—Comparative Membership in Medical and Hospital Plans for Years Ending December 31, 1948 and 1949

	1948		1949	
Location	Membership	Per Cent of Total	Membership	Per Cent of Total
New York				
Medical	1,128,967	23.98	1,547,672	27.17
Hospital	3,618,891	76.02	4,148,481	72.83
Total	4,747,858		5,696,153	
Buffalo				
Medical	159,871	24.94	211,377	29.72
Hospital	481,138	75.06	499,761	70.28
Total	641,009		711,138	
Rochester				
Medical	68,653	16.38	93,487	20.52
Hospital	350,554	83.62	362,294	79.48
Total	419,207		455,781	
Syracuse				
Medical	20,106	6.70	25,647	7.93
Hospital	279,638	93.30	297,960	92.07
Total	299,744		323,607	
Utica				
Medical	109,963	41.11	132,034	43.57
Hospital	157,517	58.89	170,991	56.43
Total	267,480		303,025	
Albany				
Medical	51,699	16.64	69,136	20.57
Hospital	258,924	83.36	266,916	79.43
Total	310,623		336,052	
Totals				
Medical	1,539,259	23.02	2,079,353	26.58
Hospital	5,146,662	76.98	5,746,403	73.42
Combined Totals	6,685,921		7,825,756	

TABLE 3.—Comparative Membership Increase in Medical and Hospital Plans for Years Ending December 31, 1948 and 1949

	1948		1949	
Location	Membership Increase	Per Cent of Total Increase	Membership Increase	Per Cent of Total Increase
New York				
Medical	398,674	49.13	418,705	44.16
Hospital	412,713	50.87	529,590	55.84
Total	811,387		948,295	
Buffalo				
Medical	40,163	53.12	51,506	73.44
Hospital	35,449	46.88	18,623	26.56
Total	75,612		70,129	
Rochester				
Medical	22,508	61.64	24,834	67.90
Hospital	14,006	38.36	11,740	32.10
Total	36,514		36,574	
Syracuse				
Medical	4,784	15.47	5,541	23.22
Hospital	26,131	84.53	18,322	76.78
Total	30,915		23,863	
Utica				
Medical	20,594	65.81	22,071	62.09
Hospital	10,699	34.19	13,474	37.91
Total	31,293		35,545	
Albany				
Medical	28,921	41.96	17,437	68.57
Hospital	39,997	58.04	7,992	31.43
Total	68,918		25,429	
Totals				
Medical	515,644	48.49	540,094	47.38
Hospital	538,995	51.51	599,741	52.62
Combined Totals	1,054,639		1,139,835	

TABLE 4.—CLAIM DATA (PAID BASIS) FOR YEAR ENDING DECEMBER 31, 1949

Location and Type of Contract	Earned Premium Income	Claim Cost	Per Cent of Claim Cost to Earned Premium	Number of Claims	Average Cost per Claim	Claim Incidence per 1,000 Members per Annum
New York						
Surgical	$ 5,948,386	$4,408,894	74.12	73,338	$60.12	75.6
Surgical, In-Hospital Medical	3,027,214	1,677,253	55.40	31,239	53.69	87.4
General Medical	942,473	557,072	59.11	45,553	12.22	796.7
Total	$ 9,918,073*	$6,643,219	66.98	150,130	$44.25	
Buffalo						
Surgical	$ 1,061,113	$ 806,713	76.02	27,959	$28.85	167.6
Surgical, In-Hospital Medical	243,000	154,288	63.49	6,661	23.16	337.0
Total	$ 1,304,113	$ 961,001	73.69	34,620	$27.76	
Rochester						
Surgical	$ 550,548	$ 345,569	62.76	10,045	$34.40	109.8
Syracuse						
Surgical	$ 28,107	$ 20,774	73.91	669	$31.05	164.8
Surgical, Medical	218,475	175,515	80.33	9,312	18.85	486.3
Total	$ 246,582	$ 196,289	79.60	9,981	$19.66	
Utica						
Surgical	$ 823,938	$ 668,946	81.18	26,162	$25.57	211.8
Medical Call Rider	161,802	45,705	28.24	2,358	19.38	44.1
Total	$ 985,740	$ 714,651	72.49	28,520	$25.05	
Albany						
Surgical, In-Hospital Medical	$ 508,729	$ 363,435	71.44	8,518	$42.66	145.3
Grand Total	$13,513,785	$9,224,164	68.26	241,814	$38.14	

* Earned premium income on Medical Expense Fund contracts not included.

TABLE 5.—COMPARATIVE NUMBER OF CLAIMS (BY CONTRACT) FOR YEARS ENDING DECEMBER 31, 1948 AND 1949

Location	Surgical	Surgical and In-Hospital Medical	Surgical, Medical (Home, Office, Hospital)	Medical Call Riders	Total Claims
New York					
1949	73,338	31,239	45,553	...	150,130
1948	49,726	14,068	25,199	...	88,993
Increase	23,612	17,171	20,354	...	61,137
Per Cent of Increase	47.4	122.0	80.7	...	68.7
Buffalo					
1949	27,959	6,661	...	...	34,620
1948	16,151	7,520	...	...	23,671
Increase	11,808	859*	...	...	10,949
Per Cent of Increase	73.1	11.4*	...	...	46.2
Rochester					
1949	10,045	...	...	...	10,045
1948	5,680	...	...	...	5,680
Increase	4,365	...	...	...	4,365
Per Cent of Increase	76.8	...	...	...	76.8
Syracuse					
1949	669	...	9,312	...	9,981
1948	473	...	7,027	...	7,500
Increase	196	...	2,285	...	2,481
Per Cent of Increase	41.4	...	32.5	...	33.0
Utica					
1949	26,162	...	...	2,358	28,520
1948	21,680	...	...	2,370	24,050
Increase	4,482	...	...	12*	4,470
Per Cent of Increase	20.6	...	...	0.005*	18.58
Albany					
1949	...	8,518	...	...	8,518
1948	...	5,541	...	...	5,541
Increase	...	2,977	...	...	2,977
Per Cent of Increase	...	53.7	...	...	53.7
Totals					
1949	138,173	46,418	54,865	2,358	241,814
1948	93,710	27,129	32,226	2,370	155,435
Increase	44,463	19,289	22,639	12*	86,379
Per Cent of Increase	47.4	71.1	70.2	0.005*	55.5

* Indicates decrease.

TABLE 6.—Comparative Claim Incidence (Frequency with Which Claims Occur)*

Location	Surgical	Surgical and In-Hospital Medical	Surgical, Medical (Home, Office, Hospital)	Medical Call Riders
New York				
1949	75.6	87.4	796.7	...
1948	70.5	73.0	666.1	...
1947	60.7	65.3	610.6	...
Buffalo				
1949	167.6	337.0	...	...
1948	140.6	342.1		...
1947	124.1	738.7		.
Rochester				
1949	109.8	...	.	...
1948	99.2	.		.
1947	73.6	...	...	...
Syracuse				
1949	164.8	...	486.3	...
1948	155.5	...	450.3	...
1947	95.3	...	728.6	...
Utica				
1949	211.8	...	...	44.1
1948	211.6	...		55.9
1947	205.8	...	.	72.2
Albany				
1949	...	145.3	...	...
1948	...	135.7	...	...
1947	...	71.2	...	...

* Per 1,000 participants per annum, by types of contracts for years ending December 31, 1947, 1948, and 1949.

TABLE 7.—Comparison of Earned Premium, Incurred Claim and Administrative Expenses for Years Ending December 31, 1948 and 1949

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Totals
Earned Premium Income							
1949	$9,976,541	$1,304,113	$550,548	$246,582	$985,740	$508,729	$13,572,253
1948	6,618,729	979,634	368,545	197,406	809,777	325,577	9,299,668
Increase	$3,357,812	$ 324,479	$182,003	$ 49,176	$175,963	$183,152	$ 4,272,585
Claim Expense							
1949	$6,794,365	$1,015,075	$374,821	$204,370	$775,619	$404,807	$ 9,569,057
1948	4,390,730	686,731	253,521	150,239	643,072	245,095	6,369,388
Increase	$2,403,635	$ 328,344	$121,300	$ 54,131	$132,547	$159,712	$ 3,199,669
Administrative Expense							
1949	$2,086,927	$ 102,456	$ 76,622	$ 29,373	$134,399	$ 46,697	$ 2,246,474
1948	1,398,534	97,647	56,782	24,501	113,644	34,804	1,725,912
Increase	$ 688,393	$ 4,809	$ 19,840	$ 4,872	$ 20,755	$ 11,893	$ 750,562
Claim Expense Ratio to Earned Premium							
1949	68.10	77.83	68.08	82.88	78.68	79.57	70.50
1948	66.34	70.10	68.78	76.10	79.40	75.28	68.49
Administrative Expense Ratio to Earned Premium							
1949	20.92	7.86	13.91	11.91	13.63	9.17	18.25
1948	21.13	9.97	15.40	12.41	14.03	10.69	18.55

TABLE 8.—Comparison of Earned Premium, Incurred Administrative Expense per Contract and per Member for Years Ending December 31, 1947, 1948, and 1949

Plan Location	Earned Premium	Per Contract	Per Member	Administrative Expense	Per Contract	Per Member
New York						
1949	$9,976,541	$13.98	$ 6.95	$2,086,927	$2.92	$1.45
1948	6,618,729	13.22	6.71	1,398,534	2.79	1.41
1947	3,986,028	12.34	6.39	847,461	2.62	1.35
Buffalo						
1949	$1,304,113	$17.13	$ 6.73	$ 102,456	$1.34	$0.53
1948	979,634	17.50	6.87	97,647	1.74	0.68
1947	830,264	19.31	7.58	100,846	2.34	0.92
Rochester						
1949	$ 550,548	$15.22	$ 6.40	$ 76,622	$2.12	$0.89
1948	368,545	14.66	6.22	56,782	2.25	0.95
1947	223,762	13.31	5.66	36,147	2.15	0.91
Syracuse						
1949	$ 246,582	$23.39	$ 9.61	$ 29,373	$3.07	$1.26
1948	197,406	25.36	10.58	24,501	3.14	1.31
1947	152,488	25.72	10.74	21,736	3.66	1.53
Utica						
1949	$ 985,740	$16.77	$ 7.98	$ 134,399	$2.28	$1.09
1948	809,777	16.33	7.90	113,644	2.27	1.10
1947	621,067	15.26	7.53	84,483	2.07	1.02
Albany						
1949	$ 508,729	$19.49	$ 8.39	$ 46,697	$1.78	$0.77
1948	325,577	18.44	7.97	34,804	1.97	0.85
1947	96,056	16.58	7.23	14,313	2.47	1.07

Note: Mean average used in determining contracts and membership.

NECROLOGY

Edward Woodruff Banta, M.D., of New York City, died on March 12 at St. Luke's Hospital at the age of seventy-three. Dr. Banta was graduated from the College of Physicians and Surgeons, Columbia University, in 1900. During World War I he served in the U.S. Army Medical Corps. Dr. Banta was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Barclay, M.D., of New York City, died on March 26 from coronary thrombosis at his home at the age of thirty-six. Dr. Barclay received his medical degree from the Royal College of Physicians and Surgeons of Edinburgh in 1940 and served in the Medical Corps of the British Army for four years, seeing service in the Middle East, North Africa, and in the invasion of Italy. He was clinical assistant physician in allergy for the Outpatient Departments of the Morrisania Hospital and the Bronx Eye and Ear Infirmary. Dr. Barclay was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sherman W. Bates, M.D., of Akron, died on January 19, at the age of eighty-one. Dr. Bates was graduated from the University of Buffalo School of Medicine in 1895. He had practiced in Queens until his retirement in 1946. Dr. Bates was a retired member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

George W. Colby, M.D., of New York City, died on March 13 at the New York Hospital at the age of seventy-five. Dr. Colby received his medical degrees from the Long Island College Hospital in 1895 and from the University of Pennsylvania Medical School in 1896. After interning at St. Joseph's Hospital, Philadelphia, Pennsylvania, he began his practice in New York City in 1898. Dr. Colby was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Carl F. Denman, M.D., of Brooktondale, died on September 24, 1949, at the age of seventy-two. Dr. Denman was graduated from the University of Buffalo School of Medicine in 1902 and had practiced in Ithaca until his retirement several years ago. He was an honorary member of the staff of the Tompkins County Memorial Hospital, Ithaca, where he had served as consultant anesthesiologist. Dr. Denman was a member of the Tompkins County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Frederick Deutsch, M.D., of New York City, died on January 10 at the age of sixty-nine. Dr. Deutsch received his medical degree from the College of Physicians and Surgeons of the University of Maryland, Baltimore, in 1906.

Eugene Harold Eising, M.D., of New York City, died on March 29 at Mt. Sinai Hospital at the age of seventy-six. Dr. Eising was graduated from the College of Physicians and Surgeons, Columbia University, in 1898 and interned at Mount Sinai Hospital and Sloane Maternity Hospital. Dr. Eising served as surgeon at Mt. Sinai Hospital and the Hospital for Joint Diseases from 1915 to 1936, when he became consulting surgeon for both institutions. A Fellow of the American College of Surgeons, Dr. Eising was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Albert Henry Evans, M.D., of Guilford, died on April 3 at the age of seventy-six. Dr. Evans was graduated from the Syracuse University College of Medicine in 1902 and had practiced in Guilford from 1905 until his retirement in 1948. For many years he was health officer for the Town of Guilford and also served as a member of the Board of Education. A past president of the Chenango County Medical Society, Dr. Evans was a member of that group, the Medical Society of the State of New York, and the American Medical Association.

Andrew Green Foord, M.D., of Kerhonkson, died on March 16 at his home at the age of seventy-five. Dr. Foord received his medical degree from the Long Island College Hospital in 1897 and became a resident at Mount Sinai Hospital. In 1906 Dr. Foord founded the Nonkanahwa Sanatorium in Kerhonkson, which he operated until his retirement. Dr. Foord was a member of the Ulster County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Clarence Payne Howley, M.D., of New York City, died on April 3 at the age of fifty-eight. Dr. Howley was graduated from the College of Physicians and Surgeons, Columbia University, in 1918 and interned at St. Vincent's Hospital before starting his practice in New York City in 1920. He was attending surgeon at St. Vincent's Hospital, consulting surgeon at Harlem Hospital, and surgeon to the Port of New York Authority. A Fellow of the American College of Surgeons, Dr. Howley was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick W. Huber, M.D., of New York City, died on March 24 at his home, the house in which he was born, at the age of seventy-nine. Dr. Huber was graduated from the College of Physicians and Surgeons, Columbia University, in 1896 and had practiced in New York City for fifty-four years. Dr. Huber was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William Matthews Keen, M.D., formerly of New York City, died on March 5 at his home in Jersey City, New Jersey, at the age of eighty-five. Dr. Keen received his medical degree from the New York University Bellevue Medical College in 1891 and practiced in New York City until his retirement in 1930. He had been a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Lothar Luft, M.D., of New York City, died on December 28, 1949, at the age of fifty-nine. Dr. Luft received his medical degree from the University of Heidelberg in 1918. He was senior clinical assistant neurologist at the Mount Sinai Hospital Outpatient Department. Dr. Luft was a member of the Society for the Advancement of Psychotherapy, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Henry McGarry, M.D., of Niagara Falls, died on January 22, 1948. Dr. McGarry received his medical degree from the University of Toronto Medical School in 1893. He was a member of the Niagara Falls Academy of Medicine.

Aaron Lawson MacGhee, M.D., of New York City, died on November 29, 1949, at the age of sixty-six. Dr. MacGhee was graduated from the Harvard University Medical School in 1917.

Convas Lane Markham, M.D., of Amityville, died on March 21 at the age of sixty-seven. Dr. Markham was graduated from the College of Physicians and Surgeons, Columbia University, in 1903 and had served since that time as medical superintendent of the Brunswick Home and Hospital in Amityville. Dr. Markham was a member of the American Psychiatric Society, the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederic Grantham Meynen, M.D., of Garden City, died on March 3 from a heart attack at the age of fifty-two. Dr. Meynen was graduated from the College of Physicians and Surgeons, Columbia University, in 1922. He was attending surgeon at the Mary Immaculate Hospital, Queens, and consulting surgeon at the Queens General Hospital. A Fellow of the American College of Surgeons, Dr. Meynen was a member of the Queensboro Surgical Society, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Chester Davis Moses, M.D., of Buffalo, died on March 17 at the age of seventy-six. Dr. Moses was graduated from the Long Island College Hospital in 1902. He was consultant radiologist at the J. N. Adam Memorial Hospital, Perrysburg, and the Deaconess Hospital, Buffalo. A Diplomate of the American Board of Radiology, Dr. Moses was a member of the Radiological Society of North America, the Buffalo Academy of Medicine, the Buffalo Society of Radiologists, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Walter Melville Pamphilon, M.D., of Jackson Heights, died on March 29 at the age of fifty-two. Dr. Pamphilon received his medical degree from the University of Toronto Medical School in 1922, after his medical education had been interrupted by a tour of duty in the British Navy during World War I. For the past twenty-five years, with the exception of a year with the Veterans Administration, Dr. Pamphilon had served with the State Department of Mental Hygiene. He was assistant director of the Willard State Hospital when, in 1945, he was appointed assistant commissioner of the Department. Dr. Pamphilon was a member of the American Psychiatric Association, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Florence Pettus, M.D., of New York City, died on April 3 at her home at the age of thirty-five. Dr. Pettus received her medical degree from the Washington University Medical School in St. Louis, Missouri, in 1936. She was clinical assistant surgeon at the Roosevelt Hospital Outpatient Department. Dr. Pettus was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Edwin Pierce, M.D., of Watertown, died on March 31 at the age of seventy-eight. Dr. Pierce was graduated from the Bellevue Hospital Medical College in 1897 and interned at Bellevue Hospital. In 1899 Dr. Pierce began his practice in Watertown, where he continued for fifty-one years. He had served as coroner of Jefferson County for two terms and for many years was secretary of the Jefferson County Medical Society. Dr. Pierce was attending physician at the Mercy Hospital and the House of the Good Samaritan, both in Watertown. He was a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herman B. Sheffield, M.D., of New York City, died on March 17 at the age of seventy-nine. Dr. Sheffield was graduated from the College of Physicians and Surgeons of the University of Maryland, Baltimore, in 1895 and opened his practice in New York City. For fifteen years he was instructor in pediatrics at the New York Post-Graduate Hospital and for eight years was consultant in pediatrics at the Community Hospital in New York City. Dr. Sheffield was the author of five books and over fifty monographs on pediatrics, including two textbooks, *Diseases of Children* and *Modern Diagnosis and Treatment of Diseases of Children.* In 1930 he retired from active practice because of failing vision, and since that time had published several volumes of poetry. He was the inventor of the optic diaphragm for congenital eye defects.

Dr. Sheffield was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Frederick Tenney, M.D., formerly of New York City, died on March 31 at his home in Beverly Hills, California, at the age of seventy-four. Dr. Tenney received his medical degree from the University of Michigan Medical School in 1904 and was assistant Fell Grant Professor of Surgery there until 1906. Dr. Tenney was director of medicine for the Fifth Avenue Hospital from its opening in 1922 until its merger with Flower Hospital in 1935. A former governor and regent of the American College of Physicians, Dr. Tenney had been a trustee of the New York Academy of Medicine and a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry Lehman Weil, M.D., of New York City, died on August 28, 1949, at the age of seventy-two. Dr. Weil received his medical degree from the New York Homeopathic Medical School in 1915. He was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edwin Barrett Wilson, M.D., of New York City, died on January 20 at the age of fifty-nine. Dr. Wilson was graduated from the University of Pennsylvania Medical School in 1915.

MEDICAL NEWS

Postgraduate Education Group to Have Luncheon

A LUNCHEON to be held on Teaching Day, May 9, at the 144th Annual Convention of the Medical Society of the State of New York has been planned for county postgraduate education or program chairmen, according to an announcement from Dr. Theodore J. Curphey, chairman of the Council Committee on Public Health and Education of the State Society.

A new venture, the luncheon is to be held for the purpose of meeting together to present criticisms and suggestions as to how the Council Committee can best serve local county society needs in the field of postgraduate education.

The luncheon will be held in Parlor 2 at the Hotel Statler, New York City, on May 9 at 12:30 P.M. Presidents of all county societies have been notified and asked to designate the chairman of their county postgraduate education or program committee or a representative to attend the luncheon as a representative of the county society.

State University Takes Over Long Island Medical College

THE Long Island College of Medicine, in Brooklyn was formally incorporated on April 5 into the State University of New York as the first State-operated medical college in New York. The medical college, which will broaden opportunities for medical education in the State, will serve as the nucleus for a proposed State medical center in Brooklyn to serve metropolitan New York.

At the merger ceremony in the Waldorf-Astoria, Governor Thomas E. Dewey said that a second college of medicine in Syracuse will be added to the State University "within the next few months."

The State University had thirty-one separate colleges and institutions affiliated with it at its establishment a year ago. The Long Island College of Medicine is the first college to be added since then.

When the two medical colleges have been fully brought under the wing of the State University, Governor Dewey said, New York will be one of two states in the nation with two state medical schools.

Others who spoke at the signing of the merger articles were Dr. Alvin C. Eurich, president of the State University; Oliver C. Carmichael, chairman of the board of trustees of the State University; Lauson H. Stone, chairman of the board of trustees of the Long Island College of Medicine; Dr. Jean A. Curran, president of the college; Vincent R. Impellitteri, president of the City Council, who represented Mayor William O'Dwyer, and Charles Garside, chairman of the committee on medical education centers of the board of trustees of the State University of New York.

The merger agreement transfers to the State University the medical college's present site in Henry Street and, in addition, a three-acre plot on Kingston Avenue, which will be developed as the medical center. The State University will also take over the medical college's $2,000,000 capital fund, 85 per cent of which is in endowments. The Long Island College of Medicine started in 1860 as the teaching department of the Long Island College Hospital. Twenty years ago it became a separate institution.

Workmen's Compensation Board Plans Institute

AN INSTITUTE to provide information regarding the Disability Benefits Law, which becomes fully effective on July 1, has been arranged by the New York State Workmen's Compensation Board, according to an announcement from Dr. Willis M. Weeden, medical director.

One session of the program will be devoted to the important part of the medical profession in the successful operation of the new law. Meetings have been arranged as follows:

Monday, May 15–Elmira
Tuesday, May 16—Jamestown
Wednesday, May 17—Buffalo
Thursday, May 18—Rochester
Thursday, May 25—Syracuse
Friday, May 26—Binghamton
Wednesday, June 7—Schenectady
Thursday, June 8—Utica
Friday, June 9—Watertown
Tuesday, June 13—Malone
Wednesday, June 14—Glens Falls
Thursday, June 15—Troy
Monday, June 19—Albany
Tuesday, June 20—Poughkeepsie

Research Grants Announced

PUBLIC Health Service grants to aid cancer control in 12 states, Hawaii, and Puerto Rico and to aid laboratory and clinical research in non-Federal institutions, totaling $301,159 and $863,496, respectively, have been announced. In the first group seven new grants, in the amount of $57,353, and renewals of 15 grants were made, while the second group of awards by the National Cancer Institute was for continuation of previously supported projects in 48 institutions in 21 states and the District of Columbia. Recipients of grants in New York State in the two groups were as follows:

Group 1—To aid cancer control:

Dr. Brewster S. Miller, American Cancer Society, New York City, $2,233, for one half of total costs of developmental, production, and distribution costs of the Proceedings of the National Cancer Conference.

Dr. David S. Ruhe, Medical Film Institute of the Association of American Medical Colleges, $7,500, for an educational film project on the progress of cancer research.

Dr. Allen G. Whipple, Memorial Hospital, New York City, $11,934, for experimental surgery.

Dr. Frank Maltaner, New York State Department of Health, $15,000, for immunologic studies of cancer.

Dr. William Law Lawson, New York University-Bellevue Medical Center, $3,240, for study of tumor registry and follow-up system.

Group 2—To aid laboratory and clinical cancer research:

Dr. Keith R. Porter, Mary Imogene Bassett Hospital, Cooperstown, $4,903, for a course of instruction in the technics and application of tissue cultures.

Dr. Edward Lee Howes, Columbia University, College of Physicians and Surgeons, $1,800, for study of the evolution of adenocarcinoma of the stomach produced by carcinogens.

Dr. Benjamin N. Berg, College of Physicians and Surgeons, $7,560, for study of the influence of time and age factors and the effect of carcinogenic agents on production of gastric cancer in rats.

Dr. John G. Kidd, Cornell University Medical College, $25,000, for study of the mechanism of resistance to transplanted cancer cells.

Dr. Leopold R. Cerecedo, Fordham University, $9,000, for study of the relationship of nutrition to tumors in mice.

Dr. Louis T. Wright, Harlem Hospital, $20,000, for study on evaluation of the effects of chemotherapeutic agents in neoplastic diseases.

Dr. Oscar Bodansky, Memorial Hospital, New York City, $10,000, for enzyme studies in malignant diseases.

Drs. C. C. Stock and John J. Biesele, Memorial Hospital, New York City, $6,912, for tissue culture studies of tumor growth and inhibition.

Drs. C. C. Stock and J. H. Burchenal, $7,581, Memorial Hospital, New York City, for study of the chemotherapy of leukemia.

Drs. C. C. Stock and David A. Karnofsky, Memorial Hospital, New York City, $10,044 for study of the growth and effect of neoplastic tissues on the developing chick embryo with particular reference to Hodgkin's disease.

Drs. Rawson, Pearson, and Eliel, Memorial Hospital, New York City, $20,000, for study of factors influencing tissue metabolism in cancer patients.

Dr. Myron Gordon, New York Zoological Society, $19,834, for genetic and correlated studies of normal and atypical pigment cell growth.

Dr. Antonio Rottino, St. Vincent's Hospital, New York City, $6,000, for study of Hodgkin's disease.

Drs. Bloor, Hodge, and Stotz, University of Rochester, $6,318, for study of the relationship of dietary factors to the formation of neoplasms in rats.

Dr. William S. McCann, University of Rochester, $22,399, for metabolic studies of patients with neoplastic diseases.

Dr. E. Henry Keutmann, University of Rochester, $10,000, for study on identification of steroid hormones in patients with cancer.

Grants-in-aid totaling $220,000 have been awarded for heart disease research to 46 universities, hospitals, institutes, and laboratories by the American Heart Association, it was announced recently. The latest grants bring to approximately $400,000 the total funds voted by the American Heart Association during the past year for research to be conducted in the academic year 1950–1951. This total does not include research funds independently allocated by affiliated local heart associations.

Following are research grants in New York State:

Syracuse University College of Medicine, $4,410, for the study of nervous and hormonal control of blood flow through the kidneys by Dr. Otto W. Sartorius (grant-in-aid; original grant two years).

Albany Medical College, $5,460, for the study of physiologic aspects of valvular heart disease, by Dr. Harold C. Wiggers (duration two years).

Long Island College of Medicine, $2,940, for the study of structural aspects of the kidney, by Dr. Jean Oliver (duration one year).

Columbia University, College of Physicians and Surgeons, $3,150, for the study of surgery of the heart, by Dr. Ferdinand F. McAllister (duration one year).

Cornell University Medical College, $5,565, for study of the effects of drugs on heart muscle, by Dr. McKeen Cattell (duration one year).

Montefiore Hospital, New York, $3,255, for the study of congestive heart failure, by Dr. Abraham G. White (duration one year).

Cornell University Medical College, $8,085, for physiologic studies, by Dr. Robert F. Pitts (duration three years).

Mount Sinai Hospital, New York City, $3,150, for the study of the role of the kidney in heart failure, by Dr. Jonas H. Sirota (duration one year).

University of Rochester, School of Medicine and Dentistry, $2,866, for the study of the ballistocardiograph, by Dr. Herbert R. Brown, Jr. (duration one year).

Also announced recently was a research grant by the John and Mary R. Markle Foundation to Dr. Daniel Lewis Larson of the Department of Internal Medicine of the College of Physicians and Surgeons, Columbia University, for the study of immunochemistry in cancer. The grant amounted to $25,000 to be allotted at the rate of $5,000 a year to the medical school in which the appointment is held. Dr. Larson is one of 20 medical scientists named as the third group of Scholars in Medical Science by the Foundation as part of a five-year program to keep young doctors on teaching and research staffs of medical schools.

MEDICALLY SPEAKING—

New Mental Hygiene Commissioner—Dr. Newton J. T. Bigelow, senior director of Marcy State Hospital, Utica, and former deputy commisioner and acting assistant commissioner of the State Department of Mental Hygiene, has been appointed by Governor Dewey as State Commissioner of Mental Hygiene. Dr. Bigelow succeeds Dr. Frederick MacCurdy, who resigned to become medical consultant to the New York State Citizens' Committee of One Hundred for Children and Youth.

Research Fellowships in Pediatric Allergy—Two research fellowships in pediatric allergy have been established by the New York Medical College. These are full-time fellowships, one beginning July 1 and the second, January 1, with stipend to be arranged. Applicants must be certified in pediatrics or have the requirements for certification. The fellowships run from one to two years and will consist of intensive training in immunology and animal research pertaining to the field of hypersensitiveness and intensive study of allergic children, which will include skin testing, laboratory work, and clinical follow-up, as well as clinical research. Applicants who have had previous training in chemistry and/or immunology will have preference.

Applications should be made to the office of the dean, New York Medical College, 106th Street and Fifth Avenue, New York City.

A Survey of Physicians' Incomes—Late in April the Bureau of Medical Economic Research of the American Medical Association and the Office of Business Economics of the U. S. Department of Commerce were to conduct jointly a survey of physicians' incomes. The Bureau has been authorized by the A.M.A. Board of Trustees to cooperate in this survey, which the Department of Commerce planned to conduct alone. It will be the first full-scale survey by the department of physicians' incomes since 1941.

Every physician can be assured that the survey has no relation whatever to the operations of the U.S. Bureau of Internal Revenue. There is no way by which the Department of Commerce could have obtained the needed information from the Bureau of Internal Revenue; hence, the questionnaire survey. Physicians will be doing the medical profession a service by filling out the forms and returning them as soon as possible.

Diseases of the Cardiovascular System—A course of lectures and demonstrations on "Diseases of the Cardiovascular System for General Practitioners" will be given at the New York Medical College, Flower and Fifth Avenue Hospitals, from May 22 to 27. These lectures are given in conjunction with the State and City Departments of Health and the Medical Society of the State of New York. The material has been selected with the requirements of the general practitioner in mind, and special emphasis will be placed upon recent advances in diagnosis and treatment. Special registration is provided for physicians of this State.

For further information, application should be made to the New York Medical College, Flower and Fifth Avenue Hospitals, 1 East 105th Street, New York 29, or to the State Department of Health, 39 Columbia Street, Albany 7, New York.

Radioactive Isotopes—On November 14, 1949, the Executive Board of the American Academy of Pediatrics approved the following recommendation of the Committee for the Study of Radiation Effects in Childhood concerning the use of radioactive isotopes:

"No research study with radioactive isotopes should be undertaken on pregnant women unless (1) it cannot first be done on animals; (2) the study is approved by the Committee for Human Use of Radioactive Isotopes of the Atomic Energy Commission."

The recommendation was made because of the ready availability of certain radioactive isotopes at present. The Committee believes the profession as a whole is unaware that it is now possible for an individual obtaining isotopes from a cyclotron to be the sole judge of how these substances are to be used.

For further information, address Dr. Harold W. Dargeon, chairman, Committee for the Study of Radiation Effects in Childhood, 119 East 84th Street, New York City.

New Booklet Issued—"Girls Want To Know," sixth of a parent-child educational series, has just been issued by the Social Hygiene Committee of the New York Tuberculosis and Health Association. Written in language a teen-age girl can understand, the booklet is designed for girls to read themselves. It was written by Jacob A. Goldberg, Ph.D. New York City residents may obtain a free copy by writing the Social Hygiene Committee, New York Tuberculosis and Health Association, 386 Fourth Avenue, New York 16, New York. A self-addressed stamped envelope is requested. Readers outside of the city are asked to pay two cents a copy plus a self-addressed, stamped envelope.

New Editor Appointed—Dr. Walter Alvarez, senior consultant in the Division of Medicine in the Mayo Clinic, Rochester, Minnesota, has been appointed medical editor of *GP*, published by the American Academy of General Practice. Dr. Alvarez succeeds Dr. F. Kenneth Albrecht, who died following an automobile accident in March. Previously, Dr. Alvarez served as editor on *The American Journal of Digestive Diseases* and on *Gastroenterology*

Newborn Baby's First Cry to Open Sterling-Winthrop Institute—An estimated 150 expectant mothers will be participating in a "stork race" during May in the maternity wing of the Albany Hospital. The race will end at 2:30 P.M. on Wednesday, May 17, when the first cry of one of the babies born closest before or exactly on that hour will be used to open officially the new laboratory building of the Sterling-Winthrop Research Institute, located in Rensselaer, seven miles from the Hospital across the Hudson River.

The baby, whether a boy or a girl, will receive a college scholarship from the Institute. If twins, triplets, quadruplets, or, of course, very unlikely, quintuplets are born at the appointed time or nearest to it, each will receive the $3,000 scholarship fund, providing they live to the required age and desire to complete their higher education.

MEETINGS

PAST

Society of Medical Jurisprudence

The 650th regular meeting of the Society of Medical Jurisprudence was held at the New York Academy of Medicine, New York City, on April 10. Speakers included: Dr. David M. Spain, medical examiner of Westchester County and assistant professor of pathology, Columbia University, "Sudden and Unexpected Death," and Dr. Theodore J. Curphey, chief medical examiner, Nassau County and pathologist to the Meadowbrook Hospital, "The Medical Examiner System: Should the Legislature Make the System State-wide?"

New York Allergy Society

A program of scientific papers was presented at the April meeting of the New York Allergy Society, held April 12 at the New York Academy of Medicine, New York City. Speakers and their topics included: "Foreign Body Simulating Asthma," Dr. Nathan Ravin, Flower and Fifth Avenue Hospitals; "Pollen Studies at Ambrose Lightship," Dr. Richard Wiseman and Dr. Israel Glazer, Brooklyn Jewish Hospital; "A New Approach to Mold Surveys," Dr. Nathan Schaffer, Orange Memorial Hospital; "Pollenosis with Negative Cutaneous Tests," Dr. Murray Peshkin, Mount Sinai Hospital; "New Antibiotics in Treatment of Vasomotor Rhinitis," Dr. Artell Johnson, New York Eye and Ear Infirmary, and "The Importance of Foods in Allergic Patients," Dr. Harry Leibowitz, Dr. Alexander Chester, and Dr. Harry Markow, Beth-El Hospital.

FUTURE

Biennial Nursing Convention

Plans have been completed for the sixteenth Biennial Nursing Convention to be held in San Francisco, California, from May 7 to 12, under the joint sponsorship of the American Nurses' Association, the National League of Nursing Education, and the National Organization for Public Health Nursing. Eight thousand nurses representing 200,000 professional registered nurses in the United States, Hawaii, and Puerto Rico are expected to attend. Convention theme is "Health—A Unifying World Influence: Nursing Accepts Its Role."

State Charities Aid Association

The annual conference of State and local committees on tuberculosis and public health of the State Charities Aid Association will be held Tuesday and Wednesday, May 16 and 17, at the Hotel Commodore, New York City. At the Presidents' luncheon on May 16, Dr. David T. Smith, president of the National Tuberculosis Association, will speak on "Tuberculosis Research at the Mid-Century." At the S.C.A.A. reunion luncheon on May 17, guest speaker will be Dr. Harry S. Mustard, former New York City Commissioner of Health who is now executive director of the S.C.A.A.

St. John's Episcopal Hospital, Brooklyn

The sixth annual Chest Conference at the St. John's Episcopal Hospital, Brooklyn, will be held Thursday, May 18, at 8:30 P.M. Dr. C. Rollin Hanlon will speak on "Surgery of Congenital and Acquired Heart Disease."

American Neurological Association

The annual meeting of the American Neurological Association will be held in Atlantic City, New Jersey, on June 12, 13, and 14, with headquarters at the Claridge Hotel. Officers of the group include: Dr. E. Jefferson Browder, Brooklyn, second vice-president; Dr. H. Houston Merritt, New York City, secretary-treasurer, and Dr. Edwin G. Zabriskie, New York City; Dr. Henry Alsop Riley, New York City, and Dr. John Romano, Rochester, councilors.

American College of Chest Physicians

The sixteenth annual meeting of the American College of Chest Physicians will be held at the St. Francis Hotel, San Francisco, California, June 22 through June 25. Dr. George Foster Herben, Yonkers, serves as Governor of the College for the State of New York, and Dr. Donald McKay, Buffalo, is Regent for the district. Dr. Joseph J. Witt, Utica, is president of the New York Chapter.

POWER OF THE PEN

The Government Printing Office, according to National Economic Council Letter of November 15, 1949, reprinted by Massachusetts Hospital Service Inc., has estimated that between 1939 and 1949 nearly 13,400,000 copies of publications were printed each year for public distribution. The ten-year total can easily be obtained by adding a zero to the tail of this astronomic figure.

Much of this material having been distributed in the interests of public information and education, a glance at a few of the titles may be of interest. These include such subjects as "How to Tell the Sex of a Watermelon," "Techniques of Fishpond Management," "Estimating Muskrat Population by House Count," "Fish for Breakfast—and Why Not?", "Fairy Tales from Korea," "Recipes for Cooking Muskrat Meat," "Mist Netting for Birds in Japan," and "Habits, Food, and Economic Status of the Band-Tailed Pigeon."

The education of the American people must have breadth as well as depth.—*New England Journal of Medicine, February 2, 1950*

TELEVISION PROGRAM

144th Annual Convention, Medical Society of the
State of New York

Keystone Room, Ballroom Balcony
Hotel Statler, New York City

* * *

Surgical Operations and Medical Procedures Performed by the Staff of the Kings County Hospital, College Division (State University Medical Center at New York)

Sponsored by E. R. Squibb and Sons in cooperation with RCA

* * *

Wednesday, May 10
12:00 NOON to 2:00 P.M.

CLINICAL BALLISTOCARDIOGRAPHY (*clinic*)
William Dock, M.D.

CARCINOMA OF THE COLON (*operation*)
Phillip E. Lear, M.D.

PEPTIC ULCER TREATED BY VAGOTOMY: FAILURE TO RELIEVE SYMPTOMS (*clinic*)
Arnold Sammis, M.D.

Thursday, May 11
12:00 NOON to 2:00 P.M.

CARDIAC ARRHYTHMIA (*clinic*)
Joseph Di Palma, M.D.

CESAREAN SECTION (*operation*)
Morris Glass, M.D.

TREATMENT OF MILIARY TUBERCULOSIS IN CHILDREN (*clinic*)
Lambert Krahulik, M.D.

Friday, May 12
12:00 NOON to 2:00 P.M.

MYXEDEMA (*clinic*)
Milton Plotz, M.D.

PEPTIC ULCER (*operation*)
Raymond K. J. Luomanen, M.D.

PARKINSONISM: ITS SURGICAL TREATMENT (*clinic*)
Jefferson Browder, M.D.

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BOOKS

Books for review should be sent to Book Review Department at 1313 Bedford Avenue Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

BOOKS RECEIVED

Streptomycin. Nature and Practical Applications. Edited by Selman A. Waksman, Ph.D. Octavo of 618 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

Injuries of the Brain and Spinal Cord and their Coverings. Neuro-Psychiatric, Surgical, and Medico-Legal Aspects. By twenty-eight contributors. Edited by Samuel Brock, M.D. Octavo of 783 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

Child of Destiny. The Life Story of the First Woman Doctor. By Ishbel Ross. Octavo of 309 pages, illustrated. New York, Harper & Bros., 1949. Cloth, $3.50.

Memories of Eighty Years. By James B. Herrick, M.D. Octavo of 270 pages, illustrated. Chicago, University of Chicago Pr., 1949. Cloth, $5.00.

Life Among the Doctors. By Paul de Kruif, in collaboration with Rhea de Kruif. Octavo of 470 pages. New York, Harcourt, Brace & Co., 1949. Cloth, $4.75.

Arterial Hypertension. Its Diagnosis and Treatment. By Irvine H. Page, M.D., and Arthur Curtis Corcoran, M.D. Second edition. Octavo of 400 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $5.75.

Massage and Remedial Exercises. In Medical and Surgical Conditions. By Noël M. Tidy. Eighth edition. Octavo of 487 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.25.

May's Manual of the Diseases of the Eye. For Students and General Practitioners. Revised and edited by Charles A. Perera, M.D. Twentieth edition. Duodecimo of 512 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

Diseases of the Aorta. Diagnosis and Treatment. By Nathaniel E. Reich, M.D. Octavo of 288 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $7.50.

Operative Technic in Specialty Surgery. Edited by Warren H. Cole, M.D. Octavo of 725 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $14.

Textbook of Bacteriology (Eleventh edition of **Muir & Ritchie's "Manual"**). By C. H. Browning, M.D., and T. J. Mackie, M.D. Octavo of 907 pages, illustrated. New York, Oxford University Press, 1949. Cloth, $12.75.

Digitalis and Other Cardiotonic Drugs. By Eli Rodin Movitt, M.D. Second edition. Octavo of 245 pages, illustrated. New York, Oxford University Pr., 1949. Cloth, $5.75.

Roentgen Diagnosis of Diseases of the Skull. By Max Ritvo, M.D. Volume 19 of the "Annals of Roentgenology." Quarto of 409 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $16.

Modern Practice in Ophthalmology. 1949. Edited by H. B. Stallard, M.D. Octavo of 525 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $12.50.

Physiology of the Uterus. By S. R. M. Reynolds, Ph.D. Second edition. Quarto of 611 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $12.50.

Advances in Pediatrics. Editorial Board, S. Z. Levine, M.D., Allan M. Butler, M.D., L. Emmett Holt, Jr., M.D., and A. Ashley Weech, M.D. Volume IV. Octavo of 316 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $6.50.

Tablet Making. By Arthur Little and K. A. Mitchell. Octavo of 121 pages, illustrated. Liverpool, England, Northern Publishing Co., 1949. Cloth, 15/-.

Mobilization of the Human Body. Newer Concepts in Body Mechanics. By Harvey E. Billig, Jr., M.D., and Evelyn Loewendahl, M.A. Octavo of 65 pages, illustrated. Stanford, California, Stanford University Pr., 1949. Cloth, $2.00.

Malaria. The Biography of a Killer. By Leon J. Warshaw, M.D. Octavo of 348 pages. New York, Rinehart & Co., 1949. Cloth, $3.75.

Bone and Joint Radiology. By Emerik Markovits, M.D. Quarto of 446 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $20.

Atlas of Surgical Operations. By Elliott C. Cutler, M.D., and Robert M. Zollinger, M.D. Illustrated by Mildred B. Codding, M.A. Second edition. Folio of 225 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $9.00.

A Textbook of Surgery. By American Authors. Edited by Frederick Christopher, M.D. Fifth edition. Quarto of 1,550 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $13.

A Textbook of Physiology (originally by William H. Howell, M.D.). Edited by John F. Fulton, M.D. With the collaboration of Donald H. Barron, Ph.D., John R. Brobeck, M.D., Robert W. Clarke, Ph.D., *et al.* Sixteenth edition. Octavo of 1,258 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $10.

Acute Laryngotracheobronchitis. By A. Harry Neffson, M.D. Octavo of 197 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $5.00.

Clinical Audiology. By Maurice Saltzman, M.D. Octavo of 195 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $5.00.

A Short Practice of Surgery. By Hamilton Bailey, F.R.C.S., and R. J. McNeill Love, M.S.(Lond.). With Pathological Illustrations by L. C. D. Hermitte, Ch.B.(Edin.). Eighth edition. Octavo of 1,050 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

Medical Meeting. By Mildred Walker. Octavo of 280 pages. New York, Harcourt, Brace & Co., 1949. Cloth, $3.00.

Surgical and Maxillofacial Prosthesis. By Oscar Edward Beder. Quarto of 51 pages, illustrated. New York, King's Crown Press, 1949. Paper, $3.00.

Selective Partial Ablation of the Frontal Cortex. A Correlative Study of Its Effects on Human Psy-

chotic Subjects. By The Columbia-Greystone Associates. Editor, Fred A. Mettler, M.D. Quarto of 517 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $10. (Problems of the Human Brain.)

The Cry and the Covenant. By Morton Thompson. Octavo of 469 pages. New York, Doubleday & Co., 1949. Cloth, $3.50.

Ophthalmic Medicine. By James Hamilton Doggart. Octavo of 329 pages, illustrated. Philadelphia, Blakiston Co., [1949]. Cloth, $8.00.

Vitaminology. The Chemistry and Function of the Vitamins. By Walter H. Eddy, Ph.D. Octavo of 365 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.00.

The Surgical Treatment of Facial Injuries. By Varaztad Hovhannes Kazanjian, M.D., and John Marquis Converse, M.D. Quarto of 574 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

The Medical Clinics of North America. Philadelphia Number. November, 1949. Index 1947–1949. Octavo. Philadelphia, W. B. Saunders Company, 1949. Published Bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

Cancer. New light on its causes, detection, treatments, cures and the brilliant promise of today's research. By Beka Doherty. Octavo of 327 pages. New York, Random House, 1949. Cloth, $3.00.

Microbiology. By Florene C. Kelly, Ph.D., and K. Eileen Hite, M.D. Octavo of 592 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $6.50.

The Vitamins in Medical Practice. By J. Shafar, M.D. Octavo of 383 pages, illustrated. New York, Staples Press, 1949. Cloth, $4.50.

Pavlov. A Biography. By B. P. Babkin, M.D Octavo of 365 pages, illustrated. Chicago, University of Chicago Pr., 1949. Cloth, $6.00.

Acute Appendicitis and Its Complications. By Frederick Fitzherbert Boyce, M.D. Octavo of 487 pages, illustrated. New York, Oxford University Pr., 1949. Cloth, $8.75.

An Atlas of Amputations. By Donald B. Slocum, M.D. Quarto of 562 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $20.

BOOKS REVIEWED

The Parathyroid Glands and Metabolic Bone Disease. Selected Studies. By Fuller Albright, M.D., and Edward C. Reifenstein, Jr., M.D. Octavo of 393 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $8.00.

This is a short compend of work done by the metabolism and endocrine team at the Massachusetts General Hospital. It has much of value in everyday clinical practice, while rare bone diseases are satisfactorily covered as well.

This book is strongly recommended.

Andrew Babey

Diseases of the Adrenals. By Louis J. Soffer, M.D. Second edition. Octavo of 320 pages, illustrated. Philadelphia, Lea & Febiger, 1948. Cloth, $6.50.

The second edition of Soffer's monograph on the adrenals fulfills all of the promise of the first. There has been much added to our knowledge of the adrenal gland since the first edition, and all of this has been thoroughly incorporated into the text. Every aspect of this special subdivision of endocrinology is covered, including the important chemical and mechanical technics. This small volume should form an indispensable part of every physician's working library.

Milton J. Plotz

America's Health. A Report to the Nation. By the National Health Assembly. Official Report. Octavo of 395 pages. New York, Harper & Bros., 1949. Cloth, $4.50.

This book contains the proceedings of the National Health Assembly convened in Washington in May, 1948.

It should be read and evaluated by all interested in social trends as they affect the individual and collective mental and physical health of the nation.

B. M. Bernstein

Mycoses and Practical Mycology. A Handbook for Students and Practitioners. By N. Gohar, M.R.C.S. (Eng.). Octavo of 234 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $6.00.

This book has been written to cover the whole field of mycotic affections. It has been accomplished in a satisfactory manner. Nomenclature is always difficult in this field and an attempt has been made to clarify it. Therapy is covered, but some of the recent advances seem to have been completely ignored. This is unfortunate, as some of the changes in therapy seem to be a marked improvement in a field where results have always been not too satisfactory.

John C. Graham

Roentgen Diagnosis of the Extremities and Spine. By Albert B. Ferguson, M.D. Volume 17 of the "Annals of Roentgenology." Second edition. Quarto of 519 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $15.

An eminently qualified author utilizing the vast material of the New York Orthopaedic Hospital has created a reference work of permanent value. The second edition is even more complete than the first.

The author's approach to the differential diagnosis of bone affections is ingenious; it is so original that he has to coin new terms. Roentgenologists, once they have familiarized themselves with the terminology, will find the book most useful when confronted with any of the numerous problems arising in bone roentgenography. The illustrations are plentiful and of excellent quality. Most of the material is documented by biopsy or necropsy findings. A very complete general index deserves special commendation.

S. W. Westing

Practical Orthoptics in the Treatment of Squint (and Other Anomalies of Binocular Vision). By T. Keith Lyle, M.D., and Sylvia Jackson, D.B.O., with the assistance of Lorna Billinghurst, D.B.O., and Diana Salsbury, D.B.O. Third edition. Octavo of 271 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $8.50.

This book on practical orthoptics is now in its third edition and, as its title implies, it deals with the functional management of squint by nonsurgical measures. The author depends almost entirely on the synoptophore, and much of the book is devoted to the operation of this instrument for various binocular disorders. Other instruments are illustrated and discussed in minor length. Very little space is devoted to prism training. The last third of the book deals with paralytic strabismus including many case reports and some good photographs. This is a valuable portion of the book and stresses clinical aspects including the problem of head-tilt.

This book is stimulating and provides food for thought. One fails, however, to find a critical evaluation of the methods as well as data about the results from orthoptic training. Diagnosis plays a secondary role to treatment. The optical basis of the synoptophore in relation to eye deviation is not discussed.

Emanuel Krimsky

Guiding Human Misfits. A Practical Application of Individual Psychology. By Alexandra Adler, M.D. Revised edition. Duodecimo of 114 pages. New York, Philosophical Library, 1948. Cloth, $2.75.

This book concerns itself with the management of neuroses through the use of the principle of "individual psychology" as originated by the author's father, Alfred Adler.

Much of the book stresses the significance of childhood in preparation for the problems to be met in later life. It is simply written, reads easily, and would be of benefit to the practitioner.

Stanley S. Lamm

Conference on Metabolic Aspects of Convalescence. Transactions of the Seventeenth Meeting, New York, N.Y., March 29–30, 1948. Edited by Edward C. Reifenstein, Jr., M.D. Octavo of 246 pages, illustrated. New York, Josiah Macy, Jr. Foundation, n.d. Paper, $4.00.

This is a useful publication from the Josiah Macy Foundation. The more important sections deal informally with protein metabolism, potassium, adrenocorticotrophic hormone, and human albumen. This is a good reference book for fundamental research.

Andrew Babey

Text-Book of Ophthalmology. By Sir W. Stewart Duke-Elder, M.D. Volume 4—The Neurology of Vision. Motor and Optical Anomalies. Octavo, pages 3473–4627, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $20.

This volume of the great work on opthalmology is devoted to the neurology of vision and the motor and optical anomalies. The preceding three volumes are so well known that everyone knows what to expect and none will be disappointed.

As in the other volumes, portraits of distinguished oculists are appropriately placed throughout the volume. Among those thus honored are Cushing, Duane, Jackson, and Gordon Holmes. The illustrations are well chosen and plentiful. At the end of each section references to important articles are appended so the reader can pursue his study into the original observations for the detail he may desire. In the section for motor anomalies the various pieces of apparatus used by various writers are illustrated. The section given to optical anomalies opens with the history of eye glasses and also includes the mathematics of optics which some will want to see but which is too intricate for the average reader. Subjects like aniseikonia, contact lenses, and toxoplasmosis are presented with full appreciation that at present there are two sides to the question in each case.

This series of six volumes will provide practically all of the material needed by the opthalmologist from his apprenticeship, through his most active days, right on to his status as a consultant.

Ralph I. Lloyd

Trends in Medical Education. The New York Academy of Medicine Institute on Medical Education, 1947. Edited by Mahlon Ashford, M.D. Octavo of 320 pages. New York, Commonwealth Fund, 1949. Cloth, $3.00.

This volume, sponsored by the New York Academy of Medicine, is, like all others issued by the Academy, highly authoritative and all inclusive. Its contents are divided into six parts. Part one is devoted to premedical education, etc. In the introductory remarks is a quote from a monograph by Raymond B. Allen, as follows: "Any sound plan of medical education must embrace the entire educational experience from childhood to retirement from practice."

While this is at the present time an exaggeration of what is possible, it expresses nevertheless the very salient idea that the education of the prospective doctor must have for its objective knowledge that will equip the practitioner, the teacher, and the research scientist with all the essentials to become a topflight individual in his chosen profession.

If all the methods for premedical education discussed and suggested were to be followed, half a lifetime would be required. One gets the impression that this phase of preparation is still in a confused and unsettled state. But commendable efforts by many educational units are being exerted to effect a more unified program.

Part six, the relationship of group practice and community medical services to medical education, is very timely and exceedingly interesting and informative.

All educators, teachers, hospital administrators, sociologists, and others will find in this volume answers to many subjects now before the public, lay and professional.

S. R. Blatteis

Regional Ileitis. By Burrill B. Crohn, M.D. Octavo of 229 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $5.50.

One cannot know or understand this mysterious disease called regional or segmental ileitis without reading and digesting this very excellent book by a most capable gastroenterologist. One might add that continuing knowledge of the disease makes it seem likely that its name might have to be changed to that of idiopathic enterocolitis, since any portion of the small bowel and even the beginning of the large bowel may be involved.

The book is amply and well illustrated by drawings and x-rays; the text is well written and the bibliography voluminous. It deserves a place on any doctor's book shelf.

B. M. Bernstein

Change of Life. A Modern Woman's Guide. By F. S. Edsall. Duodecimo of 127 pages, illustrated. New York, Woman's Press, 1949. Cloth, $2.00.

This is a sensible reliable review of the menopause for the patient. It helps clarify much that worries the anxious woman going into this period of life.

Andrew Babey

Autobiography of Dr. Robert Meyer. (1864–1947). A Short Abstract of a Long Life. With a Memoir of Dr. Meyer by Emil Novak, M.D. Quarto of 126 pages, illustrated. New York, Henry Schuman, 1949. Cloth, $2.50.

A brief and enchanting account of the long life of a great embryologist and pathologist. A prodigious worker and a distinguished teacher, Robert Meyer and his life are an inspiration. All our bright young men should read this fascinating book. Novak's memoir adds much to it. Charles A. Gordon

Anesthesia. Principles and Practice. A Presentation for the Nursing Profession. By Alice M. Hunt. Sextodecimo of 148 pages, illustrated. New York, G. P. Putnam's Sons, 1949. Cloth, $2.60.

This practical, readable book on anesthesia is a presentation for the nursing profession written by a nurse who pioneered in anesthesia. She subsequently taught anesthesia with the rank of associate professor at the Yale School of Medicine. This book ensures her continuing to teach anesthesia. Anyone who gives anesthesia would profit from reading it.

It is comprehensive, interesting, never boring, always soundly technical. Throughout, the importance of the patient is kept paramount. It is refreshing to find someone concerned with the plight of the patient during the unavoidable changes in operating schedules—someone who takes the trouble to explain to apprehensive women why they may not use makeup before they go to the operating room—instead of authoritatively issuing orders.

The book is calculated to give poise and security to anyone interested in learning anesthesia technic. It ought to find a place in all hospital shelves—for doctors as well as for nurses.

A. Streeseman

Cardiovascular Disease in General Practice. By Terence East, D.M. (Oxon.). Third edition. Octavo of 208 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $4.00.

The third edition of East's *Cardiovascular Disease in General Practice* retains the good features of previous editions. There are more comprehensive one volume cardiologies for the general practitioner but none better at the extremely modest price being asked for this short text. It is recommended especially to doctors whose principal interests lie outside the field of internal medicine and who wish a short but authoritative work covering the cardiovascular diseases. Milton Plotz

Outwitting Your Years. By Clarence William Lieb, M.D. Duodecimo of 278 pages. New York, Prentice-Hall, 1949. Cloth, $2.75.

It is pleasing to have been assigned this book for review, since this reviewer has been occupied in this process of outwitting the years for quite some time. There is no pet formula for achieving this desired objective. The "spirit of youth" must be maintained; a great aid in doing this is not alone to have the spirit, but to have actual contact and association with youth.

And so throughout this volume will be found common sense advice and suggestions on how to meet advancing years and be as contented at seventy-plus as at fifty. While reading this book is a pleasure and delight, the greater benefit to be derived is the encouragement it holds for those who sooner or later must cross the threshold of youth.

S. R. Blatteis

Photoradiography in Search of Tuberculosis. By David Zacks, M.D. Quarto of 297 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

This is one of the better books that have come out in recent years pertaining to mass surveys in search of chest diseases. Dr. Zacks, as chief of clinics of the Massachusetts Department of Health, has had a wealth of experience in this work and has put it to excellent service for the profession.

The book abounds in excellent illustrations of roentgenograms of various chest conditions and will afford considerable information to those interested in the subject. We feel that every general practitioner and every specialist in chest diseases will profit by perusing its pages. Foster Murray

Syphilis: Its Course and Management. By Evan W. Thomas, M.D. Octavo of 317 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $5.50.

The Bellevue Hospital group headed by Drs. Evan Thomas, Dattner, Wexler, Flaum, and Speiser have a rich experience in the diagnosis and management of syphilis, and their opinions are herewith published in book form. The material is brief and to the point. There are no annoying literary reviews with claims and counter claims (which only confuse physicians.)

This volume has a great deal of solid substance and is both honest and completely reliable. All medical men should have a copy and refer to it regularly. Andrew Babey

A Descriptive Atlas of Radiographs. An Aid to Modern Clinical Methods. By A. P. Bertwistle, M.B. Seventh edition. Large octavo of 622 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $16.

The author wishes to impress on the mind of the nonroentgenologist how immensely useful roentgenography can be as a diagnostic aid, a splendid idea. No technical knowledge is required from the reader. A fine feature is the arrangement on two opposing pages of good illustrations of normal as well as pathologic conditions, plus explanatory diagrams, plus a clearly and concisely written text. Emphasis is laid on "silhouette radiographs," which are conducive to directing greater attention to the soft tissues on bone roentgenograms. The usefulness of the book could be considerably enhanced by a more appropriate distribution of the space available (622 pages). For instance: The important subject of the roentgenologist's assistance when the problem of intestinal obstruction comes up is dealt with in merely one illustration and four lines of text.

S. W. Westing

New and Nonofficial Remedies, 1949. Containing Descriptions of the Articles Which Stand Accepted by the Council on Pharmacy and Chemistry of the American Medical Association on January 1, 1949. Issued Under the Direction and Supervision of the Council on Pharmacy and Chemistry of the American Medical Association. Duodecimo of 805 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1949. Cloth, $3.00.

The 1949 Edition of *New and Nonofficial Remedies* is, as usual, a gold mine of valuable information for everyone who practices medicine. All recent therapeutic advances of value are more than adequately discussed. A copy should be in the library of every physician. Milton Plotz

Introduction to Physiological and Pathological Chemistry. With Laboratory Experiments. By

L. Earle Arnow, M.D. Third edition. Octavo of 595 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $4.00.

This is an easily understood book on a subject which is usually confusing. The nurse for whom this book is primarily intended will profit greatly by referring to its pages. The instructor will find it a wonderful guide in his every-day teaching.

This volume should be well received in all schools of nursing. Alan N. Morrison

Medicine. By A. E. Clark-Kennedy, M.D. Volume 2—Diagnosis, Prevention, and Treatment. Octavo of 894 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.00.

This is the second volume of a work which approaches medicine in a nonorthodox, but commendable and satisfactory way. A great deal of interesting and helpful material is scattered throughout its pages. The book is recommended.

Andrew Babey

Hematology. By Willis M. Fowler, M.D. With a Chapter by Elmer L. DeGowin, M.D. Second edition. Octavo of 535 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $8.50.

This is the second edition of a textbook which has already made friends among family physicians. There are included in the present volume the recent advances in hematology, concisely and simply stated. This edition deserves a place on the bookshelf of every internist. Maurice Morrison

The Practice of Refraction. By Sir Stewart Duke-Elder. Fifth edition. Duodecimo of 317 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $6.25.

This well-printed and illustrated book presents the subject adequately and clearly. Each division begins with the basic theory involved and proceeds to the practical description of the condition and the methods of examination. Nothing properly a part of the subject has been omitted and several topics not included in textbooks of this type will be found here, such as an aniseikonia, contact lenses, making and fitting of spectacles, types of spectacles, lenses, etc.

This easy-to-read book is commended to both practitioner and student. The only suggestion offered by the reviewer is to include the visual requirements for official American services and employments. Ralph I. Lloyd

Textbook of Medical Treatment. By Various Authors. Edited by D. M. Dunlop, M.D., L. S. P. Davidson, M.D., and J. W. McNee, M.D. Fifth edition. Octavo of 999 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $8.50.

The fifth edition of this Scottish textbook maintains the high standards of the first four. It is an up to date, complete, but conservative one volume system of treatment. There are only minor differences from commonly accepted American methods and nomenclature and the book can be recommended to practitioners in this country.

Milton Plotz

Manual of Medical Emergencies. By Stuart C. Cullen, M.D., and E. G. Gross, M.D. Duodecimo of 267 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $3.75.

This is an outline of emergency treatment written by an anesthesiologist and a pharmacologist. Considerable emphasis is properly given to modern methods of resuscitation, maintenance of an adequate airway, and the prevention and treatment of anoxia. The general principles of management of emergencies, the handling of the head-injured patient, and the use of oxygen are especially well done. The book is a handy size to be carried in the pocket or bag and is recommended for any physician likely to be called upon to treat emergency cases.

John H. Bogle

Cardiovascular Disease. Fundamentals, Differential Diagnosis, Prognosis and Treatment. By Louis H. Sigler, M.D. Octavo of 551 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $10.

Sigler has written an excellent one volume cardiology, and no student or practitioner will err in adding it to his library. There is a first rate chapter on the anatomy of the cardiovascular system, a feature usually omitted in brief texts of this nature. The diagrams and illustrations are well chosen, and the publishers, as well as the author, have done their work superbly. Milton Plotz

Blakiston's New Gould Medical Dictionary. A Modern Comprehensive Dictionary of the Terms Used in all Branches of Medicine and Allied Sciences, Including Medical Physics and Chemistry, Dentistry, Pharmacy, Nursing, Veterinary Medicine, Zoology and Botany, as Well as Medicolegal Terms; with Illustrations and Tables. Editors, Harold Wellington Jones, M.D., Normand L. Hoerr, M.D., and Arthur Osol, Ph.D. With the cooperation of an editorial board and 80 contributors. Octavo of 1,294 pages. Philadelphia, Blakiston Co., 1949. Cloth, $8.50.

The new Gould dictionary is difficult to review but of it one may fairly say it is complete, reliable, and dependable. The contributors are numerous and distinguished. For a work of this size the price seems most reasonable.

Andrew Babey

Atlas of Roentgenographic Positions. By Vinita Merrill while Educational Director Picker X-Ray Corporation. In two volumes. Quarto of 663 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $30.

Published in two volumes, this work is an excellent guide for those physicians and x-ray technicians who would improve their radiographic technic.

Many books have been published on the subject since x-rays have come into general use, but none surpass this atlas for clarity, format, quality, and abundant illustrations. The latter are unusually well portrayed, and the technic is thoroughly and efficiently described. For the x-ray technician there is elementary anatomy and a rather complete glossary of medical terms; for the radiologist, the commoner as well as unusual positions are well demonstrated. Volume I is devoted to the extremities, spine, and pelvic girdle; volume II to the head, teeth, thorax, and soft tissues of the thoracic and abdominal cavities including the digestive and urinary tracts. A special section is devoted to pelvimetry and the female reproductive system. There is a complete index as well as bibliography which make these volumes excellent for reference purposes.

To all radiologists and technicians this atlas can be heartily recommended. Milton G. Wasch

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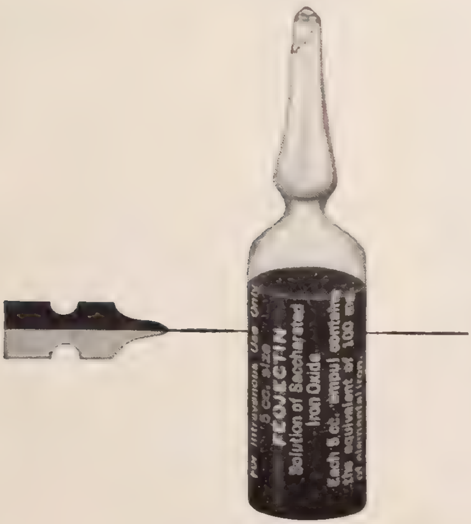
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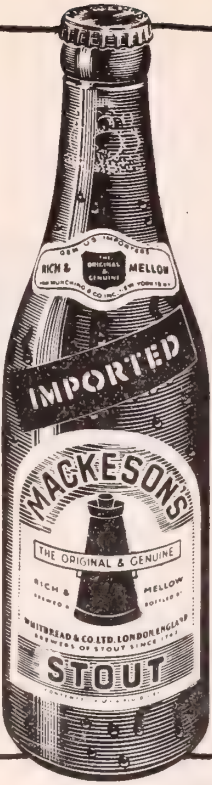
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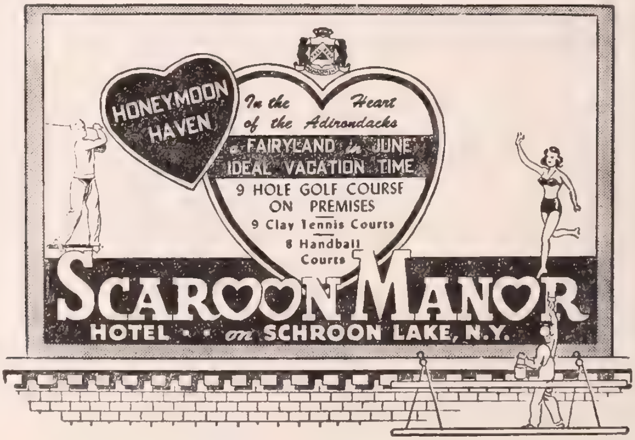
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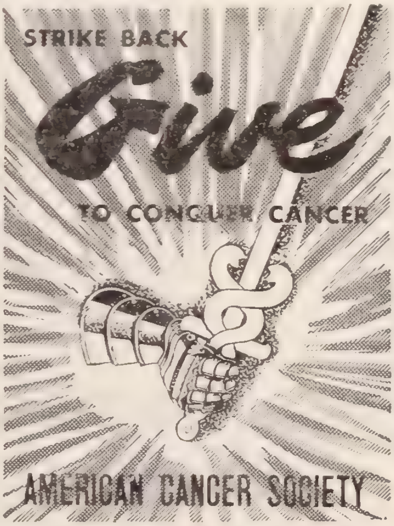

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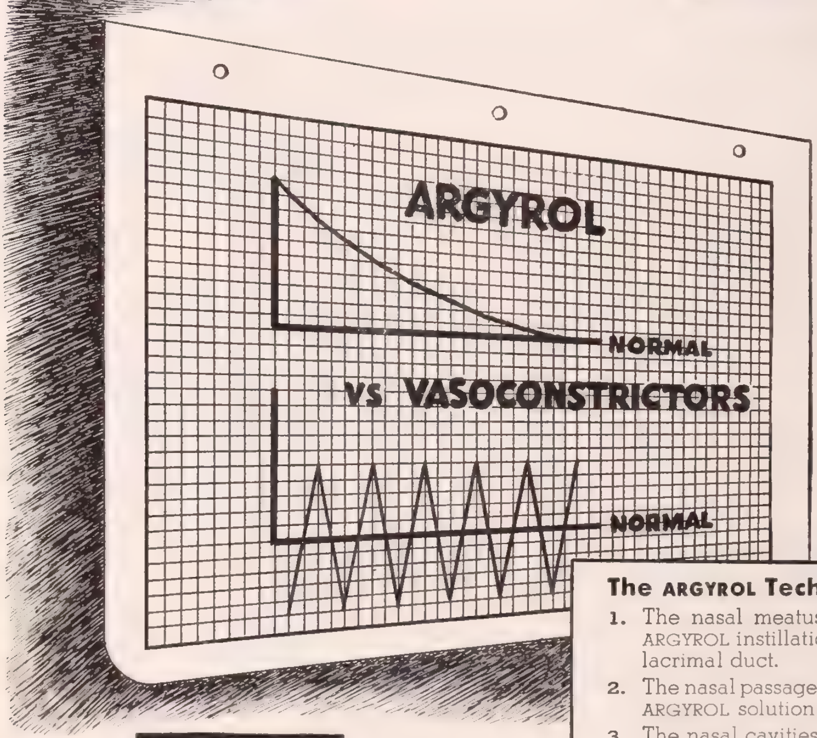

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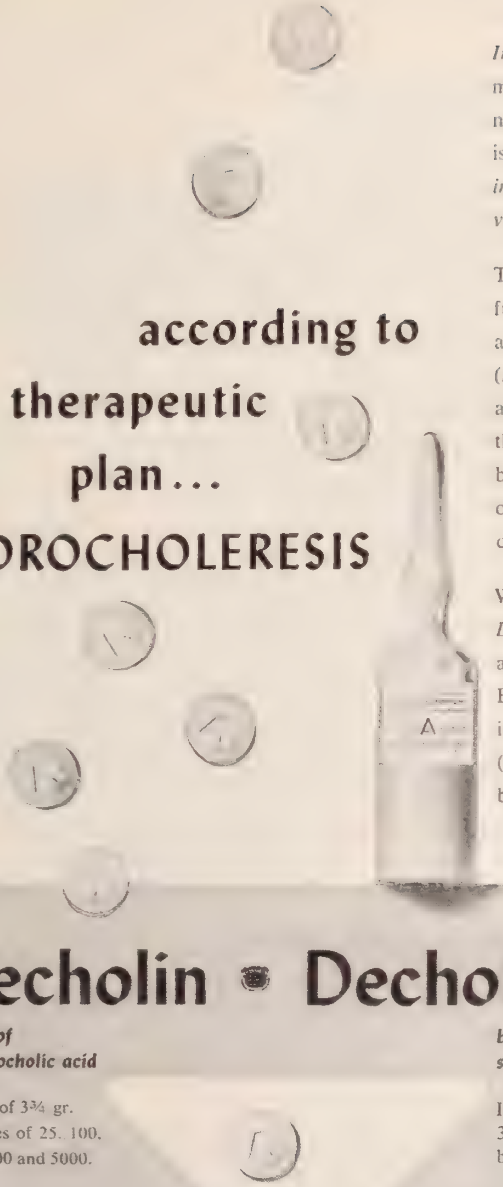

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BIBLIOGRAPHY

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2. KARNOSH, L. J. and ZUCKER, E. N.: A Handbook of Psychiatry, St. Louis, Mosby, 1945.

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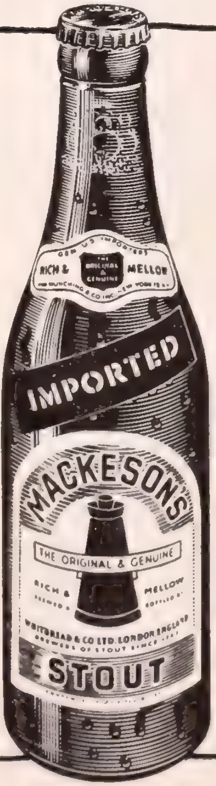

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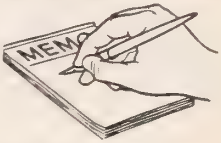

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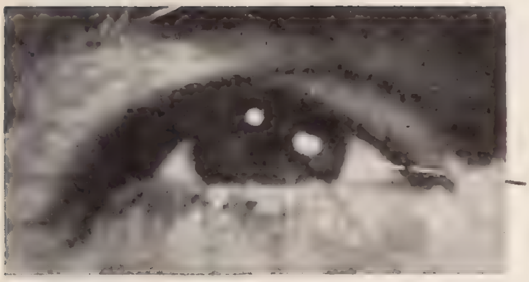

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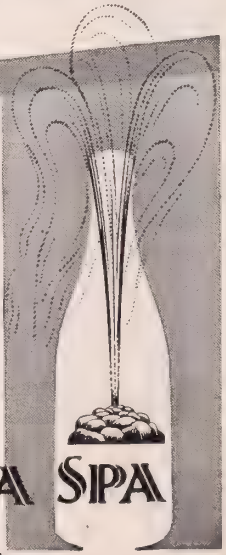

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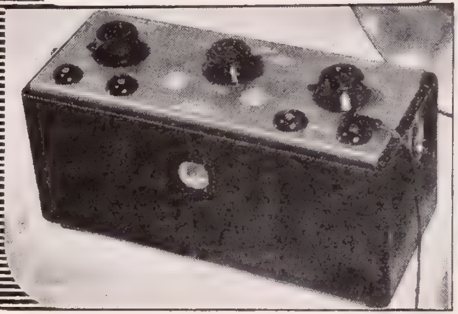

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Sodium Gentisate: A New Approach to the Treatment of Arthritis

It has been estimated[1] that nearly 7,000,000 people (at least one in every 20 persons) in the United States have some form of "rheumatic" disease. Rheumatism (with arthritis the most important single cause) ranks first in prevalence among diseases, and second in the production of disability and invalidism. It is more common than the total number of cases of tuberculosis, diabetes, cancer and heart disease combined.

The most common of the severe forms of the arthritides is rheumatoid arthritis. Although its etiology still remains uncertain, there are factors upon which there is general agreement.[2] (1) Rheumatoid arthritis has a definite tendency to be familial. (2) Eighty per cent of the cases occur between the ages of twenty and fifty with the peak at thirty-five to forty. (3) Females are more commonly affected than males in a ratio of 3:1. (4) Investigation shows that in the period preceding the onset of symptoms, emotional shocks are very common and this is frequently manifested by a severe depression.[3] (5) Pregnancy causes an amelioration of symptoms in a significantly high proportion.[4] (6) Involvement of the liver, as in infectious hepatitis, causes a definite remission in a significant number of patients.[5]

Since Klinge's[6] original work in 1929, evidence has been accumulating that both rheumatic fever and rheumatoid arthritis are diseases of the interfibrillar substance of the connective tissue.[7] The nature of this material is not well understood, although it is presumably a mucopolysaccharide in combination with a protein. This theory holds that changes in the cellular components are secondary to changes in the interfibrillar material. The composition of two of the mucopolysaccharides found in interfibrillar material is known: (a) chondroitin sulfuric acid, and (b) hyaluronic acid.[8] Changes in chondroitin sulfuric acid have been studied in hyaline cartilage which is affected to a considerable degree in rheumatoid arthritis.[9]

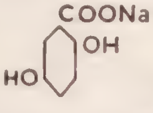
These changes have been on a purely morphological basis[9] and consist chiefly of destruction of hyaline cartilage, presumably due to interference with its blood supply by the overgrowth of pannus and granulation tissue, both beneath the subchondral plate and on the surface of the joint.

On the other hand, changes in the hyaluronic acid of the joint fluid have been shown to be present in active rheumatoid arthritis.[10, 11] These changes in active disease consist of depolymerization of the hyaluronic acid and an increase in the total amount of hyaluronic acid present. The excessive presence of hyaluronidase, moreover, has been acknowledged to produce a denaturization of mucin in the synovial fluid, the varying degrees of which are valuable for their diagnostic as well as prognostic indications.[12] Clinicians[13] have concluded that the increase of hyaluronidase activity may be responsible for the breakdown of interfibrillar cement.

A rational approach to the problem, therefore, demands a therapeutic agent that will act to inhibit the spreading effect of hyaluronidase.

Meyer and Ragan[14] treated patients having rheumatoid arthritis and acute rheumatic fever with sodium gentisate, a hyaluronidase inhibitor. Their results were uniform and notably favorable. Within a few days there followed a disappearance of pain, swelling and joint inflammation.

The increase in urinary glucuronic acid observed with salicylates does not occur with gentisates. This phenomenon has been assigned to the rapid oxidation of the gentisates.[15] It is indeed likely, as shown by examination of the structural formulas of these two compounds, that the antirheumatic action of the salicylate in forestalling the spread of hyaluronidase[16] is attributed to its partial oxidation in the body to a gentisate.



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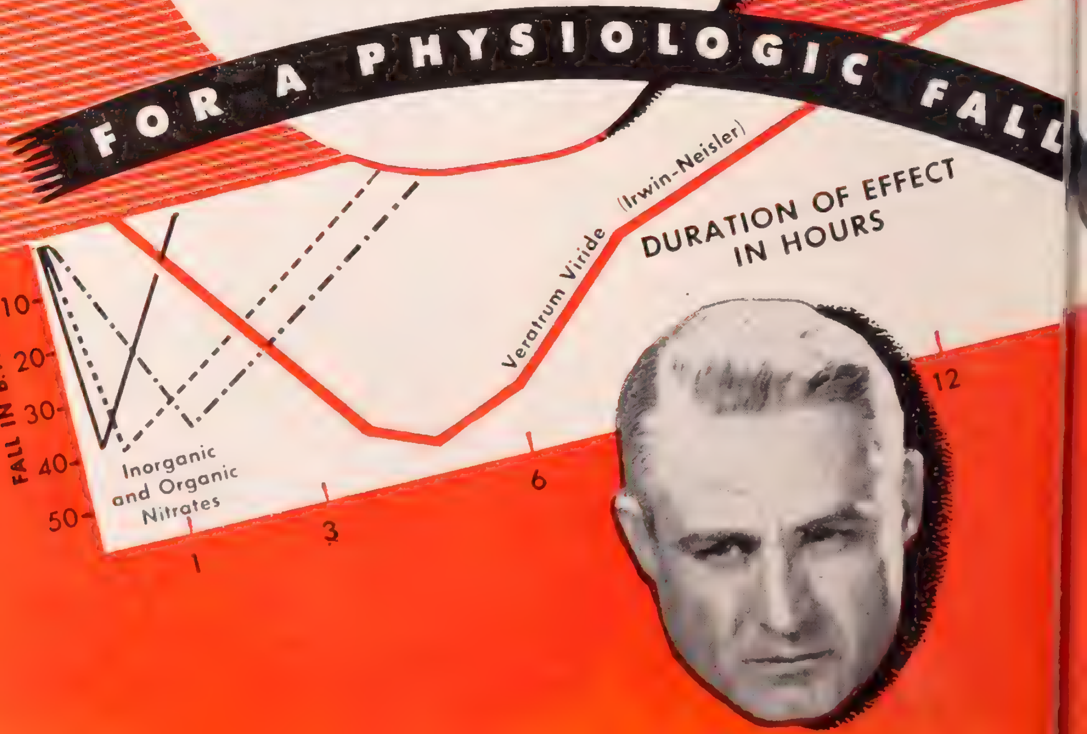

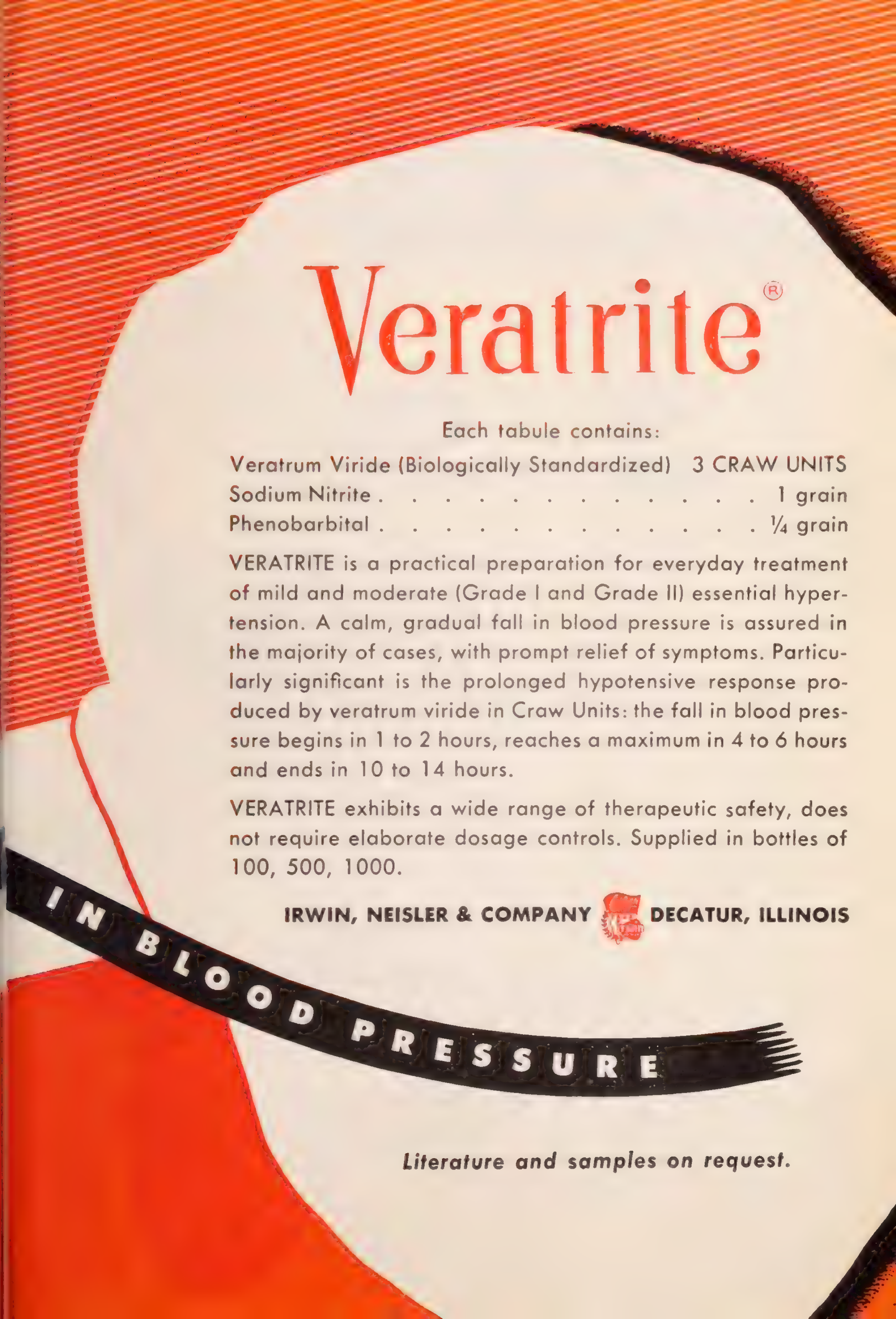

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*Shelmire, B, *Postgrad. Med.*, 4:443, 1948.

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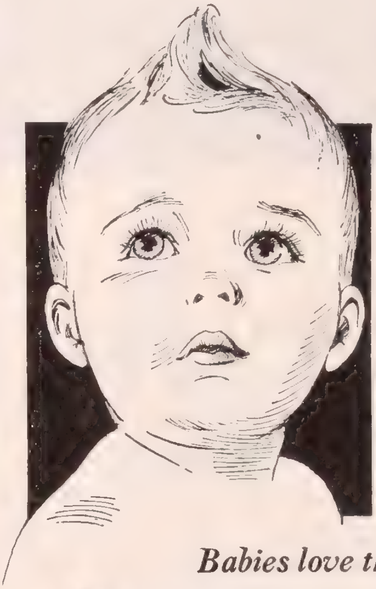

Baby eats eagerly with no coaxing!

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Babies love them—thrive on them

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FOODS *for* BABIES

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SOLD IN GLASS EVERYWHERE

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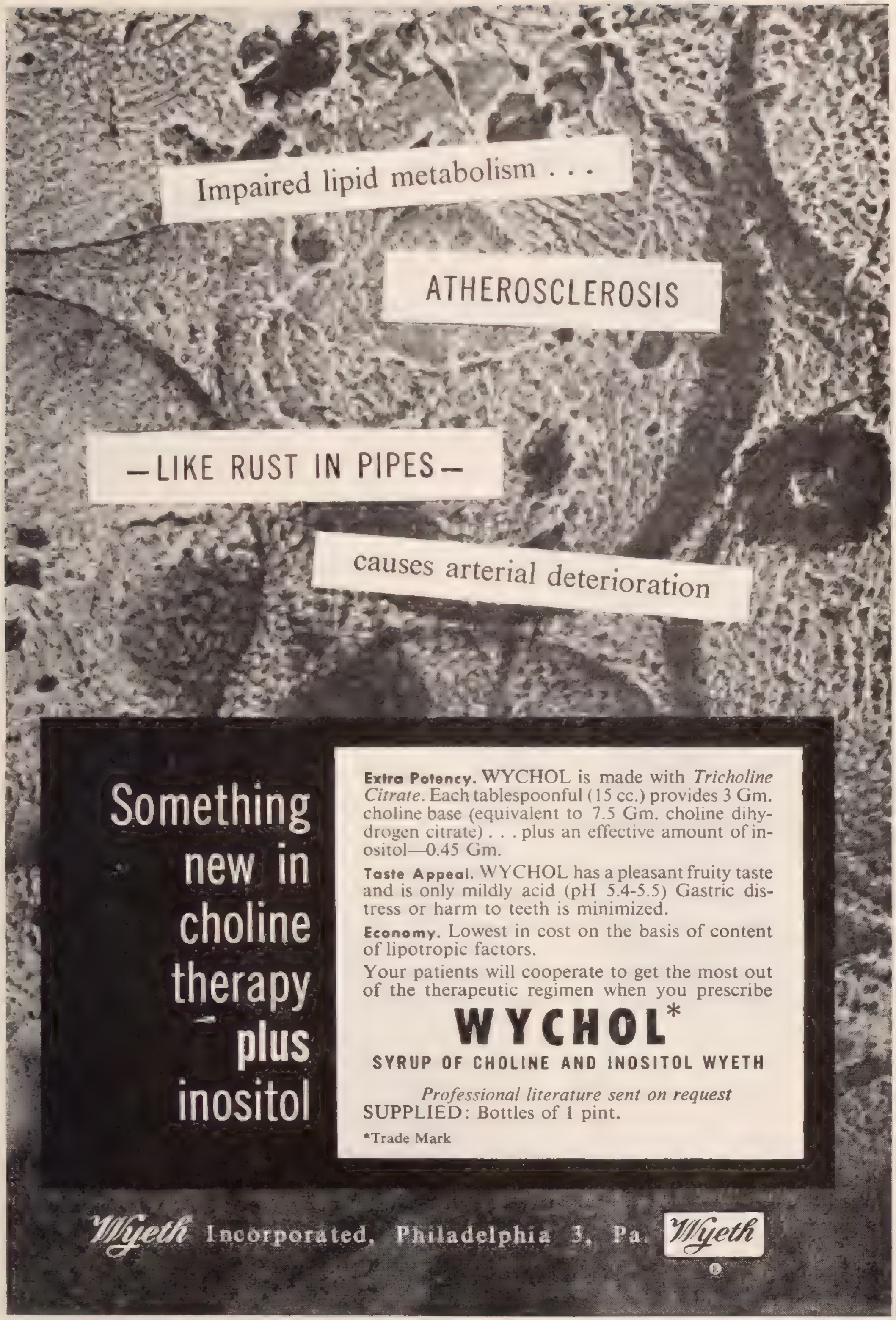

Impaired lipid metabolism . . .
ATHEROSCLEROSIS
—LIKE RUST IN PIPES—
causes arterial deterioration
Something new in choline therapy – plus inositol

Extra Potency. WYCHOL is made with *Tricholine Citrate*. Each tablespoonful (15 cc.) provides 3 Gm. choline base (equivalent to 7.5 Gm. choline dihydrogen citrate) . . . plus an effective amount of inositol—0.45 Gm.

Taste Appeal. WYCHOL has a pleasant fruity taste and is only mildly acid (pH 5.4-5.5) Gastric distress or harm to teeth is minimized.

Economy. Lowest in cost on the basis of content of lipotropic factors.

Your patients will cooperate to get the most out of the therapeutic regimen when you prescribe

WYCHOL*

SYRUP OF CHOLINE AND INOSITOL WYETH

Professional literature sent on request
SUPPLIED: Bottles of 1 pint.

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in rheumatic affections...

how can Pabalate provide better salicylate therapy than pure salicylate itself?

THE SUCCESS of salicylate therapy in rheumatic affections has been shown by authoritative reports[3,6] to depend largely on the maintenance of really adequate blood levels . . . frequently a difficult achievement under usual salicylate administration. Pabalate supplies not only salicylate, but also a "booster" in the form of the antirheumatic para-aminobenzoic acid,[7] which acts to *increase* blood levels of salicylate.[1,2,4,5] In turn, the salicylate increases the blood concentration of the para-aminobenzoic acid.[2] Enteric coating helps Pabalate prevent gastric irritation, insures optimal toleration.

Successful clinical results, contingent on adequate blood levels, can thus be achieved better, more dependably, with Pabalate . . the "new word for salicylate" in therapy of rheumatic affections.

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Ethical Pharmaceuticals of Merit since 1878

higher salicylate blood levels for better antirheumatic therap

INDICATIONS: *Pabalate Tablets*—for adult patients with rheumatoid arthritis, acute rheumatic fever, fibrositis, gout and osteo-arthritis. *Liquid Pabalate*—for treatment of acute rheumatic fever or other rheumatic diseases in children and as a replacement for tablet salicylate medication; or for adults who prefer a liquid dosage form.

DOSAGE: Average adult dose: two tablets or teaspoonfuls, three or four times daily. Dosage should be adjusted upward if necessary. For children, dosage is proportional to age and severity of condition.

FORMULA: Each enteric-coated tablet or each teaspoonful contains Sodium Salicylate, U.S.P. (5 grs.) 0.3 Gm.; Para-aminobenzoic Acid (as the sodium salt) (5 grs.) 0.3 Gm.

SUPPLIED: Pabalate Tablets in bottles of 100 and 500. Liquid Pabalate in bottles of 1 pint.

REFERENCES:

1. Belisle, M.: Union Med. Canada, 77:392, 1948
2. Dry, T. J. et al.: Proc. Staff Meetings Mayo Clinic, 21:497, 1946
3. Editorial: J.A.M.A., 138:367, 1948
4. Muratore, F. and Pugignano, T.: Bull. Soc. Ital. Biol. Sper., 24:269, 1948
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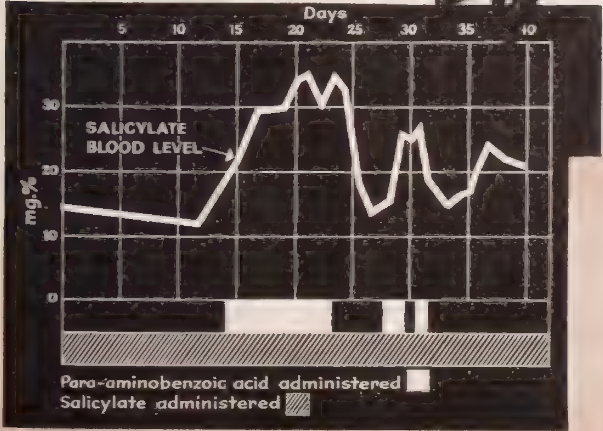
Para-aminobenzoic acid increases blood levels of concurrently administered salicylate.[2]



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WITH A VIAL OF AQUEOUS DILUENT
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The Whole is Greater than its Parts . . .

Light, when broken into its components, as when it passes through a prism to evoke a series of colors, is less luminous — generally less useful — than the original white ray.

Similarly, unless all components of the vitamin B complex are present and reach the body cells in optimal amounts, normal nutrition is impossible.

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Each vial of the desiccated powder contains: thiamine hydrochloride 150 mg.; riboflavin 50 mg.; pyridoxine hydrochloride 25 mg.; calcium pantothenate 25 mg.; and nicotinamide 500 mg.

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Breonex-L
(SOLUBLE)

Personifies convenience and adaptability. The concentration per cc may be varied by the amount of diluent used; the multiple-dose vial affords further variable dosage.

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Specifically designed for the patient with carbohydrate indigestion, LIQUID TAKA-COMBEX is especially valuable when caloric needs and vitamin requirements are greatest – in illness, convalescence, pregnancy and lactation. The enzyme, Taka-Diastase® is a potent starch digestant; the B-complex vitamins are essential for carbohydrate metabolism. Together, in LIQUID TAKA-COMBEX, this enzyme-vitamin team facilitates absorption and utilization of starchy foods.

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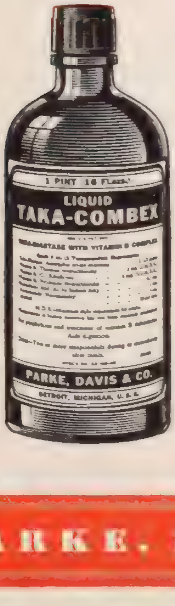
starch digestant plus B-vitamins



LIQUID TAKA-COMBEX, pleasing in taste and appearance, convenient as a vehicle for other medication, is especially suited to children and the aged.

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Each teaspoonful (4 cc.) contains:

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Vitamin B_1 (Thiamine Hydrochloride)	2 mg.
Vitamin B_2 (Riboflavin)	1 mg.
Vitamin B_6 (Pyridoxine Hydrochloride)	0.5 mg.
Pantothenic Acid (As the Sodium Salt)	2 mg.
Nicotinamide. (Niacinamide)	5 mg.

This new liquid preparation, supplied in 16-ounce bottles, is in addition to the familiar Taka-Combex Kapseals in bottles of 100 and 1000.

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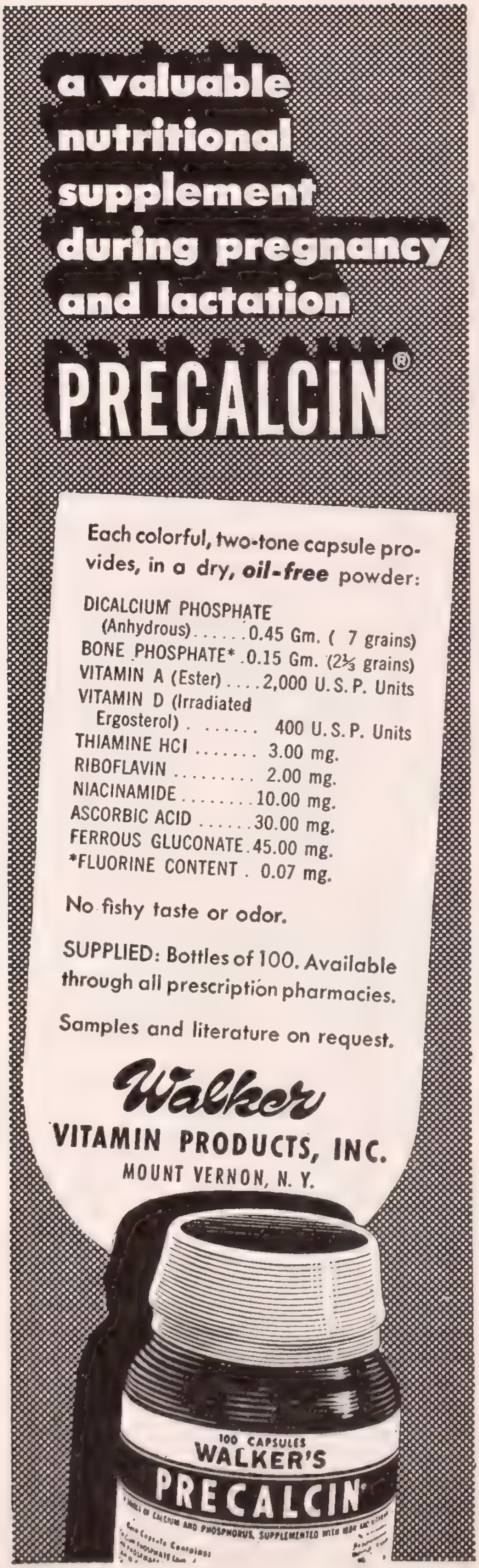
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Each colorful, two-tone capsule provides, in a dry, ***oil-free*** powder:

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No fishy taste or odor.

SUPPLIED: Bottles of 100. Available through all prescription pharmacies.

Samples and literature on request.

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Sempylex is a convenient and highly effective means of controlling nausea and vomiting of pregnancy. Exerting its action chiefly through the influence of its contained pyridoxine, it markedly reduces the discomfort of emesis gravidarum and permits normal eating.

Sempylex also provides appreciable amounts of glucose together with thiamine, riboflavin, and niacinamide to further aid in the liver storage of glycogen. This approach also combats the frequently associated acidosis and impaired liver function.

Used early in pregnancy Sempylex frequently prevents nausea and vomiting from assuming serious proportion. Dosage, one tablespoonful four times daily.

Each fluidounce of Sempylex contains:

Pyridoxine hydrochloride (B_6)	35 mg.
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Nicotinamide	25 mg.
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Aromatic aqueous vehicle	q.s.

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Sempylex

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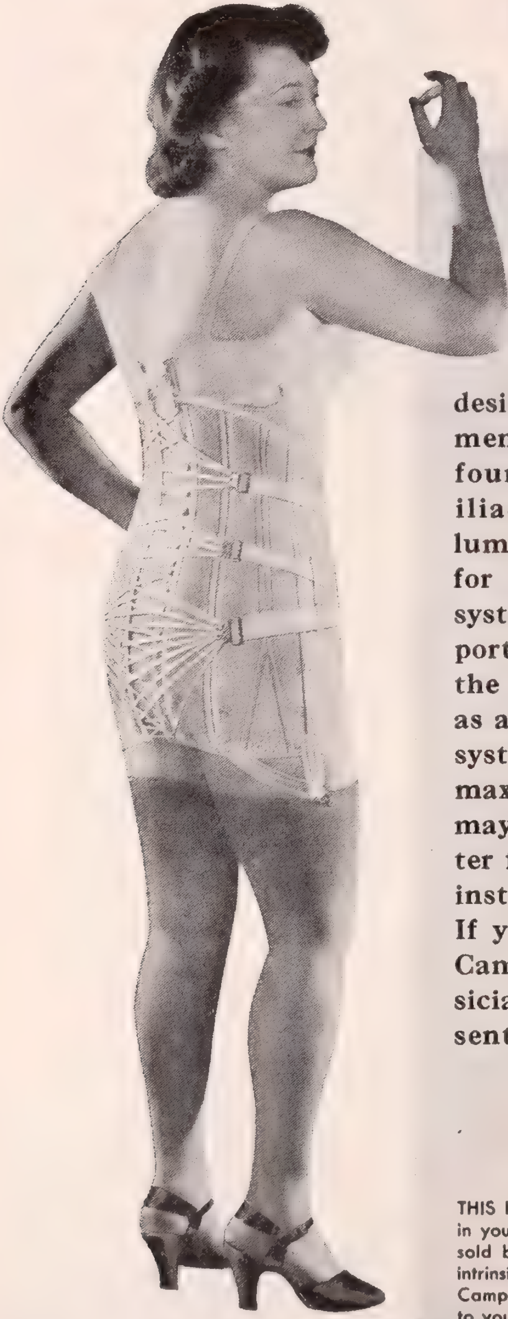

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During pregnancy and lactation it is traditionally good practice to supplement the mother's diet with *iron*, *calcium*, *phosphorus*, and *vitamin D*. CADROSON tablets, a new Sharp & Dohme preparation, provide all these in proper strength and ratio, and another important mineral as well . . . *fluorine* . . . which appears to be efficient in the prophylaxis of dental caries. Moreover, fluorine-calcium supplementation has been reported valuable in aborting dental neuralgia and leg pains and cramps during pregnancy.

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for
Mother

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SHARP & DOHME

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Fluorine	0.5 mg.
Iron	15 mg.
Vitamin D	1,000 U.S.P. Units

CADROSON tablets are supplied in bottles of 100 and 1,000.
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Every drop of Johnnie Walker is guarded all the way to give you *perfect* Scotch whisky . . . the same high quality the world over.

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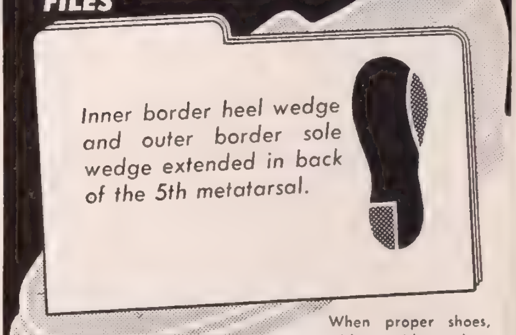

Inner border heel wedge and outer border sole wedge extended in back of the 5th metatarsal.

When proper shoes, with or without alterations, are indicated you can recommend Pediformes with confidence.

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Not displaced but deficient describes these Americans, no matter what their economic status may be. These persons are deficient because they are drained and depleted of the most important but transitory of vitamins – the B Complex – by food foibles, fever, surgery and chronic disease, even to the extent of aggravating basic hormonal imbalance in diabetes and hyperestrogenism.

Efficient utilization of any of the many interrelated factors of the B Complex is often dependent on the presence of the others. *Inadequate B Complex therapy in these patients often prolongs recovery.*

THAT is the reason Provite 'B' contains therapeutic concentrations of the important B Complex factors (whose value has been clinically established) plus all the B Complex factors naturally present in liver and yeast.

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Galatest and **Acetone Test** (**Denco**) . . . Spot Tests that require no special laboratory equipment, liquid reagents, or external sources of heat. One or two drops of the specimen to be tested are dropped upon a little of the powder and a color reaction occurs immediately if acetone or reducing sugar is present. False positive reactions do not occur. Because of the simple technique required, error resulting from faulty procedure is eliminated. Both tests are ideally suited for office use, laboratory, bedside, and "mass-testing." Millions of individual tests for urine sugar were carried out in Armed Forces induction and separation centers, and in Diabetes Detection Drives.

The speed, accuracy and economy of Galatest and Acetone Test (Denco) have been well established. Diabetics are easily taught the simple technique. Acetone Test (Denco) may also be used for the detection of blood plasma acetone.

Write for descriptive literature.

THE DENVER CHEMICAL MANUFACTURING CO., INC.
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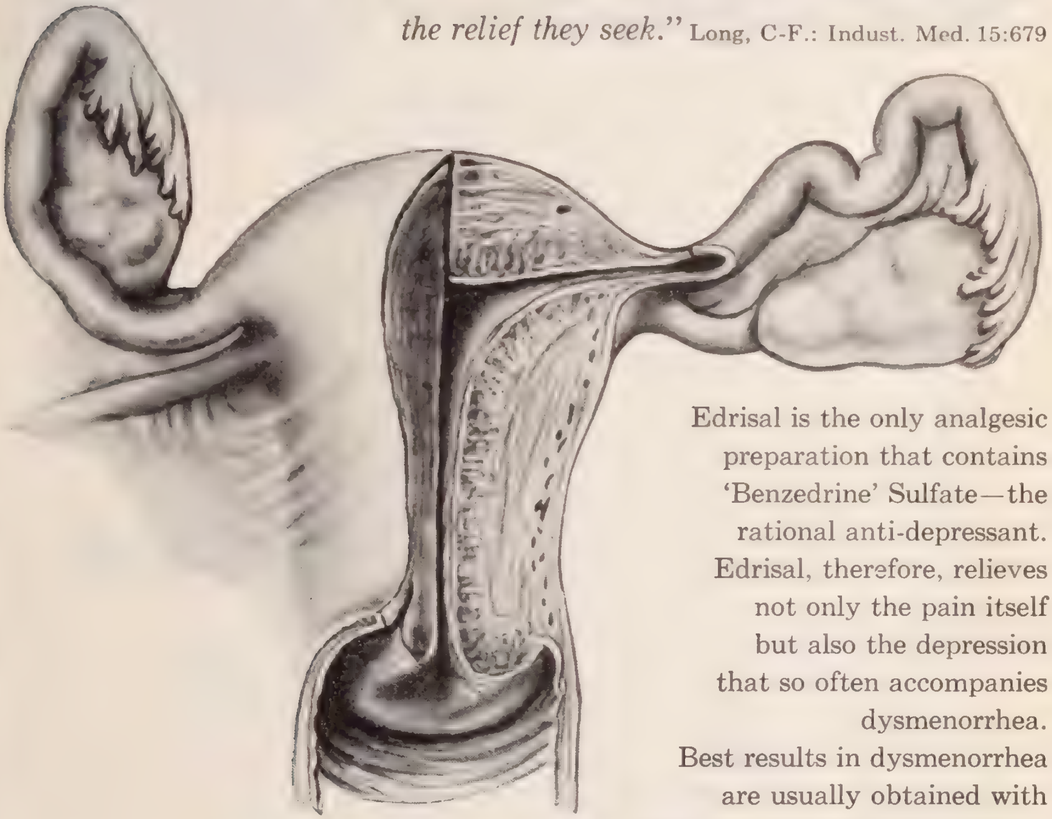
dysmenorrhea

"We use [EDRISAL] *with the knowledge that 9 out of 10 sufferers will get the relief they seek."* Long, C-F.: Indust. Med. 15:679



Edrisal is the only analgesic preparation that contains 'Benzedrine' Sulfate—the rational anti-depressant. Edrisal, therefore, relieves not only the pain itself but also the depression that so often accompanies dysmenorrhea. Best results in dysmenorrhea are usually obtained with a dosage of *two* Edrisal Tablets—repeated every three hours, if necessary.

Edrisal

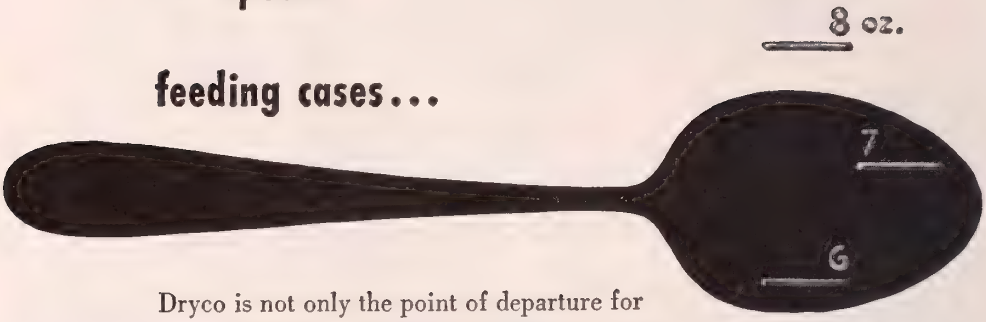
Each Edrisal* tablet contains Benzedrine* Sulfate (racemic amphetamine sulfate, S.K.F.), 2.5 mg.; acetylsalicylic acid, 2.5 gr.; and phenacetin, 2.5 gr. *Available on prescription only.*

its dual action relieves pain, lifts mood

Smith, Kline & French Laboratories, Philadelphia

*'Benzedrine' and 'Edrisal' T.M. Reg. U.S. Pat. Off.

point of departure for special feeding cases...



Dryco is not only the point of departure for almost every type of infant formula—it is also in itself a valuable food for special cases. Dryco assures ample protein intake while its low fat ratio and moderate carbohydrate content minimize digestive disturbances.

The applicability of the Dryco formula is strikingly seen in an observation by Pitt: "The majority of cases of infant diarrhea, seen in private practice, are of such nature that changing the formula to one of low fat and low carbohydrate is all that is necessary to correct the condition..." Dryco is specifically recommended for use in these cases.*

In addition to formula flexibility, Dryco offers other advantages.

Dryco's special drying process makes it more easily digested by certain infants than the fresh milk from which it is made. It supplies more minerals, particularly more calcium, than a corresponding formula of whole milk, plus 2500 U.S.P. units of vitamin A and 400 U.S.P. units of vitamin D per reconstituted quart. Only vitamin C need be added. Each tablespoonful supplies 31½ calories. Readily reconstituted in cold or warm water.

Available at pharmacies in 1 and 2½ lb. cans.

Dryco®

ACCEPTED COUNCIL ON FOODS AND NUTRITION AMERICAN MEDICAL ASSOCIATION

a versatile base for "Custom" formulation

**Pitt, C.K.: The Art and Science of Artificial Infant Feeding, J.M. Asso. Ala. 19:101 (Oct.) 1949.*

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in **BURNS**
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(decubitus, varicose, diabetic)

renew vitality of sluggish cells

stimulate healthy granulation

accelerate smooth epithelization[1]
with

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the external cod liver oil therapy

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70 Ship Street, Providence, R. I.

1. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Industrial Med. & Surg. 18:512, 1949.

THE STATUS OF B_{12} ANTI-ANEMIA THERAPY:

Vitamin B_{12} and Folic Acid (Oral)

VITAMIN B_{12} AND FOLIC ACID, given together by mouth, have a pronounced synergistic action. A non-therapeutic amount of folic acid has been found to promote the utilization of vitamin B_{12} in oral doses formerly believed to be ineffective.

HOW DOES IT ACT?

Vitamin B_{12} for extrinsic factor-like activity

Given by mouth, vitamin B_{12} acts like the extrinsic factor of food. The effective oral dose is some 30 to 60 or more times greater than the effective parenteral dose.

Folic acid for intrinsic factor-like activity

Meyer and associates[1] assert that, in vitamin B_{12} and folic acid therapy, "folic acid acts like 'intrinsic factor'" in that it promotes utilization of vitamin B_{12}. The role of folic acid "on the release, absorption or synthesis of vitamin B_{12} in the intestinal tract" is open to speculation, according to Cartwright, Wintrobe and others.[2] Folic acid, Best and Taylor[3] state, may possibly "act to stimulate the production of the intrinsic factor or be the intrinsic factor itself."

B_{12} and folic acid are essential

Luhby and Wheeler [4] suggest:

1. If a folic acid deficiency is profound, even large doses of vitamin B_{12} are hematologically inert.
2. If a severe vitamin B_{12} deficiency exists, large doses of folic acid should be hematologically inactive.

They advance the following possible equation:

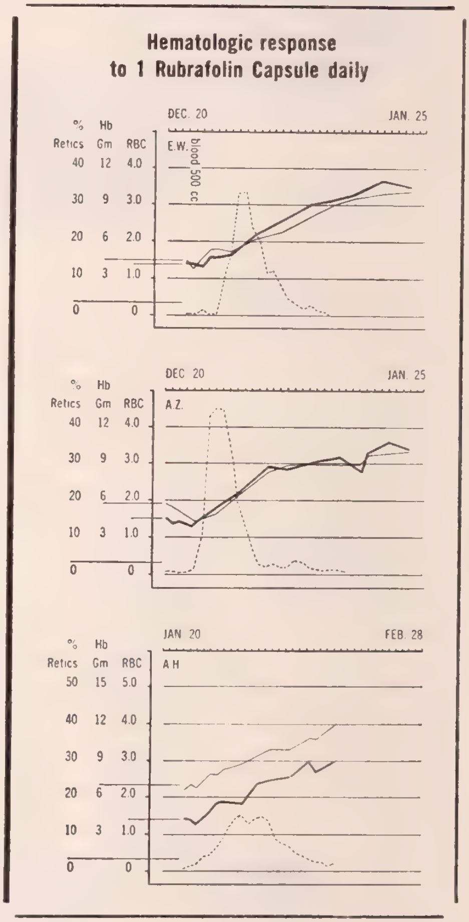
$$(\text{Folic acid}) \times (\text{Vitamin } B_{12}) \longrightarrow (\text{E.M.F.})$$

WHAT ARE THE RESULTS OF THERAPY?

With vitamin B_{12} and folic acid, given orally, hematologic response frequently parallels that of parenteral vitamin B_{12} therapy. Ordinarily, clinical remission is both prompt and dramatic. Furthermore, in patients so far studied, oral vitamin B_{12} and folic acid apparently protects against and reverses manifestations of combined system disease.

HOW IS IT AVAILABLE?

Supplied as RUBRAFOLIN *(See next page)*



Hematologic response to 1 Rubrafolin Capsule daily

INDICATIONS FOR B_{12} THERAPY

Macrocytic anemias ordinarily respond well to vitamin B_{12} therapy. These include pernicious anemia without neurologic involvement, pernicious anemia with combined system disease, nutritional macrocytic anemia, tropical sprue, non-tropical sprue. (Pernicious anemia of pregnancy responds best to folic acid therapy.)

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Vitamin B_{12} alone—parenteral administration

In most anemias characterized by megaloblastic arrest of the bone marrow vitamin B_{12} will:

1. Reverse megaloblastic arrest of the bone marrow.
2. Protect against and reverse neurologic changes.
3. Reverse gastrointestinal manifestations.
4. Produce rapid, marked and—in most cases—sustained clinical improvement.

Vitamin B_{12} alone—oral administration

When given alone by mouth, vitamin B_{12} is not as hematopoietically active as it is when it is injected. In the megaloblastic anemias, vitamin B_{12} is not easily absorbed by the gut. Much larger doses are necessary if a therapeutic effect is to be obtained.

	THERAPEUTIC DOSAGE	MAINTENANCE DOSAGE	REMARKS	SUPPLY
RUBRAFOLIN* (25 micrograms of vitamin B_{12}, 1.67 mg. of folic acid per Capsule).	1 Capsule daily	1 Capsule daily.	If response is submaximal at the end of 10 days or 2 weeks, double the dose. In case response is not optimal by the fourth week, the patient should be placed on parenteral Rubramin.	Bottles of 100 Capsules.
RUBRAMIN* Capsules (25 micrograms of vitamin B_{12} per Capsule).	6 to 12 Capsules daily.	To be adjusted to patient's needs.		Bottles of 100 Capsules.
RUBRAMIN 15 or 30 microgram ampuls; 5 and 10cc. vials—30 micrograms per cc.	15 to 30 micrograms once or twice a week.	15 micrograms every 2 weeks or 30 micrograms once a month.	Larger therapeutic doses must be used in the presence of moderate to severe neurologic involvement.	1 cc. ampuls, 15 or 30 micrograms of vitamin B_{12} per ampul. Boxes of 5. 5 and 10cc. vials, 30 micrograms of vitamin B_{12} per cc. also available: Solution Rubramin Crystalline (Squibb Crystalline Vitamin B_{12} Solution) in 1 cc. ampuls, containing 15 micrograms of crystalline vitamin B_{12}.

Bibliography: **1.** Meyer and associates: A. J. Clin. Path. (in press). **2.** Cartwright, Wintrobe and associates: Blood 4:301, 1949. **3.** Best and Taylor: The Physiological Basis of Medical Practice, ed. 5, Baltimore, Williams & Wilkins, 1950, p. 87. **4.** Luhby, A. L.; and Wheeler, W. E.: The Health Center Jl. (Ohio State Univ.) 3:1, 1949.

*Patients to receive Rubrafolin or Rubramin Capsules should be individually selected. The physician should rule out patients with severe gastrointestinal disturbances, severe cardiac failure or severe anemia when pernicious anemia is present. Patients such as these—and those with severe neurologic involvement—respond better to parenteral Rubramin therapy. Neurologic changes should be watched for closely. At the first sign of new neurologic involvement, the patient should be placed on **parenteral Rubramin therapy.**

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Editorials

Who Assists Whom?

Legislation under the general title of "Social Security" has as its ultimate objective the provision of "benefits" of one kind or another. These "benefits" may be in cash or in kind and cover a variety of calamities, old age, unemployment, sickness, injury, and the like. The "benefits" are referred to as such or as "assistance."

The phrase "government assistance" is being heard more and more, starting at the local grade, ascending to the county level, the state, and finally the national plane. In view of the announced rising unemployment figures, now nearing the 5,000,000 mark, "government assistance" may well become in the near future a staggering total. Expansion of the social security program as proposed in H.R. 6000, H. Rept. No. 1300, might well cost, when in full operation, around $6,000,000,000 for extended "benefits," disability insurance, coverage for farm and domestic employes and self-employed persons.

While government disburses the "assistance," individual and corporate taxpayers provide it. This fact is too often forgotten by the citizen taxpayer. A complicated mechanism of laws, collection devices, and hidden fiscal siphons separate the producer so quickly from the product of his toil and whisk it to remote treasuries so unobtrusively that the taxpayer has little or no opportunity to become acquainted with much of his own earnings. Having no sense of possession, he is not unduly affronted when government agencies benevolently disperse his earnings as "benefits" or "government assistance." Recipients of the same seem largely unaware of the fact that they are receiving merely their own money back, less administrative costs, and that, if they have any occasion for gratitude, it should be bestowed upon an economic system of free enterprise which has created the jobs that enable them to earn the money in the first place.

Government benevolences such as Social Security benefits are contributed by employers and employes themselves and do not actually represent "government assistance" to retired employes. This nation has operated for sixteen of the last eighteen years with a heavy Federal deficit. In 1950, the deficit will probably be six times greater than was anticipated at the time the budget for that year was submitted, or about $5,523,000,000. These figures seem to indicate the kind of management which administers "government benevolences," handouts of your money. Does such a continuing deficit raise in any worker's mind the question of how secure is Social Security under such management? If old jobs do not continue and new ones are not forthcoming in ever-increasing numbers, who will assist whom in the near future, and with what? A benevolent government has nothing except what individual citizens produce and can promise nothing except what individual citizens provide by their toil.

Of Liberalism

The history of medicine in New York State is the story of a consistently liberal and progressive movement in the service of the people. Rooted in territory that was the scene of a principal portion of the Revolution for independence, the medical profession of the State was largely recruited from a free-thinking, bold, hardy people and reflected their character. The liberalism of the nineteenth and early twentieth centuries built solidly and enduringly the basic educational and organizational structures of medicine. Impetus in this direction was added by a policy of hearty welcome to many refugees from a growing, irksome, intolerable paternalism in Europe.

Presently, we observe a new so-called "liberalism" which is seeking to obtain direction of our thinking and guidance of our education.

> Writing in the *Dartmouth Alumni Magazine*, Professor Knight defines this liberalism as the "false, fake, phony" liberalism which pretends the pursuit of liberal ends by means which lead, however, in the opposite direction. He says he regards the proponents of this liberalism—government administrators or officials of various kinds, the near-social or would-be social scientists, and "cause" preachers—as more dangerous to personal freedom as we know it than the avowed Red who at least, he says, "knows what he is up to."[1]

So far, apparently, medicine in this State has been able to retain its elements of individualism: independence, compromise, diffusion, conservation, and progress in the midst of a growing trend toward the paternalism of the welfare state.

As this State was formerly a principal battleground of the Revolution, it bids fair to become the principal locale of a political battle now in progress on the issue of compulsory national health insurance, the welfare state, paternalism of the most destructive kind.

> Professor Knight sees the paternalist as the sometimes knowing and sometimes unknowing backer of this welfare state. In individual society he is the "do-gooder," tirelessly espousing "causes" and raising funds for the "underprivileged." In academic life he is the caller for "social justice." In psychology and sociology, he urges for the establishment of "appropriate environments" for the "blossoming of social justice," disregarding heredity entirely; and, in international relations, he is the believer in pacts, covenants, charters, and abstract (and unrealistic) relationships.

> He is also to be found, Professor Knight believes, in government, where he advocates more centralization of power; and in economics, where he sponsors the "Keynesian" dogma of pump-priming or deficit spending in bad times, regardless of its inflationary results.
>
> Professor Knight sees the cumulative activities of these individuals as an actual attack upon our economy. That economy is made vulnerable, he goes on, by the natural tendency of men to seek power for themselves, by private monopoly (insofar as it exists), by economic inequality, the instability of booms and depressions, and modern technology which brings divergent nationalisms into closer contact, thus stimulating wars.[1]

---

[1] Insurance Economics Surveys, Vol. 6, No. 9, March, 1950.

Viewed broadly, the concept of national compulsory health insurance as part of a social security scheme becomes merely a political device for extending government controls over prices and wages in the medical field. Stripped of obscuring emotional considerations, it is basically part of the economic controls sought by advocates of the welfare state and should be opposed as intolerable to free men.

The Blight

We have recently noted with considerable interest a review by Clarence A. Mills, Professor of Experimental Medicine, College of Medicine, University of Cincinnati, of the preliminary report of a year-long study by the Public Health Service of the Donora tragedy.[1] Twenty persons lost their lives in Donora in America's first known mass killing from industrial air pollution. As Dr. Mills states, "This represents the U.S. Public Health Service's first foray into the field of community air pollution. Two years ago they were not even interested in making a small grant to help studies already well along in opening up this health field. Today they suddenly find the field so important that they quickly request $750,000 from Congress to enlarge upon their studies. Just what did their year's work, with a staff of 25 investigators, show?"

It would seem U.S.P.H.S. confirmed the private investigations made immediately after the disaster at the request of the citizens of Donora, that they overlooked the significance of their extensive testing throughout the following year together with the effects of the fumes on domestic animals and plant life. Needless to say, the Federal Security Administrator and the Surgeon General did not neglect to claim that they had opened a *new* field in the nation's health, blandly ignoring the prior years of work of others.

The incident may be rather characteristic of what Mr. Ewing has done to the Public Health Service. One questions the propriety of his intrusion into a scientific report of the Service. And then one realizes the ever-growing emphasis in printed material and publicity releases on the "Federal Security Agency." Perhaps Mr. Ewing intends to make personal capital out of the work of the Service. The medical profession has long respected the United States Public Health Service, having in remembrance the many distinguished investigators who served it in the past, and certain outstanding Surgeons General. It will be regretted if Mr. Ewing succeeds in bending the Service to his personal ambitions, if its direction falls into the hands of men without personal knowledge of the problems and disciplines that are involved.

One may already hear many stories of the growth of the power of the administrator in the health services. What should come first seems often second to an administrative machine without insight or the necessary knowledge. Indeed, one would like to know what prompted Dr. Parran's resignation and whether at that time, Mr. Ewing's power being confirmed by the President, the U.S. Public Health Service, as doctors knew it, was mortally wounded. Under the new formula may the expenditures be expected to become larger and larger and the results more and more trivial? The F.S.A. public relations men may give the accomplishments an air of importance and no doubt will credit them to their boss, but the Service itself is likely to be as badly blighted as Donora.

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[1] Science 3: 67 (1950).

A broken constitution in the hands of a skillful physician may as easily be propped up as an old house, or a haystack.—Anonymous

Current Editorial Comment

Note of Caution. At the annual meeting of the American Orthopsychiatric Association in Atlantic City recently, Dr. Leona Baumgartner, associate chief of the United States Children's Bureau, is reported to have stated that psychologists and psychiatrists "do not know normal children" and that in explaining what they do know they use a language few people can understand.[1]

Dr. Baumgartner's criticism was wholly constructive in our view, since it was supplemented by her further suggestion of the necessity for more solid scientific research "so that we won't be foisting half-truths on the public." This makes sense. Child psychiatry has suffered somewhat from a rash of rich enthusiasm to cope with urgent problems of behavior; occasionally, this rash has seemed to lend a roseate hue to the countenances of some few whose enthusiasm far outran their supply of solid scientific facts.

It is, therefore, with considerable satisfaction that we note within the ranks of the psychiatrists a movement, such as this of Dr. Baumgartner, to raise the scientific level and content in a potentially useful field of medicine, a field in which there is a rapidly growing demand for well-trained personnel. As with many other areas in science, technical phraseology has so far departed from the verbiage of common nonmedical usage as to have become a kind of mumbo-jumbo. While this may be no barrier to free and fluent discussion in strictly scientific meetings of medical people, it is a handicap, as Dr. Baumgartner remarks, in explaining what they (the psychiatrists) do know in language the people can understand.

It is realized that the problem is a difficult one and that earnest efforts are being made to solve it. The field of child psychiatry is one which touches medicine, nursing, public education, and government, as exemplified by public welfare agencies and the large area of the social sciences. For that reason it is particularly important that half-truths and misconceptions be rapidly eliminated. What can be misinterpreted will be misinterpreted.

Surely this is the time for orthopsychiatry to put its house in order, to weed out the poorly trained, the seekers after publicity, the logorrheic fringe. The realization by thoughtful nonmedical people of the real importance of child psychology and psychiatry warrants more solid and factual information than has been forthcoming in the past.

One shudders at the prospect for today's children, brought up these many years in the lap of subsidy, chained like convicts in involuntary servitude to the crushing burden of the shameful public debt, spewed forth from crumbling homes and decaying marriages into the welcoming arms of organized crime flourishing in our large cities, and subjected to subtle propaganda by the red and pink agitators of class hatred.

Under the circumstances, the need for good orthopsychiatrists is uncontrovertible.

Pain wastes the body; pleasures, the understanding.—Anonymous

Civilian Defense. At the tenth annual Congress of Industrial Health conducted jointly by the American Medical Association and the Medical Society of the State of New York, Dr. George Baehr, former chief medical officer of the U.S. Office of Civilian Defense, warned of the inadequacy of civilian defense programs at the present time.

> The present equanimity of our people is to be ascribed largely to the fact that they do not as yet realize the full significance of the absence at this time of specific methods of protection against the catastrophic effects of atomic agents, despite the frequently reiterated statements of leading scientists and statesmen, Dr. Baehr stated.
>
> Such protective measures are being sought by governmental agencies in our great centers of scientific research, and they will be found, we hope, before the holocaust is upon us.
>
> But the absence at this time of specific methods of protection must not be permitted to deter us from immediate consideration and adoption of an effective organizational pattern of civil defense, for much can be done to minimize the area of destruction and to save the maximum number of lives.[1]

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[1] New York Times, February 25, 1950.

[1] New York Times, February 21, 1950.

Apparently only twelve states at present have programs set up. A civil defense program must be organized as an independent national agency apart from the military, with local subdivisions in every large population center.

Industrial health centers would necessarily play an important part in taking care of the casualties of any future wars. Organized health programs should provide, as a minimum, emergency medical care, control of occupational diseases, and preventive medicine. Industrial planning should be done now to assure a well-organized and properly functioning medical department if a disaster occurs.

Discussion in the public press and over the radio by eminent physicists, who should know, if any one does, of the potentialities of the A and H bombs, emphasizes the need, particularly on the part of physicians, for a well-thought-through procedure to handle putative casualties. We may not know everything concerning the extent to which radioactivated substances may be used with the H bomb to produce destructive clouds; we do, however, have certain principles which govern the profession's handling of injured people, whether the agent be flood, fire, or gas, explosive or suffocation. Radioactivity merely adds additional factors of contamination and cellular destruction on a large scale over a wide area.

Lack of a well-defined Federal plan, such as that proposed in the rejected Hopley report, has undoubtedly discouraged state planning to a great extent. We still lack, apparently, any over-all comprehensive scheme. But time, tide, and aggressors wait for no man, and we heartily endorse the plea of Dr. Baehr for action while time yet remains in securing industrial production by every available means.

A physician who is continually changing his medicines is either professionally ignorant or he has a design upon your pocket.—Anonymous

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Peacetime Uses of Isotopes Increasing. A recent report of the Atomic Energy Commission reveals the extent to which we are indebted to radioactive isotopes for new means to study body processes.[1]

Medicine has been given a new tool with which research of a type utterly impossible only two decades ago can be conducted. The farmer, too, has reason to be grateful for the wide distribution of radioisotopes, for the Department of Agriculture is now determining with their aid the effect of fertilizer on the growth of plants. Some light is also being thrown on the age-old mystery of photosynthesis—the process whereby a plant can take the gases of the air and build them into starch, sugar, and wood. Yet all this is only a beginning. The Atomic Energy Commission announces that radioisotopes will henceforth be available in even greater quantities.

This story is hardly new. Yet it is worth telling again and again, because the Russians have been emphasizing the peacetime uses of atomic energy, which they claim to be developing, whereas we are said to be concerned only with atomic bombs. Probably not a word ever reached Soviet Russia of the peacetime uses of atomic energy in the form of isotopes that the Atomic Energy Commission is fostering. The "Voice of America" might make an impression in Russia if the information were imparted that this nation of "cannibalistic imperialists," as it is called, is spending this year $19,000,000 in biologic and medical isotopic research for the benefit of mankind.

The Atomic Energy Commission has shipped, from Oak Ridge, 8,912 lots of radioactive and 958 lots of stable isotopes. The recipients were research laboratories in most of the states of the Union and in twenty-seven foreign countries. With the aid of these isotopes, scientists have studied how much of certain trace elements our bodies contain, how blood is made, how much iron we need to remain in good health, how and why mineral salts are lost after severe injury, how protein is built up from amino acids, how fats are "burned" by oxidation and the effect on this process of certain drugs and diseases, such as diabetes. The radioisotopes have also been a boon in the diagnosis and treatment of some cancers and in relieving the pain and distress that accompany angina pectoris and congestive heart failure.

It is not beyond the bounds of probability that mankind may yet derive real benefit from such peacetime use of a most valuable tool for human progress before some trigger-happy aggressor irresponsibly finishes us off.

---

[1] July, 1949.

Psychiatric Explanation of Baldness. The April, 1950, issue of *Modern Medicine* condenses "A Theory of the Pathogenesis of Ordinary Baldness" from *Archives of Dermatology and Syphilology*.[1] This ingenious explanation relates baldness to tension of scalp muscles creating shearing stresses in the dermis, with subsequent ischemia and alopecia. "This muscular activity probably survives from a once useful defense mechanism in man's phylogenetic past, when the ears were drawn against the head for protection during attack." The authors believe that anxiety in connection with attacks on personal integrity may elicit this basic defensive attitude.

For years we have carried on personally in our absent-minded way beneath a cranial dome from which, like the Parsee's hat, the rays of the sun are reflected with more than oriental splendor. To us, in our simplicity, it has heretofore been merely a carefree bald head needing no brush and eliciting only the usual good natured "kidding." In summer it has served as a portable landing field for flies, mosquitoes, and the like, but that it was a survival "from a once useful defense mechanism" in our phylogenetic past in which our musculature slicked our ears back has never occurred to us, especially as we have never been able to wiggle our ears, thereby in our youth having lost considerable face in the presence of those who could and did practice this delightfully entertaining sport.

Our personal integrity has been at times attacked, but our defense mechanism, pinned back ears and low wind resistance on top, has worked well on the whole, now we think about it.

The authors say also "The facial expression associated with early baldness is a fixed smile which indicates hyperactivity of the occipitalis." Until now we had considered it only as an expression of good nature, but that was in our preindoctrination period. Ah, well; live and learn.

---

[1] Szasz, T. S., and Robertson, A. M.: Arch. Dermat. & Syph. 61: 34 (1950).

The A.M.A. Membership Dues

The problems and misunderstandings arising from the collection of A.M.A. dues and assessments have been stated frankly in a recent communication from the Association's Secretary, Dr. George F. Lull. The following procedure should be followed:

1. Remittances for membership dues should *not* be sent direct to the A.M.A. by county societies or individuals. These should be channeled through the office of the State Society where member payments are recorded. Individual members' checks received will have to be returned to the state in which the member resides. This rule also applies to the 1949 assessment.
2. Who is exempt from paying A.M.A. dues? The county shall determine when the payment of dues is a hardship, but in no case will the A.M.A. dues be remitted unless the county and state society dues are likewise remitted. The dues of a physician who joins his county society after July 1 will be $12.50; if he joins before that date, $25.
3. A physician who transfers from one county society to another need not pay a second time, but he must pay once.
4. For this year only (1950), the A.M.A. will reimburse the state societies the accounting expense of collecting dues. After this year, the A.M.A. dues should be billed with state or county society dues.

"Our results with the molybdenum-iron complex have been... striking..."

Dieckmann, W. J. and Priddle, H. D.: Am. J. Obst. & Gynec. 57. 541 (1949)

UNTIL recently Dieckmann has repeatedly reported that true hypochromic anemia of pregnancy did not respond satisfactorily to orally administered iron.[1,2]

Now, however, following his latest investigation—a study of the value of molybdenized ferrous sulfate (Mol-Iron)—he states:

> "We have never had other iron salts so efficacious in pregnant patients. Our results with the molybdenum-iron complex have been . . . striking . . . increases in hemoglobin were . . . dramatic and . . . rapid."[3]

This most recent evaluation of molybdenized ferrous sulfate (Mol-Iron) confirms the findings of all earlier investigators, who found Mol-Iron to be:

> ". . . unusually efficacious . . ."[4]
> ". . . a true example of potentiation of the therapeutic action of iron . . ."[5]
> ". . . hemopoietically more active . . ."[6]

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White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

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CLINICAL MEDICINE

March 1949

MANAGEMENT OF THE CARDIAC OUTPATIENT

by DONALD B. FRANKEL, M.S., M.D.

Fairfield, Illinois

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"*Mercuhydrin* proved to have many advantages, chiefly that it caused a rapid and continuous diuresis, and thus rapid relief for the patient. It was uniformly well tolerated, and in no patient was there any reaction.

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conclusions

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Scientific Articles

THE PSYCHOLOGIC IMPLICATIONS OF TONSILLECTOMY

Lester L. Coleman, M.D., New York City

(*From the Manhattan Eye, Ear and Throat Hospital*)

THERE is now universal acceptance of the relationship between emotional experiences of childhood and the behavior patterns of adults. It has been repeatedly demonstrated that even a single significant incident in early years may have an enduring effect on the emotional status of the adult. It is, therefore, incumbent upon us as surgeons to re-evaluate and alter many of our previously established technics in the light of this newer psychologic concept.

The emotional trauma associated with any surgery, elective or urgent, in child or adult, in the well-oriented or the unstable, must be included in the preoperative calculation. For improper and unplanned approaches to childhood surgery may be the very basis of and the causes for many disturbing neuroticisms. The neuropsychiatrists are constantly tracing psychologic aberrations directly to inadequate, ill-advised, or often neglected preparation for surgery.

Tonsillectomy with adenoidectomy is the most frequent single operation of childhood, numbered in the hundreds of thousands yearly. We, as otolaryngologic surgeons, are privileged to anticipate the great physical and psychic impact of this one operation on the emotional destiny of so many patients and to contribute to their psychologic balance and security by adequate study, planning, and education. To underestimate or neglect the import of psychic factors in surgery is to do a great injustice to ourselves as surgeons and a greater injustice to our patients.

If the fundamental orientation is accepted that traumatic emotional experiences can affect the destiny and productivity of a human being, we cannot overstate the importance of a carefully planned approach to the tonsillectomy experience. Tonsillectomy is one of the very few single operative procedures in childhood which can be anticipated and planned for. It is unlike most other surgical experiences which are usually urgent and demand immediate action. Even there, planning can be successfully introduced. In most instances tonsillectomy represents the first and only admission of the child to a hospital and is the first painful separation of the child from its home and security.

The effect of this precipitous dislocation on the emotional security and happiness of the child is the basis for our study. The universality and frequency of the operation has made many of us lose sight of its potential in affecting the emotional adequacy of the patient. The data that we have accumulated both from our own experience and, more significantly, from that of established neuropsychiatrists are terrifying evidence of the adult personality distortion directly traceable to improperly handled childhood surgery. For personal substantiation you need but inquire into the recollection of your own tonsillectomy or into those who intimately surround you for revelations that are distressing in magnitude. The fact that one may have forgotten the experience in no way minimizes its traumatic significance. The analytic students might even claim that this very amnesia is part and parcel of the blockading pattern so responsible for adult neuroticisms.

Let us arbitrarily create a typical composite picture of the preoperative and postoperative story of most tonsillectomized children. Note how closely your own personal experience, with time and space variations, fits into this story. Note further that, although the details may vary, the character of the impact is constant and becomes more clearly defined in retrospect.

The child is first brought to the otolaryngologist by a terrified parent who has for some time been resistant to the possibility of an operation. Since the operation is an elective one, all conceivable rationalizing methods have been used to avoid subjecting the child to surgery. When the child is brought to the doctor's office, usually under protest, examination is made by the otolaryngologist who sincerely tries to develop a pleasant relationship with the child. Failure to establish this rapport can sometimes be traced to a lack of understanding of the child's inner terror. We must not forget that often the child who is seemingly "well-behaved" is the very one who is suppressing the greatest fear. All surgical indications being present, operation is advised, a date is arranged, and the setting for an apparently casual experience for the child is thought to be complete.

Except in the rare instances where parents and surgeon are attuned to the importance of careful psychologic preparation, the stream of injustices to the patient is now begun with a frightening impetus. The composite story continues and reveals the fact that the child is given the impression that on a particular day a new and interesting experience will take place. At this point there are limitless variations to the parents' pragmatic lie. A visit to a relative, a new toy, or unlimited ice cream in a hospital may be part of the unplanned approach. Even worse perhaps is the "wonderful surprise" approach which melts into terrifying nothingness when the child first realizes the obvious trickery.

The child's right to fantasy cannot be denied. His anticipated joy becomes a dream with a rude awakening when he finds himself on that day suddenly confined to a hospital room, certainly far removed from the scene of his imagined pleasure. Strange, serious, white-robed people are milling about him. Just as he is becoming aware of the series of tricks that led to this incarceration, he is immediately undressed and at a confusing time of day placed in bed. This magnifies his sensation of capture. Add to this the picture of the drawn and tense mother who is wondering whether her decision is right and who is already chastising herself with guilt for inflicting all of this on the child, who seems to look so particularly healthy to her at this moment. It is exceedingly difficult for any of us to comprehend the true impact of such terror, confusion, and disappointment for the child and to evaluate its disastrous sequelae. There is the immediate resentment at having been lied to and tricked into a situation. Then there is the painful distrust the child suddenly feels for the parent, a distrust which may well negate all the previous support and protection and kindness offered by the parent. Years of compensating kindnesses are often necessary to "buy back" the altered relationship.

It is more unfortunate that at this time of the child's greatest need the parents are least qualified to offer solace and comfort; rather, they reflect by appearance and gesture their own personal apprehension and concern. We must remember that the parents' concern at this time is not only concern for the child but a re-emphasis and a revivification of the pain of their own childhood tonsillectomy. The fact that their own experience may have been blockaded or entirely forgotten up to this very time makes the combination of recollection and reality even more severe for mother and child.

Deprived of his breakfast with no adequate explanation, the child is now subjected to the further indignity of rectal temperature and preliminary injections. These, coupled with disappointment and pain, are too many insults for the child to accept gracefully when improperly prepared.

Now we are ready for the next exciting chapter. Without preliminary warning one or two persons, the operating room attendants or nurses, gentle and kind, but at best strangers, pick up the struggling child and whisk him away from the mother to an unknown destiny. The child's entire life up to this very moment has been attuned to that vague yet definitely all-encompassing thought, security. Here, then, is a sudden precipitous break in a relationship between child, mother, family, security, and dependence. At this particular moment there is no reason why the young child can anticipate ever being returned to his parents. The purpose of this separation has not adequately been described, nor has he been given sufficient substantiation of the fact that this separation is to be but a temporary one. The implicit trust of the child in the parents and the belief that in their presence no harm can befall him can be unalterably shattered at this moment.

Can we possibly project ourselves into that terrifying moment when first this child enters a strange white-walled, instrument-filled operating room? Before he can fully accommodate himself to this picture, a new terror descends upon him. He is now again undressed, overpowered and restrained, and anesthesia begun. Do we who have witnessed this struggle adequately appreciate the effect that this moment of terror has upon the impressionable child? He leaves his conscious state struggling against uncontrollable forces, with a great awareness that parents and life have deserted him. The temporary although significant struggle between the conscious and the unconscious during the early stages of anesthesia is tantamount to the experience of death. Up to this point the child has not had one single evidence that he will ever return to life and the normal relationships that preceded this entire ghastly experience. Is this cataclysmic happening compatible with all the training and preparation and infinite investment in our children's destiny and security? It is always particularly interesting to witness at this point the orderly who feels personally insulted when the struggling child does not acquiesce more gracefully to force and anesthesia.

Is this a pattern of behavior typical of all children? Neuropsychiatrists and experts in child behavior problems tell us that it may well be considered usual and expected. There are some few children who are so emotionally well oriented as to experience this trauma without immediate or even eventual alterations in behavior. And there are others who fail to show any early effect of the experience but subordinate it, only later reflecting its real emotional significance; witness the frequency with which adults recount with various degrees of emotional intensity every detail of this single experience. It is true that the child may go to the hospital willingly, but let us not be deceived by this apparent calm and submissiveness of the child.

It has been fallaciously noted that the timid or even obstreperous child can best be managed in the hospital when the parents are not present. Therefore, we arrive at the naive deduction that a hospital stay with parents barred is highly successful. It may be successful, but for whom? Perhaps for the efficient administration of the intricate hospital routine but certainly not for the emotional balance of the sensitive child. We dare not accept his apparent docile resignation as a true index of the emotional state of the child. Inner and suppressed fear must not be mistaken for his acceptance of a painful situation. Overwhelming terror often makes vocalization impossible. What chance has a four-year-old against the all-powerful, white-robed army that surrounds him?

One major hospital, because of administrative procedure, insists on the following: A child is brought to the hospital the afternoon before the operation and the parents immediately dismissed. There follows no contact between parent and child for forty-eight hours until they are reunited on the second following morning. A smile of welcome is hardly compensation for the horror of the child's experiences. The parents' complete ignorance of the actual details does not minimize the import of this severe emotional trauma to the child. One child, in her anguish, epitomized the whole nightmare by the surprising statement to her father who called for her, "I thought you didn't want me." Review the significance of this painfully poignant statement, and note the mounting connotations of this whole discussion.

The immediate and delayed reaction to this surgical procedure may be one of many alterations in behavior: family antagonisms, negativisms, night terrors, hostilities, phobias, obsessions, and other psychoneurotic patterns. The impact of tonsillectomy may be but the trigger mechanism that is disastrous in an already sensitized personality. Since this procedure can be anticipated, this damage can be remarkably avoided with comprehension, education, and planning.

The entire procedure of tonsillectomy is, undeniably, an unpleasant one at best. We can, however, attenuate this trauma by the adequate preparation and handling of the child and parent. Since the medical and emotional happiness of the child may be predicated on this single experience, the preservation of this stability falls directly in our surgical province. It is distinctly our responsibility, as we become more aware of the psychosomatic implications, to maintain the emotional integrity of the destiny of the child entrusted to us. Were we able, in all instances, to avoid imposing a tonsillectomy on a child, the ideal would be attained. However, since there are specific indications for this important operative procedure, we must devote ourselves to both the surgical and emotional aspects of the problem.

The established criteria for tonsillectomy vary but slightly with each school of otolaryngology. To these must be added the significant indication of an optimum age group for operation. The exact age may vary somewhat with each child, but the common denominator to all should be the child's ability to understand the necessity for the operation. It is a decided misconception to believe that the child of one or two years tolerates an operation better because "it doesn't know what is going on." The very use of the word "it" indicates a failure to give recognition to the fact that the one or two-year-old "it" is a functioning organism, subject to emotional trauma. The emotional dependence of this age group is even greater, since there is no conscious awareness of these young children to any but home experience. Therefore, their need for sustained security may be even greater than in the older group who are able to adjust more easily. The further difficulty with the age group under three and a half years is that they are as yet unable to verbalize their fears.

The child must be approached on an honest basis with a sincere effort to obtain a tangible hold on his trust and confidence. No matter what the psychologic structure and background, the child can be approached and his friendship earned by patience, kindness, and understanding.

Time is the one significant variable in establishing the patient-doctor relationship. Every extra moment previously spent in establishing a gentle, friendly relationship is rewarded from the surgeon's point of view by the trust at the time of the child's departure to the operating room and in the quiet acceptance of the anesthesia. The established faith only later becomes manifest by the maintained and lasting doctor-patient relationship, important but not really as significant as the unaltered child-parent relationship.

To obviate the psychologic pitfalls associated with tonsillectomy, the following salient steps are recommended:

1. The child must be given a calm, forthright, and honest explanation of the reason and need for the operation. He can be told that he will have fewer colds and consequently more time for his favorite play activities. There should not be any idealization of the postoperative joy that follows. It must be explained that a certain amount of pain is one of the unavoidable but tolerable aftermaths.

2. The child must be spared the tension and anxiety reflected by the attitude of the parents. Discussion of the operation must be limited to the times when the child is not present, until purposeful exposure is desired. It is suggested that the four or five-year-old not be told until a day or two before the operation.

3. Avoid the element of surprise and confusion. A simple but recognizable picture of a hospital, operating room, and white-gowned nurses can be described. The hospital picture can even be made pleasant by adequately explaining the need for white and cleanliness.

4. That the reason for anesthesia is to spare the child pain during the operation is explained. Assurance that the forced sleep is of very short duration is very comforting.

It might be interpolated here that the ideal anesthesia would be one given in the child's room without any awareness of induction. Unfortunately, avertin and pentothal, two such anesthetics, are fraught with potential danger because of their unanticipated duration and toxicity. Safety must not be sacrificed even for psychologic advantage. Rapid induction by nitrous oxide, followed by open ether, is unquestionably the safest anesthesia available. The ideal anesthesia is chosen for surgical efficacy and with psychic consideration.

5. The presence of one or both parents during the immediate preoperative and postanesthetic period is essential, and the constant presence of one parent during the entire hospital stay is the greatest single contribution to the maintained security of the child. Ingratiating technics with toys and affection is an individual one, and the approach is well known to each parent.

6. The moment of separation of the child from the parents is one of the most traumatizing ones of the entire experience. These terrifying and destructive few moments can be materially attenuated if the physician himself were to call for the child and escort him to the operating room. The doctor himself, armed with an established patient rapport, can make the moment of child-family separation more tolerable, even though basically difficult. At best, this situation is a potentially unhappy one, but it can be minimized with this extra consideration and thoughtfulness. A strange operating room attendant serves no pacifying or soothing function during this significant moment.

7. Permit the child to manifest overt hostility during the postoperative period. From the child's point of view, an injustice has been done him. Pain has been imposed on him; he feels unnecessarily hurt. There is no apparent pleasantry or compensation for the entire unhappy experience. It is a natural tendency to insist that the child remain quiet and not voice his objection or cry, for fear of irritating his throat. Actually, such suppression is fraught with subsequent psychologic danger. He must be permitted to vocalize and verbalize his objection to this imposed annoyance—better this hostility than subordinated emotional conflict.

Conclusion

This realistic portrayal of the emotional aspects of tonsillectomy is not meant to be pessimistic or foreboding, nor is it meant as a reflection on an operation which is health-restoring and constructive, when indicated. Rather, this portrayal is meant to illustrate and emphasize the fact that many childhood and adult neuroticisms can be traced to poorly planned tonsillectomy and other elective surgery. We are indeed fortunate that elective tonsillectomy, unlike urgent surgery, can be anticipated and planned for through parent and child education. It is this training that may well obviate the potential psychologic aftermaths, the damage from which may overwhelmingly negate the advantages of the surgery.

Psychic values must be considered as significant pre- and postoperative surgical problems. The optimum time for surgery must be chosen with exquisite care and consideration for the psychologic receptivity of the child. Psychic trauma must be as significant a surgical consideration as hemorrhage or infection. Psychic complications of surgery and anesthesia, although frequently delayed, must not be disregarded, because the early symptoms are subtle rather than apparent.

By our very awareness of the psychic implications of surgery, we can produce, along with the intrinsic advantage of tonsillectomy, a combined result of permanent value.

162 East 80th Street

FORMATION OF PROCAINE DEPOT AND PROLONGATION OF LOCAL ANESTHESIA BY INJECTION OF INSOLUBLE PROCAINE DERIVATIVES

Samuel Monash, M.D., New York City

(From the Department of Dermatology, New York Medical College and Flower and Fifth Avenue Hospitals)

During the past decade intravenous infusions of procaine hydrochloride have been used in the treatment of a variety of conditions such as tinnitus aurium, burns, obstetric anesthesia, pain in traumatic, inflammatory, and spastic conditions, arthritis, delayed serum sickness, reactions to penicillin, asthma, and in the prevention of cardiac disturbances under anesthesia.[1-8] Intravenous infusion is usually considered a mode of therapy suitable for administration only in a hospital and is not easily carried out in the average physician's office. It occurred to me that if an insoluble depot of procaine could be produced, there would ensue a gradual absorption of the procaine, which might then produce the same systemic effects as intravenous infusion. The effect of the latter would be more immediate, that of the former more lasting. Moreover, the procaine depot might produce a local anesthetic effect until it was completely absorbed. Such prolonged anesthesia could be useful in the treatment of painful conditions and localized pruritic lesions.

Most of the following experiments were carried out by the writer upon himself. All injections except that with procaine penicillin were made subcutaneously in order to be able to test the duration of the local anesthesia. Therapeutically, however, the intramuscular route would be the method of choice in most cases.

Procedure

Suspension of Procaine Base in Water.—One-tenth gram of procaine base, suspended in 1 cc. water with the aid of the dispersant Aerosol OT,[(R)] was injected subcutaneously into the anterior surface of the left arm. Immediate anesthesia resulted over an area about 2.5 cm. in diameter and was present for twenty days.

Procaine base, 0.5 Gm., suspended in 1 cc. of water was injected into a different area on the left arm. Again immediate anesthesia occurred and lasted for fourteen days.

A persistent anesthetic area for more than two weeks could be due only to the continuous presence of procaine in that area. This was proved by testing the urine daily for para-aminobenzoic acid, a decomposition product of procaine. The test was made with Bratton-Marshall reagent on the prepared urine. Para-aminobenzoic acid was found to be present as long as the anesthesia persisted, showing that a slowly absorbable depot of procaine was formed by the injection.

Procaine Base in a 50 Per Cent Alcohol Solution.—When an ethyl alcohol solution of procaine base is injected, the alcohol is very quickly absorbed, leaving the procaine base in situ. One cubic centimeter of a 5 per cent solution of procaine base in 50 per cent alcohol was injected subcutaneously into the inner aspect of the left arm. There was immediate anesthesia over an area about 2.5 cm. in diameter which lasted for sixteen days.

Procaine Base and Procaine Oleate.—Three-tenths gram of procaine base was warmed slightly with 0.15 Gm. of oleic acid to form an oily liquid containing a mixture of procaine oleate and free procaine base. It was injected subcutaneously into the anterior surface of the lower third of the left thigh. There was no pain, but a marked inflammatory reaction took place which subsided in two days. Anesthesia was immediate over an area about 3 cm. in diameter and persisted for twenty-two days. This preparation produces too great an inflammatory reaction to be of any value therapeutically.

Procaine Penicillin.—A suspension in oil of 200,000 units of procaine penicillin, 0.66 cc., was injected intramuscularly in a child of two and one-half years for a throat infection. The presence of procaine in the body for a period of at least five days was evidenced by a positive test for para-aminobenzoic acid for five days after injection.

Comment

The above experiments show definitely that it is possible to produce a depot of procaine in the body which lasts at least two weeks, during which time small amounts of procaine are continuously being absorbed and eliminated. They also demonstrate the possibility of anesthetizing a portion of the skin and subcutaneous tissues for a period of at least two weeks, which would make it valuable in the treatment of painful areas and pruritic lesions. It remains to be determined whether a depot of procaine base will exert the same therapeutic effects as an intravenous infusion. The amount of procaine hydrochloride used in an intravenous infusion, namely 4 mg. per Kg., or 0.24 Gm. for a person weighing 60 Kg., is equivalent to about 0.20 Gm. of procaine base. It is easily possible to produce a depot of two and three times this amount which would result in continuously feeding the body an appreciable amount of procaine over an extended time. Moreover, analogous to the procedure with penicillin where an immediate and prolonged action is obtained by mixing soluble sodium penicillin with insoluble procaine penicillin, a similar effect can be produced by mixing soluble procaine hydrochloride with insoluble procaine base in a single intramuscular injection.

Up to the present, the attention of physicians using procaine penicillin has been directed toward the penicillin fraction. One must now also think of the possible therapeutic effect of the procaine portion inasmuch as a dose of 600,000 units of procaine penicillin contains 0.24 Gm. of procaine base, 0.04 Gm. more than the amount usually administered intravenously to a patient weighing 60 Kg.

Summary

The subcutaneous or intramuscular injection of procaine base or an insoluble compound of procaine results in a depot of procaine which is then continuously eliminated from the body. Subcutaneous injection also produces a local anesthesia lasting at least two weeks. The therapeutic possibilities of such a depot and of prolonged local anesthesia are discussed.

1475 Broadway

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"DOCTOR JONES" SAYS—

A squib on the funny page of my Sunday paper: The old Army sergeant was disturbed because some of these scientists had gone and discovered something besides liquor to take for a cold. What the "sarge" was supposed to've had in mind, presumably, was the so-called antihistamine preparations there's been such a stir about in recent months. A druggist friend told me, awhile back, he hadn't been able to get 'em fast enough to keep up with the demand.

There's a certain amount of basis for this explosion of optimism but—well, it's some like a fellow said about reading the last chapter of a story first. I claimed it spoiled the story. "Maybe so," he said, "but before I let 'em get me all excited I like to see how it comes out and whether it's worth while." Many of the wonderful new discoveries—take the sulfa drugs for example: they're still wonderful, but we've learned from experience that they have to be used with discretion. If they're misused, they can do harm.

Histamine is a chemical substance the body turns loose when it's stimulated by something like ragweed pollen, for instance, that the body's become sensitized to. The allergic reaction that results—it seems to be designed as some sort of a defense reaction. Because Nature seems to overdo it at times, they've developed these antihistamine drugs that counteract the histamine effects.

The use of antihistamines for colds is based on the theory that they're allergic reactions. It could be, but other allergic reactions, including hay fever, start with sneezing, running noses, and all that. The people—and there've been a lot of 'em—that've taken these preparations *within a few hours of appearance of their symptoms* and gotten relief—there's some question how many of 'em actually had colds.

Some of the folks that take these drugs—at least 20 per cent, good authorities say—"will have side effects which will be undesirable if not actually dangerous."

In short, it's still experimental, and, like on the road under construction, we're advised to "Proceed with Caution!"—*Paul B. Brooks, M.D., January 23, 1950*

A PROGRAM FOR ACTIVE REHABILITATION OF THE CARDIAC PATIENT

S. H. May, M.D., New York City

SINCE the beginning of medical history, rest has been a primary therapy for the cardiac patient. It may be said that it has been the most widely and consistently used remedy of all time. Whereas drug medication has been carefully standardized as to therapeutic and toxic dosage, the prescribing of rest, qualitatively and quantitatively, is left to discretion. Rest may be desirable and beneficial, but it can also be detrimental. The fallacies of rest are not sufficiently appreciated.

The reason for rest in heart conditions, of course, is to favor the heart by reducing the demand for cardiac activity. The validity of this reasoning is obvious when acute cardiac decompensation is present, where any amount of effort is registered by increased manifestations of failure. Nevertheless, bed rest reduces cardiac output and stroke volume; it induces hypotension with resulting venous stasis and tendency to thrombus formation; it favors the development of pulmonary edema and nocturnal dyspnea. Therefore, after cardiac compensation has been established, or nearly so, increased activity should be resumed. One must remember that bed rest and digitalization can bring about a better utilization of cardiac reserve only where such reserve is available. By enforced and protracted "idleness," the cardiac muscle, not unlike the voluntary muscle, probably will slacken and atrophy until at last no medication will be effective. Prolonged bed rest may jeopardize the natural means of increasing the inherent cardiac reserve. Cardiacs, victimized by too much quiescence, indeed have little chance of recovery. Besides, an overdose of bed rest brings about emotional unrest; conversely, physical activity relaxes emotional tension. Rest in abundance is demoralizing; physical activity restores self-respect and humor.

The need for enforcing strict and extended bed rest in acute coronary thrombosis is not the same as in acute failure; one reason is prevention of decompensation. Experiments with dogs tend to prove that infarctions have a better chance of healing under rest enforcement, and ventricular aneurysms develop less frequently.[1] Actually, we do not know whether fewer people succumb to coronary thrombosis under this form of treatment. We know for a certainty that a good many infarctions happen unnoticed by the patient and heal well. It is thought, too, that bed rest is advisable for the prevention of shock and embolization. Physiologic facts contradict this, because ensuing hypotension and reduced blood flow are at least contributing factors in shock and thrombus formation. A great deal more diligent research is indicated in order to establish whether or not, from a physiodynamic viewpoint, protracted rest is desirable. Over 50 per cent of older people, when confined to bed after having been ambulatory, suffer thrombosis of the deep veins of the leg, and over 3 per cent of them die from pulmonary embolism.[2] A recent study of survival after myocardial infarction concludes that the mortality rate is greatest in the first two months and lessens progressively.[3] Is it wholly illogical to question whether this fact might be somewhat related to the traditional treatment of prolonged enforced rest?

In this connection, one should force the admission that, in everyday practice, complete rest in bed for weeks on end is rarely achieved. Complete bed rest includes the denial of bathroom privileges. For many patients, however, the unaccustomed procedure of elimination in bed results in a much greater physical strain than the use of a toilet or a nearby commode. This is the experience even with patients who have proper nursing, but trained nursing care for a month's duration can rarely be provided. Then too, coronary disease mostly afflicts highly emotional subjects. The task of controlling the emotional tension produced by apprehension, worry, and fear requires a time and thought-consuming artistry with which few physicians and nurses are equipped. The mere prescription of sedatives will not solve the problem; mental depression, and even confusion, often follow their continued use. Occasionally, this type of medication boomerangs into stages of excitation with increased insomnia.

When the healing of an acute coronary infarction is reasonably assured, the question arises, should the patient be discharged into permanent invalidism or semi-invalidism? Or can the patient be returned to complete normalcy in due time? With the vanishing of the acute crisis, the therapeutic task has only begun. In a great many cases the re-establishment of normal activity can be achieved. A systematic program for psychologic and physical retraining must be offered. Little or no result may be expected in cases of unyielding cardiac failure, advanced ventricular aneurysm, and marked disturbance of atrioventricular conduction. However, these cases in which anatomic destruction has progressed too far are in the minority. Mild anginal syndrome, transient congestive failure, hypertension, even repeated coronary accidents do not represent a contraindication to attempts to reestablish active life.

The prognosis of coronary disease may improve with advancing knowledge of the basic arteriosclerotic process and the causes leading to it. It appears more than incidental that coronary symptoms are alleviated after peptic ulcer or gallbladder disease have been eliminated. To a lesser degree this is true for metabolic disorders like diabetes, gout, and thyrotoxicosis. At present, there are few effective means of treating hypertension, thromboangiitis obliterans, or hypercholesteremia, although many attempts are promising.

Psychogenetic influences and conflicts contribute greatly to the wear and tear which deteriorate the elasticity of the vascular structure. Haste, tenseness, depression, undue pessimism, lack of decision, anxiety, and guilt complexes must be looked for and treated with authority and patience.

The need for physical rehabilitation is based on the same physiologic principle as outlined above. Observation of patients with healed coronary infarcts who returned to full active life tend to prove that they exhibit fewer complications and relapses. The century-old history of such world famous spas as Nauheim, Franzensbad, and Kissingen illustrate the effectiveness of physical rehabilitation in cardiacs. They have been recognized by a multitude of medical authorities. The results are obtained by systematic retraining and strengthening of myocardial function. The objective of the carbon dioxide bath, for instance, is a powerful increase in the peripheral circulation; von Romberg called it an hour of "gym" for the heart.[4] The effects can be graded by longer bathing time and by reducing temperatures. Other long recognized methods of therapy serving the same purposes are promenades, carefully distanced and timed, at first without and later with gradual inclines. It may be said that coronary disease, with all its implications, was an unknown condition during most of the time of flourishing spas. This objection is not valid inasmuch as a majority of those patients were afflicted with angina pectoris.

It would be erroneous to set up a dogmatic timetable for a program of rehabilitation. This must naturally be done under strict supervision and with caution. It may even be started toward the end of the period of rest. One kind of exercise, suggested as especially helpful, tends to mobilize the diaphragm by a slow and prolonged expiration, lasting fifteen to twenty seconds, after a short, deep inspiration. Even as few as five or six such exhalations might lead to symptoms of alkalosis; therefore, they should be restricted to only a few. This is to be followed by jerky contractions of the abdominal muscles. The effect of these exercises is obvious; they massage the intestines from above and below, and we may assume that thoracic and abdominal blood pools are thrown into circulation. One will find that patients who are trained to such simple efforts report that they feel relieved of abdominal distention and gas; that they have discarded the habitual use of laxatives, because half an hour afterwards the bowels act spontaneously. This "blood pool mobilization" should be included in the permanent daily hygiene. It is best done before an open window. It does not require extra time; it can be done, for instance, while shaving.

Because of the remarkable benefits to the peripheral circulation, carbon dioxide baths can be used effectively in the early stages of cardiac rehabilitation. After lower bathing temperatures are tolerated, a gradual training to take cold showers may be undertaken. To avoid shocking, this should be done after the daily warm bath; it should then be a year-round procedure. The Japanese traditionally use very hot temperatures; they serve a similar purpose but have not the invigorating after-effect.

Careful observation and simple exercise tolerance tests will determine the speed with which the return to normal activity can be reached. This is done by methodical increase of outdoor walks, with the later addition of mild slopes and stairs. Emphasis must be given to the daily regularity of physical exercise in combination with long, regular mid-day rest periods. At times of prohibitive inclemencies of weather, a corresponding amount of home gymnastics should replace the outdoor activity. Eventually, mild sports can be allowed and advocated, such as horseback riding, boating, swimming, and noncompetitive golf. Highly competitive sports are contraindicated because of the emotional tension connected with them. Most of the much-heralded golf tragedies are precipitated by the emotional strain, as well as by the physical, and it is not to be forgotten that most golfers are unaccustomed to habitual physical activity.

The principles of the cardiac rehabilitation program are aimed at the following benefits: increase of the cardiac reserve by strengthening the intact heart muscle, balancing of the circulation by stimulating peripheral vascular activity, shifting of blood distribution by restricting sedentary life, avoidance of autointoxication, and improvement of metabolic processes. Physical stress tends to alleviate emotional strain. With restored confidence, anxiety and apprehension will convert to mental and moral equilibrium. The task of rehabilitation of the cardiac patient to usefulness and productivity may thus be achieved.

The foregoing remarks are sketchy and oversimplified. They may be challenged and disputed. They are intended primarily to precipitate discussion and invite appropriate investigation.

57 West 58th Street

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PREGNANCY COMPLICATED BY DIABETES

Arthur N. Frankel, M.D., New York City

(From the Department of Obstetrics and Gynecology, Beth Israel Hospital)

THIS study of pregnancy complicated by diabetes covers the past ten years at Beth Israel Hospital. During this period there were 18,500 deliveries. Twenty-six of these pregnancies, or 0.14 per cent, involving 20 patients, were associated with diabetes. All of these patients were of the white race. Seven of the patients were private and the balance service cases.

The age group ranged from nineteen to forty-three years. There was one in the teens, eleven in the third decade, thirteen in the fourth, and one in the fifth decade. The average age was thirty-two years. The average age of our pregnant, nondiabetic patients was twenty-three and one-half years. Rike and Fawcett of Pittsburgh reported on 55 cases whose age group ranged from sixteen to forty-five years.[1] Their average was thirty-one years with the average age for all pregnant patients at their institution being twenty-three years of age. In Paton's series of 100 pregnancies the average age was thirty-three, which was eight years older than the average delivery.[2]

The late age of conception may be due to (1) contraception practiced because of the fear of the offspring inheriting diabetes, (2) late marriages, and (3) avoidance of gestation because of the fear of pregnancy and its complications. Infertility apparently is not a factor since the insulin era. The diabetic woman who requires investigation for sterility is the exception rather than the rule. The high incidence of multiparity in the diabetic patient indicates no lack of fertility. The Chicago Lying-In and Boston Lying-In Hospitals in their annual reports show one diabetic pregnancy in about every 1,000 deliveries.[3] Barns reports one diabetic in every 930 pregnancies.[4] This, therefore, is the expected fertility rate, since about one woman in a thousand of child-bearing age is a diabetic.[3] Forty to 50 pregnant diabetics are under care at all times at White's clinic.[5] Before the advent of insulin, pregnancy in the diabetic was a rarity. Lack of control of diabetes may be an important factor in infertility.

Seven of our patients were gravid 1, eight were gravid 2, seven were gravid 3, two were gravid 4, one was gravid 5, and one was gravid 6.

The duration of diabetes in the 26 pregnancies varied from ten years to three cases discovered during the pregnancy. The distribution is as follows:

Years recognized before pregnancy	1	2	3	4	5	6	7	8	9	10
Number of patients	2	2	.	.	3	.	3	2	1	2

Eight had no record of the duration of diabetes. It is possible that those recognized during gestation may have been potential diabetics until gestation when the disease became aggravated and was readily diagnosed. Two of these are discussed later as prediabetics.

The pregnant diabetics were classified as mild, moderate, and severe, depending on how they were controlled. Mild cases were controlled on diet alone, moderate cases on less than 30 units of insulin daily, and severe cases on more than 30 units. Three cases had no diabetic record. Four were mild, 11 were moderate, and eight were severe diabetics. Of the eight severe cases, four delivered live babies. Two of the four fetal deaths were not of viable age, one a spontaneous and the other a four-month therapeutic abortion. One fetal death of viable age was a neonatal death which probably was hypoglycemic, as the mother was given insulin during the delivery and went into insulin shock afterwards. The other was a low midforceps delivery of an $11^{1}/_{2}$-pound stillbirth, the delivery being complicated by impacted shoulders. Three of the four severe diabetics who delivered live babies were admitted to the hospital for acidosis one or more times before delivery, and one was also admitted for several bouts of coma. These findings appear to show that the severity of the diabetes per se is not the important factor in producing infant deaths. This is in agreement with White and Hunt whose statistics show that some fetal deaths occurred in cases of diabetes which were clinically controlled, while viable infants were delivered subsequent to treatment of diabetic coma and prolonged acidosis.[3,6,7] Diabetic coma complicated five of their 271 pregnancies in one of their series and was followed by a viable infant in all instances.[3] Coma did not complicate the course of pregnancy in 47 of their patients whose fetuses died. Hypoglycemia did not cause any fetal deaths. Tolstoi and others agree that diabetes can be well controlled and yet the fetus dies and vice versa.[3]

Toxemia and hydramnios are common complications of diabetes in pregnancy. White reports a 36 per cent incidence of pre-eclampsia toxemia in 271 cases; Wilson reported 31.7 per cent among 41 patients, Rike and Fawcett 32.7 per cent of 55 patients, and Bill and Posey report a 27 per cent incidence in 44 patients.[7,8,1,9] Rike and Fawcett report three cases of hydramnios in their series, or 5.4 per cent, Bill and Posey one case, or 2.5 per cent, and White and Hunt's incidence was 24 per cent.[1,9,6] In this series there were seven cases of pre-eclampsia toxemia (26.9 per cent), three cases of polyhydramnios (11 per cent), five cases of vomiting of pregnancy, and one case of pyelitis and phlebothrombosis.

There was no relation in our study between the duration of the diabetes and toxemia. Rike and Fawcett in their group of patients found those with the longest duration of pre-existent diabetes were in the toxemia group.[1] The duration of the pregnancies of the toxemia patients were all eight months or over, except one in which a cesarean section was done at thirty-three weeks with the delivery of a 6-pound live baby. Rike and Fawcett's series on duration of pregnancy of toxemia patients approached ours. White and Hunt report that 20 per cent of the toxemia patients delivered before the thirty-sixth week.[6] Two of the toxemia patients in our series delivered spontaneously, three were delivered by midforceps, and two by cesarean section. The fetal weight of those born to toxemia patients, as in Rike and Fawcett's series, showed the same increase in weight as those born to diabetic patients whose pregnancies were not complicated by toxemia. All except one of the pre-eclamptics were receiving insulin. There was one fetal death neonatally in this group which probably was hypoglycemic, as previously described. The fetal death incidence of our pregnant diabetics complicated by pre-eclampsia is, therefore, 14.3 per cent (one in seven). Rike and Fawcett's series was 11 per cent, and Bill and Posey's was 42.8 per cent.[1,9]

One must be impressed by the importance of the correct hormonal balance in pregnant diabetics with respect both to complications of pregnancy and fetal survival, as demonstrated by Smith and Smith foretelling impending pre-eclampsia and premature labor by a rise of the gonadotropes and a lowering of estrogen and progesterone levels and as demonstrated by the excellent results of fetal salvage in White's series which were followed by hormone assays with replacement therapy instituted when necessary.[3] In 52 of her cases, when the hormone balance was normal, the premature delivery incidence was zero, toxemia of pregnancy 2 per cent, and the fetal survival approached that of the nondiabetic (96 per cent). In 38 cases, where abnormal hormonal relation was observed, premature delivery occurred in 40 per cent of the cases and pre-eclampsia toxemia in 50 per cent; the fetal survival rate was 50 per cent. In the 91 treated abnormal cases, premature delivery fell to 15 per cent, pre-eclampsia toxemia was altered and prevented, and the fetal survival rate rose to 90 per cent. With such results all pregnant diabetics should be treated with replacement therapy on the basis of hormonal assays. Palmer, Bowen, Cameron, Rice, and others have reported successful treatment with estrogen and progesterone.[10-12, 3] No hormonal assays were done on any of our patients. Two of our toxemia patients were treated with estrogens in the form of stilbesterol, but the dosages were small.

The average period of gestation at which pregnancy was terminated either spontaneously, by induction, or by section was seven months. Seventeen of the pregnancies, or 65.4 per cent, were eight months or more. Rike and Fawcett's series showed seven and eight-tenths months for the average duration with 82.7 per cent being eight months or more.

1 at 2 months
4 at $2^1/_2$ months
1 at 3 months
1 at 4 months
1 at 6 months
1 at $7^1/_2$ months
1 at 8 months
5 at $8^1/_2$ months
11 at 9 months

There were seven spontaneous deliveries, six forceps (four mid, one low, and one Piper forceps for the aftercoming head), one breech extraction for a transverse position, and one breech delivery. There were five cesarean sections and five therapeutic abortions (one a fundectomy with sterilization and four evacuations by the vaginal route). There were two curettages for incomplete abortions. Thirteen, or 50 per cent, of the cases were delivered vaginally. Excluding the five therapeutic and two incomplete abortions, our cesarean rate is 26.3 per cent. This is low compared to the 80 per cent cesarean sections in White's series.[3] It approaches Bill and Posey's rate of 32 per cent and Rike and Fawcett's rate of 25.8 per cent.[9,1] In our series there was only one breech (3.8 per cent). White reports 33 per cent.[7] Rike and Fawcett also report one in their series of 55 cases, a rate of 1.8 per cent.[1] All of the five therapeutic abortions were for vomiting of pregnancy. White and Hunt, Rike and Fawcett, and others feel that diabetes alone is not an indication for interruption of pregnancy and that the indications do not differ from those for the general population.[6,1] Two of our cases had ligations of the tubes: one with a fundectomy, and the other at the time of cesarean section. White and Hunt, Bill and Posey, Rike and Fawcett, and others also agree that sterilization should be performed on diabetics after they have had two to three children, and that section simply for ligation is not sound.[6,9,1] When ligation is performed alone, Rike and Fawcett and Whitacre advise that it be done in the first few hours of the puerperium, so as to keep the risk of pelvic infection at a minimum and so as not to prolong the hospital stay.[1,13] Nitrous oxide, ether, local, spinal, and cyclopropane, alone and in combination, were employed as anesthetic agents.

There were 17 recorded fetal weights. The weights to the nearest half pound were as follows:

Weight in pounds	$1^{1}/_{2}$	6	7	8	9	11
Number of babies	1	2	3	6	3	2

It is noted that the average weight is above the average normal term fetal weight of seven and one-half pounds, since 11 of the 17 recorded weights were above 8 pounds. Rike and Fawcett also found the average weight above the average term weight for nondiabetics.[1] White reports a birth weight above average for the period of gestation in 80 per cent of her cases.[7] Miller and his group found fetuses of 11 pounds or more to be 80 times more frequent in pregnancy complicated by diabetes than in normal pregnancies.[14] Snyder and Hoopes showed, in separate experiments, that the cause of the increased weight is due to hormonal derangement.[15,16] By injecting animals with prolan they caused overdeveloped, macerated offsprings. Autopsies revealed the overweight to be due to obesity, edema, and splanchnomegaly.

Eleven of the fetuses, or 64.7 per cent of the recorded weights, were delivered at term. Their weights ranged from 6 to 11 pounds and averaged 8.2 pounds. The average weight of the eight and a half and eight months gestations was 8 pounds, which is greater than the average nondiabetic weight at term. There were nine viable infants delivered by the vaginal route. The lowest weight was 6 pounds 4 ounces and the highest 11 pounds:

Weight in pounds	6	7	$7^{1}/_{2}$	8	$8^{1}/_{2}$	9	11
Term babies	1	2	1	4	..	1	2
$8^{1}/_{2}$-month babies	.	1	1	.	2	.	..
8-month babies	.	.	..	1	..	1	..

There were 14, or 53.8 per cent fetal deaths among the 26 deliveries: one at two months; four at two and one-half months; one at three months; one at four months; one at six months, a miscarriage; two at eight and one-half months, one a breech extraction for a transverse presentation and the other died in utero; and four at nine months—one with midforceps and impacted shoulders, one a neonatal death probably from hypoglycemia (insulin given mother during delivery), one with a cesarean, and the other a normal spontaneous delivery.

If the fetal mortality is corrected, omitting all deaths up to the seventh month period of viability, there is a total of six deaths, or 23 per cent fetal mortality (five were intrauterine deaths, 19.2 per cent, and one was a neonatal death, 3.8 per cent). Three pregnancies, or 11.5 per cent, terminated in spontaneous abortion or miscarriage. White and Hunt report 15 per cent abortions, Rike and Fawcett 28.8 per cent, and Bill and Posey 27 per cent.[6,7,9] Sisson and White state that the gross fetal mortality rates are reported as high as 40 per cent and 30 to 60 per cent, respectively, depending on whether early abortions are reported.[17,7] Bill and Posey report 16 per cent as their corrected fetal mortality, Rike and Fawcett 17.3 per cent, and White and Hunt 23 per cent.[9,1,6] Bill and Posey report five neonatal deaths, or 11.3 per cent, and Rike and Fawcett two, or 3.6 per cent.[9,1]

There was one fetal death in our group of five patients delivered by cesarean section (20 per cent). Rike and Fawcett report no fetal deaths in 14 sections.[1]

Sixteen of the patients had 31 previous pregnancies. These produced 19 viable infants, or 61.3 per cent, a mortality rate of 38.7 per cent (12 dead); these figures include spontaneous and therapeutic abortions, of which there were five.

There were two prediabetic mothers in this series with the tendency to produce large infants and to follow an abnormal obstetric course prior to the onset of diabetes, as has been emphasized by Bowen, Bix, Bowcock, Miller, and Woodyatt,.[11,18,20,3] One had two previous pregnancies, the first complicated by uterine inertia with delivery by midforceps of an $8^{1}/_{2}$ pound fetus at term followed by a neonatal death and the second a midforceps delivery at term of an 11-pound dead fetus complicated by impacted shoulders. The diabetes in the first patient was discovered during her third gestation nine years after the first delivery. The other prediabetic was delivered of a stillbirth in her first pregnancy; the second pregnancy, eight years later, was a term delivery of a 9-pound live child with a cleft palate and bilateral harelip. Diabetes was discovered during the third gestation thirteen years after the first delivery. According to White and others, congenital defects are commonly found in the offspring of diabetics.[3] The large infants produced by the prediabetics are believed to be due to pituitary influence consistent with the high titers for follicle stimulating hormone found early in the disease. Chorionic gonadotropin appears to be the factor responsible for the large size of the babies in pregnancies occurring after the onset of diabetes. Paton, in a study of 100 pregnant diabetics, has shown that the prediabetic patient exhibits a higher than average incidence of miscarriage, prematurity, large babies, stillbirths, and neonatal deaths.[2] His over-all fetal mortality was 26.3 per cent. Rike and Fawcett report a fetal mortality of 39.3 per cent in their series.[1] Miller, Kuder, and Horowitz, in a study of 146 diabetic births, concluded that the fetal mortality was as high five years before as at the onset of diabetes and that there was an increase of fetal mortality fifteen to twenty years before.[15] Hertzstein and Dolger reported a total fetal mortality of only 6 per cent in 319 pregnancies occurring over a period of twenty years prior to the onset of clinical diabetes but 15.4 per cent in the five years immediately prior to the diagnosis.[21]

Puerperal sepsis is rare in diabetes. Four patients in our series were involved, one with a pelvic exudate following a fundectomy and sterilization, the second with pyelonephritis and a wound infection subsequent to a section, the third a readmission for endometritis after discharge for a normal spontaneous delivery, and the fourth patient with an abscess of the thigh from a hypodermic injection. Pyelonephritis is the most frequent cause of fever in pregnancy complicating diabetes, according to White.[3]

There were no maternal deaths in our series. Of 271 patients in her series, White reported one death eight weeks after delivery due to infectious hepatitis.[3] Bill and Posey had two deaths in their group due to aspiration pneumonia.[9] Rike and Fawcett also report two deaths; one they believe could have been averted with better control of the diabetes.[1] Fetal mortality is the problem in pregnancy complicating diabetes and not maternal mortality.

Summary

1. At Beth Israel Hospital, during a ten-year period, there were 26 cases of pregnancy complicated by diabetes.
2. The average age of the pregnant diabetic was thirty-two years.
3. The average infant weight was above the average term weight of the nondiabetic.
4. Discovery of the diabetic condition was made during pregnancy in 11.5 per cent of the cases. In others, it was known to have existed from one to ten years prior to the pregnancy.
5. Nineteen patients were multigravida, ranging from two to six pregnancies.
6. The average duration of pregnancy was seven months.
7. Eleven and five-tenths per cent of the cases terminated in abortions or miscarriages.
8. There was only one breech presentation in this series.
9. Pre-eclampsia was present in 25 per cent of the cases. The duration of pregnancy of the pre-eclamptic was usually eight months or over.
10. Cesarean sections were performed on 25 per cent of the cases. This is low in comparison to White's 80 per cent.
11. The gross fetal mortality was 53.8 per cent. The corrected fetal mortality was 23 per cent. The fetal mortality of previous pregnancies before the onset of diabetes is similar to that at the onset of diabetes.
12. There were no maternal deaths.
13. Hormone assays and the use of replacement therapy in the abnormal cases should lessen fetal mortality.
14. Cooperation of the internist, obstetrician, and pediatrician will further lower the fetal mortality rate.

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SULFADIAZINE AND SULFAMERAZINE IN COMBINED SULFONAMIDE THERAPY

Thomas G. Kantor, M.D., New York City

(From the Medical Service, White Plains Hospital)

NOTWITHSTANDING the advent of the antibiotics, the sulfonamide derivatives still hold a high place on the list of therapeutic agents. Their great drawback has been their tendency toward toxicity, especially in regard to the kidneys. Crystalluria, "renal irritation," oliguria, and an often fatal anuria have been reported from the use of each of the more common sulfonamides. Various measures have been advocated in attempts to eradicate the main difficulty, the crystallization of free sulfonamide and its acetyl salt in the renal tubules, pelves, and ureters. Primary renal toxicity caused by sulfonamides evidently is a rare condition and, except for occasional allergic reactions of varying severity, is the only serious complication of sulfonamide therapy.

Of the many measures utilized to overcome crystalluria, alkalinization of the urine and the maintenance of a high urinary output have seemed to be the most effective. However, relatively enormous amounts of alkali are necessary for urinary alkalinization. Gilligan and her coworkers have found 14 to 20 Gm. daily of sodium bicarbonate necessary for the maintenance of an alkaline urine during sulfonamide therapy.[1] This is obviously contraindicated in certain cardiac and renal diseases and may cause serious results in patients in whom anastomotic operations have been performed, because of the possibility of stomal edema and breakdown. Potassium bicarbonate has been suggested to offset these disadvantages but is apparently not as effective an alkalinizer and may be contraindicated in uremia and in patients with irritable myocardia. In addition, experimental evidence indicates that large doses of alkali lower sulfonamide blood levels and actually diminish the therapeutic efficiency of these drugs.[2]

Lehr has introduced a more rational method for control of crystalluria.[3] He discovered that urines saturated with the salt of one sulfonamide could be saturated again with another and still again with a third derivative. Thus, each sulfonamide is independently soluble in a single solution, and it has been found that these mixtures, without adjuvant alkali therapy, are at least as effective as single drugs, plus the usual doses of alkali, in forestalling crystalluria.

In order to add more data to the information on this new type of chemotherapy with sulfonamide, the present study was instituted. It is believed that the sulfadiazine-sulfamerazine mixture is the most feasible for general use for the reasons which will be discussed.

Method

A series of 32 hospital cases received 33 courses of sulfadiazine-sulfamerazine mixture. In three postoperative cases, the drugs were given in conjunction with full doses of penicillin. Little attempt was made to evaluate the mixture therapeutically, although a few therapeutic implications became apparent as will be noted subsequently.

Two grams of each drug were given as an initial dose (total 4 Gm.) to 20 patients, and 0.5 Gm. of each (total 1 Gm.) was given to five patients. In both of these groups, the initial dose was followed by 0.5 Gm. of each drug which was given every six hours as a maintenance dose. The remaining cases were given various initial and maintenance dose schedules. One case received 2 Gm. of each drug initially and 0.5 Gm. every four hours; one received 0.5 Gm. of each drug every three hours for six doses and subsequently 0.5 Gm. of each every six hours, and another received 0.5 Gm. of each every four hours from the beginning. Five surgical cases were given 0.5 Gm. of each drug every six hours following doses of sulfanilamide crystals intraperitoneally and/or sodium sulfadiazine intravenously. No case in the series received any alkalinizing agent except those in which blood chemistry changes warranted its administration and those cases requiring therapy for crystalluria. Fluid was allowed ad lib for those patients able to drink.

Sulfonamide blood levels were obtained on the day following onset of therapy and on every second day thereafter by the micromodification of the Bratton-Marshall method using the photoelectric colorimeter. The values were determined as for sulfadiazine, because of the impossibility of separation of the two sulfonamide compounds by the method used. The sulfadiazine determination was multiplied by a factor of 1.1 (the ratio difference in molecular weight between sulfadiazine and sulfamerazine) to give the theoretic sulfamerazine level. The average of these two values appears hereafter in this paper as the sulfonamide blood level. This was done to give a possibly more accurate picture of the blood level for purposes of correlation with other findings. However, in practice, it is more practical to determine the value for only one of the drugs.

Urines were collected as the first voided specimen every morning. If the voided specimen contained red blood cells, the female patients were catheterized. Each urine specimen was examined within two hours after passage and was kept at room temperature until examined. When crystals of sulfonamide were found, the urinalysis was repeated if the specimen was over one hour old. The first specimen was counted, however, in the data, whether or not the second also revealed crystals.

Each urine specimen was subjected to examination of pH (using nitrazine paper), specific gravity, and albumin content. Each specimen was thoroughly mixed and a sample centrifuged at 350 r.p.m. for five minutes, the sediment then being examined immediately under the microscope.

Results

In this series, out of the 32 patients, four showed evidence of crystalluria on one or more occasions, an incidence of 12 per cent. Of 151 urine specimens, including those taken one day after cessation of therapy, 5, or 3.3 per cent, showed crystals.

There were 20 urine specimens out of the 151 studied (13 per cent) which contained red blood cells. Only one of these showed more than an occasional cell. This one evidenced crystalluria and eight to ten red blood cells per high power field on one occasion. Alkali and fluid, given by mouth without cessation of sulfonamide, were followed by the reappearance of normal urine. None of the others showing red blood cells contained crystals, and therapy was continued with subsequent reversion of the urines to normal in all cases. Obviously, there is no assurance that these hematuric episodes were related to the sulfonamide therapy except in the one case mentioned.

The specific gravity and albumin content studies were not remarkable.

Mild nausea and malaise noted by three patients were the other toxic manifestations which could not be attributed to the underlying disease. Total doses of sulfonamide ranged from 15 to 96 Gm. with an average of 25 Gm.

Ninety-two blood levels were ascertained, and the values ranged between 4.3 and 18.7 mg. per cent corrected sulfonamide level. The average level for the entire series was 10.1 mg. per cent. For those given 2 Gm. of each drug initially and 0.5 Gm. every six hours, the average value was 9.7 mg. per cent. It is interesting to note that the blood levels of this latter group were the highest initially and were the most consistently maintained.

Patients above the age of sixty and those with known deranged kidney function, as shown by blood chemistry, phenolsulfonphthalein excretion, and/or concentration tests, showed a tendency to "pile up" sulfonamide levels on the above maintenance schedules. In these patients, 0.5 Gm. of each drug given every eight hours was enough to maintain initial levels. This seemed to confirm the findings of Reinhold *et al.* that even minor renal impairment tends toward rapid accumulation of sulfadiazine in the blood.[4]

Comment

Crystalluria.—It is interesting that all the patients showing crystals in their urine were women, although they have a predominance of only 17 to 15 over the men in this series. All of the urines showing crystals except one were of pH 5.0. Of the 19 urines with this pH, 4 (21 per cent) contained crystals. This incidence of crystalluria at the low pH is in accordance with the experimental work on solubility of sulfonamides at various pH readings. The solubilities of both free and acetylated forms of sulfamerazine are considerably greater than that of acetylsulfadiazine at pH 5.0, and perhaps the crystals found are predominantly acetylsulfadiazine. Crystals of free and acetylated sulfamerazine are almost indistinguishable morphologically from those of sulfadiazine.

Clinical study of sulfadiazine-sulfathiazole without alkali performed by Lehr revealed no cases of oliguria or renal irritation. In one of his series with this mixture, 300 urines were examined with 21, or 7 per cent, showing crystals.[5]

In two similar series, Flippen *et al.* used sulfadiazine-sulfamerazine without alkali and with a somewhat lower initial dose than the major part of my series.[6] In one instance, ten urine specimens out of 171, or 6 per cent, and in another 89 urines out of 549, or 16.2 per cent, contained crystals.[6,7] Ledbetter and Cronheim, using a mixture of sulfadiazine-sulfathiazole-sulfamerazine without alkali, found six urine specimens with crystals out of 218, or 2.7 per cent.[8] Oettinger and Cronheim used a mixture of sulfadiazine and sulfathiazole with sodium citrate and sodium lactate which gave a crystalluria incidence of 2.5 per cent.[9]

In my hands, the sulfadiazine-sulfamerazine mixture has reduced crystalluria to percentages comparable with the lowest ones available in mixtures of two or three sulfonamides. It has the superior virtue, however, of requiring dosage at intervals of six hours as compared with intervals of four hours for the others, a not inconsiderable advantage when viewed from the patient's standpoint.

Evidently, any mixture is more satisfactory than the use of any one of the drugs without alkali or even equal parts of alkali and sulfonamide. Schwartz found that sulfadiazine, given without alkali, gave an incidence of crystalluria of 25 per cent and with equal parts of alkali to drug, 17 per cent.[10] Sulfathiazole, in the same type of series, gave an incidence of crystalluria more than twice as great, 67 per cent and 35 per cent, respectively.[10]

Therapeutic Application.—Of the 32 patients in this present series, seven had bacterial pneumonias as evidenced by x-ray and clinical and sputum examinations. The average temperature on admission was 103.2 F. with a range from 101.8 to 106. On combined sulfonamide therapy alone without alkali, normal temperatures (98.6 F.) were reached after an average of four and two-tenths days. The longest stretch of abnormal temperature was seven days in a case of pneumococcus type III pneumonia involving the right middle and lower lobes. This patient presented an acute fibrinous pleurisy on admission with a temperature of 106 F.

Seven other cases that were as nearly similar to the above as possible in age, type, and severity of infection and who were admitted at about the same time as that group were treated with 50,000 units of penicillin every three hours intramuscularly. The average admission temperature in this group was 102.7 F. with a range from 101 to 105.4. The average time necessary for a fall to normal temperature was five and eight-tenths days.

Lehr, using sulfadiazine-sulfathiazole, and Flippen, with sulfadiazine-sulfamerazine, both obtained clinical results leading them to suspect potentiation of the therapeutic effect over single drugs. Our own material, while not large enough in unit volume to be conclusive, is suggestive. The combined sulfonamide method apparently is at least equal to methods using intramuscular penicillin in the treatment of bacterial pneumonias susceptible to either.

Conclusions

The clinical evidence supporting the use of sulfonamide mixtures appears, therefore, to be sound, and the experimental and clinical work on different mixtures of three sulfonamides seems to show an even smaller incidence of toxicity.[11] My own preference for sulfadiazine-sulfamerazine in mixtures of sulfonamides is based on (1) the recognized greater toxicity of sulfathiazole, a common component of mixtures of three sulfonamides, to the blood, skin, and parenchymal organs and (2) the fact that adequate blood levels may be maintained with doses every six hours rather than every four hours in the cases of all other mixtures.

On the basis of this series, the following suggestions for the use of the sulfadiazine-sulfamerazine mixture are made:

1. Frequent determinations of the sulfonamide blood level should be made in patients over the age of sixty and in those suspected of having decreased kidney function. Levels may be easily ascertained by the micro-fingertip method which gives reliable results.
2. The urine should be tested daily for pH, using nitrazine paper (the earliest morning sample has usually the lowest pH value). The physician should exercise caution if the pH drops to 5.0 and should perform frequent checks of the urine while the pH remains low.
3. We suggest the use of 2 Gm. each of sulfadiazine and sulfamerazine initially and 0.5 Gm. of each every six hours thereafter. Initial levels obtained by the intraperitoneal and intravenous administration of sulfanilamide crystals and sodium sulfadiazine, respectively, may be maintained by 0.5 Gm. of each of the components of the sulfadiazine-sulfamerazine mixture given every six hours.

As may be seen from the above, the precautionary measures advocated are similar to those advocated in single sulfonamide therapy. However, these measures are more truly "precautionary" and rarely portend serious complications when used with the combined sulfonamide method.

Summary

1. The rationale for fluid therapy and alkalinization of the urine during sulfonamide therapy is discussed.

2. Clinical and experimental findings and the application of the use of sulfonamide mixtures are reviewed with the conclusion that these mixtures may be more successful in diminishing the danger of crystalluria than fluid therapy and alkalinization of the urine.

3. Supportive clinical evidence for the efficacy of sulfonamide mixtures in this regard is given in the author's findings in a series of 32 cases.

4. Evidence is presented to support the author's preference for a mixture of sulfadiazine and sulfamerazine on the basis of prolonged maintenance of blood levels.

210 East 73rd Street

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TECHNIC OF POSTNASAL PACKING FOR UNCONTROLLABLE EPISTAXIS WITH A "KITE-TAIL" TAMPON

Armando G. Favazza, M.D., Brooklyn, New York

(*From the Coney Island Hospital*)

EVERY general practitioner has had, at some time or other, troublesome experience with severe spontaneous nasal hemorrhage. Even competent rhinologists at times may not be able to find the bleeding point and cope with it. This is especially true in patients with hypertension in whom bleeding frequently occurs high up in the back of the nose instead of in the easily reached vascular area of Hesselbach. In these cases not amenable to cauterization, electric coagulation, etc., the use of oxidized cellulose gauze packing is of real help.

Postnasal packing with a "kite-tail" tampon of oxidized cellulose gauze has given a very satisfactory result in severe epistaxis. It is easily applied, and it eliminates the cumbersome packing of the nasopharynx which is very uncomfortable for the patient. It also eliminates the production of secondary hemorrhage when the regular gauze packing is removed, and, finally, in the majority of cases it eliminates infection.

The technic is very simple:

1. Pierce the tip of a small rubber catheter with an ordinary sewing needle, threaded with a strong cotton about 24 inches in length.
2. Pass catheter through the nose down into the throat; sterile lubricating jelly helps the introduction.
3. Draw the catheter out through the mouth by means of a sponge forceps.
4. Hold one end of the thread and withdraw catheter from the nose.
5. Have ready two pieces of cellulose gauze, measuring $^1/_2$ by 2 inches. Tie first piece of cellulose gauze in the middle in such a fashion so that it will have a horizontal direction. Tie the second piece about one inch apart from the first in a vertical direction (Fig. 1). A third piece may be added for security. Cut off the excess thread.
6. Pull the end of the thread through the nose; first gauze piece will go through the nasopharnyx horizontally; the second plug (vertically) will follow, so will the third.
7. After this has been accomplished, fasten thread to face by means of adhesive tape, then pack the nose with oxidized cellulose gauze.
8. Relieve the patient's anxiety by morphine sulfate hypodermically.

This packing is left in situ. It will disintegrate spontaneously within forty-eight hours, thus avoiding the repetition of hemorrhage from the removal of a regular gauze packing.

No infections have been noted with the use of this packing, thereby eliminating secondary hemorrhages from infected areas.

1694 64th Street

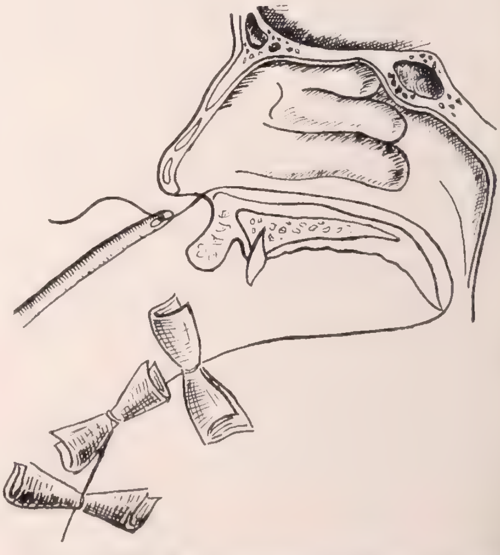

Fig. 1. "Kite-tail" tampon of oxidized cellulose gauze ready to be pulled into place by nose string which is still attached to rubber catheter.

AMBULATORY PREPARATION FOR THYROIDECTOMY

Herbert R. Marcus, M.D., Jefferson J. Vorzimer, M.D., F.A.C.P., Abraham H. Spivack, M.D., F.A.C.S., and Gerald J. Friedman, M.D., New York City

(From the Medical and Surgical Services of Beth Israel Hospital)

RECENT reports have reflected a considerable diminution of the initial enthusiasm for the medical management of hyperthyroidism with the thiouracil compounds.[1-5] The primary factor responsible for this change has been the increasingly high relapse rate, after withdrawal of medication, following apparently adequate treatment. The necessity for prolonged observation and treatment, the occasional case of drug toxicity, and various emotional and economic considerations have also been deterrents to the purely medical control of hyperthyroidism. For the present, it appears that the greatest usefulness of the thiouracil compounds is in the preparation of the thyrotoxic patient for thyroidectomy.

The thyrotoxic patient can be brought to surgery in a clinically normal state by the use of the thiouracil compounds. The increased safety of the operative procedure in these patients has, however, not produced any real change in the preoperative regime in the vast majority of the cases.[6-10] The complications following surgery in patients apparently adequately prepared with iodine have caused this attitude to persist in patients prepared with the thiouracils. Thus, the increased safety of the latter type of management has not reduced the emotional and economic burden imposed on the surgical thyrotoxic patient by prolonged pre- and postoperative hospitalization.

Ambulatory preparation with the thiouracil compounds, when associated with a hospital stay of one to four weeks, does not, in our opinion, represent any radical departure from previous practice in the iodine preparation era. Considering the reduced operative mortality (from 0.88 to 0.17 per cent in the Lahey series), we have revised our practice, not only as regards surgical versus medical treatment, but also in employing a completely ambulatory preparation for thyroidectomy.[6,11]

Certain disadvantages of the preoperative use of the thiouracil compounds have been stressed in the literature.[9,12,13] These concerned difficulties encountered at operation, such as increased vascularity of the thyroid and obliteration of cleavage planes in the neck. In our experience and in that of other authors, these technical difficulties can be overcome by the judicious use of iodine in the immediate preoperative period and by the use of whole blood transfusion during and immediately after operation.[14,15] A mortality rate of 0.5 per cent in a large series of cases, reported by Bartels, demonstrates that these difficulties do not affect morbidity or mortality to any appreciable extent.[15]

There is, at present, no uniformity of opinion concerning the indications for thyroidectomy as opposed to medical management. Some investigators maintain that the only indications for operation are compression of the trachea or esophagus or the presence of a large nodular goiter.[1,2] It is our opinion that careful consideration of the following factors by the physician and patient should precede the decision as to choice of therapy:

1. Toxic adenoma: We believe that glands with a single hyperactive adenoma should be surgically extirpated in view of possible malignant degeneration. Although this is minimized by recent reports, removal of these tumors is, we feel, a good prophylactic method.[16-18]

2. Excessively large goiters: Removal is indicated not only for the relief of pressure but for cosmetic reasons.

3. Refractory and relapsing cases: There is a certain number of patients who escape from control under apparently adequate medication and others who relapse as soon as medication is discontinued. These patients obviously require surgery.

4. Toxic reactions: Serious drug toxicity is rarely encountered with propylthiouracil, although wider use of this drug has produced agranulocytosis and leukopenia.[19] If the total white count falls below 4,000 per cu. mm., we have made it a practice to discontinue the medication, to institute iodine therapy, and to perform thyroidectomy within two weeks if possible.

5. Economic factors: Medical management with the thiouracils is lengthy and costly, requiring continuous and frequent observation. This militates against its use in the low-income groups.

The advantages of the thiouracil compounds in the ambulatory preoperative management of thyrotoxicosis are: (1) the elimination of preoperative hospitalization for practical purposes; (2) a more stable patient with a lower basal metabolism than is possible with iodine therapy; (3) elimination of the necessity of "stealing the

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thyroid"; (4) marked reduction in the incidence of thyroid crisis; (5) elimination of stage thyroidectomies and pole ligations due to more stable cardiovascular system during and after operation, and (6) smoother postoperative course.[11]

Procedure

The preoperative routine which we have evolved is simple and yet, we believe, effective and safe. When the diagnosis of hyperthyroidism has been established, the patient is started on 300 mg. of propylthiouracil daily in three divided doses. At weekly intervals a record is made of the patient's weight, pulse rate, and blood pressure, and a white count is taken. A basal metabolic rate determination is made twice monthly. When the basal metabolic rate has fallen to plus 10 per cent or lower and the patient is clinically in a state of remission, the physician and patient discuss the pros and cons of surgical and medical treatment. All the factors involved are thoroughly explained to the patient. If surgical treatment is the method chosen, the patient is started on Lugol's solution, 0.6 cc. three times daily. One week later, propylthiouracil is discontinued. The following week, a final basal metabolic rate is determined, and, if normal, the patient is admitted to the hospital and thyroidectomy performed on the same day or a day later. Throughout this entire preliminary period, the patient has been ambulatory and is urged to adhere to his usual routine. The duration of this period varies considerably with such factors as the severity of the thyrotoxicosis and the individual differences in response to the thiouracils. A commonly used, rule-of-thumb estimate may be made from the height of the original basal metabolic rate, the number of days required for preparation being approximately equal to the per cent elevation of the basal metabolic rate over zero.

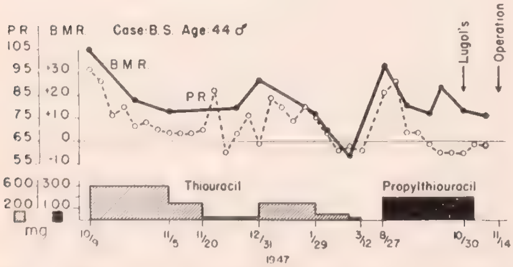

FIG. 1. Case 7: Admitted November 13; thyroidectomy November 14; discharged November 17.

Thyroidectomy advised because of patient's tendency to discontinue observation and treatment. Diagnosis: malignant ophthalmos.

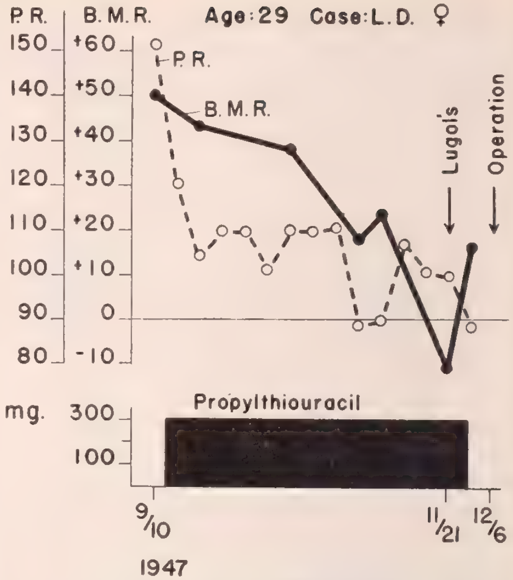

FIG. 2. Case 8: Admitted December 5; thyroidectomy December 6; discharged December 9.

Thyroidectomy advised because of large goiter and patient's unwillingness to undergo prolonged treatment.

On admission to the hospital these patients were treated in the same manner as a patient admitted for any other elective surgical procedure. They were fully aware of the fact that surgery was to be performed and were not given more than the usual preoperative sedation. General anesthesia, usually cyclopropane and oxygen, were used in all these cases. Avertin, as basal anesthesia, was used in only three cases, at the patient's request. Except for cases with complications, patients were discharged from the hospital on the fourth to sixth postoperative day.

The following three cases are graphically represented to demonstrate the application of the foregoing concepts (Figs. 1, 2, and 3; Table 1). A total of 15 cases has been so treated with results that duplicate the cases presented.

Comment

While the small number of cases studied does not permit the drawing of any definite conclusions, we feel that certain important concepts have emerged. These severely ill, thyrotoxic patients, when suitably prepared with the thiouracils, are in no way different from the patient admitted for any elective surgical procedure. As a result of the completely ambulatory preoperative regime, they come to surgery in as good or even better condition than most patients. Their morale is excellent, and they look forward to the operation and a short convalescence. On the operating table they react so well that it is possible to do really careful surgery and thus lessen the incidence of recurrence and the possibility of recurrent laryngeal nerve and parathyroid injuries. It is also noteworthy that the thyroidectomies in this series were performed by both resident and staff surgeons. In the operations performed by the residents, the procedure sometimes lasted as long as two hours. Nevertheless, all the patients tolerated surgery well without untoward results.

Patients with large glands require iodine for a longer period of time. In the terminal phase of the thiouracil preparation, we feel, however, that to maintain a completely ambulatory type of preparation, thiouracil should not be withheld for longer than ten days.

Nothing in this study should be taken to infer that this revised type of preparation in any way negates the necessity for a thorough understanding of anatomy and physiology of the thyroid gland and assiduous study of the variations in the area of operation. Moreover, careless preparation of the patient, especially with the thiouracils, will inevitably lead to disaster. The basic concept of this procedure has been to operate only on a clinically normal patient. Indiscriminate and hasty subjection of the patient to surgery, before the criteria for preparedness have been fulfilled, will result in a patient who is infinitely less suitable for surgery than those carefully prepared with iodine and who will almost invariably run a serious and stormy course. Nor should one forget that the closest cooperation between the physician and surgeon is the keystone of the successful treatment of thyrotoxicosis, and particularly is this true of the completely ambulatory treatment that we have presented.

If further experience with a larger series of cases will corroborate the incidence of rapid convalescence and short disability with the ambulatory thyroidectomy preparation, we feel that it would be advisable to offer this type of treatment to all thyrotoxic patients, including those who are financially and emotionally capable of sustaining prolonged medical therapy and those who are well controlled on maintenance doses of thiouracils. Certainly a procedure which offers a high degree of safety with ambulation throughout, except for a brief four to six-day period of hospitalization and a total disability of about ten days, is to be preferred over a method which requires frequent visits to the physician over a prolonged period of time and at present offers no great advantage other than the avoidance of an incision in the neck.

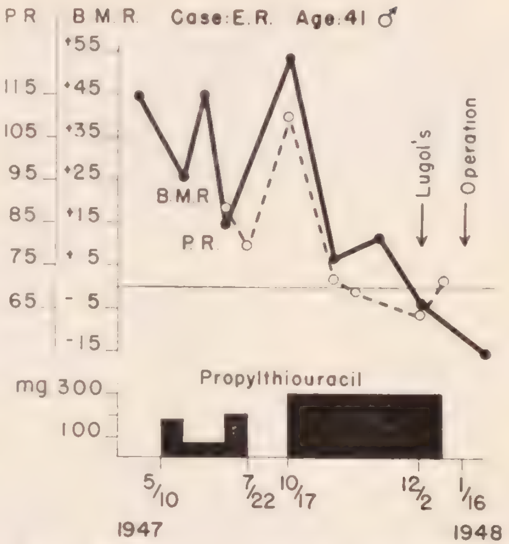

FIG. 3. Case 10: Admitted December 14; thyroidectomy December 15; discharged December 19.

Patient unable to undergo prolonged observation and treatment because of occupation (traveling salesman).

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TABLE 1.—DATA AT OPERATION IN THREE THYROIDECTOMY CASES

	Open	High	Low	Close	Postoperative Day 1	2	3	4
Case 7								
Blood pressure	136/92	120/110	130/90	138/90				
Pulse rate	76	82	52	72	72	80	68	72
Temperature					99.6	100.6	99.6	99.2
Case 8								
Blood pressure	150/80	190/120	130/80	160/100				
Pulse rate	138	118	60	108	100	108	96	90
Temperature					100	102.4	101.2	99.4
Case 10								
Blood pressure	110/70	160/90	140/80	140/80				
Pulse rate	80	86	60	80	100	96	72	80
Temperature					101.6	101.2	101	98.6

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RECURRENT MENINGITIS AND CEREBROSPINAL RHINORRHEA

Morris Kleinfeld, M.D., Morris Axelrod, M.D., and Aaron Cohen, M.D., F.A.C.P., Brooklyn, New York

(*From the Medical Service of Coney Island Hospital*)

THE incidence of true recurrent meningitis, regardless of the serologic type, is extremely low. Moreover, as it pertains to multiple attacks with the pneumococcal organism, the literature reveals its extreme rarity. Prior to the advent of serum therapy and present-day use of antibiotic and chemotherapeutic agents, no case is recorded of a true recurrent attack of pneumoccocal meningitis with recovery. Recovery from three successful attacks of pneumococcal meningitis is in itself noteworthy, considering the fact that the over-all mortality from a single attack is still around 50 per cent.[1] A summary of the cases reported to date is outlined in Table 1. Cases of multiple attacks of pneumococcal meningitis have been reported by Hoyne and Schultz who have been impressed with the history of skull fracture and head injury at some remote time and on this basis advise roentgenographic study of the skull with special reference to the sinuses.[2,3] The case reported by Elridge and Rosenman was complicated by a skull fracture.[4]

We would like to add that the sudden onset of cerebrospinal rhinorrhea in an individual who previously survived one such attack has extreme significance, as it speaks for a recurrent bout of meningitis. This was observed not only in our case, but also in others as can be seen from Table 1. We have excluded the cases reported by Elridge and Rosenman, Hopkins *et al.*, and Fox, since the latter group did not comprise true reinfections.[4-6] In order to consider a case a true recurrence we feel that an appreciable period of time must elapse during which the patient is free from all symptoms of the original disease. Craddock and Bower have reported a case of a patient who had four attacks of meningitis in one year.[7] Two of these attacks were really relapses, but we have considered the other two as true reinfections, since different organisms were found in the spinal fluid and an appreciable time period had elapsed during the interval between attacks.

We wish to report a case with multiple attacks of meningitis associated with cerebrospinal rhinorrhea and to discuss the significance of the latter finding and its management.

Case Report

R. P., a thirty-four-year-old woman, was first seen at Coney Island Hospital on November 17, 1944. The history was that of an upper respiratory infection two weeks prior to admission and had been preceded by a "nasal drip" for three months. She had continued to work up to the day of admission when she developed a headache, followed by vomiting and stupor.

The past history revealed a chronic otitis media fifteen years prior with residual deafness. A nasal growth was removed, and discharge ceased. No history of head injury was obtained.

Physical examination revealed a well-developed, well-nourished white female in a stuporous state. Nuchal rigidity was present, and both the Kernig and Brudzinski signs were positive. Extensive subconjunctival hemorrhages were present in the right eye and to a smaller extent in the left. Temperature was 104 F. rectally, pulse 120, respiration

TABLE 1.—Summary of Cases Reported in Literature to Date

Authors	Age at First Attack	Number of Attacks	Type of Pneumococcus	Presence of Cerebrospinal Rhinorrhea	Remarks
Hoyne and Schultz[2]	30	5 in 5 years	1—XXV 2—X 3—Hemoph. Infl. 4—XI 5—XX	None prior to fourth admission. Probably present in fourth and definitely in fifth	History of trauma present. Patient died. Autopsy revealed 2 small perforations behind crista galli
Hoyne[3]	25	2 in 2 years	1—XI 2—XXII	None mentioned	Recovered
	15	2 in one year	Each attack due to a different pneumococcus. Type not specified	None mentioned	Recovered
	32	2 in 6 months	Same as above	None mentioned	Recovered
Craddock and Bower[7]		4 in 1 year	1—XVII 3—XXVIII Sterile culture in others	4 months prior to fifth attack	Recovered
Traut[8]	7	5 in 4 years	XXL in 2 attacks; XV in fifth attack; sterile culture in others	Not mentioned	In each attack episode was primary. Recovered
Present communication	34	3 in 5 years	1—XV 2—XXIII 3—Sterile culture	3 months prior to first attack; 2 months prior to second attack, 4 days prior to third	Recovered

29, and blood pressure 110/80. The remainder of the physical examination was essentially negative.

Spinal tap on admission revealed a cloudy fluid. Pressure was 320 mm. water, cell count 2,600 per cu. mm., polymorphonuclears predominating, globulin 4 plus, glucose 29 mg. per cent, chlorides 719 mg. Total protein was 86. Culture of spinal fluid showed type XV pneumococcus. Wassermann was negative. White blood count 18,600, hemoglobin 78 per cent. Urine was negative.

The patient was given 5 Gm. of sodium sulfadiazine intravenously then 2 Gm. orally every three hours for first twenty-four hours and 1 Gm. every four hours for the next two weeks. Penicillin was given concomitantly, 20,000 units intramuscularly every four hours; initially 20,000 units were administered intrathecally.

The patient improved rapidly at first, but frontal headache persisted until November 23 when intrathecal penicillin was reinstituted. Spinal fluid pressure was 460 mm. water. On November 26, temperature, pulse, and respiration returned to normal, and the patient was asymptomatic. Chemotherapy was discontinued on December 7, 1944, and she was discharged on December 16, 1944.

Second Admission.—On September 7, 1947, the patient was readmitted with chief complaints of headache and stiffness of neck of one day duration. History revealed that she had not felt up to par since July 4, 1947, when she developed a cold with fever and headache which was treated with penicillin. Since then patient had had a persistent rhinorrhea of clear and watery fluid.

Physical examination revealed a well-nourished female whose sensorium was cloudy. Nuchal rigidity was marked, and the Kernig and Brudzinski signs were positive. A clear watery discharge was oozing from both nostrils. Remainder of examination was essentially negative.

Initial spinal tap on September 7 revealed 2,000 white blood cells, 250 red blood cells (15 per cent crenated), globulin 3 plus, glucose 21 mg. per cent, total protein 90, chlorides 684 mg. Spinal fluid culture revealed type XXIII pneumococcus. Red blood count was 5,000,000, hemoglobin 14.5 Gm., white blood count 24,000. Pulse was 84, respiration 16. Temperature on admission was 104 F.

The patient was placed on combined penicillin and sulfadiazine therapy with initial intrathecal dose of 20,000 units of penicillin followed by 50,000 units intramuscularly every four hours and 1 Gm. of sulfadiazine every four hours.

Temperature was normal on September 13 when it recurred for several days and subsequently returned to normal, remaining so until discharge on October 20, 1947. Chemotherapy was discontinued on September 22, 1948.

X-ray investigation of sinuses suggested polyp of right antrum. Lipiodol instillation on September 17 revealed no filling defect. No defect of cribriform plate was demonstrable. The skull films were normal.

Patient was advised to return to the Outpatient Department for further observation but failed to do so.

Third Admission.—The patient returned to the Hospital for the third time on July 27, 1949, complaining of headache, stiffness of neck, and fever. Six days prior to admission she noted clear fluid dripping from her nose. This was followed four days later by severe headache and high fever for which penicillin-in-oil was administered once daily by her private physician. Physical findings revealed nuchal rigidity and positive Kernig and Brudzinski signs. When patient was placed in head low position, cloudy fluid drained from her left nostril. Admission temperature was 103.6 F. rectally, pulse 130, and respirations, 30. Lumbar puncture revealed a cloudy fluid with a 1 plus globulin and cell count of 7,600 with equal proportion of polymorphonuclears and lymphocytes. Culture and smear of spinal fluid were negative. Total protein was 108 mg., spinal fluid glucose 25 mg., chlorides 770 mg., white blood count 10,000, and red blood cells, 3,700,000 with 11 Gm. hemoglobin. The nasal fluid was collected and found to be positive for sugar and negative for mucin. The injection of 2 cc. of indigo carmine intrathecally was followed by the appearance of the dye in the nasal secretion within thirty minutes.

The patient was given 300,000 units of penicillin, followed by 200,000 units every three hours. In addition, she received 2 Gm. of sulfadiazine initially and 1 Gm. every four hours thereafter. Temperature rose to 105 F. on the second day and then dropped to normal on the following day and remained so throughout. Penicillin was discontinued after two weeks, and patient was placed on a prophylactic dose of 1 Gm. of sulfadiazine daily on account of the persistence of the rhinorrhea.

In view of these repeated attacks she was strongly advised to submit to a neurosurgical procedure to repair the evident intracranial defect. On the advice of her family physician she was transferred to the neurosurgical service of another hospital. During the period of observation there the rhinorrhea stopped spontaneously. It was the judgment of the attending neurosurgeon that surgery be deferred at this time and that patient be followed closely for recurrence of rhinorrhea. She was advised to enter the hospital immediately for corrective surgery at the first onset of another bout of cerebrospinal rhinorrhea.

Comment

As noted in the case report, each attack of meningitis followed a period of drainage of clear fluid from the nose. The rhinorrhea preceded the first attack by three months, the second by two, and the third by only four days. Although the fluid was not collected during the first two admissions, early in the second attack clinical observation of a clear watery fluid draining from the nose strongly suggested the diagnosis of cerebrospinal rhinorrhea. This was proved to be the case during her third admission.

Cerebrospinal rhinorrhea may be traumatic or spontaneous. The former group includes those resulting from the immediate or the late effects of head injury and those resulting from operative intervention on the nose (injury of the cribriform plate) or nasal sinuses.[9] The spontaneous group includes those resulting from intracranial neoplasm and those with a congenital defect in the cribriform plate such as described by Coleman and Troland.[10] In our case there was no history of head injury or of recent surgical intervention to the nose or sinuses. There was nothing to suggest the possibility of an intracranial neoplasm. The case, therefore, falls into the group of spontaneous cerebrospinal rhinorrhea due to congenital defect in the cribriform plate. The importance of antecedent respiratory infection and associated sneezing in initiating the cerebrospinal rhinorrhea has been emphasized by the above authors. It is interesting to note that spontaneous cerebrospinal rhinorrhea occurs much more frequently in females (ten of a series of 12 cases) and that most of the cases occur in the age group of thirty to fifty years.[10] Our case belongs to this age group.

The diagnosis of cerebrospinal rhinorrhea should occasion no difficulty. The patient gives a history of a discharge from one or both nostrils of a clear fluid. This is intensified by leaning forward, and it persists during sleep. The amount varies from a few cc. to 2,000 cc. in twenty-four hours. Demonstration of the presence of sugar in the fluid and the absence of mucin establishes it as cerebrospinal fluid. When in doubt, the diagnosis may be decided by injecting indigo carmine in the spinal canal and placing a cotton pack in the nose. Colored nasal fluid will appear in about thirty minutes.

Despite the fact that cases are known where the discharge stopped spontaneously and permanently following local cauterization, most cases will require neurosurgical intervention. When the cerebrospinal rhinorrhea recurs, as it did in our case, the prophylactic use of sulfadiazine and penicillin should be considered to forestall an attack of meningitis until surgery can be carried out. Craniotomy with insertion of a muscle flap over the defect in the cribriform plate has proved highly successful.[10,11]

Summary

1. A patient having three attacks of meningitis with recovery is presented. A different type of pneumococcus was isolated from the spinal fluid in the first two attacks. No organism was recovered in the third.

2. The importance of cerebrospinal rhinorrhea in recurrent meningitis is discussed, and the therapeutic approach outlined.

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INCIDENCE OF BRONCHIAL ASTHMA IN GENERAL PRACTICE

I. Maxwell Kurtz, M.D., Brooklyn, New York

(From the Medical Care Program, Department of Welfare, City of New York)

THE material gathered for this study was obtained from the Medical Care Program, Department of Welfare, City of New York.* One thousand forty three cases of bronchial asthma are reviewed. Cases of cardiac asthma are not included in this paper.

These cases of bronchial asthma have been evaluated in several interesting phases, which include (1) the incidence of bronchial asthma according to age groups, (2) bronchial asthma according to age and sex, and (3) diseases coexistent with bronchial asthma. From a total of 1,043 cases, 610 were females and 433 males. The survey revealed that bronchial asthma is observed more frequently in females (58.5 per cent) than in males (about 41.5 per cent). Rackemann found throughout his series of 1,074 patients that bronchial asthma occurs about equally in males and females.[1]

With reference to the occurrence of bronchial asthma in different age groups, a most interesting curve is revealed. A breakdown in terms of numbers of cases reported in age groups at the decade level is as follows:

Age Group Years	Number of Cases
Under 11	212
11 to 20	78
21 to 30	75
31 to 40	127
41 to 50	127
51 to 60	112
61 to 70	150
71 to 80	125
Over 81	25

The peak in the number of cases reported is in the period from birth to the end of the first decade of life with a gradual tapering down till the age of twenty. A more or less constant plateau manifests itself during the years from twenty to thirty with a rise as we near the fifties. Between the fifth and seventh decades are the up and down phases which may or may not represent acute exacerbations of old pre-existing conditions. In spite of the rather high percentage of reported cases in the latter years of life, there is a sharp decline from the seventies through the real old age group during the eighth and ninth decades. Table 1 shows the interesting relationship of sex to age in our patients.

TABLE 1.—Relationship of Sex to Age in Our Patients

Age (Years)	Sex		Total Number of Cases
	Male	Female	
Under 11	130	82	212
11 to 20	34	44	78
21 to 30	24	51	75
31 to 40	36	91	127
41 to 50	40	87	127
51 to 60	37	85	112
61 to 70	65	85	150
71 to 80	68	57	125
Over 80	10	15	25

From observation of asthma cases classified according to age groups, the highest incidence is found to be reported in the first decade of life. These studies, moreover, show that at this period there is a very high occurrence in the males of this age group, the ratio being almost 3:2. This may indicate that hereditary influences account for the preponderance of males with bronchial asthma in the early years of life. The twenty- to thirty-year age span seems to reverse this position; a very serious increase is reported in the females with about four times as many females as males. This seems to carry over to the sixth and seventh decades of life with varying changes in the curve in favor of a higher number of female patients. From age 81 upward, the proportion among male and female patients is about even. At this point, a new light seems to be brought out on all previous statistical material presented in the literature. Other surveys have shown "males and females occur about equally throughout a series with a survey of 1,074 patients followed for two years by Francis Rackemann; except that among those with an early onset of asthma, males predominate."[1] My findings suggest the possibility of a hormonal factor in the pathogenesis of bronchial asthma.

The relationship of bronchial asthma to other diseases is of considerable importance (Table 2). Apparently, bronchial asthma may be associated with a great variety of diseases. In some instances, two or more other conditions were present in the same patient. It is noted that the various

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* Department of Welfare, City of New York, Raymond M. Hilliard, Commissioner, and Dr. A. A. Mira, Medical Director: The Medical Care Program provides medical services to such clients of the Department (people who are receiving public assistance) who are homebound and cannot attend the clinics of either the municipal hospitals or the outpatient departments of voluntary hospitals. There are some 300,000 persons who are subject to these medical services at the present time. The cases reported were examined by physicians in general medical practice who are contracted with the Department of Welfare as "Panel Physicians." The "Panel" consists of 2,200 physicians. A panel physician examines clients of the Department of Welfare in the home and immediately submits a report on a special form to the office of the Medical Director; such reports for the entire City of New York are recorded at a central point, and these are reviewed daily. Published with the permission of the Medical Director, Department of Welfare, who assumes no responsibility for the opinions expressed or conclusions drawn by the author.

TABLE 2.—Diseases Coexistent with Bronchial Asthma

Disease	Age Groups									Total
	Under 10	11 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 70	71 to 80	Over 81	
Cardiac diseases										129
Hypertensive heart disease	0	0	0	4	10	10	17	15	2	58
Cardiac	0	0	0	3	5	4	9	15	3	39
Arteriosclerotic heart disease	0	0	0	0	1	1	5	10	1	18
Myocarditis	0	0	0	0	1	1	0	2	1	5
Rheumatic heart disease	0	0	0	1	1	0	0	1	0	3
Coronary sclerosis	0	0	0	0	0	1	1	1	0	3
Coronary occlusion	0	0	0	0	0	1	1	0	0	2
Cor pulmonale	0	0	0	0	0	1	0	0	0	1
Upper respiratory infection	7	3	1	2	3	0	1	1	0	18
Bronchitis	2	4	0	0	2	1	4	1	0	14
Arthritides	0	0	0	4	1	3	2	3	0	13
Status asthmaticus	1	1	0	1	3	2	3	1	0	12
Diabetes mellitus	0	0	0	1	2	2	3	1	0	9
Hernia	1	0	0	1	2	1	1	1	2	9
Bronchiectasis	0	0	0	0	1	0	1	4	0	6
Emphysema	0	0	0	0	1	0	2	2	1	6
Influenza	0	0	0	1	0	3	1	1	0	6
Pregnancy	0	1	2	2	0	0	0	0	0	5
Obesity	0	0	1	2	1	1	0	0	0	5
Menopause	0	0	0	1	3	0	0	0	0	4
Peptic ulcer	0	0	0	0	0	3	0	1	0	4
Pneumonia	3	0	1	0	0	0	0	0	0	4
Sinusitis	0	0	0	1	1	0	1	0	0	3
Angina pectoris	0	0	0	0	1	0	0	2	0	3
Rheumatic fever	0	0	1	0	0	0	0	1	0	2
Pulmonary tuberculosis	0	0	0	0	0	2	0	0	0	2
Miscellaneous										25

cardiac diseases (129 cases) constitute over 12 per cent of the total number of cases of bronchial asthma. The majority of these occur in the age span from the fourth to the sixth decades. This demonstrates the necessity for particular care during examinations to detect and treat the cardiac status as well as the asthma in patients past the fourth decade in order to obtain optimum therapeutic results. In these cases, differential diagnosis between cardiac and bronchial asthma should be attempted. The records also show that the arthritides, hernia, and diabetes mellitus are not uncommonly associated with bronchial asthma.

Summary and Conclusions

1. From a survey of 1,043 cases of bronchial asthma, it is shown that bronchial asthma occurs more frequently in females (58.5 per cent) than in males (41.5 per cent).

2. Up to the end of the first decade of life, the number of males appears to be greater than that of females.

3. From the third to the fifth decade of life the female patients outnumber the males by about four to one, which suggests that hormonal factors possibly may play a part in the etiology of asthma.

4. Among the many diseases coexistent with asthma, heart disease appears to be the most common.

75 Martense Street

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EARLIEST PREPAYMENT PLAN

Then—

So far as available sources reveal, the earliest health service prepayment plan on the North American continent was one formulated in the year 1655 at Ville-Marie on the Island of Montreal.

According to a document dated March 3 of that year: "Urbain Tessier dit Lavigne [and] 36 others, acting both for themselves and their families and children, [contracted with] Etienne Bouchard, Master Surgeon of the said Ville-Marie. . . . [for the latter] to dress and to physic, of all sorts of illness, whether natural or accidental, except the plague of small pox, leprosy, epilepsy, and lithotomy or cutting for the stone. . . in consideration of the sum of 100 sous each year, payable by each of the above-mentioned persons. . . . in two terms and quarters. . and to treat also their children who may hereafter be born. . . ."

And Now—

The 90 Blue Cross Plans throughout the United States and Canada have more than 34,000,000 members; Blue Shield Plans have more than 11,000,000 members.—*Blue Cross-Blue Shield Scribe, February, 1950*

VARIABILITY OF BLOOD PRESSURE READINGS

A. D. Jonas, M.D., Bronx, New York

A STUDY of blood pressure readings was made on unselected patients such as one would encounter in a hospital outpatient service or in a general practice. An attempt was made to determine what possible influence environmental factors would have on the blood pressure of the average patient. In view of the fact that pressure readings are an important procedure in any physical examination, the question was raised to what extent can they be relied upon.

A certain degree of tonus in the walls of the arterial blood vessels is needed to maintain a pressure for adequate circulation. Variation of the tonus takes place even under normal circumstances. In the recumbent position and at rest a relatively low pressure is sufficient to supply the organism with the necessary amount of blood. When muscles are called upon to perform work, an increase of the pressure is necessary for an optimum rate of performance.

How the varying influences of the environmental stresses affect the state of the blood pressure is shown below in a few typical case histories. The pressure readings were made on the left arm with the patient in a sitting position. A mercury manometer (Bauman) was used by applying the auscultatory method. In each instance three readings (at the beginning, middle, and end of the patient's visit) were taken. They were seen two to three times weekly. The duration of observation varied from three to eight weeks. No disclosure was made to the patients about the purpose of the repeated pressure readings, to avoid the attachment of any significance to this procedure.

Case 1.—Mr. R. S., forty-two-year-old, married, garment worker with two children of school age, earning $50 per week and living in a small, crowded apartment, had chief complaints of general malaise and poor sleep. Appetite was fair—"food does not mean anything to me." He was told by another physician that he had low blood pressure. Physical examination and routine laboratory examinations were negative. Blood pressure was 106/72, 108/72, and 108/72.

During the first week, no significant event occurred. Blood pressure ranged between 106/72 and 114/76. In the second week patient heard rumors of threatened layoffs in the garment industry and worried about being unable to send his older son through college. Blood pressure dropped to 92/64. When he learned in the third week that the rumors were unfounded, and his son having won a prize in an oratorical contest, his blood pressure rose to 124/86.

Case 2.—Miss C. F., twenty-six-year-old clerk, lived with her parents. Her chief complaints were indigestion and occasional nausea and vomiting unrelated to the ingestion of food. Her father had frequent bouts of drinking during which he became violent. A gastrointestinal series and laboratory reports were normal except for a moderate hypochromic anemia (70 per cent hemoglobin) and a mild degree of hypoacidity. Blood pressure readings were 84/60, 88/62, and 88/62.

During the first week, no significant event took place, the blood pressure ranging between 84/60 and 104/76.

On the evening before the visit to the doctor the second week, the father returned home intoxicated. Blood pressure at that time was 82/58, 84/60, and 84/60. Then the patient took up residence in the home of an aunt, and four weeks later pressures were 118/78, 120/78, and 120/78.

Case 3.—Mrs. F. A., forty years old, married housewife, had chief complaints of varicose veins of right leg, also poor sleep, headache, and pressure sensation in her chest. She worried a great deal about her mother who suffered from attacks of cardiac asthma. Blood pressure was 110/82, 110/82, and 114/82.

Blood pressure ranged between 110/82 and 106/78 the first week. A severe asthma attack of the mother took place the second week at which time blood pressure dropped to 88/62. With improvement of the mother in the third week, pressure rose to 108/74. An upsetting experience with the mother who complained of her loneliness since she lived alone resulted in pressure of 92/64 in the fourth week. In the sixth, an uneventful week, pressure was 108/72, and in the eighth week, with the mother now staying with the patient, pressure was 118/82.

Case 4.—Mr. L. S., fifty-five years old, a manufacturer, married for the second time (first wife died in an accident), had one married son twenty-nine years old and one single daughter twenty-four years old. His chief complaints were belching, sour eructations, occasional bouts of diarrhea, poor sleep, headaches, and tightness in chest. His main difficulty was the continuous friction between his daughter and his second wife. Blood pressure was 168/96, 172/98, and 172/98.

During the first week, following the advice of his physician, the patient stopped dieting, enjoyed regular meals (pressures: 152/90, 150/88, 150/88). After a violent quarrel between daughter and wife the second week, blood pressure rose to 188/104. After daughter left for a prolonged visit with her brother in the third week, blood pressure of patient dropped to 146/84. In the uneventful fourth week pressures were 140/78, 138/76, and 138/76.

In the next series patients who showed apprehension about their blood pressure were considered. The criterion was the patient's attitude; he had to be persistent in desiring to know what pressure the examiner found. At first the physician used the standard phrase, "The blood pressure is merely for the record and it would not interest you." If this did not discourage the patients, they were deliberately misled by either adding or subtracting 40 mm. from their actual pressure, when the systolic blood pressure was between 170 and 200 mm., or 10 to 20 mm. when the systolic pressure was between 80 and 105 mm.

In the first group 15 patients were selected in whom the initial systolic pressures ranged from 170 to 200 mm. Each was told that his pressure was 40 mm. higher. Invariably, there was a change in the facial expression from curiosity to apprehension, in some cases to intense agitation. The pressure was again recorded when the patients had reached the peak of their reaction, which took from thirty seconds to two minutes. The following increases of the systolic pressure took place: three 30 mm.; two 26 mm.; two 24 mm.; two 22 mm.; two 18 mm.; one 16 mm.; one 10 mm.; one 8 mm., and one no change. The diastolic pressures showed only minimal changes, not exceeding 5 mm.

In the second series 12 patients were misinformed about their blood pressure with a figure which was 40 mm. below the actual reading. Their initial systolic pressures also ranged from 170 to 200 mm. There was a mixed reaction to this information: an incredulous look, shaking of the head or an outright demand to repeat the reading because the pressure could not be that low, indifference, relief, broad smile of satisfaction. The following decreases in the systolic pressures were found: one 20 mm.; one 15 mm.; one 12 mm.; two 10 mm.; two 8 mm.; one 5 mm., four no change. The diastolic pressures showed insignificant changes.

In the third series twelve patients with systolic blood pressures ranging between 80 and 105 mm. were given a figure from 10 to 20 mm. below the actual value. The main reaction was one of discouragement, effecting a lowering of the initial systolic value by 12 mm. in one, 10 mm. in one, 8 mm. in two, 6 mm. in four, 4 mm. in two, and no change in two patients.

In the fourth series ten patients with the same low systolic blood pressures as in the third series were given a figure which was 20 mm. higher than the actual reading. The emotional response varied from indifference to pleasant surprise. The following increase of the systolic pressures took place: one 8 mm.; two 6 mm.; four 4 mm.; three no change.

Hypertonic individuals responded to unfavorable suggestions in 94.4 per cent and to favorable suggestions in 66.7 per cent. The average increase after unfavorable suggestions was 20.2 mm. The average decrease following favorable suggestions was 7.3 mm.

Hypotonic individuals responded to unfavorable suggestions in 83.3 per cent, to favorable suggestions in 70 per cent. The average decrease after unfavorable suggestion was 5.8 mm; the average increase after a favorable suggestion was 3.6 mm.

In another group of ten hypertensive patients the procedure was slightly changed. The examining physician would first take a reading with an impassive face, then, with an appropriate facial expression, such as frowning or shaking of the head, show an alarm reaction. One patient increased his blood pressure by 30 mm., two by 20 mm., one by 15 mm., four by 10 mm., one by 5 mm., and one showed no change.

In a control series of 15 patients who seemed well-adjusted and had normal pressure readings, misinformation in either direction did not show any significant changes.

There was also an opportunity to observe the difference of reaction in regard to blood pressure when exposure to the same emotional trauma had taken place.

Case 5.—Mrs. A. F., forty-two-year-old housewife, a quiet and unassuming individual, had a physical examination for what she thought was a lump in the breast. Physical examination was negative. There were no palpable masses in her breast. Her blood pressure was 112/78. Mr. L. F., forty-six-year-old salesman, her husband, was examined at the same time. He appeared to be tense and restless. Physical examination revealed no significant findings. Blood pressure was 138/94. Three months later, the mother of Mr. L. F. who lived in the same apartment died after a stroke. Both the husband and wife appeared quite upset. The blood pressure of Mr. F. was 176/110, of his wife 86/60, and two months later, their pressures were 146/98 and 110/70, respectively.

Comment

The aforementioned case histories are typical of the samples seen in daily practice or in clinics. Such patients become the material for the clinical investigations of the efficacy of various treatments for hyper- or hypotension. One can readily see how useless an interpretation of a result will be if one fails to take into consideration the patient's personality and his environmental influences. There are hourly and daily fluctuations of the blood pressure in response to the innumerable stimuli to which the human organism is exposed in our modern society. A blood pressure taken at 10:00 A.M. may find a person acceptable for a life insurance policy, yet at 3:00 P.M., after an argument with his business partners, the mercury column may spell a rejection according to the accepted principles. Even pressure readings taken after prolonged rest, such as a night's sleep, may not reveal true values. MacWilliams noted a considerable rise in blood pressure after disturbing dreams.[1] He found the fluctuations greater at night than during the waking period, which may account for the greater incidence of nocturnal cerebral hemorrhages. Blood pressure readings, therefore, will vary according to the emotional states of the individual. There is still another factor of great importance which is frequently overlooked, namely, the attitude of the examining physician. A brusque, impatient manner on the one hand and a friendly one on the other will influence the blood pressure in opposite directions.

Patients with abnormal blood pressures are more apt to show a change in their pressure readings under environmental influences than normal individuals. By attempting to duplicate the presumptive original stimulus causing hyper- or hypotension, a situation to which the patients reacted by increasing their deviation from their original values was created. It seems, however, from the available data that hypertonic individuals are more susceptible to an unpleasant occurrence than to a friendly suggestion. It is easier to increase an already elevated pressure than to effect a decrease. On the other hand, hypotonic patients appear more prone to respond with a further decrease in their pressure readings when discouraged than show an increase when encouraged.

It is rather difficult to secure adequate controls when dealing with the somatic expressions of emotional disturbances. This would require the existence of individuals who are calm, well-adjusted, and not influenced by daily problems arising within themselves, in their homes, and in their business. For this reason any evaluation of findings, such as the blood pressure values, defy comparison between patients and controls. The factors to be eliminated, in order to secure a basic condition in which a blood pressure reading would be considered as normal for the particular individual are so many that it would appear to be an impossible task.

The variations of the blood pressure seen in hyper- or hypotensives are an exaggeration of normally occurring fluctuations.[2] The nature of the stimulus and the attendant circumstances add more variables to the problem. A well-adjusted person may react with an increase in blood pressure in a situation which would have no effect on a hypertensive. Spontaneous fluctuations of the pressure readings are known to exist. The question arises, however, as to what extent they are spontaneous. The fall of pressure seen following a heavy meal can be explained as secondary to the redistribution of blood to the splanchnic system.[3] An individual who thoroughly enjoys his meal will show a greater drop than one whose mind is concentrated on a difficult task ahead.

Hypertension should be approached as a symptom of an underlying condition and not as a disease. If we select the surgical approach to reduce a high blood pressure, what happens to the nervous impulses finding their outlet blocked through the severance of their pathways? When a patient under a severe restrictive diet in hospital surroundings will show a lowering of his pressure, is it due to the biochemical changes within his body, or is it simply caused by the fact that he was removed from an environment conducive to create increased tension? Or does the severity of the treatment, medical or surgical, appease the patient's unconscious desire to be punished, thus atoning for a deep-seated guilt feeling?

Conclusions

1. The impossibility of finding adequate controls requires caution in the interpretation of statistical data about blood pressure readings.

2. There is no one specific emotion responsible for either raising or lowering blood pressure.

3. Hypotensives are just as prone to show variations in their blood pressure readings as hypertensives.

4. Available data suggest that blood pressure is very labile, especially in the extreme degrees. Under stress a patient showing high blood pressure will develop an increase in his pressure, one with a low blood pressure a decrease.

5. While the cases at the author's disposal are limited, the findings suggest the existence of an inordinate lability of the blood pressure. Variations of the blood pressure, even under average conditions, have a latitude that seems incompatible with any objective evaluation for the purpose of scientific research. This factor should be taken into consideration when reviewing the therapeutic effects of either vasodepressants or vasoconstrictors.

214 East Mosholu Parkway

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THE TREATMENT OF ACUTE HERPETIC GINGIVOSTOMATITIS WITH OZONIDE OF OLIVE OIL

Louis S. Goldstein, M.D., Yonkers, New York

During the poliomyelitis epidemic of 1949, 54 children were seen by me and found to have a peculiar form of gingivostomatitis observed only sporadically in previous years. Within the tonsillar fossae, on the soft palate and mucous membrane of the inner cheeks multiple, discrete, pinpoint to pinhead white areas on an erythematous base were observed. Fever frequently preceded the mouth lesions and ranged from 101 to 103 F., with a rise to about 104 F. in a small percentage of cases. The mouth lesions persisted for some time after the fever dropped. In addition to the anorexia, listlessness, and general malaise common to febrile states in children, there was marked irritability and distress due to the pain from the lesions. The sleep was disturbed.

Soon after the onset, the membranes of the mouth became inflamed. The gums became swollen, dusky in color, and bled when touched. The tip and margins of the tongue, the lips, cheeks, and, in severe cases, the fauces and tonsils became inflamed. The tonsils frequently were coated with a grayish-white exudate, or else the crypts were studded with exudate. Small superficial ulcers appeared on the edge of the tongue, the lips, cheeks, and occasionally on the palate and throat.

The child resisted efforts at feeding. Hot, sour, hard foods produced acute distress. There was salivation, drooling, and a foul odor to the breath. Frequently, the foul odor attracted the mother to the source of the illness. The fingers were in the mouth continuously. As a result, excoriations and impetigenous lesions of the skin about the mouth and hands frequently appeared.

At the angle of the jaw the submaxillary lymph nodes and glands became swollen and somewhat sensitive. The swelling usually was moderate in degree and never required incision because of abscess formation.

Etiology

This disease is said to be caused by the initial invasion of the body by the herpes simplex virus.[1] In view of the fact that these cases were seen during the recent poliomyelitis epidemic, it is reasonable to believe that the causative agent may very well have been a variant of the polio virus.[2] None of my patients developed any signs suggestive of clinical poliomyelitis.

Treatment

The usual methods of reducing fever and quieting the sick child, such as baths, sponges, and bed rest were used. Aspirin, in therapeutic doses, was prescribed to control the fever. Phenobarbital was prescribed to allay restlessness and promote sleep. A cool, soft bland diet with careful avoidance of citrus fruits was advised.

In addition, the mother was instructed in the technic of swabbing the gums with an ozonide of olive oil.* Four swabs were used at each treatment, two for the upper gums and two for the lower gums. No attempt was made to introduce the medication to the back of the mouth. The child did this spontaneously by movement of the tongue. Swabbing was repeated every three hours and continued for four to five days. Without exception, the gingivitis and ulcerative stomatitis was completely healed within one week.

This form of therapy offers many obvious advantages. Ozonide of olive oil is a clear liquid, does not stain the tissues, is not irritating, and promptly eradicates the foul odor caused by anaerobic organisms. It makes unnecessary the use of expensive antibiotics which are of questionable value by virtue of the fact that the causative agent is undoubtedly a virus.

Summary and Conclusions

An epidemic of acute herpetic gingivostomatitis (54 cases) during the recent poliomyelitis epidemic is described. An ozonide of olive oil was used as local therapy. Ozonide of olive oil is a nontoxic, soothing, bland, deodorant germicide which does not stain the tissues.[3] Patients sensitive to arsenic, chromic acid, sulfonamides, and antibiotics frequently develop disappointing reactions to these drugs. The ozonide gave n irritation or allergic reaction in these 54 cases no in 200 cases of stomatitis treated during the pas eight years. Ozonide of olive oil is nonselectiv and capable of killing both aerobic and anaerobi bacteria; therefore, it lends itself to the treatmen of most infections of the mouth.

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* The ozonide of olive oil employed is designated co mercially as Sta-O-Gen.

THE ROLE OF PRESSURE IN LONG-STANDING NODULAR GOITERS

Alfred H. Noehren, M.D., Buffalo, New York

(*From the Surgical Service, Deaconess Hospital*)

THE picture of the elderly patient with a large nodular goiter of long standing, often substernal, accompanied by a rapid and often irregular pulse, hypertension, dyspnea, dysphagia, loss of weight, general deterioration, with decompensated or near-decompensated heart, is familiar to those who see many goiter patients.

These symptoms are attributed by many to the toxicity of the goiter, or hyperthyroidism, basing the diagnosis on the tachycardia, slightly elevated basal metabolism, loss of weight, and other factors. Others, notably Chesky, believe that a toxic substance is formed in these degenerated glands that has a deleterious effect upon the body and is responsible for the symptoms enumerated.[1]

We believe that the cause of most of these symptoms is mechanical in nature and that the role of pressure on vital structures has not been given sufficient importance. Suppose it were possible to take a normal individual of middle age and force a golf ball or baseball into one side of his neck between the trachea and the carotid sheath and down through the narrow thoracic inlet until it presses on the arch of the aorta, as well as on the trachea, esophagus, external and internal carotid arteries and jugular, subclavian and innominate veins. Suppose a similar object could be forced into the other side of the neck, compressing or even encircling the trachea as well as creating enough pressure on the deep veins to cause dilatation of the superficial veins of the neck and chest. Suppose further that these objects could be left there for ten, twenty, or thirty years, and that during this time they would gradually become larger and cause still greater pressure.

If this could be done experimentally, it would merely reproduce the conditions caused by a goiter of some size strategically placed for many years at the opening of the thorax. The results would probably be the same as those produced by the goiter; i.e., dyspnea, dysphagia, hypertension, rapid and irregular pulse, and eventual decompensation from continued pressure on the cardiovascular system.

If our theory is correct, the removal of these masses, just as in removal of the goiter, would remove the symptoms, unless they have been of such long standing that irreversible changes have occurred, in which case there would at least be great improvement. This we will attempt to prove by citing a few of many similar cases that we have encountered.

Other explanations usually given for these symptoms are: (*a*) Thyrotoxicosis, or overactivity of the thyroid gland, and (*b*) perverted activity in the goiter during its degenerative changes forming toxic elements different from thyroxine but producing similar symptoms.

There are some cases of nodular goiter that have a degree of toxicity, probably from overactivity of part of the gland not invaded by the nodules or in certain types of fetal adenomata, but we believe they are in the great minority in the type of cases we are discussing. Most of our nodular goiter patients, especially the intrathoracic ones, have a dry skin; are calm in their behavior; have basal metabolism rates which are normal or slightly elevated, maybe due to the dyspnea or hypertension; have no tremors, no heat intolerance or sweating. On opening the goiter at the operating table after its removal we find that it consists of colloid, degenerated, calcified material with very little glandular structures. In microscopic sections, no typical picture of hyperplasia can be found. The really toxic cases, too, are of shorter duration. Reaction after operation is not typical of the really toxic case, as these patients usually have a very smooth convalescence with a minimum of pulse and temperature rise.

Lahey has termed cases as thyrocardiacs where an already damaged heart is further handicapped by a toxic goiter and hence is improved by the removal of that goiter or is cured by an antithyroid drug. We have the same type of case in the large nontoxic goiters, where an already damaged heart is further handicapped by the pressure of the goiter and improved by its removal. Hence, we would include these under the classification thyrocardiacs, even though there is no thyrotoxicosis.

For the reasons given, we do not believe that the symptoms in these cases we are discussing are caused by any thyrotoxicosis, and, for the same reasons, treatment by any of the newer antithyroid drugs is not indicated.

The other theory is that there is a perverted secretion in these degenerated nodules that acts as a poison and causes the symptoms in these patients. This theory was presented by Chesky before the American Goiter Association in 1947, but we do not feel that he offers sufficient proof to establish this theory, and further proof is necessary.[1]

Other factors which speak against this theory are the fact that the goiters we are discussing usually have a poor blood supply and often can be shelled out without tying any large blood vessels. The tissue itself has so few blood vessels in it that absorption from this source would seem a minor factor and not enough to cause the severe symptoms in these patients.

Finally, we have seen patients with huge goiters hanging away from the neck, who are otherwise quite comfortable and live to a good old age, because these pendulous goiters cause no pressure on vital structures. This would not be the case if a toxic substance were produced in these goiters and absorbed by the body.

Following are short histories of two patients from among many that we have seen illustrating these facts.

Case Reports

Case 1.—Mrs. E. K., age fifty-seven, was first seen on January 9, 1946, with a history of increasing dyspnea for one year accompanied by swelling of the ankles. Thirteen years ago she noticed a swelling in the neck, which had been growing ever since. She was also being treated for diabetes.

Physical examination disclosed the following: pulse 126, fibrillating; blood pressure 170/90; enlarged fibrillating heart; moist rales in both bases; breath sounds absent on right side, and 2+ edema of the ankles.

There was marked enlargement of the entire thyroid gland, nodular in character, extending down into the chest. No bruits or pulsations. The patient had a severe attack of decompensation just before entering the hospital on January 14, 1946. She was prepared with rest, digitalis, iodine, and sedatives.

On February 12, 1946, a bilateral subtotal thyroidectomy was done. The right lobe was about the size of a large potato, the left slightly smaller, and trachea was of the saber-form, with a very sharp anterior edge.

Convalescence was moderately severe, temperature reaching 103.2 F. on the fifth day, which a medical consultant said was due to a small spot of pneumonia. Patient was out of bed on the fifth day and left the hospital on the eighth day.

Three months later the pulse was 96 and regular, chest clear, and only a slight ankle edema. Patient was much improved. Two years later she was doing all ordinary housework, had no edema, no shortness of breath, and her pulse was normal in rate and rhythm. She was still being treated for her diabetes.

Case 2.—Mrs. M. N., age forty-four, was first seen December 10, 1933, with a history of shortness of breath, cough, orthopnea, weakness, loss of weight, dysphagia, and vomiting. A goiter, first noticed four years ago, had been growing ever since. The onset of symptoms was three years ago.

Physical examination disclosed marked enlargement of entire thyroid gland, considerably substernal. Pulse was 120 and irregular; blood pressure 135/0; heart was enlarged to right and left. There were many crepitant and moist rales on both sides of the chest, liver was four fingerbreadths below costal margin and tender, and there was edema of ankles and abdominal wall. She entered the hospital December 14, 1933, and was treated with rest, digitalis, iodine, and sedatives.

On December 26, 1933, a bilateral thyroidectomy was done. Both lobes were greatly enlarged, nodular in consistency, and compressing the trachea between them. Respiratory difficulties arose, and a tracheotomy was done the next day. The tube was removed after forty-eight hours. Patient was out of bed on the eighth day and left the hospital on the twelfth day.

Three months later pulse was 80 and regular; blood pressure was 132/85; there was no shortness of breath and the patient was feeling fine. Laryngologic examination showed the vocal cords were normal. Patient was seen five years later when she was still very good, doing all her housework and apparently normal in every respect.

Conclusion

The pressure effects of long-standing nodular goiters lying in the right position are sufficient to explain the various symptoms found in these patients. The obvious moral is that every definite nodule in the thyroid gland should be removed as soon as discovered, not only to prevent a 5 per cent chance of malignant change but also to prevent the growth and eventual serious pressure symptoms and the much more serious technical difficulty of operation in these long-standing nodular goiters.

3 Linwood Avenue

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NO PREVENTIVE OF GRAY HAIR

An agent which will prevent the graying of hair of human beings is as yet unknown, according to an article in the March 25 issue of the *Journal of the American Medical Association.*

Some time ago it was suggested that both pantothenic acid and para-aminobenzoic acid might prove to be anticanitic agents (opposed to graying of hair), because they seemingly prevented the graying of hair in laboratory rats. However, they have had no such effect on humans.

THE CHRONIC DISEASE PROBLEM

Herbert F. Schwartz, M.D., Salisbury Center, New York

(From the Pine Crest Sanatorium)

THE problem of the chronically ill individual has aroused a great deal of attention in New York State as elsewhere. The New York State Postwar Public Works Commission recognized the need for action as early as 1944 and set up a conference to study the possibilities of a State program. In April, 1947, this conference offered "A Program for the Care of the Chronically Ill in New York State."[1] Among their recommendations were the following:

1. That the State should designate an agency for developing, coordinating, administering, and carrying out a program of education, research, rehabilitation, and improvement of facilities and services for the care of chronic illness. It would include:
    - A. Assistance to local communities for the purpose of strengthening and developing facilities and services for the care of the chronically ill.
    - B. Cooperation with other State agencies concerned with the care of the chronically ill.
    - C. Education of the public and professional personnel in the prevention, care, and amelioration of chronic illness.
    - D. Provision of consultation services to physicians, hospitals, other institutions, and agencies caring for the chronically ill.
    - E. Coordination of services provided by the official and voluntary State and local agencies caring for the chronically ill.
    - F. Research in the prevention, diagnosis, and treatment of chronic disease.
    - G. Development of services for the economic and social rehabilitation of the chronically ill.
    - H. Development and encouragement of preventive service for chronic illness.
2. That the expense of care and rehabilitation of chronically ill persons unable to pay therefor, in whole or in part, should not fall wholly on the local community but should be shared by the State.

Other observations and recommendations were made, but they are not germane to this discussion. It is sufficient to note that practically nothing concrete or definite appears to have been accomplished at this time. The reasons for the delay are not too obscure, namely, the terrific cost of hospital construction and the lack of knowledge about specific needs. Many estimates have been made, and there is agreement with the National Health Survey that the number of chronically ill is approximately 177 per 1,000 population.[2] However, Boas is of the opinion that 60 to 75 per cent of these require hospitalization, whereas Bluestone feels that this would be insufficient.[3,4] Rogers has expressed doubt as to the type of hospital facilities which would most completely fill these needs.[5] In view of these uncertainties it is apparent that caution is the watchword in planning a program. Already the Federal government has over-reached itself so far in contemplated hospital construction that the several agencies have voluntarily cancelled several thousand beds. Before embarking upon a reckless spree of spending and building, other possibilities should be investigated. Recently, the City of New York dedicated a hospital for tuberculosis *and chronic diseases*.[6] This perspicacious viewpoint is worthy of close scrutiny and is in line with a similar suggestion offered by the writer several years ago.[7] The idea has also been put into practice in one upstate county sanatorium with satisfactory results.[8] Rigid segregation of tuberculosis cases is no longer considered necessary; in fact, the treatment of nontuberculous pulmonary disease in tuberculosis hospitals is recognized in Article IV of the Public Health Law of New York State. Some of these patients have had negative tuberculin tests on discharge as well as on admission, evidence of the excellent technic employed in these institutions. If nontuberculous pulmonary disease of a chronic nature can be treated adequately in tuberculosis hospitals, it would appear logical to broaden the scope of these institutions further by including other chronic diseases.

Not only is the tuberculosis sanatorium an adequate place for the treatment of chronic disease, it is actually suited for it. The plant facilities are constructed for long-term residence with solaria, amusement centers, and ample grounds for those who are ambulatory. Physiotherapy and rehabilitation departments may require additional equipment in some institutions, but usually the basic plan or program is already in operation. The medical and nursing staffs are experienced in the unique problems associated with disease of long duration, and they are attuned to the psychologic needs of these patients. The chest clinics, as now set up, could readily be improved to include case-finding and follow-up service for chronic disease; this could be accomplished at very little additional cost.

In recent years several county tuberculosis hospitals have been closed because of empty beds; others have empty beds or children's pavilions. At the same time chronically ill persons throughout the State are being sadly neglected.

The situation in rural areas is even more crucial than in metropolitan centers; most of the counties have no definite program. If the family is capable, it usually copes with its own problem. Where no responsible person is interested, the patient is usually confined to a nursing home where definitive treatment is conspicuous by its absence. For one thing, the home is usually so poorly paid for the care of the patient by the local welfare agency that medical attention is financially impossible. The American Hospital Association's 1949 rate survey shows that hospitals are suffering a larger deficit than in 1948 for the care they give indigent patients who are wards of State and local governments.[9] This discrepancy between costs and reimbursements applies likewise to nursing homes. In addition to financial difficulties, most nursing homes are not equipped to render proper medical care and treatment. Contrast this situation with the excellent possibilities offered by caring for these persons in the empty beds of county tuberculosis hospitals. This would not only provide more adequate treatment for the patients, but it would enable the counties to maintain their hospitals at reasonable cost.

Tuberculosis hospitals are having much difficulty in attracting qualified medical men. The reasons appear to be twofold: (1) It is hoped and believed that tuberculosis will become a disease of minor importance within the next generation or two, and (2) the field of tuberculosis is even now becoming too limited to interest young men seeking a specialty.

The combination of tuberculosis with other chronic disease would be a factor in making the specialty of "Chronic Disease" an attractive one. This would be in line with the present policy of widening the scope of hospital interests.

In New York State the following program would appear to be indicated:

1. The Tuberculosis Division of the Department of Health should become the Division of Chronic Disease.
2. The Division, under direction of the Commissioner of Health, should set up rules, regulations, and criteria for the care of chronic disease in presently existent State and county sanatoria.
3. Each county should have the choice of deciding whether or not it would admit other chronic disease patients to tuberculosis hospitals.
4. The county would be reimbursed for those nontuberculous cases who were unable to pay for their hospitalization, in a manner similar to that now functioning for the care of tuberculosis patients.

This program would have the following advantages:

1. It would fulfill the recommendations of the New York State Health Preparedness Commission.
2. It would hasten progress in setting up the chronic disease control program.
3. It would save money by avoiding reduplication of staffs, departments, and facilities.
4. It would provide local areas with hospital facilities and qualified men for treatment of all forms of chronic disease at the local level. The presence of these men in the community would act as a stimulus for education of the public and professional personnel in the prevention, care, and amelioration of chronic illness. This could be accomplished much more effectively by the specialist on the scene than by the same man who came as a visiting dignitary from a distant medical center.
5. It would coordinate all branches of chronic disease under one administration. This would enable a more satisfactory utilization of the facilities and services of the official and voluntary agencies concerned with health problems.

Summary

Chronically ill persons are unable to obtain adequate medical care, while county tuberculosis hospitals are closing beds and divisions. A plan is presented which would enable counties to maintain their own tuberculosis hospitals and provide adequate care for their chronically ill patients. This plan provides that:

1. The Tuberculosis Division of the Department of Health should become the Division of Chronic Disease.
2. The Division, under direction of the Commissioner of Health, should set up rules, regulations, and criteria for the care of chronic disease in presently existent State and county sanatoria.
3. Each county should have the choice of deciding whether or not it would admit other chronic disease patients to tuberculosis hospitals.
4. The county would be reimbursed for those nontuberculous cases who were unable to pay for their hospitalization in a manner similar to that now functioning for the care of tuberculosis patients.

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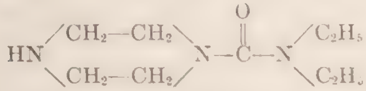
CLINICAL APPLICATIONS OF ANALGESIC AND SEDATIVE ACTION OF SUBDAMINE

Gerson Nonas, M.D., New York City

(From the New York Medical College, Metropolitan Hospital Research Unit)

Chemically, Subdamine is designed as 1-diethylcarbamyl-piperazine, and has the following structural formula:



$$HN\begin{matrix}/CH_2-CH_2\backslash\\ \\ \backslash CH_2-CH_2/\end{matrix}N-\overset{O}{\overset{\|}{C}}-N\begin{matrix}/C_2H_5\\ \\ \backslash C_2H_5\end{matrix}$$

Subdamine is a drug which in animal experimentation has been shown to be a potent sedative with a low somnifacient activity.[1] It has been found to differ from the hypnotics in that it effectively controls the extreme restlessness produced by toxic doses of ephedrine and amphetamine without forcing sleep. Although piperazine has been known in therapy for a considerable period of time, preparations containing it are new in the field of sedation.[1,2] Subdamine resembles the bromides more closely than any other sedative or hypnotic.

The low toxicity of the drug and its definite sedative action in the experimental animal warranted clinical trial of this drug in a group of cases in whom tension, restlessness, and excitability were present.

Method

Selection of Patients.—One group of patients consisted of 15 ambulatory ward subjects. Each of 12 of these subjects had some organic disease, and the remaining three were patients with neurocirculatory asthenia. All patients in this group were selected either because of pain which was not responsive to the usual analgesics or because of neuropsychiatric symptoms, such as irritability, restlessness, nervousness, headache due to tension, or anxiety.

The second group of subjects consisted of 68 ambulatory private and clinic patients. Sixty-four of the subjects had symptoms of a psychoneurosis, occasionally associated with an organic disturbance, while in the remainder there was an organic basis for the manifestation to be treated. Thirty patients of this group also received placebo and phenobarbital therapy following their course of Subdamine.

Dosage.—The ward patients were given graduated doses of Subdamine from 0.3 to 2 Gm. daily in three or four divided doses.* The minimal dose was in capsular form containing 0.1 Gm. of Subdamine. Each patient first received one capsule (0.1 Gm.) three or four times daily. If improvement was noted, no further increase in dosage was made; if not improved, increments were made every second day at the rate of one capsule per dose per day until manifestations were relieved or a total of 2.0 Gm. daily was being used. In no instance was this amount exceeded.

The clinic and private patients were given the drug either in the form of a capsule (0.3 Gm. per capsule) or in the form of a tablet (0.5 Gm. per tablet). One capsule or tablet was administered after each meal. Thus, the maximum daily dose received by these patients was either 0.9 or 1.5 Gm.

Placebo was given to 30 cases for two weeks in the form of capsules in the exact dosage of the Subdamine. This was followed by phenobarbital 0.015 Gm. ($^1/_4$ grain) three times daily for two weeks.

This study was carried out under the direction of Dr. Thomas H. McGavack, Director of the Metropolitan Hospital Research Unit of the New York Medical College, and Dr. Jonas Weissberg.

* Subdamine was supplied by the Research Department, Lederle Laboratories, Division of American Cyanamid Company, Pearl River, New York, whose courtesy is herewith gratefully acknowledged.

Period of Observation.—Ward patients were followed from day to day for a period of two weeks or more. The clinic and outpatients were followed from week to week for a period of from two to twenty weeks. However, four patients were given the drug intermittently for from twenty to forty weeks.

Objectification of the Effects of the Drug.—The patients were not told whether the medication would be of benefit for the symptoms presented. Close scrutiny of subjective improvement was made. When improvement occurred, the lowest dose necessary for this improvement was recorded. Careful attention was also paid to the occurrence of any side-reactions.

When pain was a factor to be reckoned with, it was important to determine whether any subjective improvement was due to analgesic or sedative action. In order to make this distinction it was necessary to define the patients' complaints in terms of somatic or functional origin.

All untoward reactions were recorded.

Results

1. A total of 83 patients was given Subdamine. Of this number, 63, or 76 per cent, reported some degree of improvement (Table 1).

2. In the group of ward patients it was definitely recorded that symptomatic relief of symptoms was greatest amongst those patients presenting increased tension, excitability, and irritability. These patients reported a calming and quieting effect. In this group of 15 patients there were nine, or 60 per cent, who reported some degree of relief of symptoms. Nine patients in this group had symptoms which were believed to be functional, and eight of these patients reported subjective relief. In relation to the underlying organic diagnoses, relief occurred in the type of symptoms for which Subdamine is indicated in two of three cases of arteriosclerotic heart disease, each of two of hyperthyroidism, one of two of secondary anemia, one of one of diabetes mellitus, and not at all in one case of rheumatic heart disease, acute catarrhal otitis media, and cirrhosis of liver.

In the group of clinic and private patients slight to marked relief of symptoms occurred in 79 per cent (54 out of 68) of the cases. There was no relief in 27 per cent (seven of 26) of the subjects whose complaints had an organic basis. Fifty-seven of the 66 subjects (86 per cent) with disturbances of functional type (neurogenic origin) were afforded some degree of relief by using the medicament. Concerning the organic diagnoses, relief occurred in all of ten cases of menopausal syndrome, all of three of hypertension, none in three of arthritis, two of two of arteriosclerosis and of secondary anemia, one in each of hyperthyroidism and chronic nephritis and one in one each of Cushing's syndrome, sinusitis, aneurysm of abdominal aorta, and cystitis.

Marked or moderate relief of symptoms occurred in 51 per cent of the cases in both groups.

3. The optimum dosage appeared to range from 0.9 to 1.5 Gm. per day in three or four divided doses. If subjective improvement did not occur on the larger of these doses, further increase had little effect.

4. There was prompt relief of symptoms at optimum levels of dosage.

5. No definite toxic or untoward reactions were recorded in the group of ward patients. Of the remaining subjects, four clinic patients complained of nausea and discontinued medication after two (two patients), three, and four weeks, respectively. One of these patients reported subjective improvement despite the nausea. One patient reported vomiting the first two doses of the drug. Another patient reported mild indigestion which disappeared after switching to the tablet form. Two patients were occasionally dizzy for a few moments fifteen to twenty minutes after taking a dose of the drug but did not wish to discontinue it. No patient reported diurnal drowsiness, lethargy, or "hangover" feeling. One of the patients with dizziness later reported mild disorientation at bedtime after taking the drug and voluntarily discontinued it.

6. There was no apparent effect on the blood pressure in six hypertensive patients. However, subjective improvement in the sharpness of emotional stresses was reported. Some relief of neurogenic symptoms occurred in two patients with hyperthyroidism.

7. In the 30 patients taking placebo, 21 (70 per cent) reported no relief, seven (23 per cent) mild relief, and two (7 per cent) moderate relief.

8. With phenobarbital, one (3 per cent) patient reported no relief, nine (30 per cent) mild

TABLE 1.—SUMMARY OF TREATMENT WITH SUBDAMINE

Number of cases	83	
Age range (years)	17 to 84	
Average number of years	42.1	
Sex		
Male	30	
Female	53	
Duration of medication in weeks	2 to 20*	
Results		
No relief	20 (24%)	
Slight relief	21 (25%)	76%
Moderate to marked improvement	42 (51%)	
Optimum dosage per day	0.9 to 1.5 Gm.	
Symptoms relieved	Restlessness, excitability, increased tension, anxiety	

* Actually two patients used the drug intermittently fo periods of nearly one year.

relief, and 20 (67 per cent) moderate to marked relief. However, 70 per cent (14 out of 20) of this last group reported feeling varying degrees of drowsiness not present while taking the Subdamine.

Summary and Conclusions

1. Eighty-three patients, most of whom had psychoneurotic complaints, were treated with Subdamine in divided doses three or four times daily for periods varying from two to twenty weeks. However, four subjects have taken the drug intermittently over total periods extending from twenty to forty weeks.

2. Slight to marked relief of symptoms was recorded in 63 out of 83 cases (76 per cent). In the group of 66 patients with predominantly functional manifestations, some degree of amelioration of symptoms occurred in 86 per cent.

3. Approximately similar relief of symptoms was obtained with small doses of phenobarbital. However, this was accompanied in some cases by drowsiness not present when taking Subdamine.

4. Subdamine has a definitely calming and quieting effect without producing drowsiness. The symptoms which respond to Subdamine medication are restlessness, excitability, increased tension, and anxiety.

5. Only one severe toxic reaction was encountered, mild disorientation at night which disappeared on discontinuing the drug. In all, eight patients showed some untoward reaction, which included five cases of nausea, two of dizziness, and one of vomiting.

6. Subdamine is a satisfactory therapeutic agent in the treatment of the psychoneurotic patient where symptoms due to anxiety and tension predominate. It also is a valuable therapeutic adjunct in patients with organic disease such as hypertension and the climacterium where psychoneurotic symptoms are so frequently present.

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ANTIHISTAMINIC DRUG IN THE PREVENTION OF SPINAL HEADACHE

Thomas R. Shannon, M.D., Poughkeepsie, New York

(From the Vassar Brothers Hospital)

In a series of 300 cases the effect on the incidence of spinal headache was studied when Benadryl was used as a pre- and postoperative medication for this condition, one of the most common and annoying complications of spinal anesthesia. The incidence, as reported by many clinics, varies from 0.1 to 83 per cent.[1-3] Previous reports indicate no definite causative factor which would be applicable to all cases.[3-7]

Theory

Observations on patients with headache reveal an increase in intracranial pressure in many instances. Direct manometric readings, examination of the fundi, and the method of Aceves are the methods that have been used to follow cerebrospinal fluid pressure.[8] The results of Benadryl treatment in many cases of migraine headache and in other headaches in which increased intracranial pressure is often seen led me to believe that it might be possible to prevent a percentage of the postspinal headaches now seen.[9,10] It is believed that many headaches are caused by irritation of the meninges and the choroid plexus, either due to the irritation by blood in the cerebrospinal fluid or to a direct allergic reaction to the anesthetic drug employed. Realizing that either factor might cause an increased production of histamine which in turn might be responsible for the headaches, I decided to use one of the antihistaminic drugs with the regular pre- and postoperative medication in an attempt to reduce the number of spinal headaches seen in this hospital. Careful review of the literature showed that no untoward results should be expected with Benadryl in the anesthetized patient.[11-13]

Technic

For this study a spinal headache was defined as a headache which was not present when the patient was in the supine position but which occurred very soon after the patient rose from the supine position and disappeared very shortly after the patient again resumed the supine position. In Vassar Brothers Hospital all of the accepted precautions which are advised by the various

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large clinics are routinely performed. The Sise introducer and number 22 needles are used. The patients are required to remain in the dorsal decubitus position for at least twelve hours postoperatively. It is fully realized that this last precaution is thought to be unnecessary by some observers, and some have reported that the use of immediate ambulation has shown a decrease in postspinal tap headaches, but in all cases with anesthesia it is not possible to have the patient ambulatory in two or three minutes.[6]

In this series of cases spinal anesthesia was obtained with three different drugs: nupercaine 1:200, pontocaine in glucose, and novocaine crystals dissolved in cerebrospinal fluid. For the normal adult patient scheduled for a spinal anesthesia, 50 mg. of Benadryl and $1^{1}/_{2}$ grains of Nembutal were given two hours preoperatively. Morphine, $^{1}/_{12}$ to $^{1}/_{6}$ grain, and scopolamine, $^{1}/_{300}$ to $^{1}/_{150}$ grain, were given one hour preoperatively. Benadryl, 50 mg., was given at one and three hours postoperatively. No other changes in technic were attempted. Three hundred consecutive cases have been followed. The only variation in the above technic was in emergency cases and in cases with intestinal obstruction where preoperative oral Benadryl was not given. In all but the first few cases in this category Benadryl was given intravenously. The dosage of the intravenous medication chosen was 20 mg., given on the same schedule whenever the oral medication was not used.

After the first week of this study it was realized that the sedative action of Benadryl had to be taken into account, as many of the patients were more heavily sedated than necessary. The dosage of morphine was therefore decreased about one step in each patient. It was also felt that this same action should be taken into consideration in ordering postoperative medication. Also, because it has been shown that Benadryl was transferred in the mothers' milk to infants and that most probably it was easily passed across the placental membrane, Benadryl has not been employed preoperatively in spinal anesthesia to be given for cesarean or vaginal deliveries.

Results

In a study of 564 spinal anesthetics given in the twelve months previous to this study there were 53 cases which had to be classified as postspinal headaches. This is an incidence of 9.4 per cent. In this series of 300 cases, there have been four postspinal headaches. None of these could be classified as severe. A fifth case, which did not receive preoperative medication, developed a severe postspinal headache. This gives an overall incidence of 1.7 per cent.

Summary

1. Headache is a very common and disconcerting complication of spinal anesthesia.
2. Three hundred cases of spinal anesthesia were premedicated with 50 mg. of Benadryl two hours preoperatively and received 50 mg. of Benadryl one and three hours postoperatively. If the oral route was not available, the drug was used intravenously in a dosage of 20 mg.
3. In this group only one case could definitely be considered a severe spinal headache, and four other cases were considered as mild spinal headaches.

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USE AUREOMYCIN AGAINST INFLUENZAL MENINGITIS

Favorable results from treating seven patients for influenzal meningitis with aureomycin are reported by a group of doctors from the University of Maryland School of Medicine, Baltimore.

The disease is an infection of the membranes which envelop the brain and spinal cord and is not caused by the microbe responsible for ordinary influenza.

"Aureomycin therapy was followed by fall of temperature to normal levels within ninety-six hours after the initial dose," Drs. Miles E. Drake, J. Edmund Bradley, Jerome Imburg, Fred R. McCrumb, Jr., and Theodore E. Woodward say in the February 18 issue of the *J.A.M.A.*

"On the third day of treatment, abatement of such symptoms as mental dullness and convulsions was definite," the doctors say. "On the fifth day, the acute phase of illness had completely disappeared. The patients were plainly convalescent, with increased strength and return of appetite."

Former treatments for the disease, including administration of sulfa drugs and streptomycin, possess "clearly defined disadvantages," the doctors point out, adding:

"Clinical trial of aureomycin in these cases has led us to believe that it may represent a highly effective method of therapy in this type of infection."

Case Reports

A FATAL CASE OF ALLERGIC DERMATITIS WITH MANIFESTATIONS OF COMBINED COLLAGEN DISEASES

Edward C. Zaino, M.D., and J. G. Sharnoff, M.D., Mount Vernon, New York

(From the Department of Pathology, Mount Vernon Hospital)

CONSIDERABLE disagreement still exists as to the role allergy may play in the cause of collagen disease, especially acute diffuse lupus erythematosus, whereas periarteritis nodosa more recently has been produced experimentally and observed clinically as a hypersensitive phenomenon.[1-3]

The case herein presented ran a clinical course suggestive of acute disseminated lupus erythematosus, initiated by an acute allergic dermatitis and revealed at autopsy, with both gross and histologic evidence of acute collagen disease, as well as marked bone marrow eosinophilia.

Case Report

A white woman of seventy years was admitted to the Hospital on February 29, 1948, complaining of pruritus, redness, swelling and pain in the face, scalp, neck, anterior chest, and both arms. She felt well until October, 1947, when she first had palpitations of the heart. She consulted her physician who told her she had heart disease and prescribed medication which she took daily for one month.

The patient had "dry scalp" for many years for which she used "Danderine" shampoo without success. In November, 1947, she decided to use the same shampoo in double strength. On the morning after the first application, she awakened to find her eyelids swollen, closed, and itching. The skin lesion gradually spread to involve her face and ears. In a few days time it involved her neck, chest, and arms down to her wrists. She was hospitalized at another institution for three weeks where she was treated with Pyribenzamine ointment and given x-ray treatment with improvement. There were no known food or chemical allergies in her past history.

Physical examination revealed a well-developed and well-nourished woman lying motionless in bed. The pulse rate was 100 and regular, temperature 99.6 F., respirations 22, and blood pressure 170/100. She had involvement of the skin of the face, ears, neck, and exposed areas of the chest, arms, and hands. The eruption was for the most part edematous and erythematous (purple-red in color) with telangiectasia and no scaling. Ulcers were present at the elbows and shoulders. The scalp contained numerous thick, greasy scales on an erythematous base. On the distal ends of her fingers there were irregular, flat, pink lesions. Fundoscopic examination revealed narrowing of the blood vessels with hazy disks. The eyelids were edematous with bilateral conjunctivitis. There was furunculosis of the external auditory canals with normal tympanic membranes. The mucous membranes of the mouth and pharynx were injected. Auscultation of the chest revealed moist rales in both lung bases. The heart was in regular sinus rhythm. An apical systolic murmur with accentuation of the first heart sound was heard. The liver, kidney, and spleen were not palpable. The upper extremities showed a pitting edema down to the hands. The shoulder and elbow joints were painful and limited in motion. The knee jerks were diminished bilaterally. The sensory and motor reflexes were otherwise normal.

An admitting diagnosis of contact dermatitis was made. The attending dermatologist suggested the diagnosis of acute disseminated lupus erythematosus. A patch test with the shampoo was negative. The allergist's opinion was that the skin eruption was not on an allergic basis. A skin biopsy was taken from the sternal region. It showed an atrophic thin skin with fibrinoid degeneration of the papillary dermis and perivascular infiltration by lymphocytes, plasma cells, and macrophages. The diagnosis was chronic dermatitis with fibrinoid degeneration of the dermis consistent with acute lupus erythematosus.

X-ray examination of the chest and of both shoulder joints on March 9 were normal.

The electrocardiogram on March 8 showed sinus tachycardia, low voltage, and a QT pattern in limb leads 2 and 3 and in the left leg (unipolar) lead. It was interpreted as suggesting diffuse myocardial changes and possible posterior wall infarction. The PR interval was 0.12 second.

The temperature was low grade, never higher than 101 F. Treatment consisted of Pyribenzamine, penicillin, infusions, codeine, aspirin, vitamins, boric acid compresses, and penicillin ophthalmic ointment. She expired on March 7, 1948.

The blood Wassermann and Kahn tests were negative. On admission the blood count showed an anemia of 11.5 Gm. hemoglobin and 4,100,000 red cells per cu. mm. The white cell count was 9,600 per cu. mm. The blood smear differential was normal with 1 per cent eosinophils reported. A repeat count eight days later showed a rise in hemoglobin to 14.2 Gm., and the white cell count rose to 12,500 per cu. mm. The blood smear differential was again normal with only 2 per cent eosinophils seen. The specific gravity of the urine was 1.026 with a trace of albumin and 15 to 20 white blood cells per high power field. The sedimentation rate was elevated to 95 mm. per hour and 81 mm. per hour on two occasions. Blood culture was negative. Blood chemistries were as follows: glucose 114 mg. per cent, creatinine 0.90 mg. per cent, nonprotein nitro-

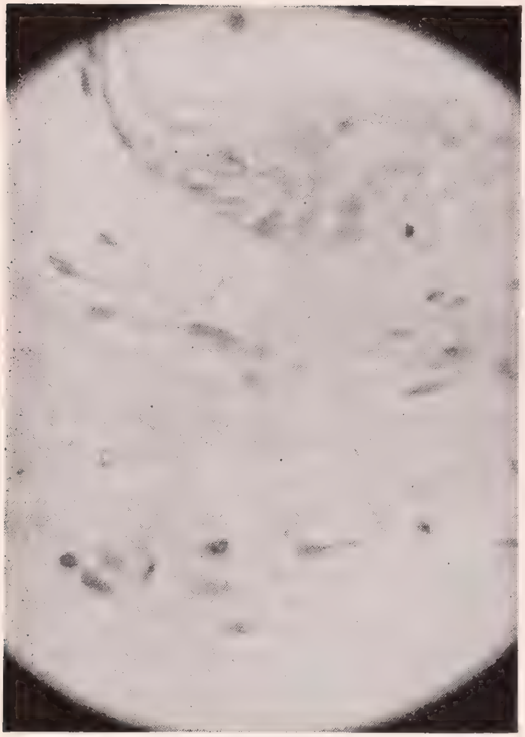

FIG. 1. Fibrinoid degeneration of the papillary dermis (autopsy specimen). (900 ×)

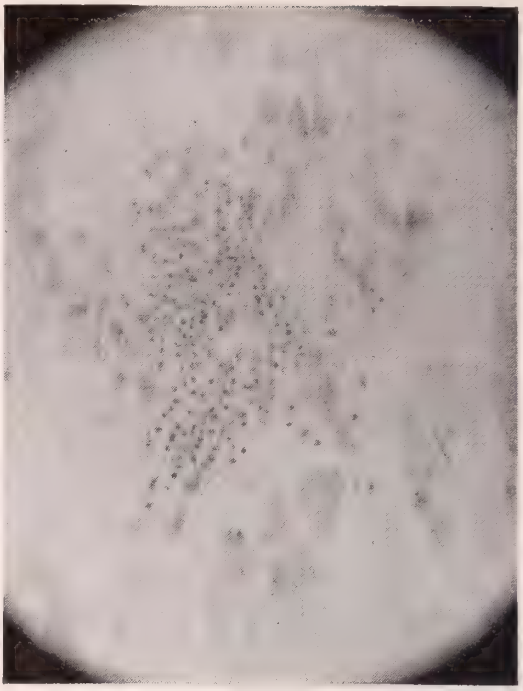

FIG. 2. Fibrinoid degeneration of the collagen fibers as well as lymphocytic, plasma cell, and monocytic infiltration of the myocardium. (450 ×)

gen 47.5 mg. per cent, total protein 5.80 Gm., albumin 2.70 Gm., globulin 3.10 Gm.

Postmortem Findings

Gross Examination.—A diffuse scaly erythema was present over the face, scalp, shoulders, and arms. There was a marked pitting edema of the dorsum of both hands and over the sacrum. The pupils were round, regular, and equal.

The right lung weighed 800 Gm. and the left 670 Gm.; both were bound to the parietal pleura by a few fibrous adhesions. A few raised granular areas were present at the bases. The heart weighed 350 Gm. and had a flabby consistency. The leaflets of the mitral valve were thickened and rolled. On their shelving edge several small very fine red granules were noted. The coronary vessels were thick-walled but patent throughout. Sections of the myocardium revealed nothing remarkable. Calcifications were noted in the aorta.

On opening the abdomen a few fibrous adhesions were noted between the undersurface of the liver and the transverse colon. The liver weighed 1,460 Gm. The parenchyma had a mottled, nutmeg appearance. The common bile duct was patent. The gallbladder contained a dark viscid bile and six, brown, faceted calculi. A small granular nodule, measuring 1.5 cm. in diameter, was noted in the fundic portion of the gallbladder. The spleen weighed 135 Gm. The capsule was smooth and glistening. The pulp was friable and purple in color. Nothing remarkable was noted in the pancreas. The adrenal medulla was friable. The right kidney weighed 165 Gm. and the left 160 Gm. The capsules stripped with ease, revealing finely granular cortical surfaces. Beneath the capsule of the left kidney there was a hemorrhagic area measuring 2 by 2 cm. which did not extend into the kidney. The renal pelves, ureters, and bladder were natural. The vagina, uterus, ovaries, and tubes were atrophic. In the gastrointestinal tract numerous sigmoid diverticulae were noted. Brain and spinal cord examination was not allowed.

Microscopic Examination.—Only the most significant findings are recorded. The skin showed a moderate, diffuse fibrinoid degeneration of the papillary dermis (Fig. 1). Also noted were a few infiltrating lymphocytes and plasma cells. In the heart there was fragmentation of the myocardial fibers. About several arterioles infiltrating lymphocytes, plasma cells and moderately large macrophages were seen (Fig. 2). The interstitial stroma in these areas revealed fibrinoid degeneration of the collagen fibers (Fig. 3). The mitral leaflets in the areas of apparent vegetation also revealed a marked swelling produced by a fibrinoid degeneration of the collagen fibers. The arteries of the spleen, pancreas, and adrenals revealed a marked intimal thickening and degeneration with narrowing

FIG. 3. Perivascular lymphocytic, plasma cell, and monocytic infiltration of the myocardium. (450 ×)

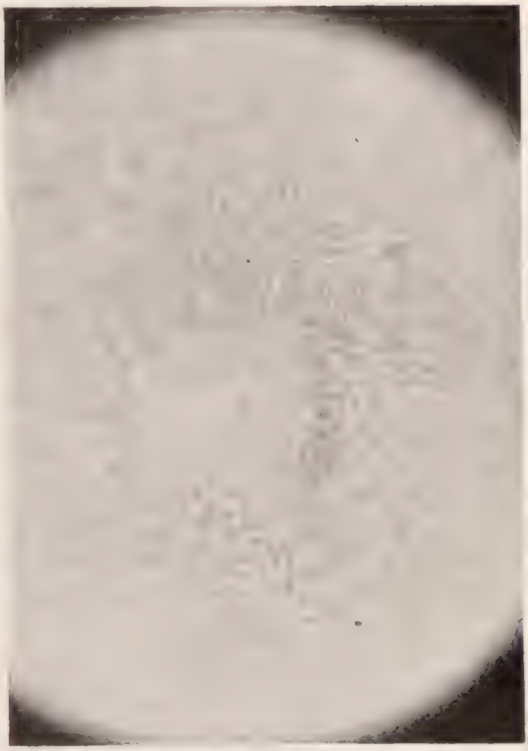

FIG. 4. Intimal degeneration of the splenic artery. (450 ×)

of their lumina (Fig. 4). The adrenal gland, in addition, revealed a few foci of infiltration in the cortex by lymphocytes, plasma cells, and macrophages. The reticular layer of the adrenal cortex was extensively necrotic. The kidneys showed the glomeruli fairly well preserved. The tortuous tubules and Henle's tubules were swollen and necrotic with a few casts in the collecting tubules. There was an extensive fatty metamorphosis of the hepatic cells with distention of the central sinusoids and marked compression of the central hepatic cells. Sections of the gallbladder nodule revealed an invading adenocarcinoma. Few patches of bronchopneumonia were seen in the lungs. The bone marrow sections revealed a striking 28 per cent eosinophilia with all other cells of normal appearance and distribution.

Comment

The sudden onset of skin eruption and eyelid edema following use of the shampoo, as well as the bone marrow eosinophilia, speaks for an allergic phenomenon. However, the fibrinoid degeneration of the collagen fibers observed in the antemortem skin biopsy, in the uncrushed autopsy skin, and in mitral leaflet sections, as well as the endothelial degeneration of many vessels, are strongly suggestive of collagen disease of the lupus erythematosus type. The perivascular infiltrations of the heart with fibrinoid degeneration of the stroma are similar to those seen in rheumatic fever. Thus, it would appear that the inciting allergic phenomenon may have produced subsequent changes consistent with collagen disease.

It is interesting to note that no eosinophilia was observed in the peripheral blood, yet the bone marrow studies at autopsy revealed a marked eosinophilia. The authors are unaware of the frequency with which eosinophilia of the bone marrow is observed in the lupus erythematosus.

There is no explanation offered for the adrenal changes, especially the cortical infiltrations and necrosis of the reticular cells. The latter may be associated with lower nephron nephrosis as the authors have made a similar observation in one other case.

Summary

A case is presented which shows clinical and histologic evidence of combined collagen disease commencing as an acute allergic dermatitis. Eosinophilia was present in the bone marrow but not in the peripheral blood.

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DELAYED HEMORRHAGE AFTER TRAUMATIC RUPTURE OF THE SPLEEN

Joseph A. Coyle, M.D., Allen Kleiman, M.D., and Morris K. Smith, M.D., New York City

(*From the Surgical Service of Halloran Veterans Administration Hospital*)

DELAYED hemorrhage after rupture of the spleen is sufficiently rare to encourage presentation of the following case.

Case Report

G. G., a thirty-year-old white man, was admitted to the hospital on September 3, 1947, complaining of increasing abdominal distention and weakness of four weeks duration, although aggravated in the past few days. On July 14, seven weeks before, he had been in an automobile accident in another city for which he was hospitalized. According to the transcript received from the hospital the patient was admitted in shock and complained of pain in the left lumbosacral region and abdomen. Blood pressure was 70/50, the red count 3,200,000 and hemoglobin 10 Gm. The urine contained microscopic blood. X-ray examination showed a linear fracture of the left wing of the sacrum. An abdominal tap was negative for blood. Three days later, the abdomen was noted to be soft and relaxed. He was ambulatory on the fifth day and on the tenth was discharged home to the care of his own doctor.

About a week after getting home he noticed increasing abdominal girth and weakness and lightheadedness. His wife was impressed by his increasing pallor. Protruding hemorrhoids developed four days before admission.

Physical examination revealed a pale young man with a distended abdomen in which a fluid wave was demonstrated. His temperature was 100 F., pulse 90, and blood pressure 112/70. The red count was 2,200,000 with 7.4 Gm. hemoglobin. Other laboratory tests were not remarkable. Abdominal tap yielded 5,500 cc. of bloody fluid with red count and hemoglobin approximating that of the patient's blood.

Transfusions corrected the anemia, and the abdominal fluid did not reaccumulate. As it was the opinion of the surgical staff, however, that the hemorrhage had resulted from a splenic injury which might bleed again, operation was done on September 25, ten and one-half weeks after the accident.

The spleen was found to have a deep rupture, filled with clotted blood, with a partial capsular tear. Adherent to the organ and adjacent viscera was a large amount of clot. Little free fluid remained. Splenectomy was done. The specimen weighed 385 Gm. Pathologic diagnosis was "rupture of the splenic capsule with hemorrhage and far-advanced organization."

The patient made an uneventful recovery and has continued in good health.

Comment

Delayed hemorrhage is estimated to occur in about 14 per cent of splenic injuries. The condition is not common. Zabinski and Harkins collected 177 cases of delayed splenic rupture including the series of McIndoe and Mueller.[1-3] Seventy were analyzed in detail, four of their own and 66 from the literature. Of these, four was the largest number collected from any one source, the 66 cases having been assembled from 52 reports. The mortality in the 70 cases was 17 per cent.

After a latent period, in which there may be abdominal discomfort or pain in the left upper quadrant, the typical patient with delayed splenic rupture suddenly develops symptoms of severe hemorrhage, as the splenic hematoma gives way. This occurs within the first week after injury in about half the cases and during the second week in another 25 per cent.

The case here presented is unusual on two counts: (1) the interval between injury and symptoms sufficiently severe to lead to rehospitalization and (2) the gradual development of these symptoms. In this patient it was seven weeks after his accident before he was admitted to Halloran Hospital. Of Zabinski and Harkins' 70 detailed cases, only two were more delayed, while in six others the period was from three to six weeks. In their series also, all but a few presented the more typical picture of a sudden massive hemorrhage. The case most closely resembling this patient is that of Hunter, whose patient walked into the hospital twenty days after injury with the presenting symptoms of abdominal distention and severe anemia.[4]

Summary

A patient with splenic rupture, who was discharged from a hospital apparently convalescent on the tenth day, entered Halloran Hospital on the fifty-first day because of hemoperitoneum, anemia, and weakness. At operation the lacerated spleen with a large, organizing blood clot was removed. The patient was in excellent health a year later.

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If you mean to be happy when you are old, be temperate when you are young.—Anonymous

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RHEUMATOID ARTHRITIS TREATED WITH MASSIVE DOSES OF HUMAN CHORIONIC HORMONE TO PRODUCE "PSEUDOPREGNANCY"

Benjamin H. Archer, M.D., New York City

(*From the Bronx Hospital*)

IT HAS been known for many years that patients with rheumatoid arthritis may have remissions during pregnancy.[1-3] This has encouraged investigators to use pregnancy blood, postpartum plasma, and pregnant mare serum in the treatment of this disease.[4-6] The results have been inconclusive. Because of the increase in gonadotropin, pregnandiol, and estrogens in pregnancy, these hormones, either singly or in combination, have also been employed in rheumatoid arthritis with essentially negative results.

Recently, Brown and Bradbury reported that they were able to produce "pseudopregnancy" in normal women by the injection of massive doses of human chorionic hormone.[7] "Pseudopregnancy" was demonstrated by a delay in menses, persistence of pregnandiol excretion, prolongation of the life of the corpus luteum, decidual changes in the endometrium, and a positive Aschheim-Zondek reaction. These investigators injected intramuscularly 2,500 to 20,000 units daily of human chorionic hormone. In a subsequent communication, the same authors state that they used doses ranging from 2,500 to 1,000,000 units daily.[8] To produce a positive Aschheim-Zondek test, it was shown that it was necessary to use at least 5,000 units daily when the hormone was given intramuscularly in aqueous solution.

The work of Brown and Bradbury encouraged me to duplicate their results in patients with rheumatoid arthritis. It was reasoned that if "pseudopregnancy" could be produced with human chorionic hormone, it was theoretically possible that this condition might, in turn, initiate those biochemical changes of pregnancy which, I have found, include the "antirheumatic factor."[3] It was conceivable that if a state of "pseudopregnancy" could be produced, this might be as efficacious as a normal pregnancy in bringing about remissions in rheumatoid arthritis.

Because pregnancy resulted in a complete remission of arthritis, the following case was selected to receive human chorionic hormone.

Case Report

T. A., a woman, age thirty-seven, was first seen seven years ago. At that time she complained of pain and swelling of the left knee and gave a history of an attack of polyarthritis two years before, which had not yielded to either "gold salt" or "ertron" therapy but had subsided spontaneously. When first seen, her left knee joint showed definite signs of fluid, and the joint was aspirated; 50 cc. of straw-colored fluid were removed which proved to be sterile on smear and culture. An x-ray of the knee at this time was found to be negative, and the sedimentation rate was 32 mm. in one hour (Cutler). Following aspiration the patient made a good recovery.

One year later she had a recurrence of her arthritis, and this time the right knee was involved as were also the fingers, wrists, and shoulders. The attack subsided in a month with bed rest and salicylate therapy.

Thereafter, the patient had no joint symptoms until three years ago at which time the effusion of the left knee recurred, associated with marked pain and stiffness of the joint. An x-ray of the left knee showed some lipping of the inferior margin of the patella but was otherwise negative. The sedimentation rate was 20 mm. in one hour (Cutler). The other laboratory tests were essentially negative.

On aspiration of the left knee joint, 20 cc. of serosanguineous fluid were removed, and the patient was put on a course of bismuth therapy (1 cc. of bismuth subsalicylate intramuscularly once a week for fifteen injections). A second aspiration of the left knee joint was done a week later, and a thick yellowish fluid was obtained which was negative for gonococcus on smear and culture.

Soon afterwards, the elbows, fingers, wrists, knuckles, and right shoulder became involved but were only mildly painful. Bismuth therapy was continued once a week, and after her course of fifteen injections the patient felt definitely improved and was discharged.

Two months later the patient had a relapse of her arthritis but refused further therapy. Shortly thereafter, she became pregnant and in the sixth week of her pregnancy noticed an improvement of her arthritis which ended in complete remission. She stated that, "she never felt better in her life," and, in fact, had no joint pains until seven weeks after her delivery. At this time the arthritis recurred more severely than ever, involving practically all her joints, especially the elbows, fingers, and knees.

She was treated with Procystamine, followed by bismuth therapy.* She failed to respond. Cephalin flocculation and thymol turbidity tests were done prior to therapy, and both tests were negative. These liver function tests were repeated after treatment with Procystamine and bismuth and were again negative.

She was discharged and told to return in three months at which time chrysotherapy was suggested but was refused. A course of bismuth therapy was tried again but was ineffectual.

She was then given penicillin-in-oil, 300,000 units daily for six days, but this gave no results, and the patient left my care for eight months.

On her return to my office, her joint condition was considerably worse than before, with painful swelling of both knees, pain and stiffness of the hips, elbows, spine, and ankles. The sedimentation rate was now 22 mm. in thirty minutes (Cutler). The urine was negative. The basal metabolic rate was minus 12 per cent and the cephalin flocculation test was negative.

Human chorionic hormone (Pregnyl) was started on the sixteenth day of her menstrual cycle, nine to eleven days before the day of her expected menstruation. Treatment with daily, intramuscular administrations of 10,000 international units was begun and continued for four days. However, the patient began to complain of some mild febrile reaction following injections and was troubled by vertigo and fatigue during the day. The daily dose was reduced to 7,500 units given for three days. An Aschheim-Zondek test was done at this time and was negative. The cephalin flocculation test was negative. The sedimentation rate was 25 mm. in thirty minutes (Cutler).

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* Procystamine (Lakeside) is a foreign protein preparation containing cysteine and thiamine.

The patient still complained of vertigo and fatigue, and the dose was further reduced to 5,000 units, given intramuscularly. On the day of the ninth injection the patient had morning nausea and expressed a keen desire for tomatoes, a yearning which she stated she had experienced during her recent pregnancy. The dose was increased to 7,500 units daily on her thirteenth day of therapy, and her basal metabolism was found to be minus 10 per cent. On the following day the patient had a marked local reaction in her right buttock with a considerable area of redness and swelling, which measured approximately 5 cm. in diameter. This was accompanied by a mild febrile reaction. Coincidentally, the patient stated that she had no pain in the joints. A sedimentation rate was done on this day and was found to be 27 mm. in thirty minutes (Cutler). The cephalin flocculation test was 3 plus in forty-eight hours. An Aschheim-Zondek test was done and was reported negative for the second time.

Improvement of the patient's joint symptoms persisted for five days during which time she received 7,500 units of Pregnyl daily. Then the pain in the joints recurred. At this time nausea became a troublesome symptom, to the point where the patient felt sure that she was pregnant. After her twentieth injection, which was a dose of 10,000 units of human chorionic hormone, an Aschheim-Zondek test was performed for the third time. This test was again negative. The sedimentation rate was now 30 mm. in thirty minutes (Cutler). A cephalin flocculation test was negative. Interestingly enough, the patient at this time developed a mild glycosuria and an acetonuria.

She felt nauseated, especially in the mornings, and continued to have a yearning for tomatoes. She stated that she felt stronger and better and had less pain and stiffness in the joints, but as far as I could judge, objectively, her arthritis appeared to be unimproved.

On the twenty-first day, due to a lack of chorionic hormone, the patient was given only 1,500 units of Pregnyl. The following day she received no injection and that night began to have some mild abdominal pain. She began to menstruate the following morning and had a normal period. Menstruation had apparently been delayed for twelve days by the therapy employed. Prior to this, her periods had been regular.

Comment

As far as I know, this is the first case of rheumatoid arthritis in which an attempt has been made to produce "pseudopregnancy" by injecting massive doses of human chorionic hormone. Although the menstruation was definitely delayed and the patient developed some of the clinical symptoms of pregnancy, it is doubtful whether "pseudopregnancy" occurred in this case. At least there is no definite evidence to substantiate such a claim. The Aschheim-Zondek test, done carefully on three different occasions, was consistently negative. Unfortunately, circumstances did not permit the performance of an endometrial biopsy. However, in view of the work of Brown and Bradbury, it is difficult to understand why the Aschheim-Zondek tests were negative in this case, as the dosage employed was adequate, according to these authors.

As far as the arthritis is concerned, it is obvious that whatever improvement the patient noted while on human chorionic therapy was either due to a foreign protein reaction or was subjective and due to the use of a new therapeutic agent. It is of special interest that the temporary improvement noted in this case was correlated with a transient positive cephalin flocculation test.[9]

Notwithstanding the essentially negative results obtained in this patient, this method of treatment seems worthy of further study.

1964 GRAND CONCOURSE

Grateful acknowledgment is made to Dr. K. W. Thompson of Organon, Inc., for the chorionic hormone (Pregnyl) used in this study.

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QUESTIONS AND ANSWERS ON DUES

The Organization Section of the April 1 issue of the A.M.A. *Journal* was devoted to questions and answers on A.M.A. dues. The question and answer page ran in only the one issue, but subsequent issues of the *Journal* will carry a statement on A.M.A. membership and Fellowship. This statement will explain how a doctor can become a member and Fellow of the A.M.A. and will outline the privileges he receives. After this statement has appeared several times it will likely be made available in reprint form.

—*Secretary's Letter, A.M.A., March 27, 1950*

CONGENITAL ABSENCE OF LUNG

Emil A. Naclerio, M.D., New York City, and Lew A. Hochberg, M.D., Brooklyn, New York

(From the Department of Thoracic Surgery, Columbus Hospital, and the Thoracic Surgical Service, Kings County Hospital)

Essentially asymptomatic but clinically significant anatomic anomalies of the respiratory tract, formerly undetected during life, are now being demonstrated with increasing frequency due to widespread acceptance of routine mass radiography and diagnosed by follow-up bronchoscopy, bronchography, and exploratory thoracotomy.

Minor forms of abnormal embryologic development, such as anomalous vascular patterns, are not too uncommonly found during intrathoracic operations. However, cases of agenesis, aplasia, and hypoplasia, in which there is practically no functioning pulmonary tissue, are considered relatively rare. Less than 75 cases have been recorded in the past fifty years. It is the authors' impression that agenesis and varying degress of hypoplasia occur more frequently than is generally suspected. Three cases encountered during the past year are considered of sufficient significance to be reported, especially in view of the many clinical points of interest.

Case Reports

Case 1.—A 5-pound, 8-ounce newborn female infant was delivered spontaneously at term. Both parents were young and healthy. This was the first pregnancy and was considered completely normal. Almost immediately, the infant began to show signs of respiratory distress. The accessory muscles of respiration were being used. There was slight retraction of the sternum and ribs. Breath sounds were depressed on the left side. There were harsh crackling rales over the right side. The apex impulse was not palpable. The heart sounds were faint and of poor quality. Roentgenographic examination demonstrated the heart and mediastinal contents drawn to the right of the midline together with nonaeration of the upper half of the right lung field and apical portion of the left (Fig. 1).

Bronchoscopy was performed by one of us (E.A.N.). The trachea and both main bronchi were obscured by frothy, clear mucus. The left main bronchus branched into its two main divisions in the usual manner. The right main bronchus appeared to proceed without interruption in a downward direction. The orifices of the right upper and middle lobes were not visualized. It was the bronchoscopist's impression that this represented a case of pulmonary agenesis.

An immediate postbronchoscopy x-ray revealed no essential changes. The infant's condition was slightly improved. The respirations were rapid but not labored. The position of the heart remained the same but the apices of the lungs appeared to be better aerated. The improvement was temporary. Respiratory distress again developed, and rales became audible bilaterally. The infant became progressively worse and expired about forty-eight hours after delivery.

Postmortem Examination. (Only the pertinent pathologic changes are included).—The lungs have a combined weight of 34 Gm. The left lung shows the usual two lobes, whereas the right lung consists of one lobe and is considerably smaller than the left one (Fig. 2). The right lung shows the usual diaphragmatic surface and is of the usual diameter in its lower portion, whereas the upper portion is small. This lung is supplied by a single bronchus which resembles in its course the bronchus of a normal lower lobe (Fig. 3). The left lung has its usual bronchi of its upper and lower lobes. The anterior portion of all lobes are pale and well aerated. However, the greater part of the lung tissues is red and markedly consolidated. Its aeration is poor.

The esophagus consists of two portions which are not connected with one another. The upper portion forms a continuation of the pharynx as usual. It measures a little more than 1 cm. in length and is somewhat wider than usual. It has a blind end. The lower portion originates from the bifurcation of the trachea and was described above. The two portions are separated from one another by a distance of more than 1 cm. From the bifurcation of the trachea, a duct arises which forms a downward continuation of the trachea and represents the lower portion of the esophagus. It opens into the stomach in the usual manner.

The kidneys are fused with one another at their lower poles forming a horseshoe kidney, which weighs 16 Gm. The fused portion is located at the

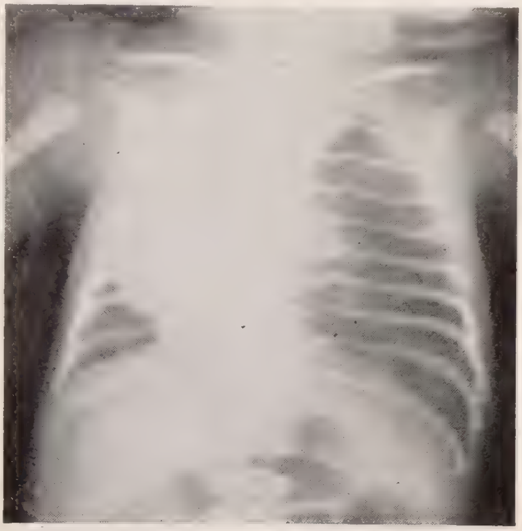

Fig. 1. Posteroanterior roentgenogram demonstrating the heart and mediastinal contents to the right of the midline together with nonaeration of the upper half of the right lung and apical portion of the left.

level of the lower lumbar vertebrae. The anterior vena cava runs along the anterior surface of the right kidney. The fused kidney receives several arteries from the aorta and the inner iliac arteries near the bifurcation. The shape of the horseshoe kidney is asymmetric.

Microscopic observations were as follows: the alveoli of the lung are partially expanded, and their lumina are filled almost without exception with an exudate containing large numbers of polymorphonuclear leukocytes. A similar exudate occupies part of the lumina of the bronchi. The blood vessels are not remarkable. The bronchi are lined by a pale, glistening mucosa. The lumina are free.

Death was attributed to bronchopneumonia and tracheal obstruction by mucus.

COMMENT.—Although a diagnosis of agenesis of lung was made by x-ray studies and bronchoscopy during life, it should be emphasized that a more important condition, which was considered, existed, i.e., esophageal atresia and tracheoesophageal fistula. While this latter condition generally is amenable to surgery, in this case the infant's extremely poor physical state prohibited surgical intervention.

As stated in the literature, if difficulties arise in cases of agenesis, they are the result of associated anomalies.[1] In this case complications arose from esophageal atresia and tracheoesophageal fistula. This resulted in aspiration of the esophageal contents into the bronchopulmonary system. The reason for temporary improvement immediately following bronchoscopy is evident in that secretions were aspirated from the tracheobronchial tree. The cause of death, however, was not pulmonary agenesis but the continual aspiration of material into the tracheobronchial tree. Unlike cases of atelectasis, the newborn infants with pulmonary agenesis show no respiratory symptoms at birth.

Case 2.—The patient, a thirteen-year-old Negro boy, was admitted to the Thoracic Surgical Service of Kings County Hospital for a bronchoscopic examination because of a shadow in the chest. The radiologic finding was detected during a routine school chest survey. Upon admission the patient said that he coughs a little upon severe exertion. Upon questioning the patient with regard to the possibility of having aspirated a foreign body, he stated that following the ingestion of some candy there was an associated coughing spell. Three weeks prior to admission he had chickenpox but has been otherwise well except for occasional colds. The family history was significant only in that his mother died of tumor of the chest. Further questioning at a later date revealed a history of cough and expectoration of mucopurulent material and shortness of breath after exercise.

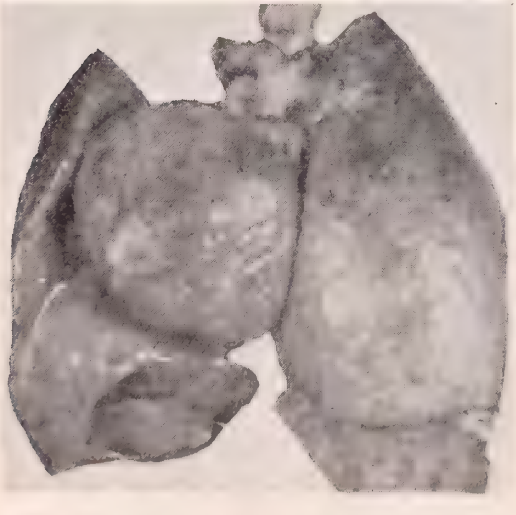

FIG. 2. Anterior view of specimen in Fig. 1 showing absent right upper and middle lobes, space occupied by heart.

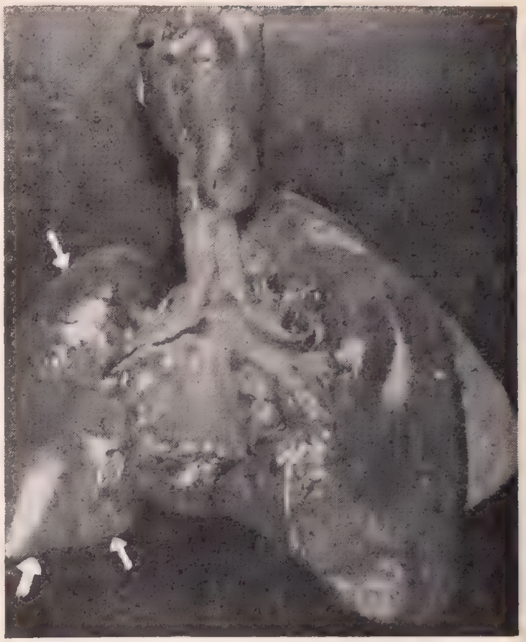

FIG. 3. Posterior view of specimen in Fig. 1 showing right lower lobe.

Examination at the time of admission revealed a well-developed, well-nourished boy in no pain or distress. Temperature was 98.6 F., respirations 20, and pulse 86. The positive physical findings were increased dullness to percussion over the right chest anteriorly and posteriorly. There was increased tactile and vocal fremitus over the right upper lobe posteriorly, decreased breath sounds over the entire right chest, and bronchial breathing over the entire left chest with hyper-resonance with percussion. The point of maximum cardiac impulse was in the right fourth interspace. A soft, blowing systolic murmur over the aortic area was audible. The remainder of the physical examination revealed no abnormality. Admission x-ray disclosed narrowing of the interspaces on the right and marked elevation of the right diaphragm, with marked deviation of the trachea and mediastinum to the right.

In view of the history, the possibility of a nonopaque foreign body causing a bronchial block was considered. Bronchoscopy was attempted but was

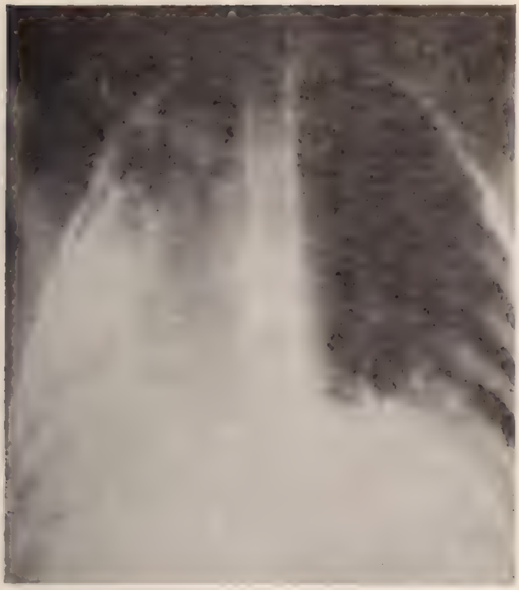

FIG. 4. Tomogram disclosing extreme angulation of the right main bronchus posteriorly with absence of lipiodol in upper half of right lung.

considered unsuccessful because profuse secretions coming from the right main bronchus obscured visualization of the upper and middle lobe orifices.

The patient was placed on a postural drainage during which time he raised approximately 3 ounces of mucopurulent material daily. Bronchoscopy was repeated. The left main bronchus and its immediate subdivisions appeared to be normal. The right main bronchus contained a moderate amount of mucopurulent secretion. The bronchial mucosa was markedly congested. The orifices of the lower lobe were markedly stenosed due to edema. The upper and middle lobe orifices were not visualized. Both tomographic examination and lipiodol bronchograms disclosed extreme angulation of the right main bronchus posteriorly and substantiated the diagnosis of congenital absence of the bronchi to the upper and middle lobes on the right with unaerated nonfunctioning parenchymal tissue (Fig. 4).

At a thoracic surgical conference it was decided that the patient was to have an exploratory thoracotomy with resection of the poorly functioning diseased hypoplastic section of remaining lung. At operation performed by one of us (L.A.H.) the right upper and middle lobes were found to be absent. The superior segment of the lower lobe was emphysematous and overdeveloped. The basilar segment was indurated and on palpation revealed numerous cystic areas. Concurrently with the absence of the upper and middle lobes, the arteries and veins of those lobes were also absent.

COMMENT.—Exploratory thoracotomy proved the diagnosis of agenesis of the upper and middle lobes of the right lung and associated disease in the remaining lobe. While the diagnosis of agenesis of lung was made by roentgenographic studies, including bronchoscopy and bronchography, surgery was decided upon in view of the clinical course in the hospital and the findings indicative of disease in the remaining lobe possibly due to foreign body or benign tumor.

A diagnostic feature usually found in such cases, i.e., external symmetry of the chest with equal movements together with gross displacement of the trachea and mediastinum, was evident in this case.

Children with congenital absence of lung often come to the early attention of the pediatrician or the radiologist during an attack of bronchopneumonia to which these patients fall an easy prey. Later in life individuals with the anomaly may complain of frequent colds, dyspnea on slight exertion, expectoration of blood-streaked sputum, or even frank blood and attacks of stertorous, wheezing breathing; the latter, too, may be the only clinical feature early in life.[2]

Case 3.—This seven-year-old Negro male child was admitted to the Pediatric Service of Kings County Hospital for a possible situs inversus. The chief complaint consisted of pain in the epigastrium of two weeks duration. The pain was unrelated to ingestion of food or activity. According to his mother the patient was found to have the heart on the right side which was discovered after admission to a hospital down South because of frequent attacks of severe upper respiratory infection. The parents have also stated that an extensive heart workup proved it to be normal.

Examination of the child revealed a well-nourished, well-developed, alert, cooperative male, lying in bed, who did not appear ill. The thorax was normally formed and symmetric. The trachea appeared to be deviated to the right of the midline. On percussion there was slight dullness of the right upper half

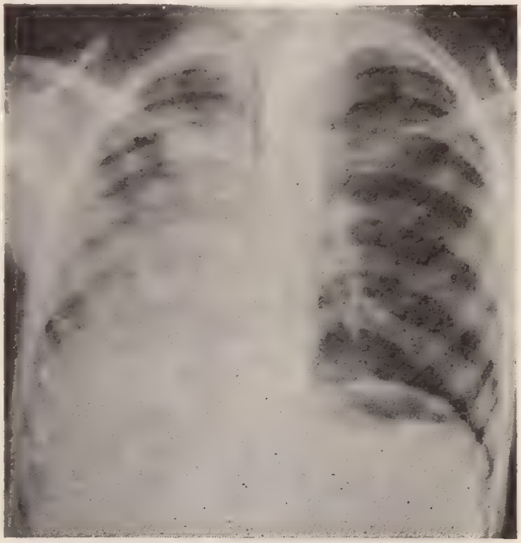

FIG. 5. Posteroanterior view demonstrating shift of the trachea and mediastinum to the right. The left lung shows considerable emphysema extending beyond the midline to the right. Barium in the esophagus demonstrates its relationship to the trachea.

of the chest anteriorly. Breath sounds were bronchial in nature over the same area. There were no other evident abnormalities.

Examination of the heart showed precordial pulsation in right chest in third and fourth intercostal space. The point of maximum impulse was in the third right intercostal space, 5 cm. to the right of the midsternal line. There was regular sinus rhythm, and sounds were of good quality, with a grade II systolic murmur best heard in third intercostal space.

Plain roentgenogram showed definite shift of the trachea and mediastinum to the right (Fig. 5). The left lung showed considerable emphysema and extended beyond the midline to the right. It was felt that bronchoscopy should be carried out. This was accordingly done. The trachea was deviated to the right. The bronchoscope could be passed for a relatively long distance through what appeared to be an abnormally long trachea. The left main bronchus was almost continuous with the trachea. The bronchial orifices were normal. On the right side the upper and middle lobe orifices were absent.

Lipiodol studies revealed the following: Lipiodol was noted in the place of the peripheral portion of the right midlung field as well as in the right main bronchus and trachea. On lateral examination the lipiodol was noted to be pooled. There was shift of the trachea and mediastinum to the right. Possible causes would include agenesis of a lobe of the lung on the right. However, the possibility of atelectasis or nonaeration of a segment of the right lung is not excluded and further studies of the right lung should be done, including tomography. Tomographic examination of the chest renders no further information pertaining to the findings previously described.

The electrocardiogram was normal.

Esophagram demonstrated a shift of the trachea and mediastinum to the right. The esophagus is in the midline (Fig. 5). Both diaphragms move well on fluoroscopy. The findings at this time are indicative of agenesis or absence of lower or middle lobe or both on the right.

The patient was discharged with the final diagnosis of congenital absence of the right upper and middle lobes.

Comment.—At present there is no evidence of any other congenital abnormalities. The prognosis at this time, therefore, is good. In view of only two lobes being absent, the patient's chances for longevity are excellent. This is not true, however, when a patient has complete absence of one lung. In these cases any involvement of the only existing lung, whether it be from infection, foreign body, or trauma may cause sudden fatality. On the other hand, it appears to the authors that in congenital absence of a lobe, the remaining lung tissue on that side is usually vulnerable to disease.

Summary and Conclusion

1. Three cases of congenital absence of lung are presented, one proved by bronchoscopy and the diagnosis confirmed by necropsy, another proved by bronchoscopic examination followed by lipiodol and tomographic studies and the diagnosis later confirmed by exploratory thoracotomy, and a third case diagnosed by bronchoscopy and lipiodol roentgenograms.
2. The authors believe that congenital absence of one or more lobes of a lung occurs much more frequently than is generally suspected, and the possibility of pulmonary agenesis should be considered in the differential diagnosis of unusual lung conditions, particularly in what appear to be a persistent atelectasis.

The authors wish to express their gratitude to Dr. T. A. McGoldrick, Director of Medicine of St. Peter's Hospital, and Dr. L. Krahulik, Director of Pediatric Service of Kings County Hospital, for granting permission to report two of these cases.

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SURVEY FOR COMPULSORY HEALTH INSURANCE

Apparently, compulsory health insurance is far from popular among the city people, according to a survey just completed by the Psychological Corporation, New York, in 25 cities and towns from coast to coast.

They asked the following question: "Which do you favor: (*a*) to have government give free doctor and medical service which would be paid for by a 3 per cent payroll tax on all wages under $3,600, or (*b*) the present system of medical service?"

65% favored the present medical service
26% favored government medicine
9% were uncertain

Even in the lower income group, the lowest third which is supposed to benefit most from government medicine, 51 per cent were against the plan while 37 per cent favored it.

In an April, 1947, survey on what people consider good and bad Americanism, the following question was asked: "Which is better for America: (*a*) to have the government give free doctor and medical service which would be paid for by a tax like the Social Security tax, or (*b*) the present system of medical service?"

63% favored the present medical service
30% favored government medicine
7% were uncertain

Insofar as the two questions and surveys are comparable, it would seem that, in spite of the heavy government propaganda in favor of socialized medicine, there has been little change in the proportion of people who favor government medicine.

The present survey was made by 81 interviewers working under the direction of 22 psychologists associated with the Psychological Corporation.—*Secretary's Letter, A.M.A., March 27, 1950*

ACUTE APPENDICITIS COMPLICATED BY HEMOPHILIA

John Burke, M.D., Buffalo, New York, and Francis J. Clifford, M.D.,
Niagara Falls, New York

(From the Department of Medicine, University of Buffalo School of Medicine)

CRADDOCK, Fenninger, and Simmons recently reviewed the role of hemophilia as a complication in major surgery and added to the literature the report of a case of acute appendicitis in a known hemophiliac.[1] In their review they were able to find but four cases in which the diagnoses of hemophilia and acute appendicitis could be confirmed. The same cases were cited by Schiller, Neligan, and Budtz-Olsen.[2] In the cases reported, two were treated conservatively and three by operation. One recovered in each group. We wish to present a sixth case, treated by appendectomy, with recovery.

Case Report

R. M., a sixteen-year-old boy, had diarrhea for two days with upper abdominal discomfort. This became more marked after the diarrhea ceased, and on the third day the patient complained of pain in the right lower abdomen. There had been no nausea or emesis. Anorexia had been present since the onset. He was admitted to the Buffalo General Hospital on December 21, 1946, at the suggestion of his family physician.

Hemophilia was first noted at the age of thirteen days on the occasion of circumcision. Bleeding was said to have persisted for several weeks. Since that time he had had numerous bouts of tissue ecchymosis brought on by minimal trauma. Hemorrhage into joints had also been a frequent occurrence. Until the present illness, transfusion had not been necessary. There was no history of abnormal bleeding tendency in either the maternal or paternal branches.

Pertinent findings were confined to the abdomen. The spleen was palpable below the right costal margin, and there was marked tenderness and muscle spasm at McBurney's point. Rebound tenderness was present. Palpation through the right posterior rectal wall caused severe pain.

Admission laboratory data were as follows: red blood cells 4,400,000, white blood cells 7,400, bands 26, filaments 55, lymphocytes 12, and mononuclears 7. Five-tube method clotting time was forty-three minutes (normal ten to twelve minutes). Urinalysis showed one or two white blood cells and was otherwise normal.

With the diagnosis of acute appendicitis in a known hemophiliac we were faced with the difficult decision as to whether nonoperative therapy (massive doses of penicillin, nasogastric suction, intravenous fluids, etc.) might not be safer than surgery. We felt that the risk of appendectomy under the protection of plasma and blood transfusion was the lesser evil, and operation was performed the afternoon of admission.

Under nitrous oxide-oxygen, pentothal, and curare anesthesia, and following the administration of 500 cc. of plasma, the abdomen was entered through a McBurney incision. There appeared to be an increased amount of oozing from all cut tissues, although every available bleeding point was ligated. Turbid, sterile fluid escaped when the peritoneum was opened. Appendectomy was performed. There was a slight ooze from the surface of the ileum and cecum. All visible bleeding points were ligated and 2 cc. of 1:500 thrombin solution were injected about the ileocecal angle. Clot formation seemed prompt. The abdomen was closed in layers, and each layer was further irrigated with the thrombin solution after its suture. Silk was used throughout.

Microscopic examination showed hemorrhagic phlegmonous appendicitis with extensive ulceration of the mucosa and phlegmonous involvement of all layers and considerable phlegmonous infiltration of the attached omental tissue and mesoappendiceal lymph node.

Clotting time immediately after operation was thirty-five minutes. Dr. Stuart Vaughan, consulting hematologist who saw the patient at this time, felt that bleeding had been adequately controlled and suggested a continuous slow drip of plasma, with determination of the clotting time in the morning.

Convalescence was both stormy and prolonged. Bleeding into the wound and the surrounding tissues was evident on the fourth day. A large hematoma was extruded a few days later. Wound infection occurred with dehiscence as far as the peritoneum. The application of red-cell paste seemed to stimulate healing, although the wound was still granulating at the time of hospital discharge, and healing was not complete until the fourth month of convalescence. Other troublesome complications were acute intestinal obstruction during the fourth week, treated by Miller-Abbott tube and intravenous fluids, and an episode of severe hematuria lasting about one week. The patient was continuously febrile up to the last two weeks of his hospital stay. His condition gradually improved, and he was discharged to the care of his physician sixty-one days after admission. In the latter part of March, 1947, fresh bleeding recurred in the granulating wound, together with mild diarrhea and the appearance of a mass below the wound. He was admitted to the E. J. Meyer Memorial Hospital on March 26, 1947, and treated with massive transfusions of blood and plasma, as well as antibiotics. The mass gradually disappeared, and the operative wound was healed four weeks after this admission.

Since this last hospitalization the patient has remained well except for the occurrence of a hematoma in the right buttock with sciatic pain which required several weeks of bed rest for its resolution. Currently he is carrying on the normal activities of a high-school student.

Space does not permit a detailed account of the plasma and whole blood transfusions which were used in an attempt to keep the clotting time near a normal level, which was never reached. Clotting times (five-tube method: normal ten to twelve minutes) ranged from sixty to thirty-two minutes. In all, a total of 9,750 cc. of whole blood and 21,000 cc. of plasma were used. It is possible that our failure to reach normal levels was due to the fact that neither blood nor plasma were freshly drawn but were obtained from blood banks. Large doses of penicillin were administered during the first two weeks of the disease and during the second hospitalization. As a matter of interest, hematoma formation was not noticeable at the sites of injection.

Serum protein levels were maintained at normal levels throughout. The red blood cell count ranged from 4,400,000 at admission to a low point of 2,200,000 during the period of wound hematomata.

Comment

In the case reported by Craddock *et al.*, hemorrhage recurred despite the presence of normal coagulation time as measured by their laboratory. They suggest that, "there are other, perhaps more subtle changes from normal in the coagulation mechanism which cannot be measured by the tests of blood coagulability routinely used."[1] It is also their opinion that freshly prepared plasma, the Cohn Fraction 1 (so-called antihemophilic globulin), and blood should be used in treatment.

It was our feeling at the time that the absence of fresh bleeding during the first three to four days indicated the presence of sound clot. It is our feeling now, however, that had we used fresh blood or plasma in adequate amounts daily for about ten days, healing might have been secured without postoperative hemorrhage.

The problem of conservative versus operative treatment cannot be settled on the basis of the few cases reported. We feel that the risk of appendectomy is less than the risk of possible perforation and peritonitis. We agree with Craddock *et al.* that there is no proof that hemophiliacs cannot handle infectious processes as well as normal individuals, but the peritonitis of appendiceal perforation may be an overwhelming infection, despite the results which have been shown by Crile and others with the use of penicillin and, more lately, streptomycin. There is, furthermore, the risk of occasioning hematomata by the injection of these agents in a hemophiliac.

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A CASE OF FATAL SUBARACHNOID HEMORRHAGES, CONGENITAL ANEURYSMS OF THE BRAIN, ADRENAL DYSFUNCTION, AND PITUITARY CACHEXIA

B. Mecklin, M.D., Watertown, New York

(*From the Mercy Hospital*)

IN THE usual private practice of medicine, one does not often have the opportunity to follow a case from the beginning to the end and especially to obtain a final postmortem check on one's study.

Case Report

This thirty-seven-year-old man appeared in my office on September 15, 1947, with the chief complaint of constant, boring pain in the right side of the head of about a month and a half duration. Never before had he had any headaches, major illnesses, or trauma to his head or other part of his body. His general examination was essentially negative, and his neurologic examination was negative except for the absence of abdominal reflexes. There was no sign of increased interocular pressure. At this time, my impression was nervous tension headache or, perhaps, migraine syndrome. He was seen several times, always with an improving picture. Several days after the last office call, he was admitted to the hospital. Physical examination revealed a violent, semiconscious man with pupils widely dilated and neck rigid; even though semiconscious he resisted all our attempts to do more intrinsic tests, but it was apparent that his right arm and right leg were not as freely movable as the left, which he thrust forth constantly as in a swimming motion. His cardiovascular system was normal, and all attempts to do a spinal tap were futile. However, the next morning, bloody spinal fluid under increased spinal pressure was obtained. He improved rapidly and was discharged with the diagnosis of improved subarachnoid hemorrhage, exact etiology unknown.

He was sent to a neurologist in a distant town who performed a right and left angiogram. In the space of two days hospital study, the x-ray of angiography revealed the presence of a "berry" type of aneurysm of the anterior communicating artery on the right. In addition, it was discovered that the left anterior cerebral artery received its blood supply from the right internal carotid. This was confirmed by the left angiogram which failed to show filling of the left anterior cerebral vessel. Spinal puncture revealed slight increase in protein and xanthochroma. Since the patient improved rapidly and because of the fact that there was no filling of the ascending portion of both anterior cerebral arteries from the left carotid, it was decided to wait, with the diagnosis of aneurysm of the anterior communicating artery, with history of rupture and abnormal circulation, since the right internal carotid served the ascending portions of both anterior cerebral arteries. He was watched closely for one month; his headaches increased, however, and he was sent back for more neurologic studies. On further diodrast studies, it was discovered that both anterior cerebral arteries filled, and it was felt that if he got worse, an operation could be done to occlude the first or horizontal portion of the right anterior cerebral artery. The left could carry on with a moderate amount of circulation to both frontal lobes to avoid necrosis.

He was sent home feeling fairly well, only to be seen again several weeks later. He was seized at the time with a severe headache, stiff neck, nuchal rigidity, and a positive Kernig's sign and was sent back to the neurologist who confirmed the findings of nuchal rigidity and a positive Kernig's sign. A diagnosis was made of fresh subarachnoid hemorrhage. Lumbar puncture confirmed the diagnosis, but on bed rest he recovered much more rapidly than previously. A repeat left cerebral angiogram was performed with right common carotid compression. X-ray findings revealed a filling of both anterior cerebral arteries from the left side. This was good, because it was possible to ligate the anterior cerebral artery in case of another emergency. However, he now rapidly improved, and since surgery would be a great risk, he was discharged back to my care for further observation.

He felt fairly well until December 6, 1948, when he developed an upper respiratory infection with dry pleurisy. On antibiotics, sulfonamides, fluids, and rest, he recovered. This left him pale and emaciated with a blood pressure of 70/60. He was given iron, thyroid, and desoxyn and placed on a high salt diet.

Through the next year, he worked off and on as a night watchman and was able to cope fairly well with life, except that he complained bitterly of loss of libido. This was abated to a certain degree by male hormone and an antepituitary-like substance at times. His general condition at the time revealed a hypophysical cachexia (so-called Simmond's disease) and a moderate degree of adrenal insufficiency. His headaches were not severe, but he was getting older and presenile with wrinkled, dry, pale skin, complained of always being tired, and was getting weaker. Throughout this time, he was on thyroid, desoxyn, salts, and cortrate (oral), but his condition seemed to be at a standstill. There was some slight increase in hemoglobin concentration. Wassermann test was negative, and the remainder of the tests revealed nothing abnormal. Basal metabolic rate was minus 29 to minus 39 on different occasions. On May 7, 1949, he was seen in his home town by his own physician, and, due to increasingly severe headaches, he was sent back to the local hospital.

He was cheerful and ambulant in the hospital. However, that night he was seized with sudden intense pain in the left side of the head which grew in intensity until he suddenly gasped and expired.

Postmortem Findings

Now that we can look over this short life with retrospect, we have here an unusual story of subarachnoid hemorrhages with death, complicated by a pituitary washout and renal insufficiency. The postmortem examination on the same day revealed many unusual and interesting phases as follows: The cortical tissue of the adrenals was reduced in thickness, and only a small amount of medullary tissue was present. The spermatogenesis of the testes was arrested. The basement membranes were thickened, and in the sections examined no interstitial cells were seen. Sections of an encysted mass, located in the inferior surface of the brain, showed a thick outer wall of hyaline fibrous connective tissue, within which were pink and glistening acellular material and red cells. Finally, the brain showed a moderate amount of subarachnoid blood in the inferior aspect of the cerebral hemispheres, cerebellum, the pons, and medulla. The left frontal lobe was enlarged. The left frontal pole was softened, and the tissue was lacerated and a blood clot evacuated when the brain was removed. On raising the anterior portion of the cerebral hemispheres to cut the optic nerves and the carotid vessels, an encapsulated mass about 1.5 cm. in diameter was detached from the inferior aspect. This mass overlay the pituitary in the sella turcica. It appeared to have been attached posteriorly to the optic chiasma in the midline at the site of the attachment of the stalk of the hypophysis. Cut sections of the brain showed a large cavity, measuring 4.5 cm. at its widest part, in the left frontal lobe. All the ventricles were dilated and filled with blood clot. After fixation, the clot about the optic chiasma was picked away, and there was found a portion of a small aneurysmal sac about 0.4 mm. in diameter, arising at the junction of the right anterior cerebral and the anterior communicating artery. The left anterior cerebral appeared to rise mainly from the right anterior cerebral through the anterior communicating artery. Only a small branch connected the anterior portion of the left anterior cerebral artery to the internal carotid at the point where the middle cerebral artery arose. The pituitary was smaller than normal in size, and the overlying mass was composed of a thin fibrous capsule filled with a blood clot.

Final pathologic diagnosis was anomalous cerebral arteries (left anterior cerebral); congenital aneurysm of right anterior cerebral artery (at junction with anterior communicating artery); rupture of congenital cerebral aneurysm; subarachnoid, intracerebral (left frontal lobe), and intraventricular hemorrhages of brain; hemorrhage into stalk of hypophysis or encysted hematoma, with compression of hypophysis; hypoplasia of adrenals and testes, and hyperemia of lungs (mild).

The left anterior cerebral artery had an anomalous origin. A ruptured aneurysm was found at the junction of the right anterior cerebral and the anterior communicating artery. The site of the hemorrhage into the left frontal lobe was not identified. The encysted structure compressing the pituitary may have been an encysted hematoma or hemorrhage into the infundibulum.

Summary

A case of congenital defects, localized mostly in the brain and consisting of anomalous cerebral arteries, congenital aneurysms, especially an encysted hematoma in the stalk of the hypophysis, and compression of the pituitary resulting in Simmond's disease associated with an adrenal and testicular hypoplasia, is reported.

Don't go to the doctor with every distemper, nor to the lawyer with every quarrel, nor to the pot for every thirst.—Anonymous

USE OF CHLOROMYCETIN IN A CASE OF RICKETTSIALPOX

Louis E. Schaefer, M.D., and Ira A. Rashkoff, M.D., New York City

(*From the First Medical Service of Mount Sinai Hospital*)

RICKETTSIALPOX is a benign, self-limited disease, first described by Sussman in 1946 and later by Shankman and Greenberg *et al.*[1-4] All cases so far reported have occurred in the New York City area. Its causative agent is the Rickettsia akari, and its vector is the rodent mite, Allodermanyssus sanguineus.[5-7]

The disease is characterized by an initial skin lesion, followed in a week by the acute onset of fever, malaise, headache, backache, and photophobia. Two or three days later a papulovesicular rash appears. The course of illness from onset of fever until recovery is from seven to ten days, and three to four weeks usually elapse from the appearance of the initial lesion until its disappearance.

Experimental work of Smadel and associates indicates that R. akari is susceptible to chloromycetin.[8,9] Inasmuch as there is no previous report on the use of this drug in a human case, it is felt that the following observations, which appear to substantiate Smadel's work, are worthy of note.

Case Report

N. B., a thirty-two-year-old white female New York City resident, entered the Mount Sinai Hospital on June 2, 1949. She had become ill two days previously with malaise, nausea, headache, shaking chills, and a temperature of 102.8 F. No skin lesions of any kind were noted. On the second day her temperature rose to 103.6 F. At this time she noticed a few red spots on her legs. She entered the hospital on the third day of illness with a temperature of 101.6 F. and a pulse rate of 80. She was acutely ill, complaining of frontal headache and photophobia. Over the entire body, including the face, there were scattered erythematous, maculopapular, slightly indurated lesions, measuring 0.5 to 0.8 cm. in diameter. On the upper right calf was a single 1-cm. lesion which was redder and more indurated than the others and was surmounted by a small black eschar. There was an enlarged tender lymph node in the right groin. Complement fixation tests performed both at the Hospital and the New York City Health Department were subsequently positive for rickettsialpox.

An initial dose of 3 Gm. of chloromycetin was given at 6:00 P.M. of the third day of illness and was followed by 0.25 Gm. every three hours. Twelve hours after the first dose the temperature had dropped to 100 F., and a marked clinical improvement had taken place. She continued to recover progressively and was discharged after five days in the hospital. The rash began to fade, coincident with the clinical improvement, and had completely disappeared after three days of treatment. There were no relapses or sequelae.

Comment

It was felt that the sudden clinical improvement and abrupt drop in temperature on the fourth day of illness, twelve hours after institution of chloromycetin therapy, indicated a response to the drug. This tended to bear out predictions based on its value in experimental infections in mice, that chloromycetin would be effective in human cases of rickettsialpox.

Despite the fact that rickettsialpox is a self-limited disease, chloromycetin is indicated in its treatment since it appears to shorten the course of the illness.

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BANTER ON BANS

On Drake Hotel Stationery, in pale blue ballpoint penmanship [which I can tell by the periods], come the following four lines of mercenary wisdom:

> If ever I shall write a book
> I'll not neglect to plan it
> So Boston, after one shocked look,
> Will profitably ban it.
>
> —*Librarian*

Who "Librarian" is I do not know, nor do I find anything notably strange in the notion she expresses [I'm pretty sure she's a she]. A somewhat similar idea, minus the geographical allusion, seems to have moved another Rimes and Remnants contributor, pseudosigning "Prone Kahn," to pen these eight lines:

> I, too, would like to write a play,
> Or novel, by the modern code,
> As do the authors of the day,
> With sex in every episode.
> And I might well achieve my aim,
> [Within the realm of reason]—BUT—
> Before I make my bid for fame
> I'll have to brush up on my smut.

—*Bookman's Holiday, Chicago Tribune, November 6, 1949*

HURTHLE CELL TUMOR

LOUIS SHEIMAN, M.D., and DAVID I. KRAVCHICK, M.D., New York City

(From the Department of Pathology, Bronx Hospital)

THE Hurthle cell tumor is an unusual neoplasm of the thyroid gland. Portmann, in reviewing 200 thyroid malignancies, reported no tumors of the Hurthle cell type.[1] Since 1933, four cases of this tumor have been encountered at this institution. The first two cases, the second of which was diagnosed in 1936, have been reported elsewhere.[2] From 1937 through 1948, 419 thyroidectomies have been carried out at the Bronx Hospital and two additional cases of Hurthle cell tumor discovered. Because of the rarity of the tumor, as well as its interesting pathologic and clinical implications, we are reporting the two recent cases.

Case Reports

Case 1.—The patient, a seventy-five-year-old white woman, was admitted on April 29, 1948, because of a mass in the neck noted for six or seven weeks. In 1932, the patient underwent a left hemithyroidectomy for pressure symptoms and thereafter was well until a sudden enlargement of the gland recurred. Chest roentgenogram, basal metabolic rate, and electrocardiogram done prior to admission were normal. There were no symptoms suggestive of hyperthyroidism.

Physical Examination.—The patient was not acutely ill on admission. The temperature was 100.2 F., the pulse 78, and the blood pressure 150/80. A systolic murmur was heard at the apex. Both the right and left lobes of the thyroid were diffusely enlarged, but the gland was firmer on the right side.

Laboratory Studies.—The hemoglobin was 54 per cent, erythrocytes 2,500,000 per cu. mm.; leukocytes 11,000 per cu. mm.; polymorphonuclear neutrophils 86 per cent, lymphocytes 10 per cent, monocytes 3 per cent, basophils 1 per cent. After transfusion, the hemoglobin rose to 78 per cent and the erythrocytes to 3,960,000 per cu. mm. The urine revealed 1 plus albumin and many leukocytes. The blood sugar was 102 mg. per cent; nonprotein nitrogen 19.3 mg. per cent; creatinine 1.3 mg. per cent; cholesterol 216 mg. per cent with 79 per cent esters. The electrocardiogram was within normal limits. A basal metabolic rate was done on the second day of hospitalization and was plus 46.

Roentgenogram of the neck and chest showed bilateral lobulated masses which displaced and compressed the supraclavicular portion of the mediastinum to the right. Calcific areas were seen in these masses as well as swelling of the prevertebral soft tissue to the level of the third cervical vertebra. The superior mediastinum was widened, and coarse infiltrative changes were present at the base of the left lung.

Hospital Course.—Hemorrhage into the thyroid gland occurred at the time of admission, causing symptoms of tracheal compression and probably accounting for the sudden elevation of the basal metabolic rate noted. On the third day of hospitalization, the patient was taken to the operating room for a thyroidectomy, but she suddenly stopped breathing when an attempt was made to pass a tracheal tube. An emergency tracheotomy was, therefore, the only operative procedure done at that time, and large masses of thyroid tumor were encountered in the process. The patient did well, and on the ninth day of hospitalization a subtotal thyroidectomy was performed. The postoperative course was uneventful, and the patient was discharged in good condition on her thirty-third day of hospitalization. She died unexpectedly in her sleep two weeks after leaving the hospital. No necropsy was obtained.

Gross Pathology.—Three large and several smaller portions of irregular, moderately firm, reddish-yellow tissue were received; the largest portion measured 9 by 6 by 5 cm. The tissue was only partially encapsulated, and the surface was somewhat hemorrhagic. On section, it presented a variegated appearance with alternation of soft red areas, partially necrotized areas, and focal calcification.

Histopathology.—The picture was that of a neoplasm composed of large acidophilic cells with vesicular nuclei growing in solid sheets (Fig. 1). There was evidence of active cell mitosis. The stroma was predominantly lymphoid in character. In one section the neoplastic tissue infiltrated among intact acini filled with colloid. The histologic picture was that of a Hurthle cell tumor.

Case 2.—A fifty-five-year-old white woman was admitted on October 27, 1948, with a six months history of weakness. For the preceding two years the patient tired easily, but this became much more marked during the six months before admission. She lost 15 pounds in those six months despite a

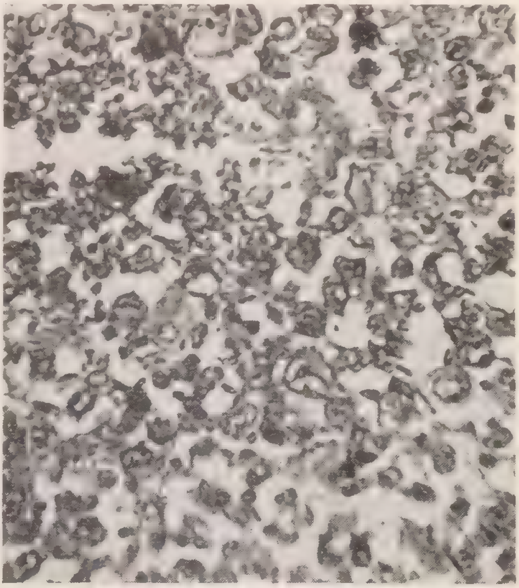

FIG. 1. Solid sheets of polyhedral tumor cells with vesicular nuclei and granular cytoplasm. Many of the clear spaces represent faintly stained tumor cells. (300 ×)

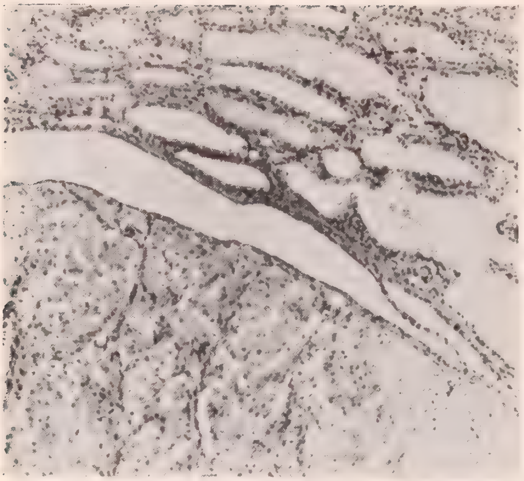

FIG. 2. Upper portion of photomicrograph shows normal appearing acini almost devoid of colloid. Clearly demarcated from it is the tumor mass which consists essentially of small congeries or columns of Hurthle cells separated by connective tissue. (50 ×)

normal appetite. Swallowing had not been normal for several months in that food seemed to stick in her throat. There was no history of tremors, sweating, diarrhea, or voice change. The patient noted a gradually enlarging mass for six months. Dyspnea on effort was present for years, but there were no other symptoms suggestive of heart disease.

Physical Examination.—The patient was a well-developed and well-nourished individual with a plethoric complexion. The temperature was 100.2 F., pulse 120, and blood pressure 170/90. Moderate bilateral exophthalmos was noted, as well as fine tremor of the hands and tongue. The skin was warm and moist. The superficial cervical and thoracic veins were distended. A symmetrically enlarged, smooth, soft, nontender thyroid gland was palpable. Pulsations were noted over this area with cardiac systole, and a systolic bruit was heard. The heart was enlarged to the left, but no murmurs were detected. Rhythm was regular except for occasional extrasystoles.

Laboratory Studies.—The hemoglobin was 80 per cent, erythrocytes 4,400,000 per cu. mm., leukocytes 5,400 per cu. mm.; polymorphonuclear neutrophils 58 per cent, lymphocytes 38 per cent, monocytes 4 per cent. The blood picture did not change appreciably under the therapy described below. The urine revealed a trace of albumin and many leukocytes. The blood sugar was 69 mg. per cent, nonprotein nitrogen 33.8 mg. per cent, cholesterol 113 mg. per cent and, when repeated two weeks later, 136 mg. per cent. The basal metabolic rate on the third day of hospitalization was plus 93. It slowly dropped under treatment to plus 39 on the forty-third day of hospitalization. Forty-eight hours prior to surgery it was plus 28. The electrocardiogram was within normal limits except for a sinus tachycardia.

Roentgenogram of the chest revealed enlargement of the left ventricle and pulmonary artery. There was bilateral enlargement of the substernal thyroid, compressing the trachea in that area.

Hospital Course.—The patient was given 200 mg. of propylthiouracil daily for six weeks, during which time the laboratory findings improved but the patient remained apprehensive and emotionally unstable. She was then given Lugol's solution for one week, and a subtotal thyroidectomy was done on the fifty-second day of hospitalization. Thirty-six hours after operation her temperature suddenly rose to 103 F. and pulse to 150. Treatment consisted of sedation, oxygen, and intravenous Lugol's solution; quinidine and digitalis were added later because of cardiac arrhythmia. There was no evidence of tracheal compression. The patient expired in pulmonary edema on her second postoperative day. Permission for postmortem examination was not granted.

Gross Pathology.—The specimen consisted of four portions of pinkish-white lobulated tissue, the largest measuring 9 by 6 cm. On section it appeared homogeneous for the most part, but in the center of one portion there were two small cystic areas containing a hemorrhagic fluid and surrounded by tissue that was softer and lighter in color than the rest.

Histopathology.—One area showed marked hypertrophy and hyperplasia with papillary infoldings of the acini and abundant colloid; other areas had small acini almost devoid of colloid. The stroma was sparsely lymphoid in character. One section showed a well-encapsulated neoplasm (Fig. 2). The cells were large, acidophilic, and grouped either as solid cell nests or as small alveoli separated by a thin connective tissue stroma (Fig. 3). There was no evidence of invasion of the surrounding thyroid tissue. The picture was that of a Hurthle cell tumor.

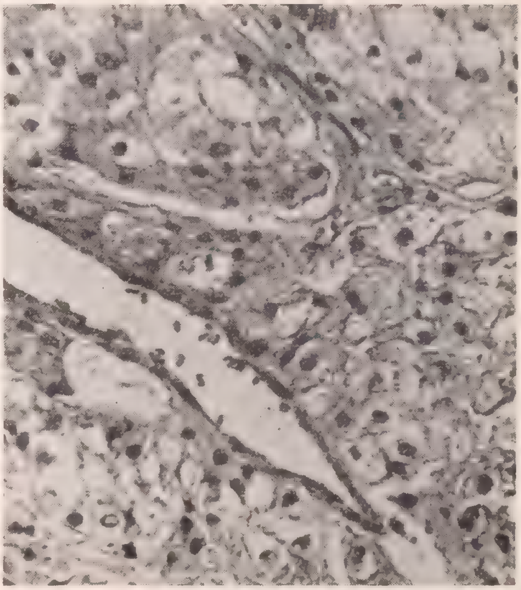

FIG. 3. Tumor cells exhibit a clear to slightly granular cytoplasm with more pyknotic nuclei than Case 1. A delicate connective tissue stroma is present, and there is a tendency to dense grouping of tumor cells about thin-walled blood vessels.

Discussion

The Hurthle cell tumor was first described by Langhans in 1907, although the cell type was described by Hurthle in 1894 and mentioned by others before him.[3-6] Grossly, these tumors are small, firm, and yellowish-brown to red in color, as are most thryoid neoplasms. Microscopically, there are two characteristic cell types: (1) large polyhedral cells with acidophilic cytoplasm and large vesicular nuclei and (2) small polygonal cells with clear cytoplasm. These two cell types are woven together into an irregular pattern, sometimes forming small alveoli, to comprise the tumor.

The Hurthle cell tumor may be found with normal thyroid tissue, hyperplastic thyroid tissue, thyroid carcinoma, or as a tumor of uniform structure. Hurthle cells per se have no influence on the basal metabolic rate. Thus, in our first case, all symptoms were referable to pressure phenomena; in the second case, the symptoms and signs of hyperthyroidism can be explained adequately by the pathologic findings in areas exclusive of the Hurthle cell tumor.

The question of origin of this tumor has been the source of much discussion for years. Ewing attributed it to the interstitial cells of the thyroid gland which Hurthle originally described, and he considered all such tumors malignant; however, other workers have denied the presence of such cells in the normal human thyroid.[7] Postbranchial, lateral thyroid, and parathyroid origins have been proposed also. Wilensky looked upon the cell as a physiopathologic variant of some normal thyroid cell rather than a distinct one in itself.[2]

Most reported cases have been in women over forty years of age, but Symmers reported the tumor in a six-week-old infant and Morrow in a two-month-old infant.[8,9]

In general, these tumors are slow growing and do not metastasize; occasional ones metastasize late in the course of the disease. Nevertheless, the tumors should be considered potentially malignant if not overtly so. In both cases presented here, the microscopic appearance of the tumor cells was similar. However, grossly, the first case showed extension beyond the capsule of the thyroid gland, while the second case presented a well-circumscribed neoplasm. Therapy should consist of surgery and radiation.

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DOCTORS LIVE TO AN AVERAGE 67.2 YEARS, 1949 DEATH REPORTS SHOW

The *Journal of the American Medical Association* published the obituaries of 3,331 physicians during 1949, an increase of 101 over the number published in 1948.

"This," the *Journal* explained, "does not represent the total number of deaths among physicians in 1949, but only the total number of obituaries published."

The *Journal's* statement said in part:

The average age at death among the 3,331 physicians was 67.2 years. This is 0.2 year less than the average age of 67.4 reported for 1948 but higher by 0.5 year than the average age for 1947. The ages of the decedents ranged from 21 to 99 years; the largest number of deaths occurred between 70 and 74.

Heart disease was the leading cause of death, with a total of 1,375 deaths, or 41 per cent. Of these, 706 were due to coronary occlusion, embolism, and thrombosis, 172 to angina pectoris and other coronary diseases, 273 to diseases of the myocardium and endocardium, and 224 to other diseases of the heart. The average age at death from diseases of the heart was 66.8 years, slightly lower than the average age of 67.5 years in 1948.

Diseases of the nervous system caused 432 deaths. The average age at death from this cause was 70.2 years, 0.2 year less than the average age for 1948. Nine physicians died from Parkinson's disease and 7 from meningitis and diseases of the spinal cord. Four hundred five, or 12 per cent of all deaths, were caused by cancer and other malignant tumors; 157 were of the digestive system, 47 of the respiratory system, 74 of the genitourinary system, and 127 of other and unspecified sites. Physicians died at an average age of 68.0 years from cancer, a 0.6 year increase over 1948.

Accidents caused 138 deaths among physicians, which was a decrease of 20 per cent from the number reported in 1948. Sixty deaths were due to motor vehicle accidents, ten to airplane accidents, 28 to falls, four to poisoning by liquids or solids, seven to drowning, and three to firearms. The average age at death from accidents was 58.9 years in 1949 and 57.2 years in 1948.—*J.A.M.A., January 21, 1950*

MULTIPLE METACHRONOUS CARCINOMAS

CAMERON DUNCAN, M.D., F.A.C.S., GEORGE R. MARSH, M.D., F.A.C.S., and JOHN B. JACOBS, M.D., Brooklyn, New York

(From the Surgical Service of St. John's Hospital)

MULTIPLE carcinomas are not rare.[1] Some authors estimate the rate as low as 0.3 per cent, while Burke reported the highest incidence of 7.8 per cent.[2] The usual estimate is of from 0.3 to 4.38 per cent.

We are reporting this case because it is an apparent cure of four primary metachronous carcinomas. The case is of further interest because of the granulomatous lesion of the sigmoid colon which complicated accurate diagnosis.

The case fills the criteria of Billroth for multiple carcinomas as he outlined in 1860, except for separate metastases which this case did not have. The patient is now alive and well eighteen years after her first carcinoma without any evidence of metastases.

Case Report

Mrs. L. W., a fifty-six-year-old white woman, was first admitted to St. John's Episcopal Hospital in March, 1931, with the chief complaint of a "vaginal growth." On the left labium majorum was a warty vegetation like a flattened raspberry with a desiccated surface. This was thought to be at least a precancerous lesion and a complete vulvectomy and clitorectomy was performed, followed by radiation therapy. The pathologic sections revealed the lesion to be an "early epidermoid carcinoma."

In March, 1939, eight years later, when she was readmitted complaining of bloody stools, the physical examination revealed absent vulva and a narrowing of the introitus but no recurrence of the vulva carcinoma. A proctoscopic examination showed a large polyp near the anus, which was removed and proved to be a papillary adenocarcinoma. Two needles of 10 mg. each of radium were inserted beneath the base of the excised tumor and left in place for twelve hours, for a total dosage of 120 mg.-hours.

Between this admission and 1946, she was well except for complaints of constipation and pain at stool. In view of her past history, a sigmoidoscopic examination was performed, and narrowing of the rectal lumen about 12.5 cm. from the anus was found. There were no signs, however, of carcinoma, either primary or metastatic. A Frei test was negative. A barium enema showed the sigmoid and descending colon to be the site of many large and small diverticuli. She was treated symptomatically with mineral oil and improved.

In August, 1946, she was admitted for vaginal bleeding of two weeks duration. At this time she was thirty years postmenopausal. A diagnostic dilatation and curettage was performed, and sections of the tissue obtained revealed an adenocarcinoma of the uterine fundus—the patient's third primary carcinoma. She was treated with 4,800 mg.-hours of radium and x-ray therapy to four pelvic ports in a course of 22 treatments

She was readmitted in March, 1947, for lower back and abdominal pain and severe constipation, amounting to an incomplete obstruction. A sigmoidoscopic examination was essentially the same as on previous admission. In view of her past history of three primary carcinomas, her partial obstruction, and uncertainty of diagnosis, an exploratory laparotomy was advised.

After careful preparation, a laparotomy was performed on March 20, 1947. The terminal ileum and mesentery in their last $2^1/_2$ feet were found to be thickened and the serosa reddened. This area was sharply demarcated from the surrounding normal bowel. The terminal ileum was acutely flexed and partially obstructed by its adherence to the fundus of the uterus and the lateral superior portion of the bladder. The entire sigmoid colon was greatly thickened and brawny and, hence, so enlarged that it bulged far to the right of its usual position. On palpation, the entire sigmoid colon was hard and indurated. Scattered over the serosal surfaces were small white patches which were biopsied. Calcified diverticuli were present. The remainder of the colon and small intestine appeared normal. No lymph nodes could be palpated in the area of the sigmoid colon. There was no evidence of carcinoma, and the uterus was small and atrophic.

A short circuiting procedure was carried out with a side-to-side anastomosis between an area of normal ileum and the ascending colon. Following this, a transverse loop colostomy was performed. This procedure allowed complete rest of the involved ileum and colon and permitted observation and closure at a subsequent date.

The biopsies taken at operation proved to be particles of intestinal wall with focal fibrosis and no evidence of carcinoma. We felt at this time she had (1) regional ileitis, (2) diverticulosis, and (3) a granuloma of the sigmoid colon of unknown etiology. We did not think the degree of reaction present in the sigmoid colon could be due to the amount of radium and x-ray used in her previous carcinomata. This type of lesion, we thought, suggested regional enteritis involving both the small and large intestine.

Eighteen months later her colostomy was closed. A barium enema showed the distal loop to be fully patent. At operation, the brawniness and size of the sigmoid colon had markedly decreased. Also, the inflammation of the ileum had also lessened.

In March, 1949, two lesions were noticed on the buttocks near the anus. These were surgically removed, one proving to be a pigmented nevus and the other a basal cell carcinoma.

On her final follow-up, the sites of these lesions were well healed. At the present time the patient is in good health. Her appetite is excellent, and she has gained weight. She has no signs or symptoms of recurrence of her previous four carcinomas.

Summary

1. A case of four metachronous primary carcinomas is presented with apparent cure.
2. An unusual granuloma of the sigmoid colon is presented which complicated the case and added to the difficulty of diagnosis.
3. One of the carcinomas was treated with radium alone, one with radium and x-ray therapy, one by surgery and x-ray therapy, and one by surgery alone.

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PARTIAL HYDATIDIFORM MOLE WITH A LIVING CHILD

Charles W. Mueller, M.D., F.A.C.S., and Warren A. Lapp, M.D., Brooklyn, New York

(From the Obstetrical Service of the Caledonian Hospital)

VARYING degrees of hydatid change in the chorion and placenta may be noted at any stage of gestation, the incidence being greatest for the first trimester. Hydatid degeneration probably begins about the fifth week of gestation when fetal circulation is established. A defective embryo or the absence of one due to a pathologic ovum prevents normal development, and the continued trophoblastic activity results in an accumulation of fluid in the loose connective tissue stroma of the villi. This process may be terminated spontaneously by abortion at any time, the hydatidiform changes being microscopic in many cases, grossly evident in some. Very few cases of hydatidiform mole progress beyond the fifth month of gestation.

The presence of a nonviable fetus in association with extensive molar degeneration of the placenta is noted on occasion, and, in a few instances, cases of twin pregnancy in which one ovum developed normally while the other ovum formed a hydatidiform mole have been reported. However, it is extremely rare and unusual for a pregnancy developed from a single ovum to continue to or beyond the point of viability, despite marked molar degeneration, with termination in the birth of a living infant.

Thaisz, in 1938, reported marked degenerative changes in a single ovum associated with a living infant.[1] His review of the literature revealed only eight similar cases previously reported. Four additional cases have been reported by Bowles, Bret, Chacko, and Masani.[2-5] The authors are herewith reporting the birth of a living infant associated with hydatidiform changes involving 75 per cent of the placenta.

Case Report

The patient was a thirty-two-year-old, white, gravida 3, Para 2, whose expected date of confinement was April 4, 1949. Her antenatal course was uneventful except for frequent episodes of moderately severe abdominal pain, not noted during either of her previous pregnancies. Weight gain was 22 pounds.

She was delivered spontaneously, after five hours of labor, on February 25, 1949, of a living female infant weighing 3 pounds, 14 ounces. The child was normally developed except for small hemangiomas on the right shoulder and arm. At delivery of the placenta, marked hydatidiform degeneration was noted grossly. There was no excessive bleeding at delivery or postpartum. The puerperium was uneventful. Pelvic examination six weeks postpartum revealed a normally involuted uterus. No cystic enlargement of the ovaries was noted. A Friedman reaction was negative.

Pathologic study of the placenta confirmed the clinical diagnosis of hydatid degeneration. The report was as follows: "The placenta weighs 1 pound, 12 ounces and measures 11 by 9 by 2 inches. On inspection of the maternal surface, approximately 75 per cent of the structure shows hydatid degeneration (Fig. 1). On serial section all of the involved area is occupied by small vesicles varying from 1 mm. to 1 cm. in diameter (Figs. 2 and 3). The uninvolved portion of the placenta appears normal but shows infarction.

Microscopically, there are giant-sized villi with a well-preserved pattern of growth. Most of the villi are lined by a single layer of syncytial cells (Fig. 4). A slight increase in trophoblastic activity is noted in some areas. The stroma is edematous.

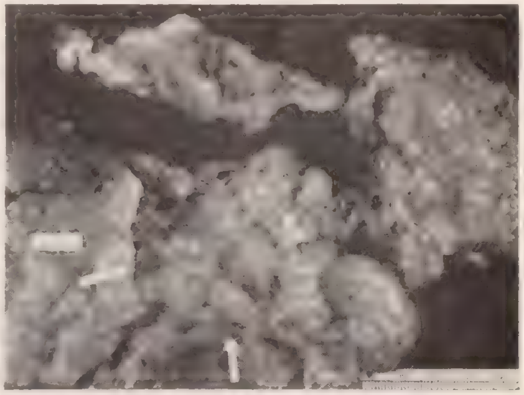

FIG. 1. Maternal surface of the placenta, a portion of which has been cut away to demonstrate the extensive vesicular formation.

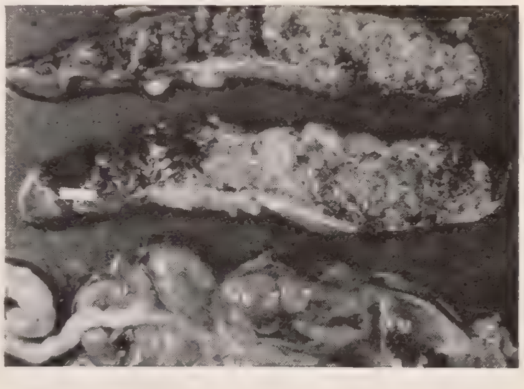

FIG. 2. Serial sections through the placenta. The lighter portion represents that part of the placenta which has undergone hydatid degeneration. The uninvolved portion of the placenta appears dark because of multiple infarcts which were present. A portion of the fetal surface, with membranes and cord, is also shown.

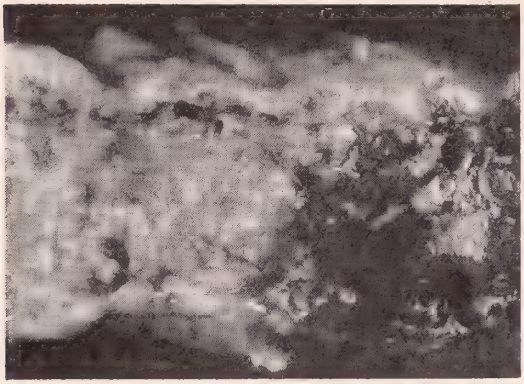

FIG. 3. Marked hydatid degeneration extending from the fetal surface above to the maternal surface below. The dark portion represents an infarcted area in the uninvolved segment of the placenta.

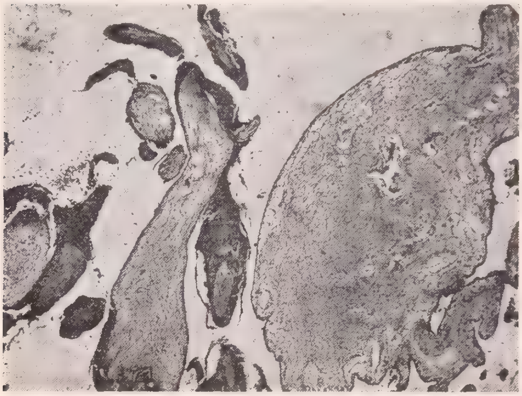

FIG. 4. Photomicrograph showing the general contour of the placenta in the region of the hydatid degeneration. Giant villi, lined by a single layer of syncytial cells, are noted. Some cystic degeneration of one giant villus is in evidence. The avascularity of the villi is prominent. (70 ×)

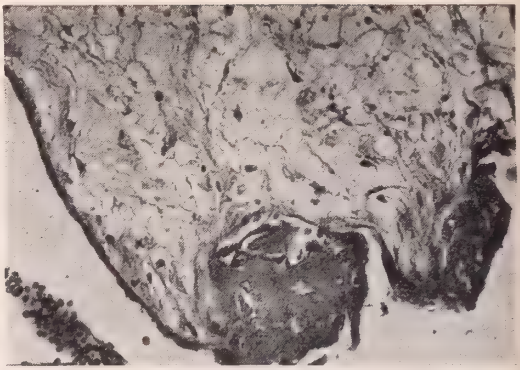

FIG. 5. Photomicrograph showing a portion of a giant villus. The edema of the stroma is well demonstrated. No invasion of the stroma is noted, and no cellular anaplasia can be observed. (400 ×)

Avascularity is prominent. Many of the villi show a large central space containing amorphous, pink-staining material. There is no evidence of malignant degeneration (Fig. 5).

Comment

In view of the fact that hydatidiform mole, either partial or complete, is associated with a pathologic ovum in a high percentage of cases, the incidence of fetal anomalies should be higher in those instances where some degree of hydatid change in the placenta is noted. In the case cited by the authors, two large hemangiomas were noted, and these have since required surgical treatment. In the case reported by Thaisz, the infant was noted to have webbed fingers on one hand and the left upper extremity was shorter than the right.[1]

Hemorrhage may sometimes accompany the expulsion of a mole, and in the case cited by Bowles, the patient had a severe postpartum hemorrhage before the placenta and mole could be removed manually.[2]

Prematurity is the rule when hydatid changes in the placenta are present, and abdominal pain throughout the antenatal period has been reported previously.[5]

The occurrence of hydatid changes, even at or near term, illustrates the importance of thoroughly examining the placenta after every obstetric delivery. On one previous occasion the authors observed extensive hydatidiform cystic degeneration of a placenta, confirmed microscopically, associated with a stillborn infant delivered six weeks prematurely. When extensive molar degeneration has been noted, the patient should be followed by clinical examination and laboratory tests at regular intervals for the next several years.

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Rise from the table with an appetite, and you will not be in danger of sitting down without one.—Anonymous

CARCINOMA IN CONGENITAL CYST OF PERITONEUM

George M. Saypol, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School)

THE rarity of carcinoma in a mesenteric cyst prompts the report of this case. Of additional interest is the possibility of rupturing mesenteric cysts by undue manipulation preoperatively, an event which occurred in this instance while the patient was under anesthesia.

Warfield in 1932 reported two cases of mesenteric cyst and reviewed the literature between 1920 and 1932 which included 129 cases.[1] Until 1920, 200 to 300 cases were estimated to have been reported. He stated that malignant degeneration of these cysts is rare and may be either carcinoma or sarcoma. Of the 129 case reports which he studied, three were diagnosed as malignant—one adenocarcinoma and two spindle cell sarcoma. Among the complications he listed hemorrhage into the cyst and rupture of the cyst.

Peterson in 1932 reported five cases of mesenteric cyst and one case of omental cyst operated upon successfully.[2] One of these, diagnosed as an embryonal carcinoma of mesenteric cyst, showed no evidence of recurrence two and a quarter years later. He commented, "The original histological picture may be so altered from hemorrhage, pressure, inflammation, or malignant degeneration that it is difficult for the pathologist to render a satisfactory report as to the origin and structure of the cyst."

Case Report

K. E., a seventy-year-old Syrian woman, was admitted to the Hospital on January 2, 1949, complaining of upper abdominal pain and the presence of a mass in the right upper quadrant of the abdomen of twenty-four hours duration. The pain was continuous and dull in character. There were no symptoms or signs referable to the gastrointestinal tract, and a history of intermittent pain in the right upper quadrant for nine years was attributed to disease of the gallbladder.

Physical examination revealed a well-developed, well-nourished patient in moderate distress with a well-circumscribed mass, measuring about 15 cm. in diameter, in the right upper quadrant of the abdomen. It was slightly tender and during palpation was displaced into the left upper quadrant of the abdomen. The remainder of the examination was negative. Temperature was 99 F., pulse 80 and regular, respirations 24, blood pressure 170/100.

A diagnosis of mesenteric or pancreatic cyst was made. The patient was taken to the operating room four hours later, and cyclopropane anesthesia with curare was administered. With the abdomen relaxed, the mass could easily be displaced to either quadrant of the upper abdomen. During palpation the mass suddenly disappeared, suggesting rupture of a cyst. A right rectus, muscle-splitting incision was made and the abdominal cavity found to contain at least 300 cc. of bright red blood. This was coming from a ruptured cystic mass, well encapsulated and lying beneath the greater curvature of the stomach and adherent to the gastrocolic omentum. The gallbladder was adherent to the first portion of the duodenum, moderately distended, and contained no stones. The cyst was easily removed by severing its attachment to the gastrocolic omentum and including serosa of the stomach with the mass. The rent in the omentum and the serosal defect of the stomach were sutured. The abdomen was closed with interrupted cotton, and no drainage was used.

The patient received 1,000 cc. of blood by transfusion and did well postoperatively, the temperature ranging between 99 and 100 F. during the first three days. She was discharged from the hospital on the seventh postoperative day and has done well to date (sixteen months).

Pathology Report.—The pathology report by Dr. Maurice N. Richter was as follows:

Macroscopic Examination.—The specimen is an opened cyst which must have been approximately 12 cm. in diameter (Fig. 1). The wall is thin, membranous, and partially transparent. The outer surface is smooth and glistening except in the region of a small saclike projection at which point the specimen was attached to the greater curvature of the stomach. No opening can be demonstrated in the wall at this point. The wall is, for the most part, less than 1 mm. in thickness. From the inner surface project many irregular masses of extremely soft, hemorrhagic tissue which is quite friable. The largest mass is approximately 3 cm. in maximum diameter and projects 1 to 2 cm. into the lumen. The small saclike projection at point of attachment to the stomach is filled with similar friable, soft, dark red tissue.

Microscopic Examination.—Multiple sections demonstrate a thin but dense fibrous cyst wall lined by irregular masses of large polygonal tumor cells. These cells contain relatively large ovoid or rounded nuclei with predominant nucleoli, which vary in size,

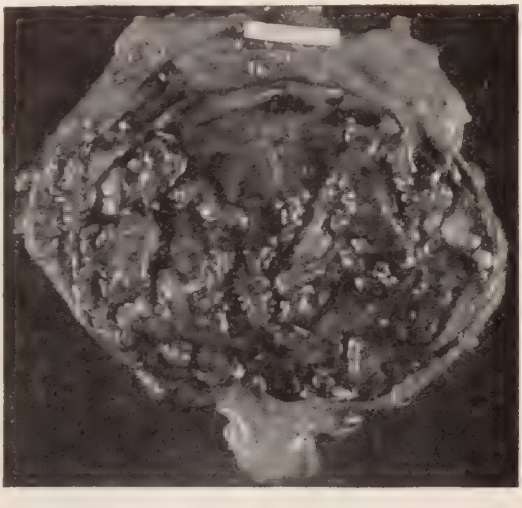

Fig. 1. Gross specimen of carcinoma in congenital cyst of peritoneum.

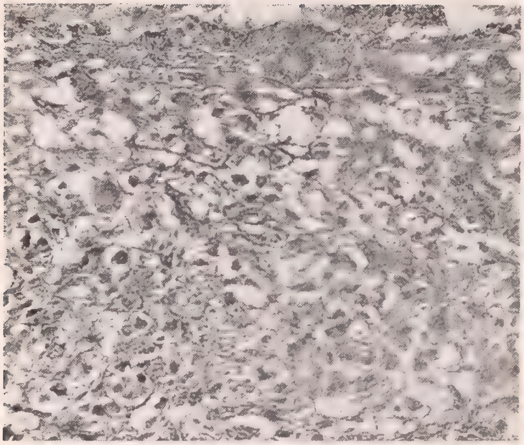

FIG. 2. Microscopic section carcinoma in congenital cyst of peritoneum. (125 ×)

and coarse granules of chromatin (Fig. 2.) Moderate variation in the size and shape of the nuclei is noted, and mitoses average about one per high power field. The surrounding cytoplasm is granular and eosinophilic with occasional small vacuoles. The tumor cells are massed in broad sheets with little fibrous stroma. Several portions of the tumor are necrotic, and many areas are hemorrhagic. Many hemosiderin-laden phagocytes are scattered in the stroma. Section through the point of attachment to the stomach wall shows a portion of the muscular coat of the stomach, with hemosiderin-laden phagocytes scattered therein but no evident invasion by tumor cells.

Diagnosis.—Carcinoma arising in congenital cyst of peritoneum; type of cyst undetermined.

Summary

A case of carcinoma in a congenital cyst of peritoneum is reported. The possibility of rupturing mesenteric cysts by undue manipulation is mentioned. In this instance, rupture of the cyst added two complicating factors: bleeding into the peritoneal cavity because of apparent previous hemorrhage within the cyst and the possibility of carcinomatous "seeding" of the peritoneum.

103 EAST 86TH STREET

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A.M.A. JOINS IN PHYSICIAN INCOME SURVEY

The A.M.A. Bureau of Medical Economic Research and the Office of Business Economics of the U.S. Department of Commerce are conducting jointly a survey of physicians' incomes.

The Bureau was authorized by the Board of Trustees to cooperate in this survey, which the Department of Commerce originally planned to conduct alone. It will be the first full-scale survey by the Department of physicians' incomes since 1941.

Dr. Frank G. Dickinson, Bureau director, said that an analysis of the results will be published by the Department of Commerce next fall in its monthly publication, *Survey of Current Business*. Its August, 1949, and January, 1950, issues published similar analyses of surveys of incomes of dentists and lawyers, respectively, made jointly with the American Dental Association and the American Bar Association.

There is evidence that the national averages in some surveys have been too high because physicians who do not have bookkeepers to fill out questionnaires do not reply in sufficient numbers. Accordingly, the Bureau emphasizes the importance of all doctors, especially those with a relatively small practice, filling out the questionnaires.

Accurate postwar data on physicians' incomes is badly needed in order to develop better estimates of how much the American people pay to physicians.

Every physician can be assured that the survey has no relation whatever to the operations of the U.S. Bureau of Internal Revenue. There is no way by which the Department of Commerce could have obtained the needed information from the Bureau of Internal Revenue. Hence, the questionnaire survey.

There will be two questionnaire forms. The Bureau of Medical Economic Research helped to design these. A short form will request income data for 1949 only. A long form questionnaire will cover the years 1945 through 1949. All are to be returned unsigned in franked envelopes.

From the medical profession's standpoint, the survey is important, and doctors who receive the questionnaires are urged to fill them in and return them as soon as possible.—*Secretary's Letter, A.M.A., March 27, 1950*

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on March 9, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of service with the armed forces for 7 members for 1950 and 1 for 1949; on account of illness for 15 members for 1950 and 7 for 1949.

In accordance with your recommendations the Board of Trustees voted an appropriation for extraordinary legal expenses, on February 8, 1950. They approved an appropriation for removing a wall near the west extremity of the main office, and the addition of two lighting fixtures. The Trustees also voted $500 for the National Society for Medical Research as suggested by you. They authorized the signing of a lease for your Albany office.

Doctor Masterson has requested me to notify the New Jersey State Medical Society that Dr. Edward R. Cunniffe and himself will represent our Society at the Annual Meeting. He also instructed me to notify the Connecticut State Medical Society that Dr. J. Stanley Kenney and your Secretary will be delegates to the Annual Meeting of that Society in Waterbury next May.

February 12, 1950, was spent in Chicago by your Secretary attending the American Medical Association National Education Campaign meeting. Dr. Floyd S. Winslow, Mr. Frederick Miebach, and Mr. Thomas E. Walsh also represented your Society. This meeting, among other things, produced a legal opinion to the effect that medical organizations ought not to take active part in political campaigns. On the other hand, it was stated, individual physicians have every right to do so and to be members of political action committees. This opinion was submitted to Mr. William Martin, Counsel.

On February 16, 1950, your Secretary attended the Annual Meeting of County Medical Society Legislation Committee Chairmen at the Hotel Ten Eyck, Albany. On February 20 and 21, he was in attendance part of the time at the American Medical Association's tenth Annual Congress on Industrial Health, at the Hotel Roosevelt. On February 24, Dr. Masterson and your Secretary took pleasure in attending the Annual Meeting and Dinner of Caduceus Post of the American Legion.

Letter No. 138, February 27, 1950, from Dr. George F. Lull, Secretary and General Manager of the American Medical Association, states that annual dues of that body should be collected by county societies and transmitted to Chicago by way of state societies. Dr. Lull states that the American Medical Association will allow each State Society up to ten cents for each payment that it collects. Exemption from A.M.A. dues will be granted when payment would be a hardship and provided the member's state and county society dues are also remitted. $12.50 will be the amount required from members elected after July 1, 1950.

The report *was accepted.*

Communications.—1. Letter dated February 20, 1950, from Dr. William Benenson, Secretary, Medical Society of the County of Queens, stating that Dr. Leroy T. Barnes had been recorded as dropped from membership because of nonpayment of 1948 dues. However, it was voted by their Comitia Minora to rescind that action and consider the doctor as resigned July, 1947, at which time he commenced a residency, if the State Society was willing to act accordingly.

It was voted that Dr. Leroy T. Barnes' resignation from the State Society be accepted as of July 1, 1947.

2. Letter from Dr. Madge C. L. McGuinness, Secretary of the New York Society of Physical Medicine, requesting the Council of the Medical Society of the State of New York to grant a Section to the specialty of Physical Medicine, instead of a Session.

It was voted to refer this to the Subcommittee on Scientific Program of the Convention Committee.

3. Letter, dated February 17, 1950, from Dr. Gerhard Hirschfeld, Director, Research Council for Economic Security, 111 West Jackson Boulevard, Chicago 4, Illinois, expressing the hope that the Medical Society of the State of New York would help the Council in its endeavor to lay before the American people the impartial facts regarding all aspects of social security, thus playing an increasingly important role in the determination of the social security system. They would particularly appreciate a subscription.

4. Letter dated February 15, 1950, from Dr. L. W. Hull, Chairman, Special Committee on Education, Michigan State Medical Society, stating that the Michigan State Medical Society and several component county societies had been asked to assist in the financial support of the Research Council for Economic Security of Chicago. They were delaying participation pending completion of a study of what other state medical societies were doing in this regard and would like an expression of opinion from our Society.

It was voted to refer letters number 3 and 4 to the Committee on Economics for study and report at the next meeting.

5. Letters of appreciation for expressions of condolence were read from Dr. Edward R. Cunniffe, Mrs. Mary Montieth, and Mrs. Ann Roetger.

6. Letter from Dr. Charles H. Loughran, Secretary, Medical Society of the County of Kings, re Dr. Henry F. Kreckman, 5 Fox Lane, Hicksville, who was dropped January 1, 1949, for nonpayment of 1948 dues. He stated that, on December 14, 1949, they were informed by letter from Dr. Kreckman that he was not discharged from service until June 1, 1948. Therefore he is entitled to remission of dues for 1948. As he is at present a resident in orthopedics at St. John's Hospital, he can *be resigned from active membership as of December 31, 1948,* and apply for Hospital Resident Membership.

It was voted to accept Dr. Henry F. Kreckman's resignation as of December 31, 1948.

7. Letter from Dr. B. Wallace Hamilton, Secretary, Medical Society of the County of New York, re remission of Dr. Alfred Hess' dues. He stated, answering a request from the Council for more information, that a personal interview had been held with Dr. Hess by the New York County Treasurer, Dr. Condict W. Cutler, Jr., and himself. Dr. Cutler had recommended to the Comitia Minora that such remission be made, and it was so carried.

It was voted that the Secretary be requested to inform Dr. Hamilton that the Council has no power to act because of limitations of our Constitution and Bylaws, and to suggest that the Medical Society of the County of New York present their request to the House of Delegates, if they so desire.

8. Dr. Anderton stated that a letter was prepared to be sent to Governor Dewey in regard to blood banks offering cooperation of the existing blood bank system in preparation for any catastrophe which might occur. This letter was submitted, at the direction of the Council, to Dr. Thomas McGoldrick, chairman of the Committee on Emergency Preparedness. Dr. McGoldrick replied that he had no objection to the letter being sent.

Dr. Anderton read the proposed letter to Governor Dewey, and

It was voted that the Secretary be empowered to edit and send it to the Governor.

9. Letter dated March 1, 1950, from Dr. Dean A. Clark, chairman of the Subcommittee on Medical Care of the American Public Health Association to Dr. Masterson, enclosing for review and comment a statement on "The Quality of Medical Care in a National Health Program" which had been prepared by the Subcommittee on Medical Care of the American Public Health Association.

It was voted that this be referred to the Economics and/or Medical Service Committees for study and report.

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon reported that there had been 1,360 bills introduced by February 21 and that he and his counsel have been keeping in touch with other groups, such as the Department of Education, the Department of Health, and the Department of Mental Hygiene, in regard to legislation in which we are jointly interested. They have been working with the New York Academy of Medicine in connection with the bills introduced at their request.

A communication from Dr. Kenneth T. Rowe, President of the Seventh District Branch, was presented with a resolution to the Council by Dr. Hannon. This requested that the Executive Officer of the Medical Society of the State of New York furnish the county medical societies with legislative information regarding bills that stand a reasonable chance of being reported out of committee.

It was voted to refer this to the Committee on Legislation for study and report at the next meeting.

Communications from several men in regard to the Seventh District Branch Meeting in Clifton Springs on September 14 were received by Dr. Hannon. That is the second Thursday, usually the day of the Council meeting. That Wednesday is the anniversary of Clifton Springs Sanitarium, and they would like to have the District Branch meeting the following day, retaining many important people for speakers at the District Branch meeting.

After discussion, *it was voted* to change the date of the Council meeting from September 14 to September 21, 1950.

Dr. Hannon read a communication from Dr. Madge C. L. McGuinness in regard to the physiotherapy bill.

Reports of Committees

Legislation.—Dr. Dattelbaum, Chairman, submitted the following report:

The Legislation Committee held its annual conference with the legislation chairmen of the county medical societies in Albany on Thursday, February 16. There were 33 county societies represented and ten of the 14 members of the State Legislation Committee were at this meeting. There were also present officers and representatives of the State Society, the Woman's Auxiliary, the State Department of Health, and the State Department of Education. There was a total of 62 persons present.

Twenty-two bills were taken up, and after discussion 11 of these bills were approved, nine were opposed, and two, no action. It was requested, after discussion, that the x-ray bill introduced by Senator McGovern (Senate Int. 1198) and by Assemblyman Dwyer, (Assembly Int. 1717) be amended. The suggested amendment was the striking out of all reference to x-ray and radium therapy. This amendment has been made to the bill in both houses.

The bill amending the statute providing liens for hospitals was opposed as it had been introduced. The objection to the bill was that portion which would permit hospitals to charge for the services of physicians, surgeons, interns, and residents. It was suggested that an attempt be made to change this wording to provide that the hospital might include in its liens charges for services of a duly licensed physician or surgeon not in the employ of the hospital when the hospital had paid or contracted to pay for such services.

Outside of the amendment to the x-ray bill, there has been no action so far on either the x-ray bill or the injunction bill which the State Society requested be introduced.

At the conference of the legislation chairmen of the county medical societies, Dr. John R. Williams, Jr., of Rochester, made a motion at the request of the legislation chairmen of the Seventh District Judicial Branch, which reads as follows:

"I would like to make a motion that this body agree to study the problem of all those now engaged or wishing to engage in the practice of the healing arts, not presently under the Medical Practice Act, and that this study be completed in time to furnish the information to the appropriate legislators for the purpose of introducing legislation on this subject in the 1951 legislative session.

"We further move that the above action be transmitted through the local county societies to their respective legislators in order that they may realize that to serve best the interest of the general public we will have constructive suggestions prior to the 1951 session of the Legislature."

After considerable discussion, it was voted that the contents of this motion be presented to the Council and recommend that such a study be made and that a resolution be presented in the House of Delegates at its next meeting.

It was voted that the Council authorize the President to appoint a subcommittee of the Legislation Committee to study the cults, and to furnish information to the appropriate legislators for the purpose of introducing legislation on this subject in the 1951 New York State Legislature; Dr. John R. Williams, Jr., of Rochester to be appointed on the Committee.

There has been a record number of bills introduced in the Legislature this session. It is anticipated that this will be a relatively short session and that there will be great activity in the Legislature in the next two weeks.

The Council voted to withdraw their action of approval at the February meeting in support of the Physiotherapy Bill and take no action on it in view of the fact that it had been amended.

Economics.—Dr. Azzari reported regarding meetings that had been attended by Mr. Farrell, Director of the Bureau of Medical Care Insurance.

Ethics.—Dr. Reuling read the annual report of the Committee on Ethics to the House of Delegates.

Approval was voted.

Nursing.—Dr. Dickson, Chairman, reported that Dr. Masterson had received a letter from Dr. John J. Bourke, Secretary of the New York State Interdepartmental Health Council, relative to the majority and minority reports submitted by the Advisory Committee on Nursing Services to the Interdepartmental Health Council, requesting him to review these reports and give the Interdepartmental Health Council the benefit of his suggestions, criticisms, and advice.

Dr. Masterson delegated this to the Committee on Nursing Education for recommendations.

Dr. Dickson submitted a preliminary reply which he suggested be given to the Secretary for briefing. He felt the problem was something that needed a great deal of study, and he did not think that any definite action would be taken in the near future on the recommendations of the Interdepartmental Health Council.

Planning Committee for Medical Policies.—Dr. Kenney, Chairman, stated that the final meeting of the Committee was held on February 16, and five members were present. The annual report is now in the hands of the printer.

Publication.—Dr. Kosmak, Chairman, reported that the Publication Committee held its regular meeting yesterday, and discussed a considerable number of minor matters. The Committee has been importuned, as has Dr. Anderton, the Secretary, by gentlemen and organizations that want to have their membership or titles listed in the *Directory*, and there have been considerable discussions in the Committee on which ones should be included. We have set up certain standards.

Public Health and Education.—Dr. Curphey, Chairman, reported that he had attended various meetings and arranged postgraduate Teaching Days. He requested that Dr. John F. Mahoney, the recently appointed Commissioner of Health of the City of New York, be appointed as adviser to the Council Committee on Public Health and Education, also that Dr. Harry S. Mustard be retained as adviser.

The above appointments *were approved.*

Cancer.—Dr. Adie, Chairman of the Subcommittee on Cancer, reported on some of the highlights of the work of the past year. The State Health Department has prepared a manual on occupational cancer which is to be distributed to the physicians on a State-wide basis. Dr. Gerhardt, Director of Cancer Control of the State Department of Health, has requested us to address the envelopes necessary for its distribution in the metropolitan area. Permission is requested from the Council for this.

It was voted that permission be granted.

Diabetes.—Dr. George E. Anderson, Chairman of the Subcommittee on Diabetes, requests the Council's approval for circularizing the county medical societies with the following resolution:

> WHEREAS, there are a million hidden diabetics in this country, and
>
> WHEREAS, many people cannot be persuaded to visit their physicians for periodic health examination, much less urinalysis, and
>
> WHEREAS, "Diabetes Detection Centers," where mass urine and blood testing are meted out to the public, have been deemed by many professional groups in this State to be not in the interest of the individual's welfare since they tend to guide the individual to bureaucratic medicine rather than to his own personal physician, and since these centers usually holding forth in a public building create the unjustified inference that the diagnosis of noncommunicable disease is a governmental rather than a professional responsibility, and
>
> WHEREAS, it would be in a large measure possible to guide these people for diagnosis and care to their own physicians of choice if they themselves were encouraged to make periodic urine tests for sugar on themselves at home, and, if positive, to see their own physicians for diagnosis (analogous to the use of the clinical thermometer by laymen), and
>
> WHEREAS, the American Diabetes Association has invited all pharmaceutical manufacturers of the country to produce simple testing sets for sale and distribution to the public, and
>
> WHEREAS, a trial experience of two months with individual testing sets distributed free to the public or vended over drug counters to the public resulted in over 2,200 people in New York City (over 3,800 in New York State) being guided to the physicians of their choice for diagnosis (often before symptoms and signs of their disease had developed), and
>
> WHEREAS, The Medical Society of the State of New York has formally approved the principle of the individual's testing his own urine periodically at home for sugar and thereby being guided to the physician of his own choice for a diagnosis, therefore be it
>
> *Resolved:* That the Medical Society of ________ County does go on record as approving the principle of encouraging the individual to test his own urine periodically at home for sugar and if positive promptly to see his physician for a diagnosis as to the cause of the sugar, and
>
> That the County Medical Society inform the local pharmaceutical associations in its vicinity of its action to the end that these local organizations will encourage their constituent pharmacists to stock on their shelves testing equipment for sale to the public, that the pharmacist be urged to publicize the fact that the medical profession through the County Medical Society has approved this as an accepted means of finding the unknown diabetic and guiding him to medical care before he develops the symptoms and the complications of his disease, and
>
> That the County Medical Society publicize this new principle through its Committees on Public Health and Publicity as being the doctors' method.

It was voted to approve the above resolution with substitution of the word "many" for "million" and that it be forwarded to the various county medical societies for their action.

Your Chairman would request the Council to consider the suitability of the Council Committee's holding a luncheon meeting on the Annual Meeting Teaching Day (May 9, 1950), for the chairmen of the postgraduate education committees of the county medical societies.

After discussion, this *was approved.*

Film Review Board.—Dr. Curphey reported he had obtained information about a film that was shown in Schenectady, "Medical Insurance—A

Pathway to Health." Through a personal communication he had obtained the film script from Current History Films, 226 East 22nd Street, New York City.

New York State Department of Health Roster of Physicians.—Dr. Curphey read a letter from Dr. Joseph C. O'Gorman, Chairman of the Workmen's Compensation Committee of the Medical Society of the County of Erie, dated March 8, 1950, which stated that

"The New York State Health Department maintains a roster of specialists. This roster is used by the various offices of the Bureau of Rehabilitation of the State Education Department in its referral of cases requiring physical rehabilitation.

"A physician desiring to become enrolled as a specialist by the State Health Department makes application on a form prescribed by that Department. The State Health Department has set up qualifying standards which at the present time are that the doctor either be a diplomate of one of the specialty boards or that he be qualified to take their examination.

"What I would like to have you find out for me is this: Has the Medical Society of the State of New York given its approval to the State Health Department setting up qualifying standards, and also whether the qualifying standards adopted by the State Health Department were approved by the State Medical Society. . . ."

After discussion, *it was voted* that Dr. Curphey be requested to obtain the necessary information for clarification and to take up the matter with the New York State Department of Health.

X-Ray Bill.

It was voted that an emergency meeting be called within the next day or two at which the chairman and members of the Legislation Committee of the State Medical Society will meet with the representatives of the Committee on Public Health Relations of the New York Academy of Medicine so that the matter of the pending x-ray bill may be ironed out and a united medical opinion be presented to the Legislature on this subject.

Public Relations.—Dr. Winslow, Chairman, reported that the Second Annual Conference in connection with the National Education Campaign of the American Medical Association was held in Chicago on February 12. Dr. Winslow represented the Committee on Public Relations and Mr. Walsh and Mr. Miebach the Public Relations Bureau. Mr. Anderson was unable to attend because of a death in his family.

Dr. Winslow, Mr. Anderson, Mr. Walsh, and Mr. Miebach attended the meeting of county legislation chairmen in Albany on February 16, at the invitation of Dr. Hannon. A report on the National Education Campaign was rendered at the meeting by Dr. Winslow.

The field representatives were recalled to the New York office from February 14 to 17 to receive instructions based on the two conferences mentioned above. Thereafter they returned to their assigned areas, with the exception of Mr. Tracey, who was assigned to the project of promoting resolutions against compulsory health insurance on the part of State organizations of all types. Mr. Tracey will continue to maintain contact with the counties in his area (the Hudson River Valley and Northern New York), but will not make personal visits except in unusual cases.

On February 20 and 21 the Tenth Annual Congress on Industrial Health, sponsored by the Council on Industrial Health of the A.M.A. and the Medical Society of the State of New York, was held at the Hotel Roosevelt, New York City. The Public Relations Bureau cooperated with the Public Relations staff of the A.M.A. in obtaining coverage of the Congress in the daily press and through the wire services.

On February 27 a release was prepared and issued on behalf of the Bureau of Medical Care Insurance announcing the fact that membership in the six voluntary nonprofit medical care insurance plans approved by the State Society reached a total of 2,079,353 as of December 31, 1950. Releases also were issued covering postgraduate medical education meetings in the following counties: Ulster, Tioga, Rensselaer, Oneida, Clinton, and Nassau.

Since 1942 Mr. Anderson has participated in work going on in the field of alcoholism, having been associated with activities of Yale University and a member of the Board of Directors of the National Committee for Education on Alcoholism. Various articles have appeared over his signature in the *Quarterly Journal of Studies on Alcohol* and other publications, and for several years he lectured at the Yale School of Alcohol Studies. Over this period he has gathered together a considerable amount of material relating to the modern approach to the subject, which will be published in book form by A. A. Wyn, Inc. in the Fall of 1950. As this work is in furtherance of the efforts of our own committee headed by Dr. Milton Potter of Buffalo, as Chairman, it has the approval of the Public Relations Committee.

Dr. Winslow supplemented the report by stating that the Committee was considering distributing John E. Flynn's book, *The Road Ahead*, to patients in various hospitals. Two thousand copies, which would cost $800, could be included in the budget for the year. If the Council does not object they will proceed with this effort and would appreciate the suggestions and cooperation of the Council. Several suggestions were made which Dr. Winslow said his Committee would think over.

Liaison with Veterans Administration.—Dr. Bauckus, Chairman, raised the question of the renewal of the contract of the Veterans Medical Care Plan, Inc., with the Veterans Administration, which expires June 30 and for which the provision for renewal is to be made thirty days before expiration. He gave a résumé of the work that had been accomplished and read the contract.

The Council voted to renew the contract and also reiterated the stand that coordinators are essential for proper working of this plan.

Workmen's Compensation.—Dr. Kenney, Chairman, reported on the activities of the Committee.

The report *was accepted.*

New Business

Extraordinary Legal Expenses.

The Council *voted* to request the Board of Trustees to make an appropriation not to exceed $2,700 for extraordinary legal expenses that may occur during the coming month.

United Medical Service Trustee.

The Council *voted* to approve the nomination of Dr. Chas. Gordon Heyd as a Trustee of United Medical Service.

Academies of Medicine.—Dr. Anderton stated: "Mr. President, last year there was a meeting of representatives of the various academies of medicine throughout New York State, during the meeting of the House of Delegates. I move that the Council approve a similar meeting this year under the auspices of our Society, without expense except to supply the meeting place."

Approval *was voted.*

District Branches.—Dr. Anderton reminded the Council that the counties of Rockland, Nassau, and Suffolk have complained about the present First and Second District Branch distribution of county societies, and have signified their intentions of discussing the matter at the House of Delegates.

CORRESPONDENCE

GRIEVANCE COMMITTEES

To the Editor:

Strange and ludicrous things are happening in this country of ours. The clannishness of the doctors and their willingness to protect each other's good name is considered a throwback to the medieval guilds and given the scare-word appellation of "reactionary." Meanwhile modern guilds such as the United Mine Workers, the Automobile Workers, and the Railroad Brotherhoods are not only condoned but encouraged by present day legislation. All this in spite of the fact that the healing guilds have always protected the public from charlatanism and other evils, while unions today seek to improve the lot of members at the expense of the consuming public.

To get to my main point, I'm against the new type of "grievance committees" encouraged for medical societies. Censorship setups have always been a part of medical societies and are sufficient to keep in check the few doctors who require watching. If the only purpose of the newer committee is for publicity of our self-regulatory functions, then publicize the fact that we have always sharply chastised our fringe practitioners. With the newer "grievance committee," every crackpot, every dead-beat and jealous ne'er-do-well can and will fill up the time of a committee dedicated to following these clues provided. And in spite of statements to the contrary these stupid grievances will continue to come in as long as human nature continues to remain the same I find no such committees set up voluntarily by electricians, plumbers, or joiners, where I can arbitrate the bill I sometimes receive.

The horrid part of it is that the present Administration is against a meeting to discuss the future of civilization and the H-bomb because it would perhaps lose face. But sufficient dictatorial pressure has already been put on the medical profession so that it apparently needs must practice appeasement and cry for good publicity after centuries of selfless public service.

I conclude by simply stating I am against the obsequiousness and utter needlessness of the newest type "grievance committee" which is being pushed for our medical societies.

Mark L. Herman, M.D.

Adams, New York
March 15, 1950

FORENSIC MEDICINE

To the Editor:

The undersigned is desirous of developing a survey in the field of forensic medicine for the discussion of medicolegal problems. Physicians with degrees in law are invited to communicate with

Leon Luria, M.D.

319 West 18th Street
New York 11, New York
March 29, 1950

NECROLOGY

Sidney Kenneth Apfel, M.D., of Great Neck, died on April 22 at the age of forty-six. Dr. Apfel received his medical degree from the New York University-Bellevue Medical College in 1928. He had been attending surgeon at Beth-El Hospital, Brooklyn, and Sydenham Hospital and the Hospital for Joint Diseases, New York City.

Bradford Bissell, M.D., formerly of Ithaca, died on September 24, 1949, at the age of forty-three. Dr. Bissell received his medical degree from the Duke University Medical School in 1936 and interned at the French Hospital, New York City. He had been attending physician at the Cornell University Infirmary in Ithaca before going to Fort Thomas, Kentucky, where he was assigned to the Veterans Administration Hospital there. Dr. Bissell was a member of the Tompkins County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harley Ulysses Cramer, M.D., of Lockport, died on December 7, 1949, at the age of seventy. Dr. Cramer was graduated from the University of Buffalo School of Medicine in 1906. He was consulting radiologist at the Lockport City Hospital. Dr. Cramer was a member of the Radiological Society of North America, the Niagara County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Raymond Farrell, M.D., of the Bronx, died on April 11 at his home after a long illness, at the age of sixty-seven. Dr. Farrell was graduated from the College of Physicians and Surgeons, Columbia University, in 1908. He was consulting dermatologist and syphilologist at the Morrisania Hospital, the Bronx; attending dermatologist at St. Francis Hospital, and consulting dermatologist at the Bronx Eye and Ear Infirmary. Dr. Farrell was a member of the American Academy of Dermatology and Syphilology, the Military Surgeons of the United States, the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Roland Charles Harris, M.D., of Rochester, died on April 14 at the age of seventy-two. Dr. Harris was graduated from the Syracuse University College of Medicine in 1905. He was consulting surgeon at the Park Avenue Hospital, Rochester, and a member of the Rochester Academy of Medicine, the Rochester Pathology Society, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edwin Harry Heller, M.D., of East Hampton, Long Island, died on April 14 in the Southampton Hospital as the result of injuries suffered when his automobile skidded on an icy pavement and crashed into a tree. He was forty-four. Dr. Heller was graduated from the Cornell University Medical College in 1929 and interned at the Fordham Hospital, New York City. He opened his practice in East Hampton in 1935. During World War II, Dr. Heller was a flight surgeon with the Eighth Air Force in England. He was attending physician at the Southampton Hospital and a member of the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Reuben Kayser, M.D., of Brooklyn, died on April 13 in the Good Samaritan Hospital, West Palm Beach, Florida, at the age of fifty-two. Dr. Kayser was graduated from the Cornell University Medical College in 1922 and interned at Bellevue Hospital, New York City. After a year as resident at the Mount Sinai Hospital, New York City, he joined the staff of the Greenpoint Hospital, Brooklyn in 1925 as assistant otolaryngologist, where he remained until 1943. Dr. Kayser was assistant otologist at the Samaritan Hospital, Brooklyn, at the Manhattan Eye, Ear, and Throat Hospital and its Outpatient Department, and at the Brooklyn Eye, Ear, and Throat Hospital and its Outpatient Department, Maimonides Hospital.

A Fellow of the American College of Surgeons and a Diplomate of the American Board of Otolaryngology, Dr. Kayser was a member of the Brooklyn Otolaryngology Society, the American Academy of Ophthalmology and Otolaryngology, the American Society for Plastic and Reconstructive Surgery, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Matthew Patrick McManus, M.D., of Bayside, died on April 18 at the age of forty-three, while vacationing in Mexico City. Dr. McManus was graduated from the Long Island College of Medicine in 1934 and interned at the Flushing Hospital. During World War II, he served as a major in the U. S. Army Medical Corps in the European theater. Dr. McManus was assistant attending obstetrician and gynecologist at the Flushing Hospital and a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Grant Palmer Pennoyer, M.D., of New York City, died on April 11 at his summer home in West Boothbay Harbor, Maine, after a long illness, at the age of fifty-five. Dr. Pennoyer received his medical degree from the Harvard University Medical School in 1919 and interned at Roosevelt Hospital, New York City, where he served as a member of the staff until his death. Dr. Pennoyer was appointed attending surgeon in 1947 and the following year served as vice-president of the medical board of Roosevelt Hospital. He taught anatomy at the College of Physicians and Surgeons, Columbia University, and was also attending surgeon at Goldwater and Booth Memorial Hospitals. He contributed many articles, particularly in the field of vascular diseases, to surgical journals.

A Fellow of the American College of Surgeons and a Diplomate of the American Board of Surgery, Dr. Pennoyer was a member of the New York Academy of Medicine, the New York Surgical Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jared A. Reed, M.D., of Newark, died at his home on March 27 at the age of ninety-one. Dr. Reed received his medical degree from the New York Homeopathic Medical College in 1884 and opened his practice in Newark the same year. On April 14, he completed sixty-six years in the practice of medicine. In 1947 Dr. Reed was honored by the State Society in recognition of his years of practice and last year was feted by the Newark Masonic Lodge on his ninetieth birthday and sixty-fifth year of practice. Dr. Reed was a member of the Wayne County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Cornelius Adrian Schmid, M.D., of Brooklyn, died on April 17 in St. Peter's Hospital, Brooklyn, at the age of sixty-one. Dr. Schmid was graduated from the Long Island College Hospital Medical School in 1912. Attending physician at St. Peter's Hospital, he had formerly served on the staffs of Long Island College, Kings County, and Holy Family Hospitals. Dr. Reed was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jesse David Schwartz, M.D., of New York City, died on April 8 at his home at the age of sixty-two. Dr. Schwartz was graduated from the Cornell University Medical College in 1910 and interned at Mount Sinai Hospital. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herbert Noble Vermilye, M.D., of Forest Hills, died on April 12 at his home at the age of sixty-one. Dr. Vermilye was graduated from the College of Physicians and Surgeons, Columbia University, in 1914 and interned at the Presbyterian Hospital. During World War I, Dr. Vermilye served with the Presbyterian Hospital Medical Unit in France at U. S. Base Hospital 2, rising to the rank of major. At Presbyterian Hospital, Dr. Vermilye was assistant professor of pathology from 1916 to 1917, assistant and instructor in physiology from 1920 to 1925, assistant in medicine, assistant pediatrician, and attending physician from 1917 to 1936, and, at the Fifth Avenue Hospital, associate attending pediatrician from 1936 to 1939.

A Fellow of the American College of Physicians and the American College of Allergists and a Diplomate of the American Board of Internal Medicine, Dr. Vermilye was a member of the New York Rheumatism Association, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry Weintraub, M.D., of Hopewell Junction, died April 17 in the Bronx Hospital after a long illness, at the age of fifty-one. Dr. Weintraub received his medical degree from the New York University-Bellevue Medical College in 1923. A Diplomate of the American Board of Otolaryngology, Dr. Weintraub was a member of the Dutchess County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MR. EWING'S RECENT VISIT

A British weekly periodical comments on Mr. Ewing's recent visit from America. It states that Americans are surprised to find that so many of those British doctors who opposed the introduction of the National Health Service are actually in the Service and apparently trying to make it work successfully. It is hinted that in doing so they are trying to make the best of both worlds. The *British Medical Journal* points out that "the real explanation is nothing so sinister. It is rooted in the contrariness, the illogicality, the what-you-will of the British temperament, and the ineradicable capacity to make the best of things. It is a case of not merely bowing to the inevitable but of shaking the inevitable by the hand and working with the inevitable in the hope of eventually, if not exactly transforming the inevitable, at least of bringing about a mutual accommodation and a working arrangement satisfactory to both sides."

It does not point out that the vast majority were forced into the Service by means of economic pressure (a polite word for "blackmail"); that many are in the Service with a great sense of grievance and frustration; that the spirit of ill will which exists between a large proportion of the profession and their governmental masters could have been avoided; that, had they failed to join, practically all consultants and specialists would have been robbed of all or almost all their public ward and private beds. It fails to distinguish between the doctors' good will toward their patients and the "apparently" trying to make the Service work successfully and does not mention the "spanners in the works." Nor does it give expression to the faith in each man's heart that change and decay will have their natural effects and that the age-long spirit of the freedom of medical practice will eventually triumph over bureaucracy.—*J.A.M.A., March 18, 1950*

HOSPITAL NEWS

Governor Appoints Hospital Commission Members

SIX persons have been appointed by Governor Thomas E. Dewey to fill vacancies on the Advisory Council of the State Joint Hospital Survey Planning Commission. The group was created in 1947 to develop a program for building nonprofit hospitals with capacity to meet health needs in all sections.

The new appointees to the unsalaried council are Dr. Marcus D. Kogel, New York City Hospitals Commissioner, to succeed former Hospitals Commissioner Edward M. Bernecker, who resigned as representative of urban public hospitals; Raymond M. Hilliard, City Welfare Commissioner, to succeed former Welfare Commissioner Edward E. Rhatigan, who resigned as representative of public welfare services, and Dr. John F. Mahoney, City Health Commissioner, to succeed former Commissioner Israel Weinstein, as representative of public health services.

Also, the Very Rev. John J. Curry, director of the Health and Hospitals Division of Catholic Charities of the Archdiocese of New York, to fill a vacancy as representative of urban Catholic hospitals; Dr. E. M. Bluestone, director of Montefiore Hospital, the Bronx, to fill a vacancy as representative of voluntary hospitals, and Dr. Theodore J. Curphey, of Garden City, to represent rural practicing physicians.

Hospitals Announce Institute, Chest Conference

NEW YORK Medical College, Flower and Fifth Avenue Hospitals, has announced plans for an institute on the treatment of atomic injuries and the organization necessary for medical disaster relief, to be held in the school auditorium on Monday, June 5.

The institute is scheduled in connection with the State-wide program to offer specialized postgraduate training in the clinical and biologic effects of atom explosion to New York State's 30,000 physicians. It has been accepted as part of this program by Dr. Herman E. Hilleboe, State Health Commissioner, and Dr. John Masterson of Brooklyn, president of the Medical Society of the State of New York.

Seniors at the school will attend the institute, and in addition space will be available for 200 practicing physicians. Those interested in enrolling should drop a penny postcard to Dr. J. A. W. Hetrick, dean of New York Medical College, Flower and Fifth Avenue Hospitals, Fifth Avenue and 106th Street, to reserve a place. No fee will be charged. A certificate will be awarded at the close of the one-day session.

Seton Hospital and Morrisania City Hospital will hold a combined chest conference on Thursday, May 18 at 8:30 P.M. in the Morrisania Hospital auditorium. Case presentations will include the following: "Acute Friedländer Pneumonia with Abscess," Dr. Leon Rain; "Cirrhosis of Liver with Chest Findings," Dr. Paul Hurwitz; "Traumatic Pneumothorax Complicating Therapeutic Pneumoperitoneum," Dr. Charles K. Bogoshian, and "Chemotherapy in Tuberculosis," Dr. Irwin G. Karron and Dr. George Simmons.

Physicians are invited to bring interesting chest x-rays for informal presentation during the first half hour of the program. Chairman is Dr. Eli H. Rubin.

Hospitals Mark Anniversaries

St. Luke's Hospital, New York City—Commemorating the one hundredth anniversary of its founding, a service was held on Sunday, April 30, at the Cathedral of St. John the Divine, for St. Luke's Hospital.

Speakers were the Right Reverend Charles K. Gilbert, D.D., Bishop of New York, and Dr. Benjamin P. Watson, president of the New York Academy of Medicine.

New York Medical College, Flower and Fifth Avenue Hospitals—New York Medical College, Flower and Fifth Avenue Hospitals, observed its ninetieth anniversary Wednesday, April 12. Dr. Marcus D. Kogel, City Commissioner of Hospitals, and a graduate of the college, delivered the Charter Day address on "Changing Concepts in Medicine."

Dr. J. A. W. Hetrick, dean of the college and president of the Flower and Fifth Avenue Hospitals, entertained with a reception at the Biltmore Hotel in honor of students and faculty members. A banquet at the Biltmore closed the Charter Day program. Dr. Hetrick and Charles D. Halsey, chairman of the Board of Trustees, spoke, reviewing the history and achievements of the institution. Dr. Leon S. Loizeaux, president of the Society of the New York Medical College, was toastmaster. A highlight of the program was the presentation to the school of an oil painting of Dr. Louis Rene Kaufman, former director of the Department of Surgery. Dr. Samuel Moore made the presentation speech. A musical program was given by the Glee Club of the Flower-Fifth Avenue School of Nursing, New York Medical College, Flower and Fifth Avenue Hospitals, under the direction of Miss Verna Carega.

Presbyterian Hospital, New York City—The Twenty-five Year Club of the Presbyterian Hospital has, for the first time, initiated 12 trustees and 88 doctors who have served for twenty-five years or more at the Columbia-Presbyterian Medical Center.

Pins and certificates were presented to all new members at the annual dinner, and Dr. Franklin M. Hanger, Jr., spoke for the physicians.

Doctors honored included the following: Drs. Walter P. Anderton, Dana W. Atchley, James W. Babcock, Alvan L. Barach, Louis Bauman, Samuel Brock, David C. Bull, George F. Cahill, Royall G. Cannaday, A. Benson Cannon, Patrick M. Carroll, Louis Casamajor, L. Beverly Chaney, Mather Cleveland, Joseph Collins, Henry S. F. Cooper, James A. Corscaden, Armistead C. Crump, Alphonse R. Dochez, Edward J. Donovan, George W. Draper, Henry S. Dunning, William B. Dunning, Evan M. Evans, Laurent Feinier, George W. Fish, Angus M. Frantz, Virginia K. Frantz, Ross Golden.

Also: Drs. Malcolm Goodridge, Robert S. Grinnell, Halford Hallock, John N. Hanford, Franklin M. Hanger, Jr., Harold D. Harvey, J. Gardner Hopkins, Hubert Howe, M. Beckett Howorth, George H. Hyslop, James W. Jobling, James J. Joughin, Foster Kennedy, John D. Kernan, Arnold Knapp, Albert R. Lamb, Adrian V. S. Lambert, Samuel W. Lambert, Jr., Leonidas A. Lantzounis, Elliot W. Lawrence, Robert L. Levy, Putnam C. Lloyd, Robert F. Loeb, Jerome M. Lynch, Isidore Margaretten, Howard H. Mason, Robert B. McGraw, Rustin McIntosh, Charles A. McKendree, John M. McKinney.

Also: Drs. Frank L. Meleney, Meyer M. Melicow, Henry W. Miller, J. Leonard Moore, Edmonde D. Neer, Arthur E. Neergaard, Hyman A. Osserman, Beryl H. Paige, Walter W. Palmer, Alwin M. Pappenheimer, William B. Parsons, Jr., Dickinson W. Richards, Jr., Henry A. Riley, Fordyce B. St. John, Bertram J. Sanger, Joseph Schroff, Charles W. Schwartz, Paul B. Sheldon, Alan DeForest Smith, Martin DeForest Smith, Franklin A. Stevens, Edgar Stillman, Byron Stookey, Arthur Purdy Stout, Walter Timme, Louis Wender, Allen O. Whipple, Herbert B. Wilcox, Sr., and Edwin G. Zabriskie.

To Hold Middle Atlantic Hospital Assembly

THE second annual meeting of the Middle Atlantic Hospital Assembly will be held May 24, 25, and 26 in Buffalo. New York State participants will include: Dr. John J. Bourke, executive director of the New York State Joint Hospital Survey and Planning Commission, who will speak on "Community Health—The Role of the Hospital"; Dr. Herman E. Hilleboe, State Commissioner of Health, "The Government's Responsibility in Hospital Care"; Dr. Karl S. Klicka, director of Woman's Hospital, New York City, "Safety in Hospitals"; Dr. Marcus D. Kogel, New York City Commissioner of Hospitals, "Service to Ambulatory Patients," and Mr. Louis H. Pink, president, Associated Hospital Service of New York, "The Blue Cross Plans."

NEWS NOTES

Vassar Brothers Hospital, Poughkeepsie, and the New York University-Bellevue Medical Center have affiliated under the Center's regional hospital plan, it was announced recently. The plan aims to provide expanded training opportunities for the medical staffs of hospitals outside the metropolitan area as well as for all practicing physicians in the communities served by these hospitals.

* * *

Dr. E. M. Bluestone, director of Montefiore Hospital, New York City, has been honored by the creation of a $5,000 fellowship fund in hospital administration in his name by Hadassah, Women's Zionist Organization of America. The fund will be used to enable Israel students to study in this field in the United States.

* * *

The fourth annual Samuel Strausberg Memorial Lecture sponsored by the board of directors and the clinical society of Beth-El Hospital, Brooklyn, was given on April 27 by Dr. Theodore B. Bayles, clinical associate in medicine, Harvard University Medical School. His subject was "The Physiology and Clinical Uses of the Adrenocorticotropic Hormone."

* * *

The monthly scientific meeting of the Monticello Hospital was held on March 6 with Dr. Louis Lapid, chief of the Papanicolaou Laboratory, Mount Sinai Hospital, New York City, as guest speaker. His topic was "Indications for Cesarean Section and the Management of the Rh Negative Mother."

* * *

Beginning April 3, all patients fifteen years of age and older admitted to Albany Hospital are receiving free admission chest x-rays, Dr. Thomas Hale, Jr., director of the hospital, announced. This program will make it possible to detect a number of unsuspected cases of tuberculosis and other chest diseases.

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On April 13, at the Mount Sinai Hospital, New York City, the Edward Gamaliel Janeway Lecture was given by Dr. Joseph L. Lilienthal, Jr., associate professor of medicine, Johns Hopkins University School of Medicine, on "The Role of the Neuromuscular Unit in Internal Medicine."

On April 25, the Isidore Friesner Lecture was given by Dr. J. Groen, physician-in-chief of the Second Medical Service, Wilhelmina Gasthuis, Amsterdam, The Netherlands, on "Emotional Factors in the Etiology and Treatment of Internal Diseases."

* * *

The appointment of Dr. Douglas S. Remsen as associate director of the National Hospital for Speech Disorders, New York City, has been announced by Dr. James S. Greene, founder and medical director of the institution. Dr. Remsen formerly was pediatrics instructor at Cornell University Medical College, director of the clinical and research laboratory of Christ's Hospital, Cincinnati, and associate professor of medicine at the Medical College of South Carolina.

* * *

Permanent promotion of Dr. Edward X. Mikol, Delmar, as general director of State tuberculosis hospitals has been announced by Dr. Herman E. Hilleboe, State Health Commissioner. Dr. Mikol, who has held the post on provisional appointment since September, 1948, heads the administration and operation of the State's seven tuberculosis hospitals.

* * *

Dr. John Salem Lockwood, professor of surgery at Columbia University and attending surgeon at Presbyterian Hospital, has been appointed clinical director and chief of surgical services at the Memorial Hospital for the Treatment of Cancer and Allied Diseases, New York City, effective July 1. Dr. Allen O. Whipple, present clinical director, will devote his full time to supervising the educational work of the Memorial Cancer Center.

* * *

Dr. R. Vincent Williams, College Point, has been re-elected as president of the Flushing Hospital medical board. Other members are Dr. Daniel J. Swan, Flushing, vice-president, and Dr. S. L. Mitchell, Flushing, secretary-treasurer.

* * *

Officers of the medical staff of St. Francis Hospital, Olean, elected at the annual meeting, are as follows: Dr. Joseph R. Giunta, president; Dr. Edward R. Mountain, vice-president; Dr. James F. Durkin, secretary-treasurer, and Dr. Leslie J. Atkins, Dr. Francis P. Keefe, and Dr. Charles A. Shaffer, executive committee.

ETHER THERAPY IN MENTAL ILLNESS

A new and promising treatment for patients with certain types of mental illness has been developed by the New York State Psychiatric Institute, it has been announced by Dr. Frederick MacCurdy, Commissioner of Mental Hygiene. The new therapy, which utilizes intravenous ether injections, has been applied in a carefully controlled experiment conducted at Manhattan State Hospital. The findings were presented before a conference of state institution directors by Dr. Armando Ferraro, principal research scientist (neuropathology) at the Institute. While preliminary reports indicate the ether therapy compares favorably with electric shock treatment which is now widely used, it is still in the early stages of development, and further studies will be necessary before its long-range effects can be adequately evaluated.

Results so far indicate that ether therapy is most helpful in the treatment of affective (emotional) psychoses and psychoses with depressive features, according to Dr. Nolan D. C. Lewis, director of the Psychiatric Institute. Out of 40 depressive patients treated, 21 have recovered sufficiently to be placed on convalescent care, ten remained in the hospital but showed considerable improvement, and nine were unchanged. This rate, while not conclusive, compares favorably with the improvement rate for patients with similar conditions treated with electric shock therapy at State hospitals.

The following advantages of ether therapy over electric shock therapy have been noted: (1) Ether therapy may be applied to patients with physical conditions which prevent the use of electric shock therapy. (2) Since there are no convulsive seizures, there is no danger of fractures or dislocations. (3) There is no evidence of anxiety when ether treatment is given (as compared with patients undergoing electric shock treatments). (4) There is a sense of well-being, and the patient is in good contact with the physician at all times. (5) There are no unpleasant after-effects, no confusion or disturbances of memory.

The ether therapy as developed by the Psychiatric Institute has never been tried before. A solution of ether is slowly injected into a vein, in a technic similar to that used for blood transfusions.

It has been found that after each treatment most of the depressed patients are relaxed and feel slightly elated. Each treatment lasts from two and one half to three hours and is administered daily fo from ten to twenty-seven days, depending upon the needs of the patient. While there were occasiona variations in blood pressure and respiration, no il effects were noted either during or after injections.

MEDICAL NEWS

American Board of Public Health Certifies Physicians

THE American Board of Preventive Medicine and Public Health, a Specialty Board in Public Health, has certified 92 New York State public health physicians engaged full-time in public health work as qualified diplomates of the Board.

Following is the list of New York State physicians:

Albany: Drs. Franklyn B. Amos, Konrad E. Birkhaug, William A. Brumfield, Jr., Albert H. Harris, Elmer L. Hill, Herman E. Hilleboe, Hollis S. Ingraham, George James, Robert F. Korns, Granville W. Larimore, Morton L. Levin, Edward X. Mikol, James J. Quinlivan, William Siegal, Howard C. Stewart, Ray E. Trussell, V. A. Van Volkenburgh, and Ralph M. Vincent.

Baldwin: Dr. Anna E. R. Robinson.

Binghamton: Dr. Vincent H. Handy.

Brooklyn: Drs. Jesse B. Aronson, John L. Lavan, and Fannie I. Tomson.

Buffalo: Drs. Wendell R. Ames, Edward B. Bukowski, Archibald S. Dean, James A. Dolce, and Berwyn F. Mattison.

Cortland: Dr. William E. Mosher.

Glens Falls: Dr. Burke Diefendorf.

Governor's Island: Dr. Oscar E. Ursin.

Lake Success: Dr. Frank A. Calderone.

Middletown: Dr. John A. Degen, Jr.

Mineola: Drs. Earl G. Brown, Joseph H. Kinnaman, and Isaac J. Tartakow.

Neponsit: Dr. Myron D. Miller.

New Rochelle: Dr. Chester A. Hicks.

New York City: Drs. Michael Antell, Donald B. Armstrong, Reginald M. Atwater, Vernon A. Ayer, Margaret W. Barnard, Charles H. Benning, Ephraim M. Bluestone, Richard F. Boyd, Dean A. Clark, Edwin Gurney Clark, Lindsley F. Cocheu, Alfred Cohn, Thomas D. Dublin, Floyd M. Feldman, John W. Ferree, Franklin M. Foote, Samuel Frant, Morris Greenberg, Leonard Greenburg, Lewis W. Hackett, Horace L. Hodes, Henry A. Holle, Robert C. Hume, Roscoe P. Kandle, Ann P. Kent, Max R. Kiesselbach, Anthony J. Lanza, William J. McConnell, Henry E. Meleney, Harry S. Mustard, James E. Perkins, Sophie Rabinoff, Arthur B. Robins, Theodore Rosenthal, Robert E. Rothermel, Paul F. Russell, Hugh H. Smith, Irving Starin, Gertrud Weiss, Samuel M. Wishik, and George M. Wheatley.

Peekskill: Dr. Theodore S. Drachman.

Rochester: Drs. Joseph P. Garen, Albert D. Kaiser, Basil C. McLean, and George H. Warnock.

Staten Island: Dr. Richard C. Arnold.

Syracuse: Drs. William E. Ayling, Ray D. Champlin, Walter C. Levy, and Clealand A. Sargent.

Troy: Dr. Frank E. Coughlin.

Utica: Drs. David E. Bigwood, Jr., and Evelyn F. H. Rogers.

Fifty-Year Doctors Honored

EIGHTY-ONE New York doctors who have completed fifty years of practice were honored by the Medical Society of the State of New York at its one hundred forty-fourth annual meeting at the Hotel Statler, New York City, from May 8 to 12.

Each of the physicians was awarded a certificate commemorating his half-century of service. The Journal extends its congratulations to these doctors whose names are as follows:

Theodore J. Abbott, M.D., New York City
David E. Alexander, M.D., New York City
Jane N. Baldwin, M.D., Poughkeepsie
John F. Black, M.D., White Plains
Robert E. Brennan, M.D., New York City
George F. Brewster, M.D., New York City
Charles M. Burdick, M.D., Plattsburg
Coryell Clark, M.D., Cold Spring
Charles S. Cochrane, M.D., Brooklyn
Ignazio Collica, M.D., New York City
George K. Collier, M.D., Rochester
Frederick Coonley, M.D., St. George, Staten Island
George P. Coopernail, M.D., Bedford
Van Alstyne H. Cornell, M.D., New York City
C. Ward Crampton, M.D., New York City
Frank Cross, M.D., Brooklyn
William E. Curtin, M.D., Cohoes
Augustus F. Dempewolff, M.D., New York City
John F. Dick, M.D., Flushing
Louise M. Ditheridge, M.D., Bronx
Alice Divine, M.D., Ellenville
Henry B. Doust, M.D., Syracuse
James B. Dowd, M.D., Brooklyn
Lilian K. P. Farrar, M.D., New York City
Bernhard A. Fedde, M.D., Brooklyn
Thomas F. Foreman, M.D., Syracuse
Edmund P. Fowler, M. D., New York City
David Gingold, M.D., Brooklyn
Francis H. Glazebrook, M.D., New York City
Edward S. Godfrey, Jr., M.D., Albany
J. Edward Grant, M.D., Northville
Robert H. Halsey, M.D., New York City
Edward Hand, M.D., New York City
Ralph A. Hayt, M.D., Fishkill
William P. Healy, M.D., New York City
Philip F. Hoffman, M.D., White Plains
L. Hayden Humphrey, M.D., Silver Springs
Simon M. Jacobs, M.D., Bronx
Edward W. Jones, M.D., Watertown
Henry M. Kalvin, M. D., Brooklyn
Frederick Knowles, M.D., New York City
Edgar W. LaFontaine, M.D., Watertown
Arthur Landsman, M.D., New York City
Melchiore Lombardo, M.D., Brooklyn
Charles G. Lyon, M.D., Binghamton
Joseph Manisof, M.D., New York City
Jocob Mantinband, M.D., New York City
Irving Margulies, M.D., New York City
Junius H. McHenry, M.D., New York City
Thomas D. McMenamin, M.D., Highland Falls
Eli Moschcowitz, M.D., New York City
L. Howard Moss, M.D., Richmond Hill

Florizel deL. Myers, M.D., New York City
Charles E. North, M.D., New York City
David D. O'Brien, M.D., Oswego
Joseph O'Dwyer, M.D., New York City
David H. Orgel, M.D., New York City
Charles T. Ostrander, M.D., Syracuse
Henry S. Patterson, M.D., Suffern
Charles E. Pearson, M.D., St. George, Staten Island
Rudolf Pollak, M.D., New York City
Nathan H. Rachlin, M.D., Brooklyn
Henry Reiss, M.D., Bronx
Isidor L. Ritter, M.D., New York City
Kennedy F. Rubert, M.D., Owego
Aloney L. Rust, M.D., Malone
Arnaldo A. Samorini, M.D., Schenectady
Bela Schick, M.D., New York City
Hugo Schueller, M.D., New York City
Robert H. Shanahan, M.D., Yonkers
Angelo L. Soresi, M.D., New York City
Leigh F. Sturges, M.D., New York City
Julius Tannenbaum, M.D., New York City
Giuseppe Tomasulo, M.D., New York City
Albert B. Van Vranken, M.D., Skaneateles
Karl Vogel, M.D., New York City
John E. Welch, M.D., New York City
Alfred J. Westlake, M.D., Elmira
John F. White, M.D., New York City
Arthur S. Wilson, M.D., New York City
Frank C. Yeomans, M.D., New York City

MEDICALLY SPEAKING—

Medical Officer and Medical Officer (Specialist) Examinations Announced—Applications are now being accepted by the United States Civil Service Commission for the positions of medical officer and medical officer (specialist). The positions to be filled are located in various Federal agencies in Washington, D.C.; in the Railroad Retirement Board in Chicago, Illinois; in the U.S. Public Health Service, the Children's Bureau, and the Indian Service, located throughout the United States and in Alaska; and in the Panama Canal Service in the Panama Canal Zone. The salaries range from $5,400 to $10,000 a year.

To qualify, applicants must be graduates of a medical school of recognized standing with the degree of doctor of medicine. In addition, they must meet certain specialized requirements depending on the field of medicine and the grade of position for which they apply. Copies of the announcement and the examining circular containing full information regarding the positions and the requirements may be obtained from the U.S. Civil Service Commission, Washington 25, D.C.

Medical Board of Hebrew University-Hadassah Medical School Appointed—Dr. Harry Grundfest, associate professor of neurology, College of Physicians and Surgeons, Columbia University, has been appointed chairman of the Medical Advisory Board of the newly established Hebrew University-Hadassah Medical School in Jerusalem. The sixteen-man board will function to give counsel and guidance on problems of curriculum, teaching personnel, and research to the Medical School and to give advice on medical and public health work in Israel to the Hadassah Medical Organization.

All members of the medical advisory board were appointed by the Board of Management of the Hebrew University-Hadassah Medical School. The following New York doctors will serve with Dr. Grundfest: Dr. David Adlersberg, Mount Sinai Hospital; Dr. Louis I. Dublin, second vice-president and statistician, Metropolitan Life Insurance Company; Dr. Thomas D. Dublin, executive director, National Health Council; Dr. Jacob J. Golub, medical director, Hospital for Joint Diseases; Dr. Ralph M. Kaufman, chief psychiatrist, Mount Sinai Hospital, and clinical professor of psychiatry, College of Physicians and Surgeons, Columbia University; Dr. Paul Klemperer, pathologist, Mount Sinai Hospital, and professor of pathology, College of Physicians and Surgeons; Dr. Louis Leiter, chief of medical division, Montefiore Hospital, and clinical professor of medicine, College of Physicians and Surgeons; Dr. Samuel S. Levine, professor of pediatrics, Cornell University Medical College and New York Hospital; Dr. David Nachmansohn, assistant professor of neurology, College of Physicians and Surgeons; Dr. David Rittenberg, associate professor of biochemistry, College of Physicians and Surgeons; Dr. Israel S. Wechsler, clinical professor of neurology, College of Physicians and Surgeons, and chief neurologist, Mount Sinai Hospital.

Dr. Joseph Hirsh of New York City, executive secretary of the new Board, left on April 7 for Israel to make a survey of future teaching and equipment needs of the Medical School.

A.M.A. Golf Tournament—C. E. Shannon, M.D., Chicago, president of the American Medical Golfing Association, announces that the thirty-fourth A.M.A Golf Tournament will be held on the two very attractive golf courses of the Olympic Golf Club, San Francisco, on Monday, June 26, on the opening day of the 1950 A.M.A. Annual Session.

Fellows planning to participate should send, as soon as possible, their name, handicap, and section in medicine in which they will register to Secretary Bill Burns, 2020 Olds Tower, Lansing 8, Michigan. This will assist the local committee in making the necessary arrangements. The starting committee will assist players from the different states to arrange games with like handicaps, age, and specialty.

The detailed program of the Tournament will appear in the Convention Number of the A.M.A. *Journal.*

Revised Edition of Motion Picture Reviews Now Available—The Committee on Medical Motion Pictures of the American Medical Association has completed the second revised edition of the booklet entitled *Reviews of Medical Motion Pictures.* This booklet now contains 225 reviews of medical and health films reviewed in the *Journal of the American Medical Association* to January 1, 1950. Each film has been indexed according to subject matter. The purpose of these reviews is to provide a brief description and evaluation of motion pictures which are available to the medical profession. Each film is reviewed by competent authorities, and every effort has been made to publish frank, unbiased comments. Copies are available at a cost of 25 cents each from: Order Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Illinois.

Surgeons General Made Responsible for Health Service of Civilian Employes—Responsibility for the health program for civilian employes of the military forces was assigned recently by Secretary of Defense Louis Johnson to the Surgeons General of the Army, Navy, and Air Force, with each directing the program in his respective department under the over-all administrative, technical, and professional control of Dr. Richard L. Meiling, Director of Medical Services, Office of the Secretary of Defense.

The order, effective July 1, 1950, replaces the former programs in which responsibility was scattered among several agencies of the Department of Defense, including the Surgeons General. Applicable to all Department of Defense installations, the order consolidates and unifies this health service.

At the seat of government, the Department of the Army has been assigned responsibility through its Surgeon General to provide an approved program of medical and related service for all civilian personnel in the Department of Defense, regardless of the military department in which they are employed. The Civilian Medical Division of the Army and the Departmental Nursing Service of the Navy will be consolidated and renamed the Civilian Employee Health Service.

The Army, through its Civilian Medical Division, has been serving all civilian employes of the Army, Navy, and Air Force located in the Pentagon, and all civilian employes of the Office of the Secretary of Defense and its affiliated boards and agencies. In the main Navy building, where Navy civilian employes predominate, civilian health services have been provided by the Departmental Nursing Service of the Navy. In other installations in Washington, health services likewise have been provided for all by the department having the largest number of civilian employes at each location.

Vacancies in Psychiatric Division of Kings County Hospital—Vacancies now exist in the positions of psychiatric resident, junior psychiatrist, and senior psychiatrist on the staff of the Psychiatric Division of the Kings County Hospital in Brooklyn.

The Psychiatric Division is housed in a modern, seven-story, 400-bed structure with extensive inpatient and outpatient facilities. The Hospital conducts an approved three-year residency program in psychiatry under the supervision of the Department of Psychiatry of the New York State University College of Medicine (previously the Long Island College of Medicine).

The minimum requirements for a staff position other than a residency is the completion of three years of an approved residency training in psychiatry or the equivalent. Inquiries should be directed to Dr. Howard W. Potter, Director, Psychiatric Division, Kings County Hospital, 606 Winthrop Street, Brooklyn.

Navy to Order 100 More Medical Officers to Duty With Air Force—Within the next year the Navy will order an additional 100 medical officers to duty with the Air Force. This action, requested by Major General Harry G. Armstrong, Surgeon General, U.S. Air Force Medical Service, and approved by Admiral Forrest Sherman, Chief of Naval Operations, will bring the number of Navy doctors serving in the Air Force to 200.

To meet this request, the Navy's Bureau of Medicine and Surgery has issued letters to all inactive Naval Reserve medical officers of the rank of lieutenant commander and below, who are less than forty years old, asking for volunteers for this temporary assignment to active duty.

These volunteers will be accepted for tours of duty of one or two years to fill the present and anticipated vacancies within the continental United States and, if desired, in overseas theaters. They will wear the Navy uniform and will be carried on the rolls of the Navy as an officer on active duty. They will receive full pay and allowances commensurate with their rank and, in addition, $100 per month as authorized for medical officers on active duty.

Annual Convention of International Academy of Proctology—The second annual convention of the International Academy of Proctology will be held June 23 and 24 at the Bellevue Hotel in San Francisco, California. The following papers will be presented by New York State doctors as part of the scientific session:

"Psychosomatic Aspects of Proctology," Dr. William Lieberman, Brooklyn; "Diagnosis of Anorectal Fistulae," Dr. Emma L. Bellows, Southampton, Long Island; "The Thermal Cutting Unit in Proctologic Surgery," Dr. Alfred J. Cantor, Flushing.

Further information concerning the convention and a copy of the program may be obtained by writing to the secretary, Dr. Alfred J. Cantor, International Academy of Proctology, 43-55 Kissena Boulevard, Flushing, New York.

A.M.A. Publication Name Changed—Since the March 1, 1950 issue, *Hygeia*, monthly A.M.A. publication, has appeared under a new title and under new editorship. Now known as *Today's Health*, the magazine, established by the Board of Trustees of the American Medical Association in 1923, is edited by W. W. Bauer, M.D., who succeeded Dr. Morris Fishbein when the latter retired recently.

Air Force Medical Service to Grant Reserve Commissions Under ROTC Program—Graduates of medical, dental, pharmacology, and veterinary colleges who participate in the medical ROTC program of the U.S. Army may now receive commissions in the Medical Service, U.S. Air Force Reserve according to a recent agreement between the Army and the Air Force. Prior to the agreement, it was necessary for students in these categories who preferred reserve commissions in the Air Force to accept commissions in the Army, and then request transfer.

The new agreement provides that 20 per cent of the students taking medical ROTC training may receive reserve commissions in the U.S. Air Force Medical Service. This may be increased to 30 per cent should that number of students signify a desire to apply for Air Force commissions.

Students in these fields now participating in the first and second year advanced ROTC course are to make a statement of choice of service prior to May 1, 1950. Students may obtain full information from the Professor of Military Science and Tactics in their college or university or, upon written request, from the Surgeons General of the Army or Air Force, Washington 25, D.C.

Current Exhibits at the New York Academy of Medicine—During May a number of interesting and timely exhibits are being shown at the New York Academy of Medicine, 2 East 103rd Street, New York City. Prepared by the Library Staff under the direction of the Chairman of the Subcommittee on

Exhibits, Dr. Frederic D. Zeman, these demonstrations serve various purposes. One celebrates a centenary in public health; another gathers together the recent literature on the new, much discussed Cortisone and ACTH. A third shows the systematic development of a portion of one of the basic sciences, anatomic illustration, and the permanent exhibit places on view one of the great historical treasures of science, the Edwin Smith Surgical Papyrus.

The Academy Building is open to the public from 9:00 A.M. to 5:00 P.M. Monday through Saturday. All interested in the exhibits are cordially invited to visit them.

Special Tour Train to A.M.A. Convention—The International Travel Service, Inc., has organized a special A.M.A. tour train from Chicago to the A.M.A. Convention in San Francisco in June. The train will leave Chicago on June 17 and travel via Banff, Lake Louise, Vancouver to Victoria and Seattle by steamer, Portland, and San Francisco. Doctors who avail themselves of this arrangement may return on the same tour via Los Angeles and the Grand Canyon or travel directly to Chicago from San Francisco after the convention. For further information write to International Travel Service, Inc., Palmer House, 119 South State Street, Chicago 3, Illinois.

Annual Meeting of American Laryngological, Rhinological and Otological Society—The fifty-fourth annual meeting of the American Laryngological, Rhinological and Otological Society will be held at the Hotel Mark Hopkins in San Francisco on May 25, 26, and 27, 1950. The following New York State doctors will participate in the program:

May 25—Dr. Edmund P. Fowler, New York City, "The Recruitment of Loudness Phenomenon"; Dr. Daniel S. Cunning, New York City, "The Tonsillectomy-Poliomyelitis Problem."

May 26—Dr. Julius Lempert, New York City, "Modern Surgery of the Temporal Bone"; Dr. DeGraaf Woodman, New York City, "Bilateral Abductor Paralysis—The Postoperative Care and Value of Speech Therapy of Cases on Whom Surgery Has Been Performed for the Correction of the Adducted Glottic Chink" (sound track film).

May 27—Drs. Franz Altmann and J. G. Walner, both of New York City, "New Investigations on the Physiology of the Labyrinthine Fluids"; Dr. Marvin F. Jones, New York City, "Allergy—Effective Treatments Used in Otolaryngology."

In addition, among the candidates' theses distinguished for excellence was the paper by Dr. Alfred W. Doust of Syracuse, a candidate for election to the Society, on "Bronchoscopy in Atelectasis in the Newborn."

Dr. Norman Jolliffe Appointed Nutrition Consultant—Dr. Norman Jolliffe of New York City has been appointed a consultant on nutrition to the United States Public Health Service along with several other physicians from all over the nation, it was announced recently by the Federal Security Agency. Dr. Jolliffe is director of the Bureau of Nutrition of the Department of Health of the City of New York.

Harvard Physician Delivers Wyckoff Lectures—Dr. George Widmer Thorn, Hersey Professor of the Theory and Practice of Physic, Harvard Medical School, delivered the annual John Wyckoff Lectures for 1950 at the New York University College of Medicine on March 28 and 29. Dr. Widmer's subjects were "Studies on the Use of ACTH and Cortisone" and "Clinical Use of the Artificial Kidney."

MEETINGS

PAST

Eastern New York Eye, Ear, Nose, and Throat Association

The 168th meeting of the Eastern New York Eye, Ear, Nose, and Throat Association was held in Schenectady on April 6, with Dr. John Sulzman presiding. Officers for 1950–1951 were elected as follows: Dr. Byron H. Porter, president; Dr. Harry Miller, vice-president, and Dr. E. Martin Freund, secretary-treasurer.

In the scientific section, a motion picture, "Ear, Nose, and Throat Diseases," was shown, and Dr. Walter Atkinson, Watertown, gave a paper on "Anesthesia and Akinesia."

New York Council of Surgeons

Dr. Isidor Mufson, assistant physician, Presbyterian Hospital, and chief of the peripheral vascular disease division, Hospital for Joint Diseases, gave a paper on "The Intra-arterial Method of Treatment for the Obliterative Peripheral Arterial Diseases and Their Complications" at the meeting of the New York Council of Surgeons held April 18 at the Parkchester General Hospital.

Association for the Advancement of Psychotherapy

The regular monthly scientific meeting of the Association for the Advancement of Psychotherapy was held April 28 at the New York Academy of Medicine, New York City. Dr. Wendell Muncie, of Baltimore, Maryland, presented a paper on "The Therapeutic Situation as It Concerns the Family, with Special Reference to the Other Marital Partner," and Dr. Margaret Lowenfeld, director of the Institute of Child Psychology, London, England, spoke on "Psychotherapy of Children."

FUTURE

Association for the Advancement of Psychoanalysis

The next meeting of the Association for the Advancement of Psychoanalysis will be held Wednesday night, May 24, at 8:30 P.M. at the New York Academy of Medicine. Dr. Frederick A. Weiss will present a paper on "Some Aspects of Sex in Neurosis," and Dr. Nathan Freeman will be the discussant.

Medical Alumni Society, University of Pennsylvania

The Medical Alumni Society of the University of Pennsylvania will hold medical and surgical clinics at the University Hospital, Philadelphia, Pennsylvania, from 9:30 A.M. to 11:30 A.M. on Alumni Day, June 17. Following the clinics, the Society will hold a luncheon at 12:00 NOON at the Penn-Sheraton Hotel, 39th and Chestnut Streets.

For further information, communicate with Miss Frances R. Houston, executive secretary, Medical Alumni Society, at the School of Medicine, University of Pennsylvania, Philadelphia 4, Pennsylvania.

American Congress of Physical Medicine

The American Congress of Physical Medicine will hold its twenty-eighth annual scientific and clinical session August 28, 29, 30, and 31, and September 1, inclusive, at the Hotel Statler, Boston, Massachusetts. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction seminars will be held August 28, 29, 30, and 31. These seminars will be offered in two groups—one set of ten lectures will consist of basic subjects and attendance will be limited to physicians; one set of ten lectures will be more general in character and will be open to physicians as well as to therapists who are registered with the American Registry of Physical Therapy Technicians or the American Occupational Therapy Association.

Full information may be obtained from the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

International Congress on Diseases of the Chest

The first International Congress on Diseases of the Chest will be held at the Carlo Forlanini Institute, Rome, Italy, from September 17 to 20, under the auspices of the Council on International Affairs of the American College of Chest Physicians and the Carlo Forlanini Institute, with the patronage of the High Commissioner of Hygiene and Health, Italy, in collaboration with the National Institute of Health and the Italian Federation Against Tuberculosis.

Physicians interested in attending the Congress should communicate at once with Dr. Chevalier L. Jackson, chairman of the Council on International Affairs, American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois, or with Professor A. Omodei Zorini, Carlo Forlanini Institute, Rome, Italy.

PERSONALITIES

Honored

Dr. John F. Erdmann, New York City, on his eighty-sixth birthday, with the presentation of a scroll by Mayor William O'Dwyer.

Appointed

Dr. McKeen Cattell, head of the department of pharmacology, Cornell University Medical College, New York City, as a member of the overseas medical mission the Unitarian Service Committee is sending to Japan this summer... Dr. John Douglas, Latham, as school physician for the Latham public schools... Dr. Thomas A. C. Rennie, New York City, attending psychiatrist, Payne Whitney Psychiatric Clinic, New York Hospital, and consultant in psychiatry at Kingsbridge and Montrose Veterans Administration Hospitals, as professor of psychiatry, Cornell University Medical College.

Elected

Dr. Ernest L. Stebbins, former New York City Commissioner of Health, as president of the National Health Council at its annual meeting March 24 in New York City. Dr. Stebbins is director of the Johns Hopkins University School of Hygiene and Public Health.

Speakers

Dr. Eli A. Leven, Rochester, chairman of the heart committee of the Monroe County Medical Society, on heart disease at a meeting of the Rochester Kiwanis Club... Dr. Jerome Schwartz, Forest Hills, chairman of the committee on mental hygiene of the Queens County Medical Society, on "Problems of Everyday Living" at a meeting of a group at the Forest Hills First Presbyterian Church... Dr. Lester C. B. Spier, New York City, in a symposium on national health insurance at the Grover Cleveland Democratic Club, New York City... Dr. St. Elmo Taylor, Brooklyn, on socialized medicine at a meeting of the Guild of the Newman Memorial Methodist Church, Brooklyn.

New Offices

Dr. Carl A. Boswell, former resident physician at the U.S. Marine Hospital, Staten Island, general practice in Mariners Harbor... Dr. Eugen Brinitzer and his wife, Dr. Jenny Brinitzer, who formerly practiced in Germany and in India, general practice in Great Neck... Dr. Adelaide Curtis, formerly of Johnstown, general practice in Delhi... Dr. Norman A. Geshlider, formerly of Floral Park, general practice in Stewart Manor... Dr. Paul Higgins, formerly on the surgical staff of the Kelly Clinic, Baltimore, Maryland, practice of surgery in Cortland.

Dr. Salvatore Rosolia, formerly of the Bronx, practice of medicine and surgery in South Beach, Staten Island... Dr. Alfred R. Ross, New York City, former surgeon with the U.S. Army Transport Division, general practice in Almond... Dr. De Witt C. Rulon, the Bronx, general practice in Rocky Point... Dr. Robert H. Wiese, formerly of Delanson, general practice in Scotia.

COUNTY NEWS

Albany County

Dr. Thomas Frawely, research fellow in medicine, Harvard Medical School, was the guest speaker at the meeting of the Albany County Medical Society held April 26 in the auditorium of the Albany College of Pharmacy. His topic was "The Use of ACTH and Cortisone." Discussion was led by Dr. Richard Beebe.

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Dr. J. Lewi Donhauser, chairman of medical aid for the disaster preparedness and relief committee of the Albany County Red Cross, has announced the appointment of five physicians to the medical aid staff. They include: Dr. Eldridge Campbell and Dr. Robert D. Whitfield, neurosurgery; Dr. Crawford Campbell and Dr. William Erkenbright, surgical fracture, and Dr. Brandon MacComber, burns.

Bronx County

At the meeting of the Bronx County Medical Society, held April 19 at the Concourse Plaza Hotel, a talk on "Malpractice Suits—Their Cause and Prevention" was given by Mr. William F. Martin, counsel to the Medical Society of the State of New York.

Broome County

Dr. Arthur W. Allen, Boston, Massachusetts, president of the Massachusetts State Medical Society, past president of the American College of Physicians, and chief surgeon at Massachusetts General Hospital, was guest speaker at a dinner meeting held April 11 in Binghamton for more than 300 physicians of Broome County and surrounding counties. His topic was "The Present Situation Regarding Venous Thrombosis and Pulmonary Embolism." The annual dinner was sponsored by the Medical Department of Endicott-Johnson, with Dr. J. C. Zillhardt, medical consultant for Endicott-Johnson, as program chairman.

Presiding at the meeting were Dr. Leonard J. Flanagan, president of the Broome County Medical Society, and Dr. George Hamilton, president of the Binghamton Academy of Medicine.

Cayuga County

Dr. William H. Wehr, attending surgeon at the Roswell Park Memorial Institute, Buffalo, spoke on "Tumors of the Breast" at a meeting of the Cayuga County Medical Society held April 20 in Auburn. The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

Chautauqua County

The spring meeting of the Chautauqua County Medical Society was held March 15 in Dunkirk with Dr. S. R. Patti presiding. Guest speaker was Dr. Carl Graf, Buffalo, who presented a paper on "The Management of Hemorrhage of the Brain." The next meeting will be held in June.

Cortland County

Two programs of postgraduate instruction have been arranged for meetings of the Cortland County Medical Society by the Council Committee on Public Health and Education of the State Society, in cooperation with the State Department of Health.

On Friday night, May 19, at 8:15 P.M. at the Cortland County Hospital, Cortland, Dr. Richard H. Lyons, professor of medicine, University Hospital of the Good Shepherd, Syracuse University, Syracuse, will speak on "Evaluation of the Hypertensive Patient."

At the meeting held April 21 in Cortland, Dr. Leon E. Sutton, clinical professor of surgery, Syracuse University College of Medicine, presented a paper on "Treatment of Congenital Defects."

Dutchess County

Dr. Robert S. Palmer, attending physician at the Massachusetts General Hospital, Boston, spoke on "Current Conception of Therapy in Hypertension" at the meeting of the Dutchess County Medical Society held April 12 at the Hudson River State Hospital Pavilion, Poughkeepsie.

Erie County

New officers of the Erie County Chapter of the American Academy of General Practice have been elected as follows: Dr. Max Cheplove, Buffalo, president; Dr. Donald E. Donovan, East Aurora, vice-president; Dr. Robert W. Lipsett, Buffalo, secretary, and Dr. Arthur C. Hassenfratz, Buffalo, treasurer.

Kings County

The regular stated meeting of the Kings County Medical Society was held on April 18 in Brooklyn, with three scientific papers presented. The program included: "Metabolic Effects of Adrenal Cortical Hormones," Dr. Abbie I. Knowlton; "Clinical and Experimental Studies with ACTH and Steroid Hormones in Rheumatoid Arthritis and Other Connective Tissue Diseases," Dr. Charles M. Plotz, and "Clinical and Experimental Studies with ACTH and Cortisone in Rheumatic Fever and Immune Reactions," Dr. Edward E. Fischel.

Monroe County

Mr. William F. Martin, counsel to the Medical Society of the State of New York, spoke on "The Problem of Malpractice" at a meeting of the Monroe County Medical Society held March 21 in Rochester. This was a joint meeting with the Rochester Bar Association.

On April 5, the Monroe County Medical Society joined with the Rochester Safety Council and the Council of Social Agencies to sponsor a luncheon meeting on "Human Factors in Accidents." Speakers included Dr. Karl Brimmer, medical officer of the Food and Drug Administration, Washington, D.C., on "Accident-Predisposing Drugs"; Dr. Harold Hodge, professor of pharmacology and toxicology, University of Rochester School of Medicine and Dentistry, "Toxic Chemicals Commonly Used in Homes and on Farms," and Dr. Samuel Clausen, professor of pediatrics, University of Rochester School of Medicine and Dentistry, "Clinical Approach to the Prevention of Accidents."

Nassau County

The annual joint meeting of the Nassau County Medical Society and the Nassau County Cancer Committee was held on March 28 in Garden City.

Dr. Charles S. Cameron, medical and scientific director of the American Cancer Society, spoke on

"Major Recent Advances in Cancer Diagnosis and Treatment."

On April 25, in Garden City, a program of postgraduate instruction, arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health, was presented for the Nassau County Medical Society. Dr. Charles LeRoy Steinberg, senior visiting physician and physician-in-charge, Arthritis Clinic, Rochester General Hospital, Rochester, spoke on "Chronic Arthritis—Its Diagnosis and Management."

New York County

In collaboration with the Association of Military Surgeons of the United States, a special meeting of the New York County Medical Society was held on April 12 at the New York Academy of Medicine. Colonel James P. Cooney, U.S. Army Medical Corps, spoke on "The Problem of the Physician in an Atomic Attack." Colonel Cooney is a staff member of the Radiological Branch of the Atomic Energy Commission.

At the April 24 meeting of the New York County Medical Society, a symposium on "Radioisotopes in Therapy and Investigation" was presented. Dr. James J. Nickson, Memorial Hospital radiation therapy department, gave the introduction, and the speakers included Dr. Sidney Werner, Presbyterian Hospital, "Radioactive Iodine in the Treatment of Hyperthyroidism"; Dr. William Money, Sloan-Kettering Institute, "Physiologic Studies of the Thyroid Using Radioactive Iodine"; Dr. Jack Trunnell, Memorial Hospital, "Treatment of Carcinoma of the Thyroid with Radioactive Iodine," and Dr. Henry Diamond, Memorial Hospital, "Medical Uses of P-32."

Niagara County

The regular monthly meeting of the Niagara County Medical Society was held on April 11 in Lockport. Guest speaker was Mr. John E. Weinrich, field representative, Public Relations Bureau, Medical Society of the State of New York, whose topic was "The Compulsory Health Insurance Issue and Public Relations."

Oneida County

Dr. Lawrence A. Kohn, associate professor of medicine, University of Rochester School of Medicine and Dentistry, spoke on "The Treatment of Hyperthyroidism" at the meeting of the Oneida County Medical Society held April 25 in Utica.

The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

Ontario County

The staff of the Geneva General Hospital presented a scientific program at the regular meeting of the Ontario County Medical Society held April 11 in Geneva.

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Dr. Clayton W. Greene, professor of medicine, University of Buffalo School of Medicine, spoke on "The Care of the Failing Heart" at a meeting of the Geneva Academy of Medicine held April 17 in Geneva. The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

Orange County

Mr. L. R. Blanchard, Rochester, executive editor of the Gannett Newspapers, was guest speaker at the spring meeting of the Orange County Medical Society and its Woman's Auxiliary held April 11 at the Hotel Thayer, West Point. Mr. Blanchard, who made a thorough study of conditions in England under the Labor Party government, spoke on "The Doctor and the State."

Queens County

The regular stated meeting of the Queens County Medical Society was held April 25 in Forest Hills. The scientific program included the following: "Diagnosis and Management of Mouth and Pharynx Cancer," Dr. Hayes E. Martin, attending surgeon, Memorial Hospital, and "Diagnosis and Management of Cutaneous Cancer," Dr. William Harris, clinical professor of radiology, Columbia University, and chief of the tumor clinic, Mount Sinai Hospital.

Under the auspices of the Queens County Medical Society, the Medical Society of the State of New York, the New York City Department of Health, and the New York State Department of Health, a Teaching Day in "Obstetrics" will be presented Friday, May 19, at the Queens County Medical Society building in Forest Hills.

The afternoon session will begin at 3:00 P.M., with Dr. Ezra A. Wolff, president of the Queens County Medical Society, as chairman. The program will include: "Heart Disease in Pregnancy," Dr. Joseph J. Bunim, associate professor of medicine, New York University-Bellevue Medical Center; "Pregnancy and the Rh Factor," Dr. Raymond J. Pieri, professor of clinical obstetrics, Syracuse University College of Medicine, and Dr. Robert C. Schwartz, assistant professor of pediatrics, Syracuse University College of Medicine; "Tuberculosis in Pregnancy," Dr. Reuben J. Erickson, director of tuberculosis service, Albany Hospital; and "Prenatal and Postpartum Care," Dr. Merton C. Hatch, professor of clinical obstetrics, Syracuse University College of Medicine.

The evening meeting will begin at 8:30 P.M., with Dr. Arthur Gordon, chairman of the Queens County Medical Society postgraduate education committee, as chairman.

The program will include: "Kidney Disease and Toxemia in Pregnancy," Dr. William Goldring, associate professor of medicine, New York University-Bellevue Medical Center; "Cesarean Section," Dr. Louise Dantuono, instructor in obstetrics and gynecology, New York University-Bellevue Medical Center, and "Hemorrhages Associated with Pregnancy and Labor," Dr. Alexander H. Rosenthal, clinical professor of obstetrics and gynecology, Long Island College of Medicine.

Richmond County

At the meeting of the Richmond County Medical Society on March 8 in Grant City, the Staten Island Cancer Committee sponsored a symposium on cancer. Participants and their topics were: Dr. Charles S. Cameron, medical and scientific director of the American Cancer Society, "Trends of Research and Newer Therapy"; Dr. Milton Friedman, assistant professor of radiology, New York University-Bellevue Medical Center, "Recent Advances in the Treatment of Cancer with Radium and X-ray," and Dr. George T. Pack, attending surgeon, Memorial Cancer Center, "The Choice of Treatment for Cancers of Different Types."

Schenectady County

Dr. Bernard Rogoff, assistant attending surgeon, Hospital for Special Surgery, New York City, spoke on "Clinical Aspects with the Use of Cortisone, ACTH, and Other Steroids of Rheumatic Disease" at a meeting of the Schenectady County Medical Society held April 4 at the Ellis Hospital, Schenectady. The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

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Officers of the recently organized Schenectady County Chapter of the American Academy of General Practice are as follows: Dr. Milton Gipstein, president; Dr. Donald Walker, president-elect; Dr. Miriam Holmes, secretary; Dr. William Burns, treasurer, and Dr. Robert MacTaggart, Dr. William Nealson, and Dr. Herman Galster, board of censors.

Steuben County

"Medicine in a Socialistic State" was the subject of a talk presented by Dr. Lester Speir, New York City, at the meeting of the Steuben County Medical Society held April 13 in Corning.

Suffolk County

The quarterly meeting of the Suffolk County Medical Society was held on April 26 at the Kings Park State Hospital. For the scientific session, a symposium on "Pulmonary Diseases" was presented.

Sullivan County

Dr. James H. Sterner, associate medical director of the Eastman Kodak Company, Rochester, will speak on 'Systemic Effects of Various Substances Commonly Used in Industry" at a meeting of the Sullivan County Medical Society to be held Wednesday night, May 24, at 8:30 P.M. at the Lenape Hotel, Liberty. Originally scheduled for April 12, this program is postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society in cooperation with the State Department of Health.

Warren County

Dr. Otto A. Faust, professor of pediatrics and director of the department of pediatrics, Albany Medical College, spoke on "Psychosomatic Pediatrics and the Family Physician" at a meeting of the Warren County Medical Society held March 30 at the Queensbury Hotel in Glens Falls.

The program was postgraduate instruction arranged by the Council Committee on Public Health and Education of the State Society with the cooperation of the State Department of Health.

Wayne County

The annual dinner meeting of the Wayne County Medical Bar and Law Association was held on March 15 at Lyons. Mr. Clarence D. Henry, district attorney of Monroe County, gave a talk on "The Most Unforgettable Character I Have Ever Known."

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New officers of the Wayne County Chapter, American Academy of General Practice, are as follows: Dr. Joseph J. Kaufman, president; Dr. Evan Tansley, vice-president, and Dr. Raymond De Smit, secretary-treasurer. The annual dinner meeting was held recently in Newark.

Westchester County

In honor of the centenary of the birth of Dr. William Osler, a special joint meeting of the Westchester County Medical Society, the Yonkers Academy of Medicine, and the Woman's Auxiliary to the County Society was held on March 21 in White Plains. Dr. Wilburt C. Davison, dean of the Duke University School of Medicine, gave a talk on Dr. Osler.

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Dr. Charles S. Cameron, medical and scientific director of the American Cancer Society, spoke on "Cancer: A Progress Report" at the April 18 meeting held at the New York Hospital, Westchester Division, in White Plains.

FIND BLOOD TEST FOR CANCER NOT SUITABLE FOR DIAGNOSIS AT PRESENT

The Huggins-Miller-Jensen blood test for cancer does not appear suitable at present as a diagnostic test, in the opinion of two researchers from the Department of Experimental Pathology, Quincy (Massachusetts) City Hospital. The test, based on albumin disturbance in cancer patients, was first reported about a year ago by Dr. Charles B. Huggins of the University of Chicago.

The diagnostic value of the procedure followed by Dr. Huggins and his coworkers was tested by Dr. Otakar J. Pollak and Adeline Leonard, B.S., who report test results from blood serums from 80 patients with proved malignant growth and on control serums from 170 patients.

In seven of the 80 patients with proved malignant growth, the test failed to indicate the presence of cancer, the researchers say. In 23 of the 170 persons in whom malignant growth was excluded on the basis of clinical signs and laboratory and x-ray study, the test indicated malignancy. The total number of false reactions in the series of 250 persons was 30 (12 per cent).

At the present time, this reaction is not suitable as a diagnostic test, the researchers point out. Further investigation might bring about the development of a reaction the result of which would show better correlation with disease.—*Journal of the American Medical Association, March 25, 1950*

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WOMAN'S AUXILIARY

TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

National Auxiliary to Meet in San Francisco

THE twenty-seventh annual meeting of the Woman's Auxiliary to the American Medical Association will be held in San Francisco, California, from June 26 to 30, with headquarters at the Hotel Fairmont. All members of the Auxiliary, their guests, and guests of physicians attending the convention of the American Medical Association are invited to participate in all social functions and attend the general sessions of the Auxiliary.

The program schedule is as follows:

Sunday, June 25: Registration and committee meetings.

Monday, June 26: Preconvention meeting and luncheon of the Board of Directors; round table discussions on *Today's Health*, legislation, public relations, and program; tea honoring Mrs. David B. Allman, Atlantic City, New Jersey, national president, and Mrs. Arthur A. Herold, Shreveport, Louisiana, president-elect. All doctors' wives are invited to attend the tea, in the Green Room of the Hotel Fairmont, with the Woman's Auxiliary to the California Medical Association as hostesses.

Tuesday, June 27: Formal opening of the twenty-seventh annual meeting of the Woman's Auxiliary to the A.M.A., with Mrs. Allman presiding. The pledge of loyalty will be led by Mrs. Luther H. Kice, Garden City, Long Island, New York, immediate past-president of the A.M.A. Woman's Auxiliary.

The program will include greetings from Dr. William L. Bender, president of the San Francisco County Medical Society; welcome from Mrs. William R. Molony, Jr., president of the Woman's Auxiliary to the California Medical Association; presentation of the president-elect, Mrs. Herold; roll call; reading of the minutes; address of the president; reports of officers, and convention announcements.

At noon, a luncheon will be held in honor of the past-presidents of the Woman's Auxiliary to the A.M.A., with Mrs. Allman presiding. Guest speaker will be Dr. Ernest B. Howard, assistant secretary of the American Medical Association.

The afternoon session includes reports of standing committees, special committees, the board of directors, and the nominating committee, of which Mrs. Luther H. Kice is chairman.

Wednesday, June 28: General session of the Auxiliary, including reading of the minutes, convention announcements, credentials and registration, in memoriam, resolutions, and reports of state presidents. Mrs. William Lavelle, Astoria, New York State Auxiliary president, will give her report at this time.

The annual luncheon in honor of the president and the president-elect will be held, with the following guests of honor: Dr. Ernest E. Irons, president, American Medical Association; Dr. Elmer L. Henderson, president-elect, A.M.A.; Dr. Louis H. Bauer, chairman of the Board of Trustees; Dr. J. J. Moore, treasurer; Dr. George F. Lull, secretary and general manager, and the members of the A.M.A. Advisory Council to the Woman's Auxiliary.

During the afternoon session, unfinished and new business will be completed; officers will be elected and installed, and Mrs. Arthur A. Herold, new president, will give her inaugural address. A meeting of the Board of Directors will follow the convention adjournment.

Thursday, June 29: Conference of national president, president-elect, national chairmen of standing committees, and state presidents and presidents-elect, with Mrs. Herold presiding.

At 7:00 P.M., the annual dinner of the Woman's Auxiliary to the A.M.A. for members, husbands, and guests will be held.

Special sightseeing trips have been arranged for delegates and visitors to the meeting, including a trip around San Francisco, a tour of Chinatown and Fisherman's Wharf, a trip across Golden Gate Bridge to Muir Woods, and trips to Stanford University and to the campus of the University of California. In addition, special arrangements have been made for golf and swimming for members and their guests.

New York State delegates include: Mrs. John C. McClintock, Albany; Mrs. Albert Yunich, Albany; Mrs. Harold Childress, Chautauqua; Mrs. Van S. Laughlin, Chautauqua; Mrs. Hilding Nelson, Chautauqua; Mrs. Ralph Upson, Erie; Mrs. Carlton Wertz, Erie; Mrs. Everett N. Perkins, Fulton; Mrs. E. MacDonald Stanton, Fulton; Mrs. Irwin Cole, Genesee; Mrs. Raymond L. Warn, Genesee; Mrs. Mahlon Atkinson, Greene; Mrs. Ray E. Persons, Greene; Mrs. George Burgin, Herkimer; Mrs. Dan Vickers, Herkimer.

Also: Mrs. Clifton L. Dance, Kings; Mrs. Adolph H. Emerson, Kings; Mrs. Edwin H. Griffin, Kings; Mrs. Leo Simpson, Monroe; Mrs. Theodore H. Curphey, Nassau; Mrs. Luther H. Kice, Nassau; Mrs. Leonard Evander, Niagara; Mrs. Frederick Leighton, Niagara; Mrs. Philip Turner, Oneida; Mrs. George N. Hemmer, Onondaga; Mrs. Harry F. Pohlmann, Orange; Mrs. Milton W. Kogan, Oswego; Mrs. Thomas M. d'Angelo, Queens; Mrs. Eugene F. Connolly, Rensselaer; Mrs. Joseph F. Worthen, Richmond; Mrs. Eldred Stevens, Steuben; Mrs. George Bergmann, Suffolk; Mrs. Irving Derby, Wayne, and Mrs. Isadore Zadek, Westchester.

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BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers

BOOKS RECEIVED

Diagnosis and Treatment of Brain Tumors and Care of the Neurosurgical Patient. By Ernest Sachs, M.D. Second edition. Octavo of 552 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $15.

Oral Histology and Embryology. Edited by Balint Orban, D.D.S. Second edition. Quarto of 364 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.00.

The Clinical Examination of the Nervous System. By G. H. Monrad-Krohn, M.D. Ninth edition. Duodecimo of 459 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $5.00.

Clinical Diagnosis by Laboratory Examinations. By John A. Kolmer, M.D. Second edition. Octavo of 1,212 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $12.

Antibiotics. Edited by George W. Irving, Jr., Ph.D., and Horace T. Herrick, Octavo of 273 pages, illustrated. Brooklyn, Chemical Pub. Co., 1949. Cloth, $6.75.

Applied Biophysics. Survey of Physical Methods Used in Medicine. A Symposium. Edited by Dr. N. Howard-Jones. Duodecimo of 293 pages, illustrated. Brooklyn, Chemical Pub. Co., 1949. Cloth, $6.75.

Modern Practice in Anaesthesia, 1949. Edited by Francis T. Evans, M.B. (Lond.) Octavo of 566 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $12.50.

Concerning Religious Values. A Psychiatrist's Viewpoint. By Sol W. Ginsburg, M.D. Duodecimo of 21 pages. Cincinnati, Hebrew Union College, Jewish Institute of Religion, 1949. Paper, 50¢.

Air Pollution in Donora, Pa. Epidemiology of the Unusual Smog Episode of October 1948. Preliminary Report. By H. H. Schrenk, Harry Heimann, George D. Clayton, W. M. Gafafer, and Harry Wexler. Quarto of 173 pages, illustrated. Washington, D.C., Federal Security Agency, 1949. (Public Health Bulletin #306.)

Allergy in Relation to Otolaryngology. By French K. Hansel, M.D. With Panel Discussion. An official publication of the American College of Allergists. Duodecimo of 77 pages, illustrated. St. Paul, Bruce Pub. Co., 1949. Cloth, $2.50.

Huang Ti Nei Ching Su Wen. The Yellow Emperor's Classic of Internal Medicine. Chapters 1 to 34 translated from the Chinese with an Introductory Study. By Ilza Veith, Ph.D. Octavo of 253 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

Golden Jubilee World Tribute to Dr. Sidney V. Haas. In Honor of His Pioneering Contribution to Celiac Therapy and the Treatment of the Hypertonic Infant, and of the Completion of His Fiftieth Year of Medical Practice. Octavo of 35 pages, illustrated. New York, The Committee for the Golden Jubilee Tribute to Dr. Sidney V. Haas, 1949.

Management of Allergy for the Patient. By Florence E. Sammis, M.D. with Pollen Charts, Maps and Photographs by Oren C. Durham. Quarto of 63 pages, illustrated. Ann Arbor, Edwards Brothers, 1949.

Coagulation, Thrombosis, and Dicumarol. With an Appendix on Related Laboratory Procedures. By Shepard Shapiro, M.D., and Murray Weiner, M.D. Octavo of 127 pages, illustrated. New York, Brooklyn Medical Pr., 1949. Cloth, $5.50.

A Candle in Her Hand. A Story of the Nursing Schools of Bellevue Hospital. By Dorothy Giles. Duodecimo of 240 pages, illustrated. New York, G. P. Putnam's Sons, 1949. Cloth, $4.00.

More About Psychiatry. By Carl Binger, M.D. Octavo of 201 pages. Chicago, University of Chicago Pr., 1949. Cloth, $4.00.

X-ray Treatment. Its Origin, Birth and Early History. By Émil H. Grubbé, M.D. Octavo of 153 pages, illustrated. St. Paul, Bruce Pub. Co., 1949. Cloth, $3.00.

For the New Mother. By Mildred V. Hardcastle, R.N. Illustrated by Shirley Tattersfield. Octavo of 163 pages, illustrated. Philadelphia, John C. Winston Co., 1948. Cloth, $2.00.

BOOKS REVIEWED

Dermatologie. By J. Darier, A. Civatte, and A Tzanck. Fifth edition. Translated from the French into German by Eva Schwarz, M.D. Octavo of 922 pages, illustrated. Bern, Switzerland, Medizinischer Verlag Hans Huber, 1949. Cloth, 90 Swiss francs.

This is a translation into German of the monumental work of the famous French dermatologist whose name we associate with keratosis follicularis, and who died in 1938 at the age of eighty-two.

For the German-reading dermatologist, this fine translation of the master's work, including the original illustrations, will be found to be immensely informative and interesting.

Nathan Thomas Beers

Bone Marrow Biopsy. Haematology in the Light of Sternal Puncture. By S. J. Leitner, M.D. English Translation revised and edited by C. J. C. Britton, M.D., and E. Neumark, M.B.(Eng.). Octavo of 433 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $8.50.

This is an authoritative compendium which covers the field of hematology, not only from the point of view of the bone marrow but also as observed from the peripheral blood. It brings to the fore new names, predominantly European, in hematologic research.

This is a work which no hematologist can afford to be without. It is unusually informative.

Maurice Morrison

[Continued on page 1306]

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[Continued from page 1304]

Early Carcinoma of the Uterine Cervix. Pathogenesis and Detection. By Hansjakob Wespi, M.D. Translated by Marie Schiller, Ph.D. Octavo of 271 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $6.50.

The gynecologic pathologist and the gynecologist will enjoy reading this monograph which has been brought up to date so as to include Papanicolaou's work. The results of colposcopy and the Schiller diagnostic test are thoroughly discussed and evaluated. A great many fine photomicrographs add much to its interest. CHARLES A. GORDON

How to Become a Doctor. A Complete Guide to the Study of Medicine, Dentistry, Pharmacy, Veterinarian Medicine, Occupational Therapy, Chiropody and Foot Surgery, Optometry, Hospital Administration, Medical Illustration, and the Sciences. By George R. Moon, M.A. Octavo of 131 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $2.00.

This small volume of 117 pages of reading matter not only gives information to the prospective student of medicine but also discusses preparation for dentistry, pharmacy, veterinary, etc.

The contents are all pertinent to the subject, and though most students have informed themselves from various sources of many of the points made, this book has all the essentials in compact form. A close perusal of it will give the student a feeling of confidence and self reliance. S. R. BLATTEIS

Operative Technic in General Surgery. Edited by Warren H. Cole, M.D. Octavo of 951 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $16.

This is a new book on operative technic, edited by Warren H. Cole and with chapters by thirty-three authors, most of whom are well known and frequent contributors to world surgical literature. The text, therefore, is fresh and modern in most respects, reflecting the work and thought of some of the best surgeons in the country. The technics presented are largely those of the authors themselves as used in practice. No book such as this can be complete, and one would have to look elsewhere for descriptions of certain procedures. The chapter on wound healing and the care of wounds by Edward L. Howes is excellent. The illustrations in general are good but some are surprisingly poor, especially in the chapter on the breast. The book as a whole is good and is recommended. JOHN H. BOGLE

Diagnostic Tests for Infants and Children. Principles, Clinical and Laboratory Procedures, Interpretation. By H. Behrendt, M.D. Octavo of 529 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $7.50.

This is a unique book, ideal for the pupil, practitioner, and especially the pediatrician. The author properly states, "Such information has heretofore been available only in widely scattered form and some of it has been difficult to find."

The method that the author uses to describe each subject is outstanding. First, he presents the physiologic review and pediatric consideration and principles, followed by detailed methods of procedure, which in turn are followed by an important discussion of interpretation. The simplicity and ready understandability of presentation is extraordinary. A large number of very interesting tables are included. SAMUEL K. LEVY

New Hope for the Handicapped. The Rehabilitation of the Disabled from Bed to Job. By Howard A. Rusk, M.D., and Eugene J. Taylor. Octavo of 231 pages. New York, Harper & Bros., 1949. Cloth, $3.00.

This small volume is a story of the rehabilitation of the disabled. The progress made in restoration to fitness of the injured during World War II is told in full. The many civilian problems of rehabilitation of disabilities due to accident or disease are listed.

The book is a plea for the person with a disability to be taught to "live and work within the limits of their disability, but up to the hilt of their capability." Otho C. Hudson

The Basic Neurosis. Oral Regression and Psychic Masochism. By Edmund Bergler, M.D. Octavo of 353 pages. New York, Grune & Stratton, 1949. Cloth, $5.00.

This book may be regarded as the culmination of years of labor and effort by the author in consummately establishing his concept of oral regression and unconscious psychic masochism as the basic theory of all neuroses. The work summarizes and adds to many of his previous contributions on the subject. This theory of oral regression and psychic masochism appears, at first, to be an oversimplification of the dynamics of neuroses, but, after careful reading of the elaborate material and clinical illustrations, resistances and skepticism become less and less. To be able to reduce all causes underlying the development of neuroses to two main basic factors of personality make-up is both intriguing and ingenious.

However, the author's thorough knowledge of psychoanalytic theory and literature and his ready facility for documentation adds validity and authenticity to his interesting speculations and clever insights. The reviewer can highly recommend this book for reading and rereading to all concerned with analytic thinking. Simon Rothenberg

The 1948 Year Book of Endocrinology, Metabolism and Nutrition. Endocrinology edited by Willard O. Thompson, M.D. Metabolism and Nutrition edited by Tom D. Spies, M.D. Duodecimo of 544 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $4.50.

This is an excellent résumé of the literature of 1948, published by two experts in the field of endocrinology and nutrition. It is a handy reference for those that are interested in knowing the last word in these fertile, advancing fields. It has numerous illustrations that add to its usefulness.

Bernard Seligman

Garrod's Diseases of Children. Edited by Donald Paterson, M.D., and Alan Moncrieff, M.D. Fourth edition. Volume II. With contributions by 24 contributors. Octavo of 1,033 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

Reviewing this, the second volume of the fourth edition, was most enjoyable as well as profitable. It is a tremendously valuable reference work on diseases of children.

"Excellent" is the well-deserved adjective that might be applied for most of the chapters of this volume. For special commendation the chapter on the cardiovascular system should be mentioned, mainly the part that deals with congenital cardiac defects. The entire book should be recommended for its thoroughness, simplicity, and up-to-dateness.

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Advances in Internal Medicine. Edited by William Dock, M.D., and I. Snapper, M.D. Associate Editors, Tinsley R. Harrison, M.D., Chester S. Keefer, M.D., Warfield T. Longcope, M.D., *et al.* Volume III. Octavo of 478 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $8.50.

This is an outstanding contribution by two eminent editors and should be carefully studied by all internists and general practitioners. Especially good are the sound reviews on BAL, hemolytic anemias, hyperthyroidism, and plasma fractionation.

ANDREW BABEY

Applied Psychoanalysis. Selected Objectives of Psychotherapy. By Felix Deutsch, M.D. Duodecimo of 244 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $3.75.

In a few selected topics, the author gives a brief exposition of severe problems that stem from family disruption and employment difficulties. He demonstrates how these complex disturbances become transparent and tractable when evaluated by a worker who has sound psychoanalytic understanding.

There is a detailed illustration of the technic of sector therapy where the therapeutic approach is kept within definite strata of the personality by guiding the patient's chains of free association around certain conflicts exclusively—conflicts that the psychoanalytically oriented therapist believes to be the basis of the patient's central problem. This is not true free association in the psychoanalytic sense, but rather an "associative anamnesis." It is recommended principally for psychosomatic disorders, anxiety neuroses, or phobias. It is intended to be a brief method of treatment that aims at goal-limited adjustment, chiefly the removal of the distressing symptoms.

This sector technic promises to become a very useful psychotherapeutic method, particularly in outpatient psychiatric clinics.

SIMON ROTHENBERG

Your Child's Mind and Body. A Practical Guide for Parents. By Flanders Dunbar, M.D. Octavo of 324 pages. New York, Random House, 1949. Cloth, $2.95.

This book is offered as a practical guide to parents. It discusses the problems involved in children's sleep, eating, play, and a host of other parent-child relationships.

It is written in a simple, pleasant style and is fairly concrete in its discussion. It is worth reading by physicians.

STANLEY S. LAMM

Fundamentals of Internal Medicine. By Wallace Mason Yater, M.D. Third edition. Octavo of 1,451 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $12.

Each successive edition of Yater's *Fundamentals of Internal Medicine* has been better than its predecessor. In its present form, it is a satisfactory volume for teaching purposes or as a one-volume text for the practitioner.

The chapters are uneven. Those written by Dr. Yater himself are good, even superb; others are skimpy or barely adequate. The wisdom of including chapters on the skin, the ear, and the eye in a work concerned with internal medicine, unless they deal primarily with these organs as related to internal medicine, may well be questioned. Since the student must or should buy texts in these fields, these chapters might well have been omitted.

The few diagrams and line drawings are excellent, notably the one on the development of a myocardial infarct. On the other hand, many of the photographs contribute little to the value of the written matter. This is especially true in the chapter on diseases of the skin. There is no reason for figure 208 to be thyroiditis rather than any thyroid enlargement. Figure 216 is meaningless. Figure 303 might be anything. In short, Yater's textbook, good as it is, would be better and cheaper if nearly all the figures had been omitted or replaced by diagrams and the chapters on the specialties omitted.

Yater deserves special praise for the inclusion of the sections on diet and "The Physician Himself." Typography and index are satisfactory.

MILTON PLOTZ

Clinical Radiation Therapy. By Ira I. Kaplan, M.D. Second edition. Octavo of 844 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $15.

This volume represents another excellent contribution by Dr. Ira Kaplan to the field of therapeutic irradiation. From the material presented, it is quite obvious that he has drawn, in a large measure, from his own vast experience, as is evidenced by the many lesions, illustrations, and technics for treatment which he has enumerated.

The text is very well organized. To each anatomic area and system, he devotes an entire chapter. This is well correlated by a very comprehensive supplemental index which makes for a handy reference, whether the query be one of irradiation physics or information pertaining to a clinical lesion.

In addition to its clarity as to text arrangement, the volume is profusely illustrated with charts schematic for technics, and photographic reproductions of lesions before and after treatment.

As a reference book for the practicing radiologist who wishes more information regarding lesions he has infrequently encountered, or who perhaps wishes a change in technic from his present treatment of a particular lesion, this volume should be part of his reference library. To the younger group of therapists, especially those located inconveniently distant from their more experienced colleagues or clinic, this volume should prove invaluable.

GEORGE W. CRAMP

Clinical Interpretation of Laboratory Tests. By Raymond H. Goodale, M.D. Octavo of 605 pages, illustrated. Philadelphia, F. A. Davis Co., 1949. Cloth, $6.50.

This is the first edition of a book, dealing, as its title implies, with the problem of proper clinical interpretation of laboratory tests. It is divided into two parts. Part 1 deals with physiology, normal values, and the significance of abnormal values of the various body fluids and excreta. Part 2 deals with diseases of the various systems in association with the usual laboratory findings.

In its preface, the author sounds a warning relative to the proper place of laboratory tests in the diagnosis of disease.

The arrangement of the subject matter is excellent, and there is a complete index making for convenience of reference.

This book should be able to take its place with similar volumes of its kind in this field.

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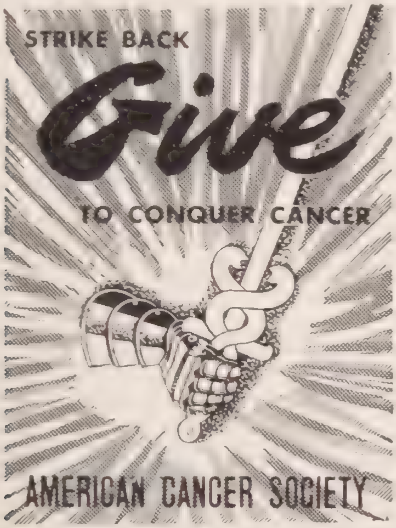

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Minnesota[5]	5000	535	10.7
Illinois[6]	4478	601	13.4
Oklahoma[7]	924	92	10.0
Washington[8]	1526	164	10.7
California[9]	1341	92	6.9
Louisiana[10]	4270	355	8.3
Tennessee[11]	20,237	2,305	11.4
New Mexico[12]	1284	190	14.8
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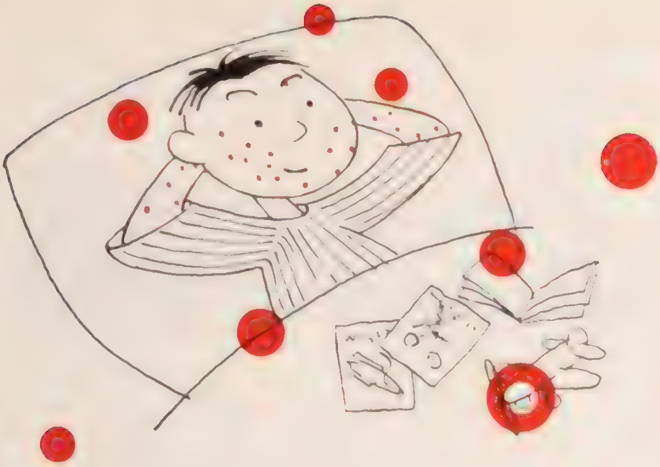

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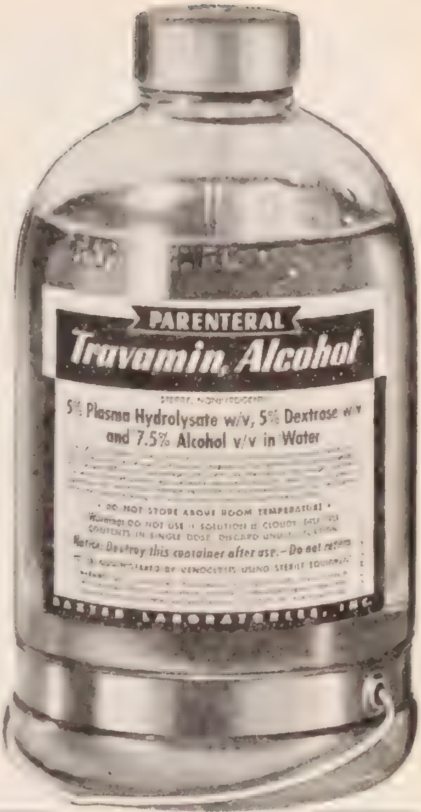
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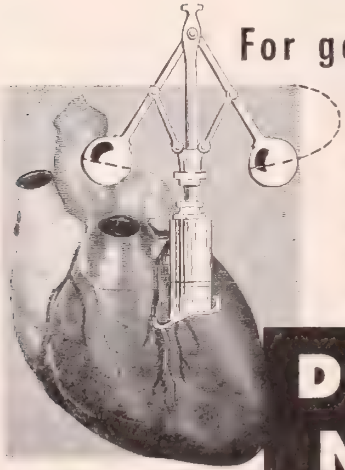

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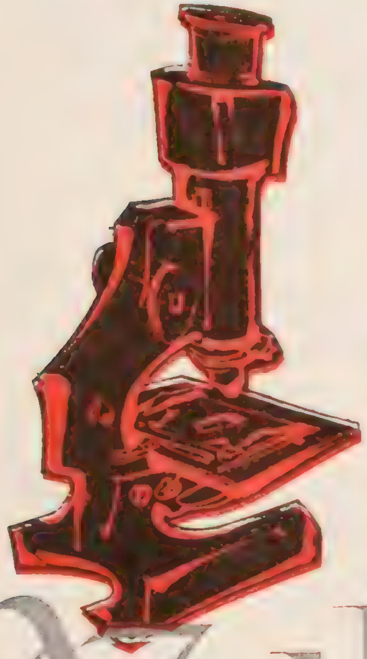

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Sodium benzoate is added because it inhibits the destructive action of intestinal enzymes.[4]

Each tablet contains: Aluminum Penicillin, 50,000 units; sodium benzoate, 0.3 gram. Supplied in vials of 12 tablets.

[1] Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2] Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3] Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, p. 342.
[4] Reid, R. D., Felton, L. C. and Pitroff, M. A. Pro. Soc. for Exp. Biol. and Med., Vol. 63, p. 438.

* Patent applied for.

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1. Sheldon, J. M. et al: Univ. Mich. Hosp. Bull. 14:13-15 (1948). 2. MacQuiddy, E. L.: Neb. State M. J. 34:123 (1949)

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Vitamin B_{12} and Folic Acid (Oral)

VITAMIN B_{12} AND FOLIC ACID, given together by mouth, have a pronounced synergistic action. A non-therapeutic amount of folic acid has been found to promote the utilization of vitamin B_{12} in oral doses formerly believed to be ineffective.

HOW DOES IT ACT?

Vitamin B_{12} for extrinsic factor-like activity

Given by mouth, vitamin B_{12} acts like the extrinsic factor of food. The effective oral dose is some 30 to 60 or more times greater than the effective parenteral dose.

Folic acid for intrinsic factor-like activity

Meyer and associates[1] assert that, in vitamin B_{12} and folic acid therapy, "folic acid acts like 'intrinsic factor'" in that it promotes utilization of vitamin B_{12}. The role of folic acid "on the release, absorption or synthesis of vitamin B_{12} in the intestinal tract" is open to speculation, according to Cartwright, Wintrobe and others.[2] Folic acid, Best and Taylor[3] state, may possibly "act to stimulate the production of the intrinsic factor or be the intrinsic factor itself."

B_{12} and folic acid are essential

Luhby and Wheeler[4] suggest:

1. If a folic acid deficiency is profound, even large doses of vitamin B_{12} are hematologically inert.
2. If a severe vitamin B_{12} deficiency exists, large doses of folic acid should be hematologically inactive.

They advance the following possible equation:

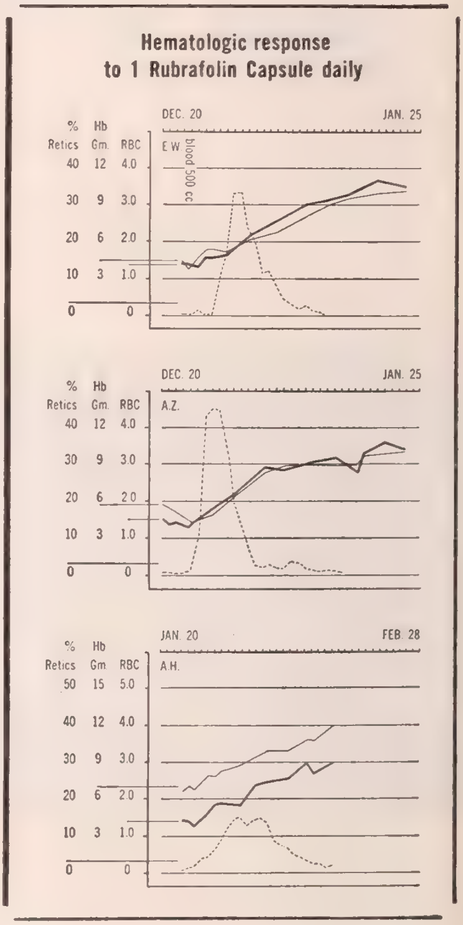
$$(\text{Folic acid}) \text{ x } (\text{Vitamin } B_{12}) \longrightarrow (\text{E.M.F.})$$

WHAT ARE THE RESULTS OF THERAPY?

With vitamin B_{12} and folic acid, given orally, hematologic response frequently parallels that of parenteral vitamin B_{12} therapy. Ordinarily, clinical remission is both prompt and dramatic. Furthermore, in patients so far studied, oral vitamin B_{12} and folic acid apparently protects against and reverses manifestations of combined system disease.

HOW IS IT AVAILABLE?

Supplied as RUBRAFOLIN ***(See next page)***



Hematologic response
to 1 Rubrafolin Capsule daily

INDICATIONS FOR B_{12} THERAPY

Macrocytic anemias ordinarily respond well to vitamin B_{12} therapy. These include pernicious anemia without neurologic involvement, pernicious anemia with combined system disease, nutritional macrocytic anemia, tropical sprue, non-tropical sprue. (Pernicious anemia of pregnancy responds best to folic acid therapy.)

and Vitamin B_{12} Alone (Parenteral and Oral)

Vitamin B_{12} alone—parenteral administration

In most anemias characterized by megaloblastic arrest of the bone marrow vitamin B_{12} will:

1. Reverse megaloblastic arrest of the bone marrow.
2. Protect against and reverse neurologic changes.
3. Reverse gastrointestinal manifestations.
4. Produce rapid, marked and—in most cases—sustained clinical improvement.

Vitamin B_{12} alone—oral administration

When given alone by mouth, vitamin B_{12} is not as hematopoietically active as it is when it is injected. In the megaloblastic anemias, vitamin B_{12} is not easily absorbed by the gut. Much larger doses are necessary if a therapeutic effect is to be obtained.

	THERAPEUTIC DOSAGE	MAINTENANCE DOSAGE	REMARKS	SUPPLY
RUBRAFOLIN* (25 micrograms of vitamin B_{12}, 1.67 mg. of folic acid per Capsule).	1 Capsule daily	1 Capsule daily.	If response is submaximal at the end of 10 days or 2 weeks, double the dose. In case response is not optimal by the fourth week, the patient should be placed on parenteral Rubramin.	Bottles of 100 Capsules.
RUBRAMIN* Capsules (25 micrograms of vitamin B_{12} per Capsule).	6 to 12 Capsules daily.	To be adjusted to patient's needs.		Bottles of 100 Capsules.
RUBRAMIN 15 or 30 microgram ampuls; 5 and 10cc. vials—30 micrograms per cc.	15 to 30 micrograms once or twice a week.	15 micrograms every 2 weeks or 30 micrograms once a month.	Larger therapeutic doses must be used in the presence of moderate to severe neurologic involvement.	1 cc. ampuls, 15 or 30 micrograms of vitamin B_{12} per ampul. Boxes of 5. 5 and 10cc. vials, 30 micrograms of vitamin B_{12} per cc. also available: Solution Rubramin Crystalline (Squibb Crystalline Vitamin B_{12} Solution) in 1 cc. ampuls, containing 15 micrograms of crystalline vitamin B_{12}.

Bibliography: **1.** Meyer and associates: A. J. Clin. Path. (in press). **2.** Cartwright, Wintrobe and associates: Blood 4:301, 1949. **3.** Best and Taylor: The Physiological Basis of Medical Practice, ed. 5, Baltimore, Williams & Wilkins, 1950, p. 87. **4.** Luhby, A. L.; and Wheeler, W. E.: The Health Center Jl. (Ohio State Univ.) 3:1, 1949.

*Patients to receive Rubrafolin or Rubramin Capsules should be individually selected. The physician should rule out patients with severe gastrointestinal disturbances, severe cardiac failure or severe anemia when pernicious anemia is present. Patients such as these—and those with severe neurologic involvement—respond better to parenteral Rubramin therapy. Neurologic changes should be watched for closely. At the first sign of new neurologic involvement, the patient should be placed on parenteral **Rubramin therapy.**

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[1] Kraemer, M.: Postgrad. Med. 2:431 (Dec.) 1947.
[2] Kraemer, M., and Siegel, L. H.: Arch. Surg. 56:318 (Mar.) 1948.
[3] Martin, G. J., and Wilkinson, J.: Gastroenterology 6:315 (Apr.) 1946.

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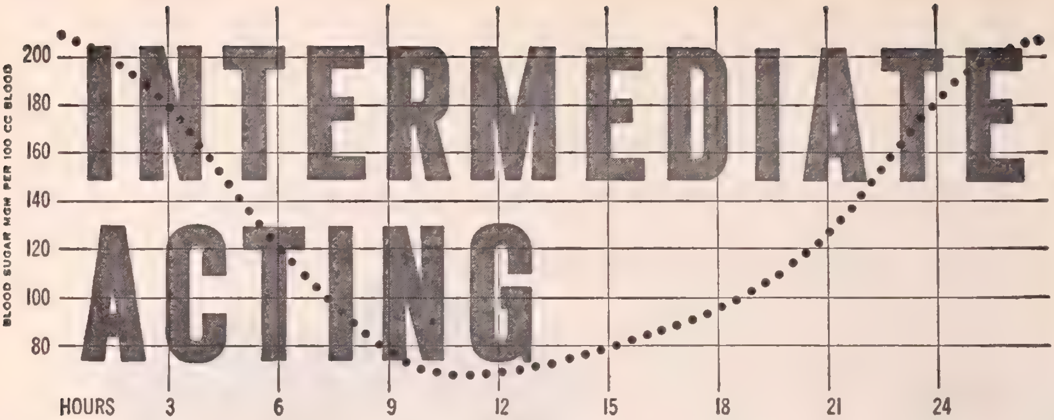

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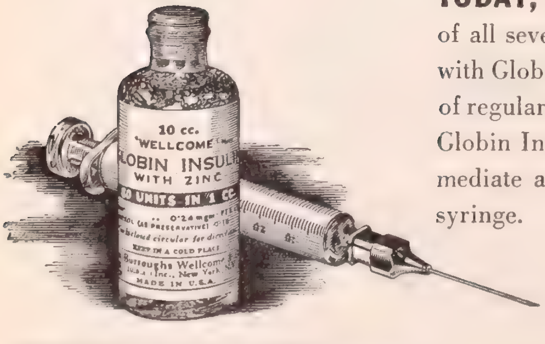
1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.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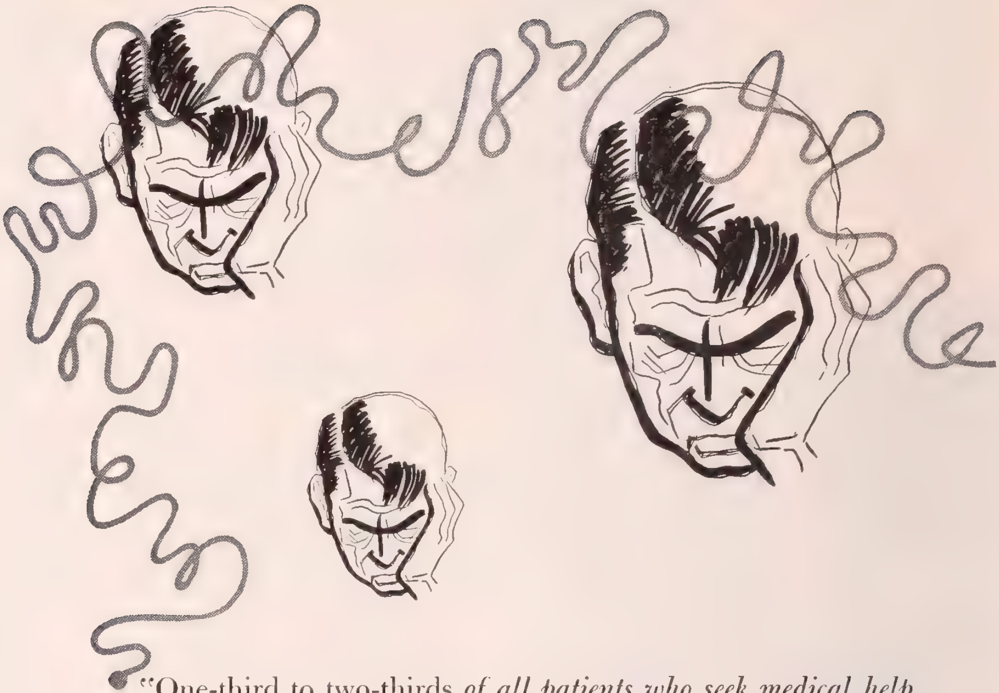

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1. Wilbur, D.L.: J.A.M.A. 141:1199 (Dec. 24) 1949

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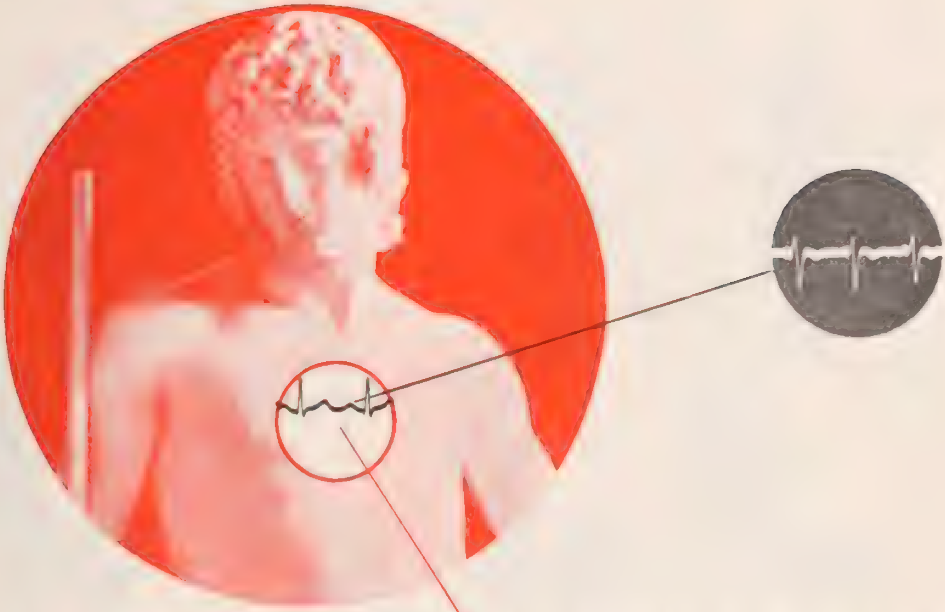

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(1) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (2) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948.

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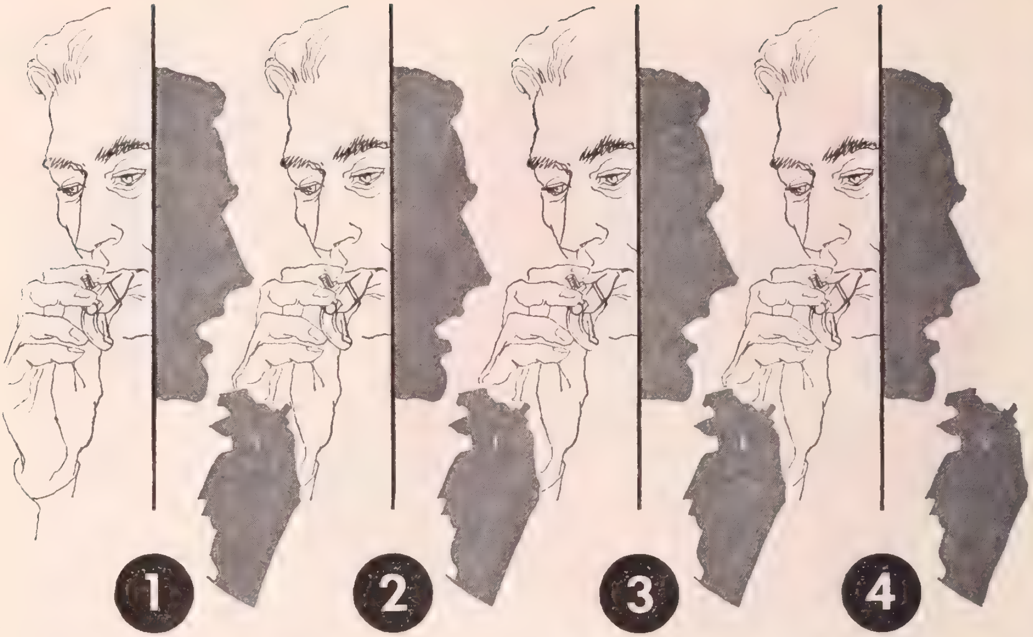

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1. Krasno, L. R., Grossman, M., and Ivy, A. C. (1948), The Inhalation of Norisodrine Sulfate Dust, Science, 108:476, Oct. 29. 2. Krasno, L. R., Grossman, M. I., and Ivy, A. C. (1949), The Inhalation of 1-(3',4'-Dihydroxyphenyl)-2-Isopropylaminoethanol (Norisodrine Sulfate Dust), J. Allergy, 20:111, March.

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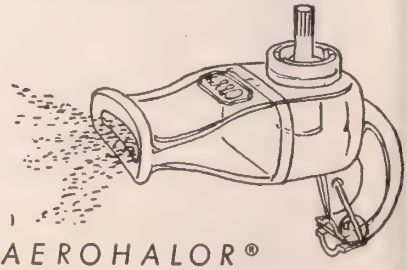

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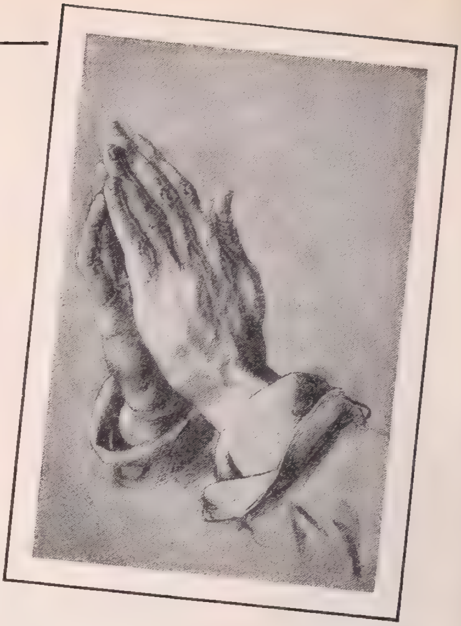

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SEBORRHEIC DERMATITIS	6	5	1	-
CHRONIC RECURRENT CONTACT DERMATITIS	11	9	1	1
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TOTAL	51	28	13	10
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1. Lowenfish, F P., N. Y State J. Med., 50:922 (Apr. 1) 1950.

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VOLUME 50 JUNE 1, 1950 NUMBER 11

Editorials

Community Health Councils

It is to be noted that much progress seems to be under way throughout the country in bettering health facilities for rural areas and in securing larger numbers of medical personnel. This has been accomplished in some areas by community health councils, the formation of which was stimulated during the past five years by the Committee on Rural Health of the American Medical Association. These community health councils are actively engaged in coordinating efforts of farm groups and state and local medical societies. Such councils have increased from 82 to 300 in the last two years, according to a recent survey made by the A.M.A.'s Council on Medical Service.

Local achievements of the community health councils include construction of hospitals with the aid of the Hospital Survey and Construction Act (Hill-Burton Act); increasing available hospital beds; developing clinics; securing more doctors, dentists, nurses, and other needed personnel; development of full-time local public health services; health examination of children of school and preschool age and correction of their remediable health defects; promotion of voluntary prepayment medical care and hospitalization; provision of medical care for the aged and chronically ill, and meeting costs of medical service to families unable to pay for hospitalization and doctors' bills.

Some community councils have been extremely helpful in cooperating with the national mental health program. Councils have matched government funds to pay mental health clinic personnel and have conducted educational campaigns to acquaint communities with the value and manner of operation of the clinics. Although health councils have been organized in urban as well as in rural areas, they have been especially important in bringing better medical care to the people of rural communities.

The Committee is set up so that its representatives can be reached locally in any area. Doctors selected by state medical societies serve as directors in nine regions and as state rural health chairmen in 45 states. Any organization wanting information on setting up a local health council or solving rural health problems may contact one of these representatives or write directly to the A.M.A. Rural Health Committee, in Chicago.

The information is referred to the regional director who takes the matter up with the state rural health chairman and the state medical society. The state chairman and the medical society contact the Farm Bureau, a meeting is called, and the state chairman and representatives of the state and local medical societies, farm organizations, and civic groups get together at the community level to work out the problem.

That the rural health problem is steadily being solved through cooperative community efforts was generally agreed at the recent fifth annual Conference on Rural Health held in February in Kansas City, Missouri. The conference, sponsored by the Committee on Rural Health in cooperation with farm organizations, brought together more than 500 medical and lay leaders concerned with providing medical care to small communities.

The Medical Society of the State of New York, through its Council Committee on Public Health and Education in cooperation with the New York State Department of Health, continues its evaluation studies of needs, present facilities, and future possibilities for the rural areas of this State.

Euthanasia

In the United States euthanasia is prohibited; nowhere is it tolerated either by statute or judicial decision. In 1947, a bill was drafted to legalize "mercy killing" and would have permitted that form of euthanasia in New York State, but the proposed bill failed of introduction at the 1947 session of the New York General Assembly. The proposed bill would have permitted that "any person of sound mind over twenty-one years of age who is suffering from severe physical pain caused by a disease for which no remedy affording lasting relief or recovery is at this time known to medical science, may have euthanasia administered" *at his own request* and *after a judicial hearing*. There is here contemplated euthanasia of a voluntary nature, legalized suicide in other words, since, however and by whom such euthanasia were administered, prior judicial hearing and consent is required.

How has mercy killing been regarded under common law? On this subject we quote, in part, from *The Linacre Quarterly*, "Legal Aspects of Euthanasia," by Vincent C. Allred, L.L.B.[1] Blackstone's *Commentaries on the Common Law* says this:

> Self-murder is one form of this crime (felonious homicide) which was the pretended heroism, but real cowardice, of the Stoic philosophers; who thus avoided ills which they had not the fortitude to endure. Though apparently countenanced by the Civil Law it was denounced by the Athenian law, which ordered the offender's hand to be severed from his body. The English law ranks suicide among the highest crimes, and, if it has been done through the advice of another, such accessory is guilty of murder.
>
> The law in such cases can only reach the man's reputation and fortune. Hence, it has ordered an ignominious burial in the highway with a stake driven through the offender's body and the forfeiture of his goods and chattels to the king.

We cannot, of course, justify the forfeiture of goods which will affect only the surviving relatives, who may be innocent, nor the ghastly revenge wreaked on the corpse, but at least this method of punishment does graphically illustrate the horror with which self-destruction was regarded. It will be noted that the accessory to a successful suicide was deemed guilty of murder.

How is suicide, and assistance thereto, regarded in the United States? To date, all jurisdictions follow the common law rule. In most states the criminal law has been codified. The statutory codes follow common law principles, however, and the courts turn to the common law for interpretation in doubtful cases. In some states there are statutes specifically providing that any person aiding in a suicidal attempt is guilty of criminal offense. Statutes of Kansas and New York are set forth as typical of this group:

"Every person deliberately assisting another in commission of self-murder shall be guilty of manslaughter in the first degree." *Section 21-408, General Statute of Kansas, 1939.*

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[1] Allred, Vincent C.: Linacre Quart. 14: 5 (April) 1947.

"Suicide is the intentional taking of one's own life." *Section 2300, Article 202, Book 39, McKinney's Consolidated Laws of New York.*

"Although suicide is deemed a grave public wrong, yet from the impossibility of reaching the successful perpetrator, no forfeiture is imposed." *Section 2301, supra.*

"A person who willfully, in any manner, advises, encourages, abets, or assists another person in taking the latter's life is guilty of manslaughter in the first degree." *Section 2304, supra.*

Even in states which have not enacted statutes on the subject, persons who aid in suicide attempts have been held guilty of murder or manslaughter by application of common law principles. The case of People *v.* Roberts, *178 N. W. 690 (Michigan 1920) 13 American Law Reports 1253*, is a leading case on this point. It will be noted that this case also involves the principle of mercy slaying.

It is said in Tiffany on Criminal Law, p. 828, that "he who kills another at his own desire or command is a murderer as much as if he had done it of his own head."

It will be noted that the legal guilt of the accessory to a suicide was definitely established at common law, but, on account of a procedural point, the accessory was sometimes able to escape punishment. This "blind spot" has been corrected in most jurisdictions as illustrated in the Roberts case. It may be said that there is today no state in the union in which the person who assists in a suicide attempt is free of criminal guilt.

We feel that, in view of the recent occurrences of so-called "mercy killings" which have been given prominence in the press and the proposals to enact legislation which are cropping up, factual information here quoted in some detail may assist our readers in their thinking.

With respect to proposals to legalize euthanasia, it should be borne in mind by all physicians that a law once enacted is subject to amendment by means of which its original, carefully restricted provisions can be liberalized. Such liberalization might take the form of *compulsory application*, for instance, to certain classes, those "suffering from painful and incurable illness, the mentally deficient, the aged, and others in ever broadening categories."[1]

The traditional service of doctors of medicine to human beings has been and continues to be consistent with the preservation of the abiding faith of men and women in their physicians, a faith consistently merited through centuries of human experience, a faith that no matter what the circumstances physicians would fight with every means available the ultimate enemy, death. To destroy that concept, that abiding faith, would be to destroy the healing art of medicine.

The *Westchester Medical Bulletin* concludes a recent editorial on this subject with these words:[2]

> No physician, nor any other citizen in any walk of life, is above the law. A feeling of individual transcendency of the written law of our country is a very dangerous precept. Whether or not we as individuals agree with the written law, it is a *must* that physicians above all people shall abide by its provisions unless and until it is changed. Otherwise chaos is inevitable and the physician who ignores this fact is headed for trouble.

With this conclusion there can be no disagreement.

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[2] April, 1950, p. 19.

Current Editorial Comment

Medical Unit Added to State University. On April 5, at formal ceremonies, articles of merger were signed adding Long Island College of Medicine to the University of the State of New York. The ninety-year-old Brooklyn college thus became the first of two medical schools to be acquired by the State University system. Governor Dewey expressed the hope that the system would operate in the near future "two of the finest medical centers in the world, the other being at Syracuse."[1]

> Mr. Dewey asserted that this nation's "whole free system" could be strengthened by

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[1] New York Times, April 6, 1950.

training more physicians and surgeons who could "serve adequately the health needs of our people."

By implication he criticized the principle of socialized medicine when he declared that the health standards of the United States, already the highest "of any peoples in the world," could be raised "without having all of our doctors, dentists, nurses, and public health specialists on Government payrolls."

"The State University, through its medical centers, will render great services to the people of the State while scrupulously preserving individual liberties and the dignity which each of us cherishes in the highly personal relationship between the patient and the doctor," he declared.

After noting that the Long Island College of Medicine was becoming the College of Medicine of the State University Medical Center, serving the Metropolitan New York area, Governor Dewey observed that "within a few months" Syracuse University's College of Medicine also would be incorporated into the State system. The latter institution, he said, would serve the citizens of upstate New York.

The Governor said that through the medical centers and 100 new medical and dental scholarships to be granted each year, the State was providing "a richer opportunity to youth who wish to be doctors or dentists—and we all know how many of them with high ability have been denied that opportunity in the past." He also asserted that the State-operated colleges were designed to "supplement" and not to "compete" with private colleges and universities, a point that had been the subject of controversy in hearings that preceded the establishment of the State University system a year ago.

A professional man who allows the world to get before him no longer belongs to it.—Anonymous

---

G. P.'s Organize. There is quite a ferment developing among the general practitioners throughout the country. It has been started in the past few years by relatively recent graduates of good medical schools. They have received their education, training, and internships in the modern hospital, with all of its technical aids and consultation services. Moreover, they were, in large measure, trained by specialists. On entering practice they found themselves suddenly deprived of the aids that formerly conditioned their thinking and found also that there was no room for them at the inn.

The pressure of their discontent gradually built up to an explosive mixture, and the result was the general practitioner movement culminating recently in a large convention at St. Louis.

This is as it should be and is a refreshing evidence of vitality. We would not minimize the great value of the specialist, but the growth of specialism in medicine has been fantastic and illogical. There are signs that this growth is now faster than its blood supply and that necrosis is setting in. Otolaryngology is already withering, and, as for general surgery, there is now not enough work to go around. A new approach to malignancy, to peptic ulcer, to fibroid tumors, or biliary metabolism, any one of which is in the foreseeable future, would leave very little work at all. This would cause a great many surgeons to go to work at something else or to be less opposed to government medicine.

With an increasing number of general practitioners happy in their work and able to use the facilities of hospitals within their capacities, American medicine's fight against government control will be greatly strengthened.

With a good educational background in the fundamentals of medicine, with the opportunities for continuous educational refreshment, with the aid of the newer antibiotics and other specific agencies in treatment, with not being handicapped by having their special senses developed at the expense of their common sense, they should reduce the cost of medical care and be the best public relations men of the medical profession.

In the opinion of one of our recent State Society presidents, as well as in our own, the Medical Society of the State of New York should [take active steps to] make this movement a part of itself and of its future program.

Physic is an honorable profession, but avarice sometimes makes it a disgraceful one.—Anonymous

FACTS ABOUT NUTRITION

Prepared by the School of Nutrition, Cornell University, Ithaca
Norman S. Moore, M.D., Editor

Interpretation of Basal Metabolic Readings

The matter of basal metabolism standards seems an old one, long since settled. But, in fact, it is like so many "settled" matters—often little understood. Certain points concerning the interpretation of a basal metabolic reading may be worth reviewing. Most doctors learned in medical school to consider a basal metabolism report of ±10 per cent or in some cases ±15 per cent as "normal." What many of us neglect to ask is, "±10 per cent of what?" At one time this was a relatively simple matter; there was only one standard of normal, that of Du Bois.[1,2] Later, in 1917, a second one appeared, the Aub and Du Bois or "Sage" standard for normal.[3] These standards, in terms of calories per square meter of body surface per hour by age, were based on limited investigations of Du Bois but supplemented by those of previous investigators, notably Benedict. The predictions for women were calculated as 7 per cent below those for men. In 1919, Harris and Benedict set up new standards after a biometric study based on careful determinations from 250 adults and 100 infants. These predictions were expressed in terms of total basal calories per twenty-four hours, the figures running somewhat lower at certain points.[4] They proved excellent for average subjects but were less accurate for persons of exceptional build or of greater age.

Many modifications then followed, an example of which is the one by Krogh, whose standards ran about 6 per cent below those of Aub and Du Bois and Dreyer, who reworked Harris and Benedict's figures.[5,6] In 1929, the present best-known standards were published, those of Boothby and Sandiford of the Mayo Clinic.[7] They represented a modification of the old Aub-Du Bois standards and differed essentially in a lowering of values for children and for women. In 1936, these standards were replaced by the Boothby, Berkson, and Dunn, or Mayo Foundation standards.[8] These were based on observations of 639 males and 828 females who were either normal children, normal Mayo clinic patients and personnel, or patients who had diseases not related to energy metabolism. These standards were intended for clinical application, being based on first determinations on nontrained subjects. The 1936 version did not differ greatly from the earlier 1929 predictions.

Du Bois has called attention to the differences in origin of normal standards for clinical purposes from the more strict physiologic standards, which are 5 to 6 per cent lower.[9] The latter were obtained in physiologic laboratories where special precautions were used and trained subjects were employed.

By and large the Mayo Foundation standards have proved to be good standards. However, there is still at least one notably weak spot in the curve: the adolescent and postadolescent age range, particularly for women. Stark at Wisconsin in a large series of young women from seventeen to twenty-one years found the Boothby-Sandiford standards averaged 8.9 per cent too high and in a shorter series on males 8.6 per cent too high.[10] The North Central States Cooperative group, using normal untrained subjects, in circumstances similar to a clinical situation, have added further evidence of the weakness of the generally used standards for this age group. In 1,179 determinations of basal metabolic rate on 576 different young women in five midwestern states, the average deviations, by state, were 5.7 to 10.9 per cent from the Boothby and Sandiford standard.[11,12]

In other words, based on an enormous series of data, there is evidence that the basal metabolism standards in use for women in the late adolescent and early adult years are high. It is curious that at least one large manufacturer of basal metabolism equipment, on the basis of Stark's work, has lowered his "normal standards" for men in this same age range but for some unexplained reason has made very little reduction in the standards for women. Consequently, doctors using that particular equipment have, probably unknowingly, a curious set of standards.

Based on the best present-day information, then, for normal young women, age seventeen to twenty-two years, the present "zero" for normalcy is about 8 per cent of the Mayo Foundation standards. The range of "normalcy" then would be about +2 to −18 per cent.

This question is one of more than academic interest. There are two important points. First, many of the office machines with calculators used for basal metabolism give little or no indication of what standard or composite of standards is being used for comparison. It is similar to one expressing a hemoglobin value in terms of say 60 per cent, but 60 per cent of what standard? We are now getting to the place where the better laboratories report hemoglobin in terms of grams per 100 milliliters of blood, with a range of normalcy given. In the same way it is hoped that basal metabolism results in the future will be expressed in terms of calories per square meter per hour, or in terms of clinical percentage, with the standard of comparison given along with the per cent deviation from normal. The second point is the realization that most of the present standards are set too high for post-adolescent young women. In this age group we have many weight problems. In most instances there are no clinical evidences of endocrine disturbances. A young woman is finally persuaded that what she eats does make a difference, her food intake is cut, she does well. But it is a long, slow process. Someone suggests she really must have a basal metabolism determination. She goes to a doctor who yields to persuasion; a basal metabolism is done; the report may read a −8 to −15 per cent, a figure which current information would indicate is quite normal. A little thyroid is given. Physically, no harm may be done, but psychologically, from that point on the young woman in her own mind is "an endocrine problem." Diet and controlled eating assume less importance to her, and progress ceases.

It seems appropriate for physicians to re-examine the basal metabolism standards which they use. Familiarity with standards should increase one's confidence in normal values.

CHARLOTTE M. YOUNG, PH.D.

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OFFICE MANAGEMENT OF VENEREAL DISEASES

"The time has now arrived when the diagnosis and treatment of venereal diseases should properly revert to the office of the private physician . . . . " are the words prominently displayed on the cover of a valuable and useful booklet recently issued by the Bureau of Social Hygiene of the New York City Department of Health, in cooperation with the New York State Department of Health and the United States Public Health Service. This booklet outlines for the physician the management of venereal disease patients and is up-to-date on the new methods of treatment, including penicillin and other antibiotic agents, although the final word on these remedies cannot be written at this time.

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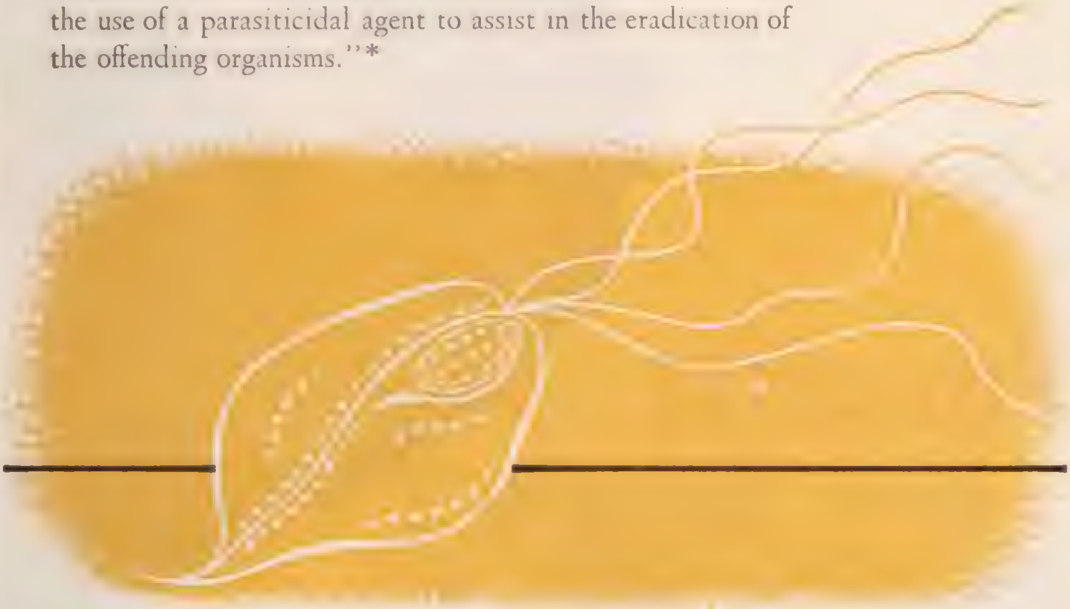

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*Hardy, J. W.: Office Gynecology, J. Missouri St. M. A. 45:811 (Nov.) 1948.

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Scientific Articles

SCAPULOCOSTAL SYNDROME (FATIGUE-POSTURAL PARADOX)

Arthur A. Michele, M.D., Brooklyn, New York, John J. Davies, M.D., Baltimore, Maryland, Frederick J. Krueger, M.D., Staten Island, New York, and Joseph M. Lichtor, M.D., Chicago, Illinois

(From the Department of Orthopedic Surgery, New York Medical College, and the United States Marine Hospital, Staten Island)

CLINICIANS should be on the alert for the presence of the scapulocostal syndrome in all complaints referable to the shoulder girdle. During the past three years, we have found that 30 per cent of all middle-aged individuals presenting shoulder complaints (either traumatic or nontraumatic in origin) have the scapulocostal syndrome. The condition is most commonly seen during the third and fourth decades of life, and both sexes are equally affected. It is at this period of life that individuals tend to become more slouched and round-shouldered due to carelessness in posture and sitting habits.

The development of symptoms is usually insidious. In the early stages, the patient may complain of a deep-seated pain in the shoulder. In many cases, however, there is no associated discomfort in the shoulder, and the only presenting symptom may be one of the following radiating pain patterns:

1. The pain may radiate to the occiput or spinous processes of the third and fourth cervical vertebrae (Fig. 1A).
2. The pain may appear to originate at the root of the neck and radiate into the shoulder joint (Fig. 1B).
3. The radiation may be down the arm into the hand, usually located along the posterior medial aspect of the upper arm and along the ulnar distribution in the forearm and hand. In a few cases, the pain originates in the region of the medial epicondyle of the humerus and radiates down the ulnar nerve distribution with no associated pain in the shoulder or upper arm (Fig. 1C).
4. The radiation may occur along the course of the fourth and fifth intercostal nerves (Fig. 1D).
5. The patient may present himself with various combinations of the above symptoms.

Pathogenesis

Postural changes with round-shoulderedness and drooping of the shoulder girdle are underlying causative factors for the scapulocostal syndrome. The convexity of the posterior chest wall and the concavity of the scapula are such that these two structures fit together perfectly. This relationship between the scapula and the chest wall is disturbed when the shoulder droops downward or laterally because of the difference in the curvature of the lateral ribs as compared to the posterior. Individuals seated at a machine for long

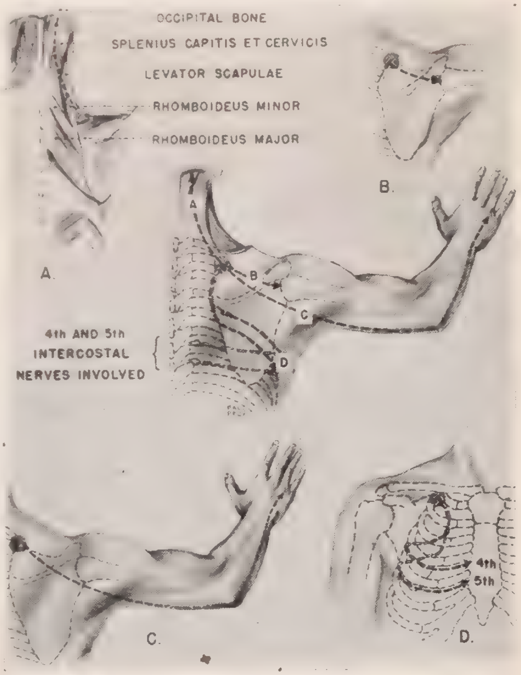

Fig. 1. (A) Manner of pain radiation toward neck and occiput. (B) Radiation toward the scapulohumeral joint. (C) Radiation into arm along the ulnar side of the forearm and fingers. (D) Radiation of pain to the anterior chest wall.

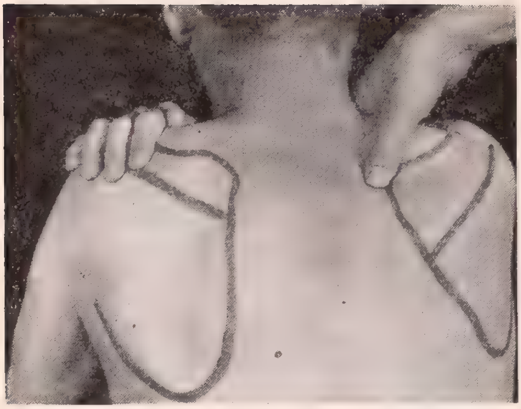

FIG. 2. Location of trigger point area of tenderness when the scapula has been retracted from the posterior chest wall.

periods with their heads pitched forward and their arms at their sides (such as machine operators, typists, long-distance car operators, and motormen) are excellent candidates for this syndrome. Sleeping on a hard or high pillow or resting in an awkward position in a chair may often be the precipitating factor of the malady. In many instances, an exaggerated lumbar lordosis, e.g., pregnancy, will contribute to further malposture.

Fractures of the scapular body, and especially fractures involving malunion at the superior medial angle, are prone to cause this syndrome. Muscular atrophy of the scapulocostal region, usually associated with immobilization of an extremity in a cast or sling or in those cases of partial ankylosis of the scapulohumeral joint, produces symptomatology which can be allocated to the region of the superior medial angle of the scapula. Hemiplegia, Marie-Strümpell arthritis, and senility with dorsorotundum are contributing etiologic factors.

As early as 1873, reports appeared in the Italian and German literature describing a syndrome of pain in the shoulder radiating into the neck and/or arm and hand.[1,2] On detailed autopsy examination, Gruber found an adventitious bursa at the superior angle of the scapula in 12 per cent of the cases.[3] In 1913, Loberhoffer described a case with shoulder pain radiating into the fourth and fifth fingers due to a thick-walled bursa.[4] Moseley considers that muscular spasm from ischemia in the area due to postural strain or vasomotor disturbance is the basis of the syndrome.[5] Steindler believes the condition to be due to skeletal abnormalities, muscular changes, and bursae.[6]

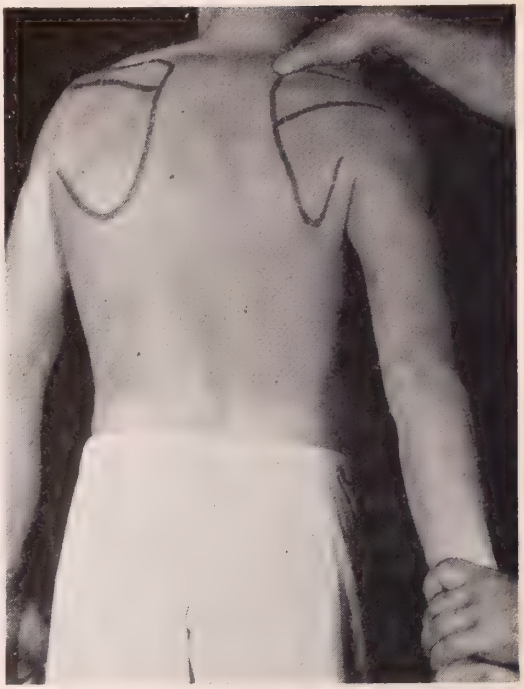

FIG. 3. Deep pressure over the superior medial angle of the scapula with compression of the posterior chest wall in conjunction with backward flexion of the internally rotated arm.

Fasciitis or fibrositis is responsible, in our opinion, for the symptoms. Routine exposure of the scapulocostal region by thoracic surgeons has rarely shown the presence of a bursa, and the pain distribution is reflex in type.

Diagnosis

The most significant finding is a definite trigger point beneath the upper medial angle of the scapula in conjunction with the posterior chest wall. This point may be determined by one of three clinical tests:

1. In the first test the hand of the affected side is placed on the opposite shoulder with the arm at a horizontal plane (Fig. 2). The examiner stands behind the patient on the normal side and, with one hand, draws the elbow across the chest thereby exaggerating the adduction of the patient's arm. The thumb of the examiner's opposite hand is used to exert pressure in the region of the superior medial angle of the scapula, whereupon the patient will complain of extreme tenderness and, in most instances, radiation of pain into the affected areas.

2. The second test is carried out with the ex-

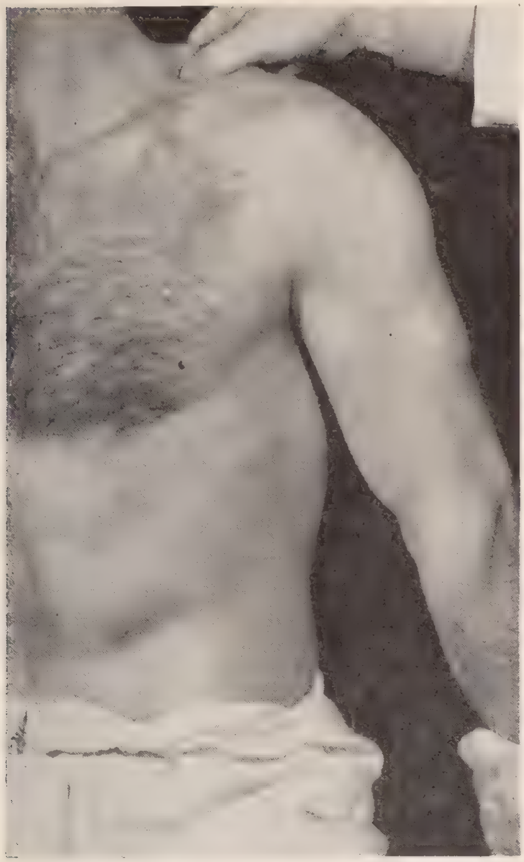

FIG. 4. Digital pressure underneath midbelly of the descending fibers of the trapezius toward the anterior surface of the superior medial angle of the scapula. Reinforcement by internal rotation and backward flexion of the arm.

aminer standing behind the patient holding the wrist of the affected side so that the arm is extended and internally rotated as far as possible (Fig. 3). Pressure is exerted over the superior medial angle of the scapula with the examiner's free thumb. With this maneuver the scapula is angulated away from the chest wall, using the upper border as a fulcrum. The additional pressure of the examining thumb will elicit pain, and the radiation may be produced or exaggerated.

3. In the third test the point of tenderness can be elicited by deep pressure of the examiner's thumb underneath the midportion of the descending fibers of the trapezius, deep onto the posterior chest wall (Fig. 4). At this site the anterior surface of the superior medial angle of the scapula is abetted. Reinforcement is produced by backward flexion and internal rotation of the arm.

In most instances, there are no significant x-ray findings. In some cases, however, calcification in the region of the supraspinatus tendon may be noted. It is the opinion of the authors that, in spite of x-ray evidence of cervical arthritis or calcification in subdeltoid bursa, one should examine the patient carefully to rule out the presence of a scapulocostal syndrome. A case in point is that of one of our patients who had been treated over a three-year period for cervical arthritis with no relief. The patient was re-examined and was found to have a scapulocostal syndrome. The condition was relieved following the institution of proper therapy.

Differential Diagnosis

A review of the symptomatology as presented in the following cases will readily show why a wide variety of erroneous diagnoses have been made on the initial examination. In those cases with radiation to the occiput, the common incorrect diagnoses are (1) cervical arthritis, (2) myositis, (3) fasciitis, and (4) eye strain. In cases with radiation to or pain in the shoulder and/or radiation to the forearm and hand, the most common misdiagnoses are (1) cervical arthritis with root irritation, (2) herniated cervical disk, (3) brachioplexus injuries, (4) subdeltoid bursitis, (5) supraspinatus injuries, and (6) rotator cuff tears.

In a few cases in which the pain originated in the medial epicondyle, a diagnosis of ulnar neuritis was made. In cases with intercostal radiation in the third, fourth, and fifth interspace, the following diagnoses have been advanced: (1) angina pectoris, if it is on the left side, (2) various intrinsic pathology of the breast, (3) pleurisy, (4) intercostal neuritis, and (5) disease of the underlying lung parenchyma.

Treatment

The treatment of the scapulocostal syndrome may be divided into two parts, preventative and definitive.

Preventative.—Postural exercises to correct the round-shoulderedness and slight dorsal kyphosis are essential. The individual should be instructed to stand or sit with the shoulders drawn backwards and the spine erect. He should avoid slouched positions and the use of large or multiple pillows at night. The use of fracture boards to prevent exacerbation by a sagging mattress is indicated. Hager states that, in cases of cervical brachial pain produced by a variety of causes, 17 out of 20 cases obtained good to excellent results with nothing more than postural exercises.[7]

Definitive.—Procaine, 5 to 10 cc. of 1 per cent solution injected into the subscapular tissues, produces dramatic relief from the local tenderness and radiating pain. Injection is made with the patient holding the hand of the affected side on the opposite shoulder with the arm in a horizontal plane. In this position, the scapula is drawn laterally, and the subscapular area is exposed. Codman corrective exercises are carried out in conjunction with the procaine therapy. Local heat, such as infrared or shortwave diathermy, serves as an adjuvant. A figure-of-eight or a posture-correcting shoulder harness may produce relief in some cases. Ethyl chloride spray over the area of trigger point tenderness may be useful both for diagnosis and treatment. A well-fitting lumbosacral support may frequently control the lumbar lordosis, thereby correcting the sagging of the shoulders. In refractory cases resection of the superior medial angle of the scapula may be considered.

Case Reports

Case 1.—B. M., a twenty-eight-year-old physician, presented a history of acute onset of pain on arising in the morning. The pain was located in the cervical spine with radiation to the occiput. The patient had had interval attacks two to three times a year for the past six years. These attacks would usually last from one to two weeks and would gradually wear off with the application of local heat. Point tenderness was noted over the superior medial angle of the scapula. The patient obtained prompt relief of the symptoms following injection of procaine. He was instructed in postural exercises and told to avoid the use of two pillows at night.

Case 2.—M. K., a forty-five-year-old steam presser, complained of deep-seated pain of three months duration in the region of the right shoulder. Lifting heavy objects or excessive motion of the shoulder provoked the complaints. Physical examination revealed drooping shoulders, dorsal kyphosis, and trigger point tenderness at the superior medial angle of the scapula. Corrective exercises in conjunction with two injections of procaine resulted in complete relief of symptoms.

Case 3.—J. F., a thirty-six-year-old ballplayer, complained of pain in the region of the right shoulder with radiation down the medial border of the arm and forearm into the fourth and fifth fingers. The pain was of two months duration. X-rays revealed a minute calcification in the region of the subdeltoid bursa. The patient had received courses of x-ray therapy, physical therapy, and procaine injections in the subdeltoid bursa without benefit. Infiltration of procaine at the superior medial angle of the scapula was carried out after trigger point tenderness was noted in this area. Relief of symptoms was immediate.

Case 4.—G. M., a thirty-eight-year-old male physician, complained of inability to abduct the right arm or to take a deep breath due to pleuritic type of pain in the right chest. Past history revealed numerous similar attacks which occurred every spring and fall. With the use of physical therapy and aspirin, these attacks lasted from one to two weeks. Upon finding a trigger point at the superior medial angle of the scapula, 5 cc. of novocaine were injected. Immediate relief of all symptoms was obtained.

Case 5.—P. D. D., a thirty-eight-year-old obese housewive with drooping shoulders, complained of pain in the right upper breast which was insidious in onset. The pain was of three months duration and was aggravated by lying on the affected side. A biopsy of the breast revealed chronic cystic mastitis. The patient had been treated ineffectually by her local physician with physical therapy, special brassieres, and various medications. Findings consistent with a diagnosis of scapulocostal syndrome were noted, and procaine was administered with immediate relief. Postural exercises were recommended.

Case 6.—J. G., a forty-five-year-old male business executive, complained of pain over the left anterior chest in the precordial area. The pain was of six months duration and was exacerbated by activity of the left arm or by lying on the left side. The pain was agonizing and often radiated to the left arm. The patient had been admitted to the hospital with a tentative diagnosis of coronary disease. In the absence of clinical and laboratory confirmation, he was referred to our department. There was localization of tenderness at the superior medial angle of the scapula. On deep pressure, the pain was aggravated in the precordial area and in the left arm. Procaine infiltration produced immediate relief of symptoms. The patient required a total of four injections, given at two to three day intervals to obtain lasting relief.

Conclusion

The scapulocostal syndrome is a clinical entity which may simulate a wide variety of conditions. Thirty per cent of all individuals in the middle-aged group who presented shoulder complaints, either traumatic or nontraumatic, were found to have the scapulocostal syndrome. Prompt and lasting relief of symptoms may be obtained with the use of procaine infiltration in the subscapular tissues, supplemented with postural exercises. Six case histories are presented. Awareness of the pathogenesis and diagnosis of this condition will facilitate the recognition of this syndrome.

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THE VALUE OF A SPECIAL AURICULAR LEAD IN THE ELECTROCARDIOGRAPHIC DIAGNOSIS OF TACHYCARDIA

David Appelman, M.D., Max Pomerance, M.D., Elliot Levine, M.D., and Mendel Jacobi, M.D., Brooklyn, New York

(From the Departments of Medicine and Cardiology, Beth-El Hospital)

TACHYCARDIA refers to a cardiac rate over 100 per minute which may be regular or irregular in character. Tachycardias with a regular rhythm include sinus tachycardia, auricular flutter, and paroxysmal tachycardia (auricular, nodal, or ventricular). Irregular tachycardias include rapid auricular fibrillation, sinus tachycardia with premature systoles (auricular, nodal, or ventricular), auricular flutter with varying degrees of block, sinus tachycardia with incomplete block, and tachycardia with complete auriculoventricular dissociation, the dominant rhythm of which may be nodal or ventricular. Some cases of bradycardia are merely so because of an extreme degree of block.

The electrocardiogram is of great help in the differential diagnosis of tachycardias. However, in those instances where the auricular waves are small or hidden in the QRS or T complexes, the examiner may find it difficult to be certain of the type of tachycardia present from a study of the standard leads. It is for this type of case that a lead in which the electrodes are so applied as to show maximal potential changes developed by auricular activity may be of help. The usefulness of special auricular leads in the electrocardiographic diagnosis of tachycardias has been established.

The first report on such a lead was by Lewis in 1910, who noted that placing the exploring electrodes over the region of the right auricle best brought out the F waves of auricular fibrillation.[1] Subsequent writers have contributed other methods, some simple and some more complicated, the better to bring out P waves. Ackerman demonstrated better defined auricular waves by placing needle electrodes in the second and fifth interspaces to the right of the sternum.[2] In 1934, Lieberson and Lieberson introduced the technic of the esophageal lead for the study of the auricles.[3] Luisada, in 1940, summarized the methods used for the simultaneous and even separate study of electrical activity in the auricles.[4] Butterworth and Poindexter, in 1946, re-emphasized the value of the esophageal electrocardiogram in certain tachycardias and arrhythmias.[5] They took esophageal electrocardiograms in all cases where the P waves were not distinctly visible in any of the leads from the surface of the body. An electrode in this area produces a pattern approaching that obtained by a direct lead from the surface of the auricle. Ellis, Lannan, and Faulkner, in 1948, reported that they obtained the special auricular lead by removing the electrode from the left arm and placing it on the chest in the third interspace just to the right of the sternum.[6] Tracings were then taken with the control switch successively at leads I and III. In addition, while these leads were being taken, pressure was applied alternately to the right and left carotid sinuses or to both at once, thus producing a slowing. In cases in which the P wave may be hidden in the preceding T wave or in its own QRS complexes or T waves, the transitory slowing thus produced may uncover the hidden P wave.

It is the purpose of this communication to emphasize again the value of a special auricular lead in the electrocardiographic diagnosis of tachycardia. It has been of particular value in auricular flutter with 2:1 block.

Case Report

S. K., a white married woman of fifty-eight years, had been attending the cardiac clinic for five years because of attacks of tachycardia. Her clinic diagnosis was that of rheumatic heart disease with mitral stenosis and recurrent decompensation. She was admitted to the Beth-El Hospital on November 12, 1948, because of a tachycardia that had persisted for hours with its attendant precordial distress, weakness, and dyspnea.

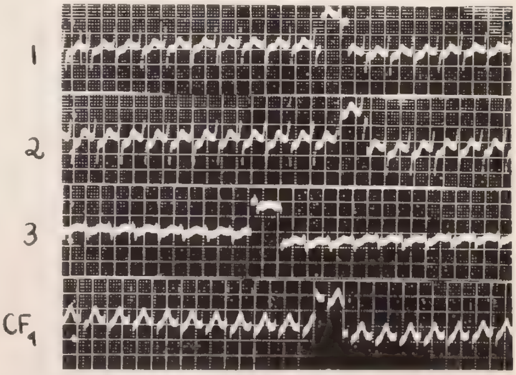


FIG. 1. Electrocardiogram, taken on admission, interpreted as supraventricular tachycardia. The P waves are not seen in the usual leads.

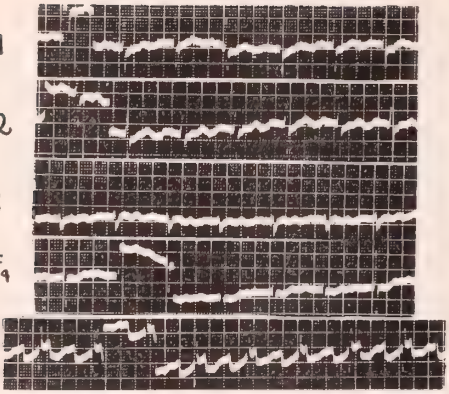


FIG. 2. Electrocardiogram taken on the fourth hospital day interpreted as auricular flutter with 2:1 block. The P waves cannot be seen in the usual leads but are clearly shown in CF$_{\text{A}}$.

The patient presented the picture of acute distress with anxious expression, dyspnea, sweating, and pounding of the heart. The temperature was 99.1 F., the pulse rate was 180 per minute and regular, and the blood pressure was 110/80 mm. Hg. The skin was cyanotic. The heart was markedly enlarged to percussion, and murmurs were heard at the apex and pulmonic areas. The heart rate was very rapid but appeared to be regular. The lungs were clear. The liver extended two fingers below the right costal margin and was not tender, and no pulsation could be felt. The spleen was not palpable. There was no edema of the lower extremities. There were no other significant physical findings. An electrocardiogram, taken on admission, was interpreted as a paroxysmal supraventricular tachycardia with a rate of 180; no P waves were identified (Fig. 1).

Laboratory examination on the morning following admission revealed 12.1 Gm. of hemoglobin, red blood cell count of 3,680,000, and white cell count of 12,300. The differential count showed 72 per cent segmented neutrophils, 22 per cent lymphocytes, 4 per cent monocytes, and 2 per cent eosinophils. Urinalysis was negative. An x-ray film of the chest was read as follows: "The heart is of the ovoid type and moderately enlarged, especially to the left. The aorta is receded, and there is a straightening of the left auriculopulmonic angle. The esophagus is displaced backwards as noted after the ingestion of contrast media. The median right diameter is 6.4 cm.; the median left diameter is 9.1 cm. The oblique diameter is 16.3 cm., and the transverse thoracic diameter is 26.5 cm. There is a moderate congestion at the roots of both lungs and to the bases. Findings: enlarged double mitral valvular type heart; pulmonary congestion."

Blood chemical examinations showed normal value for sugar, urea, total cholesterol, chlorides, and creatinine. A Kline test was negative. The basal metabolic rate was plus 5, and the vital capacity was 1,200 cc. The venous pressure was 88 mm. of water. The arm-to-tongue circulation time with calcium gluconate was thirty seconds, and the arm-to-lung circulation time with ether was nine seconds.

The patient was admitted at 12:30 P.M. One hour after admission, the induction of vagal or parasympathetic effects was attempted. Breath-holding failed to affect the tachycardia, and carotid sinus pressure caused only a momentary, slight slowing of the rate. One cubic centimeter of prostigmine (1:200) was injected subcutaneously at 6:00 P.M. and another 1 cc. at 7:00 P.M. with no appreciable effect. When examined at 10:00 P.M. of the same day, the patient exhibited a perfectly regular heart rate of 90 per minute. On the second hospital day the patient received 0.4 mg. of Digitoxin twice, and phenobarbital, $^1/_4$ grain, four times. For the next five days she received 0.2 mg. of Digitoxin orally once daily and phenobarbital, $^1/_4$ grain, four times daily. The pulse rate continued to vary from day to day and even from hour to hour. At times it would be regular at a rate of about 90 per minute, at other times it would be 120 to 140 per minute and very irregular, and at still other times it was impossible to count it accurately because of its extreme irregularity. The nurses' notes, depending on when the pulse was taken, described it as "slow and regular," "slow and irregular," "fast and regular," and "fast and irregular." The electrocardiograms were equally variable and continually confusing so that different interpretations were given at different times.

The admission electrocardiogram is shown in Fig. 1 and was interpreted as paroxysmal supraventricular tachycardia; no P waves were identified. A second electrocardiogram, taken on the fourth hospital day, was also difficult to interpret as P waves still could not be distinguished (Fig. 2). It was suggested that a special lead be attempted in an effort to bring out auricular activity. This was done merely by placing the exploring chest electrode over the third interspace just to the right of the sternum. This lead, which will henceforth be referred to as CF$_{\text{A}}$, was added to the tracing of Fig.

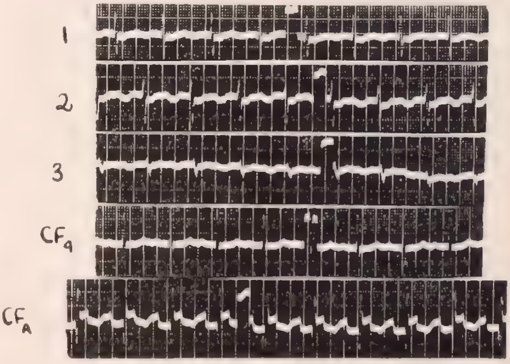
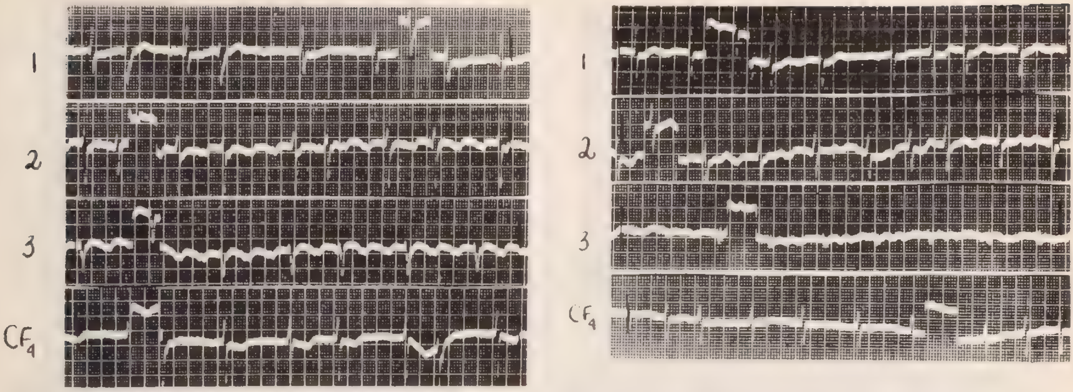
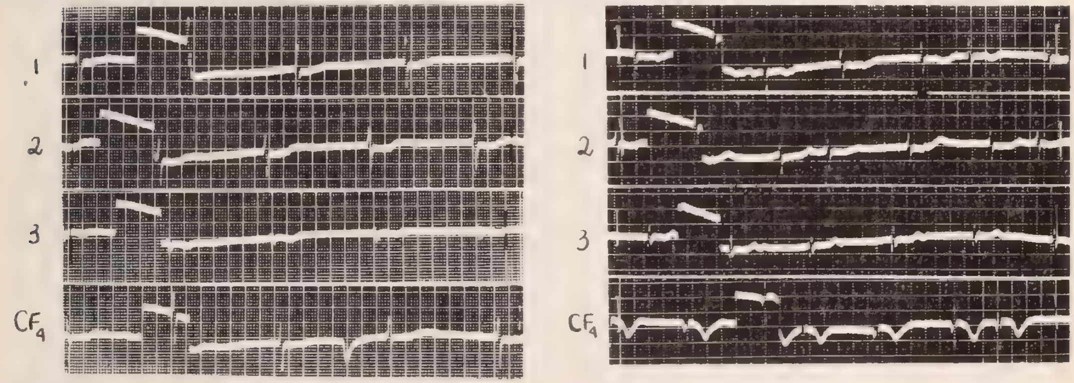


FIG. 3. Auricular flutter with 2:1 block. The P waves are not seen in the usual leads which suggest a diagnosis of a nodal or other supraventricular rhythm. Auricular lead (CF$_{\text{A}}$) clearly shows the flutter waves.



A. Interpreted as Coarse Fibrillation

B. Interpreted as Coarse Fibrillation



C. Interpreted as Nodal Rhythm - Rate 43

D Interpreted as Nodal Rhythm with Preservative Auricular Systoles

Fig. 4. The CF_A leads are deliberately omitted. No auricular waves are clearly defined. For simultaneous CF_A leads see Fig. 5.

2; the auricular waves now were clearly discernible so that the tracing in Fig. 2 could now be interpreted as auricular flutter with 2:1 block, whereas the same tracing without this additional special auricular lead was compatible with a diagnosis of nodal rhythm, since the standard leads, I, II, III, and CF_5, showed no distinct P waves. This is again clearly illustrated in the third tracing in which the CF_A lead brought out definite P waves which could not be seen in the usual leads and so made for the correct diagnosis of auricular flutter with 2:1 block rather than that of a nodal or other supraventricular rhythm (Fig. 3).

Four more tracings were taken during the rest of her hospital stay (Fig. 4). The CF_A leads, taken simultaneous with the standard leads, are deliberately omitted to show how far the examiner might be led from the correct interpretation when the special auricular lead was not available to bring out the P waves which otherwise are too small to be seen or are hidden in the QRS complexes or T waves of the standard leads. Tracing A was read as coarse fibrillation, tracing B also as coarse fibrillation, tracing C as nodal rhythm with a rate of 43, and tracing D as nodal rhythm with premature auricular systoles (Fig. 4A, B, C, D). However, whenever the special auricular lead was added, the true nature of the arrhythmia or tachycardia was revealed (Fig. 5). These CF_A leads suggest that the patient was continuously in auricular flutter and that the standard tracings obtained are different because they merely represent different phases of auricular flutter. With the realization that whenever CF_A leads are taken, P waves of flutter will be seen, one can now properly interpret Fig. 1 as auricular flutter with 1:1 block and Figs. 2 and 3 as auricular flutter with 2:1 block. The rest of the tracings are different manifestations of flutter with different degrees of block and even varying grades of block in the same tracing (Fig. 4).

Comment

The value of a special auricular lead is clearly brought out in the study of the electrocardiographic tracings of this patient. The technic is simple, as it consists merely in placing the exploring chest electrode on the chest in the third interspace just to the right of the sternum. This has given records that are labeled in the illustrations

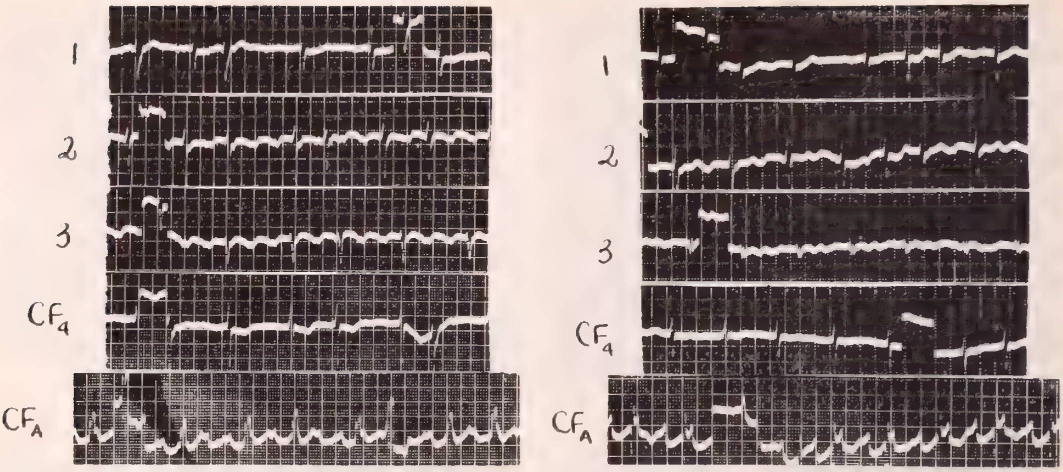


Fig. 5. The CF$_A$ leads added to electrocardiograms A and B of Fig. 4. The CF$_A$ leads show the P waves and indicate the correct diagnosis to have been at all times auricular flutter.

as CF$_A$. A study of the tracings without this lead made for diagnosis of supranodal tachycardia, nodal tachycardia, auricular fibrillation, etc., but whenever the special auricular lead was taken, it became apparent that the patient had auricular flutter. The reason for the different electrocardiographic patterns was that at times she had auricular flutter with 1:1 block, at other times auricular flutter with 2:1 block, at other times with greater degrees of block, and at still other times with varying degrees of block in the same tracing.

This lead is of particular value in auricular flutter with 2:1 block. It has also been of great help in the diagnosis of paroxysmal ventricular tachycardia in which the demonstration of an independent auricular rhythm in this lead has been strong evidence in the differentiation from other conditions giving similar electrocardiographic patterns. The auricular waves of auriculoventricular nodal rhythms have also frequently been indicated, and the method has been useful in the differentiation of such rhythm from auricular fibrillation with complete heart block. The lead should be taken routinely in clinical electrocardiography. It is done simply and occasions no discomfort; through its use correct diagnoses can be made earlier. The other special leads that have been used for this purpose, in particular the esophageal lead, involve a much more formidable procedure. The esophageal lead is admittedly the best method for the demonstration of auricular activity, but the third right interspace lead makes it unnecessary to resort to the esophageal lead, a formidable procedure and especially in cardiac patients. It should be stressed again that, although special leads for bringing out the P waves are of particular value in auricular flutter with 2:1 block, these auricular leads have a wider usefulness.

Many physicians doing electrocardiography may be unaware of the value of this procedure which is so simple and yet has such wide usefulness in the electrocardiographic diagnoses of tachycardias and other disorders of the heart beat.

Summary

A case of tachycardia is presented to show the value of a special auricular lead. A definite diagnosis of the disorder of the beat could not be made from the standard limb and chest leads, because no auricular waves could be seen, but with the aid of the special auricular lead the P waves were easily identified and the diagnosis of auricular flutter definitely established. This special lead consists of placing of the exploring chest electrode over the third interspace to the right of the sternum and taking the electrocardiographic tracing as usual. This procedure is useful in routine electrocardiography in the diagnosis of tachycardias and of other arrhythmias when the P waves are not readily seen. It is simply taken in the office or at home and does not require the special apparatus needed for esophageal leads or cause the patient any difficulties.

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RELATIVE MERITS OF COMMONLY USED SULFONAMIDE DRUGS AS COMPONENTS OF MIXTURES

DAVID LEHR, M.D., New York City

(From the Departments of Pharmacology and Medicine, New York Medical College, Flower and Fifth Avenue Hospitals)

EXPERIMENTAL and clinical studies of the last five years have established the advantages of sulfonamide mixture therapy.[1-16] From the standpoint of renal protection, combinations of substantially equal partial dosages of at least three sulfonamides were considered adequate in routine therapy in the absence of alkalization.[17] Some objection has been voiced against the use of mixed sulfonamides on theoretic grounds. It was intimated that the concomitant use of several drugs might lead to the simultaneous development of allergy against more than one component of the mixture.[18] Thus, the incidence of allergic reactions might be increased and the possibility of switching a sensitized patient to another sulfonamide drug might be eliminated.

This thought was based on the concept that the incidence of sensitization to sulfonamides is largely independent of the dosage used. However, this viewpoint is not borne out by practical experience. Critical evaluation of the vast literature on sulfonamide therapy demonstrated that, in the dosage range employed in human prophylaxis and therapy, the incidence of sensitization increases in direct proportion with the dosage.[13] Table 1 shows that, for example, at an oral dosage of not more than 2 to 4 Gm. of sulfanilamide, sulfathiazole, or sulfadiazine in twenty-four hours, none of these drugs appeared to produce rash or fever in any significant percentage of cases, even if used for prolonged periods and repeatedly in the same individuals. The incidence of allergic reactions assumed significant proportions only when the daily dosage was increased to more than 4 Gm. and reached even higher percentages with full therapeutic amounts of 6 Gm. or more, provided medication was maintained for a minimum of three to five days. These observations indicate that the production of sensitization reactions is dependent upon the repeated presence of certain minimal tissue concentrations of a sulfonamide for a minimum period of several days.

In the majority of patients, sensitization is specifically limited to the sulfonamide used. Hence, the simultaneous administration of several sulfonamides in partial dosage may result in a reduced rather than an increased incidence of sensitization, because mixtures permit "dilution" of individual drug concentrations below the level necessary for the production of allergy. This concept appeared substantiated by our experience with more than 700 patients treated with combinations of two or three sulfonamides, including sulfadiazine, sulfamerazine, sulfapyrazine, sulfacetimide, and the "worst offender," sulfathiazole. The incidence of drug rash and fever at the full therapeutic dosage of 6 Gm. in twenty-four hours was impressively low and nowhere exceeded 2 per cent.[13]

It is yet to be established whether closely related compounds such as isomers and homologues, eg., sulfadiazine, sulfapyrazine, and sulfamerazine, can be distinguished by the cells of the body as specific haptens. Should they prove indistinguishable, the danger of sensitization from their combined partial dosages could still not be

TABLE 1.—RELATION OF DOSAGE TO INCIDENCE OF SULFONAMIDE ALLERGY

Drug	Daily Dosage (Gm.)	Days of Treatment	Number of Cases Treated	Incidence of Rash and Fever (Per Cent)
Sulfanilamide	1-2	120-240	188	1.0
	1.5-4	7-21	1,687	0
	6-9	5-10	1,407	> 10.0
Routine therapy*				7.2
Sulfathiazole	2-4	3-15	3,584	0
	6	3-10	2,475	> 6.4
	6-10	5-10	529	> 10.0
Routine therapy*				11.2
Sulfadiazine	1	12-90	664,840	< 0.5
	2-4	3-20	18,185	0.07
	4-6	7-14	500	1.8
	6+	2-31	2,791	2.3
Routine therapy*				2.9

* These figures are based on a comprehensive compilation of the incidence of rash and fever reported in the literature.

TABLE 2.—RELATIONSHIP OF SOLUBILITY TO RENAL COMPLICATIONS

Drug	Symbol	Solubility in Water, 37 C., pH 5.5 (Mg. Per Cent)		Blockage of Kidneys by Crystalline Deposits
		Free	N_4 Acetyl	
Sulfadiazine	SD	13	20	Frequent
Sulfamerazine	SMD	37	79	Frequent
Sulfamethazine	SMMD	75	115	Rare
Sulfapyrazine	SPZ	5	5	Very frequent
Sulfathiazole	ST	98	7	Very frequent
Sulfacetimide	SAC	1,100	215	Not encountered
Sulfanilamide	SA	1,500	530	Not encountered

This investigation has been made with the assistance of grants from the Committee on Therapeutic Research, Council on Pharmacy and Chemistry, American Medical Association, and the Schering Corporation, Bloomfield, New Jersey.

TABLE 3.—COMPARISON OF THE BEHAVIOR OF SIX SULFONAMIDES IN THE HUMAN BODY

Drug	Average Blood Levels* Free Sulfonamide (Mg. Per Cent)	Per Cent Plasma Bound	Diffusion into Cerebrospinal Fluid (Per Cent of Blood Level)	Per Cent Acetylated in the Body
SD	**6-15**†	**17-56**	**50-75**	**20-40**
SMD	**10-20**	*39-84*‡	30-60	30-60
SMMD	5-12	*39-84*	30-60	*50-80*
SPZ	5-12	-50	40-60	*50-85*
ST	4- 7	*60-75*	*10*	**10-30**
SAC	5-10	**13-20**	**60-85**	**20-40**

* At a daily maintenance dose of 6 Gm. orally.
† Bold type: advantages.
‡ Italic type: drawbacks.

greater than if the equal total amount of any one of these drugs had been employed. Hence, no increased incidence of allergic reactions should result from any sulfonamide mixture as long as individual drug concentrations in the tissues are kept well below the level usually necessary for the production of sensitization.

Theoretic Considerations

It appeared of interest to compare some properties of systemic sulfonamides which might help to determine their relative desirability as components of mixtures. Table 2 represents an enumeration of systemic sulfonamides which deserve consideration for possible use as combinations. (The symbols for the different drugs shown here will be used in all subsequent illustrations and tables.)

It is readily apparent that a definite relationship exists between the solubility of the sulfonamides and their acetylated metabolites and the frequency of renal complications. From this point of view sulfapyrazine would appear to be about the least desirable and sulfacetimide and sulfanilamide the most advantageous compounds. However, the high solubility of sulfanilamide is outweighed by its considerable over-all toxicity. For this reason sulfanilamide was not used in our studies.

The behavior of the other six drugs in the human body, as gleaned from the extensive literature on this subject, is illustrated in Table 3.

It can be seen that sulfadiazine is the least plasma bound, best diffusing, and least acetylated of the four "diazines." Hence, sulfadiazine rightfully maintains a therapeutic advantage over sulfamerazine and a definite superiority over sulfamethazine and sulfapyrazine. Sulfathiazole shares the disadvantage of excessive plasma binding with the three last named drugs and manifests, in addition, particularly poor diffusion into the cerebrospinal canal. Sulfacetimide, on the other hand, except for low blood levels due to rapid excretion, exceeds even the merits of sulfadiazine with regard to conjugation, diffusion, and plasma binding.

No substantial differences appear to exist among the six sulfonamides concerning their antibacterial spectrum. It should be remembered that various sulfonamides, possessing a free para-amino group, do not display appreciable differences in bacterial affinities. Molecular changes in the N_1 substituent serve to modify quantitative rather than qualitative antibacterial properties.[19]

In the animal experiment sulfathiazole proved the most toxic of the group, closely followed by sulfapyrazine and then sulfadiazine and its two methyl homologues which are about equally as toxic, whereas sulfacetimide is about five times less toxic than sulfadiazine.[20]

From a clinical point of view it can be assumed as established that on the basis of their excellent clinical record, sulfadiazine and sulfamerazine qualify at present for first and second place, re-

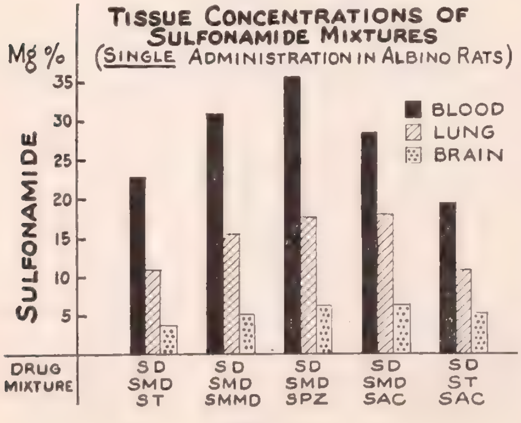

FIG. 1.

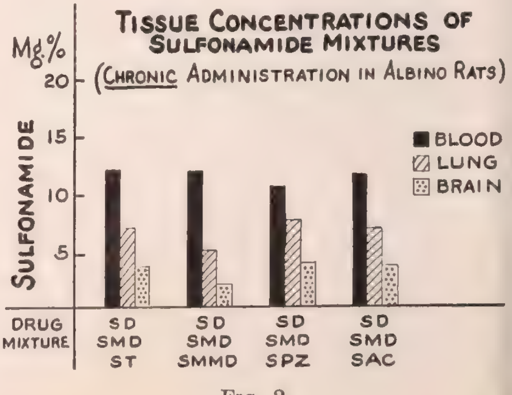

FIG. 2.

TABLE 4.—ABSORPTION AND EXCRETION OF SINGLE SULFONAMIDES IN MAN*

	Blood Free Drug (Mg. Per Cent)				Urine Total Drug Excreted After 24 Hours	
Drug	1 Hour	4 Hours	8 Hours	24 Hours	Mg. Per Cent	Per Cent of Dose
SD	1.8	8.0	7.2	3.7	2,223	55.5
SMD	3.0	9.8	9.0	4.7	1,077	26.9
SMMD	4.2	7.8	5.1	2.6	1,233	30.4
ST	3.9	6.5	5.0	1.0	2,869	71.7
SAC	6.2	6.8	4.5	1.4	2,801	71.0

* Each figure represents the mean of the values of 4 or more male test subjects. The dose was 4 Gm. sulfonamide orally.

spectively, as components of any mixture. The other four compounds deserve attention merely as possible additional members of a combination.

Experimental Results

With this view in mind, I compared various triple mixtures with regard to antibacterial activity, toxicity, and therapeutic effectiveness in the experimental animal and in man. The majority of the mixtures contained both sulfadiazine and sulfamerazine as constant components, whereas the third component varied between sulfamethazine, sulfapyrazine, sulfathiazole and sulfacetimide. Most experimental procedures used were closely similar to those outlined previously in detail.[2,8] For the sake of conciseness their description was eliminated from the present report.

No substantial differences were observed with any of the mixtures studied as far as "in vitro" antibacterial activity and efficacy against experimental infections of mice are concerned. On the whole, the triple mixtures proved about equally as effective as sulfadiazine in identical total concentration or dosage.

Absorption, fat in the body, and excretion of these triple mixtures were investigated in rats, rabbits, and human beings. The results of representative experiments on tissue distribution in groups of albino rats are summarized in Figs. 1 and 2.

Fig. 1 demonstrates the relationship of the drug concentrations in blood, lungs, and brain three hours after a single oral intubation of five triple mixtures (0.5 Gm. per Kg.). Although the sulfapyrazine and sulfamethazine combinations show higher blood levels, the sulfacetimide mixture, which is a close third in this respect, stands out as the one with excellent tissue distribution. In fact, the diffusion of this drug mixture into lungs and brain slightly surpasses that of the sulfapyrazine combination and is distinctly higher than that of the sulfamethazine or sulfathiazole mixture.

Similar results were achieved in 70 rabbits in studies of sulfonamide tissue distribution from various routes of administration. In addition, spinal fluid was obtained in these animals by occipital puncture so that the ratio of blood-spinal fluid could be calculated. From the oral route of administration the diffusion of the mixture sulfadiazine-sulfamerazine-sulfacetimide through the hematocephalic barrier was as good as that of sulfadiazine and the absolute concentration in the spinal fluid and blood even somewhat higher than that from sulfadiazine alone. Good correlation was found in all experiments between the ratios of blood-spinal fluid and blood-brain.

In the chronic study (Fig. 2) groups of rats were examined in a similar fashion after having been fed a standard diet containing 0.5 per cent of four triple mixtures for fourteen days. Here the mixture containing sulfamethazine as third component produced the lowest sulfonamide concentrations in lungs and brain, whereas there was no substantial difference between sulfathiazole, sulfapyrazine, and sulfacetimide in this respect. Since sulfathiazole has fallen into disfavor and sulfapyrazine possesses a rather high experimental and clinical toxicity, the mixture containing sulfacetimide appeared the most desirable composition for clinical application.[21,22]

This viewpoint was strengthened in numerous studies of absorption and excretion in 60 human subjects using single and multiple dosages of separate and mixed sulfonamides. Tables 4 and 5 represent a summary of all single dose experiments with separate drugs and drug mixtures.

Table 4 illustrates on the left the blood levels achieved in groups of four male subjects with five single sulfonamides and on the right the total amount of drug excreted in twenty-four hours in mg. and as per cent of the 4-Gm. dose. It is apparent that sulfacetimide and sulfathiazole show the fastest absorption and most complete excretion and that within the four-hour interval

TABLE 5.—ABSORPTION AND EXCRETION OF SULFONAMIDE MIXTURES IN MAN*

	Blood Free Drug (Mg. Per Cent)				Urine Total Drug Excreted After 24 Hours	
Drug Mixture (Equal Parts)	1 Hour	4 Hours	8 Hours	24 Hours	Mg. Per Cent	Per Cent of Dose
SD + SMD + ST	4.4	11.4	9.2	3.5	2,350	58.7
SD + SMD + SMMD	4.2	10.1	10.5	5.1	1,616	40.3
SD + SMD + SAC	6.3	9.2	7.1	3.2	2,431	60.7

* Each figure represents the mean of the values of 4 or more male test subjects. The dose was 4 Gm. sulfonamide orally.

the blood levels of sulfacetimide are better than those of sulfathiazole and not far behind those of sulfamethazine. This is the more significant since sulfamethazine like sulfamerazine shows very incomplete urinary excretion, a fact which could be partially accounted for by their greater retention in the blood stream (plasma binding) and partially by poorer absorption after oral administration. Not shown in the table is the percentage of acetylation which was highest for sulfamethazine (68 per cent), followed by sulfamerazine (46 per cent), sulfadiazine (33 per cent), sulfacetimide (30 per cent), and sulfathiazole (21 per cent). The behavior of three triple mixtures under identical experimental conditions is depicted in Table 5.

It is apparent that the replacement of sulfathiazole by sulfacetimide as the third component tends to raise blood levels slightly within the first four hours and to lower them accordingly thereafter. Sulfamethazine in the same position assists, as expected, in the prolonged maintenance of high levels and greatly retards urinary excretion. Conjugation of all three mixtures within the first twenty-four hours was around 30 to 40 per cent which was less than could be expected on the basis of mathematical computation using the figures of the single drugs. Since, in our hands, a combination of sulfadiazine-sulfamerazine-sulfathiazole had given excellent therapeutic results at the bedside, it was expected that the replacement of sulfathiazole by sulfacetimide would not interfere with the therapeutic efficiency of the triple mixture.

Clinical Application

Clinical trials with a combination of equal partial amounts of sulfadiazine-sulfamerazine-sulfacetimide are at present continuing.* To date, 130 unselected patients of all age groups with serious acute infections have completed this therapy at the full routine dosage (in adults: 3 to 4 Gm. initially, 4 to 6 Gm. daily maintenance dose; in children: 0.15 to 0.2 Gm. per Kg. daily). Blood levels were excellent. They ranged as a rule between 10 and 25 mg. per cent free sulfonamide. Acetylation was low, rarely exceeding 20 to 25 per cent in the blood and 40 per cent in the urine. Although no alkalizing agents were used, crystalluria of a moderate degree was encountered in but two instances with excessive urine concentrations of sulfonamide. There was one instance of severe nausea and vomiting requiring interruption of therapy and one instance of moderate cyanosis. No other untoward reactions were observed.

Therapeutic results were highly satisfactory with defervescence usually occurring within the first twenty-four or forty-eight hours. The series entailed 36 cases of bacterial pneumonia, 23 cases of shigellosis (Shigella sonnei), three cases of bacterial meningitis, one patient with penicillin-resistant pneumococcal bacteremia, and another with penicillin- and streptomycin-resistant staphylococcal septicemia.

Summary

It is concluded on the basis of these experimental and preliminary clinical studies that the combination of sulfadiazine-sulfamerazine-sulfacetimide (equal partial amounts) represents a highly satisfactory sulfonamide mixture because of its low toxicity, excellent tissue distribution, and good therapeutic efficiency.

The technical assistance of Helen Salzberg, Ruth Salzberg, and Edith Harnik is gratefully acknowledged.

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The Family of Fools is ancient.—Anonymous

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* The clinical studies were done in cooperation with Drs. R. Terranova, S. Kenigsberg, and J. Oberman, Department of Medicine, Metropolitan Hospital, Welfare Island; Drs. L. Morgenbesser and Ch. Svigals, Department of Medicine, and Drs. L. Slobody, J. T. Luetters, and A. J. Capute, Department of Pediatrics, Flower and Fifth Avenue Hospitals. The results will be reported elsewhere in detail.

THE ATOPIC NATURE OF AMYOTROPHIC LATERAL SCLEROSIS: EVIDENCE AFFORDED BY RESULTS WITH ADRENAL CORTEX THERAPY

Robert D. Barnard, M.D., and Solomon Friedland, M.S., Queens, New York

(From the Terrace Heights Hospital)

ONE of the writers (S.F.) in perusing routine laboratory data on amyotrophic patients in a large neurologic center found erythrocyte counts which were significantly above the average. The casual explanation given him, that this was an erythremia probably compensatory to diminished pulmonary ventilation (on the assumption that there was respiratory musculature inadequacy), did not seem to accord with the facts that amyotrophic patients do not ordinarily suffer early respiratory embarrassment and that there is a diminished oxygen requirement as evidenced by progressive diminution of the basal metabolic rate, whereas the erythremia appears very early in the course of the disease. Subsequent studies revealed a consistently elevated blood cholinesterase in amyotrophic subjects. Since "estremic" polycythemia is frequently a compensatory reactive component of the atopic-exudative episode and since an elevated blood cholinesterase is a common finding (along with erythremia) in the chronic allergic conditions, the thesis that amyotrophic lateral sclerosis is atopic in nature was one meriting exploration.[1-3]

Such exploration has now been going on for a period of two years. It has been a particularly fruitful venture in that it has been possible to adduce both direct and indirect evidence for the positive case. Direct evidence can be cited by the fact that all five patients whom we have been permitted to study show both a strong personal and family history of manifest allergy. In every instance, there is a wide "spectrum" of materials to which hypersensitivity is manifested.

Patients who react to a diversity of allergens, viz., the patient who is found to be sensitive to penicillin on initial administration and who thereafter is found to exhibit hypersensitivity to all antibiotics as well as to a variety of drugs, foods, and contactants, are those in whom there is probably a constitutional or hereditary type of "allergic diathesis." The term which we will use for this inherent type of human hypersensitivity, atopy, was introduced by Coca in rather loose connections and has been much criticized, along with the concept it entails.[4] Nevertheless, the concept did receive bolstering from the elucidation of the so-called cholinergic episode in the course of which certain physiometrically and psychometrically delineable human types react in an "allergic" manner to any severe stress situation regardless of whether that stress is imposed by an infectious, a traumatic, a psychogenic, or a metabolic incitant.[5]

Our indirect evidence of the atopic nature of amyotrophic lateral sclerosis consists in the exposition of the response of five patients to adrenal cortex therapy. The latter was instituted on the basis of the fact that, in every patient, we had been able to elicit a history of severe cholinergesis prior to the onset of symptoms, an aggravation of neuromuscular dysfunction with rapidly accelerated regression during periods of severe stress (passage of a ureteral stone in one case, an ischiorectal abcess in a second, and the witnessing of a fatal accident by a third), and some degree of restitution during mild stress (a nagging toothache or headache, seeing an exciting football match on television). That mild stress might be eliciting a Selye type of "alarm reaction" with an outpouring of adrenocortical hormone seemed to be the possibility.[6] Therefore, we began giving oral adrenal cortex to all patients, and, while they were receiving it, there was a suggestion of arrest, but it did not prevent severe regression in one patient during a severe stress period.[7] On the assumption that oral therapy was inadequate, one male in the series received 5 cc. of aqueous extract intravenously. The immediate results were astounding to all present. Within a minute after injection, the patient's fasciculations and ankle clonus had disappeared, he stood without support (the first time in over a year) and was able to move his fingers. This dramatic myodynamic effect persisted for some hours and was renewed, although in markedly diminishing intensity by each subsequent injection.

With considerable optimism, 5 cc. of Eschatin were administered intravenously to each of the two female patients in the series.* The results were quite disappointing. There was no manifest response. A nearly full, 50-cc. bottle of Eschatin was left at the home of one of the patients where a member of the family (who had been trained to inject the previously prescribed

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* The aqueous adrenal cortex preparation used (Eschatin) was furnished by Parke-Davis and Company.

and orthodoxly continued liver extract) dutifully gave 3 cc. of Eschatin triweekly believing it to be another brand of liver which didn't sting so badly on injection. The family was indeed quite gratified by the apparent potency of this "liver" for day-by-day improvement, although barely sensible in proximity, was decidedly evident when the patient was medically evaluated about a month later.

We have followed the courses of five patients on and off various forms of adrenal cortex therapy for periods of from six to eighteen months. Because of the interspersal of periods during which such therapy was unavoidably interrupted in some instances, it has been possible to correlate the concomitant status of each patient with such therapy and to separate such variations in status from the artifacts of variably superimposed administrations of liver or B_{12}, vitamins A, B, C, D, and E, antihistaminics, salicylates, xanthines, antibiotics, vaccines, and organometallic compounds. These variations, impractical to report (as they have been followed) in detail, force our own conviction that the only instrumentalities now worthy of exploitation against the disease are (1) adequate corticohormone therapy and (2) a hopeful outlook toward at least an arrest of the process. The latter is contingent on the former; both are necessary operatives in "rheumatoid" and other previously considered intractable atopic conditions; they are designated at this point only from the practical consideration that apparent arrests have been procured in the course of amyotrophic lateral sclerosis.

It is not within the scope of the present discussion to outline individualized dosage schedules or to compare effects of exogenous corticosteroids against those produced under the impetus of corticotropic factors. This is the function of collaborating neurologists who have permitted us to study their cases from our own restrictive point of view, and they will unquestionably render their own appraisal of success or failure. It is our purpose to compromise the clinicopathologic picture of amyotrophic lateral sclerosis with seemingly discordant images of those other conditions previously classified as in the rheumatoid or atopic category in order to show certain inherent similarities among them all and perhaps to implement the resurgence of optimism now being based on the ability of adrenocorticotherapy to reverse tissue changes previously considered irreversible.*

The Nature of the Atopic Reaction

When a cholinergic episode occurs in the life of an atopic reactor, a chain reaction is set off leading to a culmination which depends on the peculiar organization of the affected individual and the particular functional unit which constitutes his "shock organ." Such a chain mechanism has been previously outlined with regard to those in whom the bone marrow was the shock organ, and it was illustrated that in such an individual, a malignant blood dyscrasia would follow the imposition of any cholinergic incitant.[7] It will be evident, however, that, even where the hemopoietic marrow is not the restrictive shock organ (the individual being so predisposed as to have a weaker atopic link), it must, nevertheless, be involved to some extent during the course of any cholinergic episode. This involvement is inevitable because the bone marrow is the chief source of replenishment of the blood cholinesterase which is concerned in the abrogation of cholinergic stress. In fact, the bone marrow and the adrenal cortex constitute the two prime organs for compensatory reaction to stress. On the imposition of stress, either the bone marrow compensates adequately by an enhanced cholinesterase production, or else the bone marrow itself becomes the shock organ and its function is suppressed or perverted with death through some modality of marrow failure the consequence.

In those reactors in whom there is adequate myeloid compensation to a stress situation, by increasing its elaboration of cholinesterase the bone marrow itself avoids becoming the atopic shock organ, but in such instances atopic phenomena may persist in spite of the estremia. Obviously, in such cases some other mode of compensation may be inadequate. From three separate lines of evidence, it is now believed that the deficient compensatory mechanism is that by which the pituitary activates the adrenal cortex in response to stress. The latter mechanism which, in the human, operates in parallel with or supplementary to the acetylcholine-cholinesterase mechanism, may actually be independent of the latter. The lines of evidence for its operation in atopic conditions may be enumerated as follows:

1. Patients with adrenocortical deficiency, like patients with deficient blood cholinesterase (estrapenia), react poorly to any stress situation which, in patients with either deficiency, is likely to precipitate shock.

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* Although overt benefit has accrued only to those three patients who can be said to have had adequate, sustained adrenal cortex therapy, the limitation on the latter has not been entirely the expense involved. Interruption of therapy was enforced in one instance by definite water and sodium retention which the whole aqueous extracts were said not to induce. This tendency has been amplified in some cases, but not in others, by the concomitant administration of testosterone or progesterone which also provide, in some instances, the same myodynamic "lift" afforded by adrenal cortex administration. More than optimal amounts of extract are likely to cause potassium depletion with a type of myasthenia that may mask what benefit is accruing.

2. In the estremic type of atopic reaction, eosinophilia is frequent and lymphocytosis is usually extant. The lymphocytes are of an aberrant (not immature) type, there being present among them an undue proportion of that type once thought to be diagnostic of "infectious mononucleosis" but now known to be merely a specialized form of lymphoid cell which is actively elaborating various serum globulins whose amount and diversity are likewise increased in the atopic reactor. The almost invariable association of such "lymphotic" cells with either definitive hypocorticism and atopic conditions may prove the essential inseparability of the latter.

3. Supplementation of the patient's own corticosteroid production furnishes a measure of control for those conditions which have been previously tabulated as estremic atopic-exudative reactions, i.e., the benign systemic lymphoses ("infectious mononucleosis," chronic lymphatic "leukemia" with a life span of thirty years, giant follicular adenopathy, Hodgkin's paragranuloma, the "rheumatoid" diseases, and some cases of polycythemia vera).[1]

Corollary evidence for the dual nature of the independent compensation mechanisms which operate in counteraction to atopy, is also forthcoming. Thus, adrenal cortex therapy, alone, should be ineffective in the acute malignant hematologic dyscrasias or in severe radiation injury. In these instances, the stress decompensation involves the failure to synthesize cholinesterase. It is not unlikely, however, that both compensatory mechanisms may share in the failure (as is undoubtedly the case in surgical or hemorrhagic shock) in individual instances as is indicated by the occasional dramatic, although transient improvement observed in acute leukemics or purpuric subjects to whom adrenal cortex has been administered.[8]

On the basis of the foregoing reasoning, the stress compensation failure of the amytrophic patient, if any, must lie within the corticotropic-corticosteroid mechanism since, in such subjects, the blood cholinesterase is usually elevated.[9]

Descriptive Criteria of Atopic Reactions and the Concordance of Amyotrophic Lateral Sclerosis

Regardless of their apparently manifest diversity, there are certain unifying features among atopic reactions that serye to place them upon common nosologic ground. For the purpose of arriving at a possible generalization, one might list as the descriptive criteria of atopic reactions: (1) their exhibition following "nonspecific" incitants, (2) their symmetry, (3) the involvement of restricted portions of the shock organ which responds by (4) disseminated tissue changes and as (5) a functional (rather than as a strictly anatomic) unit.

As an acceptable illustration, the admitted entity "atopic dermatitis" may be cited: (1) It appears after an emotional upheaval and/or contact with (ordinarily considered) nonallergenic substances. (2) Its distribution tends toward equilatitude. (3) The whole skin comprises the shock organ, but (4) nonaffected areas are interspersed with those showing profound alteration in structure. Furthermore, (5) the entire integument participates in the reaction, and the skin, as a functional unit, is "sensitized."

These descriptive criteria likewise seem to fit the case of amyotrophic lateral sclerosis, at least in those patients that we have observed. The probable incitant of trauma, either physical or emotional, to an individual of allergic background, could be incriminated in each. The disease is characterized by its predominant, one might say (in later stages) its absolute, symmetry. The shock organ can be considered to be the somatomotor apparatus, all of whose components, from the Betz cells of the precentral cortex through the pyramidal pathways to their ultimate connections in the myofibrils, being involved as functional units in the reaction. Yet, side by side with demyelinated fibers, exist those which preserve at least potential, functional integrity. It is apparently due to this preservation that one may retain hope and anticipation of some degree of functional reversibility in a process that until now has been regarded as an irretrievably degenerative one.

The question as to why a specific portion of the nervous system should become the atopic shock organ in this class of atopic reactors is naturally raised. Attempts at answer are not germane to a restricted consideration of a single atopic disease. This does not mean that no answer is forthcoming; as a matter of fact it is a logical conclusion from the composition of the cholinergic episode and the reaction of the shock organ as a functional unit. The last fact will explain the known tendency of atopic reactors to "directionalize" their reactions to whatever shock organ they subconsciously designate. It explains why one will "choose" the skin, another the bronchiolar apparatus, while a third, perhaps a stellar athlete, who loves the game he lives by to the extent that neither pain nor illness can distract him from daily participation in it, might still psychosomatically destroy that particular group of functional units which made him great.

Summary

On the basis of the apparent salubrious effect of

adrenal cortex therapy upon its course and on the basis of other similarities to the atopic diseases, the clinicopathologic features of amyotrophic lateral sclerosis are analyzed and the condition designated as an atopic one. The cause of the atopic reaction which involves the somatomotor apparatus appears to be the same operative in other atopic reactions in which there is adequate compensation by the acetylcholine-cholinesterase balance but inadequate compensation by the corticotropic-corticosteroid mechanism.

We are particularly indebted to Dr. Harry G. Golan of the Allergy Division of the Wyckoff Heights Hospital for the adjudication of the allergy status of the patients.

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BIRTHS IN NEW YORK STATE

New babies came into the world in New York State at the rate of six every ten minutes throughout 1949, according to the Annual Report on Vital Statistics made recently by the State Department of Health.

The report, which covers the entire State, set the total births for last year at 303,000 and said it was the second highest number on State records. The record high of 325,000 came in 1947, then dropped to 302,000 the following year.

The births for the year outnumbered deaths (155,000) just about two to one. The 1949 death rate, 10.5 per 1,000 population, was never lower, having dropped from 11.1 in the past decade. The degree of improvement is greater than the figures indicate, the report said, because in the last ten years the proportion of old persons among whom mortality is high, has increased. If the age distribution of the population had been the same in 1949 as in 1939, the death rate would have been about 9.5.

Contributing to the year's favorable public health record were new low marks set by both infant and maternal mortality. The 1949 rate for infant mortality was 26 deaths per 1,000 live births; for maternal mortality, eight deaths per 10,000 live and still births. The rate for the former has declined from 39 in the past ten years, while the latter has fallen even more sensationally from 30.

The outstanding negative fact in the favorable record was the epidemic of poliomyelitis, which resulted in 322 deaths in the State. This figure is more than six times the number of the preceding year.

However, where diseases primarily affecting children are concerned, new low records were set in 1949 by whooping cough, with 26 deaths and a rate of 0.2 per 100,000 population, and diarrhea and enteritis under two years, with 238 deaths and a rate of 0.4 per 1,000 in this age group. Ten years ago whooping cough was responsible for 135 deaths, diarrhea and enteritis 579.

There were 35 deaths from streptococcal sore throat including scarlet fever. A lower number, 24, was recorded only once, in 1948. A decade ago, 126 deaths were charged to this cause.

Deaths from diphtheria, which rose to the disturbingly high figure of 45 in 1946, declined to nine last year, equaling the alltime low of 1944.

Among causes of death to which all ages are subject, new low rates were set for tuberculosis, 30.8 per 100,000 population, with 1949 deaths totaling 4,542; syphilis, rate of 7.1 and 1,044 deaths; pneumonia, rate of 29.6 and 4,370 deaths; appendicitis, rate of 2.7 and 403 deaths; hernia, rate of 6.9 and 1,015 deaths; nephritis, rate of 36.5 and 5,378 deaths. Rates for these diseases in 1939: tuberculosis, 47.4; syphilis, 14.9; pneumonia, 55.4; appendicitis, 10.7; hernia, 9.5; nephritis, 65.5.

The rate from diseases of the heart, 409.0 per 100,000 was the lowest in seven years. The 1939 rate was 375.3. Deaths attributed to heart disease in 1949 totaled 60,331, compared with 50,337 ten years ago. Mortality from cerebral hemorrhage, 71.5, and from diseases of the arteries, 23.5., has declined, although only slightly in both cases.

Considering cancer, the report said, although its death rate, 177.7, showed a slight increase over the maximum reached a year ago, the upward trend of the past few years probably has been due to the increase in the number of aged persons. The cancer mortality rate of a decade ago was 155.0. Cirrhosis of the liver, with a rate of 17.6 in 1949, has increased more than 50 per cent since 1939.

Among the external causes of death, the report considers exceptionally favorable the rate recorded for suicide. In the past ten years it has declined from 16.5 to 11.0. The rate was lower only once, 10.8 in 1944. The rate of homicide, 2.8, was the lowest on record with the exception of the war years.

The death rate from all types of accidents other than automobile, 38.9, was the lowest ever recorded in the State. Proportionately, the greatest reduction, 28 per cent, occurred in occupational accidents, mainly those associated with manufacturing and transportation. There was slight reduction in fatal home accidents, particularly those from poisonous gas and fire. The number of falls in the home showed a small increase. The mortality from automobile mishaps was 13.3 in 1949, compared with 12.4 in 1948.

MALIGNANT MELANOMA IN THE AMERICAN NEGRO

Herman Charache, M.D., Brooklyn, New York

(From the Brooklyn Cancer Institute)

MALIGNANT melanoma in the American Negro is rare. Only 78 cases have been reported in the literature up to the present writing. To these we wish to add another case report from the Brooklyn Cancer Institute. This is the only case of malignant melanoma in a Negro admitted to our institution during the past nineteen years. During this period 19,000 patients with all types of neoplastic diseases were admitted. Seventy-six of them were cases of malignant melanoma in white patients.

Case Report

A sixty-nine-old American Negress was admitted on July 26, 1948, complaining of a "sore" on the right heel of two years duration. About two years before admission she had noticed a "black spot" on her right heel and had attempted to wash it off with soap and water. When it did not come off, she scraped it with a razor blade. This resulted in an ulcer which failed to heal. A year later she went to a hospital and was given an ointment, to no avail. A week previous to admission she fell and injured her right foot. She was taken to a hospital where a biopsy was done and was then advised that she had a malignant tumor and would have to have her right leg amputated. Her family physician advised against it, and she was referred to our Institute for treatment.

Examination revealed an obese patient, confined to a chair and unable to put any weight on her right foot. The plantar surface of the heel was the site of a large punched-out ulcer, measuring 5 by 5 cm., with a fungating cauliflower mass at the base measuring 3 by 3 cm. and containing numerous black areas (Fig. 1). The regional lymph glands were not enlarged. The rest of the physical examination was essentially negative.

Examination of the urine showed traces of melanin. The blood count was within normal limits, as was the blood chemistry. The blood Wassermann was negative; chest x-ray showed a widening of the thoracic aorta and dilatation of the left ventricle. There was no evidence of pulmonary metastasis. A biopsy of the lesion was reported as malignant melanoma (Fig. 2).

Amputation of the leg was advised, but the patient refused surgery and signed her release. A visit to the patient's home disclosed that she was operated on at another hospital. She died in January, 1949.

Comment

The clinical and pathologic features of malignant melanoma are the same in the white as in the Negro. However, Baxter states that in African natives the tumors often remain locally malignant, metastasize less frequently, and have a slower course.[1] It is also noted that malignant melanomas are more frequently found among African natives than in American Negroes. This some authors attribute to the fact that African natives walk barefoot and their feet are repeatedly exposed to injury by thorns and sharp stones. In 170 cases of malignant melanoma in the colored races collected by Baxter, 65.3 per cent occurred on the feet. The majority were on the plantar surface. Yet malignant tumors other than melanoma are rarely found on the plantar surface of the foot. None were encountered at the Brooklyn Cancer Institute. If malignant melanoma occurs on a pre-existing benign nevus, as is generally accepted, why should the plantar surface of the foot be the most common site, where benign nevi are seldom seen? The American Negro does

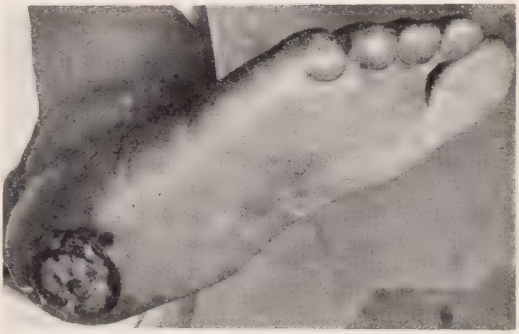

Fig. 1. Malignant melanoma of heel in an American Negress.

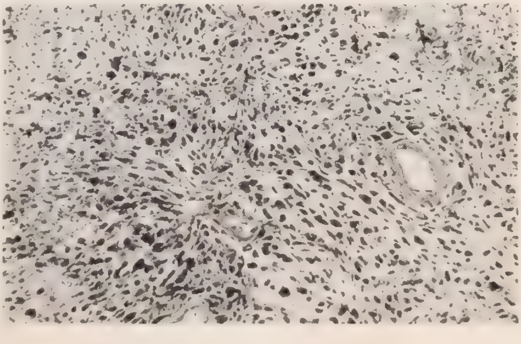

Fig. 2. Photomicrograph of malignant melanoma in Fig. 1. (200 ×)

not walk barefoot; yet a great number of the cases reported occurred on the foot.

Table 1 lists the sites of predilection of malignant melanomas in 170 cases in the colored races according to Baxter.[1]

TABLE 1.—Sites of Predilection of Malignant Melanomas

Site	Number	Percentage
Foot	111	65.3
Lower extremity (exclusive of foot)	16	9.4
Eye	16	9.4
Upper extremity	13	7.6
Head and face	8	4.7
Trunk	4	2.4
Mouth	1	0.6
Gallbladder	1	0.6
Total	170	

Once again we would ask why malignant melanoma should be more prevalent in the white than in the Negro? Are they not physiologically and anatomically the same? Do they differ only in the color of their skins? Searching through the literature for the answer, the following information is gathered.

Matas states that in highly pigmented people the physiologic function of pigment formation is under better physiologic control and, therefore, less liable to unrestricted growth.[2]

Human melanin, according to Masson, is pigmented granules varying in color from dark brown to light yellow.[3] It is found in many epithelia of ectodermal origin, such as the epidermis, hair, mucous membrane, sensory organs, and medulla of the adrenal. It is also found in the iris, choroid of the eye, and the leptomeninges. The cells that produce the pigment are called melanoblasts. There are other cells that contain the pigment without producing it. They are called melanophores. According to Masson, the melanoblasts excrete the melanin as a glandular cell excretes its product, and it may, therefore, be considered a glandular cell. Masson terms these cells cytocrines in contradistinction to endocrines and exocrines.

The influence of the endocrines on melanotic tumors has been observed by many investigators. Members of the white race, according to Fox, have but few melanophores in the dermis and may carry limited quantities of diffuse melanin in the dermis.[4] Therefore, one may reasonably conclude that the endocrines and the cytocrines are closely related, that the endocrines stimulate the melanoblasts to hypersecretion, resulting in an overproduction of melanin. If the melanophores are plentiful, as in the dermis of the colored races, they can take care of the excess of melanin, and it is equally distributed. In the white race, however, with few melanophores, it may result in the piling up of melanin in isolated places in the form of pigmented spots or nevi. This may account for the "invisible" pigmented areas becoming visible or the appearance of pigmented nevi after puberty or during pregnancy or shortly thereafter.

The association of trauma with malignant melanoma in the white as well as in the colored races has been observed by many investigators Bishop states that, although most nevi never develop into malignant tumors, they have malignant tendencies and lack only a certain stimulus to upset the normal cellular equilibrium and that stimulus may be provided by trauma.[5] Besides chronic irritation, the greatest offenders are the so-called "electric needle," the razor blade, the doctor's office where the lesion is "scooped out" with a scalpel and thrown into the waste can, and even the operating room where the lesion is inadequately removed.

The treatment of malignant melanoma in the American Negro does not differ from that in the white, namely, the excision of the tumor with a wide margin of skin, subcutaneous tissue, and deep fascia, and the removal of the regional lymph nodes or amputation of an involved extremity. Radiation therapy is of no avail, as the tumor is radioresistant. If surgery is contemplated, all benign nevi should be considered malignant and be treated with a wide and deep excision.

Of all malignant tumors known, malignant melanomas are the most treacherous and unpredictable, even in the most skillful hands, and hence the difficulty of prognostication in an individual case based on past statistics, no matter how "localized" the tumor is. The need is urgent for further clinical and laboratory studies of malignant melanomas.

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The universe is a wise man's library.—Anonymous

GASTROSTOMY: A REVIEW OF 46 CASES

David Lyall, M.D., F.A.C.S., and Harold J. Leider, M.D., New York City

(From the Second Surgical Division (Cornell), Bellevue Hospital)

THIS paper consists of a survey of all gastrostomies performed on the Second Surgical Division, Bellevue Hospital, between the years 1937 and 1947, inclusive. Forty-six gastrostomies were done over this eleven-year period. Twenty-three were executed in the last five years of the series and an equal number in the preceding six years. However, in the more recent group all but one were of the "tubular" type, e.g., Stamm or Witzel, whereas in the preceding six years approximately two thirds were done by various tubulovalvular "plastic" technics, e.g., Janeway, Beck-Jianu, Glassman. "Tube" gastrostomies typically consist of a serous lined tube and usually require a constant indwelling catheter if they are to remain patent for any period of time. The plastic types, on the other hand, are typically lined with mucosa and may have a variety of specially constructed valves. A breakdown of the entire group according to modification used is seen in Table 1.

The causes of obstruction, necessitating the creation of an artificial stoma for feeding, and associated mortality are listed in Table 2. In all of the patients with malignant disease the operation was a palliative procedure, with the exception of two patients who had a concurrent esophagectomy (who survived). In the remainder, gastrostomy was considered temporary or preparatory to further definitive surgery. Whatever the underlying diagnosis, the mortality is formidable if the patient's general condition is poor (Table 2).

The age of the patients varied from thirty-two to seventy-six years, with an average of sixty and seven-tenths years.

Mortality for the procedure included 16 deaths, or 34.8 per cent of those operated upon. Examination of case records indicates that the hospital stay in many of those expiring was so prolonged by pre-existing cachexia and the added factor that they were disposition problems (not uncommon in a municipal hospital) that a sizable proportion of the deaths was probably due to the expected progression of underlying disease. Only five deaths, a mortality of 21.7 per cent, occurred in the second half of the series when all but one of the gastrostomies performed were of the "tubular" variety. On the other hand, 11 of the first 23 (two thirds of which were of the "plastic" type) expired, giving a death rate of 47.8 per cent. Rate of the mortality associated with the various technics is seen in Table 1.

Complications before and after operation were not uncommon because of the generally advanced age of the patients and frequent presence of severe malnutrition at the time of surgery. Many had arteriosclerotic heart disease. In addition, bronchoesophageal fistulas were present in two cases of carcinoma of the esophagus. As a consequence, pneumonia, cardiac failure, and coronary thrombosis were not infrequent postoperative complications. Wound sepsis was encountered more often than any other single complication. This is of particular importance as a source of peritonitis and as a further debilitating factor in the patient already suffering from general inanition. The incidence of postoperative morbidity developing with the different types of gastrostomy in this series is revealed in Table 1. Here it is noted that wound infection, strangely enough, developed considerably less often following "tube" gastrostomies than with the "tubulovalvular" types. This is contrary to the general impression. Sweet, in particular, reported a definite diminution in wound sepsis at the Massachusetts General Hospital with gastrostomies performed according to the various "plastic" technics (in such cases he restricted himself to the Spivak and Beck-Jianu methods).[1] However, that author admits that most of these were actually done by himself, whereas the majority of "tube" gastrostomies were performed by the house staff; the few exceptions were performed by the junior attending staff. As Sweet and also Thorek have pointed out, tubulovalvular gastrostomy requires considerable technical skill in

TABLE 1.—Postoperative Complications and Mortality with Gastrostomy During the Period 1937 to 1947, Inclusive

Technic	Number	Complications				Deaths
		Wound Infection	Pneumonia	Cardiac Disease	Peritonitis	
Beck-Jianu	1	1	0	0	0	0
Glassman	3	1	0	0	0	1
Stamm	18	1	3	1	2	5
Witzel	12	1	1	1	1	4
Janeway	12	7	4	1	1	6
Total	46	11	8	3	4	16

TABLE 2.—POSTOPERATIVE MORTALITY ACCORDING TO CAUSE OF ESOPHAGEAL OBSTRUCTION

Diagnosis	Number of Cases	Deaths
Carcinoma of the esophagus	36	11
Carcinoma of the stomach	5	3
Extrinsic pressure due to bronchogenic carcinoma	1	0
Benign stricture (lye) of esophagus	2	1
Peptic ulcer, distal end of esophagus	1	0
Cardiospasm	1	1
Total	46	16

TABLE 3.—POSTOPERATIVE COMPLICATIONS IN PATIENTS WHO EXPIRED

Complication	Number
Pneumonia and cardiac failure	1
Cardiac failure	2
Pneumonia	1
Periurethral abscess	1
Wound infection and peritonitis	1
Wound infection and pneumonia	2
Wound infection and disruption	1
Wound infection	2
Hemorrhage from tumor	1
Lung abscess (which had developed preoperatively)	1
Unknown	3
Total	16

gastric surgery and may well be outside the scope of the inexperienced operator.[1,2] Hence, the average surgeon may serve the patient better by resorting to the simpler types of gastrostomy.

Complications occurring in those who expired during the postoperative period are considered in Table 3. Included are three patients who died within forty-eight hours of operation of no specified cause. It is presumed that general inanition was an important factor here.

The type of anesthesia was determined by the physical status of the individual patient. Twenty-five cases were done under general anesthesia, whereas 21 required local block because of associated complications. Consequently, twelve deaths, 75 per cent of the total, occurred following local anesthesia. On the other hand, there was a higher incidence of pulmonary complications after general anesthesia.

Hospital stay ranged from eleven to one hundred days in those surviving surgery and, where it extended beyond one month, was usually due to wound sepsis or to the disposition problems presented by the cachectic patient.

Follow-up was obtained on only 13 of the 30 patients discharged from the hospital. A majority of those not returning had been transferred to institutions for terminal care of cancer patients. Posthospital observation varied from one to fourteen months in those with malignant disease, with an average of five and nine-tenths months.

Comment

The high mortality and numerous postoperative complications present the most challenging topics in this survey. The following facts may be elicited by way of explanation. First, most of our patients are in lower socioeconomic groups. Moreover, a large proportion of these patients were almost moribund at the time of operation, which was done as a desperate, lifesaving measure. In retrospect, we would agree with Sweet that surgery is contraindicated under such circumstances.[1] Our results with the tubular type of gastrostomy would seem to indicate a definite superiority of such methods over those done by various "plastic" technics. Consideration must be given, however, to the fact that most of the latter were performed before the era of sulfonamides and antibiotics. Nevertheless, a difference in the mortality rate of approximately 30 per cent would be difficult to explain by this factor alone. The "tube" methods are technically more within the scope of the average operator. This opinion is shared by others.[2,3] Comparison of this series with a group of 50 cases reported by E. J. King at St. Thomas' Hospital in London would seem to indicate an exorbitant mortality on our service.[4] He reported his operative mortality at four deaths but excluded any occurring more than three weeks postoperatively. By the same criterion, seven deaths in our series would be considered "operative," which is about double King's figure.

Lastly, in the light of the tremendous strides made in the field of thoracic surgery within the past few years, no esophageal lesion can be considered inoperable by reason of its location. Accordingly, the tubulovalvular (plastic) gastrostomy would seem to be out of place as a preliminary step to a high esophagogastric anastomosis because of the distortion of potentially useful gastric anatomy.

Conclusions

1. Gastrostomy of any type, done indiscriminately, commands a high mortality.
2. This operation should not be done upon the moribund patient suffering from malignant disease.
3. The type of gastrostomy performed should be determined by the relative technical skill of the surgeon, with consideration of the patient's ability to withstand the procedure, the cause of the esophageal obstruction, and the need of further definitive surgery.
4. For reasons elicited above we consider "tube" gastrostomies superior to more complicated types.

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SELECTIVE DIFFERENTIATION OF BLOOD SERA BY MEANS OF TRANSMITTED FILTERED ULTRAVIOLET LIGHT

Louis Herly, M.D., New York City

(From the Cancer Research Department, College of Physicians and Surgeons, Columbia University)

Many attempts have been made to find a diagnostic test which would be as specific for cancer as the Wassermann test is for syphilis. In general, such tests have been based on changes in the metabolism of the cancerous tissues. Some investigators have hoped to develop chemical methods for the diagnosis of neoplastic diseases before the onset of visible or palpable signs. It must be concluded, however, that no satisfactory test for the diagnosis of cancer has as yet been found. A good review of serodiagnostic tests for cancer has been published by Maver.[1]

After Burrows, Hieger, and Kennaway published the discovery of the first carcinogenic hydrocarbon, many investigators took up the study of the effects of the fluorescent chemicals on the cells and on the subsequent development of malignant growths.[2] Our interest in the carcinogenic chemicals and the effects upon them of filtered ultraviolet light began with the publication by Graffi of his photographs of a fluorescent hydrocarbon absorbed into cancer cells.[3] His photographs recorded the effects of filtered ultraviolet light as it induced fluorescence in the hydrocarbon. Employing a similar method, we attempted to trace a carcinogenic hydrocarbon throughout the period preceding malignant changes in the cell. We failed to observe the metamorphosis from normal to malignant. The phenomena observed during this experiment prompted an investigation of gross tissues in an attempt to differentiate benign from malignant by means of ultraviolet light. This work was chiefly concerned with breast tissues.[4]

The term, "fluorescence," as used in the observations described here, is understood to mean such light phenomena as are excited by means of ultraviolet rays. Therefore, only such light sources that are rich in emanation of ultraviolet rays and that concentrate considerable intensity on a comparatively small surface can be used. In order to observe these fluorescence phenomena it is necessary that the light source be nearly free of visible light. This is accomplished by placing in front of the light source suitable filters that permit the passage only of near-ultraviolet light.

Method

The investigation here described began with a comparison of the blood sera of healthy laboratory mice and rats matched against the blood sera of cancer-bearing animals of similar strains. The blood was withdrawn from the hearts of the anesthetized animals by means of needle and syringe. It was found necessary to obtain at least 5 cc. of blood. This was then allowed to clot and was centrifuged for thirty minutes at 3,600 r.p.m. The supernatant fluid was withdrawn into a sterile test tube; nothing was added. All procedures were carried out under aseptic conditions. The sera were then examined with transmitted filtered ultraviolet light. The light source was a 1-kilowatt mercury vapor lamp, enclosed in a quartz-glass jacket, cooled by means of circulating cold water. For screening the lamp a Number 5840 Corning glass filter was used. This transmits near-ultraviolet light at a wavelength of 3,600 Ångström units. A portable apparatus equipped with a 250-watt mercury vapor lamp screened with a Number 5840 Corning glass filter also gave satisfactory results.* The test tubes containing the sera were placed in a bakelite holder which rested on a support in front of the filtered light source. The sera were then studied for the amount of light transmitted and for the amount and quality of the fluorescence. To estimate transmission of light we used a light meter with arbitrary scale. A Beckman Spectrophotometer with attached fluorescent unit should be used if such an apparatus is available. For demonstration to larger groups we have used the G.E. Projection Light Meter. To estimate fluorescence we are using subjective comparison, since a satisfactory apparatus to measure fluorescence has not yet been found.

Results

Cancer sera transmit more light and fluorescence than normal and nonmalignant sera.

In cancer sera the fluorescence appears turquoise blue or purple. In normal and nonmalignant sera the fluorescence appears yellow or olive-green.

Comparisons were made of the blood sera from healthy animals matched against the blood sera of cancer-bearing animals of the same strain. The following animal strains and tumor types were used:

1. The normal, healthy Paris R III mouse and the Paris R III mouse bearing a spontaneous adenocarcinoma of the breast.

This investigation was conducted in the laboratories of the Department of Cancer Research, Columbia University. The blood sera were obtained from patients, personnel, and the blood bank of the Columbia-Presbyterian Medical Center. The conclusions are entirely those of the author.

* We are indebted to Switzer Bros. of Cleveland, Ohio, for the portable unit.

2. The normal, healthy August rat and the August rat bearing the R2426 spontaneous adenocarcinoma of the breast.

3. The normal, healthy August rat and the August rat bearing the BPL sarcoma, artificially induced.

4. The normal, healthy Wistar rat and the Wistar rat bearing the R39 sarcoma which we have been transplanting since 1918.

How early can the changes in transmitted light and fluorescence be observed? To answer this question we transplanted minute particles of tumor tissue subcutaneously into healthy animals of the strains from which the transplants were taken. In the Wistar rat palpable tumors of the R39 sarcoma transplants appear in about one hundred sixty hours. In the August rat palpable tumors of the R2426 transplants and of the BPL appear in about one hundred ninety hours. Samplings of blood sera were taken at twenty-four-hour intervals up to one hundred ninety hours following transplantation. After forty-eight hours there was considerably more light transmitted, and the fluorescence had changed from grayish or yellow to blue or purple. These changes persisted and became more pronounced through all the samplings up to one hundred ninety hours when visible and palpable tumors appeared. It is significant that at forty-eight hours after transplantation neither a visible nor a palpable tumor can be detected.

To prevent errors of interpretation we transplanted liver tissue particles into one series and particles of the R2426 carcinoma in another series into an animal strain in which this tumor does not grow. Samplings of blood sera taken at twenty-four-hour intervals up to one hundred ninety hours showed no changes from the normal.

TABLE 1.—Results in Study of 1,846 Blood Sera

Result of Test	Malignancy Proved		Malignancy Not Proved	
	Number	Per Cent	Number	Per Cent
Positive	185	86	64	4
Negative	29	14	1,568	96
Total	214		1,632	

TABLE 2.—Breakdown in Results of Study of 1,846 Blood Sera

Department	Number of Sera	Malignancy Proved		Malignancy Not Proved	
		Number	Per Cent	Number	Per Cent
Internal Medicine, Surgery, Gynecology*					
Positive		103	81	53	3
Negative		24	19	1,521	97
Total	1,701	127		1,574	
Urology*					
Positive		28	93	6	27
Negative		2	7	16	73
Total	52	30		22	
Orthopedics, Oral Surgery, and Others*					
Positive		12	92	1	5
Negative		1	8	20	95
Total	34	13		21	
Neurological Institute					
Positive		42	95	4	26
Negative		2	5	11	74
Total	59	44		15	

* Columbia-Presbyterian Medical Center.

When tumors were removed surgically from the animals whose blood sera had shown the characteristic changes observed in tumor-bearing animals, as described above, the normal phenomena reappeared in their blood sera three to five days after the removal of the tumor, provided there was no residual tumor tissue.

To apply this test to human blood sera it is necessary to obtain 10 cc. of fasting blood. Blood sera that are hemolized, fatty, or contain bilirubin cannot be interpreted. It is also necessary to know the medications ingested during the past seventy-two hours, as chemicals that fluoresce will confuse the readings. Similarly, sex hormones and transfusions from donors, hyperpyrexia, acidosis, all toxemias, and pregnancy may give false positive readings. In all instances of "false positives" the patient should be followed for a considerable period of time to determine whether the "false" reaction was not due to an early malignancy which had not given any clinical signs. Several such instances have come to our attention. In this connection it should be remembered that in the animal experiment transplantation of minute particles of tumor tissue gave a positive reaction in forty-eight hours when there were neither visible nor palpable evidence of tumors. Postoperatively, in human subjects, if all malignancy has been removed, the blood serum reactions will return to normal in twenty-one days.

The statistics of the human sera examined by this method will be found in Tables 1 and 2.

Conclusions

1. Normal blood sera of animals and human subjects, when examined under transmitted, filtered ultraviolet light, give characteristic transmission of light and fluorescence.

2. The blood sera of animals and human subjects bearing malignant tumors, when examined under transmitted, filtered ultraviolet light, transmit from 50 to 150 per cent more light, and the fluorescence changes from the yellow or olive green of normal sera to turquoise blue or purple.

3. When the tumors are removed surgically, the serum reaction returns to normal in a short time if there is no residual malignant tissue.

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THE EARLY DIAGNOSIS OF UTERINE CANCER BY THE CYTOLOGIC TECHNIC AS AN OFFICE PROCEDURE

George H. Romberg, M.D., F.A.C.S., White Plains, New York
(From the Department of Gynecology, Hospital for Joint Diseases, New York City)

THE use of the exfoliative cytologic technic in the early diagnosis of cancer in the female generative tract (as well as for diagnosis of many nonmalignant gynecologic conditions) has been proved to be based on sound rationale and morphologic criteria. In the medical literature there are many reports from medical centers which are clinically significant. This paper is a report on the author's experience in the routine use of this method in office practice.

The patients, with very few exceptions, did not know that any "cancer test" was being performed. Occasionally, a casual explanation about estrogenic hormone level estimation was sufficient to satisfy the more curious. Every effort was made in the office to avoid reference to any cancer diagnosis.

It is generally accepted now that invisible and noninvasive lesions of the cervix and body of the uterus (as well as of other organs) can be properly diagnosed by the cytologic technic with a degree of accuracy comparable to that of the biopsy method, but it is generally agreed that positive smears should be corroborated by preoperative biopsies wherever possible.

Because of its frequency and seriousness, carcinoma of the cervix uteri is probably the most important of all gynecologic conditions encountered, and, from the standpoint of reducing mortality, carcinoma in situ and intraepithelial carcinoma assume greater importance. Routine biopsy of suspicious cervical lesions will not always detect this condition, because some of them are hidden high in the cervical canal. The cervical stump in cases of previous supracervical hysterectomy also deserves careful checkup. The author's interest in this subject dates back to just such a case.

There are some experts who feel that the vaginal smears have their greatest field of usefulness in screening normal women without particular gynecologic disorders. There are others who feel unqualifiedly that the vaginal cytologic method is equally as important in the routine use of screened populations who come to physicians in the various specialties.

The present paper is based on experience with 300 female patients over a period of two and one-half years. Their complaints covered all body systems, but routine employment of the vaginal cytologic smear was done regardless of the chief complaint. Approximately 50 per cent of these patients had symptoms referable to the female tract or the lower abdomen. Some patients were completely asymptomatic and came only for routine checks. The complaints most frequently encountered were the usual disturbances of vaginal bleeding, leukorrhea, backache, dysmenorrhea, and infertility.

The ages ranged from eighteen to seventy-eight years with the vast majority between thirty-five and fifty. Approximately 800 smears were taken on this group of 300 females. Suspicious smears (class III, Papanicolaou classification) were repeated as soon as possible. Class II smears were retaken after an interval of several months.

The staining technic used at Dr. Papanicolaou's laboratory at the New York Hospital was followed by the author. The vaginal and endocervical aspiration smears were done routinely on all female patients. Occasionally, endometrial aspiration and endocervical swab smears were also used. The patients were instructed not to douche on the day of the office appointment. No lubricants were used. The vaginal and cervical secretions were aspirated with a clean, dry, glass pipette, spread on clean microscopic slides, and immediately fixed in a bottle containing equal parts of 95 per cent ethyl alcohol and ether. Cervical swab smears were obtained by introducing a sterile cotton swab deeply into the cervical canal, gently rotating it, then quickly spreading it on a microscopic slide and immediately fixing it as above in the 95 per cent alcohol-ether solution. It is important that the smears not be allowed to dry up at any time.

Endometrial aspiration smears were obtained by using a malleable metal laryngeal cannula which was introduced beyond the internal cervical os. Moderate suction was supplied by the use of a 10 cc. Luer-Lok glass syringe. Aseptic technic, obviously, was used. The endometrial secretions were spread on glass slides as above. This type of smear is particularly useful in the early diagnosis of adenocarcinoma of the uterus.

In a relatively small percentage of cases, when the vaginal secretions were scanty, the smears were made by first washing out the vagina with a small amount of isotonic saline and 10 per cent ethyl alcohol (equal parts). This was then centrifuged for fifteen to twenty minutes, and the sediment was spread on slides and fixed again as above.

The staining of the smears was done by two office technicians who were trained in the Papanicolaou staining technic. Perhaps it would be well at this point to emphasize the importance of using a standardized cytologic staining method to avoid difficulties and errors in diagnosis.

The interpretation of cytologic smears should be done by personnel trained in pathology with additional specialized training in cytologic diagnosis. One of the drawbacks of this method is the long training required to obtain competency in cytologic interpretation. Also, one should not hesitate to consult expert cytologists on all doubtful smears; otherwise the progress of this very useful diagnostic method will be impeded.

The time required for screening and interpretation of a case in the present study varied between ten and thirty minutes, the negative and definitely positive smears requiring much less time than the suspicious class III smears.

In this series of 300 women routinely checked by the cytologic method, there were found the following two cases of unsuspected, invisible, and asymptomatic carcinoma of the cervix. In both these instances it was possible to corroborate the cytologic diagnosis by preoperative endocervical biopsies performed in the office.

Case Reports

Case 1.—A thirty-four-year-old married woman, gravida 1, Para 2, came to the office because of pain in the left side of her body. She had an operation in May, 1940 (appendectomy and bilateral salpingectomy) and since then had apparently been in good health. About four months previously she began to have pain throughout the left side of her body from shoulder to foot.

Examination showed a healthy looking female in no apparent discomfort. General examination was negative. The abdomen disclosed a lower right rectus scar well healed with no weakness or herniation. Pelvic examination revealed a normal appearing vagina and cervix. The fundus was enlarged and nodular, measuring approximately 6 by 4 inches. The right adnexae could not be made out. On the left side a tender cystic ovary was palpable. This was adherent to the fundus. Laboratory findings were hemoglobin 85 per cent (Sahli), differential smear normal, sedimentation rate normal, and catheterized urine specimen negative. The impression was fibroids uteri and cystic left ovary.

Routine vaginal and endocervical smears performed at this visit were interpreted as class III, with suspicious cells suggesting carcinoma in situ.

The patient was requested to return, and repeat smears were done. When these were interpreted as positive for cancer (class V), an endocervical biopsy was performed in the office, and the specimen was sent to the White Plains Hospital Laboratory where it was diagnosed as carcinoma. Subsequently, repeat smears were done and the cytology still showed class V evidence.

She was referred to the Tumor Clinic at the White Plains Hospital in March, 1949. On questioning by the group at this clinic, she admitted to no complaints and said she was feeling perfectly well. Examination by the various members of this clinic revealed only the nodular fundus. On the basis of the positive Papanicolaou smears and the positive endocervical biopsy performed in the office, the patient was admitted into the White Plains Hospital for a total hysterectomy on March 31, 1949. Gross examination of the specimen of uterus and cervix revealed no visible evidence of malignancy. The cervix looked clean, and the uterine wall contained multiple myomatous masses varying in size from 3 mm. to 6 cm. Multiple sections were taken through the entire length of the cervix, but only five of these sections showed carcinoma.

The pathologic diagnosis based on the histologic findings was squamous cell epithelioma of the cervix with no invasion. The other findings were leiomyomata of the uterus, hematoma of the corpus luteum, cyst of the right ovary, and follicle cysts of the left ovary.

The patient made an uneventful operative recovery and was discharged from the hospital on April 14, 1949. Except for some mild flushes which were easily controlled with sedatives, she continued well. Repeated vaginal smears since then have all been normal.

Case 2.—A fifty-two-year-old married woman came to the office because of hot flashes and tiredness of two months duration. She had never been pregnant. General examination was negative. Abdominal examination disclosed a healed right rectus scar. Pelvic examination disclosed a normal appearing cervix; the fundus was slightly enlarged and nodular. Laboratory examination was as follows: hemoglobin 85 per cent; red blood cells 4,310,000; differential smear normal; urine negative; sedimentation rate 20 mm. in one hour. Endocervical and vaginal smears were obtained. The impression was menopause and uterine fibroids.

The cytologic smears were interpreted by the author as class III. The patient returned to the office one week later stating that she felt completely well and relieved of her symptoms after the ingestion of oral estrogens. Repeat smears were obtained, and these also were interpreted as class III with suspicious cells for carcinoma. The patient was seen a week later at which time the smears were again repeated, and, when these were interpreted as class V with conclusive evidence of squamous cell carcinoma, the estrogen therapy was discontinued. An endocervical biopsy was performed in the office and the specimen sent to the laboratory at the White Plains Hospital, where the diagnosis of squamous cell carcinoma of the cervix uteri was corroborated by histologic examination. The patient, to date, has delayed entering the hospital because she has felt so well despite the fact that she has since been told the seriousness of her condition.

Summary

A brief résumé of the author's personal experience with the use of the exfoliative cytologic diagnosis of cancer in 300 females is given.

Two cases of unsuspected, invisible carcinoma

of the cervix found in this series were detected only by the routine use of the exfoliative cytologic method and preoperatively corroborated by the use of endocervical biopsy. These two case histories are presented. Although the author's experience is too small to be of statistical significance, the special point of interest of this paper may lie in the fact that the entire method—the taking of the smears, the staining, and the interpretation—was done as an office procedure.

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145 Maple Avenue

GYNECOMASTIA IN "LIVER DYSFUNCTION" DIABETES

Louis Pelner, M.D., and Samuel Waldman, M.D., F.A.C.P., Brooklyn, New York

GYNECOMASTIA, the development of the female type of breast structure in the male, is an interesting sign in clinical practice. Whereever it is found, it is both a challenge and an aid to diagnosis. It is a challenge, because it always requires a physiologic explanation, and an aid when it indicates certain possibilities. In most of the conditions in which gynecomastia is present as an associated symptom, it can be explained in one of two ways. First, there may be an increased amount of circulating estrogenic hormone present, due to overproduction or deficient or delayed destruction. Recently, there has been described a second cause. This involves atrophy of the tubules of the testes, resulting in diminished production of a substance which normally inhibits the breast-stimulating effects of the androgens, the so-called Klinefelter's syndrome.[1]

We have observed two cases of gynecomastia in patients in whom we had diagnosed "liver dysfunction" diabetes. Because of their liver dysfunction, the patients presumably are unable to detoxify estrogens, which results in an abnormal accumulation in the blood. We felt that this was the cause of the gynecomastia in these patients. Because of the novelty of this concept of diabetes, we have decided to describe the condition at some length.

It has now become abundantly clear that the level of the blood sugar is not alone controlled by the pancreas but also by the anterior pituitary, adrenal cortex, thyroid, and, last but by no means least, the liver. Thus, there are many types of diabetes, and, although insulin can lower the blood sugar in all of them, it is only in the "insulin-deficiency" type of diabetes that its use is really necessary. For the purposes of simplification only, it is possible on clinical grounds to divide the majority of diabetics into two types, the "insulin deficient" and the "liver dysfunction."[2,3] The "insulin deficient" patients are usually the ones that have developed their diabetes in youth—they are often first seen in diabetic ketosis—their diabetes is severe, and they must pay strict attention to diet and insulin or they will develop ketosis. The "liver dysfunction" diabetic usually first learns of his affliction accidentally, when sugar is found in his urine during a routine physical examination; it usually is discovered in the fourth or fifth decade of life, and the disease is rarely severe. This type of patient usually is asymptomatic and slightly overweight, hardly ever goes into diabetic coma, although he may go on spilling large amounts of sugar and paying little attention to diet. The liver may or may not be palpable. Of course, as is usual in clinical medicine, there are innumerable combinations of both types.

Soskin and his coworkers stressed the importance of the liver in carbohydrate metabolism.[4] They showed that (1) if depancreatized animals received a constant intravenous injection of insulin, just sufficient to maintain normal blood sugar, administration of additional carbohydrate yields normal glucose tolerance curves; (2) if hepatectomized animals with intact pancreas are given a constant intravenous infusion of glucose, just sufficient to maintain normal blood sugar, administration of additional glucose yields diabetic glucose tolerance curves; (3) when the liver is damaged by hepatotoxic agents, a diabetic type of glucose tolerance curve is obtained. From this experimental work it seems logical to

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deduct that the liver is of importance in carbohydrate metabolism.

Biskind and Schreier pioneered in the treatment of diabetes by methods which apparently improved liver function.[5] Diabetes has been treated during the past twenty-five years in terms of insulin deficiency. Biskind and Schreier suggested another possibility: that because of liver damage the patient may not be able to respond to his endogenous insulin. Thus, the treatment may be carried out in two possible ways—by giving the patient exogenous insulin or by attempting to restore liver function.

However attractive this concept might be when applied to all cases of diabetes, we were able to obtain satisfactory results with lipotropic substances only in the type that we have classified above as "liver dysfunction" diabetes. Biskind and Schreier used large doses of vitamin B complex obtained from liver and synthetic sources to enhance liver function in their diabetic patients. After much trial and error with large doses of the purified vitamins of the B complex group, we were able to show that choline was probably the potent factor in their therapy with B complex vitamins.[2,3] We originally used choline chloride but now use choline dihydrogen citrate, 3 or 4 Gm. daily (may be prescribed as capsules 0.5 Gm., Flint, Eaton and Company, eight daily; or as tablets, Lilly (10 grains), six daily in divided doses). The diet used was liberal: 250 Gm. of carbohydrate, 95 Gm. of protein, and 75 Gm. of fat (2,055 calories daily). With this method of treatment, our results have been excellent in scores of cases that we term "liver dysfunction" diabetes. This concept of treatment and division of types of diabetes has been confirmed by others.[6]

During the last year, we have tried other lipotropic factors in "liver dysfunction" diabetes. Methionine was without value in our hands; inositol, 2.5 Gm. daily, was as effective as choline.

Newburgh has described similar cases in his work with "obese diabetics" and found that the most important phase of his treatment was the reduction of weight.[7] Newburgh's article does not give a clue to the process by which reduction of weight would cause an increased glucose tolerance in his "obese diabetics." Boyd has suggested that the difficulty in these patients might be caused by infiltration of the liver with fat.[8] It is true that some of our "liver dysfunction" diabetics have lost some weight while undergoing treatment with lipotropic substances, but this has not been present in all, or even in most, of the patients. If fatty infiltration of the liver is really the pathologic defect in Newburgh's "obese diabetics," we are probably dealing with the same condition, and the lipotropic substances would seem indicated in the treatment.

The concept of liver dysfunction in certain cases of diabetes makes plausible other inferences. For example, it makes intelligible certain syndromes found frequently in diabetics and thought to be due to excess estrogen in the body. It has been shown by the Biskinds that, in liver damage, the liver loses its ability to inactivate estrogen but does not significantly lose its ability to inactivate androgen. Therefore, an alteration of the estrogen-androgen equilibrium results with a superabundance of estrogen remaining unantagonized. This may account for the frequent occurrence in the premenopausal diabetic female of menometrorrhagia, premenstrual tension, cystic mastitis, and perhaps other, more serious gynecologic ailments. In the male, it makes logical the finding of diminished libido and impotence, testicular softening and atrophy, vascular spiders, palmar erythema, and gynecomastia.[9]

Gynecomastia is not often described in the literature of diabetes, but that it does occur is significant, because it immediately suggests that the patient has excess estrogen, perhaps due to liver damage.[1] The function of this communication is to detail the history of two male patients with "liver dysfunction" diabetes and gynecomastia. Although the gynecomastia was unilateral in each of our cases, it probably would have become bilateral if allowed to go on developing.

Case Reports

Case 1.—S. F., a fifty-year-old male, had mild, untreated diabetes for about seven years. He never required insulin but was on a moderate carbohydrate diet from which he voluntarily excluded sugar, pastries, and flavored drinks. He had also taken panvitamin capsules regularly and for the last year had been on one therapeutic formula vitamin capsule daily. One day he discovered pain and swelling in his left breast. He also complained of decrease in libido.

Physical examination revealed a well-developed, well-nourished individual who weighed 166 pounds (height 5 feet, 8 inches; ideal weight 160 pounds). He had no evidence of any of the usual vitamin deficiencies. He had no clinical signs of liver disease such as palpable liver, palmar erythema, or vascular spiders. His left breast was much enlarged and tender, and he had a slightly enlarged tender gland in his left axilla. The laboratory workup revealed the following: urine 2 per cent sugar; white and red blood counts, normal; blood sugar 206 mg. per cent; urea nitrogen 15 mg. per cent; uric acid 3.6 mg. per cent; total protein 5.9 Gm. per cent, with albumin 2.7 Gm. and globulin 3.2 Gm. per 100 cc. of blood. The cephalin flocculation test was negative.

On the basis of the differential signs mentioned previously, he was thought to have "liver dysfunction" diabetes with an associated gynecomastia. The slightly low total protein with slightly elevated globulin also pointed in this direction. He was placed on the high carbohydrate, high protein, moderate fat diet mentioned previously and was given Choline Dihydrogen Citrate capsules 0.5 Gm. Flint), eight capsules daily. No insulin was given. Within two weeks the fasting blood sugar was 140 mg., and the urine became sugar-free; there was no change in the size of the left breast. In two more weeks, the blood sugar was 132 mg., the urine was sugar free, and there was a decrease in size and tenderness in the left breast. Within six weeks of the start of treatment, the breast had returned to normal size, and the gland in the axilla had disappeared. The blood sugar was 128 mg., the total protein was 6.4 Gm., the albumin was 4.0 Gm., and the globulin was 2.4 Gm. Further observation over a period of six months showed no return of the gynecomastia, and the fasting blood sugar still varied between 120 and 142 mg. per cent; the urine was sugar-free on daily test. The patient's weight fluctuated from 166 to 160$^1/_2$ pounds, and returned to 166 pounds. His libido was again normal.

Case 2.—J. P., sixty-year-old male, had had a mild diabetes of approximately ten years duration. He had never taken insulin and had never controlled his diet. He had not taken any vitamin supplements.

One day he noticed an enlargement of the right breast. He had remarried three months before, and he complained of loss of libido.

Physical examination revealed a well-nourished male with palmar erythema. He had no vascular spiders but had a palpable liver one fingerbreadth below the costal arch. The right breast was markedly enlarged and tender, and there was a tender axillary gland present on the same side.

Laboratory tests revealed the following: urine, 3.2 per cent sugar; blood sugar 276 mg.; blood urea nitrogen 12 mg.; blood uric acid 4.3 mg.; total protein 6.2 Gm.; albumin 3.0 Gm.; globulin 3.2 Gm. The thymol turbidity test was 6.2 units.

The patient was placed on the high carbohydrate, high protein, moderate fat diet described above and given inositol tablets, 250 mg. each, ten daily. In one month the blood sugar was 160 mg., the total protein was 6.1 Gm., albumin 3.8 Gm., and globulin 2.4 Gm. The breast had become much smaller and was no longer tender. The patient's libido was improved.

The therapy was continued for another month, at which time the blood sugar was 148 mg., the total protein 6.25 Gm., albumin 4.0 Gm., and globulin 2.25 Gm. The right breast was of normal size, and there was no adenopathy. The patient's libido was satisfactory. The therapy was continued for four additional months. The blood sugar varied between 124 and 138 mg., the urine was sugar free when tested daily, and there was no recurrence of gynecomastia. The weight of the patient was 158 pounds at the start of the treatment and 153 pounds at the end of observation, his ideal weight being 150 pounds.

Comment

Gynecomastia may be divided into three types: that appearing in boys at the time of puberty, idiopathic or "nonhormonal," and true or "hormonal" gynecomastia. All three forms are undoubtedly variants of the same type, i.e., hormonal, but may have been inadequately studied from a metabolic angle. The stimulus that causes enlargement of the male breast is usually unopposed estrogenic action. There are undoubtedly other stimuli, but this one can be demonstrated most easily, i.e., by giving estrogens in carcinoma of the prostate. There is also an interesting report in the English literature of gynecomastia occurring in workers manufacturing diethylstilbesterol.[10] The Biskinds have shown that unopposed estrogenic activity can be present in liver dysfunction, since a damaged liver is unable to inactivate estrogen while it is still able to inactivate androgen satisfactorily.[9] Thus, in cirrhosis of the liver, we find gynecomastia, testicular atrophy, decreased growth of axillary hair, impotence, and loss of libido in the male and menometrorrhagia in the female. Spider angiomata and "liver palms" are also thought to be evidences of hyperestrinism.

Gynecomastia has been described in one case of "liver dysfunction" diabetes by Biskind, who in a personal communication stated that he has records of other patients with this syndrome.[11,12] From the discussion this combination is probably more common than reported. A recent interesting study by Kyle is crucial for the relation between diabetes, liver damage, and gynecomastia.[13] He described a patient with ulcerative colitis who showed evidence of severe liver damage at the height of the illness and during this time developed both diabetes and gynecomastia. He noted that the development of diabetes without the usual familial background was undoubtedly due to associated liver damage, which has often been described in ulcerative colitis.

Gynecomastia has been described also in subacute liver disease, such as in hepatitis of the homologous serum type. This is also understandable.

During the last war, many of the prisoners incarcerated by the Japanese developed signs of severe multiple vitamin deficiency and gynecomastia.[14] Malnutrition might cause gynecomastia by causing hypofunction of the pituitary with resultant hypofunction of the testicles. This would result in unopposed action of estrogen. By depressing liver function the lack of B complex factors in the diet might result in inadequate estrogen inactivation. Lastly, malnourished patients would undoubtedly show a high incidence of hepatic dysfunction. One of the peculiar facets of this disease in these patients was that the gynecomastia was at first aggravated by a more liberal diet. A logical explanation of this seeming paradox would be that a liberal diet supplied the folic acid which seems necessary for estrogenic activity, but, in the face of hepatic dysfunction which was also probably present, the patient could still not properly inactivate the estrogen.[14,15] Signs of liver damage were present in a significant number of Klatskin's cases of gynecomastia associated with malnutrition.[14]

Gynecomastia occurs also in other conditions. Thus, chorioepithelioma and teratoma in the male are often associated with gynecomastia. Injection of male sex hormone can also cause gynecomastia.[16] In the literature also, there are reports of gynecomastia in Addison's disease, and conversely after giving the patient desoxycorticosterone (DOCA).[17] There are also reports of gynecomastia associated with carcinoma of the lung and in leprosy.[18–20] The etiology of the gynecomastia in these conditions is not apparent at the present time but should certainly result in some interesting speculation.

An additional cause of gynecomastia is the condition described by Klinefelter which consists of gynecomastia, atrophy of the testicular tubules, normal Leydig cells, and a high titer of pituitary gonadotropic hormone. The combination of increased gonadotropism with normal Leydig cells indicates that androgen was normal or excessive rather than deficient and that perhaps some other testicular hormone was deficient. This latter hormone might normally inhibit androgenic activity, and the presumption is, therefore, that the androgens are also mammary stimulants in the male but only in the absence of the inhibiting hormone. This latter point has also been shown to be true in hypogonad patients treated with methyl testosterone.[16]

Before making a diagnosis of true gynecomastia, one must consider other causes of enlargement of the male breast. Primary carcinoma, although infrequent, must be kept in mind. Fatty masses, localizing in or under the breast (retromammary lipoma), occasionally may be misinterpreted as true gynecomastia. Cases of so-called "idiopathic hypertrophy of the male breast" on careful study and reinvestigation may prove to be instances of hormonal disturbances as outlined in this paper.

We must admit that we do not understand why gynecomastia appears in all the conditions that we have discussed. If found as an associated symptom in any case, special attention should at once be directed to hormone metabolism, liver disease, or malnutrition and vitamin deficiency. When found associated with liver dysfunction, it calls for more vigorous therapy directed to improving the liver functions. When found associated with diabetes of the type described, we feel that it adds one more link in the chain of evidence relating to the pathogenesis of this type of diabetes. The salutary effect of choline and inositol on the gynecomastia and the diabetes also points to this conclusion.

Summary

Two cases of gynecomastia associated with "liver dysfunction" diabetes were described. The pathogenesis of gynecomastia in this as well as other conditions was discussed. The salutary effect of choline and inositol in these cases was noteworthy.

Generous supplies of choline and inositol for these and other cases were supplied by Flint, Eaton & Co., Decatur, Illinois.

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MASSACHUSETTS LEGISLATURE OPPOSES SOCIALIZED MEDICINE

The House and Senate of the State of Massachusetts this month passed a resolution memorializing the U.S. Congress not to attempt to subject the American people to any form of compulsory health insurance. The resolution was reported in the Congressional Record of Friday, March 24, 1950. Previously the following states had passed similar resolutions: Nebraska, Arkansas, Tennessee, Utah, Florida, Delaware, Michigan, Maryland, Texas, and Illinois.—*A.M.A. Bulletin, March 31, 1950*

THE USE OF CURARE IN FACILITATING ENDOTRACHEAL ANESTHESIA AND FOR THE RELIEF OF LARYNGOSPASM

Joseph Mascaro, M.D., and Harold F. Bishop, M.D., Bronx, New York

(From the Veterans Administration Hospital, Bronx)

THE use of curare during the induction phase of endotracheal anesthesia and its use for the relief of laryngospasm during surgical procedures has been reported in other publications.[1-6] The purpose of this paper is to report experiences with the use of curare in endotracheal anesthesia and in the treatment of laryngospasm during the administration of various anesthetic agents to adult patients undergoing major surgery. The duration of the surgical procedures in this series ranged from two to six hours. The series includes 36 patients.

Induction with sodium pentothal was either moderately rapid, using 2.5 per cent solution, or by the slow intravenous drip method, using 0.2 per cent solution. In either method the desired effect was achieved at that point where the eyeballs were centered. A dose of curare, calculated to produce diminished intercostal respiratory movements, was then administered. The dose for adults ranged from 40 to 100 units, the usual dose being 60 units. In some patients it was necessary to insert an oropharyngeal tube to maintain an adequate airway. As soon as the activity of the intercostal muscles was diminished or abolished, efficient artificial respiration, by means of the face mask and breathing bag, was carried out for from thirty seconds to three minutes. This interval of time allowed for adequate relaxation of the jaw. The mask was removed, and the oral endotracheal catheter was inserted under direct vision with the laryngoscope. The relaxation that follows the intravenous injection of curare usually makes intubation with an oral endotracheal catheter an easy maneuver. This supports the report by Stephens.[1]

As seen by laryngoscopy the vocal cords are in adduction or midabduction, but the musculature of the larynx shares the general weakness produced by curare to such an extent that the vocal cords could be easily separated by the soft rubber endotracheal catheter during its passage into the trachea. In this series of 30 cases, exposure of the cords, facilitated by the profound muscular relaxation of the jaw and laryngeal muscles, made intubation easier and, except for one intubation, was accomplished on the first attempt by the several residents in the department (Table 1).

Although the number of cases in this series was small, the results have been so gratifying that it is intended to continue with this method, particularly where inductions were started with sodium pentothal and endotracheal anesthesia

TABLE 1.—Data in 30 Cases of Endotracheal Anesthesia

Number of Surgical Procedures	Anesthetic Agents	Dose of Curare (Units)	Degree of Jaw Relaxation	Intubation Time from Start of Induction (Minutes)	Position of Vocal Cords	Degree of Laryngospasm	Number of Attempts at Intubation	Remarks
25	Sodium pentothal	40 to 100 (Average 60)	Maximal	3 to 13	Adducted to midabducted	None to mild	First attempt —24 Fourth attempt —1	One patient was intubated on the fourth attempt because of difficulty in exposing the glottis.
3	Cyclopropane-ether	40	Maximal	32 to 42	Midabducted	Moderate	First attempt —1 Second attempt —1 Third attempt —1	Curare used as last resort to facilitate a prolonged stormy induction.
1	Cyclopropane	60	Maximal	17	Adducted	None	First attempt	No difficulty
1	Pentothal-nitrous oxide-ether	60	Maximal	13	Midabducted	None	First attempt	No difficulty

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TABLE 2.—USE OF CURARE IN TREATMENT OF LARYNGOSPASM

Number of Surgical Procedures	Anesthetic Agents	Degree of Laryngospasm	Dose of Curare (Units)	Effect of Laryngospasm
2	Cyclopropane	Severe	60	Relieved in $1^{1}/_{2}$ to 2 minutes
1	Cyclopropane and ether	Severe	60	Relieved in $1^{1}/_{2}$ minutes
3	Sodium pentothal-nitrous oxide	Severe	40 in one, 70 in second, 100 in third	Relief in two. Third case relieved after tracheal suction of secretions

was indicated. In some instances there was produced a mild coughing after passage of the tube into the trachea. However, this usually subsided in a matter of seconds. When inhalation anesthesia with cyclopropane, cyclopropane-ether, or sodium pentothal-nitrous oxide was used for induction, curare (40 to 90 units) was administered during the first or upper second plane of third stage anesthesia. The results achieved were identical with those of sodium pentothal-curare administration (Table 1).

In three patients in whom anesthesia was induced with inhalation agents and where intubation was anticipated without the use of curare, severe laryngospasm developed, making intubation a difficult procedure. Forty units of curare were administered, and in a few minutes the laryngospasm subsided. In addition, the jaw and laryngeal muscles became sufficiently relaxed to enable the anesthetist to intubate without difficulty.

Doud reported using 40 to 60 units of curare to relax the jaws of a patient with thoracoabdominal injury after a prolonged anesthesia induction. The intubation was facilitated, and the induction was prolonged no further.

Harroun *et al.* reported that in emergencies curare is indicated where relaxation is needed promptly.[3] These authors point out that it may be necessary to intubate a patient in whom light general anesthesia is used to supplement a waning spinal anesthesia and in extraperitoneal operations which progress to the point of becoming intraperitoneal.

Baird, Johnson, and Van Bergen report that pentothal, being a parasympathomimetic drug, enhances the laryngeal and bronchial reflexes.[4,5] Curare has been found to exhibit histamine-like properties and may produce bronchial spasm.[6] In this series, however, laryngospasm was definitely decreased, and bronchial spasm, as such, was either absent or remained unrecognized.

Use of Curare for the Relief of Laryngospasm

In six patients intravenous curare was used for the treatment of laryngospasm during surgical anesthesia (Table 2). In all but one, there was definite relief of laryngospasm in one to one and one-half minutes. The initial dose of 40 units usually relieved the spasm. In a few cases, where moderate relief was obtained, a second dose of 30 units was given to relieve the spasm completely. In one patient in which relief was not obtained, it was subsequently discovered that the patient was obstructed from excessive tracheobronchial secretions. Laryngospasm was reduced following tracheal aspiration.

Whenever curare is to be administered, one must be certain that he can carry out efficient artificial respiration by means of gentle pressure on the breathing bag to which is connected the face mask or endotracheal catheter.

The marked relaxation of laryngeal musculature produced by curare may be sufficient to cause a leak of gases about a previously tight endotracheal system. The catheter no longer fits snugly in the trachea, and, in order to prevent the escape of gases, it now becomes necessary to inflate the cuff. This substantiates the statement that laryngeal muscular flaccidity, produced by curare, adds to the ease with which an endotracheal catheter can be passed.

Summary

Curare produces relaxation of the jaw and laryngeal muscles so that under direct vision the maneuver of intubation becomes relatively easy because of the ease with which the vocal cords separate on passage of a soft rubber endotracheal catheter.

In this small series, laryngospasm has been relieved satisfactorily in from one to two minutes by the administration of 40 units of curare.

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THE SYMPTOMATIC TREATMENT OF ALLERGIC DISEASES WITH CHLOR-TRIMETON

JACOB REICHER, M.D., F.A.C.A., and EMANUEL SCHWARTZ, M.D., F.A.C.P., Brooklyn, New York

(*From the Division of Allergy of the Department of Medicine, Long Island College Hospital*)

IN THE experimental animal all histaminolytics, or antihistaminics as they are commonly called, show a uniform and consistent action. All of them prevent histamine and anaphylactic shock. A larger dose is required with several of the antihistaminics, while with others a smaller dose is necessary to produce the same effect. One of the drugs, Number 3277, can protect a guinea pig against 1,500 lethal doses of histamine, and 0.1 mg. per Kg. protects a guinea pig against fatal anaphylactic shock.

Adhering to the hypothesis that histamine or a like substance is liberated by the interaction of antigen and antibody and the liberation of this substance is responsible for the production of allergic symptoms, it was reasoned that chemicals which so effectively protect the experimental animal from anaphylactic and from histamine shock will prove as effective in the human in combating allergic symptoms. It was also reasoned that those drugs which gave greater protection to the animal would act more effectively in the human patient.

Clinical trial and investigation were started. Those compounds which were very toxic were discarded, and newer ones were produced. These, while therapeutically active, exhibited fewer toxic side effects. With some the toxicity was only 7 to 8 per cent and of such a mild degree as not to interfere with the further use of the drug. For the moment it seemed that chemistry had solved the problem and was bringing a powerful weapon to combat the various symptoms of allergy. Enthusiasm reigned high, and percentages of relief ranging from 85 to 100 per cent began to appear in the literature, although with a limited number of cases.

With the large number of cases observed clinically to date, the following cardinal points became clear:

1. In the human being the action of the histaminolytics is not uniform and not consistent. It cannot be said with certainty whether a given drug will relieve an encountered allergic manifestation in all individuals. If we take hay fever as an example, one cannot say whether a given histaminolytic will give complete relief of all symptoms, partial or only slight relief, or no relief at all. The drug may relieve only some symptoms and not others. Sneezing may be ameliorated, but rhinorrhea and itching of the nose and eyes may persist, or vice versa. Very few of these drugs influence the clogging, and if clogging is relieved, rhinorrhea and sneezing may be initiated.

2. It was expected that the drugs which gave the animal the greatest protection against histamine and anaphylactic shock would likewise show the greatest histaminolytic action in the human patient. Clinically, however, such a drug may give little or no relief in certain cases, while another drug, of weaker protective action in the animal, may afford a patient far greater relief.

3. Toxic symptoms vary with the different drugs. Several of them showing greater toxicity may at the same time afford greater relief. Drowsiness may be such a pronounced manifestation of some of these drugs as to preclude their use during the day or working hours, yet they may be taken at bedtime for the hypnotic action and a milder and less toxic compound taken during the day.

   In a sizable percentage of patients no toxic symptoms or only mild ones may manifest themselves, or side-effects opposite to those encountered in the majority of cases may result, i.e., insomnia instead of drowsiness.

4. In allergic skin manifestations, as in urticaria and angioneurotic edema, the relief of symptoms may be very spectacular, but in many of these cases none of the histaminolytics give any relief.

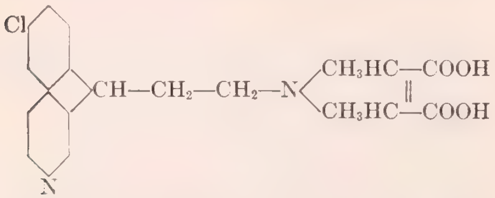
5. Very little relief has so far been reported in bronchial asthma cases, except perhaps through the parenteral injection of Thephorin in a few cases, as recently reported by Maietta.[1]

6. The pharmacologic action of these drugs is still hypothetical.

From the foregoing it can be said that neither the avoidance of the offending allergenic agents nor the immunologic approach to the treatment of allergy can at present be supplanted by any of the histaminolytics. The use of these drugs in tuberculosis, glomerular nephritis, rheumatic fever, and the common cold opens up a new field of investigation.[2,3] While their usefulness as adjuvants has been established, their wholesale and uncontrolled dispensation should be discouraged.

Observations

The present report is on the clinical evaluation of one of the newer histaminolytic drugs, Chlor-Trimeton Maleate.* Chlor-Trimeton Maleate (chlorprophenpyridamine maleate) is 1 para-chlorphenyl-1-(2 pyridyl)-3-dimethylaminopropane maleate, having the following formula:



It is a white crystalline solid, melting at 132 to 133 C., readily soluble in water, the solution being acid in reaction. It is very soluble in methanol and ethanol, less soluble in acetone and still less in ether, chloroform, and organic solvents. It is stable under ordinary conditions of storage and is not hygroscopic. Its molecular weight is 390.5; the empiric formula is $C_{20}H_{23}O_4N_2Cl$. The therapeutic index, LD 50 (mg. per Kg.) per E.D. 50 (mg. per Kg.) is 2,500. The compound was produced by the halogenation and combination with maleic acid of the parent compound, trimeton.

Toxicity study in dogs revealed no abnormality in urine or blood on prolonged administration of the drug nor any abnormality in the heart, lung, liver, spleen, kidney, or adrenals on autopsy, after the intravenous administration of 5 mg. per Kg. once daily for eight days. In dogs, too, the compound potentiates the increase in blood pressure produced by epinephrine and inhibits the depression produced by the histamine. Based on the response in chicks, it has amphetine-like action in that it is centrally stimulating to the nervous system in the same manner as benzedrine.

The clinical advantage of Chlor-Trimeton is its potency in small doses. Where it exerts a beneficial effect it does so in doses of 1 to 4 mg. one to three times a day. It shows mild toxicity. Only in one case was it necessary to discontinue the use of the drug because of marked drowsiness.

The present study deals with the use of Chlor-Trimeton in a series of 136 cases of allergy (Table 1). This group comprised the following: hay fever 95 cases, vasomotor rhinitis 18 cases, bronchial asthma 13 cases, urticaria seven cases, and atopic dermatitis three cases.

TABLE 1.—RESULTS OF TREATMENT OF PATIENTS WITH CHLOR-TRIMETON

Allergic Condition	Number of Cases	Slight Relief	Moderate Relief	Marked Relief	No Relief
Hay fever (grasses, trees, and ragweed)	95	0	43	21	31
Vasomotor rhinitis	18	4	3	2	9
Bronchial asthma	13	1	2	0	10
Acute urticaria	6	0	2	3	1
Chronic urticaria	1	0	0	1	0
Atopic dermatitis	3	0	1	2	0
Totals	136	5	51	29	51

Hay Fever.—Chlor-Trimeton was given to 34 cases of grass hay fever, one case of tree hay fever, and 51 cases of ragweed hay fever. The drug was given only to those patients who had not obtained satisfactory results from preseasonal desensitization treatment and to those who came in for treatment during the season. The doses were adjusted to the particular requirements of the patients. The dosage varied from 1 to 4 mg. one to three times a day.

Relief of symptoms occurred within ten to thirty minutes and lasted from two or three hours to the entire day. Sneezing was often relieved, rhinorrhea less often, and clogging only occasionally. In one coseasonal case of ragweed hay fever, nasal symptoms were relieved completely after taking 4 mg. three times a day for two days, but the itching of the eyes was persistent. The symptoms in this case prior to treatment were rather severe. In another ragweed case complicated with urticaria, both of simultaneous onset, the nasal symptoms were spectacularly relieved after three 2-mg. tablets were taken, but the urticaria remained, and neither the itching nor the whealing were in any way affected on further use of the drug. Several cases obtained relief when the drug was taken at bedtime. It gave them a good night of sleep, and they continued symptom-free throughout the morning hours. In one case, the parent drug, Trimeton, gave relief where Chlor-Trimeton failed. Out of 95 cases, 21 obtained marked relief of all symptoms; 43 obtained moderate relief and 31 very slight or no relief.

Vasomotor Rhinitis.—Eighteen cases were treated. Of these, two obtained complete relief of all symptoms including clogging; three obtained moderate relief, four slight relief, and nine cases obtained no relief at all. In these cases various forms of therapy were previously given, such as elimination of offending foods and inhalants, dust and vaccine therapy, specific hyposensitization, and various other histaminolytics without much relief. In several cases in which relief was obtained, the patients volunteered the information that these tablets gave them quicker and more prolonged relief without any, or with very mild, side-effects.

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* Chlor-Trimeton was furnished through the courtesy of Schering Corp., Bloomfield, New Jersey.

Bronchial Asthma.—Chlor-Trimeton was given to 13 cases of seasonal and perennial asthma. Of these, two obtained moderate relief; one only slight relief, and ten no relief of any of the symptoms. In one case of grass pollen asthma, the patient who in previous years had had moderately severe asthmatic attacks throughout the season obtained complete relief and did not have a single attack of asthma from June 2 to July 7, on one 2-mg. dose taken at bedtime daily. From July 7 to the end of the season he had mild wheezing even on 2 mg. three times a day. In previous years, specific hyposensitization plus various histaminolytics gave him but slight relief.

Urticarial Dermatosis.—Six cases with acute urticaria were treated with Chlor-Trimeton. Three were completely relieved of all symptoms; two obtained moderate relief on 4 mg. three times daily, and one had no relief. One case of chronic urticaria was markedly improved.

Atopic Dermatitis.—Of three cases to whom the drug was given there was moderate relief of the itching and slight improvement of the skin lesions in one case. In the other two cases both the subjective and objective symptoms were markedly relieved within one week.

TABLE 2.—TYPE OF SIDE-REACTIONS IN 133 CASES TREATED WITH CHLOR-TRIMETON

Side-reaction	Number of Cases
Drowsiness	15
Dizziness	1
Abdominal cramps	1
Nausea	1
Insomnia	1
Dryness of mouth	1

Side-reactions.—Of 133 patients treated with Chlor-Trimeton, 19, or 14.3 per cent, complained of side-reactions (Table 2). These complaints were, however, of a mild nature, and only once was it necessary to discontinue the drug and that was because of severe drowsiness. Fourteen experienced mild drowsiness, one insomnia, one dizziness, and one nausea. One complained of abdominal cramps and another of dryness of the tongue.

Summary and Conclusion

1. A group of 136 cases of different allergic manifestations were treated with Chlor-Trimeton.

2. Of 95 hay fever patients, 21 obtained marked relief, 43 moderate relief, and 31 no relief. In 18 cases of vasomotor rhinitis, two obtained marked relief, three moderate relief, four slight relief, and nine no relief. Of 13 cases of bronchial asthma, two were moderately relieved and one only slightly. Ten patients received no relief. Of six cases of acute urticaria, three were markedly improved and two moderately, and in one case there was no improvement. One case of chronic urticaria showed marked improvement. In three patients with atopic dermatitis, two obtained marked relief and one moderate relief of symptoms.

3. Of 133 patients treated with Chlor-Trimeton 19, or 14.3 per cent, complained of side-reactions. Only in one case was it necessary to discontinue the drug because of marked drowsiness. In all others, the side-effects, including drowsiness were very slight.

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WHAT IS DEMOCRACY?

A political society in which the greatest possible measure of justice implicit in the phrase *equal opportunity* is combined with the greatest possible measure of freedom and encouragement for the individual to develop his own talent, initiative, and moral responsibility. The hallmarks of such a political society are representative government; universal suffrage; regular free elections; the secret ballot; universal education; the classic liberties guaranteed by the Bill of Rights; a rule of law binding upon both governors and governed, and a pervasive humanism that interprets government, in all its forms, as the servant, and never the master of the individual citizen.—PRESIDENT-ELECT A. WHITNEY GRISWOLD OF YALE.—*Paul Revere Messages, Committee for Constitutional Government, New York*

THE USE AND ABUSE OF SEX HORMONE THERAPY IN OBSTETRICS AND GYNECOLOGY

Leo Wilson, M.D., New York City

(*From the Department of Obstetrics and Gynecology, Morrisania City Hospital*)

MODERN sex hormone therapy employing potent standardized preparations had its beginnings in the early 1930's. All the products used prior to this time were inert or extremely weak. Among the earliest of the new preparations were the chorionic gonadotropic hormone derived from the urine of pregnant women and the first crystalline estrogens, estrone and estriol. But the event which proved that a new era had arrived was the synthesis of estradiol by Schwenk and Hildebrandt in 1933.[1] At last we had a truly potent sex hormone with astonishing effects on the breasts, genital organs, and anterior pituitary gland of women. A year later, Butenandt succeeded in producing progesterone from a soy bean stigmasterol.[2] In the following year Ruzicka and Wettstein synthesized the androgenic hormone, testosterone.[3] Meanwhile, more gonadotropic extracts were prepared from the pituitaries of cattle, sheep, and horses and, finally, from the serum of pregnant mares. The latter received an enthusiastic but undeserved welcome because the claim that it induced follicle maturation and ovulation in the human ovary was not substantiated.

As with many new developments in medicine, the sex hormones were extolled by some as the answer to nearly all our unsolved therapeutic problems. A voluminous literature rapidly developed. Patients came to doctors with newspaper clippings and magazine articles and demanded the latest treatment that would give them a baby or rid them of superfluous hair. And, as is always the case, the wild wave of enthusiasm came to an end. The positive achievements of endocrine therapy, of which there are a sizable number, were forgotten or minimized by those who reacted by turning skeptic. Others, not critical enough, continued blithely on their way prescribing hormones when they were useless and sometimes even harmful.

It is the object of this paper to assess critically the value of present-day sex hormone therapy in obstetrics and gynecology and to enumerate the conditions in which it has proved useful and useless. This is not to be considered the final word, for, undoubtedly, the future will bring new concepts, new uses, and, particularly in the case of the gonadotropins, more potent agents. The discussion will be conducted under the following headings: conditions resulting from ovarian failure, complications of pregnancy, psychogenic and psychosomatic problems, and treatment of certain neoplasms.

Conditions Resulting from Ovarian Failure

There are four degrees of ovarian failure and each gives rise to a characteristic menstrual disorder. In order of decreasing severity they are: (1) failure of follicle maturation (amenorrhea), (2) failure of ovulation (anovulatory functional bleeding), (3) delayed ovulation (oligomenorrhea), and (4) deficient luteinization (hyper- and polymenorrhea). Besides menstrual disturbances, ovarian failure is a factor in sterility and early abortion.

While many constitutional conditions, including physical exhaustion, malnutrition, tuberculosis, diabetes, nephritis, hypo- and hyperthyroidism, blood dyscrasias, and tumors of the pituitary, ovary, or adrenal cortex may impair ovarian function, the most frequent cause in the writer's experience is an emotional disorder of an acute or chronic nature. The best therapeutic results are achieved by correcting the underlying constitutional or emotional factors. At the same time it is necessary to obtain prompt symptomatic control, particularly in bleeding cases. Gonadotropic therapy is useless because none of the present-day gonadotropins is capable of stimulating the human ovary to function normally. Estrogens, progesterone, and androgens, however, are of value in some of the conditions resulting from ovarian failure.

Amenorrhea.—Substitution therapy with estrogens is applicable to the relatively rare primary amenorrhea due to congenital absence of the ovaries.[4] The resulting artificial development of the breasts and genital tract, indistinguishable from the natural variety that occurs at puberty, is easily maintained.

The most satisfactory means of restoring ovarian function in secondary amenorrhea is by removing the cause. In the psychogenic cases estrogens, alone or with progesterone, are sometimes of value because the artificially induced withdrawal-bleeding acts as a means of suggestion. For cases that do not respond to other forms of therapy and especially where pregnancy is desired, radiation therapy in "stimulating"

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doses to the ovaries and pituitary should be tried. While the modus operandi of radiation therapy is not understood, it is more effective in this condition than endocrine treatment.

Anovulatory Functional Uterine Bleeding.—This disorder is seen most frequently just preceding the onset of the menopause, following a pregnancy, and at puberty. The bleeding is characteristically painless and exceedingly irregular in quantity and duration of flow, as well as in the length of the interval between flows. In the preclimacteric cases it is especially important not to overlook a carcinoma of the uterus or a granulosa cell tumor of the ovary. The best treatment for these cases (if bleeding recurs after a thorough curettage) is castration by x-ray or radium. Some of the milder cases can be controlled quite effectively with androgen therapy.

In the younger patients with anovulatory functional bleeding androgens play an extremely valuable role. Without doubt, this is the most important single achievement of modern sex hormone therapy. Prompt stoppage of the bleeding is secured without permanent impairment of ovarian function or loss of fertility. Masculinization (hypertrichosis and deepening of the voice), the only undesirable side-effect of androgen therapy, can be avoided in most cases by limiting the dosage of testosterone to 250 mg. per month. For the majority of patients a total of 150 to 200 mg. will suffice. A good method is to give 50 mg. of testosterone propionate in oil or crystalline testosterone in aqueous suspension every second day until the bleeding is arrested. If bleeding recurs, treatment should be resumed. Testosterone should never be used prophylactically. Recurrence can best be prevented by seeking out and eliminating the underlying constitutional and emotional factors. The anemia, which may be very profound, requires appropriate treatment. In the more severe cases, in addition to the testosterone, it is helpful to give daily injections of progesterone (25 mg.) for two or three days. This produces a prompt shedding of the hyperplastic endometrium, the so-called "medical curettage."

Some workers recommend estrogens in large doses for functional bleeding, because elevation of the blood level of estrogen usually brings about a rapid stoppage or reduction of the flow. But the improvement is often quite temporary and, when the withdrawal-bleeding recurs, it is from a much higher estrogen level and more difficult to bring under control.

Estrogens, however, are useful in nonbleeding cases with a large follicular cyst of the ovary. The cyst, measuring 3 to 5 cm. in diameter, is usually unilateral and causes pelvic pain and dyspareunia. It frequently appears after salpingectomy or hysterectomy and, therefore, may be due to interference with the blood supply of the ovary. The administration of estrogens in fairly large doses for two or three weeks usually causes a prompt disappearance of the cyst.

Estrogens are also of value in senile vaginitis, which is generally accompanied by slight vaginal bleeding or staining. Small doses, by vaginal suppository, are sufficient and should be discontinued as soon as the symptoms subside.

Functional Oligomenorrhea.—Functional oligomenorrhea, or infrequent menses, is rarely benefited by administration of sex hormones.

Functional Poly- and Hypermenorrhea.—These usually respond to progesterone in doses of 25 mg. every two or three days beginning one week before the expected period and continuing until the flow begins to subside. The treatment should be continued for three menstrual cycles. This condition is sometimes seen in a young woman with a slight irregularity of the uterus suggestive of a fibroid. A trial of progesterone may save her from an unnecessary hysterectomy.

Complications of Pregnancy

Actually very little is known of the causes of spontaneous and habitual abortion. The problem is not so simple nor is hormone therapy as good as some enthusiastic authors claim. While our knowledge remains in its present unsatisfactory state, treatment must be empiric, and any agent that seems promising is worth a trial. Stilbestrol in huge doses is in vogue at present, while dessicated thyroid remains an old favorite. In missed abortion estrogens are often helpful but not so for the induction of labor. Good results have been claimed for estrogens in toxemia of pregnancy and diabetes in pregnancy, thus far without confirmation. Estrogens are widely used at present to prevent or relieve painful breast engorgement in the puerperium. This practice is unnecessary and useless; the result is no different when hormone therapy is omitted.

Psychogenic and Psychosomatic Problems

Because the symptoms are related to menstruation, certain neurotic manifestations are erroneously attributed to endocrine imbalance and treated with sex hormones. The menopause syndrome, functional dysmenorrhea, premenstrual tension, and premenstrual mastodynia are in this category.

The greatest abuse of hormone therapy today is in the menopause syndrome. Too many women approach this physiologic state with apprehension and anxiety, associating its onset with premature aging, loss of sexual power, loss of physical attractiveness, cancer, high blood pressure, arthritis, insanity, etc. All that is required in most cases is a word of explanation, much reassurance, and mild sedation. A few cases will need expert psychiatric attention. Hormone therapy is not necessary. While there is no objection to small doses of estrogens for a few weeks as a placebo, there is absolutely no justification for high dosage continued for months or years. Sooner or later, there will be withdrawal-bleeding, suspicion of cancer, and, possibly, unnecessary surgery or radiation therapy, and, where cancer is present, hormone therapy may delay institution of the proper diagnostic and therapeutic measures.

Functional dysmenorrhea is another psychogenic condition which responds, as a rule, to simple reassurance and suggestion. In a few cases with deep-seated emotional conflicts, expert psychiatric management will be required. The use of estrogens provides a simple method of obtaining symptomatic relief.[5,6] Ethinyl estradiol (0.05 mg.) or stilbestrol (1 mg.) daily by mouth for the first two weeks of the menstrual cycle nearly always prevents or relieves the pain of the subsequent period. Estrogens given in this manner diminish or suppress the function of the corpus luteum, which in turn inhibits uterine contractility. This therapy should be repeated for a total of three menstrual cycles.

Premenstrual tension, functional mastodynia, frigidity, and obesity, also psychogenic, are not benefited by endocrine therapy.

Treatment of Certain Neoplasms

Estrogens and androgens in very large doses afford temporary symptomatic and objective improvement in some cases of advanced mammary cancer. This is not a substitute for surgery or radiation therapy but a palliative measure when orthodox methods have failed to arrest the progress of the disease.

Endometriosis responds to androgen administration by relief of pain and regression in the size of the tumor.[7] Hormone therapy should be given: (1) to young women desiring to preserve their reproductive capacity, (2) as a diagnostic test in early cases with few physical findings, and (3) as a preliminary to radical surgery in advanced cases with bowel involvement. Originally it was thought that suppressive doses of androgens were necessary but recent experience has shown that smaller doses (150 mg. of testosterone propionate per month) are effective.[8] It has been claimed that large doses of stilbestrol are even more effective, but this has not been confirmed.[9] If true, the explanation of the improvement may be related to the arrest of endometriosis by pregnancy.

Summary

Therapy with the modern sex hormone preparations is neither a panacea nor a fraud. The use of androgens in functional anovulatory bleeding from the uterus is without doubt the most valuable single achievement of endocrine therapy. Other uses of lesser importance have been described. The abuses and failures of hormone therapy are due chiefly to diagnostic errors and result from attempts to influence symptoms having their origin in unrecognized organic pathology and psychogenic disorders.

400 West End Avenue

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VAGOTOMY VERSUS GASTRIC RESECTION

In an address before the New York Academy of Medicine (March 1, 1950), Drs. Martin J. Healy, Jr., Sidney V. Hellman, and Paul K. Sauer, of the Bronx Hospital, presented a clinical evaluation of these two methods. A total of 264 conservative subtotal gastrectomies were compared with 54 vagotomies. In 149 cases the indication for surgery was an intractable, nonobstructing duodenal ulcer with or without bleeding. Subtotal gastrectomy was done in 106 cases with four deaths (4.7 per cent) and vagotomy in 43 with one death (2.3 per cent). A follow-up study included two years of observation. The total results were as follows: symptom-free 60, or 60 per cent, for gastrectomy; 8, or 19 per cent, for vagotomy, with total failures in ten gastrectomies and 13 vagotomies. It would appear from this analysis that, despite a lower mortality rate, vagotomy is inferior to gastric resection.

Case Reports

ACUTE FULMINATING ULCERATIVE COLITIS WITH PERFORATION

HARRY W. ROTHMAN, M.D., and JEROME A. MARKS, M.D., F.A.C.P., New York City

(*From the Medical and Surgical Service of Harlem Hospital*)

BECAUSE of the imminent possibility of perforation in the acute form of ulcerative colitis, early diagnosis and surgical intervention is of the utmost importance. In all previously reported cases of fulminating ulcerative colitis, the history was of short duration, usually less than nine weeks. While bowel perforation may occur in chronic ulcerative colitis, this complication may be expected in almost all cases of the fulminating type.[1,2] In either form of this disease, once perforation has occurred, the mortality rate is extremely high.

Chisholm reported a case of acute fulminating colitis in a forty-three-year-old woman, who gave no antecedent gastrointestinal history except for diarrhea of four weeks duration, and who entered the hospital in shock and died shortly thereafter.[3] Autopsy revealed a massive perforation involving the entire colon. Sulzberger's case was in a twenty-nine-year-old woman with a four-day history of diarrhea containing blood and mucus, and, although an ileostomy was performed, she died two weeks later.[4] Autopsy revealed that the entire colon was ulcerated and that five of these ulcers had perforated.

However, not all cases of acute fulminating ulcerative colitis perforate. Jobb and Finkelstein reported a case in a twenty-year-old man with a twelve-day history of lower abdominal cramps, frequent serosanguineous bowel evacuations, and sigmoidoscopic and roentgen findings consistent with a diagnosis of acute fulminating ulcerative colitis.[5] This case recovered without perforation. Kirschner's case was a female, aged twenty-two, who gave a two-week history of diarrhea containing blood and mucus with findings typical of acute fulminating ulcerative colitis.[6] This patient recovered after being treated with streptomycin.

Case Report

W. T., a Negro, aged forty, was admitted to Harlem Hospital on February 21, 1948, with a history of "griping" pain in his lower abdomen for the past two weeks. This he attributed to being constipated, and he had taken various cathartics with no symptomatic relief. A few days after the onset of his illness, he began to have eight to ten loose, blood-streaked stools daily. At the onset of the diarrhea he was nauseated and vomited several times. On admission to the hospital, he was ambulatory and did not appear to be either acutely or chronically ill, his main complaint being diarrhea and some nausea. His previous medical history was noncontributory.

Physical examination revealed the patient to be in no acute distress; the abdomen was soft and nontender. The liver edge was palpable two fingers below the costal margin. There was appreciable deep calf tenderness in both legs. A working diagnosis of "dysentery" of unknown origin was made. He was also considered to have early liver cirrhosis and peripheral neuritis. Temperature on admission was 99 F. and pulse 120 per minute. Laboratory findings were as follows: hemoglobin 8.5 Gm.; red blood cells 2,484,000; white blood cells 10,800 with 70 polymorphonuclears, 20 lymphocytes, and 3 neutrophils. Blood agglutination for typhoid, paratyphoid A and B, Proteus OX 19, and Brucella

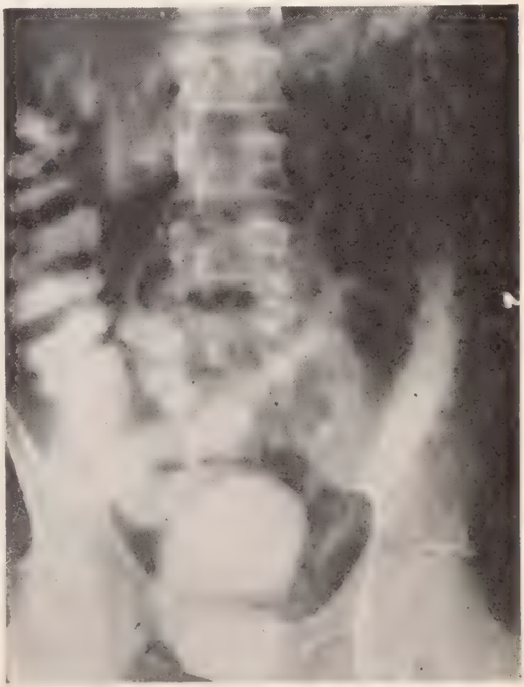

FIG. 1. Barium enema showing saw-tooth effect of colon.

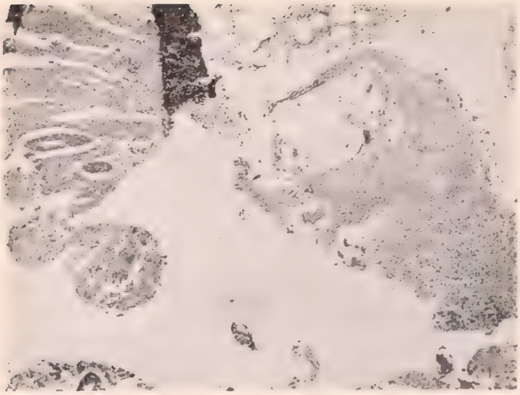

FIG. 2. Section of colon shows a pyogenic ulceration of mucosa with infiltration of acute inflammatory cells and necrosis.

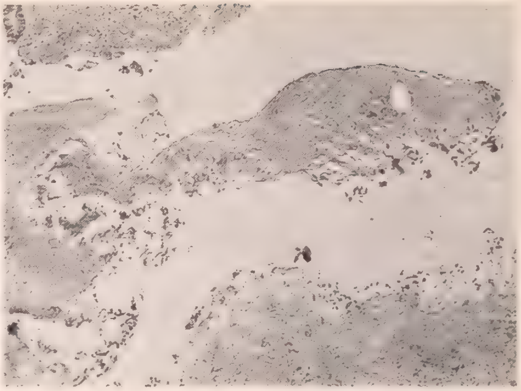

FIG. 3. Section reveals an acute and chronic infectious process in the submucosa and undermining mucosa above. Numerous acute and chronic inflammatory cells are seen as clumps along the edge of the ulceration.

abortus were negative. Total blood proteins were 6.11 Gm. with albumin 3.32 Gm. and globulin 2.79 Gm., the albumin-globulin ratio being 1.10. Blood Kahn test was negative. Stools were negative for ova and parasites, and repeated stool cultures failed to reveal enteric pathogens.

The patient was placed on a high protein, high caloric, and low residue diet and was given various vitamins, sulfaguanidine, and intestinal sedatives in therapeutic doses. Since he did not appear to be acutely ill at this time, he was semiambulatory. Gastrointestinal x-ray series done on admission was reported as negative, but a barium enema x-ray series shortly thereafter revealed involvement of the entire descending colon with a saw-tooth deformity (Fig. 1).

Sigmoidoscopic examination revealed areas of normal rectal mucosa and some ulcerations, and, because of a steady trickle of blood-stained fecal material which, to a great extent, interferred with good visualization, the sigmoidoscope was passed only about 4 inches. The patient was now placed at complete bed rest and given several transfusions of whole blood. He seemed to improve for several days, stools becoming less frequent and abdominal discomfort lessening. On March 4, thirteen days after admission to the hospital, the patient became irrational, and his abdomen was found to be diffusely tender and moderately distended. There was a marked degree of rebound tenderness, and it was felt that perforation had occurred.

At operation, about 2,000 cc. of muddy, foul-smelling fluid were found in the abdominal cavity. At its junction with the descending colon, the sigmoid contained a perforation about $^1/_2$ cm. in diameter surrounded by small bowel and omentum. The colon was friable, and great difficulty was encountered in pulling the sutures together. The perforation was closed with purse-string sutures, and the patient left the operating room in poor condition, deteriorated steadily, and expired ten hours after operation.

Postmortem Examination.—The significant findings were confined to the abdominal cavity, which contained about 300 cc. of muddy colored fluid. The entire small intestine was dilated. The mucosa of the ileum was injected and hemorrhagic. At the region of the junction of the descending and sigmoid colons, there was a sutured area on the posterolateral surface, measuring 2.5 cm. in length. The colon from the cecum to the rectum was filled with areas of edematous mucosa, and in between those areas of edema were areas of ulceration, yellowish-brown in color and in a patchy, island-like manner. These ulcerations, for the most part, extended through the mucosa down to the submucosa. In the region of the junction of the descending colon with the sigmoid colon, the wall was paper thin, and

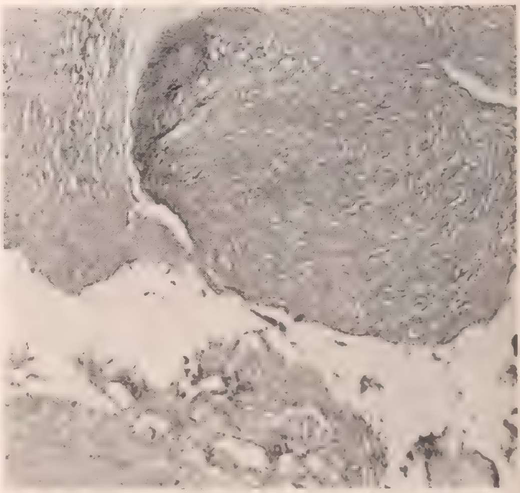

FIG. 4. Section shows marked destruction and vascularization of muscularis with a fibrinous, thickened serosal lining. There is a definite break in the integrity of the serosal layer at which point the rupture took place.

it was in this area that the perforation had occurred. The rectum had a smooth mucosa except for two isolated areas of ulceration. These ulcers extended through the mucosa down to the submucosa.

Histologic examination of the involved colon revealed areas of ulceration down to and including the muscularis. The inner lining was infiltrated with chronic inflammatory cells. There were areas of edematous mucosa raised above the muscularis and likewise infiltrated with chronic inflammatory cells. The pathologic diagnosis was ulcerative colitis with perforation at the sigmoid and secondary peritonitis (Figs. 2, 3, and 4).

Comment

Inasmuch as the acute form of ulcerative colitis assumes a fulminating character and death from bowel perforation and peritonitis may occur at any time, operation in this group should not be delayed. Cattell and Sachs believe that, due to the prohibitive mortality in this form of the disease, in patients not responding satisfactorily to intensive medical therapy within one week ileostomy should be performed, for, once perforation and peritonitis have occurred, neither medical nor surgical treatment will avail.[7] If early ileostomy is carried out, the mortality in this group of cases will undoubtedly be lowered.

Summary

A forty-year-old Negro male presented a two-week history of diarrhea containing blood and mucus, and in fourteen days the ulcerative process had progressed to such an extent that perforation and death occurred.

We wish to express our thanks to Dr. Solomon Weintraub, director of the Department of Pathology of the Harlem Hospital, for interpreting the microscopic pathology.

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ACUTE HYDRAMNION TREATED BY ABDOMINAL PARACENTESIS

ALFRED C. EMMEL, M.D., Mount Vernon, New York

(*From the Department of Obstetrics and Gynecology, Mount Vernon Hospital*)

IN JUNE, 1946, Louis Carnac Rivett of London delivered a lecture before the American Gynecological Society on hydramnion and its treatment by paracentesis of the amniotic sac through the abdomen.[1] He reported a series of 50 cases. Twenty-five per cent of his patients, where treatment was begun before the viable age of the fetus, gave birth to live infants. In some cases the fluid returned and required further aspiration. In others there was no recurrence. In his treatment no serious injury occurred to either the mother or fetus. He strongly recommended that the method be given careful consideration and trial in this country.

The following case history is that of a patient delivered on the private service of the Mount Vernon Hospital.

Case Report

Mrs. G. H., age twenty-seven, gravida 2, Para 1, was first seen on October 8, 1948. Her last menstrual period was August 20, 1948, and expected date of confinement was May 27, 1949. Heart, lungs, and general physical examination were negative. Obstetric examination revealed a normal two-finger introitus, normal cervix, and symmetric, normal uterus in normal position and enlarged to a size consistent with period of gestation. Pelvis was of the gynecoid type with a moderately shallow sacral curve. Pelvic measurements were average. Wassermann test was negative; blood type O, Rh positive; hemoglobin 100 per cent; blood pressure 95/50, and weight 115 pounds.

The first three months of her prenatal period were essentially negative except for a mild early toxemia which was relieved with diet and pyridoxine. During the sixteenth week of pregnancy there was a sudden increase in the size of the uterus and in the weight of the patient. With this increase there was no evidence of increased adiposity or added weight of the remainder of the body. This increase continued to a lesser degree for a period of five weeks as shown in Table 1.

TABLE 1.—INCREASE IN WEIGHT OVER A FIVE-WEEK PERIOD

Period of Gestation (Weeks)	Height of Fundus Above Symphysis (Cm.)	Circumference of Abdomen at Umbilicus (Cm.)	Weight (Pounds)
14	19	...	122
17	29	92.5	136½
18	35	96.0	139
19	36	...	141
20	38	102.5	144½

During her twenty-second week the distention of the abdomen became so great and the pressure so severe, the patient began to suffer from respiratory and circulatory embarrassment. She was forced to recline in an almost upright position and, even with the aid of hypnotics, suffered marked insomnia. Vaginal examination revealed a cervix open to admit one finger but uneffaced.

X-ray examinations of the abdomen were made during the nineteenth and twenty-second weeks. Twin pregnancy was noted with marked activity of both fetuses. There was no evidence of cranial or other skeletal defects. While multiple pregnancy was suspected before roentgen examination, only one fetal heart was audible, and this was not obtained until the nineteenth week.

As there was no evidence of abnormality of either fetus and as the patient had reached a stage where relief was necessary, decision was made to aspirate the amniotic sac through the abdominal wall. On February 2, 1949, during the twenty-second week, abdominal aspiration was done and 7,000 cc. of liquor amnii withdrawn. The technic of Rivett was largely followed. On the night before operation Pantopon, $^{1}/_{3}$ grain, was administered. This was repeated the following morning with scopolamine, $^{1}/_{150}$ grain, following the operation, during the evening, and twice the following day. After the usual abdominal preparation, the skin was anesthetized with novocaine, and a small incision made through the skin 1 inch above the umbilicus. A spinal needle was used. The liquor amnii was clear and did not flow with unusual pressure. The needle was attached with rubber tubing to a suction pump. Over a period of about forty minutes, 4,000 cc. of fluid were withdrawn. At this time the contracting uterus caused the aspirating needle to assume an almost horizontal position. The needle was withdrawn and again reinserted with a continued flow of clear fluid to the additional amount 3,000 cc. When what seemed a normal amount of fluid remained, the needle was withdrawn. The skin wound was sutured and the patient removed to her room. During the operation the patient had no pain and seemed to experience only relief. There was no evidence of cardiac embarrassment or shock.

Before aspiration the height of the fundus was 38 cm., circumference of the abdomen 105 cm., and weight 148 pounds. After the operation and on discharge (three days later), the height of the fundus was 30 cm., circumference of abdomen 95 cm., and weight 132 pounds.

There were no uterine contractions following the operation, and the patient was discharged from the hospital on the third day.

From February 5 until May 16, the prenatal progress of the twin pregnancy was normal. A third x-ray revealed no fetal abnormality. The height of the fundus increased gradually from 30 to 40 cm. and the circumference of the abdomen from 95 to 107 cm. Both fetal hearts were audible, and each fetus was easily outlined. There was no abnormal increase in amniotic fluid, and the patient did not complain of undue pressure or of marked dyspnea.

On May 16, eleven days before the estimated date of confinement, the patient was taken to the hospital for medical induction. It was believed to be the onset of a mild albuminuria, and further pressure symptoms, accompanied by a three-finger dilatation of the cervix, warranted this procedure. The patient was given several minimal doses of Pitocin, and with the advent of regular uterine contraction the membranes of the presenting fetus were ruptured. Strong pains ensued shortly after the rupture of the membranes. The first baby was in right occipital posterior position. When the cervix was fully dilated, head presented at the perineum. It was delivered with low forceps after medial episiotomy. The second baby was in left sacroanterior position. After rupture of membranes, it was delivered eight minutes later as a footling breech. They were uniovular female twins. Baby A weighed 5 pounds, 6 ounces, Baby B 5 pounds, 13 ounces. The babies were normal at birth and two months later were making average progress.

Summary

The case reported is that of a twenty-seven-year-old secunda gravida with twin pregnancy, who developed acute hydramnios in her sixteenth week of gestation. X-ray revealed no skeletal deformity. During her twenty-second week 7,000 cc. of amniotic fluid were withdrawn by abdominal paracentesis. The patient did not develop further hydramnios and was successfully delivered of normal twins during her thirty-ninth week of pregnancy.

30 Rich Avenue

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FIND ETHYL ALCOHOL UNSATISFACTORY DISINFECTANT FOR WOUNDS

Ethyl alcohol, the ordinary alcohol of commerce and pharmacy, should not be used as a disinfectant in wounds or on raw surfaces of injured areas, according to Dr. Philip B. Price who made a study of the substance.

The antibacterial action of ethyl alcohol is neutralized by proteins present in the wound, says Dr. Price, University of Utah College of Medicine. Dr. Price's report appears in the March issue of *Archives of Surgery*.

Further, the alcohol is painful, injures wound tissues, and delays wound healing. Simple solutions of ethyl alcohol are not satisfactory agents for cold sterilization of surgical instruments, Dr. Price also found.

Seventy per cent alcohol (by weight) in water, however, is still believed to be the "solution of choice" for disinfection of the skin, he says. On healthy skin, this solution is powerfully destructive to germs and harmless to the body.

AUREOMYCIN IN ACUTE FULMINANT HEPATITIS: REPORT ON SUCCESSFUL TREATMENT IN THREE CASES

Hector J. McNeile, M.D., F.A.C.P., and Cyril Solomon, M.D., F.C.A.P., New York City

(From the Departments of Medicine and Pathology, French Hospital)

THIS report concerns the use of aureomycin for cases of acute fulminating hepatitis based on the treatment and recovery of three patients at the French Hospital, New York City. All three patients are still alive and have been followed for fourteen, thirteen, and twenty-nine months since admission for this disease.

In a previous study aureomycin, given orally or by intravenous route, was found to be of little or no value in cases of hepatitis which followed the gastrointestinal pattern as described by Lucke and others.[1–5]

The diagnosis of acute fulminating hepatitis in all three cases was dependent upon the laboratory data and clinical course. In one case liver biopsy material was available. Since there has been a notable lack of success in the treatment of virus hepatitis with chemotherapeutic and antibiotic agents, it is felt that three such cases might be important as a test of its effectiveness in one type of the disease.

The isolation of aureomycin, pharmacologic properties, and activity against experimental and human infections in a variety of diseases have been well presented previously. Its use orally has been advocated, since it is quite rapidly excreted in the urine and is found in the blood soon after ingestion. The significant findings in this laboratory, as well as others, has been that, like most other antibiotics, the antibacterial and antiviricidal action of aureomycin is influenced by the number of organisms and it is effective only against actively multiplying organisms.[6–8]

The diagnosis in these three cases was based upon criteria of Lucke and Watson with all having the following findings: (1) early appearance of bilirubin in the urine, (2) disappearance of bilirubin in the urine when the serum bilirubin is still elevated, (3) positive urinary urobilinogen, (4) presence of cholesterol esters percentage decline, (5) bromsulfalein retention, (6) positive cephalin flocculation tests, and (7) in one case, liver biopsy.

Case Reports

Case 1.—R. F., a forty-six-year-old man, was admitted to French Hospital on March 17, 1949, with complaints having begun ten days previous to admission. He suddenly developed nausea, vomiting, and diarrhea with fever but no pain. Abdominal distention occurred two days previous to admission. He was given penicillin after which the fever subsided, but the nausea, anorexia, and diarrhea continued. Marked jaundice developed on the fourth day of illness, with the urine becoming dark. While the patient's stools had always been well-formed and brown, symptoms included eight to ten bowel movements per day. Previous history was negative for jaundice, cholecystitis, intolerance of fatty foods, and transfusions. There was no recent weight loss, fatigue, or melena.

Physical examination showed the patient to be jaundiced with abdomen markedly distended and tense. There was slight tenderness in the right upper quadrant. The liver was not tender, and no masses or organs were felt. Extremities were not edematous. X-ray examinations performed March 10, 1949, revealed duodenal diverticulum, chronic bronchial infection, and no abdominal obstruction. Urine on March 18 showed 3 plus albumin, many red and white blood cells with positive urobilinogen in high dilution. On March 20, albumin was 1 plus with bile positive. White blood count on March 20 was 16,250, with polymorphonuclears 90 and lymphocytes 10.

The patient became progressively more lethargic, and jaundice increased. He was unable to void, with his stools becoming light in color, and loose. On the third hospital day, examination by the medical consultant revealed obvious jaundice, acidotic respiration, soft eyeballs, distended abdomen, and the presence of ascites. Prior to this examination the urine output was 200 cc. in the twenty-four hours. Diagnosis at this time was acute fulminating hepatitis. Treatment initiated was as follows: Aureomycin 500 mg. four times daily was given orally with amphogel along with 1,000 cc. of 5 per cent glucose in saline, and 1,000 cc. of sixth molar lactate solution two times daily, each containing 500 mg. of aureomycin. A Levine tube was inserted for feeding, and a diet of skimmed milk and cottage cheese was given by gavage.

Twelve hours after the institution of the aureomycin therapy, the patient spontaneously voided 210 cc. urine and became more responsive to questioning. The jaundice decreased, but ankle edema and abdominal distention were marked. On the fourth hospital day the patient was more comfortable, passing 710 cc. of urine on intake of 3,100 cc., frequent evacuation of liquid stools, and great amounts of flatus, but edema and distention were progressive with the patient retching frequently. On the fifth day of hospitalization, the patient passed 700 cc. of urine on an intake of 1,200 cc. The blood chemistry at this time was as follows: urea nitrogen 108; carbon dioxide 36; icteric index 45; albumin-globulin ratio 4.38:1.84; stool grossly bloody, and benzidine test positive.

The patient continued to improve. His urine output rose to 1,960 cc. on the sixth hospital day and continued on this level throughout the remainder of his stay in the hospital. On the eighth hospital day, a transfusion of 500 cc. of whole blood was given. Blood agglutinin for enteric organisms was negative, and blood chemistry was as follows: urea nitrogen 70; icteric index 35; carbon dioxide 60; prothrombin time fifteen seconds; red blood cells 4,000,000; hemoglobin 11.5 Gm.; white blood cells 10,700. On the tenth hospital day, an abdominal paracentesis was done with the removal of 2,200 cc. The temperature, which had been rising slowly since the fourth hospital day, reached 104 F. on the tenth day but subsided slowly, reaching normal on the seventeenth hospital day, where it remained for the rest of his hospital stay. A chest x-ray revealed pneumonia at the right base. Crysticillin was increased to 300,000 units every eight hours, and 500 cc. of whole blood were given. Jaundice subsided gradually, and the diet was increased to include fruits and white meat. Aureomycin was discontinued on the fifteenth day, and crysticillin discontinued on the sixteenth day. On the eighteenth day, the patient was out of bed in a chair and by the twenty-first day was completely ambulatory and felt well. The blood chemistry during this week (March 28) was as follows: urea nitrogen 20, creatinine 3.6; March 30—urea nitrogen 20, creatinine 3.0, icteric index 25, prothrombin time seventeen seconds; April 4—urea nitrogen 10, icteric index 40, prothrombin time seventeen seconds. Blood count was red blood cells 3,900,000, hemoglobin 11.5, and white blood cells 6,200.

Four months after admission to the hospital, patient had no complaints. Bromsulfalein revealed 5 per cent retention in forty-five minutes and abnormal cephalin flocculation.

Case 2.—M. P., a white woman, age fifty-three, was admitted to French Hospital on April 3, 1949, in so lethargic a condition as to be unable to respond to questioning. She was also markedly jaundiced. The following history was obtained from her husband and secretary: The patient had recently returned from a trip to Europe and North Africa. One week prior to hospitalization, the patient developed "flu" with malaise, fatigue, headache, and back pain. Jaundice had appeared two days prior to hospital admission and had become progressively deeper. With the onset of jaundice, the appetite had become poor, and the patient had been unable to retain anything but weak tea. The lethargy had developed twenty-four hours prior to admission, progressing rapidly. During this period, the patient passed no urine, had no abdominal pain or diarrhea, no chills or fever. There was no history of a previous attack, and until this attack the state of health had been good.

Physical examination showed patient to be lethargic, depressed, and markedly icteric. The abdomen showed some voluntary spasm but was not tender. The reflexes were hyperactive bilaterally, with no Babinski or meningeal signs. Laboratory findings were as follows on admission: urine—3 plus sugar, trace of albumin, urobilinogen 1:500 with bile present, and with occasional red and white blood cells. Blood showed 4,200,000 red blood cells, hemoglobin 12.5 Gm., 10,400 white blood cells with a shift to the left. On the next day (April 4), the blood chemistry showed urea nitrogen 8, carbon dioxide 65, icteric index 70, alkaline phosphatase 16.7, total protein 6.68, albumin 4.31, globulin 2.37, cephalin flocculation twenty-four hours 3 plus, forty-eight hours 4 plus. The impression was that of acute fulminant hepatitis.

Treatment on admission was as follows: A 2,000-cc. infusion of 10 per cent glucose in water with supplementary vitamins B, C, and K was given. In addition, 250 mg. of aureomycin were given three times daily intravenously in sixth-molar lactate solution. Seven hours after admission, the patient had a generalized tetanic convulsion, becoming cyanotic, incontinent, and bit her tongue. The patient continued to be restless, vomited, and had a second tetanic convulsion during the first twenty four hours. Between the twenty-fourth and the twenty-sixth hours, the patient's condition changed dramatically. She urinated voluntarily, tolerated fluids well orally, and became rational and cooperative. However, she continued to sleep for long periods and seemed unable to understand her environment. At this time, on the second day, the patient's urinary output, which had been negligible on admission, increased to 1,900 cc., in addition to the incontinent urine. By the third hospital day, the urine output equaled the intake and continued in this relationship throughout the clinical course. On the third hospital day the liquid diet was augmented with white of eggs, sugar, jello, Protinal, and skimmed milk. By the fourth hospital day, the patient was enjoying solid foods low in fat content. Aureomycin was continued orally with amphogel. The temperature, which had been between 99 and 101 F., began on the fourth day to recede until it was normal on the seventh day. At this time antibiotics were discontinued, resulting in a slight elevation of temperature and pulse. On the ninth hospital day, the patient was enjoying a high caloric, high protein and carbohydrate but low fat diet. She was now able to give herself bed care and was ambulatory with bowel and urinary habits normal.

Laboratory findings on April 6 were as follows: Urine—bile negative; trace of urobilinogen; icteric index 60; alkaline phosphatase 3.0. Stool culture on April 12 showed no ova or parasites on the smear, and the culture was negative. On April 15, the icteric index was 40; bromsulfalein 40 per cent in five minutes, 5 per cent in forty-five minutes. Cephalin flocculation was 4 plus. An x-ray of the patient's gallbladder taken on April 13, the eleventh hospital day, disclosed a normal gallbladder without stones. Agglutinations were negative.

At the present time, the patient is well and active in her business.

Case 3.—R. G., a woman, was first admitted to French Hospital on August 9, 1948, complaining of nausea, vomiting, and epigastric distress over a period of three to four months prior to admission. These symptoms occurred along with frequent sinus attacks which the patient had had throughout the year prior to the occurrence of the gastric symptoms. The patient also complained of pain in the right scapular area with radiation to the right shoulder and epigastrium, followed by vomiting. The symptoms included an intolerance of fatty foods, bloating and belching after meals, dark urine, but no diarrhea. The history included rheumatic fever in 1936 and acute sinusitis in 1947.

Physical examination showed the patient to be slightly jaundiced, with epigastric tenderness but no organs or masses palpable. Laboratory findings on admission were as follows: urine, urobilinogen 1:150, bile positive, cholesterol 330, esters 80; icteric index 40; alkaline phosphatase 9; cephalin flocculation 3 plus.

X-ray examination of gallbladder revealed it to be normally functioning.

The patient was afebrile and improved symptomatically with supportive therapy. She was then discharged. On September 18, 1948, she was readmitted with complaint of frequent episodes of epigastric distress and pain with radiation to right shoulder and scapular area, accompanied by vomiting and belching. Malaise and fatigue were constantly present. Physical examination found the patient essentially the same as on the first admission. Laboratory findings were as follows: urine no bile; urobilinogen 1:100; van den Bergh direct, positive. X-ray examination of the colon, gastrointestinal tract, and kidneys was negative. The patient was again afebrile and improved on palliative therapy which included bed rest, high protein

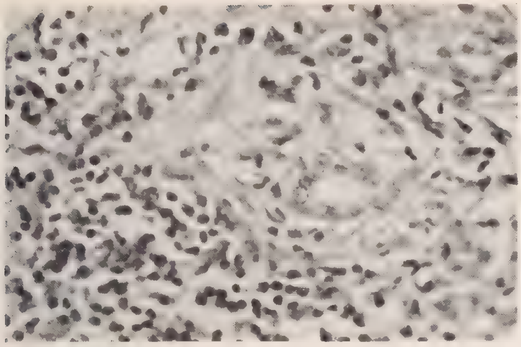

Fig. 1. High power view of liver biopsy of Case 3 showing cellular infiltration, bile duct epithelial changes, and necrosis of adjacent liver cells. (430 ×)

and carbohydrate diet low in fat, vitamins, and liver extract. Agglutinations were negative.

The patient was again discharged on October 2, 1948, only to be readmitted on October 7, 1948, complaining of a recurrence of all symptoms two days after the last discharge. The laboratory findings on this admission were cephalin flocculation 4 plus, alkaline phosphatase 9, icteric index 10, cholesterol 250, and esters 90. Patient was again afebrile and was again treated symptomatically. The patient lost weight, going progressively downhill with bromsulfalein retention and positive high dilution urobilinogen.

On the thirty-sixth hospital day an exploratory laparotomy was performed with the findings as follows: The liver was enlarged to 1 inch below the costal margin, the capsule mottled red and purple with the edge somewhat blunted. The gallbladder was entered easily. The common duct was thin walled and not dilated. The stomach, duodenum, spleen, and both kidneys were normal. A biopsy of the liver was done revealing periportal polymorphonuclear and lymphocytic infiltration with necrosis of adjacent liver cells, and bile duct epithelial proliferation (Fig. 1).

Aureomycin, 250 mg. three times daily beginning with first postoperative day, was given intravenously for seven days in the sixth-molar sodium lactate solution.

Eight months later, the patient was back working as a nurse without complaint.

Comment

Clinically and by laboratory methods these three cases present the picture of the fulminating form of hepatitis. All three were of the mixed type with gastrointestinal, infectious, and mental disturbances. Fever and nitrogen retention were present in all. The use of aureomycin produced a rapid and marked improvement in the clinical status of these patients and in laboratory tests subsequent to treatment.

A theoretic reason for the value of the aureomycin in these cases of hepatitis, as contrasted with its lack of value in the less fulminant forms, may be that in the fulminating type the virus is rapidly multiplying and has not yet caused metabolic changes. It may well be that in the more insidious types of hepatitis the virus is well fixed in the tissue, is slow growing, and cannot be affected by antibiotics.

Summary

1. Three cases of acute fulminating hepatitis have been presented with treatment by aureomycin given intravenously and orally with recovery.

2. An attempt was made to explain theoretically the good results in these three cases as compared with the lack of results in the previously reported series.

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SEX CRIMES

Civic-minded persons and others are preparing to sponsor study and advisory groups to cope with the problem of sex crimes. Of particular concern are the sex crimes against children and the control of the sex offenders. The solutions to the problems associated with this phase of community life are not easy to obtain. Nor are they confined to one group; they should be of interest to, among others, civic organizations, professional groups, and law enforcement agencies. Well-rounded programs will depend on cooperative study and planning. Members of the medical profession should be interested in community and even state or national efforts. Their participation will be important, and they can provide a real service to community life by assuming leadership when the latter is missing in areas in which sex crimes are the cause of much concern.—*Journal of the American Medical Association, March 18, 1950*

COMBINED HYPOTHYROIDISM AND UROLITHIASIS

Jacob Rosenblum, M.D., Brooklyn, New York

(From the Maimonides Hospital)

THE finding of a severe advanced untreated hypothyroid child is rare, as are renal calculi in children. The combination of hypothyroidism and renal and vesical calculi in the same individual is apparently unknown. A diligent search of the literature has not revealed a single report indexed under hypothyroidism and calcinosis or cretinism and renal calculi.

Case Report

D. A., a female, aged eleven years and ten months, was the eighth child of healthy parents. The oldest child was twenty-four years of age, and the patient reported was the youngest. Her parents were Italian and not related, and were both thirty-five years old when this child was born. The parents lived in a small town in New York State and were of low economic status. There was no history of idiocy or nervous disease in either family.

The patient was a full-term infant, born after an uneventful pregnancy and normal labor. At five months of age, she contracted pertussis and continued to cough for approximately six months. Obstinate constipation developed early in life and required laxatives and enemata for relief. She had a bowel movement every two to four days, and it consisted of small dry masses. Mental development was markedly delayed. She sat up at two years but still did not crawl, stand, or talk at the time of examination. Sphincter control was absent. She voided frequently. She was always quiet, never disturbed anyone, and took no interest in the surroundings. She seldom cried but when she did, the cry was deep and coarse. The eruption of her teeth did not begin until three years of age and then proceeded very slowly. At no time did she receive supplementary vitamin D. Her only previous visit to a physician was at the age of two years at which time unknown medication was prescribed without apparent relief.

This patient presented the typical appearance of a cretin (Fig. 1). Her weight was 11.8 Kg. (26 pounds, 1 ounce) and the body length was 80.5 cm. ($31^{3}/_{4}$ inches). The circumference of the head was 45 cm. and that of the chest 50 cm. The anterior fontanelle was still patent and measured 5 by 5 cm. The skin was dry, scaly, and of grayish-yellow hue. The hair was coarse and dry, lacked the normal luster, and grew over the forehead. The scalp was extremely dry and seborrheic. The eyebrows consisted of coarse, dry hair, and eyelids appeared puffy. The nose was composed of a broad turned-up tip and flat root. The mouth was constantly open, and she snored when asleep. The lips were thick, and the tongue was large, thick, and broad. She had a full set of deciduous teeth in very poor condition.

The neck was short and thick and without any palpable masses.

The chest was narrow. On percussion, the heart appeared enlarged. Heart action was regular, and heart sounds were distant. Pulse was slow and regular. The lungs were normal to percussion and auscultation.

The abdomen was large and had an umbilical hernia. The umbilicus was well below the center of the abdomen, being 14 cm. below the tip of the xiphoid process and 8 cm. above the symphysis pubis.

The hands were broad, flat, and spadelike.

Laboratory findings were as follows: red blood cells, 3,100,000; hemoglobin (Sahli) 64 per cent; white blood cells 13,000. Differential revealed 69 per cent polymorphonuclear leukocytes, 21 per cent

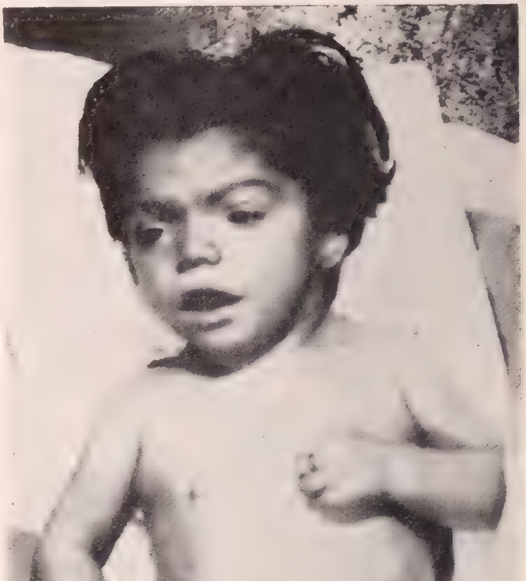

Fig. 1. Cretin child. Note stupid expression, small stature, open mouth and large tongue, short extremities, and umbilical hernia below the center of the abdomen.

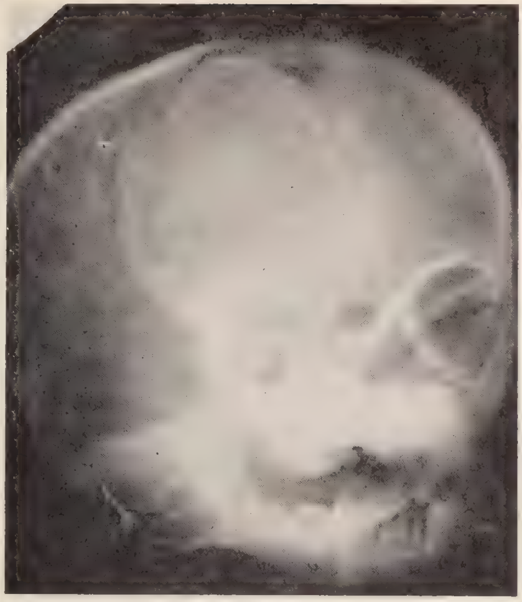

FIG. 2. Roentgenogram of skull showing anterior fontanelle widely open, wide sutures, and small sella turcica.

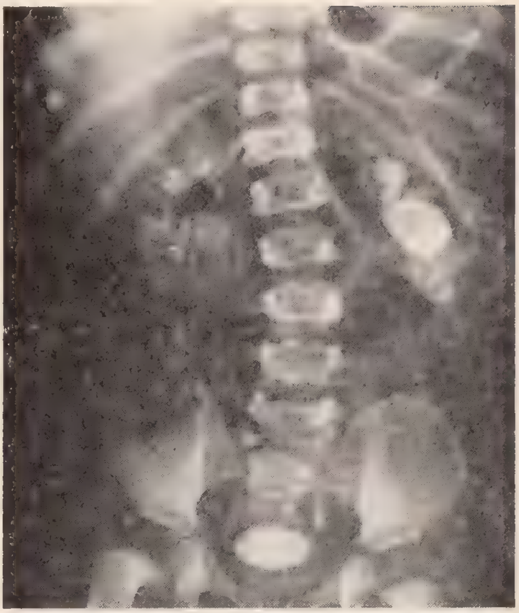

FIG. 3. Roentgenogram of abdomen, spine, and pelvis.

lymphocytes, 8 per cent monocytes, and 2 per cent eosinophils. Urinalysis showed a trace of albumin, few to many pus cells with clumps and a moderate number of red blood cells. Specific gravity varied between 1.008 and 1.010. The cultures were negative. Blood chemistry showed urea nitrogen 39.9 mg. per cent; creatinine 1.6 mg. per cent; uric acid 3.5 mg. per cent; cholesterol 333.3 mg. per cent; calcium 13.1 mg. per cent; phosphorus 1.5 mg. per cent; alkaline phosphatase 6 Bodansky units. Glucose tolerance (40 Gm. glucose given orally) test revealed the following: fasting, 96.2 mg. per cent; one-half hour, 105; one hour, 131; two hours, 102; three hours, 105. The Wassermann, Kahn, and tuberculin tests were negative.

X-rays of the wrists revealed the presence of only two small ossification centers. Films of the lower extremities showed decalcification, especially of the centers of ossification. The skull bones were thickened and showed no diploic structures. Vascular markings were scanty. Pneumatization had not begun. The anterior fontanelle was open, and sutures persisted (Fig. 2). The vertebrae were deformed in outline and appeared less calcified than normal, and there was slight scoliosis of the spine. Large branching stones were present in the pelves of both kidneys, outlining the calices, and a large egg-shaped calculus was noted in the bladder. In the pelvis large amounts of cartilage separated the components of the innominate bone. The acetabular cavities were large and shallow, the obturator foramina large and open. The ilia were still separated from the ischia and pubic bones. The epiphyseal centers at the head of the femur were absent, indicating a bone development of less than six months (Fig. 3). The cardiac shadow was markedly enlarged, and faint epiphyseal centers were visible at the humeral heads.

The electrocardiogram showed regular sinus rhythm (Fig. 4). The ventricular rate was 80 per minute. P waves were poorly developed in the three leads so that the PR interval was indeterminate. QRS interval was 0.08 second, and the R waves were of low voltage in the three leads. T waves were of low voltage in lead 1 and isoelectric in leads 2 and 3. A pronounced right axis deviation was seen. The low voltage of all electrocardiographic features was consistent with a diagnosis of hypothyroidism.

In view of the severe endocrine disturbance with the multiple stone formation and evident kidney damage, little hope for a complete cure was entertained. Nevertheless, thyroid therapy was prescribed, and exploration of the parathyroids was suggested. The parents decided to take the child home to visit the grandparents before consenting to the operation. They never returned. Follow-up revealed that the patient died several months later of what was apparently an uremic death. A necropsy was not obtained.

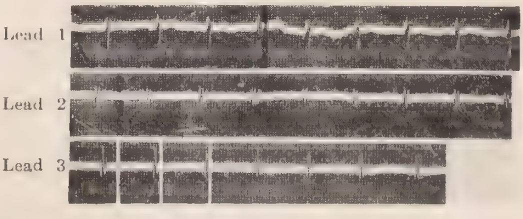

FIG. 4. Electrocardiogram showing right axis deviation and low voltage in all leads.

Comment

The case presented was undoubtedly an untreated cretin. At the time of observation, the child presented the physical development of an infant of approximately nineteen months, the bone age corresponding to that of a six-month old and the mental status equivalent to that of a nine-month-old child. Laboratory findings and the electrocardiogram showed the characteristic features of hypothyroidism. Roentgenographic examination revealed a marked retardation of osseous development, mild generalized decalcification, and calculi in both renal pelves and the bladder.

Urinary calculi are not frequently encountered in children. In a report of 2,195 cases of renal stones by Hager and McGath from the Mayo clinic, only 33 were under fifteen years of age.[1] Campbell found nine urinary calculi in a study of 580 cases of chronic pyuria and only 35 in 10,360 autopsies in children under fifteen years of age.[2] The case reported is of greater interest because the renal calculi were bilateral. Campbell reported bilateral calculi in only 10 per cent of his cases. Furthermore, the occurrence of renal calculi in association with vesical calculi in children is not mentioned in either the Mayo or Campbell reports.

The following causative factors for urinary calculi were considered in this case: congenital anomalies, poor nutrition, prolonged immobilization, secondary or renal hyperparathyroidism, and primary hyperparathyroidsm.[2–5] Secondary hyperparathyroidism in association with renal rickets can definitely be excluded in this case by the chemical blood findings of hypophosphatemia and hypercalcemia and the absence of characteristic osseous changes.[6]

Although no tumor was palpable and there was no surgical or postmortem confirmation, primary hyperparathyroidism must be considered as the probable cause of the urinary calculi in this case. The mild decalcification of bones and the chemical findings of high calcium and low phosphorous in the blood and multiple stone formation is a symptom complex indicating primary hyperparathyroidism. The majority of the cases reported were diagnosed because of the concomitant renal stone complication. A review of the literature by Cope revealed incidental kidney stones in 80 per cent of the reported cases of primary hyperparathyroidism.[7]

The finding of a normal alkaline phosphatase level in this case does not mitigate against the diagnosis of primary hyperparathyroidism. Albright, Bauer, and Aub demonstrated that where other than bony symptoms predominate, the serum phosphatase will be normal in amount without ruling out the possibility of hyperparathyroidism.[8] Another possible explanation for the low serum phosphatase in this case was the presence of severe untreated hypothyroidism. According to Talbot and his coworkers, the serum phosphatase measurement may be an index of thyroid deficiency during infancy and childhood.[9] Untreated hypothyroids in this age group tend to have phosphatase levels below normal which are restored to normal upon the administration of thyroid therapy. The finding of the equivocal figure in this case may possibly be explained by the presence of two opposing factors: the hypothyroidism acting to lower the level and the suggestive hyperparathyroidism acting to raise it.

Summary

1. A case of severe untreated cretinism together with vesical and renal calculi in an eleven-year, ten-month-old female has been presented.
2. No case of cretinism associated with urolithiasis has hitherto been reported in the literature.
3. Some of the possible causative factors in stone formation in children are mentioned.
4. The weight of evidence points to primary hyperparathyroidism as the causative factor for the calculi in this case.

161 Rugby Road

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DISCARDING OF SAMPLES OF MEDICINE

The Office of Budget and Planning of the Post Office Department has received the following suggestion from a postal clerk:

"May I suggest a notice to all professional men, especially of the medical group, not to throw unwanted samples, especially liquid mediums and laxatives, in lobby waste baskets. Many times youngsters delve through these baskets to find pictures or old stamps and might sample the medicine with fatal results."

The extent to which members of the medical profession discard samples of medicines in post office lobby waste baskets is not known, but many children and some adults rummage through baskets. The use of samples by children at play or with more serious intentions by adults offers a definite health hazard. Physicians can help minimize this hazard by discarding unwanted samples in safe receptacles. This practice is equally applicable to samples left unprotected in physicians' offices, homes, and elsewhere.—*Journal of the American Medical Association, March 11, 1950*

GASTROILEOSTOMY

Charles Polivy, M.D., New York City

(From the Surgical Service of Morrisania City Hospital)

MANY surgeons perform gastroenterostomies in the treatment of lesions of the stomach and duodenum. The segment of small intestine chosen for anastomosis is the upper jejunum. Many complications have occurred with gastrojejunostomies, including gastrojejunitis, gastrojejunal ulcer, malfunctioning gastrojejunal stoma, and gastrojejunocolic fistulas. Occasionally, a typical syndrome following a gastroenterostomy is presented, and an abnormal anastomosis employing ileum instead of jejunum should be suspected.

Only 27 cases of gastroileostomy have been reported.[1-6] The incidence of this condition is unknown, probably because not all cases of this surgical error are published. The syndrome of gastroileostomy is manifested by diarrhea and weight loss in the presence of a normal appetite, nutritional edema, occasional abdominal pain, or occasional vomiting of a fecal type. These symptoms usually occur almost immediately after a surgical procedure, but they may also occur later. They depend on the location of the gastroileal anastomosis and whether or not ulceration is present at the stoma site.

Case Report

A forty-five-year-old white man was admitted on March 9, 1949, with a chief complaint of swelling of his right lower extremity. Two weeks prior to admission, the patient was out in a snowstorm without socks, and his right leg swelled the next day. The leg was never red, hot, or tender. The patient was successfully treated at another hospital for this condition with intramuscular injections of penicillin and wet dressings. The swelling recurred in both legs, more marked on the right, and the patient was hospitalized again.

Four months prior to present admission, the patient had a subtotal gastrectomy for a duodenal ulcer with pyloric obstruction. His postoperative course was uneventful, and the patient was discharged on the tenth postoperative day. Within a week after discharge, the patient noticed the onset of four to eight soft, foul-smelling, watery stools daily. There was no blood in the stools. There were neither abdominal cramps, vomiting, nor pain. The patient had lost 25 pounds in the preceding three months despite good appetite and voracious eating.

The patient had gonorrhea in 1928 and was treated with injections for eight months. There was no history of tuberculosis, diabetes, heart disease, or carcinoma. The patient was single and worked as a laborer. However, since his operation four months ago, the patient had felt weak. He did not drink, smoked moderately, and had never lived outside of the United States.

Physical examination revealed a thin, chronically ill appearing male in no acute distress who showed signs of weight loss. Temperature was 99.8 F., pulse 88, respirations 20, and blood pressure 82/56. The tongue was coated, teeth in poor condition, gingiva clean. Abdomen was scaphoid with no masses felt, no tenderness, no hernias, and a healed right upper quadrant scar. Prostate showed a 2 plus enlargement, soft whitish-gray stool on examining finger, and no sacral edema. A 4 plus pitting edema was present in the right leg to knee; one plus edema left leg; no redness, no heat, no tenderness. Dorsalis pedis and posterior tibial vessels were palpable bilaterally. Neurologic examination revealed the following: ankle and knee jerks equal and active, no paresthesias, Babinski negative bilaterally.

The impression on admission was that the patient had a nutritional edema and was suffering from a jejunal insufficiency. Laboratory data included the following: red blood cells 3,100,000; hemoglobin 10.1 Gm.; white blood cells 4,600 with 52 per cent polymorphonuclear cells and 48 per cent lymphocytes. Urine was negative for albumin and sugar; stools negative for blood, positive for undigested protein fibers and fat globules; no ova or parasites found. Gastric analysis revealed no free hydrochloric acid present. Total proteins 3.8 Gm., albumin 2.3 Gm., globulin 1.5 Gm., cholesterol 133, cholesterol esters 72, alkaline phosphatase 19.9 King-Armstrong units; blood calcium 8 mg. per cent; cephalin flocculation negative for forty-eight hours; icteric index 8; carbon dioxide combining power 62 volumes per cent; serum chlorides 618 mg.

Gastrointestinal series revealed the barium entering the stomach which had a normal mucosal pattern. The barium passed into the terminal ileum.

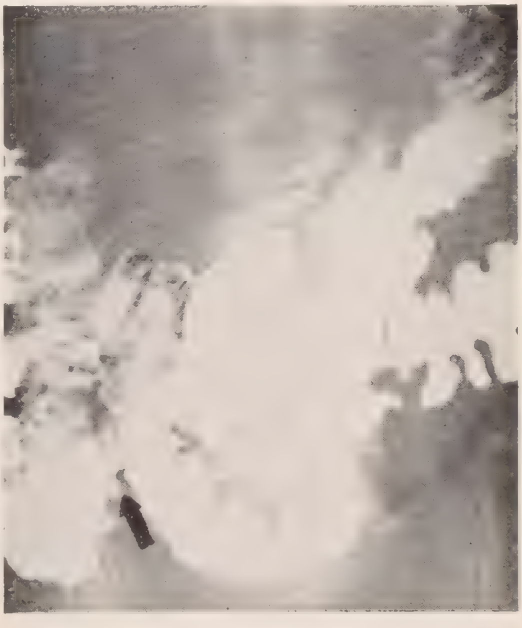

Fig. 1. Roentgenogram illustrating gastroileostomy. Barium enters the stomach and empties into terminal ileum and directly into the large bowel. Arrow indicates ileocecal junction. Note smooth contour of small intestinal lumen denoting ileum.

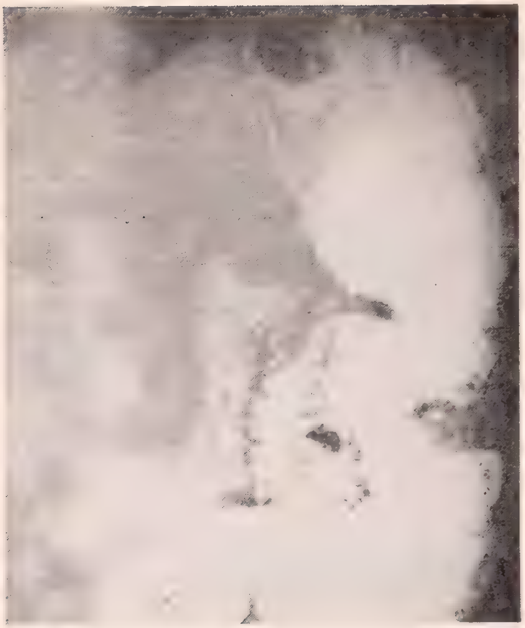

FIG. 2. Roentgenogram following revision of gastroileostomy and establishment of gastrojejunostomy. Barium enters jejunum from stomach and feathery pattern differentiates the small bowel as jejunum.

The diagnosis of a gastroileostomy was made, and the patient was prepared for surgery (Fig. 1). In addition to oral amino acids and high protein, high carbohydrate diet, the patient was treated vigorously with 500 cc. plasma and 1,000 cc. of amigen intravenously daily, vitamins B (complex), C, and K, and liver extract intramuscularly. The patient's weight on admission was 120 pounds. In spite of the intensive protein therapy, the patient's total proteins rose only to 4.4 Gm. after sixteen days. The edema of both legs remained, and his weight rose to 125 pounds. The patient was given Mercuhydrin and lost 10 pounds in twenty-four hours. The edema subsided slightly. Total proteins were still 4.4 Gm. twenty-two days after admission. It was decided that further treatment would not alter the patient's total proteins, and the patient was given 1,000 cc. of whole blood preoperatively.

The diagnosis of gastroileostomy was confirmed at operation on April 4, 1949, twenty-six days after admission. All tissues were found to be edematous and transparent, and 2,000 cc. of clear, serous fluid was suctioned off. The gastroileostomy was dismantled. A 6-inch segment of ileum was resected. A side-to-side ileal anastomosis and an anterior gastrojejunostomy were performed (Fig. 2). The patient ran a smooth postoperative course.

Intravenous protein therapy was continued. Food was offered on the fourth postoperative day. On the sixth postoperative day, total proteins rose to 6.4 Gm. and on the ninth postoperative day to 8.4 Gm. Albumin was 6.2 Gm., globulin 2.2 Gm., and serum chlorides 624 mg. The edema of the legs disappeared on the twelfth postoperative day. The patient left the hospital on the twenty-fourth postoperative day symptom free, eating well, with normal bowel movement and weighing 140 pounds.

Summary

A case of gastroileostomy is reported, bringing the total reported in the literature to 28. The predominant sypmtoms are loss of weight, diarrhea with foul, fatty stools, and malnutrition. Pain and vomiting are not common with only a gastroileostomy. X-ray examination is diagnostic.

Careful preoperative evaluation of the patient's fluid, electrolyte, and protein balance is necessary, and surgical restoration of gastrointestinal continuity is the treatment.

210 WEST 70TH STREET

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NATIONAL EDUCATION CAMPAIGN

The 1950 endorsement drive of the National Education Campaign, reflecting the rapidly broadened front of public support for medicine's cause, continues to gain momentum.

As of March 15, a total of 4,181 national, state, and local organizations had taken a stand in opposition to compulsory health insurance and in favor of voluntary health insurance. This marks a gain of 1,420 new resolutions since January 31. The 4,181 national, state, and local groups, according to type of organization, line up as follows:

Medical and allied	1,033
Insurance	117
Farm	239
Veteran	385
Religious	56
Women's	1,768
Civic clubs	321
Other groups	262

—*Bulletin from Whitaker & Baxter, National Education Campaign Directors, April 4, 1950*

THE EFFECT OF VITAMIN B_{12} ADMINISTERED SUBCUTANEOUSLY

Marvin Seife, M.D., and Carl Reich, M.D., New York City

(*From the City Hospital*)

Vitamin B_{12} is producing remarkable results in the treatment of pernicious and several other macrocytic anemias. The various reports to date have stressed the use of the drug via the intramuscular route. Two case reports of relapsed pernicious anemia follow in which vitamin B_{12} was successfully administered subcutaneously.

Case Reports

Case 1.—A seventy-four-year-old Negro male was admitted to the hospital on April 21, 1949, because of several bouts of vomiting for two weeks prior to admission. He also complained of increasing dizziness and weakness of one month duration. The patient was somewhat confused and unable to give an adequate history. From his niece, it was learned that he was diagnosed in 1944 at Harlem Hospital as a case of pernicious anemia. An abstract of that admission (May 10, 1944, to August 11, 1944) revealed a chief complaint of anorexia of one year duration plus recent attacks of vomiting and weight loss. A chest plate, gastrointestinal series, and barium enema were essentially negative. On admission there, the erythrocyte count was 1,400,000, hemoglobin 30 per cent, and leukocyte count 1,700. The patient was discharged to a convalescent home and thence to the clinic as improved. He was carefully followed, being given weekly intramuscular liver injections. The patient admitted that he did not attend the clinic for a two-month period before being admitted to the hospital at the present time.

On examination, he was seen to be a well-developed, well-nourished male with an unsteady gait. The blood pressure was 120/70. The mucous membranes were pale, but no tongue changes were seen. No neurologic signs, other than diminished lower extremity vibratory sense, were present.

The patient's initial erythrocyte count was 1,570,000, the hemoglobin reading 6.0 Gm., reticulocyte count 1 per cent, hematocrit 22 per cent, leukocyte count 3,200, and icteric index 15 units. The mean corpuscular volume of hemoglobin was 38.8 micromilligrams and the mean corpuscular hemoglobin concentration 27.2 per cent. Gastric analysis revealed no free or combined hydrochloric acid following the administration of histamine. Megaloblastic hyperplasia with a diminution of normoblasts and myelocytic elements was seen on the initial sternal marrow study. A chest plate, gastrointestinal series, and a barium enema revealed no pathology. Three days after the administration of ten micrograms of vitamin B_{12} subcutaneously, the reticulocyte count rose to 8.0 per cent. Following another ten micrograms, a peak of 23.8 per cent was reached on the fifth day of therapy. In one week, there was a 1.5 Gm. rise in the hemoglobin (7.5 Gm.), 1 per cent in the hematocrit (23.0 per cent), and a rise of 880,000 erythrocytes (2,450,000). The sternal marrow revealed a decrease in the number of megaloblasts plus marked erythroblastic hyperplasia forty-eight hours after treatment was started. On the sixth day, the marrow showed only a rare megaloblast and large numbers of normoblasts. Subcutaneous injections of 25 micrograms of vitamin B_{12} were given once weekly for the next three weeks. At the end of the second week, there was a further 1.5-Gm. rise in hemoglobin (9.0 Gm.), 9.5 per cent in the hematocrit (32.5 per cent), and a 670,000 increase in the erythrocytes (3,120,000). In three weeks the hemoglobin was 11.0 Gm. and the hematocrit 38.0 per cent, and, at the end of four weeks, the hemoglobin reading was 12.5 Gm., the hematocrit 42.0 per cent, and the erythrocyte count 4,060,000.

Comment.—Within one week after the start of therapy, the patient's gait was seen to improve, anorexia subsided, and mental alertness returned. The therapy given was vitamin B_{12} (Cobione) administered subcutaneously.* No reaction was noted at the site of injection, nor did the patient complain of any discomfort. A total of 95 micrograms of vitamin B_{12} (Cobione) was given during a twenty-eight-day period in which an almost complete remission of the anemia resulted.

Case 2.—A fifty-seven-year-old, white, female cook entered the hospital on May 8, 1949, complaining of increasing weakness and lassitude of six months duration. Dizziness had been marked for two years prior to admission. She complained also of numbness, tingling, and coldness of both upper and lower extremities. There had been no weight loss or anorexia. In 1936, a strangulated abdominal wall ventral hernia was repaired at Queens General Hospital but had since recurred.

On examination, a pallid, moderately obese, white woman was seen with a pale, lemon-yellow tint to her skin. The temperature was 101 F. and blood pressure 110/70. The mucous membranes were markedly pale, and the tongue was pale and smooth along its edges. A large ventral hernia was present. Vibratory sensation was absent in the lower extremities, and the patient's gait was unsteady.

The patient's initial erythrocyte count was 995,000, the hemoglobin 4.25 Gm., the hematocrit 10.5 per cent, the reticulocyte count 2.0 per cent, the leukocyte count 4,100, and the icteric index 19.0 units. Urinalysis was positive for urobilinogen in a 1:80 dilution. The mean corpuscular hemoglobin was 42.7 micromilligrams, and the mean corpuscular hemoglobin concentration 40.5 per cent. Gastric analysis revealed no free or combined hydrochloric acid before or after the administration of histamine. Marked megaloblastic hyperplasia with depression of normoblasts and myelocytic elements was seen on the initial sternal marrow study. A chest plate and barium enema revealed no pathology. The gastrointestinal series showed that the lower half of the stomach was included in the lower portion of the ventral hernia; otherwise, the series was normal.

On the fifth day after the subcutaneous administration of 25 micrograms of vitamin B_{12}, the reticulocyte count reached a peak of 34.0 per cent. In one week, the hemoglobin increased 1.25 Gm. (5.5 Gm.) and the hematocrit and erythrocyte count doubled (22.0 per cent and 1,880,000, respectively). The sternal marrow revealed a diminution in the number of megaloblasts plus a marked increase in erythroblasts and normoblasts. Subcutaneous injections of 25 micrograms of vitamin B_{12} were given once weekly during the second and third weeks. At the end of eighteen days, the hemoglobin had increased to 9.0 Gm., the hematocrit to 30.5 per cent, and the erythrocyte count to 2,910,000. The fourth injection of 15 micrograms of vitamin B_{12} resulted in only a slight increase in erythrocytes. In the fifth and sixth weeks of observation, a total of 40 micrograms of vitamin B_{12} was given. The blood values at the end of the forty-two-day period were 12.5 Gm. of hemoglobin, 3,930,000 erythrocytes, and a 38.0 per cent hematocrit.

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* Cobione is the trade name of Merck & Co., Inc. brand of vitamin B_{12}.

Comment.—On the fifth hospital day the low-grade fever subsided, and the patient was able to get up and move about. The extremity tingling and numbness had completely disappeared in about ten days. The only therapy given was vitamin B_{12} administered subcutaneously. The patient did not complain of any discomfort, nor was any reaction noted at the site of injection. (All the B_{12} used was Cobione, except for the fourth injection of 15 micrograms of B_{12} which was Rubramine.)** A total of 130 micrograms of vitamin B_{12} was given during a forty-two-day period in which almost complete remission of the anemia resulted.

Addendum.—Since this report was written, two more cases of pernicious anemia have also been treated successfully by the same method.

Summary

In both cases an excellent and rapid response was obtained with the use of vitamin B_{12} given subcutaneously. The response certainly was as rapid as that obtained with the use of vitamin B_{12} or liver intramuscularly. The early neurologic signs and symptoms cleared rapidly. There was no pain or reaction from the injection. With the new commercial preparations consisting of 15 to 30 micrograms per cc., the drug can be administered subcutaneously without loss of effectiveness.

** Rubramine is the trade name of E. R. Squibb & Sons brand of vitamin B_{12}.

HEALTH TIPS FOR AIR TRAVELERS

Most people can now travel by air without any qualms about upsetting or harmful results from the altitude. In some questionable instances, however, medical consultation should be obtained before a flight is attempted.

Protection against possible development of motion sickness includes wearing warm clothing and use of cotton plugs in the ears to reduce the effects of vibration and noise. A simple procedure that is recommended if one feels ill during a flight is to tilt the head back against the seat. Specific medication may be prescribed by a physician.

Anemia may be a definite cause of individual inability to obtain sufficient oxygen for the body's needs even when a flight is being made at the usual heights of one or two miles. It is a matter of common sense for the prospective air traveler with anemia to have the condition of the blood checked.

Those with certain forms of heart disease may require careful analysis of the pros and cons by their physician before taking an air trip. Some can be affected adversely by flights at relatively low levels, but travel in pressurized cabin planes obviates such hazards.

Among specific disorders that should be studied are angina pectoris and disease of the heart's blood vessels that may have reduced permanently the blood supply to that organ. High blood pressure is not considered a barrier to air trips unless its upper level is over 200 and the lower about 120.

Severe chronic bronchitis is a potential hazard because of the excessive strain resulting from strong, prolonged coughing, as well as the interference with normal oxygen and carbon dioxide exchange in the lungs.

Patients with active tuberculosis are considered undesirable risks unless the sputum is germ-free and lung cavities have been obliterated. When air has been injected within the chest cavity to collapse a diseased lung, no flying at all for a week and, thereafter, a pressurized cabin or low flight level are advisable.

Acute inflammation of the nose or throat should constitute a warning against airplane travel. Changes in pressure associated chiefly with ascent and descent may be sufficient to force infection into the middle ear or sinuses.

Active ulcers in the stomach or intestinal tract should be evaluated carefully before one decides to take to the air. The chief possible danger is that changes in air pressure within the digestive system may cause excessive strain on weakened ulcer areas and result in perforation or serious hemorrhage.

Obviously, persons with infectious diseases, such as measles, whooping cough, influenza, and other serious conditions, would be rejected for flying because in many such ailments the nose and throat are extensively involved and because the patient represents a health hazard for other passengers.—*William Bolton, M.D., Today's Health, March, 1950*

CONGENITAL FETAL ANOMALIES: INTRAUTERINE AMPUTATION AND ANNULAR CONSTRICTION BANDS

Robert J. Collins, M.D., and David H. Nichols, M.D., Buffalo, New York

(*From the Department of Obstetrics of the Millard Fillmore Hospital*)

CONGENITAL anomalies of the type to be described are statistically uncommon in an active obstetric service. The embryopathologic analysis of this anomaly serves as an interesting study.

At the Millard Fillmore Hospital, where at the present time approximately 4,000 deliveries are attended each year, no case of annular constriction band has been observed in the last eleven years until March, 1949, and only two cases of congenital amputation have been recorded during this same period. However, in March of this year one case each of annular constriction band and congenital amputation presented itself. The occurrence of these two cases within the same month along with the rarity of this condition stimulated this report.

Case Reports

Case 1.—M. S. was admitted March 6, 1949, delivered March 7, and discharged March 15, 1949. This twenty-year-old gravida 1, Para 0, whose expected date of confinement was estimated at April 11, 1949, had an essentially negative past history. Her antepartum course was uneventful except for slight spotting of one day's duration on three occasions during her first month of pregnancy, and a pinkish discharge of two days duration one month before admission.

This patient began flowing moderately at 4:00 A.M. on March 6. At 6:00 P.M. she consulted her physician who immediately hospitalized her. Labor began at 7:00 P.M., and after a first stage of fourteen hours duration and a second stage of one and one-half hours she was delivered by low forceps of a 3-pound, 12-ounce living male who breathed and cried spontaneously. The membranes had been intact until the time of delivery at which time they were artificially ruptured on the delivery table with the escape of a total of no more than 90 cc. of amniotic fluid. Postpartum course of the mother was uneventful. She was discharged on the eighth postpartum day.

As the infant was being delivered, it was apparent that the membranes were adherent to the baby's body in two places, the left hand and the right foot. These were involved with circumscribed bands of a glistening membrane interpreted as amnion. There was a large band constricting the right foot approximately 2 inches above the ankle (Fig. 1) and a smaller one about the second toe at the distal interphalangeal joint. The great toe of the right foot appeared to be absent, although x-rays showed the ossification center of the proximal phalanx to be present. There was also noted bilateral pes valgoplanus. The band about the lower leg was dissected easily, and the color of the distal foot showed it to be viable with a functioning deep circulation. There was also present a bilateral flexor contraction of the legs upon the thighs.

Upon examination of the left hand, the thumb appeared to be normal in all respects (Fig. 2). The index finger had a constriction ring at the base of the proximal phalanx. This was not as deep, however, as the grooves in the remaining three fingers, nor was the soft tissue damage as great. The midfinger was bulbous distal to the constriction ring, although the entire finger appeared to be intact. The ring finger also was swollen distal to the groove, and tip of the distal phalanx was absent. However, the greatest soft tissue destruction was to the little finger. The tip was pulpy and partially amputated with a deep constriction ring between the first and second interphalangeal joint. The soft tissue of the midpart was extremely bulbous, although the circulation seemed to be intact here, as it was in all the fingers. X-rays showed the thumb and index finger to be intact. The distal phalanges were missing in the middle and ring fingers with a rudimentary ossification center being present in the distal phalanx of the little finger. Figures 2 and 3 show these findings.

The infant, when discharged on April 4, twenty-four days after delivery, had attained a weight of 5 pounds, 6 ounces. The condition of the child at that time seemed good with well-established circulation in all of its limbs.

Case 2.—D. S. was admitted to the hospital March 28, 1949, operated on the same day, and dismissed April 8. She was a twenty-eight-year-old gravida 2, Para 1, whose estimated date of confinement was March 30, 1949. She had been a sterility case for five years until two years prior to admission when she was delivered of a normal, living full-term infant through the birth canal. The present pregnancy was uneventful until the morning of admission when the patient had a sudden, profuse, painless hemorrhage. She was admitted to the hospital after one hour of bleeding and ninety minutes later was delivered, by low cervical cesarean section under spinal anesthesia, of a living 6-pound, 8-ounce male infant who breathed and cried spontaneously. The placenta showed a rim of premature separation.

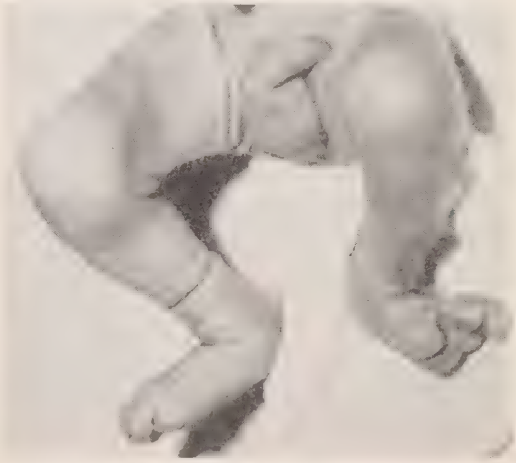

Fig. 1. Constricting band around ankle (Case 1).

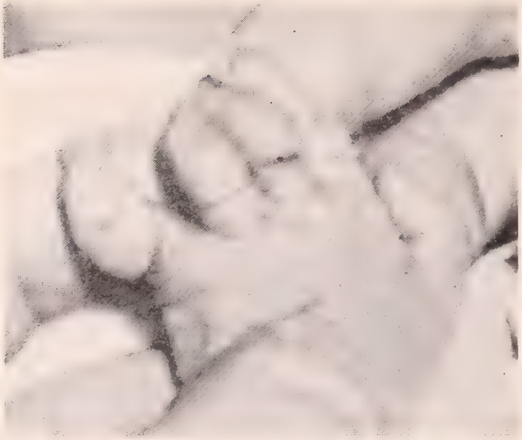

FIG. 2. Constriction rings of left phalanges (Case 1).

Recovery was uneventful, and the patient was discharged on the eleventh postoperative day. It was observed at the time of delivery that the baby's right ankle was deformed and the foot was missing. The stump was well healed, save at the very center where a small irregular, friable piece of bone protruded through the skin. There was no evidence of any constriction bands anywhere on the infant's body. X-ray studies revealed an absence of the bones and soft tissues in the right foot. The appearance was that of an amputation through the midtarsal region. Ossification of the astragalus and os calcis was present, but these centers appeared smaller than the ones of the other foot. On the left there was a partial amputation of the great toe, the ossification center for the proximal phalanx being present. The metatarsals on this side showed an irregularity of formation (Fig. 4).

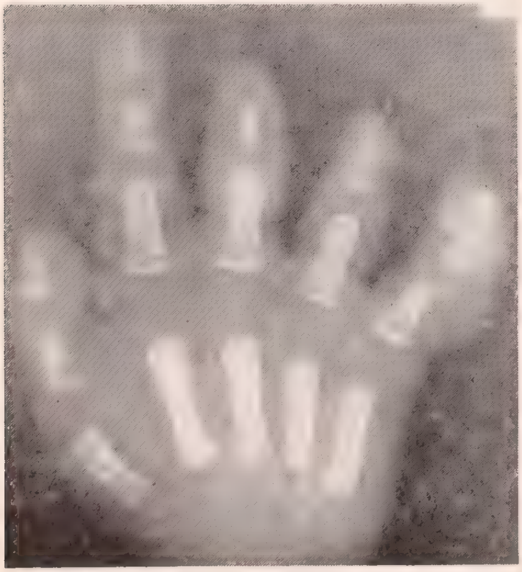

FIG. 3. X-ray of left hand showing missing distal phalanges in middle and ring finger (Case 1).

There was webbing of the two proximal phalanges of the middle and ring fingers of the left hand and of the ring finger and small finger of the right hand. True constriction bands per se were not found here. The child made an uneventful recovery and was discharged with the mother on the eleventh postpartum day.

Case 3.—W. S. was admitted and delivered on March 14 and discharged on March 25, 1939. This twenty-six-year-old gravida 1, Para 0, whose expected date of confinement was April 13, 1939, had a noncontributory past history until two days before admission when her membranes ruptured spontaneously. Labor began the day of admission and after a first stage of six hours and thirty minutes and a second stage of twenty-six minutes she was delivered by low forceps of a 4-pound, 8-ounce living male who breathed and cried spontaneously. Postpartum course of the mother was uneventful.

It was noted at the time of delivery that the baby's right hand was laterally flexed and the thumb missing. There were also an imperforate anus and an anomaly of the heart.

X-ray study of the right hand and arm showed a complete absence of the radius associated with absence of the first metacarpal and phalanges of the thumb. The ulna bowed laterally so that the hand lay lateral to the upper arm.

The infant expired on the third neonatal day, and autopsy showed the findings described above and the additional information that the pulmonary artery arose from the aorta communis and that there was an interventricular septal defect.

Case 4.—A. G. was admitted and delivered June 9 and discharged on June 17, 1947. This forty-one-year-old gravida 6, Para 5, whose expected date of confinement was June 5, 1947, had a noncontributory past history, with five living, normal children.

She was delivered by low forceps, after a first

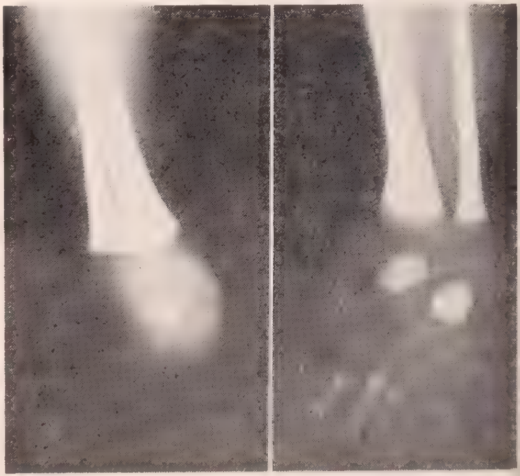

FIG. 4. X-ray of feet showing amputation of right foot (Case 2).

stage of four and three-quarter hours and a second stage of thirty minutes, of a living 8-pound, 13-ounce female who breathed and cried spontaneously. Postpartum course of the mother was uneventful.

Physical examination of the infant was negative except for the absence of the left index, third and fourth fingers, and metacarpals of these fingers. The amputations were well healed, and there was no evidence of constriction bands. Postpartum course of the infant was uneventful.

Comment

The "amnion-like" constriction bands in Case 1 were sent to the laboratory for study. The report submitted by Dr. Anthony V. Postoloff, pathologist, proved these to be not "sheets of amnion" but necrotized epidermal tissue, in agreement with the section studies by Dr. G. L. Streeter.[1]

All of the pathology found in the extremities of these four cases were in the distal portions which coincided with Streeter's report. It is interesting, however, that Meyer and Cummins report a case in which, among other findings, the most pronounced constriction band was in the right upper arm.[2]

Oligohydramnios was an additional finding in only one case, and ultimate damage was less to that child than to the others. We do not believe that there was any direct association between these two conditions.

In all four of our cases no history of dietary deficiency or of similar occurrences in other members of the family was obtained.

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RECOVERY OF A SURGICAL SPONGE IN A THYROIDECTOMY WOUND AFTER TWO AND ONE-HALF YEARS

Robert A. Herfort, M.D., and Arthur H. Glick, M.D., F.A.C.S., New York City

(*From the Surgical Service of Montefiore Hospital*)

The loss of surgical sponges in the abdominal cavity has been noted frequently enough to occasion individual reports no longer. However, the seeming paucity in the literature of similar occurences in the course of surgery in the neck prompts the reporting of the following case.

Case Report

V. I., a fifty-two-year-old man, was admitted to Montefiore Hospital for the first time on November 19, 1947. His history dated back to June, 1945, at which time he was admitted to a hospital for a persistent swelling in the right side of the neck; the mass had been noted for the first time six years previously and had not increased in size in the interim. The presumptive clinical diagnosis was that of nontoxic thyroid adenoma, the basal metabolic rate at time of admission being plus two. The patient was operated on under general anesthesia, and a large adenoma measuring 12 by 7 by 5 cm. was removed without untoward difficulty from the right lobe of the thyroid gland. The pathologist reported the specimen as nontoxic fetal adenoma of the thryoid. The immediate postoperative course was uneventful, the surgical wound healing per primum. The patient was discharged without complaints on the fifth postoperative day.

Nine months subsequent to his discharge from the hospital, the patient noted the appearance of a somewhat tender swelling in the right neck, coinciding in location with that of the thyroid adenoma previously removed. This tender recurrent swelling occasioned his admission to a second hospital in March, 1946. Reoperation at this time revealed a calcareous plaque, 2 by 3 cm. in size, in the right paratracheal area just below the deep cervical fascia. In the excision of the plaque an abscess cavity was entered from which 20 cc. of thin, grayish, purulent fluid were evacuated. The wound was closed about a rubber dam drain placed down into the cavity. The drain was shortened progressively and ultimately removed on the sixth postoperative day. The wound healed uneventfully except for a draining sinus at the site of the drain which had been removed. The patient was discharged with the draining sinus in the operative scar on the ninth postoperative day.

Drainage from the sinus tract persisted, necessitating the constant use of a dressing. The flow of purulent fluid from the sinus was profuse enough to warrant change of the dressing every twenty-four hours. The patient was readmitted to the second hospital in June, 1946, and the sinus tract was explored under anesthesia. At a distance of 3 cm. from the skin surface, a silk suture was found and removed. The suture was evidently thought to be the basis of the sinus and nothing more was done. Nevertheless, the sinus did not close and continued to drain thin, gray, seropurulent fluid after discharge from the third hospitalization. This situation occasioned the admission to Montefiore Hospital on November 19, 1947.

The remarkable physical findings were confined to the neck. There was a well-healed low collar incision 2.5 cm. above the mesial ends of the clavicles. A sinus ostium was located in the scar 3 cm. to the right of the midline. The sinus ostium was 4 mm. in diameter and was surrounded by granulation tissue just below the level of the skin. Thin gray pus was seen issuing from the sinus; pressure on the right side of the neck

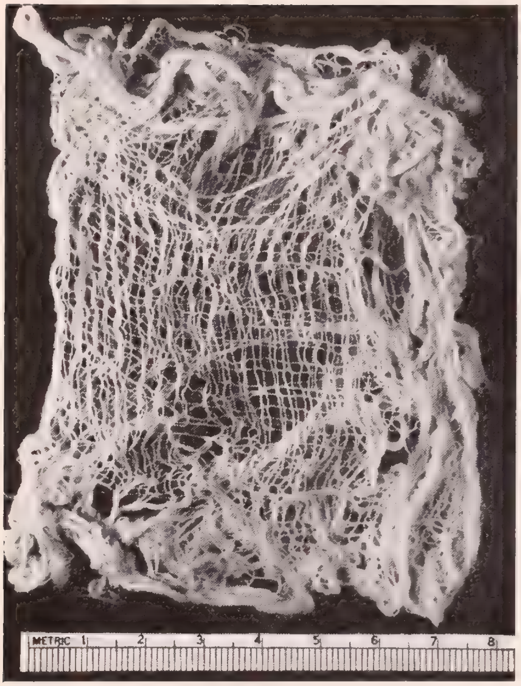

Fig. 1. Sponge removed from thyroidectomy wound after two and one-half years.

failed to express additional pus. A probe was passed with ease to a depth of 1 cm. at which point obstruction was met. No masses could be palpated in the neck. The white cell count was 8,900 with 72 per cent polymorphonuclear leukocytes. Smear and culture of the pus yielded Staphylococcus aureus. Smears and culture failed to reveal acid-fast organisms. X-rays of the neck revealed nothing remarkable in the soft tissues or osseous structures. Lipiodol instilled into the sinus tract was seen on anteroposterior and lateral views to produce a mottled puddling in a circumscribed area 1 cm. in diameter in the right paratracheal region on a level with the right transverse process of the first dorsal vertebra. The patient received penicillin for twenty-four hours preoperatively. Under endotracheal cyclopropane anesthesia, the sinus tract was injected with a solution of methylene blue and hydrogen peroxide and thereupon dissected free of contiguous tissue. The old operative scar was excised in its entirety on both sides of the sinus. The skin and underlying platysma muscle were reflected in superior and inferior flaps. Beneath the deep cervical fascia the sinus tract, well outlined by methylene blue, was found to bifurcate: the right limb ended blindly in two silk sutures; the left or mesial limb of the sinus tract extended posteriorly into the tracheoesophageal hiatus adjacent to the bed of the right lobe of the thyroid gland. The tract in this area terminated in a smooth-walled cavity in which a folded gauze sponge stained with the methylene blue was found. The sponge was readily removed and the cyst cavity irrigated with saline. The wound was closed about a gutta percha drain placed into the cyst cavity. The immediate postoperative period was marked by a transient episode of premature ventricular systoles; this was attributed to the cyclopropane anesthesia and disappeared four hours postoperatively. The drain was shortened on the third postoperative day and removed on the fourth. There was a minimal amount of serous drainage from the drain site; this ceased on the eighth postoperative day. The patient was discharged from the hospital on the tenth postoperative day with a well-healed, dry wound. He was seen in the outpatient clinic eight weeks later with the scar well healed and dry. Examination of the sponge revealed it to be a crushed but otherwise well-preserved ordinary wound sponge. It was made of absorbent surgical gauze folded in layers corresponding probably to the 3 by 3 inch size sponge found in use in many operating rooms (Fig. 1).

Review of the preoperative films of the lipiodol study of the sinus tract suggested that the mottled effect, reported in the pooling of the radiopaque oil, was due to the contrast substance filling the interstices between the gauze mesh and producing the mottled lattice work effect on the developed films.

Comment

Repeated inquiry has revealed that sponge counts are not done routinely after thyroidectomies nor, indeed, after any procedures in the neck in the four general hospitals that were investigated. It is suggested that possibly such sponge counts are indicated after these operative procedures to obviate the possibility of leaving sponges in the wound.

Summary

A case report is presented wherein a cervical abscess with resultant persistent draining sinus occurred subsequent to the abandonment of a gauze sponge in a thyroidectomy wound. Removal of the sponge two and one-half years later resulted in prompt healing of the sinus tract.

WOMEN ARE MORE TEARFUL THAN MEN, ROCHESTER DOCTORS REPORT

Young women have more active lacrimation than young men. In order words, the female of the species can turn on the tears more copiously.

If there is any doubt of this ability, two Rochester, Minnesota, ophthalmologists, Drs. John W. Henderson and Wendell A. Prough, have proved it by examining the eyes of 114 males and 117 females. Sex was a factor in the rate of flow of tears among young persons (sixteen through twenty-nine years of age), and females exhibited a definitely greater flow of tears than males, the normal flow of tears for men in this age group being slightly more than half that of women of the same age group, the doctors stated.—*Archives of Ophthalmology, February, 1950*

Special Article

PREVENTION OF PREMATURITY AND DEATH FROM PREMATURITY FROM THE OBSTETRIC VIEWPOINT

EDWIN M. GOLD, M.D., JERE B. FAISON, M.D., and HELEN M. WALLACE, M.D., New York City

(*From the City of New York Department of Health*)

SINCE premature birth now accounts for 50 per cent of neonatal mortality, medical, nursing, and public health workers have recognized the fact that, if much more significant reduction in neonatal mortality is to take place, greater emphasis must be placed on the problem of prematurity. Not only is it a pediatric responsibility to provide good pediatric care to the prematurely born infant after birth, but the obstetrician has an important role in the prevention of prematurity.

This material is drawn up to outline currently well-accepted facts in an effort to reduce the incidence of premature birth and to reduce mortality among prematurely born infants.

Preconceptional Care

Not only is it important for the expectant mother's health, both physical and emotional, to be at optimum level during pregnancy, but also there is a growing acceptance of the fact that such an optimum level should be attained wherever possible prior to pregnancy. This fact would mean that, by the time conception occurs, women in the child-bearing age group would be at their maximum in physical and emotional health and that family planning would be on a sounder basis. More specifically, prior to conception, any chronic or acute condition should be corrected or at least brought to its fullest level of control, and any pathologic deviations, including those of a nutritional and psychologic nature, should be remedied.

Antepartum Care

From the point of view of prevention of prematurity, measures are mentioned which potentially may prolong the period of gestation and carry the patient more closely to term. It is a well-accepted fact that good antepartum care, begun early and continued throughout pregnancy, decreases the incidence of a degree of prematurity. By good antepartum care is meant the basic medical workup and care of the pregnant women, plus the counseling of the patient regarding rest, exercise, sleep, type of work, nutrition, and mental hygiene. It is now well accepted that there is a direct relationship between the adequacy of the diet of the pregnant woman and the incidence of premature birth.

Good antepartum care includes the proper management of the pregnant woman with syphilis, heart disease, kidney disease, and acute and chronic infections from the point of view of correct treatment and prolongation of pregnancy without added maternal risk. Such proper management should include assistance, when indicated, from the internist.

It should be recognized also that the public health nurse, the nutritionist or dietitian, and the social worker may each make a contribution: the public health nurse by bringing patients under medical care early in pregnancy, by assisting the patient in carrying out medical instructions, and by counseling of the patient; the nutritionist by advising regarding diet and assisting the patient to budget; the social worker by assistance with social and economic problems.

Care of the Patient in Premature Labor and During Premature Delivery

The following guides may be used:

1. Patients who have premature rupture of their membranes should be hospitalized and treated conservatively. No attempt should be made to induce labor.
2. It is highly desirable to eliminate the use of amnesics and analgesics, since these agents act as severe respiratory depressants, particularly for the premature infant.
3. Vitamin K should be administered to the parturient during premature labor.
4. The use of local or pudendal block anesthesia for delivery. Inhalation anesthesia should be used sparingly. Anesthesia, as for all obstetric patients, should be administered by medical and nursing personnel trained in anesthesiology.
5. Episiotomy should be done to protect the baby's head, when indicated.
6. Elective outlet forceps for the delivery of the baby's head is advisable in most cases.
7. Breech extraction in breech presentation and internal version are very dangerous when the baby is premature. Spontaneous delivery of the breech is desirable.
8. At cesarean section, the baby should be removed slowly with as little trauma as possible and aspiration instituted.
9. The umbilical cord should not be clamped until pulsation ceases, in order to give additional blood supply to the baby and thus increase the oxygen transport.

Care of the Premature Baby

IN DELIVERY ROOM:

1. There should be competent personnel in the

This is a report developed by the Advisory Obstetric Council to the Commissioner of Health of the City of New York and is presented for general information.

delivery room to take over the care of the newborn immediately after the birth.

2. Establishment of respiration:
    (*a*) provision of oxygen
    (*b*) provision of clear airway
    (*c*) provision of warmth
    (*d*) intratracheal intubation and insufflation when necessary
    (*e*) provision of personnel trained in these procedures
3. Maintenance of heat:
    (*a*) provision of modern incubator or heated crib in each delivery room at all times
    (*b*) provision of personnel trained in the use of these devices
4. Administration of vitamin K to the premature baby shortly after birth.

Transfer of the Baby from the Delivery Room to the Nursery:

1. Transfer in an incubator or heated crib.
2. Routine provision of oxygen during transfer.

THE ROLE OF PHYSICANS AND SURGEONS IN NATION'S DEFENSE IS DESCRIBED

Physicians and surgeons are in the first line of defense of this country and are "charged with the responsibility of maintaining production through health," Dr. William B. Rawls, President of the American Academy of Compensation Medicine, said at the opening session of a week's course on the medical aspects of workmen's compensation held recently at the New York University Post-Graduate Medical School. Special emphasis was placed on New York State's new Disability Benefits Law during the course, the sessions of which were conducted in University Hospital from February 27 through March 4.

Speaking of the significance of the course, sponsored jointly by the Medical School and the Academy, Dr. Rawls said, "This course recognizes the fact that the workingman is our first citizen and the best offense and defense of our national security, for our nation's safety depends upon a healthy worker who can maintain production during war or troubled peace. You and I are in the first lines charged with the responsibility of maintaining production through health. Casualties in industry may be even more serious than those on the battlefield. It is incumbent upon us, therefore, to return them to work with the least possible waste of time."

INSURANCE CLAIMS FOR DEATH

Two out of every three dollars of the $269,000,000 in death claim payments by the Metropolitan Life Insurance Company in 1949 were for deaths from diseases of the heart and blood vessels or from cancer. More than half of the payments, $139,175,000, were for deaths from the chronic diseases of the heart and blood vessels. Ten years ago, the proportion paid out for the diseases of this group was only about 44 per cent.

Cancer payments totaling $45,601,000 comprised 17 per cent of last year's total, as compared with 13.4 per cent ten years ago. Part of this rise is due to more accurate diagnosis of cancer as the cause of death.

Polio death claims totaled $741,000, more than twice as much as in 1948 or 1946, the most recent previous epidemic years. While the amount paid for poliomyelitis claims in 1949 was only 0.3 per cent of the total, it was nine times as much as for the communicable diseases of childhood as a group, and 14 times as much as for cerebrospinal meningitis.

Although the total paid out in death claims for all causes combined increased by almost 60 per cent from 1939 to 1949, payments for deaths from tuberculosis were 20 per cent lower and from pneumonia and influenza 40 per cent lower last year than they were ten years ago.

This attests to the remarkable progress which has been made in reducing the mortality from these diseases. Similarly outstanding gains have been made in reducing the death toll from appendicitis and the diseases of childbearing.

About one dollar in each ten paid out was for deaths from external causes, with deaths from accidents accounting for $21,304,000, suicide accounting for $4,928,000, and homicide $1,326,000.

NECROLOGY

Thomas L. Crescenzi, M.D., of Katonah, died on May 1 at the age of forty-eight. Born in Italy, Dr. Crescenzi was graduated from New York University and Bellevue Medical College in 1927 and interned at the Fordham Hospital, Bronx, where he was in charge of the cardiac clinic from 1927 to 1931. A practicing physician in Katonah for twelve years and an associate physician on the staff of the Northern Westchester Hospital in Mount Kisco, he also served as attending physician to Lincoln Agricultural School, Lincolndale; physician for the Katonah public schools and St. Mary's Parochial School, and director of the Katonah chapter of the American Red Cross. Dr. Crescenzi was a member of the American Medical Association and the New York State and Westchester County Medical Societies.

Paul Federn, M.D., of New York City, died on May 4 at the age of seventy-eight. Dr. Federn received his medical degree from the University of Vienna in 1895 and, after doing postgraduate work at the University, he became first assistant in the medical department of the Allgemeinen Krentenhaus, a Vienna hospital. He held this post for five years, after which he entered general practice. Dr. Federn joined the psychoanalytic movement in 1901 and became one of Dr. Sigmund Freud's closest collaborators and assumed the post of acting chairman and director of the Psychoanalytical Society of Vienna when Dr. Freud became too ill to maintain active direction of the Society in 1922.

Dr. Federn came to the United States immediately after the Hitler march on Austria and practiced psychiatry and psychoanalysis until illness forced his retirement. For the last twelve years he had written numerous papers for publication and served on the teaching staff of the New York Psychoanalytic Institute. Dr. Federn was a member of the American Psychoanalytic Society, the American Medical Association, the New York Psychoanalytic Society, the Rudolf Virchow Society, and the New York State and County Medical Societies.

Arthur M. Gabriel, M.D., of New York City, died on April 23 at the age of fifty-two. Dr. Gabriel was graduated from Halle in 1922 and at the time of his death was assistant otolaryngologist at Metropolitan Hospital on the staff and in the Outpatient Department, adjunct otolaryngologist at Jewish Memorial Hospital, and assistant chief of otolaryngology in the Outpatient Department of Jewish Memorial Hospital. Dr. Gabriel was a member of the American Medical Association and the New York State and County Medical Societies.

Magnus Tate Hopper, M.D., of Brooklyn, died on May 2 at the age of eighty-two. Dr. Hopper was graduated from the New York Homeopathic Medical College in 1891. Dr. Hopper was a founder and for many years medical director of the Peck Memorial Hospital in Brooklyn. He retired from that post in 1947 and was elected vice-president of the board of trustees of the Hospital. An ear, nose, and throat specialist, Dr. Hopper was a member of the American Medical Association, the American Institute of Homeopathy, the New York State Homeopathic Society, and the New York State and Kings County Medical Societies.

Archie Sheinmel, M.D., of Yonkers, died on May 3 at the age of forty-four. Dr. Sheinmel was graduated from the George Washington University Medical School in 1934. He was chief of the radiology department of the Veterans Administration Hospital in the Bronx. A diplomate of the American Board of Radiology, Dr. Sheinmel was also a member of the American Medical Association and the New York State and Westchester County Medical Societies.

M. Webster Stofer, M.D., of Norwich, died on April 17 at the age of sixty-three, in Phoenix, Arizona. Dr. Stofer received his medical degree from the Medico-Chirurgical College of Philadelphia in 1910 and practiced in Chambersburg, Pennsylvania, from 1912 to 1917, when he entered the Army Medical Corps. Following the war, he became medical director of the Norwich Pharmacal Company, a position he held until 1941 when illness forced his retirement. Dr. Stofer was a member of the American Medical Association and the New York State and Chenango County Medical Societies.

Correction: Due to a similarity in names, an error in listing the death of a physician occurred in the April 15 issue, page 1038. Dr. Luvia Mildred Willard of Jamaica, who is director of pediatrics in Jamaica Hospital, was incorrectly reported as dead. The editors wish to apologize to Dr. Willard for this unfortunate error.

EFFECTS OF PLACEBOS

A recent report by Stewart Wolf re-emphasizes that placebos may produce observable effects which must be remembered when drug medication is instituted. When a drug is applied to an isolated tissue suspended in a standard solution, the response usually is predictable and reproducible. This is not necessarily true, however, for intact tissue; modifying factors may influence profoundly the tissue reaction. Using urogastrone, diphenhydramine hydrochloride, sterile water, ipecac, neostigmine, tap water, lactose, and atropine on a patient with a large gastric fistula, through which the gastric mucous membrane could be observed, and 4 other human subjects for supplementary experimental work, Wolf observed "placebo effects" which can modify the actions of drugs; in fact, the "placebo effects" may surpass the actions attributable to the drugs. He contends that these are not imaginary but may be associated with measurable changes at the end organs. He warns again of the difficulty of evaluating new remedies in patients and urges curbing of enthusiasm until one has accounted for the physiologic effects of the "placebo" action.—*Journal of the American Medical Association, March 18, 1950*

MEDICAL NEWS

State Society Holds 144th Annual Convention

THE 144th annual convention of the Medical Society of the State of New York was held May 8 to 12, at the Hotel Statler, New York City, with a total registration of approximately 6,000, including 4,407 physicians, 1,200 guests, and 300 exhibitors.

The House of Delegates of the State Society met on Monday, Tuesday, and Wednesday in the Penn Top at the Hotel Statler. Dr. Albert F. R. Andresen, Brooklyn, acted as speaker, with Dr. Frederic W. Holcomb, Kingston, vice-speaker, taking over the chair for one session.

At the annual elections held Wednesday morning, May 10, Dr. J. Stanley Kenney, New York City, was chosen president-elect, to succeed Dr. Carlton E. Wertz, of Buffalo, who became president. Dr. Wertz succeeds Dr. John J. Masterson, of Brooklyn, who completed his term as president.

Dr. Kenney has been a member of the Council of the State Society for the past six years. He is chairman of the Committee on Workmen's Compensation and is also chairman of the Planning Committee for Medical Policies. He is a native of New York City and has practiced medicine for forty years.

Other officers elected by the House of Delegates were Dr. Charles Post, Syracuse, vice-president Dr. W. P. Anderton, New York City, secretary; Dr. Andrew A. Eggston, Mount Vernon, assistant secretary; Dr. Maurice J. Dattelbaum, Brooklyn, treasurer; Dr. Thomas M. D'Angelo, Jackson Heights, assistant treasurer; Dr. Albert F. R. Andresen, Brooklyn, speaker of the House of Delegates; and Dr. Frederic W. Holcomb, Kingston, vice-speaker of the House of Delegates.

Three members of the Board of Trustees were elected: Dr. Edward T. Wentworth, Rochester, for five years; Dr. James R. Reuling, Bayside, for four years; and Dr. Fenwick Beekman, New York City, for three years.

Six physicians were elected as members of the Council. They are Dr. Peter J. Di Natale, Batavia; Dr. Floyd S. Winslow, Rochester; Dr. Renato Azzari, the Bronx, and Dr. Walter W. Mott, White Plains, for three years; Dr. Denver M. Vickers, Cambridge, two years, and Dr. Irwin Siris, Brooklyn, one year.

Delegates to the American Medical Association elected at the annual meeting were: Dr. W. P. Anderton, New York City; Dr. Albert F. R. Andresen, Brooklyn; Dr. Herbert Bauckus, Buffalo; Dr. Harold F. R. Brown, Buffalo; Dr. Edward Flood, the Bronx; Dr. Norman Moore, Ithaca; Dr. Harold Brennan, Buffalo; Dr. Leo F. Schiff, Plattsburgh; Dr. Denver M. Vickers, Cambridge; Dr. Carlton E. Wertz, Buffalo; Dr. Floyd S. Winslow, Rochester, and Dr. James R. Reuling, Bayside.

Alternate delegates to the A.M.A. elected are: Dr. Joseph A. Geis, Lake Placid; Dr. William B. Rawls, New York City; Dr. W. Guernsey Frey, New York City; Dr. Clarence G. Bandler, New York City; Dr. Frederic W. Holcomb, Kingston; Dr. John J. H. Keating, New York City; Dr. Herman E. Hilleboe, Albany; Dr. Ezra A. Wolff, Forest Hills; Dr. Christopher Wood, White Plains; Dr. Moses H. Krakow, Bronx; Dr. B. Wallace Hamilton, New York City, and Dr. Philip D. Allen, New York City.

Dr. Edward R. Cunniffe, Bronx, is the new chairman of the Board of Trustees.

Scientific papers which were presented at the meeting will be published, according to sections and sessions, in the NEW YORK STATE JOURNAL OF MEDICINE, beginning with the July 1 issue. The proceedings of the House of Delegates will be published as Part II of the issue of September 1.

Awards for scientific and clinical research exhibits, announced at the convention, include:

Scientific—First—"Histamine Biochemotherapy in Suggested Psychiatric Disorders," Dr. John H. W. van Ophuijsen, Dr. Arthur M. Sackler, Dr. Mortimer D. Sackler, and Dr. Raymond R. Sackler, Creedmoor State Hospital, Queens Village.

Second—"Surface-active Solvents in Topical Antibiotic Therapy," Dr. Edwin J. Grace, Grace Clinic, Brooklyn, and Dr. Vernon Bryson, Biological Laboratory, Cold Spring Harbor.

Honorable Mention—"Pathologic Changes in the Component Joints of the Shoulder," Dr. Charles J. Sutro, Hospital for Joint Diseases, New York City.

Clinical—First—"Cervical Cytology Indicating Threatened Abortion," Dr. Clyde L. Randall, Dr. Richard W. Baetz, Dr. Donald W. Hall, and Dr. Paul K. Birtch, Buffalo General Hospital and University of Buffalo, Buffalo.

Second—"Reversible Bronchiectasis," Dr. Walter Finke, Genesee Hospital, Rochester.

Honorable Mention—"The Problem of Cerebral Palsy," Dr. Herman E. Hilleboe, Dr. I. Jay Brightman, and Dr. Granville W. Larimore, New York State Department of Health, Albany.

Honorable Mention—"Behcet's Syndrome: Aphthosis," Dr. Helen Ollendorff Curth, College of Physicians and Surgeons, Columbia University, New York City.

The annual banquet was held on Wednesday night, May 10, in the Penn Top at the Hotel Statler. Dr. Thomas A. McGoldrick, Brooklyn, was toastmaster, and the invocation was given by the Most Reverend Stephen J. Donohue, Auxiliary Bishop of New York.

Addresses were made by Dr. John J. Masterson, Brooklyn, retiring president, who received the President's Medal from Dr. Edward T. Wentworth, Rochester, chairman of the Board of Trustees; Dr. Carleton E. Wertz, Buffalo, incoming president; Dr. Adelaide Romaine, president of the Women's Medical Society of New York State; Dr. John Rankin MacElroy, Jonesville, New York State's outstanding general practitioner for 1949, and Mr. Louis H. Pink, president of Associated Hospital Service, on "The Doctors and Blue Cross."

Guests seated on the dais, in addition to those who participated in the program, included: Dr. Nathan B. Van Etten, past president, Medical Society of the State of New York and the American Medical Association; Dr. Herman E. Hilleboe, Commissioner, New York State Department of Health; Dr. Chas. Gordon Heyd, past president, Medical Society of the State of New York and the American Medical Association; Mrs. William J. Lavelle, president, Woman's Auxiliary to the Medical Society of the State of New York; Dr. Albert F. R. Andresen, speaker of the House of Delegates of the State Society; Dr. Leo F. Simpson, past president of the State Society; Dr. Walter P. Anderton, secretary of the State Society; Dr. J. G. Fred Hiss, chairman of the Subcommittee on Scientific Exhibits; Dr. Charles F. McCarty, chairman of the Arrangements Committee; Dr. Charles W. Mueller, president, Kings County Medical Society; Dr. Oscar M. Race, president, Richmond County Medical Society; Dr. John J. H. Keating, president, New York County Medical Society; Dr. James R. Reuling, treasurer, State Society; Dr. Alfred P. Ingegno, chairman, Subcommittee on Scientific Program; Dr. Andrew A. Eggston, chairman, Convention Committee; Dr. Ezra A. Wolff, president, Queens County Medical Society, and Dr. Henry J. Barrow, president, Bronx County Medical Society.

MEDICALLY SPEAKING—

Course in Occupational Skin Diseases—Representatives of labor, industry, and the New York State Workmen's Compensation Board will cooperate with the faculty of the New York University Post-Graduate Medical School to give a two-week course in "Occupational Dermatoses" from Monday, June 5 through Friday, June 16.

The course, to be presented jointly by the Medical School's Departments of Dermatology and Syphilology and Industrial Medicine, under the auspices of the Institute of Industrial Medicine of the New York University-Bellevue Medical Center, will consist of lectures and demonstrations designed to provide basic instruction in major problems relating to industrial skin diseases.

Sessions of the course will be held in Erdmann Auditorium, University Hospital, 303 East 20th Street, and the Pathology Lecture Room, the Skin and Cancer Unit of the Medical Center, 330 Second Avenue, both in New York City. Applications or requests for further information should be directed to the Office of the Dean, New York University Post-Graduate Medical School, 477 First Avenue, New York 16, New York.

Course in Postgraduate Gastroenterology—The National Gastroenterological Association announces that its course in postgraduate gastroenterology will be given at the Hotel Statler in New York City on October 12, 13, 14, 1950. The course, which will again be under the direction of Dr. Owen H. Wangensteen, Professor of Surgery, University of Minnesota Medical School, will cover the following subjects: diseases of the mouth, diseases of the esophagus, peptic ulcer diseases of the stomach, diseases of the pancreas, cholecystic disease, psychosomatic aspects of gastrointestinal disease, diseases of the liver, diseases of the colon and rectum, and other miscellaneous subjects including pathology and physiology, radiology, gastroscopy, etc.

For further information and enrollment write to the National Gastroenterological Association, Department GSJ, 1819 Broadway, New York 23, New York.

Augustus B. Wadsworth Lecture—Dr. Warfield T. Longcope, Emeritus Professor of Medicine, Johns Hopkins University Medical School, presented the first Augustus B. Wadsworth Lecture on "Clinical Implications of Recent Advances in the Medical Sciences" in Albany on May 24.

The Lectureship has been established by the staff of the Division of Laboratories and Research of the New York State Department of Health and the Council of the New York State Association of Public Health Laboratories.

Dr. Augustus B. Wadsworth retired as Director of the Division of Laboratories and Research in 1945 after thirty-one years of continuous service. He is a graduate of the Massachusetts Institute of Technology and of the College of Physicians and Surgeons, Columbia University. With a background of clinical practice, teaching, and research, he has been a notable leader in the advancement of laboratory standards and services in relation to the practice of medicine. Under his directorship the laboratories of the New York State Department of Health achieved world-wide recognition.

Award for Outstanding Research in the Field of Infertility—The American Society for the Study of Sterility offers an annual award of $1,000, known as the Ortho Award, for an outstanding contribution to the subject of infertility and sterility. Competition is open to those in clinical practice as well as individuals whose work is restricted to research in the basic sciences. Essays submitted for the 1951 contest must be received not later than March 1, 1951. The Prize Essay will appear on the program of the 1951 meeting of the Society. For full particulars, address The American Society for the Study of Sterility, 20 Magnolia Terrace, Springfield, Massachusetts.

Cornell Alumni Award to Dr. Barr—At the annual Alumni Day exercises of the Cornell University Medical College, held March 23, 1950, the second Annual Award for distinguished service to medicine was presented to Dr. David P. Barr, M.D., F.A.C.P., Professor of Medicine at Cornell, and past president of the American College of Physicians. Dr. Barr addressed the large gathering of alumni on "The Significance of Cryoglobulinemia." Other activities of the day included the presentation of papers by prominent alumni, an exhibit of the current investigative work of the New York Hospital-Cornell Medical Center, and a scientific program presented by the Second (Cornell) Medical and Surgical Division of Bellevue Hospital.

Officers Elected—Newly elected officers of the New York Society for Clinical Ophthalmology, for 1950–1951, include: Dr. Samuel Gartner, president; Dr. Adolph Posner, vice-president; Dr. Bernard Kronenberg, recording secretary; Dr. Leon H. Ehrlich, corresponding secretary; Dr. Edward Saskin, treasurer, and Dr. Frederick Theodore, historian. Committee chairmen are: Dr. Abraham L. Kornzweig, program; Dr. Max Chamlin, instruction session; Dr. Howard Agatston, legislation; Dr. Bernard Fread, membership, and Dr. David A. Newman, industrial.

Dr. Sidney A. Fox, retiring president, was elected to the Advisory Council.

BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

BOOKS RECEIVED

Ecology of Health. The New York Academy of Medicine Institute on Public Health, 1947. Edited by E. H. L. Corwin, Ph.D. Octavo of 196 pages. New York, Commonwealth Fund, 1949. Cloth, $2.50.

The Arthropathies. A Handbook of Roentgen Diagnosis. By Alfred A. de Lorimier, M.D. Second edition. Octavo of 335 pages, illustrated. Chicago, Year Book Pub. Co., 1949. Cloth, $7.00.

Chemotherapy of Leukemia and Leukosarcoma. By William Damashek, M.D., Marvin L. Bloom, M.D., Louis Weisfuse, M.D., Milton H. Freedman, M.D., and Miguel Layrisse, M.D. Quarto of 54 pages, illustrated. New York, Grune & Stratton, 1949. Paper, $4.75. (A reprint of an exhibit presented at the American Medical Association Convention, Atlantic City, June, 1949.)

Physiology of the Nervous System. By John Farquhar Fulton, M.D. Third edition. Octavo of 667 pages, illustrated. New York, Oxford University Press, 1949. Cloth, $10.00.

The Physiology of Thought. A Functional Study of the Human Mind in Action. By Harold Bailey, M.D. Octavo of 313 pages. New York, William-Frederick Pr., 1949. Cloth, $3.75.

Microphthalmos and Anophthalmos with or without Coincident Oligophrenia. A Clinical and Genetic-statistical Study. By Torsten Sjögren, M.D., and Tage Larsson. Translated by Erica Odelberg. Octavo of 103 pages, illustrated. Copenhagen, Einar Munksgaard, 1949. Paper, 15 Swedish crowns.

Metabolic Interrelations. Transactions of the First Conference, New York City, February 7–8, 1949. Edited by Edward C. Reifenstein, Jr., M.D. Octavo of 193 pages, illustrated. New York, Josiah Macy, Jr., Foundation, n.d. Paper, $2.95. (Sponsored by Josiah Macy, Jr., Foundation.)

Biological Antioxidants. Transactions of the Third Conference, October 7–8, 1948, New York City. Edited by Cosmo G. Mackenzie. Associate Editors, Richard H. Barnes, Leslie Hellerman, and Karl E. Mason. Octavo of 146 pages, illustrated. New York, Josiah Macy, Jr., Foundation, n.d. Paper, $2.70. (Sponsored by Josiah Macy, Jr., Foundation.)

Blood Clotting and Allied Problems. Transactions of the Second Conference, January 24–25, 1949, New York City. Edited by Dr. Joseph E. Flynn. Octavo of 231 pages, illustrated. New York, Josiah Macy, Jr., Foundation, n.d. Paper, $2.25. (Sponsored by Josiah Macy, Jr., Foundation.)

Essentials of Obstetrical and Gynecological Pathology. By Robert L. Faulkner, M.D., and Marion Douglass, M.D. Second edition. Octavo of 357 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.75.

Physiology of Heat Regulation and the Science of Clothing. Prepared at the Request of the Division of Medical Sciences, National Research Council. Edited by L. H. Newburgh, M.D. Octavo of 457 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $7.50.

Diseases of Women. By Ten Teachers. Under the Direction of Clifford White, M.D. Edited by Clifford White, Frank Cook, and Sir William Gilliatt. Eighth edition. Octavo of 461 pages, illustrated. Cloth, $5.25.

A Twentieth Century Physician. Being the Reminiscences of Sir Arthur Hurst, D.M., F.R.C.P. Octavo of 200 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $3.50.

Aviation Medicine. Its Theory and Application. By Kenneth G. Bergin, M.D. Octavo of 447 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.00.

Handbook of Digestive Diseases. By John L. Kantor, M.D., and Anthony M. Kasich, M.D. Second edition. Octavo of 658 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $11.

Oxford Loose-Leaf Medicine, Supplements. 6 reprints. Octavo. New York, Oxford University Press, 1949. Available only to subscribers.

Handbook of Medical Management. By Milton Chatton, M.D., Sheldon Margen, M.D., and Henry D. Brainerd, M.D. Sextodecimo of 476 pages, illustrated. Palo Alto, California, University Medical Publishers, 1949. Paper, $3.00.

Human Growth. The Story of How Life Begins and Goes On. By Lester F. Beck, Ph.D., with the assistance of Margie Robinson, M.A. Octavo of 124 pages, illustrated. New York, Harcourt, Brace & Co., 1949. Cloth, $2.00.

Atlas of Human Sex Anatomy. By Robert Latou Dickinson, M.D. Second edition. Quarto of 145 pages text, 175 pages illustrations. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.00.

Physiology of the Eye. Vol. 1. Optics. By Arthur Linksz, M.D. Quarto of 334 pages, illustrated. New York, Grune & Stratton, 1950. Cloth, $7.50.

The Medical Clinics of North America. Chicago Number. January, 1950. Octavo. Philadelphia, W. B. Saunders Co., 1950. Published bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Green's Manual of Pathology. Revised by H. W. C. Vines, M.D. Seventeenth edition. Octavo of 1,200 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $8.00.

From the Hills. An Autobiography of a Pediatrician. By John Zahorsky, M.D. Octavo of 387 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $4.00.

The Question of Lay Analysis. An Introduction to Psychoanalysis. By Sigmund Freud. Translated by Nancy Procter-Gregg. Duodecimo of 125 pages. New York, W. W. Norton, 1950. Cloth $2.50.

Essential Urology. By Fletcher H. Colby, M.D. Octavo of 580 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $8.00.

The Physiological Basis of Medical Practice. A Text in Applied Physiology. By Charles Herbert Best, M.D., and Norman Burke Taylor, M.D. Fifth edition. Quarto of 1,330 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $11.

Angina Pectoris and Myocardial Infarction. With Special Reference to the Autonomic Nervous System. By Heymen R. Miller, M.D. Octavo of 336 pages, illustrated. New York, Grune & Stratton, 1950. Cloth, $8.75.

Principles of Human Genetics. By Curt Stern. Octavo of 617 pages, illustrated. San Francisco, W. H. Freeman & Co., 1949. Cloth, $7.50.

Principles and Practice of Plastic Surgery. By Arthur Joseph Barsky, M.D., D.D.S. Quarto of 499 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $10.00.

BOOKS REVIEWED

Streptomycin. Nature and Practical Applications. Edited by Selman A. Waksman, Ph.D. Octavo of 618 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.00.

This book is of special historic interest since it represents the first comprehensive report on the development and utilization of streptomycin, including its clinical uses, microbiologic and chemical aspects, and the antibacterial and pharmacologic properties. The editor of the volume is the discoverer of the antibiotic, and each of the contributors provides at least one chapter dealing with that phase of the general topic which, through actual experience, he is eminently prepared to present.

The thorough scope of the work can best be appreciated by referring to the chapter headings. These chapter headings indicate that every possible phase of the subject has been covered in an exhaustive manner. The compilation of data is an outstanding contribution to the field of antibiotics. Furthermore, the volume has continuity which is not always the case when so many authors are involved. It satisfies the needs of the teacher, the clinician, and the laboratory worker. Leo Loewe

The Ciba Collection of Medical Illustrations. A compilation of pathological and anatomical paintings prepared by Frank H. Netter, M.D. Folio of 222 pages, illustrated. Summit, N.J., Ciba Pharmaceutical Products, Inc., 1948. Cloth, $6.50.

This book consists of a series of anatomic and pathologic drawings of the following systems: respiratory, cardiovascular, gastrointestinal tract, and the reproductive. The largest of the sections is that of the gastrointestinal tract and is almost complete with descriptions of the most common diseases and injuries. The reviewer has seen many of these when they were first distributed a number of years ago. The present set gives more detail and is excellent for reference and review. In a book of this type there cannot be any criticism except suggestions for future editions. One such suggestion might be to have the format smaller, limiting the illustration to one page and the comments on another page. This would provide more room for the description and perhaps a larger point type for the increasing number of presbyopic readers. Morris Ant

The Origin of Medical Terms. By Henry Alan Skinner, M.B. Quarto of 379 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.00.

This volume is essentially a dictionary of medical terms and, in addition, gives not only the origin of the terms but also historical and etymologic facts pertaining to them. It differs from a dictionary in that the treatment of a term is not limited to a brief line or two, but the description is exceedingly generous.

For the medical student, general practitioner, and specialist this volume contains a wealth of information that is often difficult to obtain. It is an intriguing work and one that will give satisfaction to those who possess it. To the doctor, it is as indispensable as a dictionary is to the lay writer. S. R. Blatteis

Hindu Medicine. By Henry R. Zimmer, Ph.D. Duodecimo of 201 pages, illustrated. Baltimore, Johns Hopkins Press, 1948. Cloth, $4.00.

Zimmer, who was best fit to write a book on Hindu medicine, unfortunately died before the work was completed. Although the book is based on many years of research by the author, in its present form it contributes very little to advance our knowledge of Hindu medical practices. It must be stated in all fairness to the editor that the notes left by Zimmer were too fragmentary for a more detailed work. Lew A. Hochberg

The Epitome of Andreas Vesalius. Translated from the Latin by L. R. Lind, Ph.D. With Anatomic Notes by C. W. Asling, M.D. Quarto of 103 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $7.50.

This is the first complete English translation from the Latin of the *Epitome* of Andreas Vesalius since its publication in June, 1543. The *Epitome* is both a descriptive anatomy and an anatomic atlas. Unlike the *Fabrica*, which appeared in the same year and is, at least by title, known to many more people, the *Epitome* is a triumph of condensation. It was intended to be an introductory book for students, and its success in achieving this aim is evidenced by the fact that only some 20 copies are now known.

Dr. Lind has performed a great service by making available an introduction to the achievement of a founder of modern medicine, Andreas Vesalius. The translation is good, and anatomic notes by C. W. Asling make the entire work more valuable for the modern reader. The present translation should appeal to all physicians and, in particular, to teachers of anatomy and medicine. As an example of bookmaking this volume is well produced and a pleasure to handle. George Rosen

The Physician's Business. Practical and Economic Aspects of Medicine. By George D. Wolf, M.D. Third edition. Octavo of 563 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1949. Cloth, $10.

The modern physician is confronted more and more with economic and social forces that demand an acute awareness of practical aspects of professional life unknown to his colleagues of days gone by. In those dear, departed days doctors were expected to live in an ivory tower far above the "plebian" level of business men whose concept of life's goal was the amassing of a fortune in contrast with the Hippocratic ideal to which medical neophytes swore allegiance as they dedicated themselves to a life of "service to suffering humanity." In such idealistic soil were imbedded the roots of that now familiar bromide, "doctors are *such* poor business men."

Even today, but scant attention is given in the jampacked scientific curriculum of our medical colleges to the preparation of the expectant graduate for such important medicoeconomic problems as picking a proper internship or residency, selecting the location of and equipping an office, professional and nonprofessional society memberships, investments, retirement plans, what fees to charge in order to meet the rent or be able to buy a dozen eggs and yet be considered "reasonable" by his patients after the "oh, doctor, we'll pay anything" period has passed.

True enough, magazines like *Medical Economics* bring to America's doctors a monthly running commentary on the "business of medicine." Yet, to the young graduate and even to most practicing physicians a book such as that written by Dr. Wolf (now in its third printing) is a veritable *vade mecum*, a text and a reference, serving as a useful guide through the maze of medicoeconomic problems that beset us in these days of ever-widening dependency for "security" upon a paternalistically minded Federal government.

To build and maintain a virile private practice becomes ever more difficult in the face of such competition as comes from the practice of medicine by hospitals and medical schools, well-advertised stupendous medical centers, and per capita group practice such as HIP, an "experiment" doing business in and about New York City but seeking to spread its influence throughout all of New York State, and even into every nook and corner of our country.

Practical discussions of such perplexing problems plus epitomized diagnostic and therapeutic procedures are what make Dr. Wolf's splendid book a must for every expectant graduate and a worthwhile addition to every doctor's library.

MORRIS WEINTROB

The Management of Binocular Imbalance. By Emanuel Krimsky, M.D. Quarto of 464 pages, illustrated. Philadelphia, Lea & Febiger, 1948. Cloth, $12.50.

In this book the author has expanded the various papers he has published on the subject of the ocular muscles.

His main thesis is the use of what he terms the fixational corneal light reflex and prism reflex tests for muscle imbalances, both phorias and tropias. During the description of every type of muscle defect, this method, along with various instruments he has devised, is used in diagnosis. Treatment with prisms and stereoscope is considered with a final chapter on surgery.

It is an interesting book, a bit difficult to read at times, but worth the effort. E. CLIFFORD PLACE

A Synopsis of Medicine. By Sir Henry Letheby Tidy, M.D. Ninth edition. Duodecimo of 1,243 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.50.

The ninth edition of Tidy's well-known synopsis has been thoroughly revised. It continues to be an excellent synopsis and will doubtless be of great value to those who need such a handbook.

MILTON PLOTZ

Atlas of Obstetric Technic. By Paul Titus, M.D. Illustrations by E. M. Shackelford. Second edition. Quarto of 197 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $7.50.

Residents will find the second edition of this atlas as valuable as heretofore. Text is minimal but sufficient, and the illustrations are good. The diagram of the technic of forceps application at the midpelvic station is particularly useful. As a desk reference this book is excellent. CHARLES A. GORDON

German-English Medical Dictionary. Compiled by F. S. Schoenewald, M.D. Octavo of 241 pages. Philadelphia, Blakiston Co., 1949. Cloth, $8.50.

Although the author did not live to see the day of publication, his idea to compile a dictionary for English-speaking people who wish to read German medical literature and vice versa resulted in a perfect success. It illustrates the varying shades of meaning of a word or expression by giving suitable examples of it. So far, the German-Anglo-American division is available. It certainly is the best dictionary of medical terms in both languages and will be of value to anyone studying articles or books in these languages. MAX G. BERLINER

Blood and Plasma Transfusions. By Max M. Strumia, M.D., and John J. McGraw, Jr., M.D. Octavo of 497 pages, illustrated. Philadelphia, F. A. Davis Co., 1949. Cloth, $7.50.

The fields of blood grouping and blood transfusion have expanded very rapidly during the past decade, in part due to the discovery of the Rh-Hr blood factors, in part to the widespread adoption of blood banks in hospitals, and in part due to the exigencies of World War II. Therefore, the publication of this book is timely, and, in fact, it is one of three such books which have appeared during the present year. The authors were particularly qualified for their task by their extensive experiences in the Bryn Mawr Hospital Blood Bank and their experiments on the preservation of plasma during the war. Accordingly, in this book the reader has a well-balanced, clear, and authentic presentation of the subject. The book can, therefore, be recommended without any reservations. A. S. WIENER

The March of Medicine. The New York Academy of Medicine Lectures to the Laity, 1948. Octavo of 163 pages. New York, Columbia University Press, 1949. Cloth, $2.50.

This little book of 163 pages contains six lectures to the laity on the frontiers of medical research.

"The Atom in Civil Life," by Lewis L. Strauss, lists in an interesting manner some of the possibilities of the use of atomic power. A brief discussion of the isotopes and their use in medicine is included.

"Food and Civilization," by Sir Raphael Cilento, is an argument with historical background for the importance of food production in the prosperity and ultimate survival of nations.

"On Being Old Too Young," by Edward J. Stieglitz, considers the import of the rapidly increasing number of older individuals on our civilization. Space is also given to the biology and diseases of senescence.

"Perspectives in Cancer Research," by Cornelius P. Rhoads, indicates the various types of research that are required and are in progress.

[Continued on page 1416]

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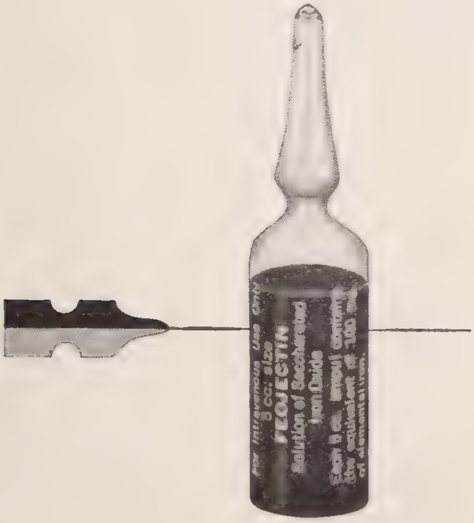
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[Continued from page 1414]

"Psychiatry for Everyday Needs," by William C. Menninger, is a brief outline of some of the potential contributions of psychiatry toward the understanding and management of personal and social problems.

"The Inter-Relation of Pure and Applied Science in the Field of Medicine," by James B. Conant, is an interesting briefing on the importance of scientific investigation in medicine.

A. Sidney Barritt, Jr.

Diabetic Manual for the Doctor and Patient. By Elliott P. Joslin, M.D. Eighth edition. Duodecimo of 260 pages, illustrated. Philadelphia, Lea & Febiger, 1948. Cloth, $2.50.

This latest edition of the Joslin *Manual* for the lay diabetic is brought up to date and even ahead of date, especially as it relates to newly developed insulin mixtures that may become commercially available. It is three years now that advance copy for this anticipated insulin has been released to the laity. All these premature announcements simply cause more disappointment to the diabetic and are a headache to the physician because the reader is always asking the doctor for these new drugs and the doctor cannot supply them. It is poor policy for authorities to make reports to the lay people before they reach the medical literature. However, the author accomplishes the maintenance of hope and faith of the future diabetic in a much better way, that is, by citing all the accomplished advances made to date, such as increased longevity, decreased morbidity, rate reduction of coma to a minimum, the increased number of living and well diabetic youngsters, and the increase in safety in childbearing. The evidence of increased participation in remunerative fields such as education, the professions, business, and even sports, are valuable in the psychosomatic management of the diabetic and are highly commendable.

The reviewer recommends this manual.

Morris Ant

Industrial Toxicology. By Lawrence T. Fairhall, Ph.D. Octavo of 483 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.00.

This new book on toxicology is very useful. It groups all the usual toxic agents into inorganic substances and carbon compounds. Each compound is discussed concisely but adequately under the general format of characteristics (both chemical and physical in nature), industrial uses, toxicity, and methods of analysis. At the end of each discussion is listed a group of pertinent references to the literature.

The text should prove useful to all physicians and others interested in industrial medicine and toxicology.

Nathan Millman

Biomicroscopy of the Eye. Slit Lamp Microscopy of the Living Eye. By M. L. Berliner, M.D. Volume II. Quarto of 1,512 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $50 set; $35 Volume II alone.

This fine work complements the first volume which Berliner previously published. It makes available not only the recent advances in our knowledge of the slit lamp but also makes available in English the foreign studies which have contributed to our knowledge in this field. The illustrations and the text are all that can be desired, and this second volume, although expensive, is not only a must but is also very much worthwhile as part of the equipment of every ophthalmologist. An adequate review would require more space than is permitted.

John N. Evans

Migraine Cervicale (Das Encephale Syndrom nach Halswirbeltrauma). By Dr. Werner Bärtschi-Rochaix. Octavo of 188 pages, illustrated. Bern, Switzerland, Medizinischer Verlag Hans Huber, 1949. Cloth, 21.80 Sw.fr.

This is a very elaborate monograph based on Barré's studies on "syndrome sympathique cervical postérieur." The author compiles his studies on 33 post-traumatic cases, in which the syndrome of migraine cervicale appeared or increased at a time after the accidents, within which time the manifestations of the traumatic concussion had already or should have disappeared. This syndrome could be traced by x-ray studies as the result of lesions of the "uncovertebralen junctions" of the cervical vertebrae three to seven which are described as uncovertebral deformities. These findings are corroborated by very minute anatomic studies and physiopathologic experiments. The book represents a valuable source of considerations to be used by the various specialists in charge of such head and neck accidents with pertinent complaints and manifestations.

Max G. Berliner

Manual of Urology. By R. M. LeComte, M.D. Fourth edition. Octavo of 311 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $4.00.

This volume is a decidedly valuable contribution to the urologic literature. Its scope is comprehensive without confusing or controversial detail; the material is up-to-date and, as a whole, logically presented. It gives the student a bird's eye view of the subject of urology by drawing his attention to pertinent basic science data and acquainting him with the diagnostic and therapeutic armamentarium, together with valuable suggestions as to clinical application. In other words, the author apparently succeeded in accomplishing what he set out to do.

It is the reviewer's opinion that this manual will enable the student to secure a sure footing in urology and, therefore, should become a *vade mecum* of every urologist-in-training.

Mark Fishberg

The Medical Clinics of North America. May Clinic Number. July, 1949. Octavo. Philadelphia, W. B. Saunders Co., 1949. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Most readers look forward to the Mayo Clinic Number of the *Medical Clinics* for it generally has at least several good reviews of interest to the practitioner. This volume will not disappoint anyone. There are fine résumés of headache, renal failure, urinary infections, pancreatitis, and congenital heart diseases.

Andrew Babey

Pavlov. A Biography. By B. P. Babkin, M.D. Octavo of 365 pages, illustrated. Chicago, University of Chicago Pr., 1949. Cloth, $6.00.

Written by a distinguished pupil of Pavlov, the book is intensely interesting, and affords an intimate insight into Pavlov, the man, as well as the scientist. The first part of the book deals with the background which gave impetus and direction to his scientific leanings. The author has not spared us the shortcomings of Pavlov, but he has brushed them aside in his admiration of the greatness of the man

[Continued on page 1418]

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[Continued from page 1416]

himself. We are made aware of the passion with which Pavlov pursued his work, to the exclusion of everything, even to the day of his death in 1936, at the age of eighty-five.

The remainder of the book deals with Pavlov's scientific achievements in the physiology of the gastrointestinal tract, the cardiovascular system, and conditioned reflexes. The evolution of Pavlov's thinking, the trials and mistakes and ultimate success are traced for us in an absorbing fashion. It will repay anyone to read it as a biography, but it will appeal especially to physiologists, gastroenterologists, and research workers in general. It can grace the shelf of any scientist.

Joseph L. Abramson

Roentgen Diagnosis of Diseases of the Skull. By Max Ritvo, M.D. Volume 19 of the "Annals of Roentgenology." Quarto of 409 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $16.

The nineteenth edition of the *Annals of Roentgenology* is devoted to congenital anomalies and diseases of the skull. As has been the history of all previous editions, the form, excellence of presentation, abundance of illustrations, and, on the whole, the clarity readily establish the volume with its gifted predecessors.

It should prove valuable to all radiologists, neurosurgeons, and neurologists. In addition to brief sketches of the various pathologic states, it provides excellent radiographic examples and a satisfactory bibliography.

One cannot but be impressed in these days of advanced intracerebral investigations (pneumoencephalogram, ventriculogram, and cerebral angiography) with the vast information that the competent radiologist can obtain from plain x-ray studies of the skull, especially when complete from all angles. This 409-page book will be found extremely useful for reference purposes and is to be so recommended.

Milton G. Wasch

A Short Practice of Surgery. By Hamilton Bailey, F.R.C.S., and R. J. McNeill Love, M.S.(Lond.). With Pathological Illustrations by L. C. D. Hermitte, Ch.B.(Edin.). Eighth edition. Octavo of 1,050 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

This is the eighth edition of a work which first appeared in 1932. It is well organized and profusely illustrated and is literally a mine of information. The short biographical notations at the bottom of each page where the name of a person appears are interesting. The treatment of each subject is, of necessity, brief in a one-volume work. In general, it is up-to-date, although retaining something of an old-fashioned air. Occasionally, ideas are expressed that are not in accord with present-day American surgical thought. The book is a useful one for students and for brief review.

John H. Bogle

Operative Technic in Specialty Surgery. Edited by Warren H. Cole, M.D. Octavo of 725 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $14.

The frontier between general and specialty surgery is often vague. Dr. Cole has edited his collection of monographs by leaders in the fields of orthopedic, neurologic, plastic, urologic, thoracic, and gynecologic surgery, excluding eye, ear, nose, and throat. Each author presents only what he considers best in his sphere. The general surgeon whose problems extend into special areas should find it valuable. Some chapters, for example those on brain tumors and mediastinal anastomoses, although interesting, seem beyond the outposts of general surgery.

William H. Field

Diseases of the Aorta. Diagnosis and Treatment. By Nathaniel E. Reich, M.D. Octavo of 288 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $7.50.

As Dr. Dock states in his foreword, this is a "labor of love," and since it deals with an important structure and covers the subject thoroughly with numerous helpful illustrations and diagrams, it should interest all internists.

Andrew Babey

Child of Destiny. The Life Story of the First Woman Doctor. By Ishbel Ross. Octavo of 309 pages, illustrated. New York, Harper & Bros., 1949. Cloth, $3.50.

This is the life story of a most remarkable woman, Elizabeth Blackwell, the first woman to receive the degree of Doctor of Medicine. And what a struggle it was! Repeatedly rejected, discouraged, ridiculed, she finally gained admission to Geneva College, later part of Syracuse University. Her admission in 1847 depended on the unanimous consent of the student body.

Thus, from the date of graduation in 1849 began a career that for courage, determination, and an unswerving adherence to the highest ideals is unique in medical history. Her assocation with Florence Nightingale was of mutual benefit. In 1857, the New York Infirmary for Women and Children was officially opened, and in 1868 the College for Women became a reality.

These were some of the many activities she initiated; they were milestones along the path for women determined to study medicine. It is regrettable to record that her medical career was marred by her advocacy of antivivisection. She was a frequent visitor and highly regarded by the profession in London and Paris. She died in 1910 at the age of eighty-nine, after sixty years of unselfish devotion to the highest ideals in Medicine.

S. R. Blatteis

Acute Appendicitis and Its Complications. By Frederick Fitzherbert Boyce, M.D. Octavo of 487 pages, illustrated. New York, Oxford University Pr., 1949. Cloth, $8.75.

One might at first glance question the need for a book of 487 pages on a subject about which so much has already been written. Accordingly, the author has prefaced his extensive monograph with a discussion of the urgency of appendicitis and certain points of evidence to indicate that the lethal character of this common surgical disease is not universally appreciated. He has obtained his statistics from a series of 6,441 cases treated at the Charity Hospital of Louisiana at New Orleans.

The book is written in a clear and flowing style which makes for very easy reading, even though it is complete and detailed enough to serve as a reference text. The chapters on the history and pathology of the disease are especially worthy of note. Subjects are well illustrated with numerous case reports. Technical details are clearly presented, and photographs and drawings are ample. The final pages are devoted to an extensive bibliography and subject index.

George Strenger

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[1] Gould, William L., New York State Journal of Medicine, 981-983, May 1, 1947, also in Modern Medicine, No. Carolina State Medical Jour. Lippincott's Digest of Treatment.

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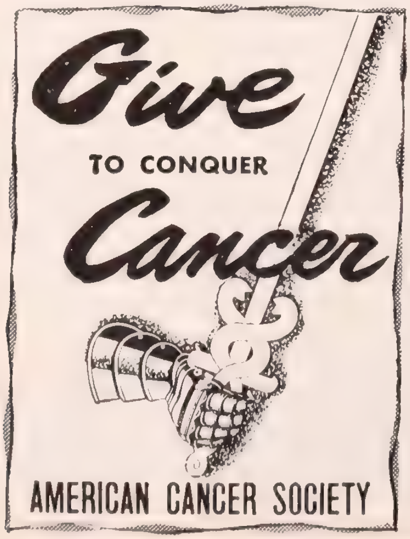

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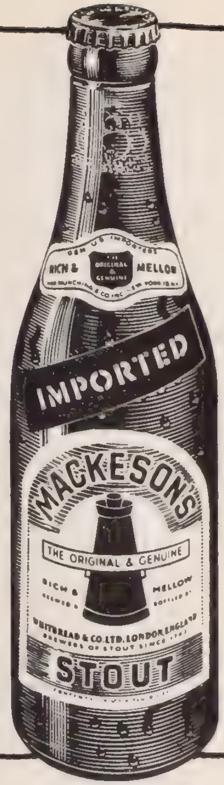

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As printed in American Heart Journal, Vol. 29, No. 1, Pages 44-61, January, 1945.

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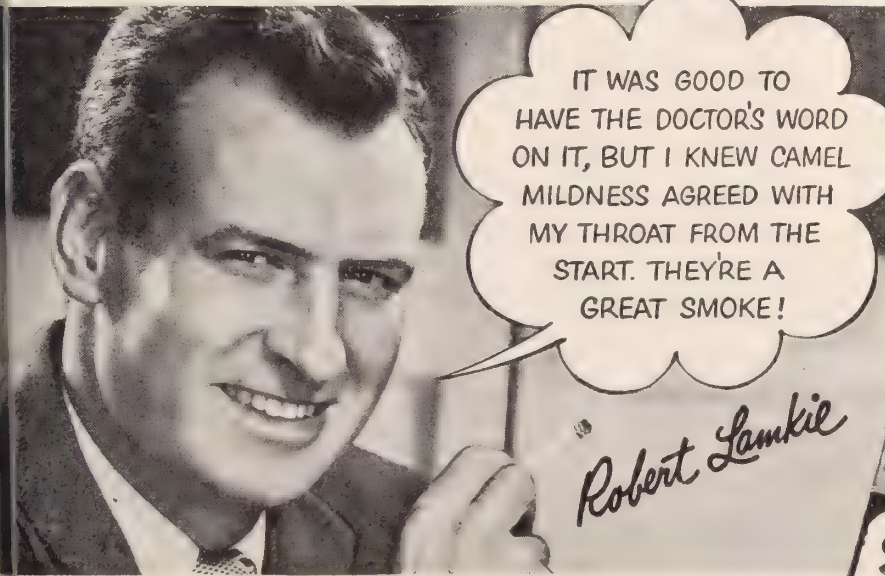
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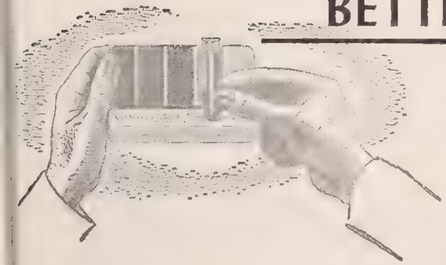

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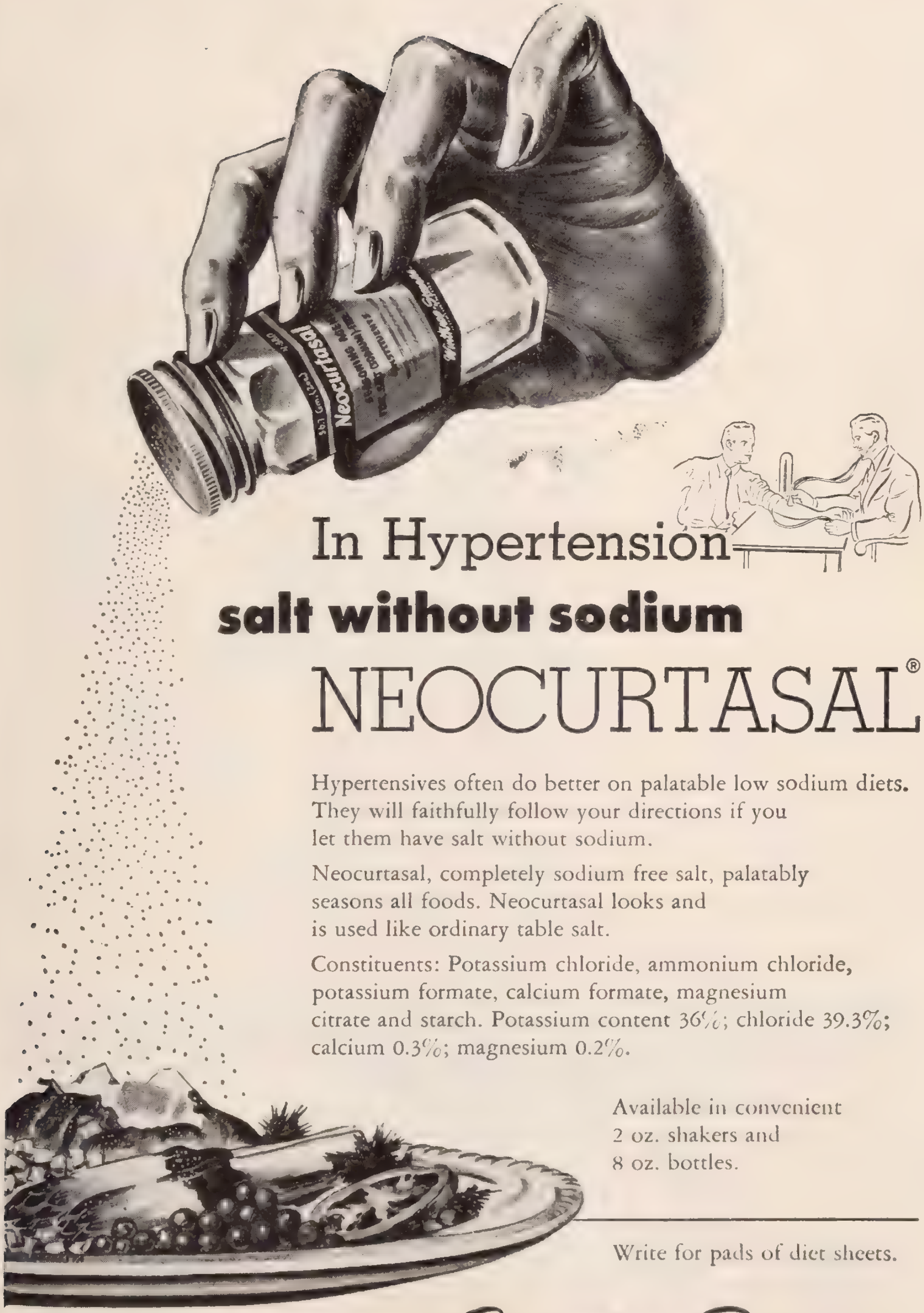

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REFERENCES

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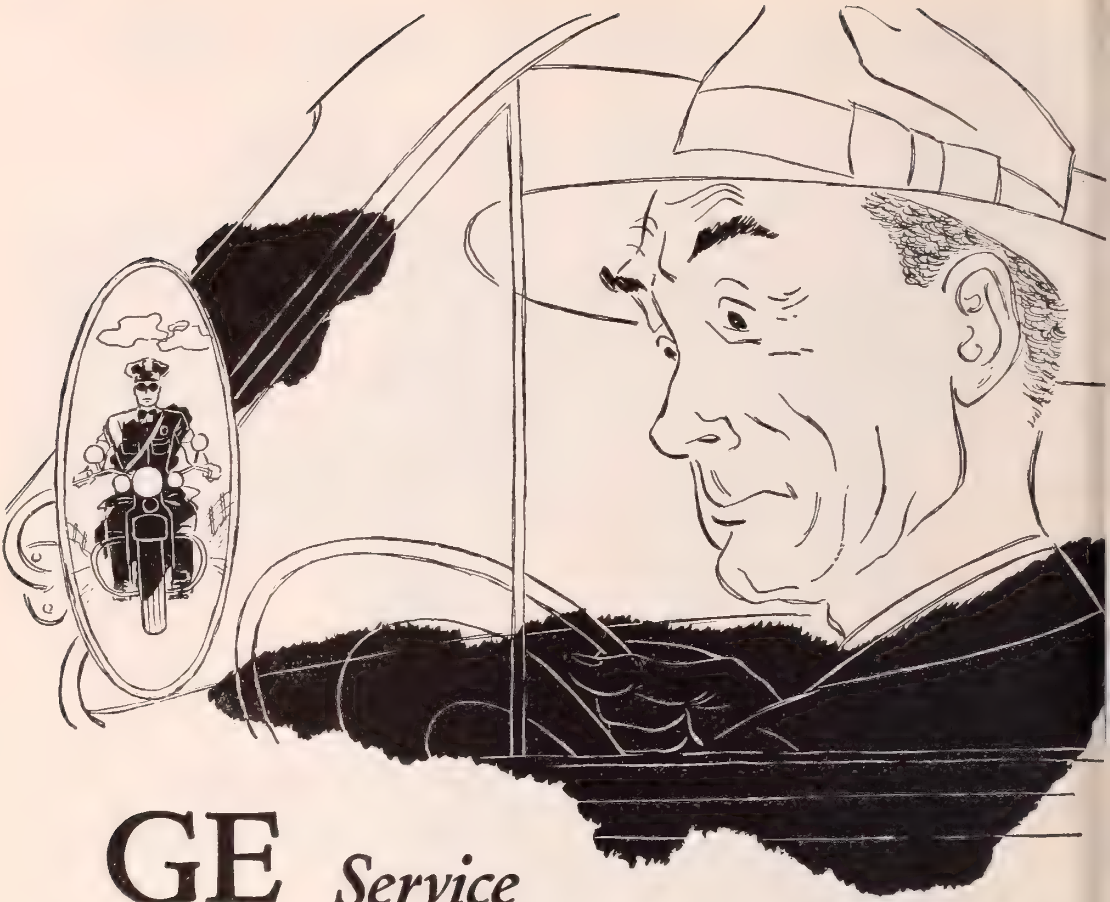

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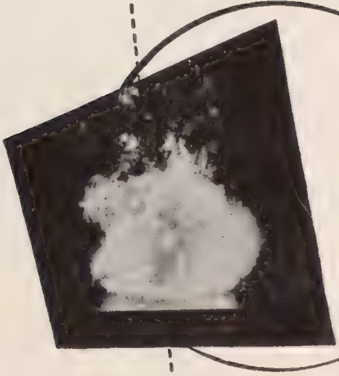

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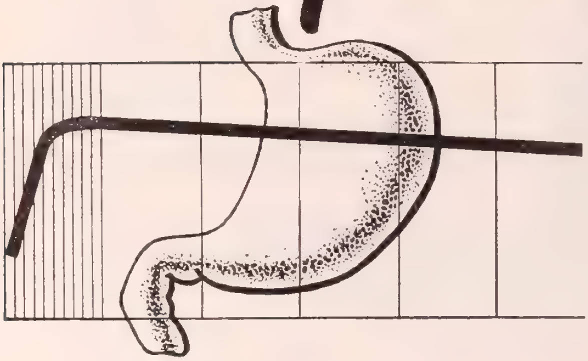

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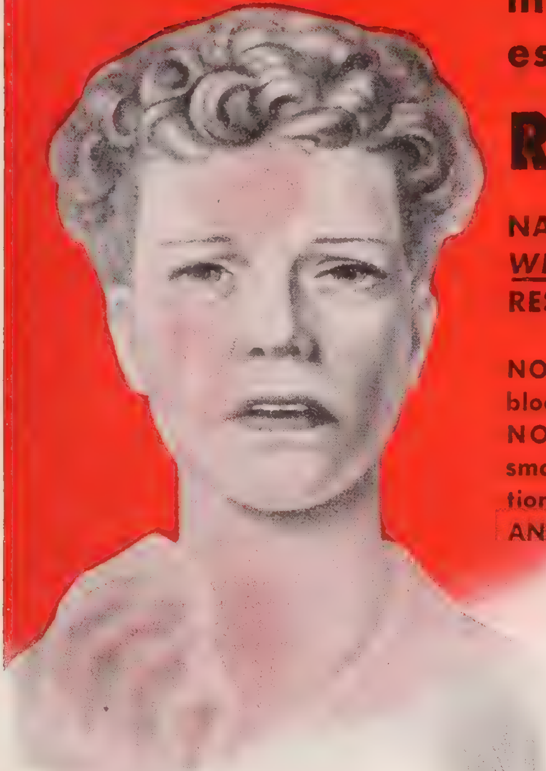

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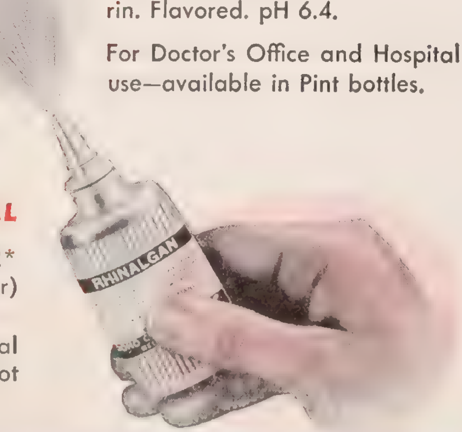

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Supplied in bottles of 100, 250, 500 and 1000 capsules, and 16 oz. and one gallon syrup.

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for specific therapy in reparable liver damage . . . cirrhosis,
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Sodium Gentisate: A New Approach to the Treatment of Arthritis

It has been estimated[1] that nearly 7,000,000 people (at least one in every 20 persons) in the United States have some form of "rheumatic" disease. Rheumatism (with arthritis the most important single cause) ranks first in prevalence among diseases, and second in the production of disability and invalidism. It is more common than the total number of cases of tuberculosis, diabetes, cancer and heart disease combined.

The most common of the severe forms of the arthritides is rheumatoid arthritis. Although its etiology still remains uncertain, there are factors upon which there is general agreement.[2] (1) Rheumatoid arthritis has a definite tendency to be familial. (2) Eighty per cent of the cases occur between the ages of twenty and fifty with the peak at thirty-five to forty. (3) Females are more commonly affected than males in a ratio of 3:1. (4) Investigation shows that in the period preceding the onset of symptoms, emotional shocks are very common and this is frequently manifested by a severe depression.[3] (5) Pregnancy causes an amelioration of symptoms in a significantly high proportion.[4] (6) Involvement of the liver, as in infectious hepatitis, causes a definite remission in a significant number of patients.[5]

Since Klinge's[6] original work in 1929, evidence has been accumulating that both rheumatic fever and rheumatoid arthritis are diseases of the interfibrillar substance of the connective tissue.[7] The nature of this material is not well understood, although it is presumably a mucopolysaccharide in combination with a protein. This theory holds that changes in the cellular components are secondary to changes in the interfibrillar material. The composition of two of the mucopolysaccharides found in interfibrillar material is known: (a) chondroitin sulfuric acid, and (b) hyaluronic acid.[8] Changes in chondroitin sulfuric acid have been studied in hyaline cartilage which is affected to a considerable degree in rheumatoid arthritis.[9]

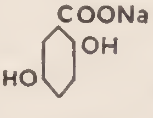
These changes have been on a purely morphological basis[9] and consist chiefly of destruction of hyaline cartilage, presumably due to interference with its blood supply by the overgrowth of pannus and granulation tissue, both beneath the subchondral plate and on the surface of the joint.

On the other hand, changes in the hyaluronic acid of the joint fluid have been shown to be present in active rheumatoid arthritis.[10, 11] These changes in active disease consist of depolymerization of the hyaluronic acid and an increase in the total amount of hyaluronic acid present. The excessive presence of hyaluronidase, moreover, has been acknowledged to produce a denaturization of mucin in the synovial fluid, the varying degrees of which are valuable for their diagnostic as well as prognostic indications.[12] Clinicians[13] have concluded that the increase of hyaluronidase activity may be responsible for the breakdown of interfibrillar cement.

A rational approach to the problem, therefore, demands a therapeutic agent that will act to inhibit the spreading effect of hyaluronidase.

Meyer and Ragan[14] treated patients having rheumatoid arthritis and acute rheumatic fever with sodium gentisate, a hyaluronidase inhibitor. Their results were uniform and notably favorable. Within a few days there followed a disappearance of pain, swelling and joint inflammation.

The increase in urinary glucuronic acid observed with salicylates does not occur with gentisates. This phenomenon has been assigned to the rapid oxidation of the gentisates.[15] It is indeed likely, as shown by examination of the structural formulas of these two compounds, that the antirheumatic action of the salicylate in forestalling the spread of hyaluronidase[16] is attributed to its partial oxidation in the body to a gentisate.



SODIUM GENTISATE

The corrective action of sodium gentisate is generally not an immediate one; therefore, as an added therapeutic measure, a salicylate, which provides prompt relief from pain, should be included in the formula.

The product of choice, therefore, should be GENTARTH Tablets, prepared by the Raymer Pharmacal Company of Philadelphia.

Each salol-coated GENTARTH Tablet contains:

Sodium Gentisate	100 mg.
Raysal-Succinate	325 mg.
(representing 43% Salicylic Acid and 3% Iodine in a Calcium-Sodium Phosphate Buffer Salt Combination)	
Succinic Acid	130 mg.

The recommended dosage is two or more tablets three or four times daily (after meals and before bedtime).

GENTARTH Tablets are supplied in bottles of 100, 500 and 1,000 and are available at all pharmacies on prescription.

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Literature on request.

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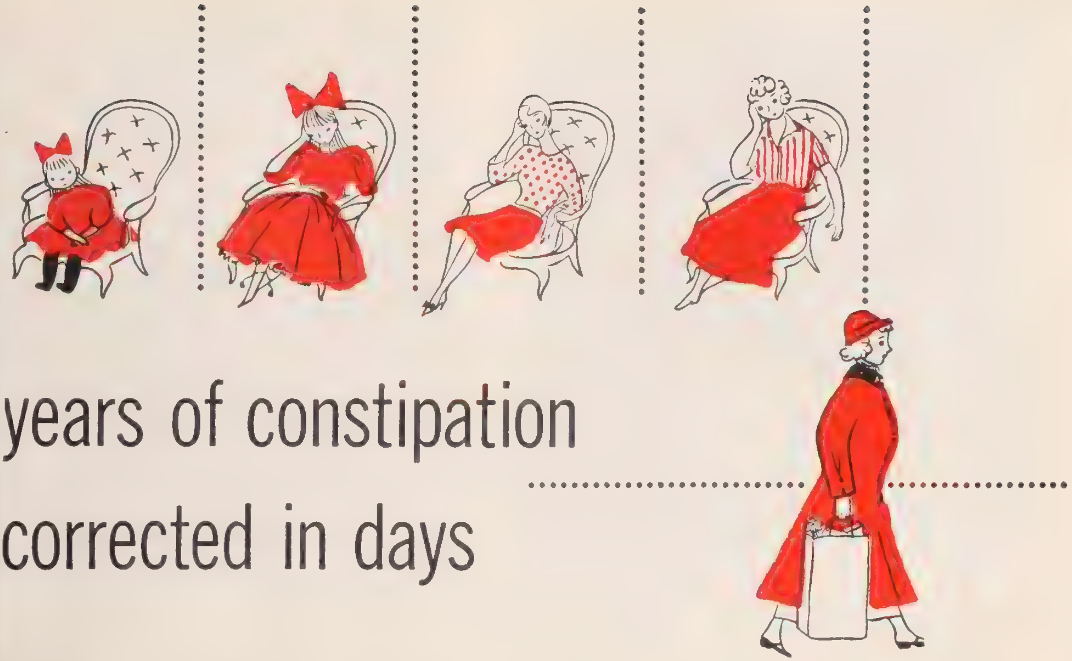

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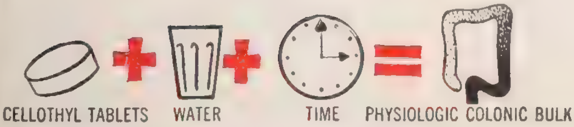
[1] "A Method of Improving Function of the Bowel": J. Arnold Bargen, M.D., Division of Medicine, Mayo Clinic, Rochester, Minnesota, in Gastroenterology, 13:275 (Oct.) 1949.



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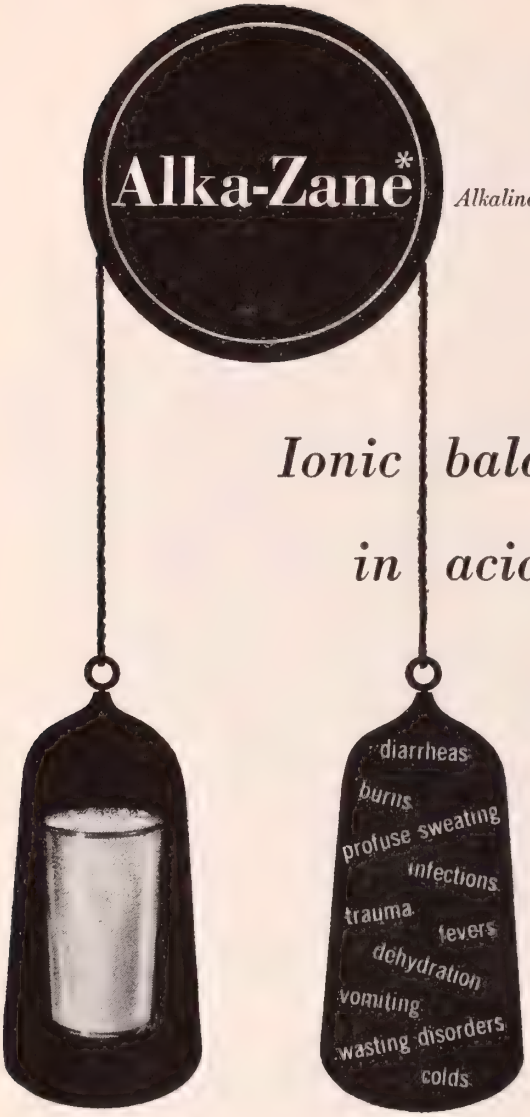

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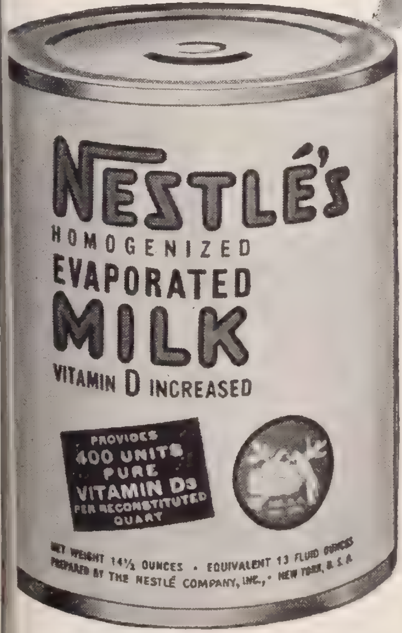
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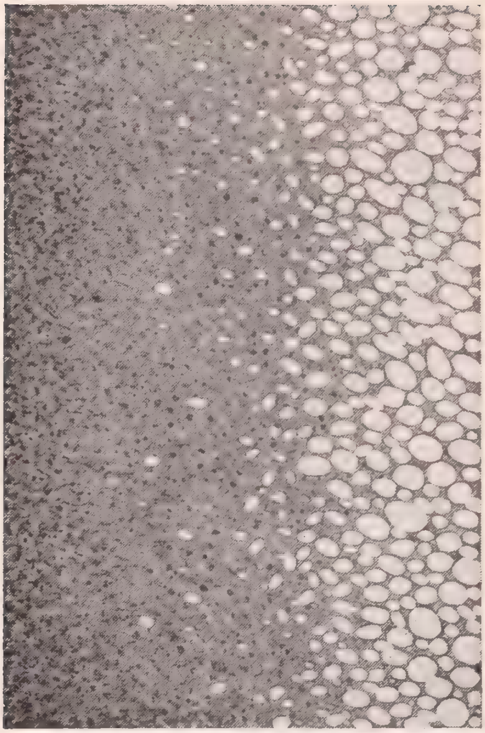

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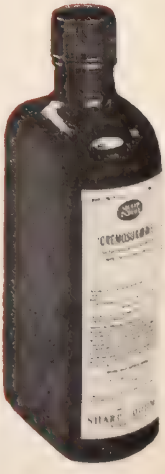
*Gray, A. L.: Southern Med. J., 43:320, April, 1950.



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Editorials

The Art of Medicine

Addressing the members of the Medical Society of the State of New York at the banquet of the 144th Annual Meeting, Dr. John Rankin MacElroy, of Jonesville, chosen New York State's outstanding general practitioner for the year 1949, said, in part:

"I am concerned about several things:

"What type of medical service will be vailable to my friends and patients when I an no longer serve them?

"I am concerned over the reluctance and ftentimes the refusal of recent graduates vith ample intern and residency training to ndertake practice in small or rural comnunities.

"I am concerned at the results of the later-day methods of determining fitness for ntrance to medical schools, methods that eem to overlook entirely the fact that, as ong as medicine, agriculture, and industry hall endure, there must be laborers in the eld to carry out the findings of scientific research, or that the rough plank in the stable oor often serves a more useful purpose than hen polished and laid in a ballroom.

"Let them forget the A's and B's in the remedical courses and inquire more deeply into the character, the courage, the resourcefulness, the aspirations and aims of the candidate. Then get him out in practice before years of internship and residency have placed him in the same category as the overtrained bird dog who blinks his birds.

"In spite of the many changes in the world, in living conditions, economic improvement, the people haven't changed much through the three generations with which I have been privileged to practice, as far as their reaction to illness is concerned. John Jones III and Mary Brown III present about the same list of complaints that their grandfathers and grandmothers did; they are equally anxious to get relief and are much less concerned with the diagnosis than with prompt treatment that promises comfort and cure. While John the third and Mary the third will accept hospital care, surgery, and the like with less reluctance than their forebears, they still would much prefer to be a private room patient in their own home, with all the little sympathetic attentions there available, and under the frequent attention of the physician of their choice who brings to the sick room an atmosphere of confidence and cheer, than to spend long, weary, lonesome hours in a hospital bed."

Since 1894, Dr. MacElroy has been accumulating the experience from which he now speaks incisively, authoritatively of many aspects of modern medical practice. What Dr. MacElroy says, it appears to us, is worth many times the theoreticians' vain promises of something for nothing.

"I am concerned, even as you are, over the threat of a nation-wide infection that strikes at the roots, not only of medicine, but of agriculture and industry and everything that is 'America the Free.' An infection that to my mind is parasitic in origin, arising in the jungles of the sob sisters, the parlor pinks, and the do-gooders, activated by the gas bacillus of power-seeking politicians. An infection that I feel cannot be treated successfully by the barbiturates of prepaid hospital and medical insurance and the psychosomatic therapy of argument and persuasion, an infection that needs the intensive, deep therapy of better distribution of qualified physicians throughout all communities, men or women of determination who are ready, willing, and able to make themselves an integral part of the economic, social, and fraternal life of the community, with courage and self-confidence, the ability to meet emergencies with calmness, and that indescribable something that inspires confidence; who realize that neither illness nor accident recognizes Thursday and Sunday off; who are willing to drive a Ford instead of a Cadillac for a few years. Men and women who will again bring to the front that relic of bygone days, 'The Art of Medicine,' and use it in their application of the scientific advances of recent years. Then the physician will recover his rightful place in the sun of public opinion, unobscured by the mirage of his workshop."

Changing Channels of Education

In the current annual report of the president, Dr. James B. Conant of Harvard emphasized the fact that the channels of education are perpetually changing with the changing needs of the times and the increasing volume of knowledge that must flow through them. Reform must be a constant factor, if education is not to become static. President Conant's remarks receive lengthy editorial notice in the *New England Journal of Medicine* for March 16, 1950, as follows, in part:

> The system of concentration and distribution has also been subjected to constant scrutiny and finally an official review by a committee on general education. The college, as a result, has committed itself to a new program that recognizes the dangers of specialization by requiring each undergraduate to include in his program three courses in general education. These are to include the humanities, the social services, and the natural sciences.

It is encouraging to observe that emphasis is once more being directed to the dangers of overspecialization, perils which have beset medicine among the other professions in recent times. A return to the humanities, the social services, and the natural sciences by our undergraduates constitutes therefore a welcome trend.

Each student, prior to graduation and preferably in the early years of his training, must thus have exposed himself to the influence of academic culture in its broadest sense; he must have taken at least three prolonged flights that will reveal the topography of the terrain in which the accumulated knowledge of the world resides.

Exceptions are to be made in the case of those who plan to study medicine; whether these exceptions represent rewards or penalties is yet to be determined, for no one more than the physician requires breadth in his education if medicine is to survive as a learned profession. Moreover, as was brought out in the meeting of the academic deans earlier in the year, the intention of an undergraduate to study medicine may have little bearing on his fitness or his chances for acceptance for that arduous course of study, to which so many believe themselves called and for which so few are actually chosen.

It is to be hoped that the exceptions to be considered in the case of those who plan to study medicine will not be made if it is possible to avoid them. It is realized that the cost of modern education to the universities and to the student in time and money is high . . . . This high cost applies most particularly to the study of medicine and the allied sciences, and, in the medical area, teaching and research in public health are suffering most severely. That this need must be met is obvious, because of the fact that public health and preventive medicine represent the currents in which the medical practice of the future will flow.

The relations of a medical school to its affiliated teaching hospitals, themselves in straitened circumstances, need constant attention; these are among the problems raised in part by the prodigious strides that have been taken in the medical sciences.

The cost of the benefactions that science has brought to mankind must not be allowed to become prohibitive, nor must medical education become a captive branch of learning through the unguarded acceptance of those doles that eventually lead the way to universal "welfare."

Be Just Before You Are Generous

The various communities of the State, ranging from hamlets to large cities, face a serious problem of financial drainage. It is a matter of great pride to self-respecting citizens to be able to assist in the maintenance and betterment of local charitable enterprises and institutions such as district nursing associations, the local hospitals, day nurseries or child care centers, for example, as well as various local religious institutions. Latterly, it seems to be more and more difficult to raise sufficient money to keep them going, even on a restricted basis, in spite of unremitting labor by interested citizens. What are the reasons for this difficulty?

High taxes for one thing, increased cost of living for another. Yet another is the multiplicity of organizations other than local whose appeals for aid siphon away small community resources. This is to state a fact and in no way to impugn the worthiness of these larger groups. Physicians will be interested both as citizens and doctors to know why financial support is increasingly hard to obtain for local hospitals, district nursing associations, and other aids to medical practice as well as community assets.

> A check by the National Information Bureau on national nonprofit organizations, nearly all of which solicit public aid, shows an astounding number in existence.
>
> There are, for example, no less than 75 national associations dealing with public health, ranging alphabetically from those concerned with Alcoholism through Hay Fever, Parenthood, Social Diseases, and Veterans.
>
> There are 24 national organizations dealing with the problems of Youth.
>
> There are 31 which are solicitous for continuance of "Free Enterprise" and the "American Way of Life" and the like.
>
> There are five which are anxious about the American Indian Welfare, 10 concerned with Conservation, 19 aroused over Civic Affairs, 29 which deal with International Relations, 23 interested in General Welfare, and no less than 72 seeking to help on matters connected with Foreign Relief Aid and Rehabilitation, with practically every other nation in the world on the receiving end of American charity.
>
> These are not fly-by-night organizations, mind you. Every one of the more than 400 organizations listed by the bureau is either national or international in scope.
>
> They say that every dog has his day, but we doubt it for the same reason that every organization can't have its own week—there just aren't enough days and enough weeks.
>
> As it is, we defy any reader to name a week when there isn't some campaign or drive. And, from a professional viewpoint, we know there is never a day when a newspaper isn't asked to give ample space for some deserving cause.[1]

It has come to a point where drives for this and that have begun to overlap each other. It is a rare morning when the mail does not contain at least one and often two or three appeals from various sources. To the more than 400 organizations of national or international scope must be added those of less than national but not purely local character. There is, apparently, no limit.

In an expanding economy it is quite possible that all of these appeals can somehow be met, but it is to be kept in mind that the financial assistance asked is *in addition* to the steady, enormous drain through taxes to provide governmental subsidies to specially favored groups, either domestic or foreign. Matters would be much worse if any serious effort were to be made by government to reduce the national debt of some $1,700 for every man, woman, and child in the nation. It will have to be done sometime, somehow.

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[1] Ossining Citizen Register, April 20, 1950.

Meanwhile we hope that some thought will be given to a return to the time-proved maxim, "Be just before you're generous." Be sure your purely local institutions do not lack the financial assistance they merit.

Current Editorial Comment

Are Federal Income Tax Laws Unfair to the Professions? Present Federal income tax laws discriminate against physicians and other professional men and women, Frank G. Dickinson, Ph.D., Chicago, Illinois, economist and statistician of the American Medical Association, points out.

Because a considerable portion of physicians' lifetime earnings are "bunched" into a relatively few peak earning years, they pay more income taxes than other persons who receive the same lifetime incomes spread more evenly over a greater number of years, Dr. Dickinson says in an article in the April 29 issue of the *Journal of the A.M.A.* This discrimination in lesser degree applies to a number of other professions, according to the article.

> A physician undergoes a long training period (the longest among the professions) during which he foregoes income and incurs expenses accumulating to approximately $35,000 at the time of entering medical practice, at approximately age twenty-eight. The working lifetime remaining after this prolonged training period is shortened.
>
> To pay off this investment in training in annual installments, his annual gross earnings would have to be at least $5,000 more than those of a person whose earning period started at the age eighteen.
>
> Under the 1942 Federal Internal Revenue Code, funds used by companies for the purpose of providing employes with pensions or shares in profit-sharing trusts are deductible from gross receipts as business expenses and thus are not a taxable part of the employer's or company's income, if the particular plan is approved by the Bureau of Internal Revenue.
>
> Since the provisions are restricted to employes, professional men who can qualify as employes—for example, company lawyers and company physicians—can receive the benefits of these pensions and profit-sharing trusts, while those who conduct their professions as single proprietorships or partnerships may not qualify for these benefits.
>
> The Board of Trustees of the American Medical Association authorized its representatives to record, at a meeting of the Association of the Bar of the City of New York, its support, in principle, of the proposal that the Internal Revenue Code be amended to permit physicians who practice as individual proprietors or partners to declare as business expenses the costs of pension programs for themselves, with the proviso that there should be a reasonable maximum pension. The American Medical Association believes that such an amendment would appreciably reduce the present discrimination.

The foregoing seems to us a reasonable contention. A somewhat similar condition has confronted certain authors who have spent many years in the collection of material from which they have eventually written and then published a book. Profits from sale of the book are "bunched" into a relatively short period. To tax these profits in one year, for example, would be obviously an inequity. It is our understanding that in the case of authors certain arrangements have been worked out for tax purposes to allocate the profits from book sales over a period of years, the period being related to the time during which the material or experience necessary to the writing of the book was being accumulated.

Perhaps a more equitable arrangement for tax purposes can be arrived at by negotiation between the Bureau of Internal Revenue and the American Medical Association. Surely nothing can be lost by an examination of the facts.

J. STANLEY KENNEY, M.D.

President-Elect

Medical Society of the State of New York

Dr. Kenney, a native of New York City, attended Montclair Academy and Cornell University Medical College, from which he graduated in 1909. He has been in the practice of medicine for forty years, twenty-five as a general practitioner, and he has devoted fifteen years to internal medicine. He is director of medicine at Lutheran Hospital of Manhattan; attending associate physician, St. Vincent's Hospital; consultant physician, Fordham Hospital, and visiting physician at St. Elizabeth's Hospital.

Dr. Kenny is a past president of the New York County Medical Society, having served in 1943. He also served on the county society's Board of Trustees from 1943 to 1948. He has been a member of the Council of the Medical Society of the State of New York for the past six years and has served as chairman of the Workmen's Compensation Committee and the

Planning Committee for Medical Policies. He also has represented the State Society as a Delegate to the American Medical Association. By appointment of the governor, Dr. Kenney is a member of the Advisory Council to the Joint Hospital Survey and Planning Committee of the State of New York.

During World War I he served as a Captain in the Medical Corps and was overseas with the Fordham Hospital Unit of the AEF. In World War II he was chairman of the Medical Advisory Board Number 21.

The following letter from Governor Thomas E. Dewey, to the Medical Society of the State of New York, was read to the House of Delegates by Dr. Albert F. R. Andresen, Speaker of the House, May 8, 1950.

The Medical Society of the State of New York
292 Madison Avenue
New York 17, New York

Gentlemen:

I am delighted to send warmest greetings to your Annual Meeting and just wish that official engagements in Albany did not prevent me from coming to New York to discuss with you some aspects of the major issue of our time concerning the freedom of the medical profession.

The high quality of medical care in New York State is not just something that resulted from chance. It has evolved out of the joint efforts of the private practitioners, your own Medical Society, and a State government that supports the principle of comprehensive medical services on a voluntary basis. We do not need socialized medicine in this State to provide adequate medical care for our people. We do need to strengthen and expand our voluntary health and hospital insurance programs, our network of community hospitals, our hospital care for the mentally ill and the tuberculous, our county health departments and related local health services.

I wish to express my personal appreciation to your president, Dr. John J. Masterson, for the fine support he has given to the State Health Department during the past year. I am sure that the activities of our public health workers have been made more effective as a result of the cooperation that exists between this Department and your great Society.

With the necessity of expanding voluntary medical care and the problems of civil defense which unhappily face us, there is a continuing need for ever closer cooperation between all of us. I am grateful for all that has been done and I know the free medical profession of our State will rise to every challenge in the years ahead.

Sincerely yours,
THOMAS E. DEWEY

May 6, 1950

FACTS ABOUT NUTRITION

Prepared by the School of Nutrition, Cornell University, Ithaca
Norman S. Moore, M.D., Editor

Diet and Arteriosclerosis

It is hardly necessary to mention the position which arteriosclerosis holds among the causes of death in this country. Physicians are probably all too aware that one third of the deaths in their own ranks are caused by coronary and cerebral arteriosclerosis.[1] The prevention of this disease stands as one of the foremost aims of medical science.

Many physicians and research workers regard arteriosclerosis as an inevitable accompaniment of the processes of aging. This view is seen to be erroneous, however, when it is noted that many people dying at advanced ages have little arteriosclerosis; also, severe arteriosclerosis is not unknown among younger people, and especially among people with certain specific diseases, such as diabetes mellitus, hypothyroidism, and nephrosis.[2]

The role of cholesterol in the production of arteriosclerosis was first brought to attention when Windaus, in 1910, chemically analyzed sclerotic human aortas and found that they contained much larger amounts of cholesterol than did nonsclerotic ones.[3] It was further noted that diseases which are accompanied by marked arteriosclerosis, such as diabetes and hypothroidism, also evidence hypercholesterolemia. Soon thereafter, Anitschkoff produced lesions in rabbits resembling human arteriosclerosis, by feeding cholesterol.[4] These fundamental discoveries soon led to the concept that arteriosclerosis could be prevented in humans by eliminating from the diet foods containing large amounts of cholesterol, such as eggs, brains, and butter. The idea gained wide acceptance among the medical profession. Since that time, however, much has been learned.

It is now known that cholesterol is synthesized in considerable amounts in the body. This is shown by the fact that animals kept on cholesterol-free diets continue to excrete cholesterol in the bile, while their blood levels remain normal. Further proof is furnished by the observation that when isotopically labelled acetate is fed, the labelled molecules are found incorporated in the body cholesterol.[5] Blood cholesterol levels in humans bear little relation to cholesterol intake.[6,7] When subjects were fed low or high cholesterol diets, no significant changes occurred in the blood levels.[4]

Further studies on the composition of the atheromatous plaques of human aortas have shown that cholesterol is not the only lipid concerned. Fatty acids and phospholipids occur in the lesions, together with other sterols, in proportions similar to their occurrence in the plasma.[8]

Atherosclerosis has been produced in several species of animals by adding large amounts of cholesterol to their diets. The significance of this work in relation to human arteriosclerosis is questioned by some workers, who point out that the lesions produced are usually different from human lesions, and that the amounts of cholesterol fed are proportionally far greater than occur in normal human diets. Steiner was able to produce in dogs lesions which resembled human arteriosclerosis, but only when thiouracil was fed concomitantly with the high-cholesterol diet, producing sustained blood levels of 1,100 to 1,200 mg. per cent.[4]

The causes for the deposition of cholesterol and other lipids in the arterial wall, to produce the primary lesions of arteriosclerosis, are not clearly understood. It is certain, however, that there are other factors in addition to the level of cholesterol in the blood. Intravascular pressure is known to be involved; the high incidence of arteriosclerosis associated with hypertensive disease is common knowledge. The physicochemical state of the blood lipids also appears to play a role in the rate of its deposition in the vessel wall. Of interest in this respect is the observation by Moreton that the particle size of serum lipids is greatly increased in metabolic diseases associated with atherosclerosis, such as diabetes and hypothyroidism.[9] Lipid particles are also larger in older people and following the ingestion of a fatty meal in young people. Moreton was able to cause a deposition of various injected materials in the vessel walls of animals, producing lesions resembling atherosclerosis, and he showed that these substances (polyvinyl alcohol, methyl cellulose, and others) occurred in the blood in colloidal particles of the same general size as the large blood-lipid particles. A third factor which probably affects lipid deposition is the state of the vessel wall. Certain changes occur with aging which are not a direct part of the process of arteriosclerosis. These are: (1) thickening of the intima, (2) deterioration of elastic fibers with resultant stretching of the wall, and (3) precipitation of the cellular colloid material.[10,11] These changes occur at varying rates, and their effects on the rate of deposition of lipids in the vessel wall are not known.

It would appear, therefore, that several interrelated factors are concerned in the production of human arteriosclerosis. The amount of cholesterol in the blood may be one of the factors; it is certainly not the only one. Any dietary approach to the problem of arteriosclerosis must consider more than cholesterol intake. Other lipids would seem to be of importance, for the following reasons: (1) The primary lesion of atherosclerosis consists of a deposit of all the lipids found in the serum; (2) cholesterol absorption is increased as dietary fat increases, and (3) serum lipids occur in large colloid particles following fat meals, and the larger particles may be the ones which are chiefly deposited in the vessel walls.[8,9,12,13]

It should be pointed out that there is no conclusive evidence that any known treatment, dietary or otherwise, will reduce the occurrence of arteriosclerosis in man. Evidence thus far obtained is only suggestive, and filled with contradictions.

Conclusions

Cholesterol has been shown to play a primary role in the occurrence of arteriosclerosis. Other lipids, however, are also concerned. Furthermore, there is little evidence that eliminating cholesterol from the diet will diminish its amount in the body or will retard the development of arteriosclerosis. A quart of milk a day would supply about 2 mg. of cholesterol per Kg. of body weight; an egg, 3.3 mg., levels of intake which are but small fractions of those found necessary to produce experimental atherosclerosis in rabbits. These foods are excellent sources of many important nutrients, particularly protein, calcium, iron, and certain vitamins. Their elimination from the diet in the hope of avoiding arteriosclerosis does not seem justifiable, on the basis of present evidence.

C. R. Shaw, M.D.

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"Let us always remember that human freedom is not a gift to man. It is an achievement by man, and it was gained by vigilance and struggle, so it may be lost by indifference and supineness."—Hon. Harry J. Byrd, Virginia, Congressional Record, January 31, 1950.

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Scientific Articles

INTESTINAL OBSTRUCTION

Philip Thorek, M.D., F.A.C.S., Chicago, Illinois

(*From the Departments of Surgery, University of Illinois, Cook County Graduate School of Medicine, Cook County Hospital, American Hospital, and Alexian Brothers' Hospital*)

THE problem of intestinal obstruction still continues to present a diagnostic and therapeutic challenge to the surgeon and practitioner alike. Despite the many recent advances in electrolyte balance, intestinal siphonage, caloric requirements, and surgical technic, the mortality continues to remain high. Any plan which aids in the early diagnosis and treatment of the obstructing lesion helps further to reduce the number of fatalities. Wangensteen, Haden, Orr, Coller, and many others have contributed monumental stepping stones which enable us to understand the pathologic physiology of this condition.

Intestinal obstruction is a symptom complex and not a disease; hence, it is not enough to make a diagnosis of just "intestinal obstruction." In attacking this problem we have devised a plan whereby we can make an earlier and more thorough diagnosis, thus enabling proper therapy to be instituted more rapidly. To diagnose the condition correctly it is necessary to ask and answer the following four questions:

1. Is this an intestinal obstruction?
2. Is it a large or small bowel obstruction?
3. Is it strangulated or nonstrangulated?
4. Is the obstruction complete or incomplete?

In answer to question 1, "Is this an intestinal obstruction?," we expect to find the obstructive triad, namely, distention, obstipation, and vomiting. Even though the triad may be present, either wholly or in part, its individual parts call for clarification. In regard to distention, one must define what he means by the term. Since we have no standard for measuring the distended abdomen, we have decided to utilize the anatomic relationship of the umbilicus to the xiphoid process. We believe that the normal abdomen is scaphoid and not flat; hence, the umbilicus is normally placed below the xiphoid. When the umbilicus is on a level with the xiphoid, the abdomen is called flat, and when the umbilicus is above the xiphoid, the abdomen is described as being distended. Therefore, when the umbilicus is on a level with or above the xiphoid, some pathologic condition exists. When such an abnormally placed umbilicus is found, we consider the differential diagnosis of the seven "F's", namely, fat, feces, fluid, flatus, fetus, fibroids, and "Ph"antom tumors. In almost every case one of the "F's" has been found to be the underlying cause. It is important to record the position of the umbilicus when the patient enters the hospital and to recheck this position every hour thereafter. If the umbilicus is below the xiphoid when the patient is first seen, and one hour later is found on a level with the xiphoid, this signifies early distention. In this way we can avoid the development of a late preterminal distention that so many neglected intestinal obstructions present.

Regarding obstipation, we know that the average intestinal obstruction passes neither feces nor flatus, but we also recall that this may be lacking in incomplete obstruction as, for example, Richter's hernia, in which only part of the circumference of the bowel is incarcerated. In such cases the resulting irritation and hyperperistalsis may even lead to a diarrhea which can be most misleading when one makes a diagnosis of intestinal obstruction.

Vomiting will be more thoroughly discussed under question 2.

Regardless of the absence or presence of the obstructive triad, it is far more important to elicit the one pathognomonic finding of intestinal obstruction, namely, that pain and intestinal sounds appear at the same time. This synchronization of sound with pain differentiates intestinal colic from any other type of intermittent pain. The physician should place his stethoscope upon the

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Presented at the First Scientific Assembly of the New York State Academy of General Practice, Syracuse, New York, October 11, 1949.

patient's abdomen when the patient states that he has pain, and, if it is of an intestinal nature, rushing bowel sounds will be heard at this time.

The most important differentiating factor to question 2, namely, "Is this a large or small bowel obstruction?," is whether or not vomiting is present or absent. Patients with large bowel obstructions do not vomit, but those with small bowel obstructions do. We all have seen late cases of large bowel obstructions where vomiting has been present as a late and not too distressing symptom, but in the small bowel lesions vomiting appears very early. The higher the obstruction, the more fulminating the vomiting. Utilizing this one fact, we can usually differentiate the small from the large bowel obstructions. To use the word "fecal" vomiting as being descriptive of intestinal obstruction is incorrect. The term "feculent" is more descriptive, since fecal vomiting refers to a gastrocolic fistula or some similar lesion. The flat x-ray film is used to differentiate further the small from the large bowel obstruction. It is unnecessary to stand or turn the patient or to give him any contrast media. A flat x-ray film which can be taken with a portable machine will usually give the desired information. If the obstruction is a large bowel lesion, the x-ray plate usually reveals a large distended colon which appears as a horseshoe or inverted "U." The rectosigmoid is the most common location for these lesions. If, on the other hand, the obstruction is small bowel in nature, the typical paralleling or stepladder pattern will be present.

The history also aids in differentiating the two types of obstructions. A slow, progressive, chronic, increasing constipation speaks for a large bowel lesion, but a sudden violent attack signifies small bowel pathology. Patients with intestinal obstruction who have had previous surgery should be considered as having small bowel obstructions until proved otherwise. The large bowel obstruction resulting from postoperative adhesions is a rarity. A 2-quart diagnostic enema is also a help. The large bowel can usually retain 2 quarts of fluid plus its usual contents. If the bowel cannot take the 2 quarts, this speaks for a large bowel lesion. There are many other ways of differentiating the two, but neither time nor space permits extending this discussion.

Question 3, "Is this a strangulated or nonstrangulated intestinal obstruction?," can usually be answered by the presence or absence of tenderness. Patients with intestinal obstructions do complain of colicky pain, but the strangulated lesion has pain plus localized tenderness. This tenderness is best found by the patient, who will usually locate the exact point of the pathology. The classic example of this is a strangulated inguinal hernia. The patient has diffuse pain over his entire abdomen but will permit one to palpate it; however, he resents having pressure made over a strangulated mass because of its exquisite tenderness. Our incision is usually determined by the location of the patient's tenderness. Another differentiating point between the strangulated and the nonstrangulated obstruction is the appearance of the patient. A patient who has a strangulated intestinal obstruction is acutely and violently ill and usuall is in shock or impending shock, whereas th patient with an intestinal obstruction withou strangulation does not present such a dramati picture. The flat x-ray film may aid in the differentiation of a strangulated from a nonstrangulated small bowel obstruction. If a small bowel nonstrangulated, intestinal obstruction is present the typical stepladder pattern is observed and th valvulae conniventes are readily seen. If, on th other hand, a small bowel strangulated obstruction is present, no characteristic bowel pattern i assumed, since the distended loops arrange themselves in whatever portion of the abdomen th obstruction occurs. The valvulae connivente are not easily detected or seen because of th extravasation of blood into the strangulated loo of bowel and into the abdominal cavity.

Question 4 states, "Is this a complete or i complete obstruction?" As has been mentione a patient with a complete intestinal obstructio passes neither flatus nor feces per rectum, but, the obstruction is incomplete, flatus and fec may be expelled, especially with repeated enema It is important not to be misled by the results the first enema, since a copious movement an flatus may be expelled following its administr tion. This, however, is material which is dist to the lesion. If repeated enemas bring flat and feces, then we assume that the lesion is i complete; if the returns of the repeated washin are clear, we conclude that the obstruction is complete one. A "scout" film of the abdom should be taken when the patient arrives. Th immediately reveals the bowel pattern and al determines whether or not flatus is present in t region of the hollow of the sacrum. If the flat over the sacrum is absent following repeat enemas, we consider the condition a comple obstruction, but, if flatus continues to come do and appear over the sacral region, the lesion is incomplete one. A patient with a complete o struction will appear more ill than one with incomplete lesion; therefore, the clinical appe ance and impression is of importance.

On the basis of these four questions, one m make a proper diagnosis instead of just "intesti obstruction." The case, therefore, may be di nosed as a large bowel, nonstrangulated, inco plete intestinal obstruction, or a strangulat small bowel, complete intestinal obstruction, depending upon the findings.

Treatment

When one labors through the voluminous literature on the subject of the treatment of intestinal obstruction, it becomes difficult to apply this maze of material. It is wise, therefore, to have a plan based on a simple summary. We have devised a plan based on the six "S's," since we state that the treatment of intestinal obstruction consists of suction, saline, sanguine, surgery, sulfa, and the "stir-'em" technic.

Suction, or gastrointestinal siphonage, has done much to lower the mortality of this condition. It has its pitfalls, however, and these must be kept in mind. It has no place in large bowel obstructions, nor should it be used when strangulation is present. On the other hand, it may be curative in postoperative ileus, nonstrangulated adhesive obstruction, or in obstruction associated with peritonitis; these are usually small bowel esions. Its value as a pre- or postoperative adjunct needs no emphasis. To keep a patient with a carcinoma of the rectosigmoid and a large bowel intestinal obstruction on continuous siphonage is to court disaster. Hence, its uses and abuses must be thoroughly understood.

Saline can prolong the life of a patient with an ntestinal obstruction. However, while it cannot ure the condition, it is an excellent form of supportive therapy. Chloride ions have been lost in he patient who has manifested a great deal of vomiting or in whom continuous gastrointestinal iphonage has been instituted. These must be eplaced, and it is mainly by the use of physiologic aline that the patient's chloride balance may be maintained. By restoring this electrolyte balnce one is able to put his patient into better ondition to withstand surgery and in this way lso to lower the mortality. Saline, however, is ot the only supportive therapy that the patient eeds; this will be discussed subsequently.

Sanguine is the word used to refer to blood and s derivatives. We feel that the only place for he use of whole blood is in the replacement of ost red cells. We prefer to keep the protein alance of the patient normal with plasma, serum, r amino acid therapy. If the obstruction is ssociated with blood loss, we feel that the fluid of hoice is then whole blood. In many cases of trangulated obstructions or in cases which might ecessitate extensive bowel resection, whole blood preferred. Maintaining a normal protein level ermits a patient to seal properly because of his ood fibrin content. Hypoproteinemia and hyperchloridemia are two conditions which must be voided in the case of intestinal obstruction as well s in all other surgical emergencies. Too little protein and too much chloride both produce tissue edema and permit the patient to "drown" in his own body juices. It is because of hypoproteinemia and hyperchloridemia that sutures pull out of edematous tissue. Faulty suturing or faulty material is not the cause of intestinal leakage; this is due to poor pre- and postoperative care. The patient's vitamin needs must be maintained, especially the water-soluble vitamins B and C which he loses readily. Vitamin C is truly the "surgeon's vitamin" because this is the one which is essential to sound wound healing.

Surgery is a subject which cannot be discussed adequately in a few pages, and I will only have time to touch upon the surgical highlights as they pertain to the patient with an obstruction. If a patient has a strangulation, he should have immediate surgery. As has been stated, the patient will tell us where to make the incision if we just permit him to reveal his most tender spot. Complete large bowel, nonstrangulated lesions require immediate colostomy for the release of intracolonic pressure. We prefer the so-called "blind" cecostomy in such conditions. This is made through an exaggerated McBurney's incision which hugs the anterior superior iliac spine. If the cecum is distended, and it surely should be in an obstructed colon, then it bulges into the wound. It is held in place by two hemostats, and an iodoform pack is placed between the cecum and the parietal peritoneum. Following this stitchless procedure, the patient is returned to bed, and the cecum is opened some six hours later after it has had a chance to seal off. Since the bowel wall is edematous and will not retain suture, it is unwise to attack an obstructed colonic lesion directly. It is for this reason that we leave the primary pathology alone and do a preliminary cecostomy away from the site of the lesion. For the following ten days or two weeks the patient may be deflated, prepared, and then reoperated. It is at this time that a true evaluation of the pathology can be made and a resection done. The cecostomy acts as a vent in the event that an intestinal anastomosis is performed.

In strangulated lesions we may be confronted with the question, "Is the bowel which has been freed viable or not?" It seems impractical to stand about placing hot towels on a segment of intestine and watch its color. Viability is readily determined if one merely flicks the bowel with the finger and watches for peristaltic waves. If it is able to contract, regardless of the color of the intestine, it is viable. Intestinal obstruction is usually associated with a transudate which is present in the peritoneal cavity; if this is bloody, a strangulation is present. Therefore, if a blind cecostomy is done and a sanguineous fluid noted, we must abandon the cecostomy and explore for

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the presence of a strangulated lesion. The type of anastomosis performed is purely a personal matter; however, we feel that a lateral anastomosis is the safest in the hands of the occasional operator. If time is a factor, one should be familiar with the technic of the so-called quick "aseptic" end-to-end anastomosis.

Sulfa drugs have taken their place among the chemotherapeutic agents used in the treatment of intestinal obstruction. There is also a place for such allied drugs as penicillin and streptomycin. Following the surgery, we place 3 to 4 Gm. of sulfathiazole or sulfadiazine in the peritoneal cavity and follow this with 40,000 units of penicillin every three or four hours intramuscularly. We do know that penicillin will not affect the colon group of organisms, but it will attack streptococci and staphylococci. Sulfadiazine is administered intravenously following the first postoperative day, and streptomycin is coming into its own as the main chemotherapeutic agent against the gram-negative rods. Sulfasuxidine and sulfathaladine will keep the bacterial count low in the intestinal tract if these drugs can be taken by mouth.

By "stir-'em" technic we mean early ambulation, active and passive movements, and breathing exercises. The beneficial effects brought about by getting patients out of bed as soon as possible have been well proved. We do not wish to infer that early ambulation should be carried to an extreme. It is our plan to have our major surgical cases out of bed on the first postoperative day, although each case presents an individual problem. Having the patient move about, having him take a few deep breaths every hour, and encouraging arm and leg movements all play their part in lowering the incidence of phlebothrombosis, pulmonary complications, and their sequelae.

Only the surface has been scratched in this discussion of the vast subject of intestinal obstruction. However, we feel that if we approach the problem with the "four questions," make a diagnosis based upon these, and then summariz the treatment with our "six S's," we should have logical approach to a given case.

25 East Washington Stree

DOCTOR JONES SAYS—

A notice, awhile back, of the death of a health officer (It's funny how we associate things in our minds!) it reminded me of the story of a cow. The doctor was health officer of three places, including the Town of Tyrone, in Schuyler County, and the Town of Starkey, up in Yates.

Did you ever hear of the "Tyrone-Starkey" cow? Well, that's what the health department folks called her. Her story, to them, was sort of a classic. It was back when milkborne disease outbreaks were still common. It started on a farm in one of these towns. This cow's milk was being used without pasteurization. An outbreak of scarlet fever developed, and they traced it to her milk. Her udder was infected with hemolytic streptococci. How they got there: they found she'd been milked by someone that'd just had what was evidently a scarlet fever (streptococcal) sore throat.

The milk sanitarian that was working on it—they knew it'd be risky to use her milk again and the owner agreed to see she was slaughtered. The milk sanitarian expected to follow it up and make sur But he suddenly developed pneumonia and was o of circulation a long time.

After he'd recovered he heard of a scarlet fev outbreak that "looked like milk," in the oth county. The cases, he found, were all connect with one farm: families of the farmer and his e ployes. He went to look over the cattle and there, his surprise, was the supposedly deceased cow. T story, when he ran it down, was that she'd be sold to a dealer. She'd changed hands several tim When she finally arrived at this farm, she w "dry." She "freshened" and a few days after th began using her milk, the scarlet fever appeared.

That was the end of poor Bossy's career as an i nocent disease spreader. Today her udder repos in a glass jar in the museum at the State Laborato If it isn't a fitting monument to Bossy, it is a lasti reminder of what can happen when a strep-infect person milks a cow.

—*Paul B. Brooks, M.*

CELLOPHANE WRAPPING OF INTRATHORACIC ANEURYSMS

B. G. P. Shafiroff, M.D., and Q. Y. Kau, M.D., New York City

(*From the Third Surgical Division* (*New York University*), *Goldwater Memorial Hospital*)

REACTIVE cellophane was introduced recently in vascular surgery as a wrapping material for aneurysmal dilatations. In close conjunction with several experimental studies De Takats and Reynolds applied cellophane to abdominal aortic aneurysms, while Poppe and Abbott each reported a series of intrathoracic aneurysms which were wrapped in cellopane.$^{1-3}$ Clinical evaluation of the results of cellophane wrapping, although still premature, was sufficiently promising to encourage further use of this material. Consequently, with renewed interest in the surgical aspects of vascular aneurysms, cotton tape, fascial strips, and metallic bands have been abandoned in favor of reactive cellophane for extravascular reinforcement and support to progressively weakening vascular dilatations.

The present report is devoted to our experience with five intrathoracic aneurysms which were wrapped in polythene cellophane. These patients were referred for surgery because of the progressive severity of their symptoms and the serious prognosis as to life based on clinical findings. The following five case reports are presented in abstract form.

Case Reports

Case 1 (*Aneurysm of Arch and Descending Aorta*).—A male patient, age sixty, was admitted with a chief complaint of lancinating substernal pain which radiated to the left chest. Physical examination was essentially negative except for moderate cardiac hypertrophy and a mitral systolic murmur. Blood test gave a 4 plus Kolmer reaction. Colloidal gold test of the spinal fluid was negative for syphilis. Angiocardiogram showed diffuse dilatation of the aorta with an aneurysmal sacculation extending from the distal part of the arch to the descending aorta. The preoperative electrocardiogram indicated a sinus bradycardia with interrupted premature ventricular contractions, abnormal inverted T_1 and T_2, and prolonged QRS. He was operated upon on May 27, 1947, at which time the distal portion of the arch and the descending aorta were wrapped in four thicknesses of polythene sheeting and anchored to the aorta and surrounding structures by fine atraumatic silk sutures. A small piece of tantalum was enclosed in the lower edge of the cellophane padding to serve as a marker (Fig. 1). Postoperative recovery was uneventful. In a follow-up to date, the patient is alive and well with complete subsidence of chest pain twenty-seven months postoperatively. Periodic x-ray examinations indicated no further aneurysmal expansion of the involved area.

Case 2 (*Aneurysm of Ascending Aorta with Superior Vena Cava Obstruction*).—A female patient, age forty-seven, complained of severe pain with the sudden appearance of a mass in the right chest near her breast. This pain radiated to the back and also to the right arm. On physical examination a hard pulsating mass was palpated to the right of the sternum. It extended from the second to the fifth ribs to the right of the midclavicular line but not beyond the right anterior axillary line. Blood test showed a 4 plus Kolmer reaction. The angiocardiogram revealed a large saccular aneurysm of the ascending aorta with angulation of the proximal portion of the superior vena cava and dilatation of the azygos vein at the azygocaval junction. Venous pressure was higher in the right arm than in the left arm. Preoperative electrocardiogram indicated a sinus ar-

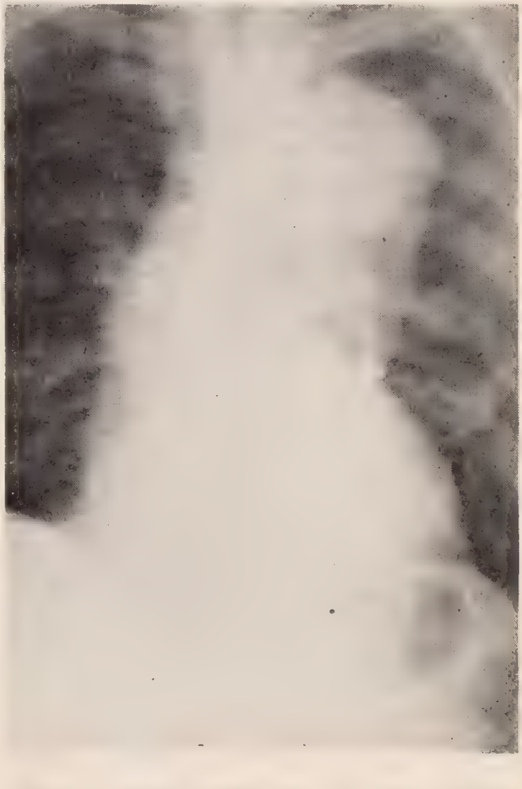

Fig. 1. Postoperative x-ray of Case 1 showing aneurysm of descending aorta. Along the left ventricular border can be seen the tantalum which was used as a marker.

Aided by a grant from the Ben Lewis Fund in Surgery.

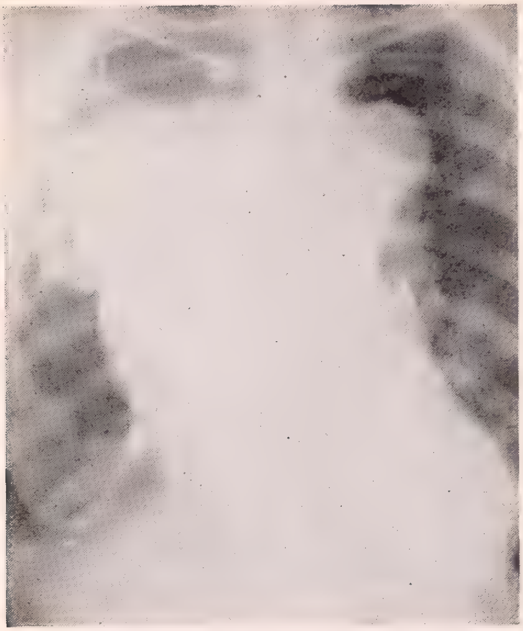

FIG. 2. Postoperative x-ray of Case 2 showing aneurysm of ascending aorta which caused obstruction of superior vena cava. Here also can be seen the tantalum marker which was used in conjunction with the cellophane wrapping.

rythmia and premature ventricular contractions. On November 11, 1948, she was operated upon through a right thoracotomy incision with removal of the third right rib. The aneurysm which involved the ascending aorta was wrapped in three thicknesses of polythene cellophane (Fig. 2). There was no surgical interference with the superior vena cava or the azygos vein except the dissection necessary for the exposure of the aneurysm. The postoperative course was essentially uneventful. Venous pressure became equalized in both arms. Thoracic pain subsided. The improvement in her general condition was sufficiently good to allow her to return to work. She is now ten months postoperative.

Case 3 (*Aneurysm of Arch of Aorta with Compression of Left Main Bronchus*).—A male patient, age forty-nine, complained of severe pain in the left chest which was knifelike in character and was accompanied by a burning, tearing sensation which radiated around to the back like a belt. The onset of this pain was four months prior to admission to the surgical service. At no time was it adequately relieved by morphine or other drugs. Frequent intercostal blocks provided temporary relief of few hours duration. On physical examination, the lower five ribs posteriorly were markedly tender to palpation and pressure. A loud, blowing systolic murmur was audible at the apex and transmitted to the axilla. Blood test gave a 4 plus Kolmer reaction. Spinal fluid was negative for syphilis. While in the hospital he suddenly developed a severe productive cough which, on x-ray examination of the chest, indicated complete atelectasis of the left lung, possibly caused by bronchial compression of an aneurysm. Bronchoscopic examination revealed an obstruction of the left main bronchus about 15 mm. below the level of the tracheal bifurcation. During this acute period he required treatment for hemorrhagic shock due to the loss of a large quantity of blood in the pleural cavity. The latter diagnosis was made by thoracentesis. Electrocardiogram showed abnormal PSR tracing and indicated that the heart was in a semivertical position due to clockwise rotation. Early x-rays of the dorsal spine were negative for bony destruction of vertebral bodies.

On January 23, 1949, the patient was operated upon through a left thoracotomy incision with removal of the fifth rib and section of the fourth rib. The left pleural cavity was found to contain bloody fluid. A large aneurysm, originating in the arch and extending to the descending aorta, was exposed. On its posterior aspect it was found to be firmly attached to the vertebral bodies and, hence, was not freed in that area. The aneurysmal dilatation was wrapped in four thicknesses of polythene cellophane commencing from a point within the pericardium which was opened. The left lung which was completely atelectatic due to compression from the aneurysm was used as a hemostatic agent and wrapped over the polythene and fixed around the aneurysm as far back as possible. The source of hemorrhage from the aneurysm was not located.

Postoperative recovery was good, and for a three-month period the patient was markedly improved.

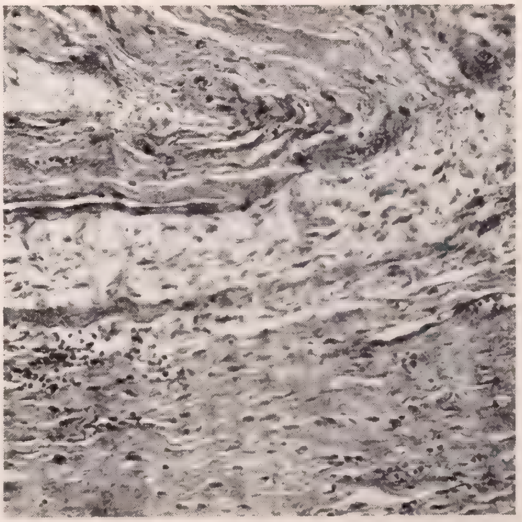

FIG. 3. Section of aorta through periadventitia, adventitia, and media from the area of cellophane application. The periadventitia (upper part of photograph) shows a dense fibroblastic reaction. The adventitia shows moderate thickening. The media (lower part of photograph) shows no reactive changes. (370 ×)

His pain had subsided, and he was freely ambulatory about the ward. On May 18, he developed signs of paresis, and x-rays at this time showed destruction of the vertebral bodies and transverse processes from the seventh to eleventh thoracic vertebrae. The patient died on June 6, after which an autopsy was performed. Postmortem examination revealed a dense fibrous membrane in the area of deposition of the polythene (Figs. 3 and 4). The atelectatic lung appeared firmly compressed against the aneurysm, and there was no blood in the pleural cavity. With the removal of the cellophane a considerable amount of clear gelatinous fluid escaped into the chest. The aneurysm wall in contact with the polythene cellophane was considerably thickened. A microscopic section taken from this area showed a typical polythene-induced fibroplasia.

Case 4 (*Aneurysm of Aortic Arch with Tracheal Compression*).—A male patient, age fifty-one, was admitted to the surgical service because of severe intermittent attacks of respiratory dyspnea and a productive cough of white sputum. Blood Wassermann was 4 plus for which he was treated by massive doses of penicillin at the Rapid Treatment Center. X-rays revealed an aneurysm of the proximal aortic arch with tracheal compression. Polythene cellophane was applied to the aneurysm, following which a mild secondary infection developed, and some of the cellophane was extruded from a sinus. Thereafter, the patient suffered recurrent attacks of asthma-like wheezing, expiratory in character, with grunting and crowing accompanied by severe cyanosis and profuse sweating. These attacks soon occurred four or five times daily. Medication failed to relieve this condition. The patient was reoperated on through the old thoracotomy incision. Cellophane was found embedded in the vicinity of the pulmonary nerve plexus and was believed to be the cause of the respiratory distress. The aneurysm was rewrapped in polythene. Sternal bone splitting and tracheotomy were employed as decompressive measures. Although relieved of his respiratory distress, the patient died within the first postoperative week. Postmortem examination revealed a severe compression of the trachea which was relieved surgically. Microscopic examination of an aortic section taken from area of cellophane application revealed marked perivascular infiltration of the adventitial layer. Organized thrombus was attached to the intimal surface. The muscular layer of the aorta was normal in density.

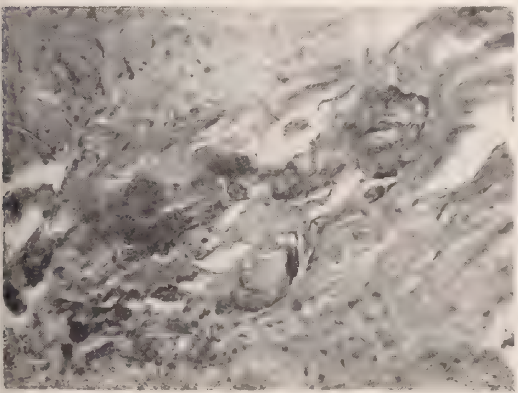

Fig. 4. Section through the reactive tissue in the area of polythene application. The tissue is of a dense collagenous nature. In the center of photograph the remnant of polythene can be seen. (370 ×)

Case 5 (*Arteriosclerotic Aneurysm of the Descending Aorta*).—A female patient, age sixty-two, was admitted to the surgical service with the diagnosis of an arteriosclerotic aneurysm of the descending aorta, fusiform in type. Surgery was recommended for this patient because of intractable pain unrelieved by conservative therapeutic measures such as intercostal block, intravenous procaine, etc. She was operated on August 19, through a left thoracotomy incision. A large fusiform aneurysm of the descending aorta was exposed and wrapped in three thicknesses of polythene cellophane. Her postoperative course was essentially uneventful. She was followed for a period of fourteen months, during which time she was clinically improved.

Comments and Summary

The reactive properties of polythene cellophane in vivo have been demonstrated by several investigators. Polythene cellophane (1.5 mil, XV-7-14 Du Pont) and cellophane of the regenerated cellulose film type (Visking) were proved to be causative of marked fibroblastic tissue reaction in animals. This material, particularly polythene cellophane, was found to be an efficient fibrous tissue stimulant without producing a foreign body effect intolerable to the organism. The inflammatory response induced by polythene is manifested biologically by the rapid production of fibrocollagenous connective tissue in the area of its deposition. The basic reactions were usually those of edema, hyperemia, and fibroplasia with focal aggregations of lymphocytes and eosinophils.[4] Carcinogenic or sarcogenic effects due to reactive polythene embedded in tissue were not observed in experiments on cancer-susceptible mice.[5] Polythene wrapped around blood vessels produced a constrictive fibrosis of the adventitia and periadventitia, progressive in some instances to the point of vascular occlusion. Dicetyl phosphate is claimed to be the specific fibroblastic factor in the brand of polythene mentioned above.[5]

To date, in addition to the five cases described above, Abbott treated 23 patients and Poppe 6 patients for intrathoracic aneurysms.[2,3] Included in the latter were all types of vascular dilatations—luetic, arteriosclerotic, congenital, and rheumatic. Recently, Osler has included with the cellophane application the added procedure of internal wiring of the aneurysm.[2] Experimentally it has been suggested that the immediate effect of a compressive metal band be combined with the polythene wrap.[6] Marked relief from pain seemed to be the most significant clinical observation noted after cellophane application. The decompressive effect of the thoracotomy may also be considered as a contributory factor in pain relief. Although it appears that the fibroblastic support of the aneurysmal wall reduces the hazard of perforation, this observation remains to be proved. The relative simplicity of the operative procedure, as compared with other more intricate operations, for the treatment of intrathoracic aneurysms, justifies further clinical investigation of polythene cellophane as a wrapping agent.

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"AND THE GOOD REMAINS"

To the Editor:—In Italy in the sixteenth century there was a rough, tough soldier by the name of Camillus. He was a roisterer and had been in and out of jail several times. He reformed and joined a religious order. He worked in one of the hospitals of Rome. There was an outbreak of dysentery among the babies of that city, and the death rate was appalling. The former soldier, later canonized St. Camillus, gathered up the sick in the highways and byways and brought them to his hospital. There they were bathed, given plenty of fresh air, and fed goat's milk. The epidemic was stopped, and the mothers of Rome forever afterward sang songs of praise to St. Camillus. It was he who founded, in 1584, the first nursing order devoted exclusively to the care of the sick. It was during this period that he wrote, "If you wearily do a good thing, the weariness passes and the good remains."

The spirit of Christian sacrifice exemplified by this rough humanitarian of the sixteenth century is exactly that which has characterized the lives of our country practitioners since the very beginning of our nation. If physicians are regimented, is it not reasonable to assume that this flaming spirit will be extinguished?

John J. Rainey, M.D.
Troy, New York

—*Journal of the American Medica Association, February 4, 1950*

FIND RICE DIET FAILS TO REDUCE BLOOD PRESSURE

The rice diet did not effect any significant reduction in blood pressure during a trial on 12 patients, according to a report by a group of New York doctors, Herbert Chasis, William Goldring, Ernest S. Breed, George E. Schreiner, and Alfred A. Bolomey, of the New York University College of Medicine. Their report appears in the March 11 *Journal of the American Medical Association.*

Twelve patients with essential hypertension were selected from the Hypertension and Nephritis Clinic of the New York University Clinic and from the Third Medical Division of Bellevue Hospital. These patients were maintained on a balanced diet for fourteen to seventy-nine days to stabilize their blood pressures. They were then placed on the rice diet for fourteen to ninety-eight days. Observations of four patients were continued during a second period on the balanced diet after discontinuance of the ric diet.

The changes in blood pressure observed in thes patients did not exceed the random, spontaneou variations to be anticipated from the control dat on these patients and from the variations in pressur observed in other patients kept in the hospital und similar conditions without restriction of diet. Du ing the latter part of the rice diet period, five p tients were given daily doses of sodium chloride. prompt and significant increase in pressures o curred in four of the five patients. Although t cause for this rise in blood pressure is unknown, t phenomenon suggests that salt restriction may b more important than dietary restriction in effec ing such reductions in blood pressure as have bee reported by others on the low salt, rice diet.

PREPYLORIC GASTRITIS SIMULATING GASTRIC CARCINOMA

DAVID LYALL, M.D., F.A.C.S., and HAROLD J. LEIDER, M.D., New York City

(*From the Second Surgical Division* (*Cornell*), *Bellevue Hospital*)

THE following discussion concerns itself with one of the more difficult problems that confront the abdominal surgeon. The cases reported reflect errors in clinical diagnosis and in the interpretation of the gross findings at operation. The decision as to whether or not to resect the stomach is an important one. This dilemma is not frequently encountered by the surgeon, and, therefore, we believe the following cases are worth presenting.

On the Second (Cornell) Division of Bellevue Hospital between January, 1937, and December, 1947, 87 patients were operated on for proved carcinoma of the stomach. Our records do not show the number of exploratory laparotomies done for clinical carcinoma in which no cancer was found. In addition, three cases with well-buttressed clinical diagnoses of cancer and presenting prepyloric masses at operation were operated as outlined below.

Case Reports

Case 1.—Mrs. M. N., age fifty-four, was admitted to Bellevue Hospital on January 24, 1938, complaining of vomiting of four weeks duration. Prior to this she had noted epigastric distress after meals and gaseous eructations. In the four weeks before admission she had vomited all solids and had lost 25 pounds in weight. There were no symptoms of gastrointestinal bleeding.

The patient showed evidence of recent weight loss. In the abdomen there was no distention, masses, or tenderness.

Laboratory examination showed the following: red cells 4,500,000; hemoglobin, 95 per cent; urinalysis normal; Wassermann negative; gastric analysis—free acid 6 units, total acid 20 units; stool showed benzidine test positive. X-ray examination revealed that the stomach was dilated and atonic with 20 per cent six-hour residue. The pylorus and duodenal bulb could not be visualized. These findings were interpreted as indicating pyloric obstruction of malignant origin. Preoperative diagnosis was carcinoma of the stomach.

Operation was performed nine days after admission after suitable preparatory measures to restore nutrition and to empty the stomach. Through a left upper rectus incision a firm, infiltrating mass was felt, involving the distal third of the stomach posteriorly and along the lesser curvature. There were a few small firm nodes in the gastrohepatic omentum. A subtotal gastrectomy was performed removing the distal two thirds of the stomach. A retrocolic Polya-type anastomosis was done. The immediate postoperative course was unremarkable, and she was discharged on the twenty-fourth postoperative day. Subsequently, she developed obstructive symptoms, and eight months later an anterior gastroenterostomy was done to relieve this.

Pathology examination revealed no evidence of malignant growth. The stomach wall was markedly thickened with fibrosis and round cell infiltration. There was a small superficial ulceration in the prepyloric area. Diagnosis was chronic interstitial gastritis and superficial simple ulceration of the stomach.

Case 2.—E. S., white male, age thirty-four, was admitted to Bellevue Hospital with a left lower lobe bronchopneumonia on March 1, 1939. Two years previously he had had epigastric pain, and x-rays were said to have revealed a peptic ulcer. While recovering from the pneumonia, he vomited blood on several occasions, and the epigastric pain recurred.

Examination revealed no abdominal mass or tenderness.

Laboratory examination showed the following: blood Wassermann 4 plus, spinal fluid Wassermann and colloidal gold tests normal. Blood count showed a leukocytosis with a marked secondary anemia; gastric analysis—no free acid, total acid 10 units. Gastrointestinal x-ray revealed a small stomach with diminished gastric tone and absence of peristalsis over the pars pylorica and the distal end of the pars media. This was interpreted as evidence of a malignant infiltration of the pars pylorica extending into the pars media. Gastroscopy revealed absence of normal mucosal folds, induration of the stomach wall, and several hemorrhagic areas. These findings were interpreted as revealing a scirrhous carcinoma of the stomach.

After suitable preparation the patient was explored on March 31, 1939, through a left upper rectus incision. The stomach was of normal size, but the stomach wall was thickened in the prepyloric area where an indefinite mass was felt. Enlarged nodes were present in the gastrohepatic and greater omenta. One of the latter nodes was removed for biopsy. A subtotal gastrectomy was performed with an antecolic Polya-type anastomosis. The patient made an uneventful recovery.

Pathologic examination showed the gastric mucosa to be thickened. There was fibrosis and round cell infiltration of the stomach wall. A Levaditi stain for spirochetes failed to reveal their presence. There was no evidence of neoplastic growth. Diagnosis was chronic gastritis.

Case 3.—N. D. S., Chinese male, age thirty-four, was admitted to Bellevue Hospital on June 6, 1948.

Three weeks before admission he began having severe lower substernal pain aggravated by eating. His appetite disappeared, and two days before admission he began vomiting copious amounts of liquid, brownish material. No hematemesis was present.

Physical examination revealed a poorly nourished dehydrated man vomiting large amounts of greenish-tinged fluid. The abdomen was flat. There was moderate deep epigastric tenderness.

An abdominal flat plate revealed no evidence of intestinal obstruction. The patient vomited 750 cc. of fluid during admission. A Levine tube was passed, and an additional 600 cc. of greenish fluid was obtained. Continuous suction was applied, and the patient became much more comfortable.

Laboratory data were as follows: urinalysis normal; red count 5,100,000; hemoglobin 16.0 Gm.; nonprotein nitrogen 28; Wassermann negative; total proteins 7.4 Gm. per cent. Gastric analysis showed 15 units of free acid. X-ray revealed a filling defect along the lesser curvature of the stomach in the prepyloric region characteristic of a malignant growth. Preoperative diagnosis was carcinoma of the stomach.

Operation was performed on June 22, 1948. Exploration revealed a soft mass in the prepyloric region, principally occupying the posterior wall. Two small firm lymph nodes were discovered in the gastrocolic omentum near the pylorus. After prolonged consideration it was decided to proceed with the resection. The greater omentum was freed from its colonic attachment. A subtotal gastrectomy was then performed, removing the omentum with the specimen. An anterior Polya-type anastomosis was performed.

The patient developed a wound infection on the twelfth postoperative day but otherwise made an uneventful recovery.

Pathologic examination revealed the following: Beginning at the pyloric sphincter and extending for a distance of 4 cm. from it, completely encircling the stomach, the luminal surface was roughened, and the normal rugal folds were absent. This irregular surface was not elevated but appeared to involve diffusely the mucosa and submucosa. Microscopic examination showed the mucosa infiltrated with eosinophils, polymorphonuclears, plasma cells, and lymphocytes. It was quite congested. The mucosa had a nodular surface. The glands were elongated and revealed some branching. The lining cells were slightly atypical, being more hyperchromatic than usual. In one of the sections the arrangement of the mucosa suggested early adenomatous change. The muscularis mucosa was intact. The submucosa and the muscle layers were edematous and showed occasional eosinophil and mononuclear cell infiltrations. There was no evidence of neoplasm. Diagnosis was chronic hypertrophic gastritis.

Comment

The diagnostic difficulties in these cases become apparent when we consider that they all gave symptoms of epigastric pain, nausea, and vomiting, that they all exhibited hypochlorhydria, and that the roentgen findings were unreservedly interpreted as showing carcinoma. Furthermore, at operation a "firm, infiltrating" mass was felt in Case 1. In Cases 2 and 3 the mass was softer and more indefinite. In all, firm but not markedly enlarged nodes were felt in the gastrocolic or gastrohepatic omenta or both.

Gastric resection was not justifiable in these cases simply because they might have been cancerous. Nor do we believe as noted below that operation is justified by a possible precancerous property of gastritis. Certainly if their benign nature had been suspected, a longer medical regimen would have been sanctioned before resorting to surgery.

Chronic prepyloric gastritis is not found with duodenal ulcer unless there is an associated pyloric obstruction with stasis. Even here it is not usually of marked degree and subsides rapidly with relief of the obstruction. It is rare in cases of gastric ulcer.[1,2] The superficial ulceration overlying a chronic gastritis of the type found in Case 1 is not to be confused with gastric ulcer of the "peptic" variety associated with hyperchlorhydria.

Advanced gastritis exhibits epithelial alterations which simulate precancerous changes. These include adenoid hyperplasia and round cell infiltration leading to plaque formation and the appearance of polypoid excrescences. Hinkel believes that, because of the likelihood of recurrent severe bleeding, surgical removal is necessary.[3] However, Meissner points out that gastritis of this type is uncommon in stomachs actually showing cancer, and this has been the experience of others.[2] Therefore, we believe it unlikely that gastritis is precancerous in the stomach in the sense that leukoplakia is in the oral cavity.

The importance of gastroscopy in differentiating gastritis from carcinoma has been emphasized by Pollard and Cooper.[4] Moersch presents 100 cases of microscopically proved gastritis.[5] In 20 of these, gastroscopy was in error, and in 12 an erroneous diagnosis of cancer was made. In six of these latter cases the surgeons had difficulty in making the diagosis at the time of operation.

The type of cancer most likely to be gastroscopically confused is the linitis plastica variety. Gastroscopy does not lighten the burden when the findings are contrary to overwhelming clinical evidence.

The study of gastric cell washings is a technic which was not available at the time these cases were encountered. Positive cytologic findings are the basis for real clinical suspicion, but negative findings do not constitute grounds for surgical neglect in the presence of x-ray and clinical evidence to the contrary. Biopsy and frozen section are of doubtful value in differentiating between inflammation and the more cellular types of cancer, especially lymphosarcoma, and these are just the types which are grossly difficult to distinguish from inflammatory change.

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CHICKENPOX COMPLICATED BY SEVERE PNEUMONIA TREATED WITH AUREOMYCIN

Paul A. Bunn, M.D., Syracuse, New York, and J. D. Hammond, M.D., Auburn, New York

From the University College of Medicine)

THIS report describes the successful management of an adult with varicella and pneumonia treated with aureomycin.* Review of the literature indicates that the pulmonary complication of chickenpox, although distinctly uncommon, is always serious and is fatal in a significant number of cases.[1-6] A reasonably constant clinical picture accompanies the pneumonia, and since the patient to be described fulfills most of the stated criteria, report of her prompt recovery with aureomycin seems warranted. Because of the impressive recovery a small study was undertaken to determine more precisely the role of aureomycin in therapy of uncomplicated varicella, both in adults and in children. Results of these observations suggest that aureomycin is not a specific and dependable agent in treatment of chickenpox although, on occasion, it seems to shorten the expected course of the disease and to reduce associated toxicity.

Case Report

F. K., a thirty-year-old white multipara was in the sixth month of gestation. She was admitted to the Auburn City Hospital on February 5, 1949, complaining of fever, cough, and extreme air hunger. She had been exposed to chickenpox three weeks previously and had developed the skin lesions typical of varicella four days prior to admission. Twenty-four hours after onset of the vesicles she noted a cough and mild fever (102 F.), and on examination a few moist rales were discovered over the right lung base posteriorly. The following day she had improved, temperature was lower but not normal, the rales had disappeared, and the cough had lessened. Early on the day prior to hospital admission, new skin lesions appeared, and temperature was slightly elevated. Later the patient became restless, had great anxiety, and was insomnic. During the night preceding admission, gradually increasing difficulty in breathing developed, and by morning, February 5, the patient was found to be deeply cyanotic with severe dyspnea and orthopnea. A distressing, frequent, nonproductive, and harassing cough had developed during the night and persisted. Procaine penicillin, 300,000 units, had been administered daily for the three days prior to hospitalization.

On examination in the hospital, temperature was 103.3 F., pulse 112, blood pressure 115/80, and respirations over 40 per minute. The patient appeared moribund, and death was expected. Cough was deep, nonproductive, paroxysmal, painful, and markedly disturbed her respirations. She was in acute, severe, and serious respiratory distress, dyspneic in an oxygen tent and deeply cyanotic until oxygen by face mask was applied. There were papular, vesicular, and crusted lesions profusely scattered over the entire body, except for the feet and hands. Similar lesions were seen in pharynx and nose. There was a shotty lymphadenopathy of both su-

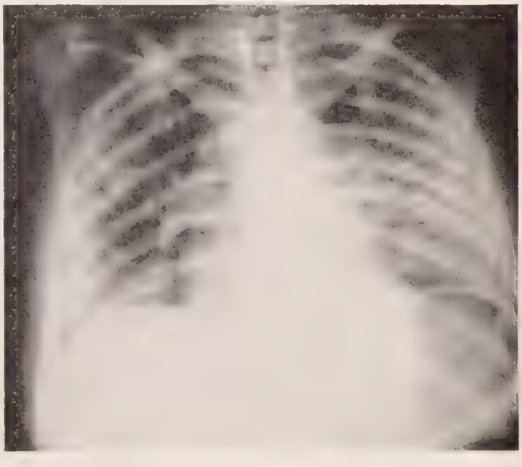

Fig. 1. Chest roentgenogram taken on admission to hospital on February 5, 1949, showing bilateral, diffuse, small, patchy infiltrations throughout both lung fields.

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* Aureomycin used in this study was supplied by Dr. B. W. Carey, director of Lederle Laboratories, Pearl River, New York.

perior and inferior deep cervical chains; the majority were pea-sized, but a few nodes were walnut-sized. Slight dullness over the right lung base was found. A soft, nontransmitted systolic murmur over the pulmonic area was heard, and there was a systolic gallop rhythm. Fundus was slightly above the umbilicus, and fetal heart and movements were discerned.

Laboratory Studies.—Red blood cell count was 4,580,000, hemoglobin 13.2 Gm. (83 per cent), white blood cell count 10,050 with 65 per cent polymorphonuclear leukocytes (35 stab and 30 per cent segmented forms). Blood sugar was 69 mg. per cent. Urinalysis revealed specific gravity of 1.024, acid reaction, trace of sugar (±), and very slight trace of albumin (1 plus). Microscopic examination showed many pus cells and a few red blood cells per high power field. Single cultures of blood, sputum, and throat were negative. Roentgenogram of chest showed diffuse mottled parenchymal infiltration involving all lobes (Fig. 1).

Course in Hospital.—Following the few laboratory procedures, the patient was started on antimicrobial therapy. Aqueous penicillin, 100,000 units every two hours, and 0.5 Gm. of streptomycin every six hours, both parenterally, and oxygen by both mask and tent were administered. During the first hospital day the clinical picture worsened; crepitant rales throughout the entire chest appeared; signs of fluid at the left lung base were discovered; cough became more frequent and distressing; cyanosis deepened appreciably; respirations were more labored, more rapid (50 per minute), and more shallow; pulse rose to 140 per minute and temperature to 104 F. rectally. Aureomycin was started nine hours after hospital admission in dosage of 50 mg. intramuscularly five times daily (total twenty-four-hour dosage 4.0 mg. per Kg. body weight). Fifty cubic centimeters convalescent chickenpox serum were also given intravenously in three doses at that time.

Clinical improvement was noted within nine hours after aureomycin was started and was marked twenty-four hours after hospital admission. Cough was less; respirations were below 30; cyanosis was less deep, dyspnea became less severe, and she became comfortable in the oxygen tent. The improvement was maintained for the following two days. Seventy-two hours after admission, temperature spiked to 104 F., and respirations increased to 50 again, but there was no other significant change in the picture. Twenty cubic centimeters of chickenpox convalescent serum were given at the peak of the febrile relapse, but no other change in therapy was made. This episode was followed within twelve hours by prompt and steady improvement. By the fourth day, fever fell to normal and remained below 99.5 F. for the remainder of the hospital stay. Cyanosis gradually disappeared in the same period; rales diminished and were absent after the seventh hospital day, and respirations remained below 22 after the fifth day. Oxygen was discontinued on the sixth hospital day.

Following institution of aureomycin, no new pox were observed. The skin lesions improved slowly so that at the end of the seventh day in the hospital (eleven days from onset) only crusts remained; none were infected. The patient was mentally clear throughout the disease.

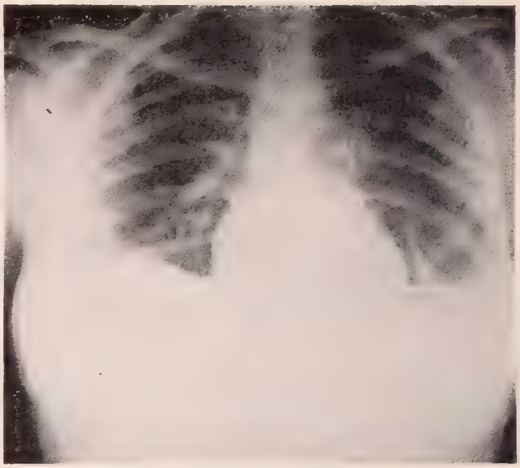

FIG. 2. Chest roentgenogram at time of discharge February 19, 1949, revealing marked resolution of pneumonitis.

Streptomycin was discontinued on the fifth day (total dose 20 Gm.). Parenteral aureomycin was continued for four days (total dose 0.8 Gm.); thereafter 250 mg. five times daily were administered orally until the eighth day (total oral dose 5.0 Gm.). Penicillin was continued throughout the hospital stay, although dosage schedule was altered as follows: From the third to the seventh hospital day 400,000 units twice a day were given, and from the seventh day to the time of discharge on the fourteenth day 450,000 units of procaine penicillin twice a day were given. Total dosage of penicillin was 19,600,000 units.

She was discharged from the hospital on the fourteenth hospital day, free of all clinical evidences of varicella and pneumonia. A chest roentgenogram showed the pneumonia to have resolved (Fig. 2).

From February 20 until July 1, 1949, the patient has been well save for mild rubella in June. The final trimester of pregnancy was uncomplicated and on May 22, 1949 she delivered an 8-pound female child. The baby has shown no abnormalities.

Comment

Although it is unfortunate that more laboratory examinations were not performed, the acuteness of the illness prevented more than single cultures of blood and sputum prior to institution of therapy. It was very possible that, because of the few culture studies, a pyogenic pulmonary infection actually existed and penicillin was mainly responsible for the initiation of the impressive clinical response. On the other hand, the abrupt onset of pneumonia seventy-two hours after appearance of skin lesions, the widely scattered, individually small, but massive total pulmonary infiltrations, and the absence of specific pyogenic organisms in body secretions pointed toward the diagnosis of varicellar pneumonia. It was evident, with this clinical decision, that all available therapy had to be instituted, including aureomycin, because any single antimicrobial might have been inadequate.

Although the treatment program was complicated, it is the considered opinion that aureomycin was the agent most responsible for the impressive and rapid improvement in the patient. Convalescent serum has not been shown to alter the course of varicella.[7] Whether it acted in synergism with aureomycin in this patient cannot be stated, but such a phenomenon has no clinical corollary. Penicillin and streptomycin may have protected the patient against other bacterial invaders so that their administration cannot be considered useless. Bullowa has pointed out the seriousness of secondary pulmonary infections, usually hemolytic streptococci, in varicella, and in his group the principal cause of death in instances with pneumonia and chickenpox was streptococcal pneumonia.[6] However, adequate amounts of penicillin alone had not forestalled the pneumonia in the patient, suggesting that the pulmonary complication was not bacterial.

Spot determination of blood concentrations of aureomycin during parenteral therapy were performed, ranging from 0.05 to 3.9 micrograms per cc. The dosage of aureomycin was not arranged because of these determinations.

Seven individuals with uncomplicated chickenpox were treated with aureomycin. Four adults (ages nineteen to twenty-eight years) were acutely and severely ill, and three children (ages five to fourteen years) were less ill, although pox was equally marked in each group. Therapy was instituted in all within thirty-six hours after the first outcropping of skin lesions. Regimens of aureomycin were similar in all respects to that described above, i.e., 3 to 5 mg. per Kg. body weight per day parenterally and 25 to 50 mg. per Kg. body weight per day orally. All patients recovered, but in none was there a truly impressive response during the treatment period. Two adults had no further skin involvement after commencing therapy, but in the remaining five patients new lesions continued to appear for as long as three to four days. Crisis of temperature was not observed; defervescence was routinely by lysis. Hospital stay was not shortened for any patient. Two adults and one eight-year-old child voluntarily admitted subjective improvement and decrease in burning and pruritus of skin lesions. The study was concluded because the morbidity of the disease was not otherwise grossly affected and because four patients found the oral administration of aureomycin to be intolerable with nausea, vomiting, and diarrhea reaching severe proportions. All intramuscular injections of aureomycin were accompanied by pain, not relieved by simultaneous administration of procaine.

One feature of varicella and its treatment with aureomycin seems important. Successful in vivo antiviral activity may be dependent upon size of virus. Presumably, the virus of varicella is relatively large, not unlike that of the virus of lymphogranuloma venereum, in which disease aureomycin has proved to be of value.[8] Aureomycin has also appreciably altered the clinical courses of other infections caused by viruses of large particulate size, such as the rickettsial group of infections and psittacosis.[8–10] Measles and influenzal viruses on the other hand are small, and in these infections no demonstrable effect by aureomycin has been observed.

Summary

Eight patients with varicella have been treated with aureomycin administered parenterally and orally. In the single patient with a complicating pneumonia, prompt and impressive response followed the combined use of aureomycin, penicillin, streptomycin, and convalescent serum. The remaining seven patients, all with uncomplicated varicella, were treated within thirty-six hours of the first pox. No appreciable benefit followed. It is not claimed that aureomycin is a specific antiviral agent in varicella, but its use in fulminating and complicated cases is warranted. Responses in the less seriously ill patients might have been better had larger doses been used.

ADDENDUM: Through the courtesy of Dr. H. W. Whiteley, Jordan, New York, a second adult with a typical clinical picture of pneumonia with chickenpox was treated with aureomycin. The patient was a thirty-year-old farmer who developed an acute, overwhelming pneumonia within eighteen hours of his first pox eruption. Like the above case, this patient was morbidly ill within a few hours of the onset of the disease, there being such an extraordinarily severe degree of respiratory distress that survival seemed unlikely. With 3 Gm. of aureomycin administered daily by mouth, there was a prompt crisis in temperature from 105 F. to normal in a few hours. Thereafter there was reasonably rapid resolution of the pneumonia over a four-day period. Once again it would appear that aureomycin is most assuredly warranted in the presence of chickenpox with severe pneumonia.

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EXPERIENCES WITH THE HUGGINS TEST

Samuel Dvoskin, M.D., and John S. LaDue, M.D., New York City

(*From the Pack Medical Group*)

HUGGINS, Miller, and Jensen have recently described a test for the detection of cancer based on the degree of inhibition of serum protein heat coagulation by iodoacetic acid.[1] They reported that in a series of 85 active cancer cases the iodoacetic acid index (I. A. I.), which relates the amount of acid needed to inhibit heat coagulation of the serum proteins and the serum protein concentration, fell below 9.0. The I. A. I. in a small group of patients without cancer or that of a group of patients with pulmonary tuberculosis or inflammations were also under 9.0.

Because this test appeared to be of possible value in screening patients for the presence of malignant tumors, it was performed in a preliminary series of nonselected patients. The test was performed exactly as described by Huggins *et al.* Total serum proteins were determined by the Micro-Kjeldahl method. The I. A. I. was calculated in accordance with the formula, μmIA × 4/(Gm. Prot./100 cc.), described by Huggins *et al.* The diagnoses in all patients with cancer were established by surgical excision and pathologic examination of the specimens.

A series of 81 patients were tested, and the results are summarized in Table 1. Of greatest interest is the group with proved active malignant neoplasms. Of a group of 21 patients, only five patients had an I. A. I. under 9.0, while the other 16 cases had I. A. I. ranging from 9.9 to 14.4 with a fairly uniform distribution within this range (Table 2).

In the group in which the test was performed after the cancer had been resected and in which there was no clinical or x-ray evidence of recurrence, the I. A. I. was under 9.0 in two patients and over 9.0 in 14 patients (Table 1). Of the 44 patients with no evidence of cancer, the I. A. I. was under 9.0 in only five patients (Table 1). Whether these patients will prove to have malignant tumors remains to be determined by careful follow-up examination.

Conclusions

The Huggins test was performed on the sera of 81 patients. In our experience the test as described seems to be useless for screening patients for the presence of malignant tumors, since it was negative (over 9.0) in 16 to 21 patients with proved malignant disease. The distribution in these patients paralleled that observed in 39 control patients not suffering from cancer.

We wish to acknowledge the technical assistance of Miss Constance Brooks, Miss Georgian Newman, and Miss Fern Ochs.

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TABLE 1.—I. A. I. in Cases Tested

Type of Case	Number	Average I. A. I.	Range
Cancer			
Present			
I. A. I. under 9.0	5	7.7	6.6 to 8.2
I. A. I. over 9.0	16	11.5	9.9 to 14.4
Resected, no evidence of recurrence			
I. A. I. under 9.0	2	8.6	8.3 to 8.9
I. A. I. over 9.0	14	11.2	9.2 to 13.3
Benign tumors and other diseases			
I. A. I. under 9.0	5	8.4	7.8 to 8.6
I. A. I. over 9.0	39	11.7	9.6 to 14.5

TABLE 2.—Patients with Cancer with an Iodoacetic Index over 9.0

Diagnosis	How Established	When Established	Date of I. A. I.	I. A. I
Adenocarcinoma of perigastric node	Biopsy at laparotomy	2/21/49	5/12/49	9.9
Recurrent carcinoma of breast	Excision of axillary ulcer	7/8/49	6/1/49	10.0
Metastatic melanoma	Melanoma choroid; metastases to neck and liver (clinical)	3/2/48	5/12/49	10.2
Reticulum cell sarcoma of skin	Biopsy	6/22/49	6/15/49	10.2
Squamous cell carcinoma of parotid gland	Radical resection	3/11/49	5/13/49	10.3
	Extensive local recurrence	5/16/49		
Carcinoma of breast	Radical mastectomy	11/27/46	5/13/49	10.4
	Extensive bone metastases	3/25/49		
Squamous cell carcinoma of mouth	Radical neck resection	6/2/49	5/24/49	11.2
Carcinoma of breast	Radical mastectomy	3/12/49	5/12/49	11.6
	Metastases to bones	5/14/49		
Metastatic carcinoma of abdomen	Biopsy of omentum	6/3/49	5/23/49	11.7
Carcinoma of esophagus	Exploratory thoracotomy	7/6/49	6/21/49	11.8
Salivary gland carcinoma	Resection	6/10/49	6/8/49	11.8
Basal cell carcinoma of lip	Resection	5/28/49	5/18/49	12.4
Fibrosarcoma of chest wall	Resection	6/17/49	6/8/49	12.5
Adenocarcinoma of rectum	Resection	6/29/49	6/13/49	12.6
Recurrent carcinoma of cervix	Biopsy, radiation therapy	9/1/49	5/28/49	13.3
	Recurrence by biopsy	5/28/49		
Squamous cell carcinoma of esophagus	Resection	5/27/49	5/20/49	14.4

CAUSE AND PREVENTION OF SOME UNTOWARD REACTIONS FROM MERCURIAL DIURETICS

ISIDOR COHN, M.D., Brooklyn, New York

(*From the Department of Medicine, Jewish Hospital of Brooklyn*)

TOXIC and even fatal reactions due to mercurial diuretics have been noted many times, although the incidence is relatively infrequent when one considers the great number of injections given to so many patients without mishap, and there is an extensive discussion of the subject in the literature.[1-3] Several mechanisms have been implicated as causative factors with some suggestions as to prevention and treatment. A new approach to prevention in cases apparently due to drug hypersensitivity is presented in this report of four cases.

Most, if not all, of the fatalities, have followed intravenous administration, usually within a short interval after injection. This has raised the question as to whether it is the mode of administration rather than any direct effect of the mercurial itself which is the cause of the toxic reaction. This "speed shock" theory is proposed by Hyman.[4]

There is definite laboratory and clinical evidence that a direct action on the heart muscle is responsible for many toxic reactions. Salant and Kleitman observed ventricular fibrillation in dogs after intravenous injection of inorganic mercury.[5] Other investigators found that intravenous injection of mercurial diuretics in dogs produced T wave changes, ventricular tachycardia, ventricular fibrillation, and death.[1,6,7] In two of the fatal cases described by Volini, Levitt, and Martin, ventricular fibrillation was observed, and in a nonfatal case of a series reported by Ben-Asher there were changes in the S-T segment, followed by ventricular premature systoles and ventricular paroxysmal tachycardia.[8,9]

Disturbances of water and electrolyte balance have also been implicated as causative factors in these untoward reactions. Blumgart found increased excretion of chloride, sodium, and potassium in the urine with mercurial diuresis and decrease in serum chloride but no change in serum sodium.[10] On the other hand, Chabanier, Lebert, and Lumiere found a decrease in both chloride and sodium in the blood.[11] Poll and Stern believe that the toxic reactions are due to sodium loss, similar to the acute collapse seen in Addison's disease.[12] Kieth, Barrier, and Whelan also found increased urinary sodium but inconstant and unimportant changes in concentration of inorganic ions in the serum.[13] These conflicting findings may be correlated and explained by the fact that two mechanisms are involved, the mercurial diuretic causing a decrease in tubular reabsorption with no change in glomerular filtration, and dehydration with the directly opposite effect. Hence, chemical findings will differ according to which mechanism is predominant at the time of observation.

Dehydration itself may cause distress, as Lyons, Avery, and Jacobson have shown that this is accompanied by a fall in plasma volume, venous pressure, and pulse pressure and increased serum protein and hematocrit reading.[14] Marked hemoconcentration with diminished return to the heart and decreasing cardiac output may cause vascular collapse and death.

Another theory invoked to explain the mechanism of these reactions is anaphylaxis. Greenwold and Jacobson considered this probable, because in some cases fatality did not occur until after one or more injections.[15] They believe that the patient may have been sensitized to the mercury ion by the previous administration. This theory, of course, does not account for reactions following the first injection.

Drug hypersensitivity would seem to be the causative factor involved in four cases recently observed. In all, the symptoms occurred soon after intramuscular administration of Mercuhydrin sodium, in one case within fifteen minutes. These consisted of general discomfort, weakness, nausea, sometimes vomiting, sweating, giddiness, and in one case, a diffuse erythematous eruption followed by moderate exfoliation. The time interval should rule out metabolic disturbances or dehydration as causes, and since the intravenous route was not employed, speed shock or cardiac involvement (none observed clinically) cannot be implicated. By exclusion, then, and by the character of the symptoms and the preventive measure used, one may assume that these reactions were due to drug hypersensitivity.

Because of urgent need of diuresis in one patient with advanced congestive heart failure and the assumption that previous reactions to a mercurial diuretic were allergic in nature, an antihistaminic drug, Pyribenzamine, was given before injection of Mercuhydrin intramuscularly, and three times more during that day. There were no untoward sequelae and a good diuretic effect. The same regime was then followed in the other three patients with similar results. One patient, however, who had had several episodes of acute left heart failure with pulmonary edema, died in such an attack twelve hours after the second administration of Mercuhydrin with Pyribenzamine. In view of the previous attacks of decompensation, the relationship of the injection to the final attack, whether causative or coincidental, cannot be definitely determined.

Patch tests with the mercurial were entirely negative in three cases and elicited only erythema, but no wheal formation, in the fourth. This finding does not necessarily negate an hypothesis of drug sensitivity, since in many such instances of systemic rather than cutaneous allergic disturbance skin tests are negative.

Case Reports

Case 1.—This seventy-two-year-old man had a severe attack of coronary occlusion in December, 1946. In the following year, he had several attacks of acute left ventricular failure with pulmonary edema, relieved by morphine sulfate, phlebotomy, and oxygen. There were persistent basal rales and exertional dyspnea, despite maintenance dosage of Digitoxin, 0.2 mg., and ammonium chloride. Mercuhydrin was refused by the patient after several intramuscular injections, because of nausea, vomiting, weakness, and malaise, which appeared about an hour after administration. A medical consultant insisted on the need for mercurial diuretic and had him admitted to Beth Israel Hospital in New York City for this purpose, but treatment had to be discontinued because of the same reaction. The patient was fairly comfortable for a year, but then there was a marked increase in basal rales and suggestion of left pleural effusion. It was deemed the lesser of two evils to administer Mercuhydrin again, but, on the assumption of an allergic basis for the untoward reaction, Pyribenzamine, 50 mg., was given before injection and three times during that day. There was adequate diuresis and no ensuing discomfort. The same procedure has been followed since then, when required, with the same results. Patch test with Mercuhydrin was negative.

Case 2.—This woman of fifty-three, suffering from hypertensive cardiovascular disease, had several episodes of acute left heart failure with pulmonary edema. Mercuhydrin caused nausea, vomiting, weakness, tachycardia, and pruritus. Preliminary and coincidental medication with Pyribenzamine enabled subsequent injection of mercurial with little or no ill effect. Patch test was negative.

Case 3.—This man of seventy-four, afflicted with psoriasis for many years, was seen in congestive failure as a result of mitral disease and auricular fibrillation, with basal rales, slight left pleural effusion, hepatomegaly, and ankle edema. Treatment with Digitoxin, ammonium chloride, and Mercuhydrin produced copious diuresis and clinical improvement. After several injections, however, he noted marked weakness, nausea, and giddiness, occurring about fifteen minutes after administration. With Pyribenzamine used as above, there was no further distress. Patch test was negative.

Case 4.—This man, seventy-three years old, hypertensive, had had several attacks of severe precordial pain. Electrocardiogram showed definite evidence of myocardial disease but no confirmation of coronary occlusion. There was also a dermatitis of the legs of many years duration. He had suffered several episodes of acute left ventricular failure. A mercurial diuretic had caused such severe discomfort, nausea, vomiting, aggravation of preexisting rash, and generalized erythematous eruption, with some later exfoliation, that further use was regarded with apprehension by patient and physician. However, increasing pulmonary congestion necessitated this step, but Pyribenzamine was administered concomitantly. Only slight nausea was complained of, and the procedure was repeated five days later but that night pulmonary edema again occurred, this time with fatal termination.

Summary and Conclusions

Drug hypersensitivity may be considered a cause for some cases of untoward reactions from mercurial diuretics.

Symptoms may be prevented by the preliminary and concomitant administration of an antihistaminic preparation.

1623 Avenue P

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Anger may continue with you for an hour, but it ought not to remain with you for a night.—Anonymous

MASSIVE HEMORRHAGE COMPLICATING PERFORATED PEPTIC ULCER

Philip Ladin, M.D., New York City

(From the Surgical Services of Lebanon and Gouverneur Hospitals)

MASSIVE hemorrhage occurring with, or in the immediate postoperative period of, a perforated peptic ulcer is generally believed to be rare. A search of the literature confirms this belief. Very little has been written in English, but a few reports have appeared in French and Spanish. Two of the cases herein being reported survived, while all other reported cases found in the literature were mortalities.

Notwithstanding the paucity of reports, there is a wide divergence on frequency. Judine reported one case out of 116 perforated ulcers.[1] Lang reported two cases in a series of 152 perforated ulcers.[2] Harrison and Cooper studied 57 consecutive cases of acute perforation of peptic ulcers and found four who had hemorrhage as well.[3] On the other hand, Finsterer studied 1,262 ulcer deaths and found only four due to perforation and hemorrhage, according to Novaro.[4] Carnot and Marre reported a case of perforation of an ulcer followed five days later by massive hemorrhage.[5] Autopsy in their case revealed four ulcers, two of which were perforated. Fotheringham and Orsi reported a case that perforated while being treated for bleeding.[6] Behrend makes the statement that he has never seen perforation and hemorrhage occur together.[7] Hinton states ". . . hemorrhage and perforation are never associated in the same case."[8]

As would be expected when two such serious conditions occur together, the combination of massive hemorrhage and perforated ulcer is a lethal one. All cases reported in the literature were fatalities.

There are many reasons given to support the dictum that bleeding ulcers do not perforate and that perforating ulcers do not bleed. Most perforating ulcers are anterior, while most bleeding ulcers are posterior. The anterior wall of the pyloric antrum is relatively avascular, which predisposes both to perforation and lack of bleeding. The gastric and duodenal secretions have been thought to aid in sealing small vessels.[7] The major vessels that produce massive hemorrhage are around the posterior wall of the duodenum, while the thickening and scarring produced by an old ulcer tend to constrict vessels and inhibit bleeding.

Case Reports

Case 1.—J. S., a fifty-six-year-old white male, was admitted to Lebanon Hospital, on August 26, 1940, with a chief complaint of severe epigastric pain of three and one-half hours duration. This started immediately after the drinking of a glass of milk, at which time he was suddenly seized with severe pain and chills and perspired freely. The pain was primarily in the epigastrium and the right upper quadrant and was not associated with vomiting.

For the past ten years the patient had been having abdominal cramps after meals which were relieved by vomiting. He had been on a diet and had been given Sippy powders. He had never before had a pain similar to the present seizure.

On admission his temperature was 100 F., pulse 100, hemoglobin 88 per cent, red blood count 5,300,000, and white blood count 23,900 with 75 polymorphonuclears of which 12 were bands. Physical examination revealed an acutely ill man in great pain. He appeared slightly cyanotic, and his skin was cold and sweaty. The abdomen was very tender and rigid, especially in the right half. The rigidity was boardlike. There was definite rebound tenderness throughout the abdomen. A diagnosis was made of a perforated peptic ulcer, and the patient was operated upon.

A right upper rectus incision was made. A moderate amount of free gastric contents was found in the upper abdomen, and a small pinpoint perforation covered by a small piece of adherent omentum was found on the anterior surface of the duodenum just beyond the pyloric ring. The opening was closed with a purse-string suture of catgut, and this was reinforced by two overlapping linen sutures. A section of omentum was then sutured over the perforation with two interrupted number 00 chromic catgut sutures. One cigarette drain was placed near the foramen of Winslow and one in the right lateral gutter. The peritoneum was closed with continuous chromic number 2 catgut, the muscle with interrupted sutures of plain catgut, the fascia with interrupted sutures of chromic catgut number 3, and the skin with interrupted sutures of black silk.

He developed a postoperative bronchopneumonia (pneumococcus type I) from which he was recovering when he suddenly had a massive hemorrhage and vomited blood fifteen days postoperatively. This was associated with a fall in blood pressure and hemoglobin progressively to 38 per cent and the red blood count to 1,880,000. The patient was placed on large doses of vitamin K, shock position, and morphine. He expired eighteen days postoperatively with signs of exsanguination and shock.

An autopsy was done and reported as follows: On opening the markedly dilated stomach the contents were found to consist almost entirely of blood mixed with gastric contents. Immediately upon entering the duodenum a large ulcer along the posterior wall was found. This ulcer measured $^1/_2$ by 1 inch in area and $^3/_8$ inch in depth. In the center of the base of the ulcer, there was a sclerotic artery which projected about $^1/_8$ inch above the surface of the base. The proximal edge was overhanging and the distal edge sloped. Directly opposite on the anterior wall, there was an area, 1 cm. in diameter, which was smooth, grayish, and slightly depressed. This area had the appearance of a healed ulcer. On the peritoneal surface of the duodenum over this area a catgut ligature could still be seen. Pathologic diagnosis was exsanguination and shock, chronic ulcer, posterior, duodenal, with acute hemorrhage, and acute ulcer of anterior duodenal wall with healed perforation.

Case 2.—M. S., a fifty-six-year-old white male, was admitted to Gouverneur Hospital on March 8, 1947, with a chief complaint of severe epigastric pain of five hours duration. The patient had been suffering with mild epigastric pains associated with repeated episodes of nausea and vomiting for the past three days. Five hours before admission this pain became severe and steady, but no nausea or vomiting was present. No feeling of faintness was present, and the patient had a normal bowel movement the same day. Past history revealed similar but mild attacks during the past eight months which were relieved by alkalis.

Physical examination on admission revealed a thin white man appearing acutely ill and complaining of severe abdominal pain. The abdomen was rigid throughout but most marked in the upper and right sides. Rebound tenderness was present all over the abdomen. There was no obliteration of liver dullness. Rectal examination showed marked tenderness and a boggy sensation in the cul-de-sac. A flat x-ray plate of the abdomen was taken, and no air was seen under the diaphragm. On admission his temperature was 101.4 F., pulse 120, blood pressure 134/76, white blood count 11,800 with 90 per cent polymorphonuclears. Urine examination showed a trace of albumin. A diagnosis was made of a perforated peptic ulcer, and the patient was prepared for operation with intravenous fluids, penicillin, and the insertion of a Levine tube. A large amount of dark blood was obtained from the gastric tube.

The abdomen was opened through a transverse incision, cutting across the right rectus muscle. A large amount of dark, bloody, gastric fluid escaped, but no perforation was found anteriorly. The incision was enlarged by cutting through the left rectus muscle and extending it to the left costal margin. The gastrocolic omentum was opened and the stomach everted. A perforated gastric ulcer was found near the lesser curvature. This was closed with two rows of atraumatic silk Lembert sutures. The fluid was aspirated and the abdomen closed in layers, without drainage, with interrupted number 00 chromic catgut throughout and vertical mattress sutures of silk to the skin.

Postoperatively he was given 500 cc. of blood and penicillin and fluids by mouth. A Meulengracht diet was started on the first postoperative day. Because of the large amount of blood found in the stomach and abdominal cavity, the blood count was repeated and was reported as follows: hemoglobin 5.0 Gm. and red blood cells 3,000,000. The patient was out of bed two days postoperatively and started on a soft diet on the third day.

On March 15, eight days postoperatively, the patient had a convulsive seizure and passed a large tarry stool which was followed by more massive, involuntary, tarry stools. He appeared to be weak and pale; pulse was 128, and thready, and blood pressure was found to be 80/30. A blood count showed hemoglobin 5 Gm. and red blood cells 1,000,000. The convulsion was believed to be due to cerebral anemia, and it was obvious that the patient had suffered a massive gastrointestinal hemorrhage. A continuous blood transfusion was started, and oxygen was given, together with morphine, cortate, and other supportive measures. The patient received 1,000 cc. of blood that day. He appeared to rally, and his condition improved. His blood pressure gradually rose to 120/80.

On March 17, two days after the massive hemorrhage, the patient sneezed and "felt something give." His dressing was wet, and an examination revealed a wound dehiscence with several loops of small bowel on the abdominal wall. Attempts to replace this through the incision while the patient was in bed met with failure, and he was taken to the operating room. The wound was found to be completely open and was closed with through-and-through sutures of number 4 black silk. He was given another 1,000 cc. of blood.

Postoperatively he developed a wound infection which gradually cleared and healed by secondary union. The patient was discharged May 5, 1947, apparently well with hemoglobin and red blood count within normal limits. He had received a total of 4,000 cc. of blood.

Case 3.—S. H., a forty-three-year-old white male, was admitted to Lebanon Hospital on July 3, 1948, with a chief complaint of severe epigastric pain of three hours duration. History revealed that he had chronic abdominal pains for the past fifteen years and that he had been put on an ulcer diet without relief. The present illness started with severe epigastric pain which radiated to the right shoulder. There was no nausea or vomiting. The patient had taken a large dose of Alka-Seltzer and following this was seized with severe, generalized abdominal pain which had persisted.

Physical examination revealed a patient in acute distress with the abdomen rigid and boardlike throughout. The skin was pale, cold, and sweating. His blood pressure was 120/80, temperature 101.4 F., and pulse 96. Tenderness was present in the epigastrium and also in the left lower quadrant along with rebound tenderness. Rectal examination was nonrevealing. Blood count on admission showed hemoglobin 15.7 Gm., white blood count 7,750, with a differential of 43 polymorphonuclears, 33 bands, 18 lymphocytes, 5 monocytes, and 1 basophil. Urine examination was normal. A diagnosis of perforated peptic ulcer was made, and the patient was prepared for operation with intravenous fluids, sedation, and penicillin.

A right upper rectus incision was made, the rectus muscle split, and the peritoneal cavity entered. A very large amount of turbid fluid containing pieces of fibrin and solid matter was found. About 2 quarts of material were aspirated. A perforation was found at the first portion of the duodenum anteriorly. The opening was closed with four through-and-through sutures of number 00 chromic catgut on an atraumatic needle, and a free piece of omentum was tied over the opening by these sutures. The abdomen was closed in layers without drainage, using continuous number 00 chromic catgut to the peritoneum and interrupted figure-of-eight sutures of number 00 cotton to the anterior rectus fascia. The wound was thoroughly irrigated with saline, and clips were applied to the skin. The patient made an uneventful recovery and was out of bed on the first postoperative day. Wangensteen suction was discontinued, and fluids by mouth were permitted after twenty-four hours. On the fourth postoperative day the temperature and pulse were normal.

On the ninth postoperative day, the patient suddenly became extremely pale and complained of severe weakness. His pulse rose to 170, and blood pressure fell to 110/60. The patient was pale, nervous, and apprehensive. This was followed one hour later by a massive bowel movement of red and black material. A diagnosis was made of massive gastrointestinal hemorrhage. Hemoglobin was 7.7 Gm., and red blood count was 2,400,000. The patient was immediately given 1,000 cc. of blood by continuous drip, oxygen, morphine, and was placed in shock position.

The following day the hemoglobin had dropped to 6.5 Gm., and the red blood count was 2,000,000. The hematocrit was 18 per cent. Another 1,000 cc. of blood were given. His pulse remained rapid, and continuous blood infusion was maintained. The patient had several episodes of vomiting large amounts of blood. His condition appeared critical for forty-eight hours, at which time the pulse slowed down and he appeared to improve. The hemoglobin rose to 8.7 Gm. and the red blood count to 2,600,000; the hematocrit was 31 per cent at this time. Four days after the acute episode, the patient having received 4,500 cc. of blood, the hemoglobin rose to 13.6 Gm., and the red blood count was 4,350,000.

From then on the patient continued to improve and was discharged twenty-five days after his first admission and sixteen days after his massive hemorrhage. At the time of discharge his hemoglobin was 14 Gm. and red blood count 4,850,000. This patient was seen at follow-up one year later and was apparently well and without complaints.

Comment

Slight amounts of blood in the vomitus are commonly seen in perforated ulcer, but massive hemorrhage is not. There are many factors that explain the absence of hemorrhage associated with perforation. How, then, do these cases occur? When we consider that about 20 per cent of all ulcer cases show the presence of two or more ulcers on further study or at autopsy, it is easy to picture two separate ulcers: one that bleeds and one that perforates. The autopsy findings in the reported cases, as well as the one reported here, bear out this explanation. Inasmuch as bleeding and perforation are considered signs of activity of an ulcer, keeping food from the stomach should allow other ulcers that may be present to progress. Since many patients are treated for gastrointestinal hemorrhage by starvation and many postoperative patients are kept for various periods of time with empty stomachs, it is surprising that more complications of this sort do not occur. This should be considered further argument for the Meulengracht or feeding treatment for bleeding ulcers. By the same token it would seem advisable to start feeding, especially with antacids and proteins, as soon as possible after closure of perforated ulcers. The importance of massive blood transfusions in the treatment of massive hemorrhage is illustrated by the last two cases. The first patient undoubtedly died of exsanguination. Blood was withheld in this case, because of the fear that it would raise the blood pressure and "blow out the clot." The two patients who survived were under the care of the author. They were given massive amounts of blood in the belief that the major treatment for severe blood loss should be adequate blood replacement. There is no adequate evidence to support the belief that giving blood causes a clot to "blow out." The latter two cases appear to be the first ones reported that have had both perforation and massive hemorrhage and still recovered.

36 Central Park South

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SEVEN CASES OF HEMOPHILUS INFLUENZAE MENINGITIS SUCCESSFULLY TREATED WITH STREPTOMYCIN AND SULFADIAZINE

G. F. Robertson, M.D., and G. C. Graham, M.D., Hempstead, New York

(*From the Departments of Medicine and Pediatrics, Meadowbrook Hospital*)

UNTIL the last decade the mortality in influenzal meningitis approached 100 per cent. With type specific serum and the sulfa drugs this high fatality rate was reduced. In more recent years an outstanding gain in the therapy of this serious disease has been the combination of streptomycin with sulfadiazine. The following report reflects this gain and illustrates the present brighter outlook for those afflicted with this form of meningitis.

In the six-month period between October, 1948, and March, 1949, seven patients with meningitis caused by Hemophilus influenzae, type B, were admitted to Meadowbrook Hospital. Five of the patients had had a prodromal upper respiratory infection or otitis media for a period ranging from two days to four weeks prior to the onset of the acute symptoms. The acute symptoms were present for only a few days before admission and consisted in most cases of fever and vomiting. Moderate or marked nuchal rigidity was present in all seven, while in six there was inflammation of the throat or ear drums, or both. The average temperature on admission was 102.5 F.

Examination of the spinal fluid revealed an elevated cell count, predominantly polymorphonuclear leukocytes, and an elevated protein in all cases. Likewise, in all cases H. influenzae, type B, was identified on both smear and culture. The time required to establish the diagnosis after admission varied from forty minutes to six hours, with an average of two and six-tenths hours.

Six patients received two intrathecal injections of 25 or 50 mg. of streptomycin, and one received three intrathecal injections. All seven were given intramuscular streptomycin as well and oral or subcutaneous sulfadiazine. A uniform and specific dosage based on body weight was not employed. In fact, two patients (Cases 4 and 5) who were older and heavier received only 1 Gm. of streptomycin in twenty-four hours in divided doses at six-hour intervals, while the first three smaller patients received 1.5 to 2.0 Gm. in divided doses in the twenty-four-hour period. The lower dosage appeared to be equally effective. The dosage of sulfadiazine was based on the attainment of an adequate blood level, i.e., 12 to 15 mg. per cent, and seemed to depend as much on absorption, fluid intake, and output as on dosage.

It was felt that smaller doses of both streptomycin and sulfadiazine might have been effective and that both drugs might safely have been discontinued sooner. This applied in two cases in which a febrile drug reaction was suspected.

Results

In all cases there was a satisfactory response to treatment, the average febrile period being four and four-tenths days.

All seven patients made a complete recovery and were discharged after an average stay in the hospital of thirteen and seven-tenths days.

Comment

The advisability of employing the intrathecal route of administration of streptomycin in the treatment of influenzal meningitis has been questioned recently by a number of investigators on the ground that there is undue risk, not only from the mechanical standpoint, but also from the irritative and allergic properties of the drug. Hoyne and Brown state that intrathecal therapy is not required in this disease.[1] However, if care is exercised in administration and the number of instillations is reduced, the risk can be greatly decreased, and with the current use of a more purified form of streptomycin the irritative and allergic phenomena also are diminished.

Intrathecal streptomycin assures an adequate level of drug in the spinal fluid. When it is combined with intramuscular streptomycin and oral or subcutaneous sulfadiazine, it seems to provide the best prognosis in a disease which still carries with it a grave threat to life.

Summary

Seven cases of influenzal meningitis are presented. All received two or three intrathecal injections of streptomycin as well as intramuscular streptomycin and sulfadiazine. There was good clinical response in all, with 100 per cent recovery.

Addendum: Evidence has been obtained recently which suggests that aureomycin may currently be the antibiotic of choice in meningitis due to H. influenzae, type B.

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POLYAMINE ANION EXCHANGE RESIN IN THE MANAGEMENT OF PEPTIC ULCER

Otto M. Bergen, M.D., and Abraham Greenberg, M.D., New York City

(From the Department of Internal Medicine of the Good Samaritan Dispensary and Hospital)

CLINICIANS have long been aware of the possibilities of side-effects likely to be encountered with conventional antacids. This hindrance to prolonged or intensive antacid therapy may be eliminated by utilizing the acid adsorbent properties of a polyamine anion exchange resin, a substance insoluble in the gastrointestinal tract. While effectively deacidifying the gastric contents by binding acid molecules, this resin releases its adsorbed acid in the small intestine. Thus, there is no interference with acid-base equilibrium or mineral balance. Urinary tract alkalinization does not occur. In addition, this agent inactivates pepsin and does not stimulate acid rebound. Further advantages are absence of diarrhea or constipation and noninterference with absorption of thiamine, riboflavin, or ascorbic acid.

Polyamine anion exchange resin permits unusual freedom in prolonging duration of treatment and in increasing the frequency of its administration and the amount prescribed without hazard. This feature of resin therapy facilitates management of peptic ulcer patients by allowing the physician to make appropriate adjustments for effective control of pain. The symptomatic relief thus obtainable, while a worthy clinical objective per se, has important therapeutic implications. Since ulcer pain is considered to be due to irritation of defective mucosa by hydrochloric acid, freedom from pain is indicative of conditions most conducive to repair of the lesion.

An effective antacid which could safely be prescribed practically without limitation for prolonged intervals was of extreme interest to the authors, particularly in management of patients whose adherence to a prescribed dietary regime was considered unlikely. Ten ulcer patients from private and dispensary practice were selected for study. They were treated with Resinat, an antispasmodic tablet, and chronic ulcer diet.* Two cases are described, and the salient features of eight cases are summarized in Table 1.

TABLE 1.—Summary of Cases Treated

Case	Age	Sex	Duration of Complaint	Period of Observation	Maximum Daily Dosage (Gm.)	Results
A. M.	35	F	15 years	1 year	4	Good
F. E.	24	M	3 months	15 months	4	Good
J. L.	58	M	1 week	10 months	4	Good
I. B.	40	F	1 year	3 months	3	Fair
A. G.	71	M	20 years	1 year	4	Good
M. G.	43	M	2 years	3 weeks	3	Good
J. H.	66	M	2 years	2 months	4	Fair
C. P.	52	F	2 years	15 months	8	Fair

Case Reports

Case 1.—M. B., a thirty-six-year-old white male, had had intermittent epigastric pain for ten years, relieved by food and particularly milk. Due to excessive milk intake, he had gained 100 pounds in the previous two years. In the six weeks prior to his first visit, his pain had become constant and severe, and he had been drinking up to 6 quarts of milk daily.

Abdominal distention and fingertip tenderness in the midepigastrium were observed on examination. X-ray revealed a niche at the lesser curvature in the prepyloric region with mucosal swelling and a duo-

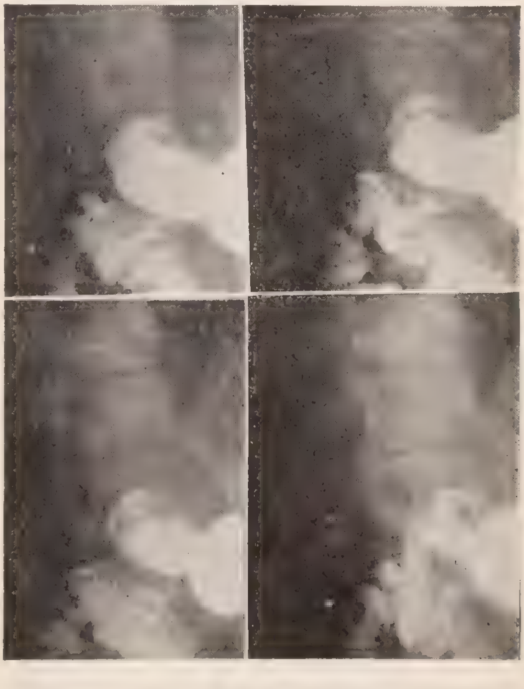

Fig. 1. Case 2—Before treatment, persistently deformed duodenal bulb which failed to fill completely with barium.

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* Acknowledgment is made to the Medical Research Department of the National Drug Company, Philadelphia, for liberal supplies of Resinat.

denal cap with a tendency to hammerhead deformity.

He was treated for six weeks with conventional antacids and diet without relief. He continued to drink up to 6 quarts of milk daily, and his weight rose to 300 pounds.

On September 29, 1947, Resinat, 0.5 Gm. every two hours, was prescribed with no benefit. The dose of Resinat powder was then increased to 3 Gm. every two hours, day and night. On this dosage of 36 Gm. daily he obtained rapid relief of symptoms.

At the present writing, the patient is on a maintenance dose of 3 Gm. three times daily and has lost 100 pounds as a result of the prescribed diet. X-ray on April 29, 1948, showed the niche in the prepyloric region still present. A subsequent x-ray on January 1, 1949, did not show the prepyloric ulcer previously visualized. The hammerhead deformity of the duodenal cap persisted.

Case 2.—W. B., a well-developed and well-nourished, twenty-six-year-old white male, complained of intermittent upper abdominal pain of seven years duration, with exacerbations lasting one to one and one-half months and remissions of four to five months. The pain was described as "hunger" pain and occurred about one hour after meals and at two or three o'clock in the morning. The pain was aggravated by fried or spicy foods and relieved by milk, sodium bicarbonate, and Amphojel.

Physical examination revealed marked point tenderness in the abdomen 3 inches above the umbilicus in the midline. X-rays on October 16, 1948, revealed a persistently deformed duodenal bulb which failed to fill completely with barium (Fig. 1). Resinat powder, 1 Gm., was prescribed after each meal and at bedtime and antispasmodic tablets before meals and at bedtime. One week after therapy was begun the patient was asymptomatic.

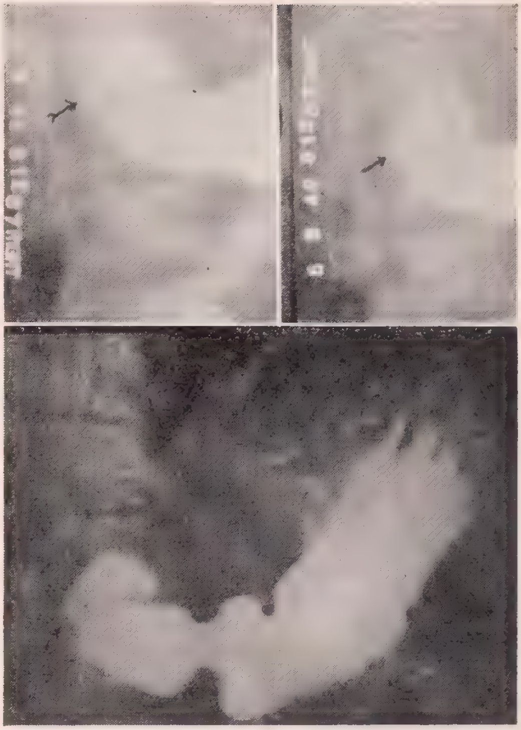

Fig. 3. Case 2—After five months treatment, duodenal cap fills completely.

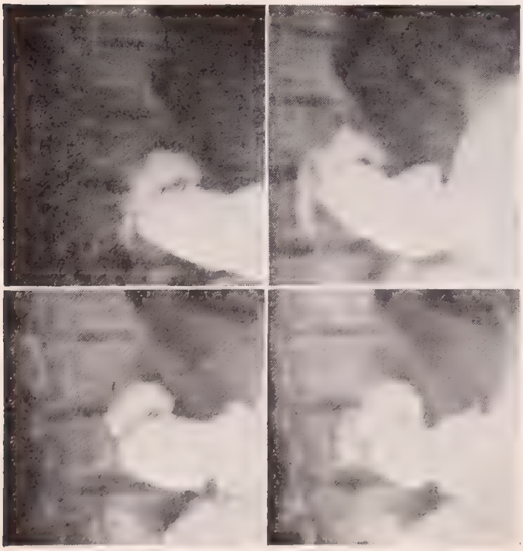

Fig. 2. Case 2—After three months treatment, duodenal cap fills nearly completely.

X-rays after three months of therapy showed that the duodenal cap filled much more completely than in the first films, although persistent filling defects were still noted (Fig. 2). The patient continued treatment and remained asymptomatic despite many violations of his dietary regimen. When x-rayed again after five months of treatment, the films showed that the duodenal cap now filled completely (Fig. 3).

Summary and Conclusions

Favorable results in ten cases of peptic ulcer are reported with the use of polyamine anion exchange resin. The nature and action of this agent are such that relief of pain is readily obtained without adverse effects. Its advantages over conventional antacids permit unusual freedom in increasing dosage and frequency of administration.

Thanks are due to Mr. Elmer E. Simmons of the Good Samaritan Dispensary for technical assistance in radiography and for preparation of photographs.

Case Reports

MALROTATION OF THE COLON

Thomas C. Case., M.D., New York City

(*From the Surgical Service of St. Vincent's Hospital*)

THE incidence of malrotation of the colon is infrequent; however, when encountered and recognized, the surgery necessary for the condition should be definitive. A brief review of the history and management in the following case will illustrate the point.

Case Report

I. E., a male, thirteen years of age, was admitted to the hospital on May 29, 1949, complaining of pain in the epigastrium with nausea and vomiting for twenty-four hours prior to admission. The parents informed us that the child had been complaining of recurrent attacks of vague abdominal pain as far back as they could remember, always without vomiting, however. The bowel habits had been irregular with an increasing tendency toward constipation in the past year. The general health of the child had never been normal, and the appetite had always been poor. There were no urinary symptoms or sudden loss of weight.

Physical examination revealed a thin white boy, appearing chronically ill, obviously undernourished, and definitely underweight. The abdomen was soft and not distended with some tenderness and spasm in the right lower quadrant. No masses were palpable. Rectal examination was negative.

The white blood cell count was 9,850 with 67 per cent polymorphonuclears. Temperature was 98.6 F. and pulse 85. Urinalysis was negative.

A laparotomy was performed on the day of admission for appendicitis. The appendix was found in the left lower quadrant and not particularly inflamed, and the congenital bowel abnormality of malrotation of the colon was noted. The appendix was removed and the abdomen closed.

Postoperatively, the patient continued to complain of abdominal pain with vomiting, and the abdomen became progressively distended. A Miller-Abbot tube was introduced into the small intestine, and in spite of satisfactory intubation the abdominal distention increased and the child began to show definite signs of obstruction.

Nine days after the appendectomy an exploratory laparotomy was performed through a long right pararectus incision. The pathology as demonstrated was easily visualized (Fig. 1). There was a volvulus of the distal portion of the small intestine with a recent omental adhesive band, extending from the cecum down to the site of the original incision and compromising the lumen of the small intestine to which it was adherent. This created a closed loop obstruction. The volvulus was untwisted after this adhesion was severed. The thick old broad congenital band, extending from the greater curvature of the stomach near the pylorus over to and encroaching upon the cecum, was then cut, thereby releasing the site of the original obstruction. The abdomen was then closed without drainage, using through-and-through heavy interrupted silk sutures.

Postoperatively, the abdomen became slightly distended in spite of the effective intubation with the Miller-Abbot tube. On the second postoperative day a fecal fistula developed through the original appendectomy incision. On the third day, another fecal fistula appeared at the lower angle of the second operative wound, and the abdominal distension then gradually subsided. The fistulas persisted for

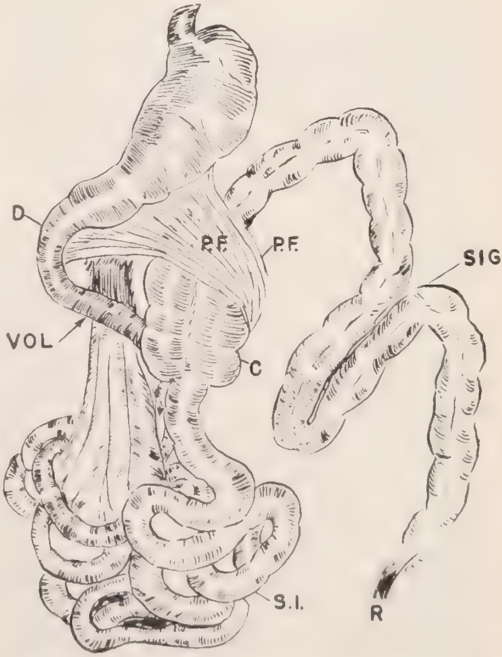

Fig. 1. Schematic drawing of findings at operation: Vol.—first portion of volvulus; D—duodenum; P. F.—peritoneal fold; S—fused sigmoid; C—dilated cecum; S. I.—small intestine; R—rectum.

about four weeks, during which time the bowel movements gradually increased per rectum and the abdominal fistula closed spontaneously.

Immediately after the second operation the patient was given blood, adequate fluids by vein, and nothing by mouth. Penicillin, sulfadiazine, and streptomycin were given to control infection of the wound and the contamination of peritoneal cavity. About the fifth postoperative day the patient was fed by mouth, and this was gradually increased as tolerated.

He was discharged from the hospital about six weeks after admission with the abdominal wounds well healed, normal daily bowel movements, and no abdominal complaints.

Comment

Mild abnormalities in position of the intestine may be present in an individual for a long period of time, only to be discovered during a routine x-ray examination. The condition does not interfere with the health of the individual until the lumen of the bowel becomes compromised. The obstruction which ensues is due either to a volvulus or the obstructing action of the congenital adhesive band, the latter being most often at the duodenum (Fig. 2).

The basic factors in the normal process of bowel rotation have been admirably presented by numerous embryologists. The essential features of the process are divided into three stages. We are principally interested in the second stage of the process at which time the entire midgut returns into the abdominal cavity, and during the process of rotation the ileum occupies the right lower quadrant, while the cecum and ascending colon swing forward in front of the superior mesenteric artery from the left to right and gradually obtain their normal positions on the right side of the abdomen.

To be noted in Figure 1 are the following:

1. The small gut was chiefly to the right of the midline, with the terminal ileum over to the left.

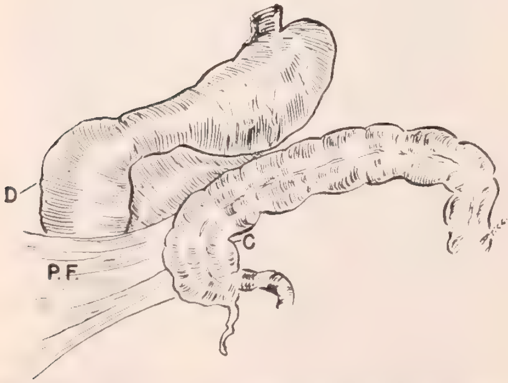

Fig. 2. Schematic drawing showing peritoneal fold (P. F.), duodenum (D), and cecum (C).

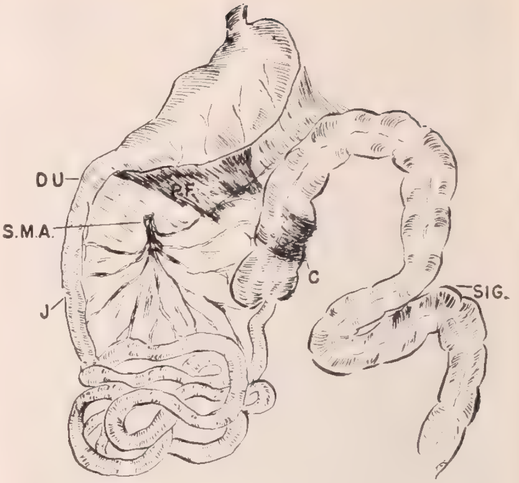

Fig. 3. Schematic representation of organs after operation for release of volvulus and adhesive band: Du—duodenum; J—jejunum; C—cecum; S—fused sigmoid.

2. Duodenum was entirely to the right of the midline and going on directly to jejunum with the superior mesenteric vessels to the left.
3. The terminal ileum crossed the midline to enter the cecum in the left upper quadrant on its right side instead of the usual left.
4. The entire colon was confined to the left side of the abdomen with a fused sigmoid.
5. Entire small intestine was suspended by an extremely narrow and small pedicle, really the duodenocolic isthmus.

The condition thus appears to be an early arrest of the natural progress in development during the second stage of rotation of the intestine in the fetus, i.e., the proximal part of the small intestine never rotated behind the superior mesenteric vessels to occupy its position in the left upper quadrant. The explanation usually offered for this condition is that the abnormality occurs as a result of the umbilical orifice being so large that it exerts no restraining influence on the return of the cecum through this orifice.

The offending adhesive band which usually causes an early obstruction of the duodenum in these cases was not present here (Fig. 2); instead, the obstructing band encircled the distal portion of the cecum as shown in Fig. 1.

Surgery is indicated early in these cases and consists essentially of untwisting a volvulus when present and the complete release of abnormal obstructing adhesions associated with the malrotated colon (Fig. 3).

530 Park Avenue

In a numerous company avoid a long argument.—Anonymous

ACTINOMYCOTIC OSTEOMYELITIS IN PAGET'S DISEASE OF TIBIA TREATED WITH DIASONE AND AUREOMYCIN

Frederick R. Thompson, M.D., F.A.C.S., New York City, and Wm. Vernon Wax, M.D., F.I.C.S., Catskill, New York

THE following case of Paget's disease of the tibia spontaneously developed an osteomyelitis due to actinomyces. It is reported because aureomycin and Diasone were successful in healing the lesion. In the past, iodide therapy has been protracted and difficult to tolerate, and actinomycosis frequently has caused the death of the patient. With the advent of sulfonamides and penicillin more successes have been reported, but this therapy was unavailing here.

Case Report

M. Y., a seventy-two-year-old male carpenter, on September 9, 1948, fell in the street and sustained a fracture of the middle third of tibia, transverse, simple. Roentgenograms revealed marked Paget's disease of the bone, and he was treated by a long-legged plaster boot. On the fourteenth postfracture day, he developed tibial pain with marked edema of his foot which brought him again to the Memorial Hospital of Greene County. New roentgenograms showed considerable absorption of the bone in the distal two thirds of the tibia indicative of osteomyelitis. This was a 1-inch circular area located 7 inches above the ankle joint, just below the site of the fracture. Not wishing to compound the recent fracture by incision and drainage, he was placed on 100,000 units of penicillin every three hours.

Six days later, on September 29, his twentieth postfracture day, incision and drainage were necessary. Twenty cubic centimeters of necrotic bone, pus, and clot were evacuated and the underlying cavity curetted. A primary closure of the wound was attempted, and the patient was placed on sulfadiazine therapy in addition to the penicillin, 1 Gm. every four hours. Three days later, the culture material was reported as Actinomycosis nocardia madura. Potassium iodide therapy was then begun but had to be discontinued in three days because of marked intolerance. Streptomycin, 0.8 Gm., was given for seven days without noticeable benefit and had to be discontinued because of a severe rash. The penicillin and sulfadiazine were continued.

On November 12, this patient was seen in consultation. He presented a two months postfractured tibia. The attempted primary closure had failed, and the wound had reopened and was beginning to fungate without the presence of sulfa granules. Two new fluctuant areas were visible on the medial side of his anterior tibial crest incision, indicative of additional sinus formation soon to appear. He demanded that his leg be amputated. Aureomycin was not available at that time, and none could be obtained for experimental purposes. He was persuaded to withhold amputation until aureomycin could be obtained and tried in the near future. A second incision and drainage were performed on November 15, nine weeks postfracture, to evacuate pus and connect the two sinuses which had formed more medially. An Orr dressing and cast was applied.

On December 2, twelve weeks postfracture, after the article of Arnold and Austin appeared in the *J.A.M.A.* on disodium formaldehyde sulfoxylate derivative of 4,4′-diaminodiphenylsulfone ("Diasone," Abbott), this therapy was immediately begun.[1] According to their recommendations, 5 grains of Diasone were given three times a day for the first week, 5 grains four times a day for the second week, and 5 grains five times a day for the third week and thereafter. The wound, however, continued to swell, fungate, and drain. Amputation appeared to be the only possible solution. On December 15, two weeks later, aureomycin became available and was immediately given in 1-Gm. doses every four hours. Within five days a marked improvement in the wound was present with cessation of drainage and marked reduction in the fungating appearance of the wound margins. The aureomycin dose was reduced to 250 mg. twice daily. The Diasone was discontinued on December 30 after four weeks of therapy, but the aureomycin was continued for two more weeks (a total of six weeks) after which time the wound remained healed. Roentgenograms revealed that the fracture had healed. Figure 1 shows the appearance of the leg five months after healing, and at thirteen months follow-up this patient continues at work with no recurrence.

Comment

Actinomyces was present in three separate cultures. The infection was not abated by penicillin,

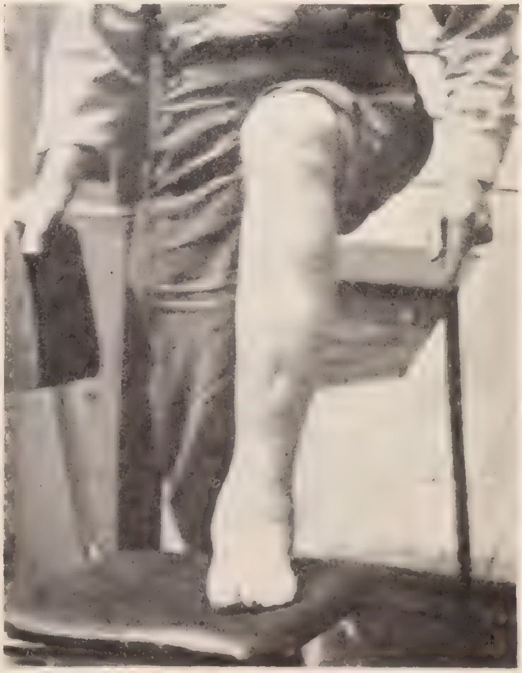

Fig. 1. Appearance of the leg five months after healing. There has been no recurrence at thirteen months follow-up.

sulfadiazine, or streptomycin, nor did it seem to be diminishing after two weeks therapy with Diasone. Clinically, aureomycin produced a dramatic change in the infection in five days, which is more remarkable because this was an osteomyelitis and not a soft tissue involvement.

Reference

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CHOLECYSTECTOMY COMPLICATED BY HEMORRHAGE FROM THE INFERIOR VENA CAVA

Alexander Zabin, M.D., Malverne, New York

(*From the Department of Surgery, South Nassau Communities Hospital*)

THE following case is being reported because a similar complication occurring during cholecystectomy was not found recorded in a comprehensive review of the available literature. The procedure utilized in controlling the hemorrhage and the successful outcome are also of interest.

Case Report

A white female, aged sixty years, was first seen by Dr. Reilert of Franklin Square, New York, on May 3, 1949. A history of right upper quadrant pain followed by nausea and vomiting was obtained. Similar attacks had occurred every four to six months for the past fifteen years. About ten years ago she had been hospitalized for the first and only time because of the severity of the attack. At that time there was marked pain in the back. All previous and subsequent attacks were localized to the upper right quadrant or epigastrium and did not radiate to the shoulder or back. At no time was there a history of jaundice. A diagnosis of chronic cholecystitis with cholelithiasis was made and confirmed by x-ray. The patient was referred for operation and was admitted to the hospital on May 5, 1949. Examination showed the following relevant findings: a markedly obese white female, 5 feet in height, complaining of right upper quadrant pain. There was no evidence of scleral or cutaneous jaundice. The heart and lungs showed no abnormalities. The blood pressure was 140/70. The abdomen was obese and markedly pendulous. It was soft throughout. There were no masses or organs palpated. There was some deep tenderness in the right upper quadrant. The urine and blood count and blood chemistry showed no abnormalities.

Operation was performed on May 6, 1949, under general anesthesia. The abdomen was entered through a right rectus muscle-splitting incision. The peritoneal cavity in the entire upper abdomen was obliterated by adhesion to the anterior abdominal wall. The upper surface of the liver was also adherent to the diaphragmatic peritoneum. There were adhesions of the small bowel and stomach to each other, to the anterior abdominal wall, and to the undersurface of the liver. The transverse colon was also adherent to the anterior abdominal wall and to the liver. The gallbladder was easily isolated from its adhesions to the stomach and transverse colon by blunt and sharp dissection. These adhesions involved primarily the fundus and neck. The foramen of Winslow was partially obliterated by adhesions. The cystic duct was easily isolated and its entrance into the common duct visualized. The cystic duct was then cut between clamps. The Deaver retractors in the lower angle of the incision were adjusted to allow for better exposure in tying off the cystic artery.

Immediately following this p ocedure there was a rather rapid welling up of blood from the depth of the operative area. This bleeding was not controlled by digital pressure of the hepatic artery in the gastrohepatic omentum. The point of hemorrhage was then controlled by pressure of a sponge stick in the bottom of the operative area. The common duct and the portal vein were then isolated and visualized, and the bleeding was found to come from a small ragged opening, measuring about 3 mm. in diameter, on the lateral aspect of the inferior vena cava. A clamp was then placed over the opening in the vessel which controlled the bleeding. Cholecystectomy was then performed from below upward. A tie which was then thrown around the vessel opening below the clamp cut through the wall so that now the opening in the vessel wall measured about 1 cm. in diameter. Because of the precarious condition of the patient, the operation was terminated by placing two small cystic duct clamps with the points approximating each other on the vessel below the rent so that the opening was completely encircled by the clamp. Some oozing lateral to the inferior vena cava was controlled by a pressure pack of cellulose gauze overlaid by a gauze strip. The abdomen was then closed by through-and-through interrupted sutures with the handles of the cystic duct clamps and the end of the gauze pack protruding above the skin. The patient had received about 1,000 cc. of whole blood during the operative procedure which lasted about two hours. Condition of the patient on closure was fair with a blood pressure of 80/40 and a pulse of 140.

The postoperative course was uneventful. One week postoperatively the gauze pack and the clamps were removed. The tract leading down to the inferior vena cava was then packed with cellulose gauze. The subsequent course was uneventful, and the incision healed after several weeks The patient is well and uncomplaining at present.

Comment

The hemorrhage in this case was due to a tear in the inferior vena cava caused by traction on an adhesion to its wall. The retroperitoneal and intraperitoneal adhesions found at operation were probably the sequelae of a previous attack of acute pancreatitis.

133 Broadway

BILATERAL CORTICAL NECROSIS OF THE KIDNEYS

Robert J. Lowrie, M.D., and Edward B. O'Connell, M.D., New York City

(From the St. Vincent's Hospital)

Bilateral cortical necrosis of the kidneys was first recognized and described by Juhel-Renoy in 1886.[1] In 1941, Duff and Murray reviewed 71 cases in the literature, 48 of which were associated with pregnancy.[2]

In this case, we present a report of the clinical, laboratory, and autopsy findings, followed by a brief reference to the theories of pathogenesis.

Case Report

Mrs. C. L., age thirty-six, gravida 14, was admitted to the ward obstetric service of St. Vincent's Hospital January 20, 1948, in the sixth month of pregnancy. The family history was essentially negative. Her past history revealed that she had scarlet fever and diphtheria when young. All her 14 pregnancies, starting with the first in 1933, were complicated by toxemia, which, through the years, became progressively worse. In the total of 14 pregnancies, there were six living children, four miscarriages, and four spontaneous, premature deliveries. Seven of the 14 deliveries were at St. Vincent's Hospital, but the patient rarely came to the prenatal clinic. Her blood pressure ranged from 162/108 in the fourth pregnancy in 1937 to 224/122 in the last pregnancy. In the third pregnancy in 1936, she had convulsions.

On admission the patient stated that during the present pregnancy she had swelling of the feet, low backache, headaches, and visual disturbances. On the night before admission, she "blacked out," began to vomit, and had irregular abdominal pains and profuse vaginal bleeding. She had not voided since the night before admission.

Examination on admission revealed moderate edema of the legs, a blood pressure reading of 224/122, a palpable fundus two fingers above the umbilicus, and absence of fetal heart sounds.

Several hours after admission, the bladder was catheterized, and only 10 cc. of urine were obtained. Ten hours after admission a sterile vaginal examination was done, and the membranes were ruptured artificially. Labor soon started, and in thirty-five minutes a macerated fetus was delivered. Before the delivery of the placenta, many large clots of blood were passed, but there were no signs of shock. The placenta was delivered, presumably intact, ten minutes after the birth of the fetus.

Clinical Course.—Drowsiness was evident on the day of delivery and became progressively worse, culminating in coma on the day of her death. The blood pressure continued at a high level, a typical reading being 196/132. The temperature was never elevated, and the pulse was usually between 80 and 100 per minute.

The edema of the lower extremities throughout her course was only moderate. Two days before death there was evidence of beginning edema of the lungs. Examination of the eyegrounds revealed no evidence of hemorrhage, but some old exudate was seen near the temporal side of the disk of the left eye; there was some contracture of the arteries and slight arteriovenous nicking.

Oliguria never progressed to anuria, but the patient passed only 645.5. cc. of urine during the eight days in the hospital. Urinary albumin ranged from 1 to 4 plus and the specific gravity of the urine from 1.003 to 1.012. While no casts were noted in the urine, many white blood cells in clumps were seen, as well as many squamous and round cells and five to ten red blood cells. The blood Kahn test was negative. Anemia was evident on the first postpartum day, the red blood count being 2,610,000 with 8.5 Gm. of hemoglobin. The white blood cell count was 18,200 with 68 per cent neutrophils (Table 1).

Notwithstanding antitoxemic therapy, bilateral paravertebral block, and spinal anesthesia, the severe oliguria persisted, the nitrogenous products of metabolism increased in the blood, and the patient died on the sixth postpartum day.

Autopsy Findings.—There were many small subperitoneal hemorrhages, especially over the uterus and small intestine. The liver and spleen were moderately engorged and enlarged. The uterus measured 10 cm. in diameter, and there was a small piece of placenta adherent to the wall of the uterine cavity. The heart weighed 380 Gm.; its left ventricle was hypertrophied, and there were a few atherosclerotic plaques in the coronary arteries. The lungs were congested, and there was widespread lobular pneumonia of the right upper lobe.

Kidneys.—Gross examination revealed that each kidney weighed 240 Gm. The capsule stripped with ease, and the surface was smooth and mottled yellow and red in color, representing areas of necrosis and hemorrhage. On cut section, the cortex appeared hemorrhagic, and throughout the cortex there were many yellow areas of necrosis varying in size up to 1 cm. In several areas, the columns of Bertini were involved. The medulla was well differentiated from the cortex and was markedly congested; in one part of the medulla there were several small patchy areas of necrosis. The calyces, pelves, and ureters were normal.

Microscopic examination of the kidneys revealed many completely necrotic areas in the cortex. "Ghosts" of the glomeruli and tubules were easily discernible. In the necrotic areas, nearly all of the glomeruli were hemorrhagic, with only small, pyknotic, basophilic cells among the blood cells. The cells of the tubules were pale pink in color with poorly defined borders, and the nuclei were not discernible. The tubules were filled with red cells, hyaline material or amorphous debris, and there were numerous areas of congestion and hemorrhage around the tubules. In viable areas of the kidney, the tubules were markedly dilated, and their lumina were filled with red blood cells, hyaline casts, and polymorphonuclear cells. The arterioles showed mild intimal sclerosis, and an occasional vessel contained a small thrombus. Necrosis of the walls of the small arteries was not noted.

Comment

The course, findings, and end result of a case of bilateral cortical necrosis of the kidneys in pregnancy here presented are comparable with the observations of other workers.

Presented at a meeting of the New York Academy of Medicine, Section on Obstetrics and Gynecology, May, 1949.

TABLE 1.—Relationship Between Urinary Output and Certain Elements of the Blood

Date	Hospital Day	Urine Output (Cc.)	Blood Urea Nitrogen (Mg. Per Cent)	Creatinine (Mg. Per Cent)	Uric Acid (Mg. Per Cent)	Carbon Dioxide Combining Power (Vol. Per Cent)	Blood Chlorides (Mg. Per Cent)	Blood Sugar (Mg. Per Cent)	Blood Acetone	Protein (Gm. Per Cent)
1/20	1 (antepartum)	20	11	...	4	..	...	..	..	..
1/21	2 (delivery)	167	26	...	5.6	53	451	..	..	..
1/22	3	11.5	..	...	...	..	...	..	..	..
1/23	4	89	40	6.3	...	34	412	75	Trace	..
1/24	5	125	60	7.2	12.4	33	...	..	..	Total 5.5
1/25	6	108	..	...	...	..	...	..	..	..
1/26	7	95	150	11.7	16.2	45	391	..	..	..
1/27	8 (died)	30	165	11.9	17.1	40	438	..	Negative	..

The mortality in this disease is very high; 85 per cent of the 75 cases reported by Madding *et al.* died.[3] O'Sullivan and Stitzer reported two cases with recovery following splanchnic block, and Rinker and Thurmond reported a case with recovery in 1946.[4,5] While cortical necrosis has been reported more often as a complication of pregnancy, it may be associated with other conditions in the nonpregnant, such as infections, intoxications, and shock.

The etiology is obscure, but it is now fairly well established that the pathologic process is in the interlobular arteries and afferent arterioles of the glomerulus. However, it has not yet been determined whether the initial process is functional, such as severe vasospasm followed by vasoparalysis, or whether it is organic, such as necrosis of the arterial wall or thrombus formation in the small arteries.

Duff and Murray, after review of the literature up to 1940, summarize by stating that the arterioles of the renal cortex are very sensitive to stimulation and may become hypersensitive in some individuals under the conditions of pregnancy or other disease processes.[2] Depending on the intensity or duration of the irritating deleterious factor, one could conceive of a series of vascular disturbances of increasing severity, intensive vasospasm, vasoparalysis, and partial or complete necrosis of the arterial walls, which may be due either to vascular spasm of extreme intensity or to the direct action of some toxic substance.

Cortical necrosis, or a process resembling it, has been produced experimentally in animals by injection of substances such as epinephrine, pitressin, staphylococcus toxin, and the washed cells of meningococci. X-ray studies with contrast media by Trueta *et al.* have shown that the arteries of the peripheral cortex are most sensitive to stimulation by adrenalin, pitressin, and staphylococcus toxin.[6] It is the contention of Trueta, therefore, that cortical necrosis is due to intense vasospasm of the arteries in the outer two thirds of the kidney cortex, with a shunting of blood through the juxtamedullary glomeruli, followed by vasoparalysis and ischemic necrosis of the kidney cortex.

Summary

There has been presented a case of bilateral cortical necrosis of the kidneys in a thirty-six-year-old gravida 14, who died six days after the premature delivery of a macerated fetus, with premature separation of the placenta.

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POPULATION INCREASES

More children were born in the United States in 1949 than in any year except 1947, according to a statement of Federal Security Agency, based on figures prepared by the Public Health Service. The estimated number of registered live births for 1949, 3,581,000, exceeded the 1948 total of 3,535,068 by slightly more than 1 per cent but was about 3 per cent below the number recorded for 1947, the alltime high year. The 1949 crude birth rate was estimated at 24.1 per 1,000 population excluding the armed forces overseas as compared to the final rate of 24.2 for 1948. During 1949, the rate for each month differed little from the corresponding monthly rate in the previous year.

Taking into account unregistered births, it is estimated that 3,729,000 children were born in this country during 1949. The total number of children born in the four postwar years, 1946 through 1949, was close to 15 million. This was virtually the same as the number born in the five previous years.

CONCEALED TRAUMATIC RUPTURE OF AORTA IN ORTHOPEDIC PATIENT

Harold M. Childress, M.D., Jamestown, New York

IN THIS age of machines patients are often severely injured by trauma. Internal lesions may be concealed and their nature not suspected until revealed upon the autopsy table. This case is reported because of its rarity and also in order to point out that delayed disasters not infrequently occur in severely traumatized patients.

Case Report

The patient, a white boy aged eleven, was hospitalized about forty-five minutes after sustaining multiple injuries in an automobile accident. He was riding as passenger in the front seat of a small truck which collided headon with another truck. Each vehicle was traveling 20 to 30 miles per hour. The engine of his car was driven back into the front seat and the patient was thrown partially through the windshield, his thighs being trapped by the engine. He sustained a severe compound, comminuted fracture of the mid right femur and a simple, comminuted fracture of the mid left femur. His face was lacerated deeply in three areas. Patient was in profound shock upon hospital admission and apparently had lost considerable blood.

Immediately after admission he was given 500 cc. of fresh whole blood and 500 cc. of plasma. One hour later he had routine care of the 6-inch compound fracture wound including débridement and copious irrigation with normal saline solution. One hundred thousand units of penicillin were injected into the wound after closure. Steinmann pins were put through both distal femurs, and the patient put up in bilateral 90-90-90 type traction. Before he left the operating room, he was given an additional 500 cc. of 10 per cent glucose in saline. His condition at that time was fairly good.

Twenty-four hours later, the patient complained of moderate pain in the right thorax. Examination of the right chest was negative clinically and roentgenographically. He remained slightly cyanotic with temperature moderately elevated and pulse up to 110 for four days following injury.

Roentgenograms made on the fourth day showed alignment of fragments of both femurs to be satisfactory. The lacerations of the face healed, and sutures were removed on the fifth day. The wound of the right thigh also healed completely, and sutures were taken out on the tenth day. Patient's general condition was excellent, his color good, and he was able to roll from side to side without discomfort.

Twelve days after admission he suddenly developed marked coughing and brought up a large amount of blood-tinged sputum. He had begun coughing mildly the evening before. His temperature went up to 102 F. rectally and his pulse to 170. Cyanosis became apparent, and he had difficulty in breathing. There was sternal depression on each respiration. Patient became drowsy and unresponsive. Breath sounds were present but diminished over both right and left thorax. He was placed in an oxygen tent with moderate relief. It was thought that a foreign body had lodged in the trachea, and a bronchoscopic examination was being arranged when his condition became rapidly worse. An emergency tracheotomy was done, and heavy mucus was aspirated from the trachea. The respiratory embarrassment was greatly relieved, but the patient remained cyanotic. He went quietly to sleep at 3:25 P.M. but fifteen minutes later awakened and complained of being thirsty. He became restless and suddenly developed a marked pallor. Pulse rapidly became imperceptible, and patient ceased to breathe at 3:50 P.M.

Autopsy Findings.—The left pleural cavity contained about 800 cc. of fluid blood and a port wine clot weighing 1,000 Gm. The right pleural cavity contained about 400 cc. of fluid blood. The dorsal mediastinum was distended by a tough, deep purple clot from the tip of the arch of the aorta to the diaphragm which enfolded the roots of both lungs and extended beneath the visceral and parietal pleura on both sides. The mediastinal clot was very dense and was adherent to the structures adjacent, and its peripheral portion was relatively dry. When the clot was partially removed, there was discovered a rent in the lowermost part of the arch of the aorta running throughout the length of the arch proper and easily admitting three fingertips. Anatomic diagnosis was rupture of aorta, secondary rupture of mediastinum, and bilateral hemothorax.

Comment

On hospital admission this patient had no signs of external injury to the thorax. There were no fractures of the ribs or sternum. His wearing a heavy overcoat at the time of accident may have prevented superficial soft tissue trauma. The pain in the right chest was probably pleurisy due to the irritative reaction of blood seeping into the pleural cavity. On the day of his demise he had been sitting up in bed and moving about freely. This activity must have loosened the clot which permitted blood to dissect upward on the trachea. The resultant edema of and pressure upon the trachea caused the forced breathing and cyanosis. Tracheotomy gave temporary, relief, but when the clot broke loose completely the result was massive hemorrhage into the pleural cavities with immediate death.

According to Forbes, no reported cases of dissecting aneurysm of the aorta following trauma have been correctly diagnosed before death.[1] One cannot but entertain the thought that this patient would have survived indefinitely upon absolute bed rest had the vascular injury been known. Whether the mediastinal clot would ever have become organized sufficiently firmly to prevent the formation of an aneurysm remains equivocal.

Reference

1. Forbes, Gilbert: Brit. M. J. 2: 400 (Sept. 23) 1944.

COMPLETE RECOVERY OF A CASE OF BACTERIAL ENDOCARDITIS WITH A TWO-YEAR FOLLOW-UP

A. Warren Jones, M.D., New York City

(*From the Knickerbocker Hospital*)

THE following is a report of a patient who suffered a severe bacterial endocarditis without there being any apparent cardiac defect permanently.

Case Report

Mrs. M. S. C., a twenty-four-year-old Negro woman, was first seen on November 24, 1944, at which time she was in acute distress because of an incomplete abortion, a severe upper respiratory infection, and bacteremia. At this time the heart was normal, the patient having normal sinus rhythm and no evidence of enlargement, no murmurs, thrills, or past history of rheumatic fever, lues, tonsillitis, or rheumatism.

Her past history was noncontributory. Both parents were living and well; there were no other siblings, and she had been well prior to the onset of the present illness, four days before admission. Her last normal menstrual period had been two and one-half months previously.

Clinically, and substantiated by x-rays and laboratory evidence, the patient was too ill for immediate surgery having a marked secondary anemia (8 Gm. hemoglobin Sahli with 2,500,000 red blood cells), a patchy bronchopneumonia, and a bacteremia due to Hemolytic streptococcus viridans with vaginal cultures also showing the same organism. She was treated by chemotherapy (sulfadiazine, maintaining a blood level of 6 to 8 mg. per cent), antibiotics (penicillin in aqueous solution, 20,000 units every three hours intramuscularly), and by blood transfusions and infusions (500 cc. of whole blood) until her condition warranted dilatation and curettage on December 15, 1944.

Fortunately, an electrocardiogram was taken during this hospital admission and was quite normal in all respects except for a slurred QRS component in leads 2 and 3.

Following the dilatation and curettage the patient made an uneventful recovery and was discharged from the hospital on December 23, 1944, in good condition to be followed in the clinic for further treatment as necessary.

On December 31, 1944, only eight days after discharge from the hospital, this patient again presented herself in acute distress due to a septicemia with delirium and a spiking temperature of 104.4 F. orally which she claimed, during rational moments, to have had for three days. Sulfadiazine and supportive measures were instituted with 6 Gm. of sulfadiazine orally daily. In one week the temperature was normal after a fall by lysis, and chemotherapy was stopped with a total of 71 Gm. having been used. However, the temperature curve immediately started to rise in a spiking fashion, and chemotherapy was reinstituted for another week with another 44 Gm. having been used by this time. However, as the clinical condition of the patient showed no improvement, sulfathiazole was substituted successfully with a cessation of symptoms occurring on February 9, 1945, after 80 Gm. of sulfathiazole had been used.

On the second hospital admission this patient had a soft blowing systolic apical murmur which persisted for one week, at which time the character of this murmur changed to a harsh systolic murmur, and a blowing diastolic murmur was also heard over the mitral area.

On January 15, 1945, the diastolic murmur disappeared, leaving a blowing systolic murmur, best heard at the apex. On January 23, 1945, a gallop rhythm occurred for eight hours. Repeated x-rays showed no changes in the size of the left ventricle which assumed its normal size at the time the diastolic murmur was lost just prior to discharge from the hospital. (These changes consisted of mild to moderate enlargement of the left ventricle as shown on x-rays and by fluoroscopy, and at the time of discharge this enlargement had completely disappeared as proved by x-rays.) Also both heart murmurs were again present and persisted until the day before discharge.

Pain and swelling occurred in the left knee joint indicative of embolic phenomena, although no definite petechiae were found nor was the spleen enlarged. Electrocardiograms showed inconsequential changes for two weeks, and then an inverted T_3 occurred that persisted as long as the patient was seen.

The patient was discharged to the Outpatient Department on February 23, 1945.

Repeated blood cultures were positive for H. streptococcus viridans until the end of January, 1945, after blood sulfathiazole levels revealed a constant level of 7.6 to 11 mg. per cent without crystalluria ever occurring. On two occasions, January 8 and 10, cultures of the urine obtained by sterile technic also revealed H. streptococcus viridans. Ten urine specimens revealed no evidence of hematuria, even in microscopic amounts. Complete blood count was as follows: hemoglobin (Sahli) 8 to 11 Gm.; red blood cells 3,500,000 to 3,900,000; white blood cells 21,000 to 8,500, and polymorphonuclear leukocytes 86 to 53 per cent.

This patient was seen at intervals in the clinic for one year and apparently had suffered no ill effects from her serious illness other than the persistent systolic murmur, heard best at the apex area. There was no cardiac enlargement or evidence of insufficiency. In 1946, the patient gave birth to a normal child at the Bronx Hospital, following a normal pregnancy, and as late as July of 1946, she was apparently fully recovered.

Comment

1. It is of interest that, while there was apparently no cardiac defect, this patient still suffered a severe bacterial endocarditis with a very clear-cut causative factor for her septicemia.
2. It is rare for patients with sepsis to develop a gallop rhythm and recover completely.
3. It is of interest that, although the course of treatment extended over two months and over 200 Gm. of sulfa drugs were used, there were no residual effects.
4. It is of exceptional interest that this young woman could resume an apparently normal life as manifested by her successful pregnancy two years after her illness.

NECROLOGY

Robert L. Ellithorp, M.D., of Gloversville, died on April 26 at his home at the age of seventy-eight. Dr. Ellithorp was graduated from Albany Medical College in 1897 and opened his first practice in Johnstown, where he was city physician and health officer. In 1903 he moved to Gloversville, where he practiced until his death. Dr. Ellithorp was consulting physician on the staff of the Nathan Littauer Hospital in Gloversville and had served as Fulton County coroner for twenty years. In addition, he was a member of the Gloversville Board of Health and city health officer. During World War I he served in the United States Army Medical Corps with the rank of captain. In 1947 Dr. Ellithorp was honored by the staff of the Nathan Littauer Hospital and the Fulton County Medical Society at a dinner commemorating his fiftieth year in the practice of medicine. He also received citations from the Medical Society of the State of New York and Albany Medical College in recognition of a half century of service.

Dr. Ellithorp was a former president of the Fulton County Medical Society and was a member of the Medical Society of the State of New York and the American Medical Association.

Philip Frank, M.D., of Syracuse, died on April 21 at his home at the age of sixty-six. A native of Poland, Dr. Frank received his medical degree from Yale University Medical College in 1907 and had practiced in Syracuse for the past eleven years.

Burlin George McKillip, M.D., of Gloversville died on May 16 at the age of sixty-nine. Dr. McKillip received his medical degree from the Albany Medical College in 1909 and had practiced in Gloversville for the past forty years. He was attending physician in orthopedic surgery and general surgery at the Nathan Littauer Hospital in Gloversville. A Fellow of the American College of Surgeons, Dr. McKillip was a member of the Association of Military Surgeons of the United States, the Fulton County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Rufus Goldsmith Stanbrough, M.D., of Floral Park, died on December 8, 1949, at the age of ninety-six. Dr. Stanbrough was graduated from the New York University Medical College in 1875.

Leonard D. Weinberg, M.D., of New York City, died in Beth Israel Hospital on May 14 from a tropical ailment contracted while on service with the United States Army Medical Corps in India. He was thirty years old. Dr. Weinberg was graduated from the New York University Medical School in 1942 and had served on the staffs of the Metropolitan, Beth Israel, and Flower and Fifth Avenue Hospitals. During World War II he was stationed in the China-Burma-India theatre. Dr. Weinberg was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

THE ESTIMATED COST OF NATIONAL HEALTH INSURANCE

The following is from a speech by Senator J. L. McLellan, of Arkansas, and appears in the *Congressional Record*, February 22, 1950:

National Health Insurance

S. 1679:

Initial cost	$ 15,000,000
When in full operation	7,000,000,000

Information concerning this program was obtained from the Senate Committee on Labor and Public Welfare, the Bureau of the Budget, and the Federal Security Agency.

According to the various estimates that have been submitted to the Committee on Labor and Public Welfare, the cost of the program, when in full operation, will vary from a minimum of $7,000,000,000 to a maximum of $15,000,000,000. Usually, the lower figure was submitted by proponents of the legislation, while the opposition's estimates were much higher.

Studies made by the Federal Security Agency, and information contained in the August issue of the *Social Security Bulletin* of the FSA of August, 1949, indicates that this program will cost from $7,000,000,000 to $10,000,000,000 a year. The Council of State Chambers of Commerce estimated that national health insurance, as proposed, would cost from $5,000,000,000 to $6,500,000,000 per annum. Senator Douglas estimated that the President's compulsory medical insurance plan would cost $5,300,000,000 per year. (*Washington Post*, November 25, 1949.) In order to attempt to strike a conservative average, the total annual expenditure under this program has been estimated at $7,000,000,000.

DEPARTMENT OF WORKMEN'S COMPENSATION

Conducted by David J. Kaliski, M.D., Director

Workmen's Compensation Fee Schedule

The following letter has been received by Dr. David J. Kaliski, director of the Bureau of Workmen's Compensation, from Dr. William A. Buecheler, Syracuse, president of the New York State Academy of General Practice.

Dear Dr. Kaliski:

Your very fine letter was pleasing to me, as it convinced me that your president, Dr. Masterson, Dr. Stanley Kenney, yourself, and the Bureau and Committee on Workmen's Compensation are endeavoring to help bring about a just revision of the fee schedule. You have explained in detail all the work that has been done in behalf of the general practitioner. Your efforts will surely be appreciated by every general practitioner in the State.

It will do much to make a better united Medical Society of the State of New York. The general practitioner will realize more than ever that the State Medical Society is interested in him.

I have examined the fee schedule you have proposed, and I believe it to be very fair, reasonable, and just. I sincerely hope you will be able to bring about its adoption, as proposed.

Please accept my thanks for the splendid work you have done for the general practitioner.

Yours sincerely,
William A. Buecheler, M.D.
President

May 1, 1950

Note: The Chairman of the State Workmen's Compensation Board, Miss Mary Donlon, has set the date for a meeting of her Advisory Board to consider a revision of the fee schedule to include fees submitted by the President of the Medical Society of the State of New York, Dr. John J. Masterson, under the provisions of the Workmen's Compensation Law.

NEW CHEMICAL FOR TREATMENT OF MYASTHENIA GRAVIS

Significant relief for victims of the mysterious and incurable disease, myasthenia gravis, is claimed for a new chemical developed by two University of Chicago biologic scientists, who reported to the recent meeting of the Federation of American Societies for Experimental Biology.

Variant of an insecticide which kills a variety of pests from rats to cockroaches, the compound is designated as OMPA by Kenneth P. Du Bois, assistant professor of pharmacology, and John Doull, research assistant of the department and the Toxicity Laboratory of the University of Chicago.

Myasthenia gravis produces a weakening of the muscles of the limbs, face, throat, lungs, and heart. The cause is unknown. OMPA restores muscular strength by stimulating the nervous system and muscles by its reactions with a body chemical, cholinesterase, which is present in all body tissues, but especially the nervous tissues. During treatment, the victims are able to lead normally active lives. In some cases, there is evidence that OMPA has halted the progress of the disease.

Du Bois and Doull began their researches which led to the discovery of the usefulness of OMPA (octomethyl pyrophosphoramide) in 1947, with the study of a German insecticide called HETP (hexaethyl tetraphosphate), which was reported to work much like nicotine in killing insects.

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SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on April 13, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of illness for 11 members for 1950 and 5 for 1949.

Your Secretary also takes the liberty of drawing your attention to questions and answers regarding payment of A.M.A. dues on page 995 of the April 1, 1950, *Journal of the American Medical Association.*

Dr. George F. Lull's Secretary's Letter of March 27, 1950, states that Dr. Elmer L. Henderson, president-elect of the American Medical Association, is the author of an article entitled, "Here's Health—The Voluntary Way," in the May issue of *Reader's Digest.*

A letter of thanks has been received from Dr. A. C. Ivy, secretary-treasurer of the National Society for Medical Research, for the subscription from the Medical Society of the State of New York. As instructed by you, your Secretary wrote Governor Dewey on March 21, 1950, that our Society is anxious to cooperate in establishing a mechanism for emergency medical preparedness.

On March 25, 1950, and subsequent days, bills for American Medical Association annual dues were sent to all members of the Medical Society of the State of New York.

As instructed by the Committee on Office Administration and Policies, a vote was taken among the employes at 292 Madison Avenue, New York City, regarding participation under the Disability Benefits Law. As a result the Society will not participate in this project.

It is recommended that Dr. Emanuel Stern, Dr. Raymond C. Coburn, and Dr. Frederick A. Lewis, retired members of the Medical Society of the State of New York, be nominated for Associate Fellowship in the American Medical Association as per their requests.

The recommendation *was adopted.*

Since the last meeting of the Council your Secretary has attended one meeting in Albany, five committee meetings in New York City, a meeting of the First District Branch in Brooklyn, and the meeting of the Middle Atlantic States Conference of the American Medical Association Council on Medical Service in Philadelphia, Pennsylvania.

The Bylaws newly adopted by the First District Branch were presented for consideration to the Council.

It was voted that these be referred to the Committee on Constitution and Bylaws.

Communications.—1. Letter dated March 28, 1950, from Dr. Morris Weintrob, Comdr. (MC) USNR, Association of Military Surgeons of the United States, to Dr. Anderton, inviting the Medical Society of the State of New York to participate in the annual convention of the Association of Military Surgeons of the United States on November 9, 10, and 11, 1950.

It was voted to refer this to the Public Relations Committee.

2. Letter, dated March 15, 1950, from Dr. Charles F. McCarty, director of medical activities of the Medical Society of the County of Kings:

> "At the March 8, 1950, meeting of the Comitia Minora of the Medical Society of the County of Kings, it was recommended that the State Society remit the War Memorial Assessment of hospital residents who were active members of the Society at the time the assessment was levied."

It was voted that the Secretary be instructed to ask for a list of the members for whom these remissions are requested.

3. Letter, dated March 22, 1950, from Dr. Charles F. McCarty, director of medical activities of the Medical Society of the County of Kings:

> "The Comitia Minora of the Medical Society of the County of Kings, following its meeting on January 4, 1950, requested the State Society to remit the War Memorial Assessment of those doctors who were seventy years of age or over on September 1, 1948, due to the fact that they were seventy years of age and that they had applied for retired membership.
>
> "At the present time the following doctors have applied for retired membership in the Medical Society of the County of Kings and the Medical Society of the State of New York, all of whom were seventy years of age or over on September 1, 1948: Drs. Simon R. Blatteis, George H. Ding, Grace D. Ives, Benjamin F. Corwin, John A. Ferguson, and Paul L. Parrish.

After discussion, *it was voted* to remit the dues and assessments that are in arrears but, in notifying each member, state that such is not the custom.

4. Letter, dated March 16, 1950, from Dr. Harry Mandelbaum, treasurer, Medical Society of the County of Kings:

> "At its March 8, 1950, meeting our Comitia Minora voted to refund 1950 dues to the Estate of Dr. Jacob T. Sherman. Dr. Sherman died on January 6, 1950.
>
> "The Comitia Minora requests that the State Society take similar action, and if approved forward check for $15 State dues to us as soon as possible."

It was voted that this request be granted.

5. Letters regarding expenses for collecting American Medical Association dues from Dr. Oscar M. Race, president, Richmond County Medical Society, and Dr. Goodlatte B. Gilmore, secretary, Bronx County Medical Society.

After discussion, *it was voted* that these letters be tabled until we receive further information from the American Medical Association.

6. Letter dated April 3, 1950, from Dr. William Benenson, secretary, Medical Society of the County of Queens, announcing the establishment of a grievance committee.

7. Letter regarding illness of Dr. James E. McAskill to Dr. Anderton and Dr. Anderton's reply.

8. Letter dated April 4, 1950, from Mr. Royal W. Ryan, executive vice-president, New York Convention & Visitors' Bureau, Inc., re holding the 1953 A.M.A. meeting in New York City.

It was voted that this letter be referred to the House of Delegates.

9. Letter dated March 27, 1950, from Dr. Norman C. Lyster, secretary, Chenango County Medical Society, re prepaid medical care insurance as a deductible expense on income tax reports.

After discussion, *it was voted* to refer this to the Economics Committee.

10. Correspondence regarding Form 44-R766 approved by the Budget Bureau of the Department of Labor, Wage and Hour and Public Contracts Division. (See Workmen's Compensation Committee report in these minutes.)

It was voted to refer this to the Economics Committee.

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon, Executive Officer, reported that, of a record number of items introduced in the Legislature this year, we followed 122 bills and eight resolutions in the Senate, 155 bills and eight resolutions in the Assembly. Forty-one of these bills were passed and in the hands of the Governor as thirty-day bills.

He also stated that he had been submitting recommendations to the Governor's counsel on many of the bills in which we are interested. Up to the present date three have been vetoed and eight have been signed by the Governor.

The two bills introduced at the request of the State Society were not passed by the Legislature.

Reports of Committees

Legislation.—Dr. Dattelbaum, chairman, submitted the following report:

The Legislature adjourned about 3:00 A.M., Thursday, March 23. With this adjournment comes the close of another legislative period, with the exception of the thirty-day bills in the hands of the Governor.

Although this was a relatively short session of the Legislature there was an all-time record number of bills introduced. There were 6,135 bills and 380 resolutions introduced in the two houses. Of these we followed 122 bills and eight resolutions in the Senate and 155 bills and eight resolutions in the Assembly. Forty-one of these were passed and went to the governor as thirty-day bills. At the present time the governor has vetoed three and signed eight of these bills. There are still 30 bills in the hands of the Governor in which we are interested. The Governor will have until April 23 to complete this action on the thirty-day bills.

Two bills were introduced at the request of the State Society. The x-ray bill was reported out of committee but was recommitted. Our other bill was the Injunction Bill. This did not receive strong support from those interested in its passage, but did receive strong antagonism from those opposed. Thus with a controversial bill we were unable even to get it reported out of committee.

The Legislation Committee has been called on by many other organizations to support or oppose legislation in which they were interested, where this legislation pertained to public health, practice of medicine, and medical care. This support or opposition was given along the lines that were thought to be the best for the good of the public. The work with other organizations has been successful and it is thought helped to contribute satisfactorily to public relations and standing of the Medical Society.

Dr. Dattelbaum supplemented his report by stating he had received letters from Dr. Lawrence, director, Washington Office of the American Medical Association, and from the Association of American Physicians and Surgeons in Chicago concerning H.R. 6000.

It was voted that Dr. Hannon be requested to write each of the members of the Senate Finance Committee expressing the disapproval of this Society regarding H.R. 6000.

At this point the Council went into Executive Session, at the conclusion of which the following motions were made:

On motion of Dr. Winslow, seconded by Dr. Holcomb, *it was voted* unanimously to accept Dr. Dattelbaum's report.

On motion of Dr. Holcomb, seconded by Dr. Azzari, *it was voted* unanimously that a special meeting of the Committee on Legislation be called for four o'clock on the Sunday prior to the meeting of the House of Delegates, and that interested representatives of groups concerned with legislation be called to meet with the Committee.

On motion of Secretary Anderton, seconded by Dr. Reuling, *it was voted* unanimously to go out of Executive Session.

Dr. Dattelbaum asked that there be included in the record the following telegram sent by the New York Academy of Medicine to Governor Dewey on Friday, April 7, 1950:

"Committee on Public Health Relations of New York Academy of Medicine earnestly requests you to veto Assembly Bill No. 1030, Int. 1026, which would authorize podiatrists to treat all injuries of foot under Workmen's Compensation Act without regard to nature of injury and without supervision by licensed physician or qualified surgeon. This bill is in serious conflict with Medical Practice Act and present Workmen's Compensation Act. It gives podiatrists right to diagnose and treat gravest injuries which may result in loss of life or limb. Podiatrists should have right to treat under Workmen's Compensation Act those foot injuries or resulting conditions which have been referred to them by a qualified physician or surgeon. Academy believes this matter of grave public importance and urges veto of bill as presently written."

GEORGE BAEHR, M.D., *Chairman*
Committee on Public Health Relations
New York Academy of Medicine

Constitution and Bylaws.—Dr. Reuling, chairman, reported: "There is a revised constitution and bylaws of the Medical Society of the County of Orange that has been gone over carefully by our Secretary and by the Counsel. There is only one question in it on which there is apparently a little difference of opinion.

After discussion, *it was voted* to approve the constitution and bylaws as submitted by the Committee with the exception of the phrase "a compensation filing fee of $10" at the end of Chapter II, Section 3. The Council felt that perhaps some members would not desire to do workmen's compensation practice.

Economics.—Dr. Azzari, chairman, stated:

Following is the report of the Bureau of Medical Care Insurance, George P. Farrell, Director:

March 12, 1950—On invitation of Dr. Carlton E. Wertz, president of the Western New York Medical Plan, your Director attended a meeting in Buffalo, called for the purpose of presenting the proposals for a State-wide uniform contract to the presidents and economics chairmen of the county medical societies in the area served by the Western New York Medical Plan. The following motions were carried:

That a service type contract be approved; that service benefits be recommended for a family whose annual income does not exceed $4,000 and for an individual whose annual income does not exceed $2,500; that the present Workmen's Compensation minimum fee schedule be used as a basis for considering the proposed fee schedule; that the new contract include in-hospital medical care, allowing thirty in-hospital visits in any contract year for subscriber and each dependent; that a fee of $5.00 be allowed for the initial hospital visit and $3.00 for each subsequent visit for the general practitioner; that specialist fees be allowed as per the Workmen's Compensation fee schedule for in-hospital medical care.

Diagnostic x-ray, anesthesia, and maternity were considered and tabled. Dr. Wertz recommended that each county medical society present these recommendations to its membership for consideration.

March 21, 1950—Your Director spoke before the senior medical students of Syracuse University College of Medicine for the fifth successive year. His subject was "The Economics of Medicine."

March 27, 1950—Your Director attended a Conference of Blue Cross and Blue Shield Plans in Detroit, Michigan, held to consider the offering of a uniform hospital and medical care contract to the U.A.W., C.I.O. employes of General Motors on a national basis.

He also consulted with the Michigan Medical Service in regard to an agreement between the Michigan Hospital Service Corporation and the Michigan Medical Service for payment of certain medical services covered under the Michigan Blue Cross contract. Michigan Medical Service, under this agreement, assumes the liability for x-ray and electrocardiographic examinations under a special certificate issued by the Michigan Medical Service.

March 28, 1950—Your Director attended a stated meeting of the Medical Society of the County of Erie, Buffalo, on invitation of Dr. Carlton E. Wertz. A lengthy discussion was held on the Blue Shield plan.

The Bureau has completed the Fourth Annual Report on Blue Shield Plans in New York State, distributed at the Council meeting.

The Progress Report on Blue Shield Plans in the State for the quarter ending December 31, 1949, was also distributed.

Dr. Azzari continued: "There is a letter addressed to the Secretary of the Medical Society of the State of New York by Bertholon-Rowland & Company, Insurance Agents, in which they requested an interview on some new insurance plan they would like to discuss with us. We took the privilege of writing to them, and asking them to submit in writing any plan that they may have, and we will give it further consideration at that time.

"The next report is on the booklet entitled 'The Quality of Medical Care in a National Health Program,' which was prepared by the Subcommittee on Medical Care of the American Public Health Association. This was accompanied by a letter from Dr. Dean Clark asking us to study the matter, with a view that he would publish the summaries of our opinions in the forthcoming issue of their *Journal*."

(*Dr. Azzari gave a résumé of the contents of the booklet.*)

After discussion, *it was voted* to send a letter to Dr. Dean Clark opposing the basic principles of the proposal.

Dr. Azzari continued: "Another matter referred to the Committee on Economics was a communication from the chairman of the Special Committee on Education of the Michigan State Medical Society addressed to the Secretaries of all State Medical Societies requesting our attitude toward the financial support of the Research Council for Economic Security, of Chicago. This was followed by a letter from the secretary-treasurer of the Research Council setting forth the purposes of the Council in the field of social and economic security. Mention was made that Dr. George F. Lull was kind enough to mention the work of the Council in his Secretary's Letter of January 23, and recommended its support."

Dr. Azzari summarized the letter and stated: "It cannot be denied that the purposes of this Council on Economic Research are highly commendable, its organization, study plan, and personnel of its research staff admirable. Your Committee feels that the work in social security, especially as it relates to health insurance, has been rather thoroughly explored, and that questions as to size of benefits, the extent of coverage, the financial cost, the kind of administration, the principle of compulsion have been discussed, and solutions are being evolved by our voluntary plans. Therefore, your committee does not feel that it is necessary or prudent to subscribe to this survey service."

It was voted to accept this report. The report as a whole *was accepted.*

Ethics.—Dr. Reuling, chairman, submitted a draft on the formation of Grievance Committees to be known as Appendix III of the Principles of Professional Conduct and presented to the House of Delegates as a supplementary report of the Committee on Ethics.

Nursing Education.—Dr. Dickson, chairman, stated: "We are meeting this noon with the heads of nursing associations, both practical and professional, to suggest the matter of the Coordinating Council on Nursing Problems having a formal meeting."

Office Administration and Policies.—Dr. Anderton reported for Dr. Cunniffe that the Office Administration and Policies Committee met yesterday afternoon. Most of the business was routine. A poll of the employes regarding participation in the Disability Benefits Insurance Law was discussed.

The Committee makes one recommendation to the Council regarding American Medical Association dues. On account of additional work, the Committee voted approval of Mr. Alexander's recommendation that an extra clerk be engaged at $35 a week. It was voted to request the Council to recommend to the Board of Trustees an appropriation of $1,225 for this unbudgeted expense for the rest of 1950.

It was voted that this recommendation be approved.

Dr. Anderton continued: "Also after discussing the matter of typewriters in general, the Committee voted approval of the Public Relations Committee's request that the Council recommend to the Board of Trustees to appropriate money to purchase one new typewriter. That item is in the report of the Public Relations Committee."

Planning Committee for Medical Policies.—Dr. Kenney, chairman, stated that the Committee had no report but that he would like to state to the Council that the Middle Atlantic States Regional Conference was held in Philadelphia a week ago. It was the sixth Middle Atlantic States Regional Conference, and the Society was represented by Dr. Anderton, Mr. Farrell, and Mr. Miebach of the Public Relations Bureau, as well as by himself.

Publication.—Dr. Kosmak, chairman, reported as follows: "The Publication Committee held its regular monthly meeting yesterday and devoted considerable of its discussion to financial matters in connection with JOURNAL publication. It may not be possible for us to reach our aims in the solicitation of advertising for the coming year, and we are therefore confronted with the possibility of a deficit. We have endeavored to remain within our income, and it is very difficult in view of the increased costs of publication, both printing and paper, and in a number of other ways. It was voted to charge to the cost of the Annual Meeting the item of publication of pages 809 to 842 of the April 1 issue, in the belief that much of the information was of particular interest and value to the members, but the other included the announcement of exhibits, etc. The cost would be about $750. It includes composition and printing. I, therefore, would like to present this recommendation to the Council."

It was voted that the recommendation be approved.

"It was also decided to reduce the total number of pages in the JOURNAL for the issues during June, July, and August, 1950, from 128 to 112 pages each. That is to conform with the amount of advertising which we will probably have.

"As for *Directory* matters, it is very likely that first copy will go to the printer September 15, 1950, which should make it possible to bring out the new *Directory* in the early part of 1951. The Committee has received proposals and will award the contract for both printing and binding to the American Book and Stratford Press, a very reliable concern with whom we have had experience."

Public Health and Education.—Dr. Curphey, chairman, reported that he had attended various meetings and arranged postgraduate instruction and teaching days.

A. Present at the meeting with Dr. Hilleboe and his associates on March 16, 1950, were Drs. Anderton, Masterson, Post, and your chairman. The purpose of the meeting was to prepare an agenda as a basis for discussion with representatives of the deans of medical schools of the State, concerning postgraduate education and the medical aspects of atomic warfare. It was agreed that the three agencies having a definite responsibility in this field were the Medical Society of the State of New York, the medical schools of the State, and the State and local health departments. The relative functions and responsibilities of each group were outlined and reviewed.

It was suggested that the program could best be developed on a basis of regional planning, with a division of five health regions centering around the four upstate medical schools and the area around New York City. As an initial educational approach it was suggested that the three agencies work in a cooperative attempt to provide one full day's instruction in the medical aspects of atomic warfare for essentially all the practicing physicians in New York State. It was felt that, following this initial period of instruction, a subsequent and more lengthy course would be instituted, the members for which would be recruited from those displaying sufficient interest and desire. These in turn would be potential material for heading up the various divisions in the State.

At this meeting the problem of undergraduate education was also considered.

B. Besides representatives of the State Health Department and Drs. Masterson, Anderton, Eggston, and your chairman, there were present at the meeting on March 17, 1950, the following physicians from the medical schools: New York University, Dr. John Ryan; Cornell University, Dr. L. W. Hanlon; University of Buffalo, Dr. Stockton Kimball; Syracuse University, Dr. Herman Weiskotten; Albany College, Dr. Ray Trussell; University of Rochester, Dr. John W. Howland; Columbia University, Dr. J. B. Truslow and Dr. A. C. Severinghaus.

Also present were Dr. John J. Bourke, Director of the New York State Hospital Survey and Planning Commission, and Dr. John Oberwager of the New York City Health Department.

The agenda was critically discussed. As a result it was agreed to form a committee to study the matter and prepare a curriculum of instruction, under the chairmanship of Dr. Howland of Rochester. It was understood that a draft of the curriculum and a plan of procedure would be ready for discussion at the Annual Meeting of the State Medical Society.

Plans were discussed for having the regional health officers of the State take part in a week's intensive course in atomic warfare in the early part of July. It was felt that teaching days through the State should be scheduled for September and October.

C. 1. At the meeting on March 25, 1950, of the *Subcommittee on Physical Medicine and Rehabilitation* there were present Drs. Arthur S. Abramson, W. P. Anderton, Austin J. Canning, Donald A. Covalt, Theodore J. Curphey, George G. Deaver, Norman Egel, Richard Kovacs, John J. Masterson, Walter S. McClennan, Charles D. Post, George Raus, and Howard A. Rusk, chairman.

The program for the Teaching Day of the Annual Meeting was reviewed. It was the opinion of the Subcommittee that at that meeting it be made known that specialists in the field of Physical Medicine and Rehabilitation from the Subcommittee membership will be available to give similar demonstrations at meetings of county medical societies.

The problem of rehabilitation in workmen's compensation practice was discussed. A memorandum was drafted for referral to the Council Committee on Public Health and Education with the recommendation that it be presented to the Council for transmittal to Miss Mary Donlon, chairman of the Workmen's Compensation Board.

The Council voted that the referral of the proposed memorandum to Miss Donlon be deferred until after the House of Delegates meets.

Several resolutions were presented, but action was deferred by Council until after the meeting of the House of Delegates.

2. The Committee requests authorization for assuming the incidental expenses of the Teaching Day program. This concerns the cost for transportation of patients and materials necessary for the demonstration.

It was voted to grant this request.

D. Present at the meeting of the *Subcommittee on Medical Film Review*, April 4, 1950, were Drs. John L. Norris, chairman, Lee A. Hadley, David Ruhe, Granville Larimore, Ruth Sumner, John J. Masterson, W. P. Anderton, George Baehr, Charles D. Post, and your chairman.

Dr. Norris outlined the progress of the committee, emphasizing the need for regional review boards composed of senior and junior specialists in the particular field, along with general practitioners, stu-

[Continued on page 1524]

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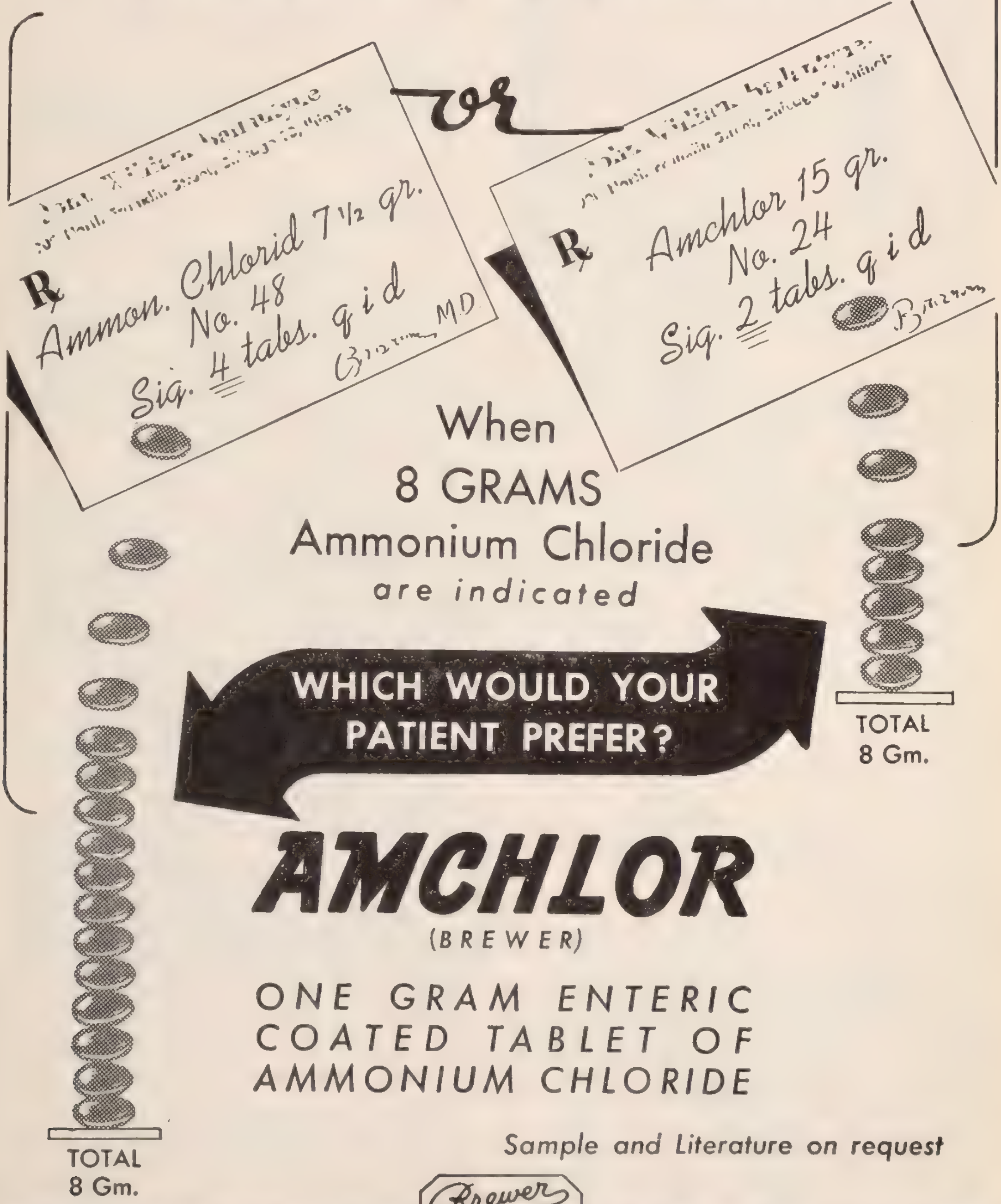

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[Continued from page 1522]

dents, and, for certain films, nurses trained in the technics of surgery and public health. To date such review boards have been organized in preventive medicine, public health, obstetrics and gynecology, nose and throat, radiology, psychiatry, and medical and surgical neurology.

He pointed out that, of the 64 films now owned by the State Department of Health and available for review, from 60 to 70 per cent deal with surgical technics, hence establishing the need for more surgical review boards.

The question of accelerating the process of reviewing films was discussed. It was agreed that more rapid progress could be made if the Medical Film Institute, under the auspices of the Association of American Medical Colleges, David S. Ruhe, M.D., director, acted as an initial screening board. The films thus screened could be distributed to the regional review boards. The feeling was that this final review could be further accelerated if an attempt was made to elicit the interest and assistance of the medical schools. It was decided that the medical schools in New York City would be invited to review surgical films; the University of Buffalo Medical School, the films on pediatrics, and the Albany Medical College, films dealing with diagnosis.

A letter from Mr. Joseph P. Hackel of the Medical Film Guild, which had been previously circulated, was discussed. It was agreed that no action was indicated and that a letter should be written to Mr. Hackel thanking him for his interest and informing him of the action of the committee.

E. In a communication from Dr. Milton G. Potter relative to the session on Problems of Alcoholism for the Teaching Day, he states that the importance and the interest in the subject of alcoholism would seem to warrant a verbatim record of the meeting, to be later circularized to the physicians of the State. This the State Health Department is willing to do, assuming the full expense for the distribution of the proceedings.

> *It was voted* that the verbatim record should be submitted to Dr. Kosmak for possible publication, and then to the New York State Health Department.

Your Chairman therefore requests authorization for the employment of a stenograph operator to record these proceedings.

> *It was voted* to grant this request.

> *F.* Invitation to Dr. Herman Baruch to attend the Teaching Day session on "The Rehabilitation of the Chronically Disabled" *was approved.*

G. Your Chairman was charged with investigating the complaint registered by Dr. Joseph C. O'Gorman of the Erie County Medical Society relative to the alleged discriminatory action on the part of the New York State Department of Health in respect to the admission of Dr. Everett A. Woodworth to its roster of specialists.

Information has been received from the Erie County Medical Society and from Dr. Hilleboe, from which a conflict of opinion is evident. In view of the fact that the last joint discussions by the State Department of Health and the Medical Society of the State of New York were held some five or six years ago, the subject will be brought up at the next meeting with Commissioner Hilleboe on Thursday, April 20. The results of this meeting will be reported to the Council.

Dr. Curphey supplemented his report by stating that the *Course Outline Book* had been revised and was in the hands of the printer.

He also stated he had a letter from Dr. Larimore of the New York State Department of Health in reference to the *Parent's Book* that was prepared in conjunction with the joint Maternal and Child Welfare Subcommittee. This book has just been produced and the New York State Health Department would like to have an individual copy distributed to each physician.

> After discussion, *it was voted* that we cooperate with the New York State Health Department in addressing the envelopes to distribute the books to our members.

> The report *was adopted* with the exception of part which was deferred.

Public Relations.—Dr. Winslow, chairman, submitted the following report:

In accordance with the last report submitted to the Council Mr. Anderson has obtained 1,000 copies of the book, *The Road Ahead*, by John T. Flynn, which are being placed in hospital rooms in various parts of the State. Results will be watched to determine whether it is feasible to make a more general distribution of the book, or, in the alternative, reprints of a condensation which appeared recently in *Reader's Digest*.

Three hundred copies of the book were placed in Syracuse through the efforts of Mr. Stephen Leech, Central New York field representative, and to date 200 have been sent to Buffalo for distribution by Mr. John Weinrich, Western New York representative. Mr. Martin Tracey is canvassing the Metropolitan area to determine where the book can best be placed. In this he will have the assistance of the Woman's Auxiliary of Queens County, which has expressed an interest in participating in this project.

Mr. Leech submitted his resignation as field representative, effective April 1, to accept the position of executive secretary of the Onondaga County Medical Society. The Public Relations Committee regrets to lose Mr. Leech's services, but it feels that if the field program qualifies men to fill positions of this type, it will prove to have unexpected value to the Society, in addition to its more immediate aims. Mr. Leech's former territory will be covered by Mr. Weinrich.

The work of soliciting resolutions in opposition to compulsory health insurance from local units of State-wide organizations continues, under the direction of Mr. Tracey. Following a general mailing to veteran's groups and their auxiliaries, 900 letters were mailed to local Grange organizations and 200 letters were sent to local units of the D.A.R. The effectiveness of this activity is shown by the fact that, during the short time it has been in operation, 70 resolutions have been added to the previous total of 140 resolutions previously obtained over a period of a year.

There is continued interest on the part of county societies in the formation of 24-hour emergency services. On March 17, the Albany County Medical Society publicly announced the formation of a panel of 125 physicians for this purpose, and similar announcements by other societies are imminent.

On March 15 a *News Letter* was issued about the outlook for 1950 and calling attention of members to new printed materials.

Preparations were made for publicizing the 144th Annual Meeting by supplying editors of county

[Continued on page 1526]

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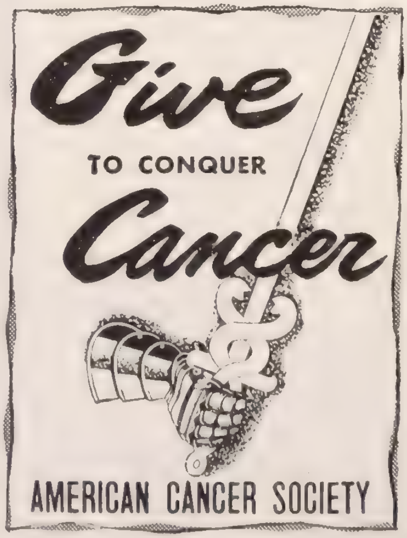

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[Continued from page 1524]

medical bulletins with advance releases, and by mailing special letters to deans of medical colleges and superintendents of a selected list of hospitals.

An increase in the allowance for travel expenses for Mr. Dwight Anderson was requested.

After discussion, *it was voted* that the Board of Trustees be requested to increase the traveling expenses of Mr. Anderson by $600.

An appropriation of $362 for the purchase of a typewriter was requested.

It was voted that a new typewriter be purchased at the cost of $362.

Workmen's Compensation.—Dr. Kenney, chairman, reported that, relative to various complaints in the fee schedule, Dr. Masterson had received a letter from Miss Donlon asking the President of the Society to submit the various changes recommended in the fee schedule so that she could have them studied by a special committee on costs, and if the expenditures seemed extraordinary to suggest certain priorities. After consultation with Dr. Kaliski and himself the President would submit that letter to Miss Donlon.

The Bureau received a communication dated March 21, 1950, from the Erie County Chapter of the New York State Academy of General Practice, signed by Dr. Max Cheplove, president, containing the following resolution:

> "*Resolved*, that the Erie County Academy of General Practice here assembled at the Millard Fillmore Hospital on March 16, 1950, go on record as strongly urging the Council of the Medical Society of the State of New York that it take any and all steps necessary to obtain an increase in home, office, and hospital visit fees for general practitioners in Workmen's Compensation practice."

Your Director replied to Dr. Cheplove advising him what steps we have already taken to bring to the attention of the Chairman of the Workmen's Compensation Board the sense of the resolutions which the Erie County Chapter had passed.

Dr. Masterson referred to the Director of your Bureau a communication from Dr. Marion K. Colle, of Catskill, concerning a form to be filled out by the attending physician at the request of an employer who desired to give employment to a partially disabled individual, and to pay such individual an hourly wage less than the minimum set by the recent Wage and Hour Law. It was ascertained that form 44-R766 has been approved by the Budget Bureau of the Department of Labor, Division of Wage and Hour and Public Contracts. This is to be filled out by the attending physician for individuals physically and mentally handicapped. The form contains nine questions to be answered by the attending physician.

It was voted to refer this to the Economics Committee.

An examination for physician candidates in therapeutic and diagnostic radiology was held at New York University on March 28. The candidates were referred from New York and Queens Counties. Two candidates passed the examination. Of the four candidates for rating in diagnostic roentgenology, one passed and three failed.

The Committee on the simplification of compensation forms has completed its work and is awaiting a meeting with a committee of the Compensation Insurance Rating Board which will be held on Thursday, April 20. Subsequently, if an agreement can be reached, the matter will be referred to the Chairman of the Workmen's Compensation Board for approval.

New Business

Extraordinary Legal Expenses

The Council voted to request the Board of Trustees to make an appropriation for extraordinary legal expenses that may occur during the coming month.

Thanks of Council to President Masterson

Dr. Winslow stated: "On behalf of the Council and the membership of the Medical Society of the State of New York whom we are here representing, I wish to extend to you, Dr. Masterson, our appreciation for your earnest and successful efforts to advance the interests of medicine in the State of New York and the interests of American medicine, throughout your year of administration as President of the Medical Society of the State of New York."

. . . *The members arose and applauded.* . . .

President Masterson: "I want to thank you all for your very generous support and assistance during the whole year. I think it is becoming evident that this position of President of the Medical Society of the State of New York is almost a full-time job. The time is past when we can depend upon the work of this Society being carried on by voluntary workers exclusively.

"In my position I know of the tremendous work of Dr. Winslow and his Committee. It is all volunteer work. I know of the tremendous work of the Public Health and Education Committee, and also of the Legislation Committee. I think a lot of the things that were talked about here this morning in the way of our shortcomings are due to the fact that we are trying to carry on the large business of this Society by volunteer workers. It is just about as foolish to think we can do it as it is to have a volunteer fire department exclusively in this city. I have given the matter considerable thought, and I may have some recommendations in my supplementary report to the House of Delegates. We come here once a month, and we hear these problems; we pass resolutions, and we go away, and forget after we leave here. I say that with no criticism of anybody. We have our own business to attend to. We are all busy men. All the men on the Council are busy men, as are the men on the standing committees, otherwise they probably would not be in the positions they occupy. It is just physically impossible, I believe, to carry on our work as efficiently as it should be carried on unless we have more full-time employes. At the present time, as I said in my report, I think we have four and one-half full-time employes outside of our clerical help. Nobody has any idea of the tremendous work that devolves on our Treasurer, Dr. Reuling, but his work is different from most of the committees' work because it does not involve policy. His work is more or less routine, but it takes a tremendous amount of his time, and I don't think anybody, unless he is in a position as I am, can realize the tremendous amount of work that is asked of our Secretary, and how well he is doing it."

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1. Cooke, R. A.: in Textbook of Medicine (Cecil). Philadelphia, W. B. Saunders Company, 1947; seventh edition, p. 528.
2. Nevius, W. B.: J. M. Soc. New Jersey 46: 17 (1949).
3. Rosen, F. L.: ibid. 45: 389 (1948).

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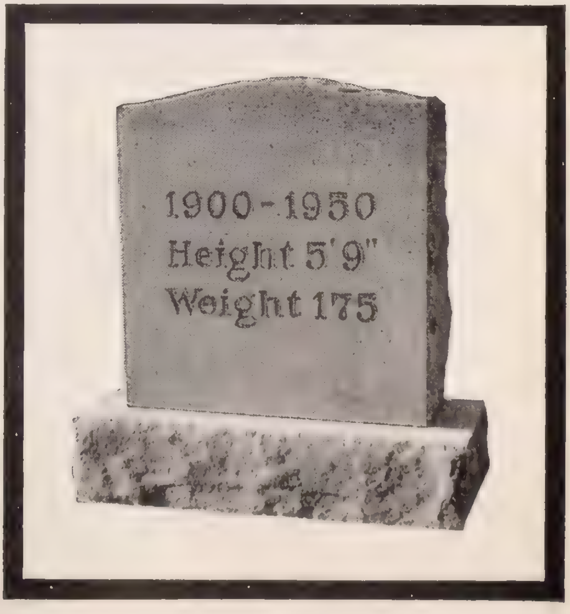

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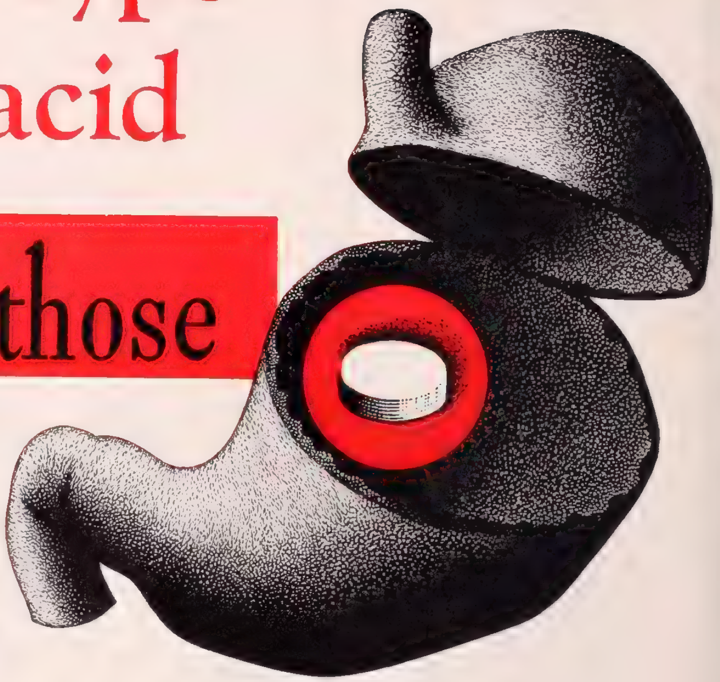

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1. Brick, I.B.: Amer. J Dig. Dis., *In Press* 2. Bralow, Spellberg & Necheles: Scientific Exhibit #1112, A.M.A. Annual Session 1949

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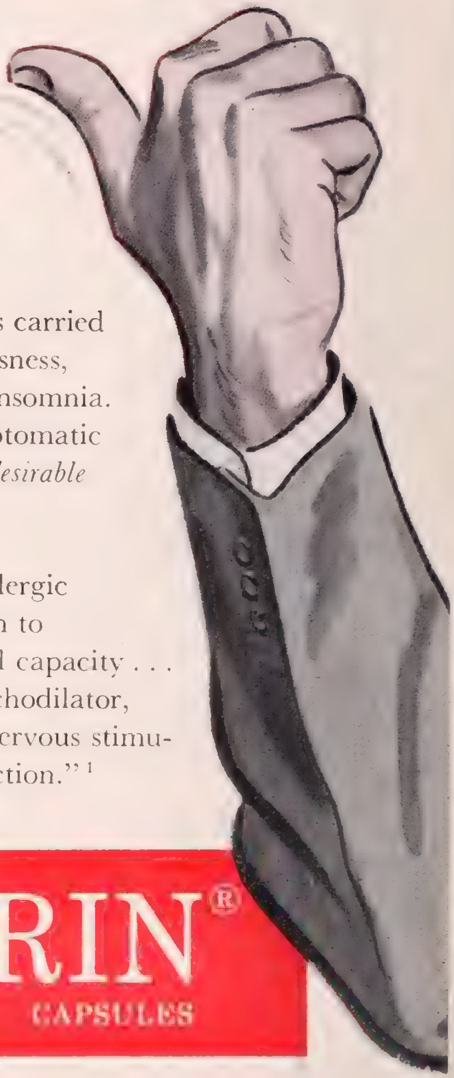

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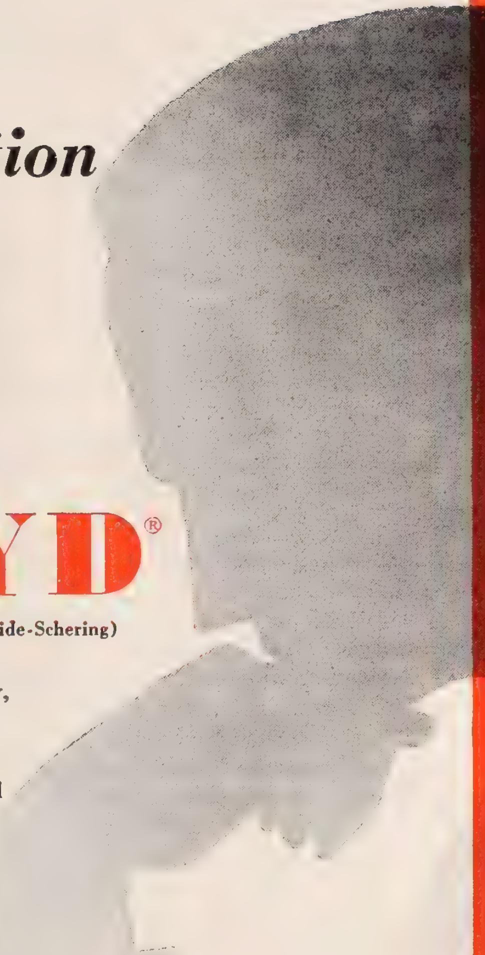

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2. Dodson, A. I.: West Virginia M.J. *45*:1, 1949.
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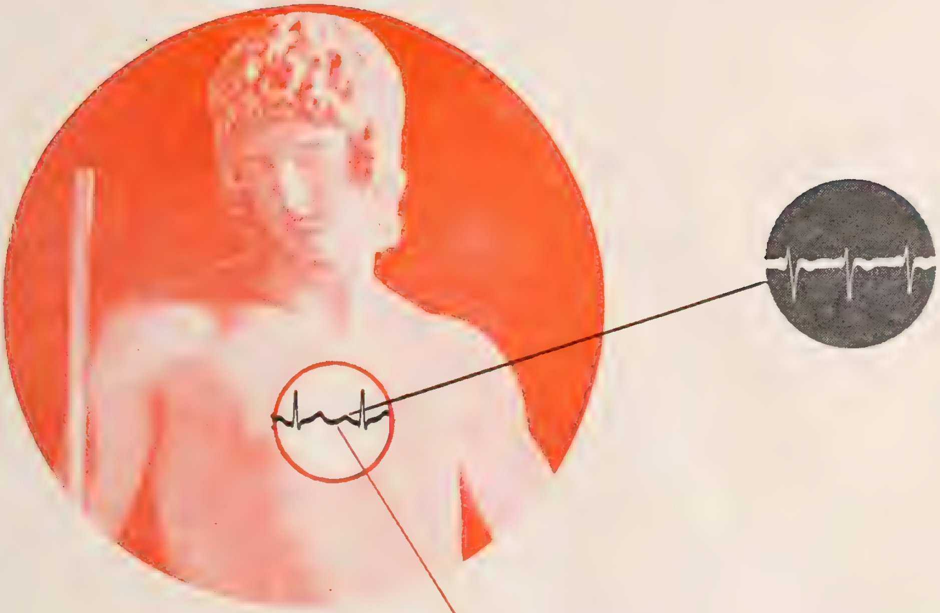

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(1) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (2) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948.

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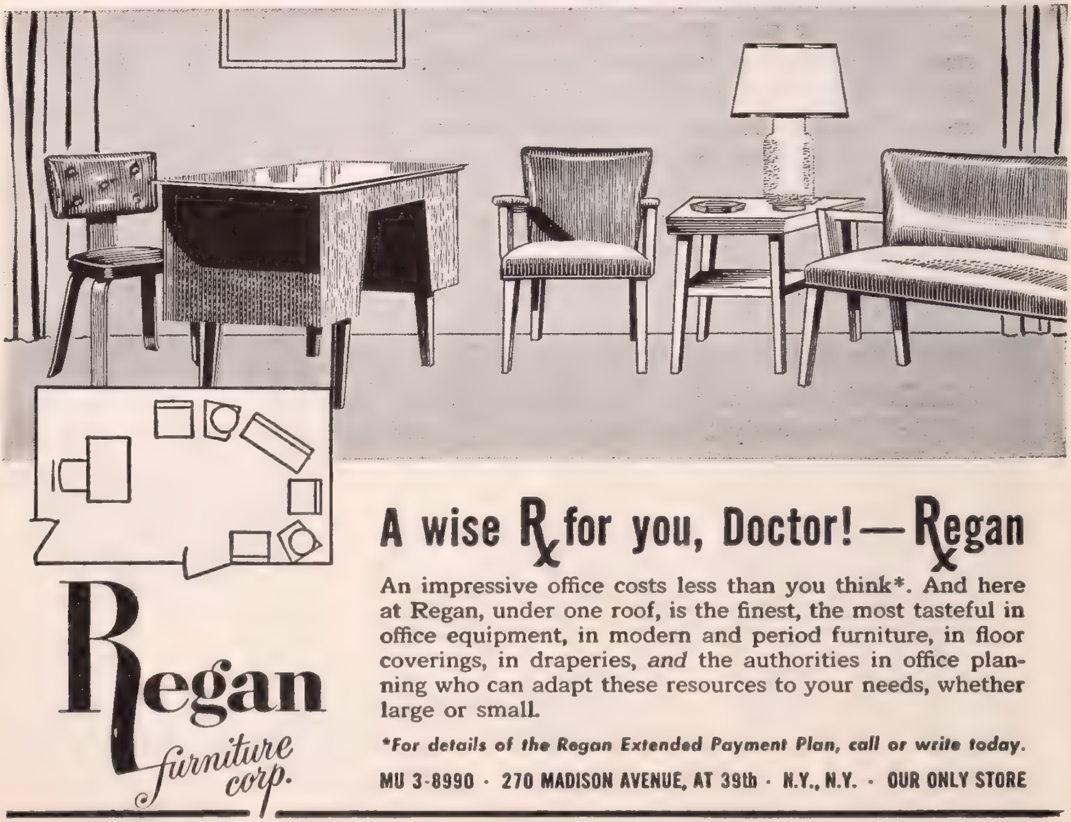
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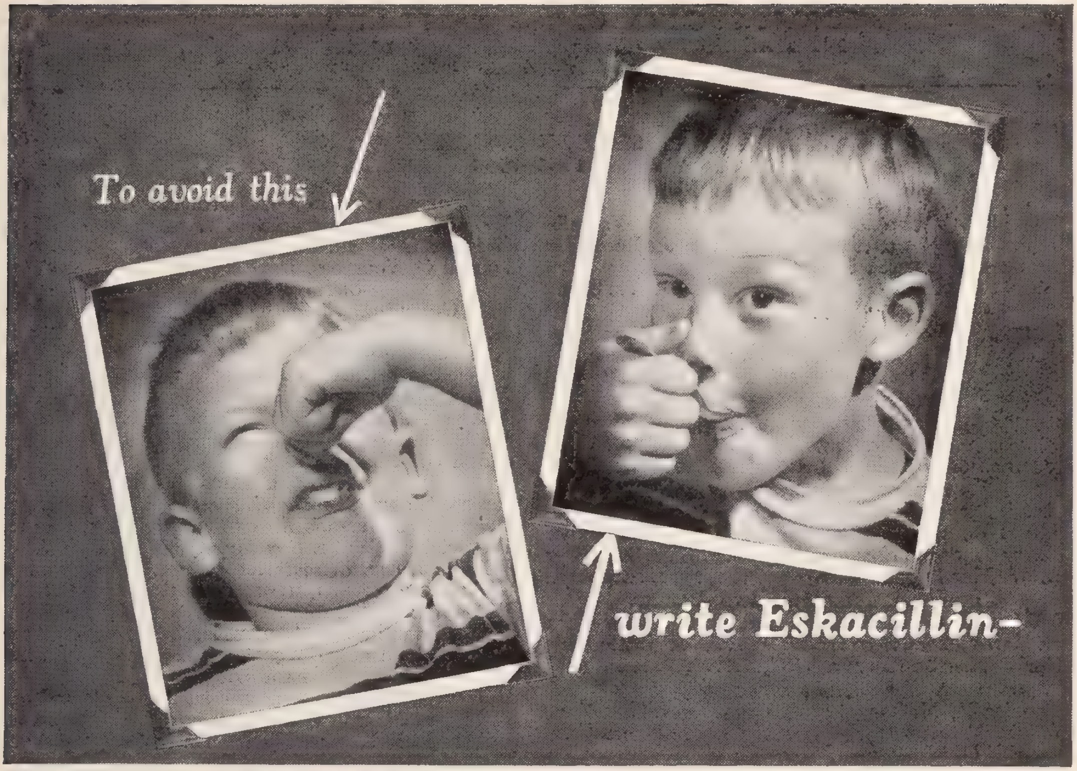

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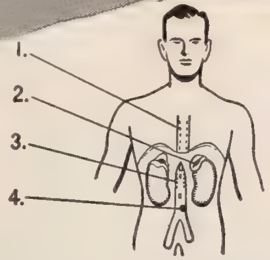

Fig. 1. Typical locations of epinephrine-producing tumors.
1. Thoracic Paraganglia.
2. Adrenal Medulla (10 per cent of tumors bilateral).
3. Abdominal Paraganglia.
4. Organ of Zuckerkandl.

Fig. 2.

Pathologic specimen of a pheochromocytoma. (*Courtesy of Becker, Bass, and Robbins, Beth Israel Hospital, Newark, N. J.*)

For the detection of Hypertension-producing
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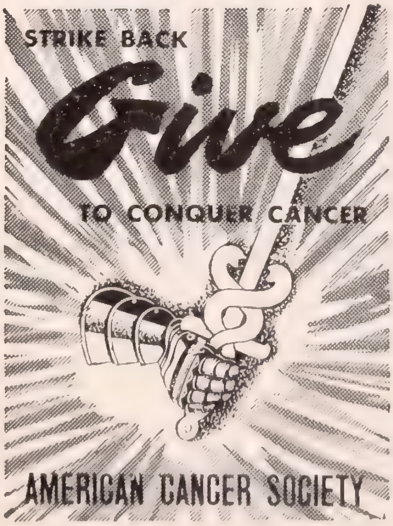

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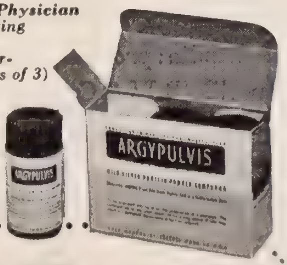

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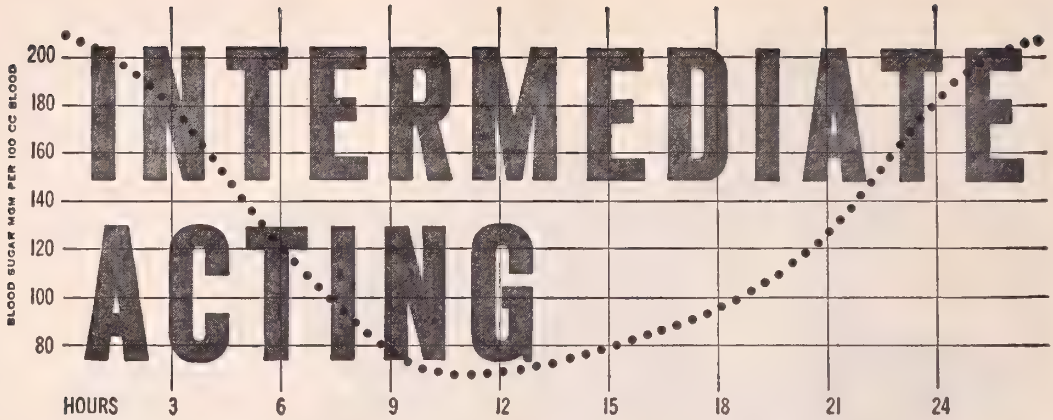

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1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
2. ibid Proc. Am. Diabetes Assn. 8:37, 1948.

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– Wetzel, N. C., et al., Science 110:65

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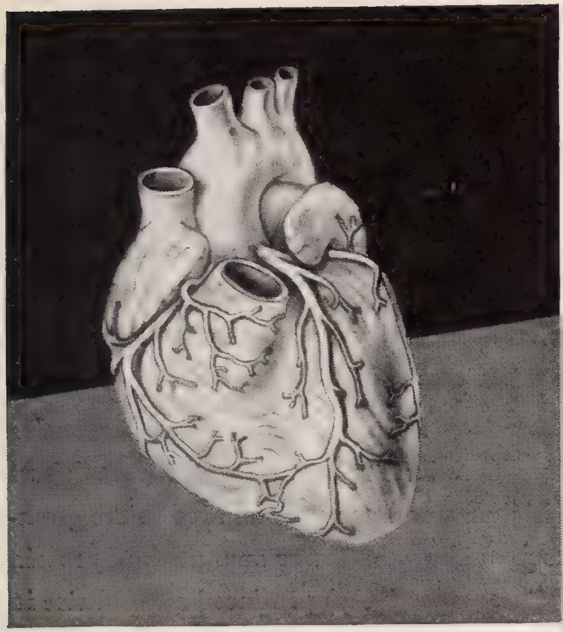

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1. Killam, K.R., and Fellows, E.J.: Federation Proc. 9:291 (March) 1950.
2. Rosenman, R.H., et al.: J.A.M.A. 143:160 (May 13) 1950.
3. Osher, H.L., and Katz, K.H.: Boston M. Quart. 1:11 (March) 1950.
4. Kenawy, M.R., et al.: Eye, Ear, Nose & Throat Monthly 29:79 (Feb.) 1950.

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*Orent-Keiles, E., and Hallman, L. F.: The Breakfast Meal in Relation to Blood-Sugar Values, Circular No. 827, United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, Dec., 1949.

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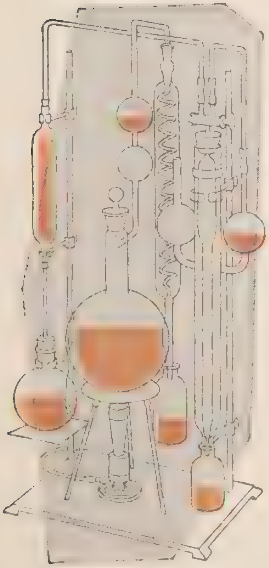

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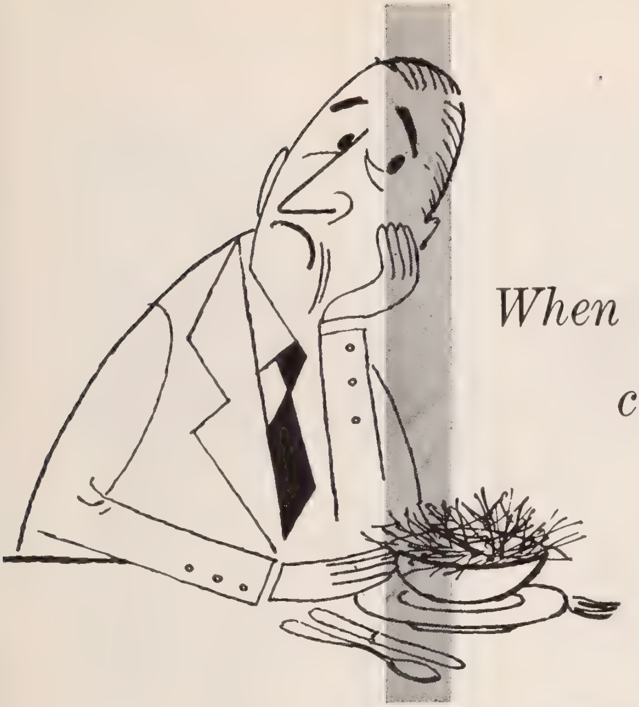

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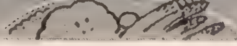

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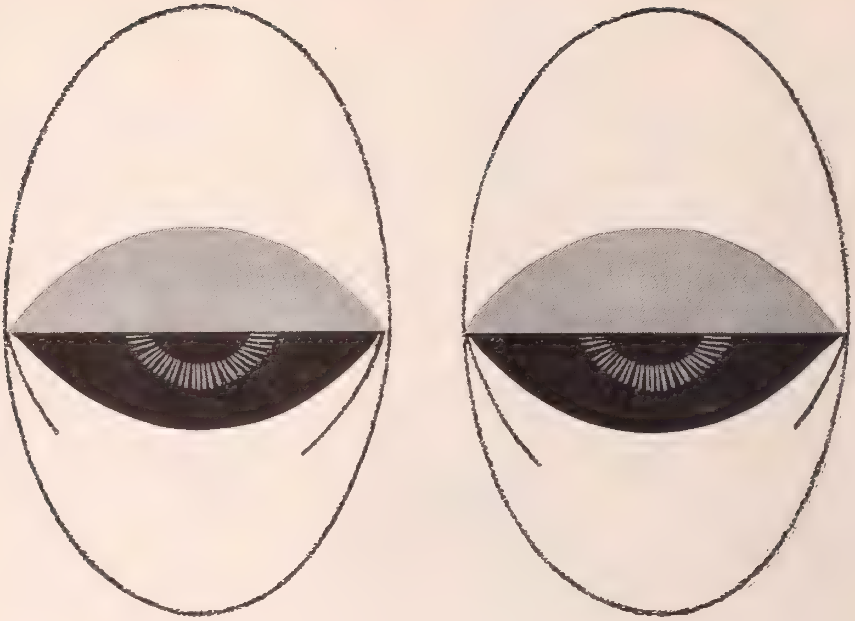

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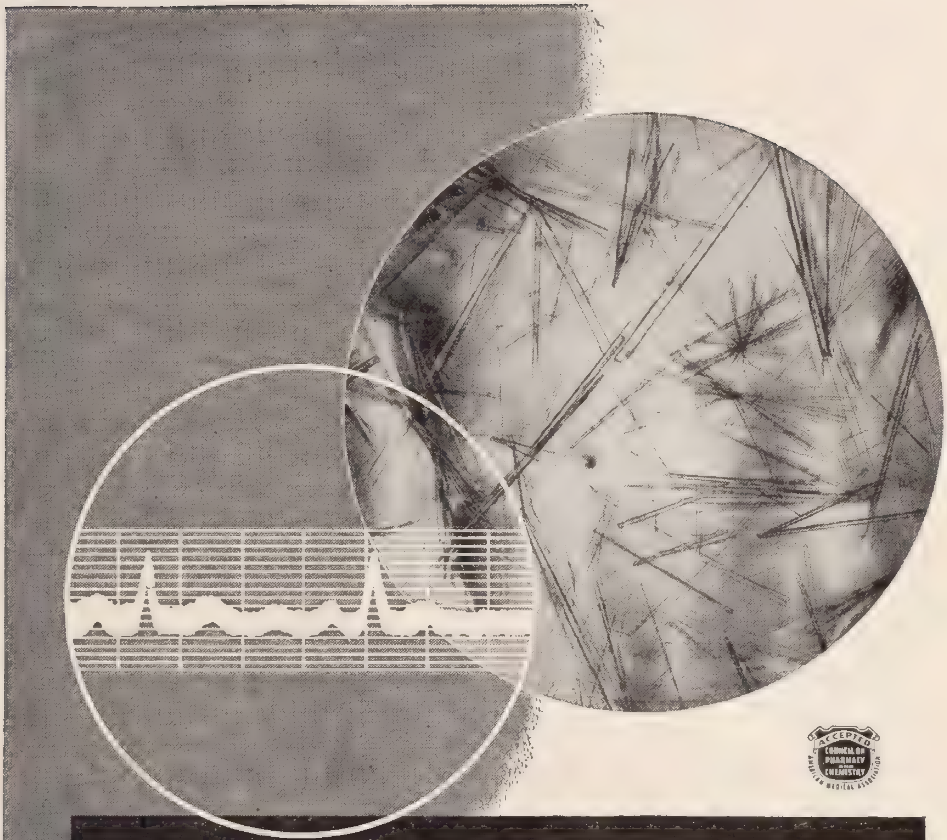

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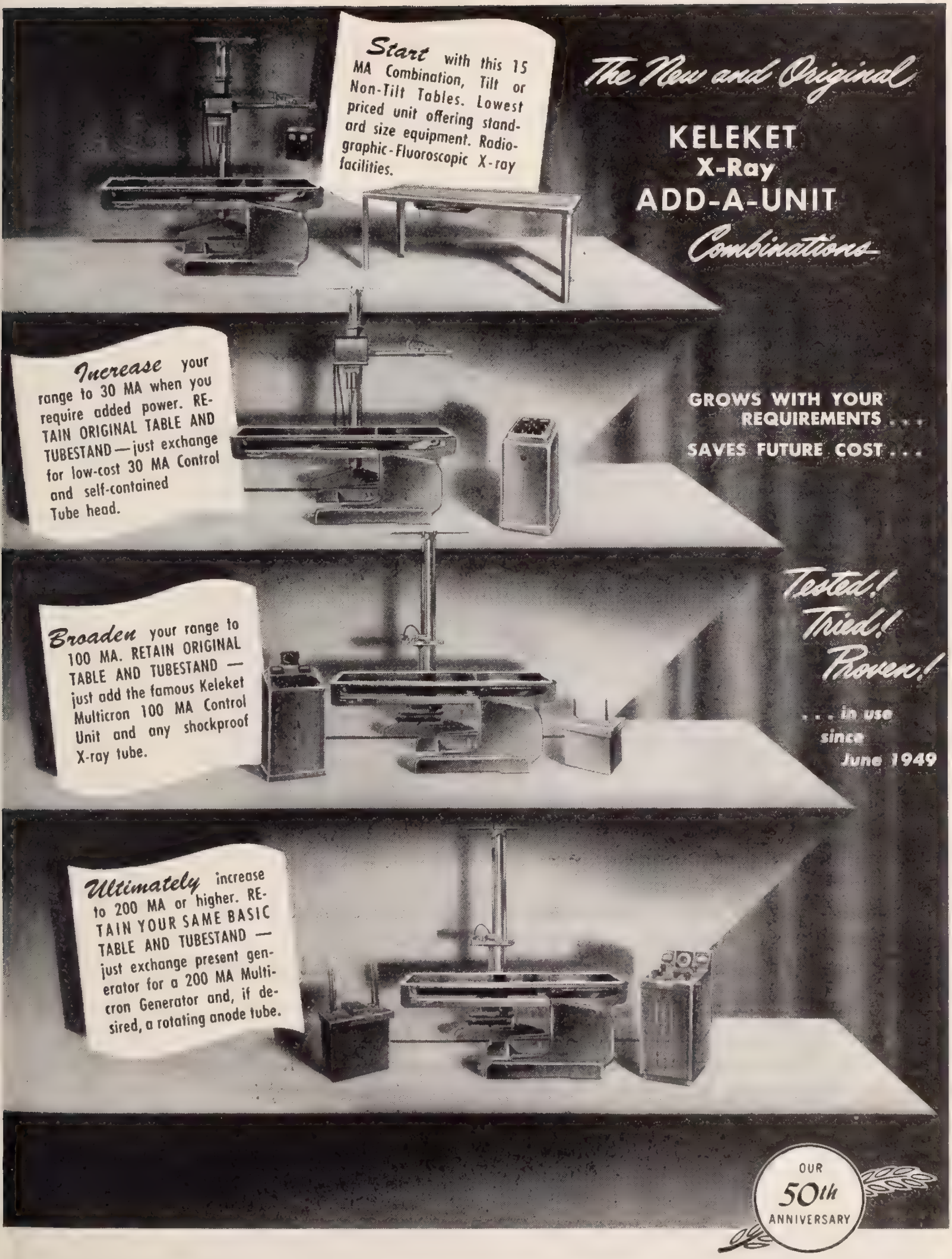
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Editorials

Physicians and Phosphate Insecticides

During the last war, the Germans, who had concentrated their efforts on phosphorus-fluorine compounds in their intense search for lethal war gases, discovered that some of these compounds were more effective as insecticides than chemical warfare adjuncts. The compounds tetraethyl pyrophosphate, known as TEPP, hexaethyl tetraphosphate, spoken of as HETP, and O, O-diethyl O, p-nitrophenyl thiophosphate, designated E-605 by the Germans but now called Parathion in the United States, were uncovered by British and American teams occupying Germany at the close of the war.

During the postwar years, these insecticides were found to be of major importance to agriculture. Of the group, Parathion has been the one most extensively developed in this country. It is now being used by farmers, florists, and commercial spray operators in the form of aerosols, sprays, and dusts. So far its use by home gardeners has been discouraged.

It is highly important that the medical profession realize the widespread use of these phosphate insecticides and be informed of the toxic symptoms they cause in man. Millions of gallons of spray solutions and large quantities of dilute dust containing Parathion were applied for insect and mite control during 1949. Three fatalities and an unknown number of poisonings occurred during last season. All of the fatal cases followed prolonged inhalation of Parathion wettable powder or spray mist and extensive skin contact.

Parathion inactivates the cholinesterase enzymes of the blood and tissues, and, therefore, the signs and symptoms resulting from excessive absorption are primarily those of marked parasympathetic stimulation. The initial complaint is usually giddiness or headache, followed often by abdominal cramps, diarrhea, nausea, weakness, and a sense of contraction in the chest. If the cholinesterase level drops precipitously, marked signs of parasympathetic stimulation will be evidenced by hyperhidrosis, miosis, lacrimation, and salivation.

Many of the parasympathetic symptoms and signs are relieved by atropine. Doses of 1 or 2 mg. per hour up to a daily total of 20 mg. of the drug may be required to control respiratory symptoms and to keep the patient fully atropinized. The intravenous route is best for those severely poisoned. Unfortunately, atropine does not block the muscular weakness. Artificial respiration may be necessary for many hours—clearing of the airways by suction if they are obstructed or positive pressure oxygen if pulmonary edema is present may be lifesaving. Patients severely poisoned can completely recover after full atropinization and artificial respiration. Morphine should not be given. The acute emergency requiring atropine and artificial respiration may last forty-eight hours.

Physicians in areas where large scale use of phosphate insecticides is prevalent should be on the alert for people who give a history of vertigo followed in two to eight hours by nausea, abdominal cramps, vomiting, diarrhea, muscular twitching, pressure in the chest, convulsions, coma, or pulmonary edema. They may be severely poisoned, and the prompt administration of atropine will block many of the parasympathetic effects.

If a person exhibits toxic symptoms from exposure to the phosphate insecticides, he should be warned against further exposure until restoration of blood and tissue cholinesterase to normal levels has taken place. Because all the phosphate insecticides inactivate cholinesterase, persons exposed to any specific one may be susceptible to any of them for a considerable period of time. Restoration of the cholinesterase level occurs slowly. Laboratory methods are available for the determination of the blood level of cholinesterase. Physicians would do well to advise their patients not to expose themselves further to the phosphate insecticides until the cholinesterase of the blood has returned to normal.

The medical profession has a great responsibility to agricultural personnel who will be using these insecticides this year—alertness on the part of physicians and hospital employes will undoubtedly cut the toll of those who would otherwise die through their own carelessness.

Physicians' Obligation to Reduce Costs

A tangible service to patients is within the control of many physicians; namely, lowered costs for laboratory work. Says the President of New York County Medical Society, in part:[1]

> Many a patient finds that his total bill for an illness may involve a very considerable charge for a battery of tests performed to accumulate a voluminous mass of diagnostic data. The new trend, too, is to have the patient undergo an entire "checkup" in diagnostic centers—even when critical illness is not at hand—as a measure of preventive medicine. This, again, is as it should be. Yet again there is no doubt that such a comprehensive series of laboratory procedures all adds to the price paid by someone for medical care... by the public, by health agencies, by the hospitals, or by the private patients.
>
> Without trying to fly against the advancing winds of medical progress, one may reasonably ask for a bit of reflection on the blanket orders sometimes issued for laboratory tests which—on second thought—promise to aid the diagnostician only slightly, which may sometimes by their very abundance confuse the issue, and which always increase the cost of illness for the patient.
>
> There is an understandable emphasis on elaborate clinical diagnostic procedures among younger physicians—fresh perhaps from a residency in a major university teaching hospital where they had only to lift a finger to have harassed technicians turn out the work. That was part of their postgraduate medical education and gave them the training and experience they will need later. Moreover, this reliance on the objective information thus available is a desirable thing...as information.
>
> But diagnosis is a mixture of information plus judgment. As these younger physicians come to work with their own patients in their private practice, they gradually learn that a second and a third look at the patient and their experience in physical diagnosis will often reap rewards in attaining the correct decision without confusing the issue with a host of laboratory data and at a considerable saving in cost to their patients. Never forget that the

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[1] New York Medicine, April 5, 1950, p. 22.

> cost of medical care is a major issue of medicine today.
>
> One must add, immediately, that laboratory work, if it is truly needed, must never be sacrificed merely on the basis of cost. Admittedly, too, the margin between enough laboratory work and an overabundance is sometimes a narrow one. Nevertheless, for those who err on the side of ordering too much laboratory work it is well to remember that the world had good diagnosticians before they were born.[1]

While no one contends that the patient's financial interest is paramount, it is a definite and, we believe, a growing obligation of the physician to assist in cutting costs in his patient's behalf wherever possible. This cannot be emphasized too often. Excessive fees and indiscriminate prescribing of expensive drugs, as well as unnecessary laboratory procedures, open the profession to justifiable criticism. There is, as Dr. Keating remarks, an art and science to the practice of medicine. The best over-all care of the patient—medically and economically—is the proper blending of the two.

Anything which physicians can do to help lower the cost to the patient without sacrificing the quality of medical care is most meritorious. Sensible planning in the numbers and types of diagnostic tests to be ordered for the patient is one starting place to achieve this end.

Current Editorial Comment

A Question of Ethics. Medical advancement in the past fifty years has been great. Hospitals have multiplied and expanded their services, medical schools have fitted themselves to give better training to their graduates, and the practitioner has equipment and methods at his disposal that were unheard of at the opening of the century. However, according to the *Military Surgeon,*[1]

> There are signs in the air that there has been no parallel life in the spirit of the individual that would practice medicine. Indeed there are indications of serious defect in the mental attitude of the medical student body of today toward the vocation they have chosen to follow. The text of this discourse is found in an item of "Current Comment" in a recent issue of the *Journal of the American Medical Association.* This item relates to the proceedings of a meeting of the Association of Interns and Medical Students. This pressure group in convention went on record for a program of benefits for its membership including minimum pay for interns and residents, for vacations and time off, for accident insurance and extra pay for work regarded as hazardous. However reasonable these objectives may be, there can be but abhorrence and concern at the methods being employed for their accomplishment. At a stage in their careers when the members of this group should have no interest but that of perfecting their professional preparation, they are banding themselves together for exacting material advantages by means of political and industrial pressures.....

For more detailed information about the activities of the group in question, we refer our membership to an article in the *Saturday Evening Post* of February 11, 1950, by Vic Reinemer, "How Our Commies Defame America Abroad," and the more recent article in *Medical Economics,* March, 1950, entitled, "Leftist Minority Woos Future Doctors," a behind-the-scenes look at the Association of Interns and Medical Students.

The *Military Surgeon* comments further—The years that have passed since the beginning of the century have seen introduced into our mass thinking a new set of psychologic values that help to explain the behavior of the membership of the society under scrutiny. There is the intangible concept called "human dignity," precious to its advocates, a delicate and sensitive possession that is easily affronted. This isn't at all the quality of personal dignity that the individual acquires spontaneously by conforming to well-established habit patterns. No, "human dignity" is to be achieved by regulations and statutes and maintained by the same means.

A comparatively recent phenomenon is the passion for what is called security, meaning financial security. *It has always been a goal among our people, its attainment seen through the means of industry and thrift, qualities no longer in high repute.*[2]

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[1] 106: 315 (April) 1950.

Security is to be obtained again by regulation and statute, by groups in proportion to the pressure they are able to exert. There was no word of a strike threat in the demands made by these embryo members of the profession, but that threat is inherent in any such statement of grievances.

It may be argued that this Association of Interns and Medical Students is just another medical society, but it would be a jaundiced eye that could see it as such. It more closely resembles a labor union in that the benefits it demands are personal ones for its members. . . . .

The mental query that arises from this discussion is what manner of professional ethics may be expected in the years to come from individuals who in their years of student work and of internship bind themselves together into pressure units for the furtherance of their interests? We feel that an inherent sense of personal dignity will keep the right-minded medical student and intern out of such an organization.

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[2] Italics ours—*Editor.*

IN MEMORIAM

William David Johnson, M.D.

Dr. William David Johnson, of Batavia, former president of the Medical Society of the State of New York, died on June 1 at the age of eighty. Honored by the State Society in 1947 for his completion of fifty years of service in the medical profession, Dr. Johnson, active for many years in the work of the Genesee County Medical Society and in the State Society, was president of the Medical Society of the State of New York in 1931–1932.

A graduate of the Syracuse University College of Medicine in 1892, Dr. Johnson had practiced in Batavia for forty-eight years until his retirement in 1948. He was a Fellow of the American College of Surgeons and chief surgeon at the St. Jerome Hospital in Batavia, in addition to being consulting surgeon for several other hospitals in the vicinity.

Long respected by his associates, Dr. Johnson will be remembered for his sincerity and interest in his profession and in the State Society and its work.

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Scientific Articles

RECENT ADVANCES IN THE TREATMENT OF MALIGNANCY

I. Snapper, M.D., and E. Greenspan, M.D., New York City

(From the Second Medical Service, Mount Sinai Hospital)

IN A discussion of the recent advances in the treatment of malignancy, mention must be made of the developments in hormone therapy, nitrogen mustards, the antifolics, urethane, and the radioactive elements.

Hormone Therapy

Tumors derived from organs under direct endocrine influence may in certain instances retain an element of sensitivity to endocrine hormones or related substances. Unfortunately, this sensitivity appears to parallel the extent to which the tumor cells retain the normal functional activity of the parent organ. Therefore, the rapidly proliferating anaplastic tumors are likely to be more resistant to hormones than the slower-growing, well-differentiated types.

In the normal metabolism of prostatic cells there is produced approximately 1,500 times the amount of the special enzyme acid phosphatase than is found in any other cell type in the body.[1] Most prostatic carcinoma cells also produce acid phosphatase as an essential component in their metabolism. Androgens increase the production of this enzyme by both normal and carcinomatous prostatic cells. A testosterone stimulation test for diagnosis in patients suspected of having prostatic carcinoma was at one time suggested on the basis of these observations. In such patients the blood level of acid phosphatase might be expected to show a dramatic increase after androgen administration. However, this test has, in general, been abandoned because of the inherent dangers of stimulation of an occult prostatic carcinoma.[2] When estrogen is administered or when androgen is withdrawn by castration, the ability of the cells to produce acid phosphatase is impaired, with a resulting inhibition of cell growth.

During the past six years the development of androgen control in the treatment of prostatic carcinoma has resulted in adding to the comfort, economic usefulness, and life expectancy of about 80 to 85 per cent of all patients with prostatic carcinoma.[3,4] No patients, however, are completely cured by castration or by administration of estrogens. It is not clear why certain patients do not respond, despite sufficient administration of estrogen and a commensurate fall in the blood acid phosphatase level. In such cases it may be concluded that acid phosphatase is simply one of several possible points at which the cells might be successfully attacked.

These principles have been extended to carcinoma of the male breast, which is now treated with estrogens. Excellent reports of castration and estrogen treatment in this disease are available, but the number of favorable cases published is still small.[5]

Some years before Roentgen's discovery of x-rays, metastatic carcinoma of the female breast was treated by surgeons with oöphorectomy.[6] Now that a better understanding of tumor metabolism has been attained, this treatment has been revived again in conjunction with the administration of either androgens or estrogens. Androgens are best employed in the premenopausal or early postmenopausal woman under the age of sixty years.[7] The dosage of testosterone propionate varies between 25 mg. intramuscularly three times weekly up to daily injections of 100 mg. The estrogens are used in the late postmenopausal group and can be given as stilbestrol, 2 to 5 mg. daily.[8] Other estrogenic substances in large doses can also be used. Objective improvement in skeletal metastases should not be expected in the cases treated with estrogens but

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, General Sessions, May 12, 1950.

may occur in 10 to 20 per cent of cases treated with testosterone.[7] The reduction in bone pain, which is at times remarkable, may be observed in 50 to 80 per cent of all cases, frequently with marked relief of other constitutional signs. Soft tissue metastases do not respond as well to testosterone as to estrogen treatment which may be associated with regression in as many as 20 per cent of all cases in the late postmenopausal group.[9] However, the retention of large amounts of water, nitrogen, and minerals makes the indiscriminate use of these hormones not without danger, especially in elderly patients with hypertensive and cardiovascular disease. The masculinizing effects of testosterone are very disturbing, and this is the reason why the patients occasionally refuse to continue the medication.

ACTH and cortisone may produce surprising temporary improvement in patients with leukemia and disseminated lymphomas.[10,11] The fever, anorexia, and signs of systemic toxicity may disappear completely during treatment, but when the hormones are withdrawn, symptoms return within a day or two after ACTH is stopped, usually in a week or so after cortisone. The latter is retained to a certain extent in the intramuscular sites of injection.

ACTH and cortisone possess very little activity against a number of rapidly growing transplantable lymphomas in mice and rats.[12] Likewise, it must be remembered that estrogens and androgens do not appreciably influence breast carcinomas in mice once they are established.[13,14] Therefore, it seems entirely likely that the beneficial effect of these hormones in man is rather the result of an indirect action on the tumor cells, following the radical rearrangement in carbohydrate and protein metabolism which can be regularly produced by large doses of hormones. Although the striking amelioration is only temporary, sufficient time may be gained to permit the patient to go into a spontaneous remission. The effect of these hormones in patients with malignant tumors is, therefore, comparable to the result obtained by ACTH and cortisone in leukemia or by the administration of nitrogen mustard in patients with lymphomas. The adrenal metabolites may well become a useful adjunct in the development of a rational chemotherapeutic program of treatment for malignant lymphomas, as are the estrogens and androgens for breast and prostatic carcinoma, but they do not represent a direct attack on the malignant cell.

Nitrogen Mustards

The nitrogen mustards have definitely attained a place in the treatment of most radiosensitive tumors once they begin to metastasize widely. In 50 to 70 per cent of cases of Hodgkin's disease and in a lesser number of cases of lymphosarcoma, lympholeukosarcoma of the Sternberg type, reticulum cell sarcoma, and giant-follicular lymphosarcoma, a prompt and, at times, dramatic result may be obtained.[15–18] These results may be reproducible several times, especially in Hodgkin's disease. Patients have been successfully treated for several years with mustard alone with as many as a dozen courses of treatment. A minimum of four weeks should elapse between courses of treatment. Nitrogen mustard is especially useful in those proved cases of Hodgkin's disease in which occult foci of diseased tissue are producing serious constitutional symptoms. Combined treatment with nitrogen mustard for disseminated lesions and x-ray to the local predominant lesion is not only feasible with reasonable caution but may actually become the treatment of choice.

In disseminated mycosis fungoides and in occasional cases of seminoma, neuroblastoma, and small cell or anaplastic carcinoma of the lung and other primary sites, nitrogen mustard may temporarily provide a favorable influence.

The nausea and vomiting from mustard are usually controlled by sodium amytal. When a depression of leukocytes develops seven to ten days after a standard course of treatment, then an adequate dosage has been employed. It is possible to give mustard even in the presence of leukopenia, provided the platelets are not seriously depressed. The patient should be followed with biweekly blood counts on an outpatient basis during a two to three-week period after each course of treatment.

Antifolics

The recent interest in folic acid and antifolic acid compounds in neoplasia has originated from a number of observations in the laboratories of Dr. Lewisohn.[19] In experimental tumors in mice Lewisohn found that an impure material, labeled "Folic Acid Conjugate," was capable of producing tumor regression. It is now highly probable that this curative effect was obtained by folic acid derivates which contaminated the folic acid, produced by fermentation which Lewisohn used. Since then, a large number of substances with antifolic activity have been made available; these substances are capable of inhibiting a variety of experimental tumors in lower mammals.[20] This property is based entirely on the antifolic potency of these substances, since the addition of folic acid at the proper interval, prior to the antagonist, will prevent both the tumor inhibition and the drug toxicity.[21,22] If the folic acid is given one hour after the antifolic or even simultaneously with the antifolic, it is not possible to block the antifolic effect.[22] It is for this reason that the bone marrow depression in patients is so difficult to overcome once aminopterin toxicity has developed.

In acute leukemia of children, either aminopterin or A-methopterin may produce from 40 to 60 per cent of clinical remissions.[23] In adults with acute leukemia the results are less favorable for the toxic and damaging effects are more likely to prevail.[21] In chronic leukemia and the lymphomas, aminopterin may produce partial clinical remission and lymph node shrinkage, but better drugs are available for these diseases. It is too early to state whether the antifolics have a place in the treatment of other neoplastic conditions. However, it is of considerable interest that patients with carcinoma may tolerate prolonged treatment with antifolics.[24] This is probably due to the slower consumption of the endogenous folic acid reserves as compared to patients with leukemias and lymphomas, who may be more frequently in a state of subclinical folic acid deficiency. There is no doubt that the antifolics will continue to remain of great interest to the clinical investigator.

Urethane

Although a large number of carbamates inhibit tumor growth in animals, only a single carbamate, urethane, has received adequate clinical study. Urethane has been found to possess a very narrow therapeutic range which can be assayed safely only in patients with chronic myeloid leukemia and in patients with multiple myeloma.[25–28] In patients with chronic myeloid leukemia maximal tolerated doses of urethane may reduce the total white count and the degree of splenomegaly with excellent symptomatic improvement. Urethane would seem to offer no advantage over x-ray therapy to the spleen except for ambulatory patients in areas which lack facilities for proper radiotherapy.

In patients with multiple myeloma large doses of urethane have had a favorable influence upon pains. In certain cases Bence-Jones proteinuria has diminished, hyperglobulinemia has decreased. The drug should be given in large doses, 2 to 4 Gm. daily, either in urethane enseals or in a 50 per cent water solution. Two cubic centimeters of the latter solution are mixed with 4 cc. syrup of orange and taken by mouth, followed by a glass of water. This should be repeated two to four times daily. The drug usually causes nausea. In some patients daily subcutaneous injection of 2 to 4 cc. of 50 per cent water solution of urethane is tolerated better than peroral administration. A total of 200 to 250 Gm. of urethane should be taken. Thereafter, intramuscular injections of 25 mg. of testosterone propionate should be given three times per week for one month and then for a long time one month of urethane treatment of 2 Gm. daily should be followed by one month of testosterone injections. At the Mount Sinai Hospital where only patients with late stages of multiple myeloma are admitted, favorable results of urethane have been observed only rarely. We have, however, seen very good, but usually temporary, results in earlier stages of multiple myeloma where urethane could be administered immediately after the disease had been discovered.

Radioactive Elements

The radioactive elements at present are prepared and administered as simple salts. Unfortunately, this limits their usefulness in chemotherapy, for these salts partake in the normal body metabolism as well as in the abnormal metabolism of the tumor cells. Unless a radioactive element is found exclusively or preponderantly in tumor cells, no selective effect will be produced, aside from that of generalized radiation, for these salts do not otherwise differ biochemically or physiologically from their nonradioactive homologues. For example, radioactive sodium does not concentrate in any organ or group of organs.[29] It is found in all the extracellular fluids of the body; its effects are similar to total body radiation. Although the nonmineral radioactive isotopes, such as carbon, nitrogen, and oxygen, contribute vastly to our knowledge of physiology, their practical therapeutic application is only very limited. Until these isotopes are incorporated into fairly stable compounds which themselves connect with specific enzyme systems or influence metabolic processes preferentially affecting the tumor cells, we should not expect these elements to possess sufficient selectivity to replace conventional radiotherapy. Radioactive strontium, cobalt, iron, sulfur, copper, and others offer much hope for important advances in our knowledge of basic physiology, but nothing startling for the clinician has been yet forthcoming. For the present, our attention must be confined to the two older isotopes which preceded the atomic age by a good many years.

Radioactive Iodine.—This substance would naturally be expected to enter the thyroid gland since the latter contains about 50 per cent of total body iodine. Although recent reports of its use in hyperplastic goiter are favorable, the results in thyroid carcinoma still leave room for improvement. Good responses have occurred in the type of well-differentiated metastases which the older pathologist called the benign metastasizing struma and more recently has been designated as alveolar or follicular carcinoma.[30] In this type of carcinoma the cells may maintain a glandular structure and function. Unfortunately, when first seen, not more than 20 per cent of the thyroid carcinomas show sufficient signs of function to justify treatment of either of the primary tumor or the metastases with radioiodine. Undifferentiated thyroid metastases can sometimes be converted into more mature cells by the removal of all of the remaining normal thyroid tissue.[31,32] After thyroidectomy the malignant cells will then become more like normal thyroid tissue, since they will not be nurtured any longer by circulating thyroid hormone. When the malignant cells assume the secretion of thyroid hormone, they become sensitive to radioactive iodine.

Over-all statistics indicate that 10 to 20 per cent of the undifferentiated thyroid carcinomas can be transformed into functioning thyroid tissue after removal of the normal thyroid, irrespective of whether this is accomplished by a surgical thyroidectomy, by administration of radioactive iodine in myxedema doses, or by very large doses of propylthiouracil (up to 1,500 mg. daily). In the cases where after thyroidectomy an undifferentiated thyroid carcinoma has started to produce iodine containing thyroglobulin, treatment with radioiodine may lead to remarkable results. At the Mount Sinai Hospital disappearance of large metastases in the lungs and union of pathologic fractures have been observed.[33] In one case the hair over a metastatic lesion in the scalp completely disappeared, evidently under the influence of the radioactive iodine which was picked up by the metastasis. Nevertheless, it follows from the figures mentioned that, even under the most favorable conditions, not more than 30 to 40 per cent of the thyroid carcinomas can be treated successfully with radioactive iodine.

Radioactive Phosphorus.—This isotope is administered as a simple salt, either orally or intravenously. It enters into the total phosphorus metabolism of certain lymphomatous tumors, the cells of which are rich in nucleoproteins. Nevertheless, the preferential uptake is only about twice that of normal tissue. It is not sufficient to leave normal tissue unaffected, even in cases of leukemia in which a vast abundance of malignant cells avidly utilizing phosphorus for nucleoprotein synthesis is present. The further disadvantage of radioactive phosphorus is that it remains in bone marrow longer than in other tissue. These facts limit its usefulness to the polycythemias and the chronic leukemias in which a prolonged action on the proliferating bone marrow is desirable.[34,35] It is essentially of no value in carcinomas, not even in the solid lymphomas.

Orientation for Future Research

Radioactive phosphorus has no therapeutic action in tumor patients because the nucleoproteins of the tumor cells compete with the nucleoproteins of other organs. It is evident that, in order to devise a rational treatment of malignancies, it will be necessary to find radioactive substances which distinguish between the nucleoproteins of normal organs and nucleoproteins of neoplasms, probably even between nucleoproteins of different neoplasms. Until now very little has been accomplished in this field. However, it seems that investigations on the action of diamidines indicate that such differences may actually exist.

After injection of 2-hydroxystilbamidine, considerable amounts of this compound can be demonstrated in the cytoplasm and in the nuclei of liver, kidneys, testicles, and adrenals. In some animals (mice) the kidneys contain larger amounts of this diamidine than in other species (rabbits and humans). It is remarkable that this diamidine does not only penetrate into the cytoplasm but also into the nuclei of the cells of liver, kidneys, and testicles. Nevertheless, the function of liver and kidneys as far as can be made out with the customary function test is not impaired.

This diamidine does not only have a preference for the organs mentioned, but it also has a preference for a special tumor. Since large amounts of 2-hydroxystilbamidine are deposited in the normal liver, animals bearing a transplantable hepatoma were injected with this substance. It then appeared that the cells and the nuclei of a transplantable mouse hepatoma after treatment with 2-hydroxystilbamidine contain large amounts of this substance, whereas only traces of this diamidine are deposited in a transplantable lymphosarcoma and a transplantable adenocarcinoma of the mamma.

These results have been obtained by study of organ smears with the fluorescent microscope and also by chemical analysis of the different organs and the different tumors.[36]

In this way it can be demonstrated that the nuclei of certain cells easily accept a special diamidine, whereas the nuclei of other organs do not. At the same time it has become evident that certain tumors have an affinity for this substance, whereas other malignant tumors do not. This seems to indicate that basic differences exist either between the nucleoproteins of cells and nuclei of different organs and of different tumors or between the permeability of different cells and nuclei. Thus, it does not seem beyond the realm of possibility that one day substances will be available with an affinity for the nuclei of certain neoplasms but not for the nuclei of normal organs.

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CONTROL OF POLYCYTHEMIA BY MARROW INHIBITION

After a ten-year study of 172 patients suffering from polycythemia due to various causes, it is concluded that persons with polycythemia vera when properly treated now have a prognosis as favorable as those with diabetes mellitus on insulin or those with pernicious anemia treated with liver. Results on this series seem to indicate that radiotherapy aimed at inhibition of cell production in the bone marrow is most effective, accomplished through use of sodium radiophosphate.

Of the total of 172 patients, 134 had the laboratory and clinical indications of polycythemia vera; 26 had mild polycythemia of unknown etiology; 12 had secondary polycythemia usually associated with cardiac or pulmonary disease. Diagnosis of polycythemia vera was arrived at after a study of the history, physical examination, and laboratory findings including sternal marrow examination both before and after therapy. To rule out secondary polycythemia, arterial blood saturation was done if necessary. Also, if needed, special pulmonary and cardiac studies were made. Before diagnosis was made, the degree of unexplained polycythemia had to be 7 million or over, except in those instances where past evidence was unquestionable or where there was an enlarged spleen and an obviously high erythrocyte count.

From 1939 through 1942, 30 patients were treated, and since then these have received one course generally consisting of two injections of 3 to 6 millicuries on the average of every three years. Altogether in this series, 121 polycthemia vera patients were treated, of whom 47.8 per cent had only one course, and, of the group treated during the first five years, 28 per cent have had only one course.

Of the 121 polycythemia vera cases referred to above, follow-up studies had been completed on 116 at the time of reporting. In the first group of 30 referred to above, 17 per cent had remained normal for over three years after one course of therapy. Some have not needed retreatment after as long as eight years.

Although these studies must be extended both in number and duration, certain facts already are apparent. Average age of patients at onset is fifty and seven-tenths years, and the average age of those that died was sixty-seven years, almost a normal life expectancy for persons in this age group. Also, this compares favorably with data regarding life expectancy in diabetes and pernicious anemia. In this group there were 21 deaths, of which five were due to leukemia and five to generalized arteriosclerosis. Of the remainder, two were due to cardiac failure, three to coronary occlusion, three to neoplastic disease, one each to portal thrombosis and cerebral thrombosis, and one due to anemia and leukopenia.—*John H. Lawrence, M.D., J.A.M.A., September 3, 1949.*

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THE PATHOGENESIS AND TREATMENT OF UREMIA

Louis Leiter, M.D., New York City

(*From the Medical Division, Montefiore Hospital*)

THE pathogenesis of uremia includes all of the processes responsible for the complex clinical syndrome defined as uremia. Basically, the pathogenesis of uremia begins with severe glomerular and tubular functional impairment, regardless of whether these result from a variety of acute or chronic organic diseases of the kidneys or from acute or chronic functional disorders of the kidneys secondary to circulatory or other prerenal disturbances. The impairment of glomerular filtration explains the nonprotein nitrogen retention, the retention of inorganic sulfates and phosphates and potassium, part of the acidosis, and some of the edema in certain types of uremia. The impairment of tubular function accounts for the variety of electrolyte disturbances, some of the edema, much of the acidosis (by failure of tubular secretion of ammonia), and certain suspected but unproved vascular and toxic effects of considerable import. The pathogenesis of uremia, however, does not end in the kidney. Once the metabolic and electrolyte derangements have been initiated by severe renal insufficiency, they give rise in turn to secondary and tertiary disturbances, all of which add up in the clinical picture of uremia. For example, renal retention of inorganic phosphate in the serum entails reduction of serum calcium which, in turn, may affect parathyroid function and morphology, bone structure, and the calcium concentration in body fluids. The complex secondary effects of acidosis, dehydration, overhydration, potassium retention, and other primary consequences of renal impairment are further examples.

Uremia may be defined, according to Bradley, as "the clinical state associated with nitrogen retention and disturbances of body water due to renal insufficiency, regardless of etiology."[1] The term, "clinical state," is used advisedly because one should not jump to a diagnostic conclusion on any laboratory finding alone. The clinical state of uremia involves every system in the body and includes one or more of the following symptoms and signs: anorexia, nausea, vomiting, weakness, pallor, headache, insomnia or drowsiness, irritability or apathy, confusion, stupor or coma, muscle twitchings, apnea or hyperpnea, dehydration or edema, hypotension or hypertension, anemia, acidosis or alkalosis, pruritus, and skin eruptions. No group of these symptoms or signs are actually specific for uremia; in fact, about the only specific physical finding in uremia is a pericardial friction rub. Even this is usually absent in the functional types of uremia.

Returning to the definition of uremia, we must add "nonprotein nitrogen retention" to the "clinical state." It would be simple if we could assume that uremia exists when the blood nonprotein nitrogen is above 75 mg. per cent, the blood urea nitrogen above 50 mg. per cent, and the blood creatinine above 5 mg. per cent. However, there are numerous exceptions in both directions, depending on the etiology of the uremia, the acuteness or chronicity of change in renal function, the protein intake, the fluid intake, the urine volume, the rate of endogenous protein catabolism and its influence by oral carbohydrate and fat or by intravenous glucose. One may see uremia in a patient with a BUN in the normal range, but his blood creatinine will still be elevated. One may be surprised, on the other hand, by finding a very high BUN and creatinine in a moderately anemic child or young adult who manifests practically no symptoms. Therefore, one cannot blame the state of uremia on what it signifies, literally, "urea in the blood", or even a great excess of urea in the blood.

The same argument applies to creatinine, uric acid, and other known nonprotein nitrogen compounds in the blood of uremic individuals. Much work was expended in the past in attempts to prove the toxicity of one or another of these retained metabolites. The only compounds normally excreted in the urine that are poisonous when injected intravenously are ammonia, guanidine derivatives, and phenols. Ammonia is not retained in uremia because all the urinary ammonia is made by the kidney itself as part of its acid-base regulating function. This was established by Nash and Benedict some seventy years after Frerichs implicated ammonium salts in the etiology of the hyperpnea and convulsions of uremia.[2,3] Little that is definite can be stated about either the guanidine compounds or phenolic derivatives as toxic factors in uremia because analytic methods are not yet satisfactory. However, as we shall see later, the complex pathologic physiology of uremia must include the possibility of a toxic metabolite, as yet unknown, in addition to the established disturbances of body water and electrolytes.

This brings us to another part of our definition

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of uremia: a clinical state associated with nonprotein nitrogen retention and disturbances of body water. What are these disturbances? In regard to water, one may see dehydration or overhydration, depending on the etiology and treatment of the uremia. There may be serious imbalance between extracellular and intracellular water. In severe oliguria or anuria, any pattern of water distribution in the body may be produced at will or unwittingly by the physician because the kidneys are no longer on the job to steer the body through troubled waters. Circulatory and other prerenal factors play an important role.

Similarly for electrolytes, virtually any pattern may be found or created in uremia, although ordinarily certain changes are relatively common. Thus, inorganic sulfates and phosphates usually accumulate in the serum, while calcium tends to fall. Bicarbonate or carbon dioxide is usually reduced, sometimes to extremely low levels, except in the uremias precipitated by severe alkalosis and associated dehydration. Serum chloride may be up or down, depending on the etiology of uremia, on the oral intake or infusion of sodium chloride, and on loss by vomiting or salt-losing renal tubules of chronic nephritis, pyelonephritis, or Addison's disease. Many physicians wonder why salt intake should increase the serum chloride level in uremia without increasing the serum sodium concentration at the same time. The reason probably is that normally there is 40 per cent more sodium than chloride in extracellular fluids, including serum, i.e., 140 meq. of sodium and only 100 meq. of chloride. However, in sodium chloride as ingested or injected there is an equal number of milliequivalents of sodium and chloride. This means that the kidney always has to dispose of the extra chloride to keep the serum sodium to chloride ratio at 1.4:1. In renal insufficiency this function may be seriously impaired, and thus a chloride acidosis with depression of bicarbonate can be brought about by giving neutral salt. If large amounts of saline are infused into normal animals, normal kidneys can be overwhelmed and a chloride acidosis produced. It becomes obvious now why a physician should not administer ammonium chloride to a patient in uremia or preuremia. At least, in the case of sodium chloride neutral edema fluid can be formed with 70 per cent of the chloride; with ammonium chloride hydrochloric acid is released after the liver pulls off the ammonia and converts it into urea. Dangerous acidosis is the result of the acid chloride unbalanced by sodium.

One more point in connection with the serum chloride level in uremia deserves mention. Ordinarily, we can use the sum of serum bicarbonate and chloride values, in milliequivalents, as a close index of the serum sodium value because 90 per cent of the sodium is usually in the form of sodium chloride plus sodium bicarbonate. This is true in most pathologic states, including moderate alkalosis or acidosis, when the sodium concentration remains normal but bicarbonate and chloride vary reciprocally, giving a constant sum of the two. However, in uremic acidosis as in severe diabetic ketosis, the sum of chloride and bicarbonate no longer reflects the sodium level. The sum may be abnormally low, yet th sodium concentration lies in the normal range. One reason is that marked accumulation of sulfates and other anions in the serum displaces not only bicarbonate but chloride as well. Therefore, before embarking on replacement therapy with sodium chloride solutions for hypochloremia, it is important to analyze directly the serum sodium.

Potassium is important in uremia because it is retained in anuric states and may be a direct cause of death by its cardiac toxicity. However, dangerous serum levels rarely develop unless the patient is able to take food containing potassium —remember the ever popular fruit juices and their potassium content! A high serum potassium is also found in the functional uremias of Addison's disease in crisis, in severe acute hemolysis, and in the traumatic crush syndrome. But it should not be forgotten that vomiting, diarrhea, or diuresis, especially when induced by glucose solutions, may deplete the body potassium and lower the serum potassium concentration to dangerous levels from the standpoint of the heart, respiratory muscles, and central nervous system. Potassium deficiency is common in the functional uremia associated with postoperative hypochloremic alkalosis.

Apart from the symptoms produced by the disturbances in water and electrolyte balance in uremia, there remain the refractory anemia, the central nervous symptoms, the pericarditis, often hypertension and acute vascular damage; all are possible indications of a specific toxemia, attributed by some investigators to retained organic metabolites, by others to autolytic products of degenerating or ischemic kidney tissue, and by still others to the lack of some nonexcretory, antipressor, or antitoxic activity of the normal kidney.[4–6] There is still much to be learned about the immediate causes of uremic intoxication.

Our definition of uremia speaks of a "clinical state . . . due to renal insufficiency regardless of etiology." The term "regardless of etiology" is very significant for the present discussion. We cannot really distinguish, without knowledge of the history of the patient or the subsequent pathologic findings, between the so-called renal or organic uremias and the so-called prerenal azotemias or functional uremias. Basically, the two groups of uremias represent the same functional disorganization of the kidneys and general metabolic derangement. The difference lies in the hope of functional restoration in the functional uremias. However, we must remember that even in organic renal disease a given episode of uremia may be largely attributable to prerenal derangements. It is important, therefore, for the physician to act on the principle that all uremias are related and to apply common general principles of treatment. This will result in the physician's taking a serious attitude toward prerenal azotemia early enough to benefit the patient and will prevent a too hopeless point of view toward the uremia of organic renal disease.

The treatment of uremia must, nevertheless, take into account individual differences in etiology and the type of physiologic disturbance involved. Treatment begins with prevention. This is most important and highly successful in the functional or prerenal types of uremia. The prompt treatment of circulatory shock by restoration of circulating blood volume, the adequate correction of fluid and electrolyte balance in states of depletion of whatever origin, the relief of pain, anoxemia, and heart failure in acute myocardial infarction, the specific hormonal therapy of adrenal cortical insufficiency and diabetic ketosis, the timely interruption of the low sodium syndrome in heart failure—these and other well-known procedures will prevent the development of uremia. However, to attain the desired goal the physician must observe the patient carefully and repeatedly for early signs of circulatory impairment or shock. He must insist on a complete daily record of volume of urine, vomitus, aspirated gastrointestinal fluids, and diarrheal stools and make allowance for sweating and increased insensible loss of fluid due to fever. He must know the daily amounts of all fluids and electrolytes administered, including blood and plasma. He must avail himself of frequent chemical analyses for serum bicarbonate, chloride, sodium, potassium, blood nonprotein nitrogen or urea, and creatinine. The results of these efforts will be very gratifying, because the therapy based on biochemical bookkeeping is both rational and successful.

Prevention of uremia in severe acute glomerulonephritis and the acute toxic nephroses is based on reduction of protein catabolism to the very minimum and careful regulation of the fluid intake to avoid hydremia and cardiac failure with its deleterious effects on the residual renal function. Protein catabolism is held down by eliminating protein from the diet and depending on carbohydrate and fat for oral calories or on hypertonic glucose intravenously. Hydremia and cardiac failure are obviated by strict limitation of fluids to the urine volume plus calculated extrarenal losses. No electrolytes are given except to replace gastrointestinal losses and then only after demonstration of significant serum changes. The potassium content of fruit juices must be borne in mind. The temptation to force fluids in patients with oliguria is to be resisted with the faith of conviction. The use of BAL (dimercaptopropanol) as early as possible in mercurial nephrosis is, of course, a prophylactic against uremia. The prompt recognition and treatment of acute cardiac failure in acute nephritis or toxic nephrosis may prevent the onset of circulatory uremia. Adequate sedation in patients with acute hypertensive crises will protect the renal circulation and conserve what renal function there is. Urinary tract obstruction should be excluded in every patient with severe oliguria.

The prevention of uremia in chronic renal disease at the preuremic level is a matter of maintaining a urine volume of 1,500 to 2,000 cc. on a diet of 30 to 50 Gm. of protein, adequate in calories and regulated as to salt content by the presence or absence of edema and the serum sodium level. Mild acidosis may require a few grams of sodium citrate or bicarbonate daily. The earliest signs of left ventricular failure in hypertensive glomerulonephritis are an indication for cardiac therapy. Anemia productive of symptoms must be corrected by transfusions of packed erythrocytes when ordinary hematinic measures fail. Any infection must be treated as a serious condition with due regard for the maintenance of adequate urine volume—by parenteral fluids, if necessary. Oliguria for a day or two in a patient with chronic renal insufficiency may precipitate irreversible uremia.

The management of uremia is essentially symptomatic. The diet must be low in protein content but contain enough calories to reduce protein catabolism to a minimum. Nutrition becomes a severe problem because of anorexia and vomiting. Therefore, oral medication with a large number of assorted pills and capsules should be discontinued and the small gastric tolerance saved for food. Complete rest for the irritable stomach for a few days at a time can be best achieved by parenteral fluids, glucose, and vitamins. Protein hydrolysates are contraindicated for uremic patients, but small amounts of serum albumin may be helpful. The type and volume of solutions given are determined by the patient's needs, the presence or absence of edema or pulmonary congestion, the urinary output, and the blood chemical analyses. Deficient electrolytes may have to be given in hypertonic form to prevent increase of edema. There is no point—in fact, it is dangerous—in forcing fluids on an oliguric and edematous patient in uremia whether due to acute or chronic renal disease. Acidosis, anemia, dyspnea, central nervous irritability, hypocalcemia, and psychologic distress are treated in the accepted manner. Too often, uremic patients retain consciousness and capacity for suffering long after any prospect of remission has vanished.

It is definitely established that patients with acute toxic nephrosis have a high chance of recovery if they can be tided over the first ten days or so required for regeneration of functional tubules. This is accomplished by the total exclusion of protein from the diet or infused fluid; sharp limitation of fluid intake to 800 or 1,000 cc. of distilled water unless there is demonstrable initial dehydration or abnormal loss extrarenally; and avoidance of any electrolyte containing fluid during the oliguric phase, unless some electrolyte is specifically indicated by symptoms and blood chemical changes. When urine flow is re-established, one must be prepared to replace daily the large renal tubular loss of electrolytes, as determined by chemical analyses on urine and blood. To what extent a good dialyzing apparatus can improve the results in patients treated early along the above lines remains to be determined. In neglected or improperly managed cases, the "artificial kidney" may be vital in rapidly correcting a bad situation. The possibility that even patients in chronic uremia may be carried through a critical period by the use of an "artificial kidney" is now being explored. Much more clinical and technical experience is necessary in this field.

100 East Gun Hill Road

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HERE'S MY SPECIMEN, DOCTOR

I often view with consternation
Albeit a bit of fascination
How milady's fruits of urination
End up in such a variation
Of big and little bottles.

II

If you were the man who made Drene
You'd probably think it quite mean
If a certain Miss Throttle
Took your shampoo bottle
And used it for a latrine.

III

I believe it really quite funny
The awfully stout Mr. Bunny
Brings the daintiest vial
While that runt Mr. Trial
Lugs a jug that held gallons of "Honey."

IV

There was that young *Miss* Frazee
Who wanted a Friedman A-Z
What she laid on my table
Had an apt perfume label
"My Sin," it said. C'est la vie!

V

That bottle that's marked "Mrs. Serkins"
Was really made to hold gherkins
But, "Manhattan Mixed Relish"
With the urine quite smellish
We know belongs to Ma Perkins.

Joseph H. Werk, M.D.
Port Jefferson

—*Bulletin of the Suffolk County Medical Society*

PRACTICAL APPLICATIONS OF RECENT ADVANCES IN GENETICS TO CLINICAL PROBLEMS

Laurence H. Snyder, Sc.D., Norman, Oklahoma

(*From the University of Oklahoma*)

THOSE persons who have been concerned with the progress of medicine have long centered their chief attention on the problems of the alleviation and control of unfavorable and deleterious agencies in the environment. Little by little some measure of supremacy has been achieved over the harmful and debilitating effects of infectious agents, malnutrition, trauma, emotional stress, and occupational hazards. These achievements rightly stand as a significant memorial to the abilities, energies, and enthusiasms of those who have accomplished so much for medical science and human welfare.

The battle against noxious external agents must of course continue unabated. Ultimate victory on this front may reasonably be expected and, indeed, is actually in sight. However, as the aggressors in this sector are being vanquished, we must not lose sight of the fact that on another front the battle is becoming more acute and will require more of our attention and energies. I refer to the genetic front.

As the infectious, nutritional, traumatic, and emotional disturbances are being gradually brought under control, another and differently caused set of anomalies, diatheses, and susceptibilities is becoming of greater relative importance. The genetic factor in the production of disease is rapidly becoming appreciated and understood, and the realization is growing that this factor now deserves all the careful attention that we can give it.

The important roles, played by the bacteriologist in facilitating the control of infectious disease, by the biochemist in suggesting the regulation of nutritional disorders, by the physiologist in pointing the way toward the understanding of hormones and other secretions, by the psychologist and psychiatrist in aiding in overcoming the harmful effects of emotional stresses, and by the physician and surgeon in teaching the repair of damage due to trauma and irritation, are now being duplicated by the medical geneticist who is making possible the understanding of genetic disease. This understanding is even now resulting in practical control.

Applications of genetic knowledge to human health are made possible by the continuing studies of geneticists and, more recently, of medical geneticists. As a result of such studies we now have a rather thorough basic knowledge of the principles of the transmission of chromosomes and genes, the physiologic and biochemical activities of genes, the evolutionary history of gene arrangements, the distribution and behavior of genes in populations, and, finally, we have a growing awareness of the medical, legal, and social implications of many of the traits resulting from genes.

There is no time in this lecture to review these basic and fundamental principles. They are available in several recent texts on medical genetics.[1-5] It is most important, however, that medical students be given an appreciation of the value of the genetic viewpoint in the modern practice of medicine. The trend in this direction among medical schools is slow, but it is sure.

Let us review briefly some of the very real values of the genetic viewpoint in the practice of medicine. One of the most active and productive areas of research in this field today is concerned with the detection of genetic carriers and the resulting applications in diagnosis, prevention, and prognosis. It is proving feasible to detect by various means the carriers of genetic disease and to use the knowledge in very practical ways.

Detectable genetic carriers are of several sorts. There are, for example, those persons who carry a dominant gene which in some instances results directly in a clinical anomaly but which in other instances produces first preclinical or laboratory stigmata. These stigmata may later develop into the complete clinical picture. The recognition of the early signs may, therefore, make possible the institution of preventive therapy in the individual himself, and such recognition may be used in genetic prognosis in regard to chances of the appearance of the trait in the offspring of those showing the signs. The fact that secondary signs are most likely to be found among the relatives of a patient having a clinical hereditary condition narrows the search for them to a reasonable and practical range.

Among the practical applications of this principle, many of which I have had occasion to describe in lectures similar to this and subsequently to publish in various medical journals, are the following:[6-10] Prophylactic splenectomy, for the purpose of precluding premature death

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The A. Walter Suiter Lectureship.

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from a hemoclastic crisis, may be instituted in those relatives of a patient with clinical activity who themselves show one or another of the stigmata of hemolytic icterus. The stigmata include microspherocytosis, increased icterus index, increased erythrocyte fragility in hypotonic solutions of sodium chloride, enlarged spleen, and a relatively high degree of reticulocytosis for the degree of anemia involved.

Hyperuricemia may be demonstrated and the genetic carriers recognized in those relatives of a patient with clinical gout in whom the mean uric acid level is high but has not yet exceeded the critical value for a sufficient period of time to result in symptoms. Similarly, the genetic carriers of xanthoma tuberosum may be identified by the increased blood cholesterol and cholesterol esters long before the clinical picture of nodules and tumors of the joints and tendons, with potential heart involvement, appears.

Preventive therapy may be undertaken in those relatives of a patient with pernicious anemia in whom achlorhydria can be demonstrated. The genetic carriers of epilepsy may be recognized by cerebral dysrhythmia by means of the electroencephalogram.

I have previously recorded an illuminating instance which may deserve repetition here.[6] A professor in one of our medical schools was consulted by a young practitioner, a former student, on a case of tic douloureux. The patient was in acute dread of the impending operation. The professor had formerly attended the parents of the patient and recalled that there were several cases of diabetes in the family. On the chance that the so-called tic douloureux might be a manifestation of diabetic neuritis, he suggested that the patient be examined for signs of diabetes. The examination was made, the signs were found, and the "tic" disappeared when the diabetic condition was treated.

A second type of genetic carrier consists of those individuals who are heterozygous for a gene which in the homozygous state produces a clinical manifestation, but who, being heterozygous, show only some minor, although significant, departures from normality. Those persons, for example, who have the gene for Osler's disease in only single dose, exhibit the well-known symptoms of classic multiple telangiectasis. In our laboratory we have found evidence that this gene in double dose, i.e., homozygous, results in a severe, fulminating generalized telangiectasia capable of producing death in early infancy.[11]

Falls and Cotterman have shown that those women heterozygous for the sex-linked recessive gene for retinitis pigmentosa may be detected by a tepetal-like retinal luster.[12] It is thus possible to recognize the carriers and to state definitely which women in the family are likely to have sons with the disease and which are not.

Similar identification of heterozygotes capable of transmitting genes for other anomalies and diseases is rapidly becoming possible. Among the conditions for which this can already be done are hemophilia, sickle cell anemia, thalassemia, phenylketonuria, keratosis, xeroderma pigmentosum, and anidrotic ectodermal dysplasia.[13] It is imperative to continue the search for criteria for the identification of genetic carriers of disease.

Even when carriers cannot be positively identified, however, it is possible to make genetic prognoses on the basis of the probability of the reappearance of the trait. If the condition under discussion has been accurately identified, if it is known to be genetic, if the type of gene responsible for the anomaly is known, if the patient's own family history is available, and if the potential effects of the environment on the condition are understood, it is possible to give the patient a very clear account of the probability of the reappearance of the disease in his children or other relatives. Many persons are sincerely concerned over the answers to this type of question, and factual information is in itself comforting, if not always reassuring.

The continuing search for the detection of genetic carriers may be expected to result in other advantages to medical practice. It will, for example, make possible a more definitive approach to the physiology and development of specific diseases by making available for study an increased number of persons in the early stages of the conditions. In addition, it will put into sharp focus those early signs, those slight but significant deviations from the norm which have in the past been ignored by physician and patient alike. Under the genetic viewpoint these deviations will be recognized for what they are, important guides to new criteria for early diagnosis and consequently to new opportunities for prevention and for earlier treatment.

One of the most spectacular developments of medical genetics, and one which has thrown it into the forefront of modern medical progress, is the solution of those medical and medicolegal problems which depend upon the inheritance of the many hemagglutinogens in man. The twentieth century has seen a remarkable growth in our understanding of the complexity of the human blood groups. Whereas about thirty years ago only two hemagglutinogens, A and B, were known in man, resulting in the four classic blood groups, there are known today 27 such antigens, forming at least 11 distinct series and capable of combination into more than eight million human blood groups.

Each of these 27 hemagglutinogens appears to be inherited according to the Mendelian laws, in such a way that a child never has any specific agglutinogen unless at least one of the parents had it. If a child does possess a specific antigen of this sort and the mother does not possess it, we know that the father did have it. Tables can be constructed showing, for any combination of parental blood groups, the groups which are possible and those which are not possible in the children.[14,15] Moreover, we know something of the antigenicity in man and in animals of each of these agglutinogens. We know whether they have natural antibodies or only immune antibodies. We know the distribution of many of the antigens in various human populations.

Drawing on the laws of Mendelian genetics, population genetics, and immunology, we can account for the many clinical implications of the blood groups. The original antigens of Landsteiner, namely, A and B, were found to be antigenic to man but reciprocally matched by normal antibodies in the plasma of individuals not possessing the antigens. Because of this, they have a most important bearing on transfusions, even first transfusions. This application, involving the typing of donor and recipient prior to the transfusion, is now so well known as to require no further discussion.

The two original antigens A and B could be combined into four groups, namely, A, B, AB, and O. Group O was considered to be merely the absence of antigens A and B. Later work makes it highly probable that O also represents an antigen, but one for which antibodies are obtainable only with great difficulty, so that it has no implications in transfusion. Moreover, antigen A may be subdivided into A^1, A^2, and A^3. It is thus possible to divide people into eight groups on the basis of this series of antigens.

Antigens A, B, and O appear to occur in two chemical forms. In some persons the antigens are soluble in water, in others not. Those having water-soluble antigens are known as "secretors," those having insoluble antigens as "nonsecretors." The secreting ability is directly inherited on the basis of a dominant gene. Since any of the eight groups just mentioned could be either "secretor" or "nonsecretor," there are now 16 possible combinations.

By injection of human cells into animals it was discovered by Landsteiner and Levine that in some human erythrocytes certain antigens exist which have no normal antibodies but are capable of specification by means of immune antibodies resulting from the injections.[16] Although such agglutinogens are highly antigenic to animals, they are apparently only weakly, if at all, antigenic to man. They are, therefore, of no clinical importance in transfusions, even in multiple transfusions. They may be added, however, to the armamentarium for the elucidation of instances of disputed paternity. Among the antigens of this type are M and N, which are inherited in such a way that everyone has either M or N or both. Moreover, N can be subdivided into N^1 and N^2, so that each person can be classified as type M, or N^1, or N^2, or MN^1, or MN^2. Since any one of the 16 types already described could be any one of these five, there are now 80 possible classifications.

Another similar antigen is agglutinogen P, which also may be subdivided into P^1 and P^2. Here there are four classes, P^1, P^2, P^1P^2, and P negative. Since each of the 80 previous classifications could also be any one of these four, the result is 320 different blood groups. Recently, several British investigators have presented evidence for antigen S, closely related to M and N, and again doubling the number of blood groups, since each of the 320 could be S positive or S negative. The total thus far is, therefore, 640.

When the further injection of human cells into experimental animals failed to reveal the presence of additional antibodies, Landsteiner and Wiener approached the problem from a different angle.[17] They injected blood from the Rhesus monkey into rabbits and guinea pigs. The antibodies produced as a result of the injection would not only agglutinate the red cells of the monkey but would agglutinate the erythrocytes of about 85 per cent of the white American population. Using the first two letters of Rhesus, the new agglutinogen was named Rh. Like all the previously known antigens, it was inherited on the basis of a dominant gene, so that no child showed it unless at least one of the parents possessed it.

The new agglutinogen, however, differs in its sum total of characteristics from all the previously known antigens. Like M, N, S, and P, it has no known natural antibodies, but unlike these and like A and B it is, on occasion at least, highly antigenic to man. On these occasions, immune antibodies are produced as a result of transfusion, which may be either intentional, as in therapy or in the deliberate effort to produce anti-Rh serum, or unintentional, as in the transfer of small amounts of blood from an embryo to its mother.

The antigenicity of Rh gave rise to two very practical applications. One of these is to transfusion. Although, because of the absence of natural antibodies, the first transfusion of Rh positive blood to an Rh negative recipient can result in no immediate transfusion reaction, it can initiate antibody production. A subsequent Rh positive transfusion may then result in a hemolytic reaction in the recipient. It is, therefore, necessary to transfuse Rh negative blood into an Rh negative recipient.

The second practical application of the antigenicity of the Rh antigen is to maternal-fetal incompatibility. It appears that a small "transfusion" may occur from an embryo to its mother. If the embryo is Rh positive and the mother is Rh negative, the mother may be stimulated to antibody production. Although the baby which sets up the immunity is usually born before the antibody production of the mother is sufficient to affect that child, a subsequent Rh positive embryo may be affected by the antibodies.

Erythroblastosis has long been known as a dangerous diathesis, and we have long known that it runs in families. It could never, however, be attributed to a definite kind of genetic behavior until Levine and his associates demonstrated that in itself it is not hereditary at all but is the result of the action on the red cells of the fetus of anti-Rh antibodies of an Rh negative mother who has been immunized either by a previous Rh positive embryo or by a previous therapeutic transfusion of Rh positive blood.[18]

The demonstration that erythroblastotic babies were Rh positive from Rh negative mothers led to the puzzling discovery that antibodies were not always demonstrable in such mothers by the usual saline agglutination tests. This in turn led to the demonstration by Wiener, Diamond, and others that antibodies are indeed produced by all such mothers but that the antibodies may be either of two types: bivalent, reacting in the presence of saline, or univalent (blocking), reacting only in the presence of serum or other proteins.

These facts in turn laid the groundwork for the discovery that not all mothers of children with hemolytic disease (nor all Rh negative recipients of Rh positive blood) produced antibodies against the original Rh antigen. Some of them produced antibodies against hitherto unrecognized antigens. In this way many new antigens have been discovered and described. Some of them belong to the Rh series and are closely related genetically to the original Rh antigen; others are genetically quite distinct. Each of these antigens appears capable on occasion of causing, through reaction with its specific antibody, hemolytic disease in an infant or transfusion reactions in a recipient. Each antigen occurs with its own unique frequency in the population, and each appears to be inherited in such a way that no child has it unless at least one of the parents had it.

Weiner discovered in this way two new antigens closely related to Rh, but agglutinating the erythrocytes of proportions of the population different from those agglutinated by the original Rh antigen. He renamed the original factor Rh_0, calling the new ones rh′ and rh″. Still another antigen of this series was discovered by Levine. This new antigen was reciprocally related to rh′ in such a way that each person has one or the other or both of these antigens, but no one lacks both. The relationship of the new factor to rh′ is essentially the same as the relationship of N to M. Levine named the new antigen hr.

Fisher and Race in England, noting the reciprocal relationship of hr to rh′, suggested that this hr be named hr′, and predicted that other hr factors would be discovered, reciprocally related to Rh_0 and rh″.[19] This prediction has been fulfilled, and Hr_0 and hr″ have now been reported. In addition, several other antigens have been described, genetically related to the original Rh_0, until now there are ten reported antigens in the Rh-Hr series, capable of combination into 270 Rh groups. Since any one of the 640 groups previously mentioned could be any one of these 270, the number of possible classifications would now be 172,800.

Careful study of the blood of mothers of children with hemolytic disease and of the blood of immunized transfusion recipients has led to the discovery and description of several new agglutinogens. These new antigens act similarly to the Rh-Hr antigens insofar as hemolytic transfusion reactions are concerned but are genetically quite independent of the Rh antigens. They are thus far named only for the person whose cells induced the antibody production. For example, the Kell antigen and the Cellano antigen are reciprocally related to each other as Rh is to Hr, so that any person has one or the other or both of these antigens. This triples the number of classifications, which thus reaches the total of 518,400.

Other antigens, none of which so far has a known reciprocal, are the Lewis, Levay, Lutheran, and Duffy agglutinogens. Reciprocal antigens will no doubt eventually be described for each of these, but until this occurs, the presence and absence of each of these antigens merely doubles the previous number of classifications. Doubling 518,400 four times brings the total to 8,294,400, which is the number of blood groups which are now possible based on the potential combinations of all the described antigens. As a matter of fact, many of the combinations must be so rare as probably not to exist in the world, while others are fairly common. Moreover, no laboratory is likely to have all the antiserums at any one time. Nevertheless, all these classifications potentially exist, and many of them are in fact known to occur and have been so demonstrated in living individuals.

Of the 16 last-mentioned hemagglutinogens which have no normal antibodies but which are antigenic to man, only the original Rh_0 appears to initiate antibody production frequently enough to be of real clinical significance. This is the antigen which has been responsible for the vast majority of cases of hemolytic disease and of transfusion reactions. In fact, the term "Rh negative" is usually understood to mean negative for Rh_0. However, since the other 15 antigens of this category were originally described on the basis of clinical manifestations, they cannot be ignored from the clinical standpoint.

A woman expecting her first child should most certainly be tested for Rh_0. If she is negative and the father is positive, her obstetrician will be in a position to take such precautions as may be available for depressing antibody formation and for minimizing or counteracting their effects on the child. Fortunately, effective means for bringing about the desired results are being discovered.

Summary

Geneticists are anxious to increase the usefulness of the principles of heredity in the practice of medicine. In order to do this effectively, the active cooperation of physicians is required. Only you are in a strategic position to obtain the sort of data which the medical geneticist needs. Empiric data have not yet caught up with theoretic genetic considerations. We need data on the frequencies of many anomalies and disorders in populations, on their distribution within families, and on the degree of assortative mating, inbreeding, and the formation of isolates.

We have particular need for the careful recording of consecutive series of family histories on various anomalies, listed as the patients appear in your offices, regardless of whether there is a patent familial occurrence in every case. Too often the families which are recorded and reported are those in which several members exhibit the disease, while the sporadic cases are not considered worthy of publication. Yet only complete data such as are furnished by series of consecutive cases can give the background for making accurate genetic prognoses. It is highly probable that many sporadic cases of disease or anomaly are not due to recessive genes or dominant mutations or any other genetic mechanism but are actually developmental accidents or environmentally induced effects. The facts can be established only through the recording of large series of consecutive case studies. Only through the obtaining of such basic facts may the further application of genetic principles to medical practice become increasingly significant.

I can promise you that if you will furnish the geneticist with data of the sort I have described, he in turn will continue to provide you with careful analyses and a deeper understanding of them and with ever new and more valuable applications of them in the practice of medicine.

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TREATMENT FOR CARBON MONOXIDE POISONING

Treatment of suffocation from carbon monoxide gas by injections of procaine hydrochloride is reported in the April 8 *Journal of the American Medical Association.*

Seventeen of a group of 23 patients who received the treatment made good recoveries, Drs. Edwin W. Amyes, John W. Ray, and Norman W. Brockman of the College of Medical Evangelists and University of Southern California School of Medicine say. The remaining six patients either died or did not fully recover. In this group the drug was given long after the exposure to carbon monoxide, or there were additional complicating factors. All except one of the 23 patients had become unconscious in a room in which there was no ventilation and where an open gas flame was burning.

THE PSYCHOSOMATIC CHARACTER

Alfred Blazer, M.D., New York City

(From the Postgraduate Center for Psychotherapy of the Institute for Research in Psychotherapy)

THE psychosomatic character is one of the most common neurotic personalities of our time. He is the number one challenge to the general practitioner.

This character structure has never been clearly defined, or even well considered, as a single entity in the same sense as the compulsive obsessive or the detached schizoid or other types of characters. Yet the psychosomatic character is a definite type of conditioned person who has a certain definite type of defense, a certain way of life, of meeting situations, of facing himself and others.

The psychosomatic character utilizes psychogenic illness or organic illness as his way of life. Of course, he is totally unaware of what he is doing. This type of person may use a real organic illness as a way of life and, because there is a real illness, may even fool his physician. The important factor here is that, unlike the normal person, the psychosomatic character does not meet life constructively. He holds on to his organic illness, or his psychogenic illness, and gets well too slowly or refuses to recognize that he is getting well, because illness, unpleasant though it may be, is his main asset in coping with people, situations, and with his attitude toward himself. For example, a woman patient with a rheumatic heart condition was able to exercise power in the family because of this. Even when her heart was well compensated, she clung to her invalidism. Being aware she was well would have relegated her to a fifth-rate role in her circle of friends and family.

Physical illness can thus be used neurotically.

The beginnings of a nervous breakdown may even be manifested in a person who has been accustomed to the lush, warm life of a concerned family circle when he recovers his health and has to face the rarer oxygen of ordinary life, where people feel ordinary emotions toward him. The new adjustment to the loss of the sense of power and warmth can be so difficult that the physician may be surprised to observe a return of suffering without adequate evidence of return of active pathology.

It is very important to understand that the motivation of such a person is almost completely unconscious. He is not at all aware of his motivation. He is not a malingerer who wants consciously to be ill for certain gains. The true psychosomatic individual is as unconscious of his motives as is the compulsive individual. All neurotic, as well as normal, persons want emotional security and satisfaction, of course; they have to obtain it somehow. If in their earliest experiences they have been unable to gain them with the ordinary tools, they may have developed certain traditional, characteristic, learned, ingrained, conditioned technics. Of these patterns they are unaware.

Definition of Character

Character is an ingrained, rigid, set, stereotyped way of responding to people and situations and to one's inner self. It is developed in the formative years of life and repeated, often unnecessarily and in a distorted fashion, in real situations, as if they were as threatening or disturbing as they originally were in childhood. A child learns fear, hostility, and guilt and has to respond with "fight or flight" in order to feel emotionally secure.

In the detached, schizoid personality, the typical defense is to feel distant, aloof, and withdrawn and to entertain overcompensatory daydreams which rewrite history in a light more complimentary to the individual, who achieves a neurotic kind of emotional security and gratification.

The psychosomatic individual satisfies this need by being sick. He has chronic backache, for instance, which gives him a special place in the noncombative world where he can wear his purple heart on his sleeve. His backache brings warmth and sympathy and gives him, in his inner life, a high score for small achievement. He is able to think of himself as a pretty brave fellow. The backache dilutes his inferiority complex. He can feel self-pity instead of self-contempt, which well compensates for the pain of the backache. If he has a strong conscience, or superego, backache makes up for the deficit of laziness or ineffectiveness.

How Character Develops

In the first days of life, with the milk that he gets from his mother, the child sensitively reacts to her, to her attitudes, her attention, irritability, happiness, tension, annoyance, etc. Day in, day out the child is under this influence. He is affected by whether she has welcomed having a baby or has merely been conforming to the social indoctrination that one ought to become a mother.

Of course, what happens in the first few weeks of life is not irrevocable. At any stage the child's character may be altered or modified by new experience, but without outside intervention the mother will probably retain the same attitudes that she had in the beginning. Sometimes it is not the mother but the father whose attitude is hard to take. He may be rejecting, exacting, stern. The child may have difficulty in handling his father and have to develop subversive character traits in order to keep afloat.

Some babies smile and seem happy. Some are tense, breath-holding. Some swallow their milk, relax, and sleep until hunger comes again. Others show something that looks like anxiety and apparently feel irritable, disturbed, and insecure. Children inherit, of course, some constitutional characteristics. Some are over-responsive to environment; others have thick skin which insulates them, and these can survive almost any type of knocking around. But the child is essentially a soft piece of clay that can be molded. When the mother does such things as diapering with reluctance, the child senses it and is troubled, has to devise some way—reflexly, unconsciously, certainly below the surface of awareness—to cope with it. The child also has to adapt itself to the father's personality, to other children, to teachers, to religious ideas, to the pressure of culture.

Every child needs gratification and the primary satisfaction of hunger and warmth. He has to achieve some sense of emotional security. In a good environment he may not have to work for it. In a hostile environment he may become aggressive or detached and remote.

A child carries the attitudes he has learned into the outer world. The child who is submissive at home is often submissive outside. He acts toward other children as he does toward the stern father. Reactive fear of the father is internalized and becomes a constant fearful attitude.

The crux of character formation is what the child does about fear. The child is either afraid of the parents or contagiously catches their fear. Fear is the stumbling block. Internalized fear becomes linked with guilt and hostility and makes a person neurotically defensive.

Types of Character Structure

We are indebted to Dr. Wilhelm Reich who, twenty-five years ago, helped to change our thinking.[1-3] Instead of treating symptoms alone, he thought of them in terms of character structure. From his book, *Character-Analysis*, we began to get the idea of changing character rather than treating symptoms. Dr. Karen Horney, in *The Neurotic Personality of Our Time*, has selected four of the more common types.[4]

To clarify the picture we can describe today at least eight different character structures:

1. The normal, well-adjusted individual, able to obtain emotional security without "flight or fight" or other defense.
2. The overaggressive, sadistic character who suffers anxiety when not in power.
3. The psychopath who acts out his aggression: the gangster type.
4. The detached, schizoid personality who wears a protective shell.
5. The hermit or lone wolf, incapable of developing the protective shell, so must avoid people.
6. The obsessive compulsive who finds safety in rituals.
7. The submissive, compliant, masochistic character.
8. The psychosomatic character who is a variation of the submissive but to get warmth and acceptance from his conscience and from other people he has to be pathetic in physical illness.

Many character structures are not clear-cut. For example, the obsessive compulsive can also be detached or can also somatize.

The following typical case was taken from the files of the Institute for Research in Psychotherapy.

Case Report

Mr. Leo B., thirty-seven, married three years with a son aged two, felt sure he had a heart condition because of pain in the area of the left chest, rapidity, skipping. Frequent, thorough examinations showed a normal heart. He came in reluctant desperation to a psychoanalyst only because of unyielding symptoms. He denied emotional problems except for concern about his heart.

In the course of forty-five minute weekly sessions the following came to light: He was the "baby" of three children, protected by parents and siblings. The mother and sister were dominating "pants-wearers," the father and brother weak but kind. The smothering family discouraged any move toward maturation and independence. This was frustrating but pleasantly habit-forming.

As he grew older the hothouse atmosphere cooled; only illness brought it back. When he was eight, his mother became a cardiac hypertensive, was irritable and self-absorbed. He was twenty-three when she suddenly died of a coronary thrombosis. A week later, the patient staggering with the shock began to be concerned with his own heart. Examinations showed that he had no heart problem except "cardiac neurosis."

After four years, therapeutic factors in his life permitted the anxiety to wear off. It lay dormant up to two years ago.

He was shy with people, particularly women. Except for rare visits to a house of prostitution his sexual gratification was masturbatory. He occasionally went bowling or to a basketball game if his one buddy, a more aggressive type, suggested it.

He remained seventeen years in the job where his family placed him. His boss, who was "like a father, only stingier with money," continued the role of mother and sister. When Leo went into the army, they shook hands and both cried. Unfortunately, he had two sons in the business who were hostile and unsympathetic to Leo.

Two years ago, Leo had another psychosomatic crackup. He had been selling inside the wholesale store. Then they sent him to try selling on the road, which required an assertiveness he did not have. He had been married a year to a wife whom he had hoped would be a supportive person like his sister but who was a dependent psychosomatic character like himself. She and their son were a load around his neck.

A week after the anniversary of his mother's death, which he still observed with a pious pilgrimage to the grave, he heard suddenly that his boss had had a coronary thrombosis, was too disabled ever to return to work. The two hostile sons became his bosses. Returning from the road, where he had been a financial flop, he became apprehensive about his heart. During the past two years he has been disappointed by the lack of sympathy of his wife and his employer's sons. The magic of childhood has failed, but the somatizing, instead of being abandoned, has been redoubled frantically, although with a sense of bewilderment at the poor results.

The Rorschach showed, in part, that "this patient has few or no resources for the expression of affect ....that he tends toward strong passive patterns of reactivity....has....an inability to find an outlet for repressed energy (which) must result in some kind of displacement into bodily complaints or somatic response."

Dynamics of Somatization

We have spoken about the psychodynamics of the psychosomatic character, and a brief word on the dynamics of somatization itself is appropriate here, for this occurs not only in this but in any character structure. If we think of the brain as the switchboard or broadcasting station, and the parasympathetic, sympathetic, and the spinal tracts and their tributaries as various networks which hook up to every tract and every cell in the body, it is not at all surprising that emotional experiences are not completely contained in the awareness (consciousness) or the unawareness (unconsciousness) but can overflow any branch of the network that has become sensitized and by conditioning has been drafted into service by the nervous system.

Take a person who is embarrassed. This can be strictly cerebral with no somatic effects. Yet in some people the switchboard short-circuits, the emotion flows into the network which supplies the dilating muscles of the vascular bed in the face and other areas. The vascular load is almost doubled; the skin is red and hot to the touch. Or, take a person who is frightened. In some people this is experienced in mental awareness with no somatic overflow. In others, the overflow may constrict the blood vessels in the face; the skin becomes cold and blanched, or the contractile fibers of the lower bowel are stimulated and the sphincter relaxes.

Again, embarrassment, fear, resentment, reactions which cannot have sufficient ventilation because of the conditioning of the person, can overflow and cause a hot, itching skin, or pain sensations along a nerve pathway, or muscular and vascular contractions, e.g., hypertension, migraine, etc. Glands also innervated by these networks can cause salivation like Pavlov's dogs, or the secretion of extra hydrochloric acid in the gastric mucosa, or can inhibit mucin formation. A brain reaction of fear, overflowing the network, stimulates the suprarenals into an increased adrenalin flow. It may affect the insulin production of the pancreas and increase the insulin level of the blood stream, causing hypoglycemia. This, when seen in the patient, resembles a typical anxiety attack, although it can be interpreted by the patient as a strictly somatic experience because he is not aware, on a conscious level, of the emotional character of his experience.

It would be a mistake to think that only the psychosomatic character somatizes. Somatization can be used as a minor adjunct of any neurotic or psychotic character structure and can be developed, temporarily, by a normal, well-adjusted person under special circumstances. For instance, anyone can get a headache when his mother-in-law comes to stay for an indefinite period. It is not difficult to realize the cause of the headache and, more to the point, what can relieve it.

Essence of Therapy and Variety of Treatments

Many psychosomatic characters do not do well under therapy. In some cases therapy causes a visible, conscious, emotional disturbance that was repressed before, and these individuals are, therefore, worse off than before. However, about one third are helped, according to the meager statistical tables that are available. Each therapist, in helping his patient, may use a psychodynamic ideology totally opposed to another therapist's ideology. In some cases Freudian analysis seems to work, in others the Karen Horney approach; in still others, conditioned reflex therapy or hypnosis or superficial counselling. Each method has its failures, each its successes. The $64 question is, what is the *essence* of therapy that is present in every form of therapy that succeeds and is absent in every form of therapy that fails? It is rarely emotional insight. This is often more destructive than constructive.

What really counts is the relationship which the therapist permits the patient to have with him, and which the patient permits himself to have, and which is different from any relationship the patient has ever had before. It may begin like a parent-child relationship, but the therapist is an ideal kind of parent that did not exist in the patient's formative years. With this person he does not have to be a submissive worm or a destructive steamroller, or a remote, aloof, shell-armored person, nor does he have to be a psychosomatic character whose only communication with another person is his sickness. He can learn to express his resentment to the therapist when it is necessary, and later to the rest of the world, without converting it within himself.

The principle behind this is a science; the application is an art. The therapist must feel the patient's mood and respond to it in a healing way, and this is far from easy. In such an atmosphere the patient can accept himself, can have an interpersonal relationship in which he feels autonomous and has sufficient power. Presently, the neurotic technics slough off—with or without insight—because they are not needed. His ego and self-confidence expand to healthy proportions, and the psychosomatic character soon forgets to bellyache. He has an emotional security now and can relate himself in a mature way without this device.

Some psychosomatic characters should, after a trial run of therapy, be left strictly alone except for an occasional placebo and emotional support. It is often unnecessary, sometimes unwise, to analyze the psychosomatic character. This encapsulated neurosis allows the patient to function comparatively well and does not follow the malignant course of other neuroses. It is also the only socially accepted neurosis that the patient need not conceal. Unlike the obsessive compulsive, the kleptomaniac, or the individual with serious sexual disturbance, he can wear his neurosis on his sleeve.

The psychosomatic character structure is a well-ingrained dynamism not easy to dislodge. The psychosomatic individual is not to be confused with people who somatize occasionally as a minor mechanism in expressing their problems in interpersonal relationships.

Conclusions

1. The psychosomatic character is a definite entity and consists most commonly in the subtle form of a single complaint rather than in its caricature, the easily diagnosed hypochondriac.
2. Other types of neurotics and psychotics somatize, but this is not their main dynamism, their somatization being a minor thing.
3. The essence of therapy is supplying an interpersonal relationship of a type not hitherto experienced by the patient. It may be tried by the general practitioner who has the gift, the time, and the patience.

5 East 73rd Street

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SURGICAL TREATMENT OF URINARY RETENTION

The introduction of transurethral resection has made possible adequate care for a large group of men suffering from various types of urinary retention for whom little or nothing was done in the days when perineal and suprapubic prostatectomy were almost the only means of dealing with it. Evolving out of the use of transurethral resection is the modern concept of urinary retention, which is based on realization of the delicate balance existing between the bladder and the vesical neck. By weakening the vesical neck sufficiently, almost any variety of urinary retention can be corrected. It is emphasized that the delicate balance may be tipped by minimal involvements of various kinds and that it is impossible to say that no obstruction of the vesical neck exists until transurethral resection actually has been attempted. Moderate hypertrophy or increased tonicity of the muscle fibers of the vesical neck might result in retention, and normal vesical function can be restored by its transurethral removal. These principles are also applicable to women.

—John L. Emmett, M.D., Chicago Medical Society Bulletin, September 24, 1949

MINIMAL SPINAL ANESTHESIA FOR CESAREAN SECTION

Robert E. Ahearn, M.D., and Charles J. Marshall, M.D., Binghamton, New York

(*From Our Lady of Lourdes Memorial Hospital and the Binghamton City Hospital*)

When maternal mortality statistics are evaluated, invariably there are cases attributable to spinal anesthesia. Usually, these patients were lost as the result of anesthesia in cesarean section. Only too often, other factors, such as hemorrhagic shock and medical complications, can be ruled out as the primary cause of death. We feel that the bad reputation that spinal anesthesia in obstetrics has acquired is chiefly the result of overdosage and, secondarily, lack of care and understanding on the part of the anesthetists.

For a decade or more we have been exploring the field of anesthesia for a method that would fulfill certain requirements. It must be safe for mother and child, yet provide adequate relief of pain. The technic should not be mechanically too difficult for the less skilled anesthetist. One cannot avoid the fact that a great deal of anesthesia has been given and will be given by those with little experience. It may be the obstetrician's place to outline a safe procedure so that he will not have to divide his time between operating and watching the progress of anesthesia. We also have been seeking a method of anesthesia that might minimize operating complications for the surgeon and one that is suitable for the majority of patients.

Inhalation anesthesia has been unsatisfactory, although it has been given the longest trial. The obstetric patient usually is not well prepared for general anesthesia, especially ether. The stomach is often full and a hazard as far as vomiting is concerned. Almost all patients dislike an ether induction. Nitrous oxide in concentrations strong enough for a laparotomy produces deep cyanosis. It is of value only for induction. Not many operating rooms are planned so as to make cyclopropane safe from the possibility of explosion. If the surgeon is hurried by an agent that depresses the respiration of the baby, he is not in a position to work as carefully as he might otherwise. Necessary preoperative medication is often omitted so as not to exaggerate this condition.

Very few patients are cooperative enough to endure a complete cesarean section under local infiltration anesthesia. It has been aptly termed "more vocal than local." The addition of intravenous pentothal sodium on entrance into the peritoneal cavity has made this somewhat less an ordeal for the patient without the hazards of pentothal alone. The use of pentothal alone for the whole procedure may result in a sleepy baby if the operator is slow or runs into difficulty before the child is born. Pentothal for a laparotomy requires a skillful anesthetist who must be familiar with dosage and be prepared to cope with any of the complications that may arise. To secure proper relaxation he might have to use curare. With caudal anesthesia there may be trouble securing pain relief at the higher levels. The procedure is time-consuming, somewhat difficult, and not without danger.

In the course of time our attention was directed to the use of spinal anesthesia, using 10 to 20 mg. of pontocaine hydrochloride in solution. We found that the baby would be born with a lusty cry, the mother would have relief from pain, and the surgeon would have good patient cooperation and relaxation for his work. However, marked blood pressure drop, even to the point of shock, was routine. Vomiting was frequent. The levels of anesthesia varied considerably. The spinal curve of the pregnant individual is different from that of other patients. The intrathecal agent may go to unexpected levels because of this, especially when using a markedly hyperbaric solution. In the experience of one of us this extended once to involve the phrenic and intercostal nerves with respiratory paralysis and death of the patient. Muscular paralysis was complete for the anesthetized motor nerves. Because of this hazard, we had all but abandoned spinal anesthesia.

As the result of considerable experience with low spinal anesthesia for vaginal delivery the following points became apparent:[1]

1. A total of 3 to 5 mg. of heavy pontocaine would provide abdominal anesthesia for at least one hour.
2. There was only partial loss of motor function.
3. There was seldom a severe drop in blood pressure.
4. Relief of pain extended at least to the umbilicus.
5. Vomiting was extremely rare.
6. Blood loss seemed to be less than with inhalation anesthesia.

Presented at a meeting of the Central New York Association of Gynecologists and Obstetricians, Syracuse, January 10, 1950.

7. The patient seemed to enjoy being awake when her child was born.

We felt that the advantages of this minimal type of anesthesia warranted a trial for cesarean section.

Selection of Cases

This is a report on 60 continuous cases of minimal spinal anesthesia for cesarean section. It is the experience of eight anesthetists and six obstetricians. Patients who were in shock or near shock from hemorrhagic complications of pregnancy were not subjected to spinal anesthesia because of the possibility of additional depression of the blood pressure. We made no exception, however, in regard to toxemia and hypertensive cases. Table 1 will give an idea of what might be considered significant complications associated with the pregnancies under consideration.

TABLE 1.—COMPLICATIONS

Complication		Number of Cases
Previous cesarean section		15
Elderly primigravida		5
Myoma uteri		3
Pre-eclampsia		6
Mild	4	
Severe	2	
Obesity (over 200 pounds)		2
Hypertension		1
Severe anemia		1

Indications for operation were as follows:

TABLE 2.—INDICATIONS

Indications	Number of Cases
Disproportion	31
Placenta previa	9
Previous cesarean section	6
Toxemia	3
Abnormal presentation	3
Premature separation of the placenta	3
Elderly primigravida, breech, poor pelvis	2
Fetal distress	2
Rh incompatibility	1

Technic

Most of the patients received some form of premedication within a period of time close enough to the time of operation to have an effect. We found that when Demerol and scopolamine were given, the patients seemed to tolerate the operation under spinal anesthesia alone most effectively. If at any time the patient experienced pain, she was given pentothal sodium solution by slow continuous drip. This was usually done more in the nature of sedation rather than as an actual anesthetic. After the baby was delivered, pentothal was given, even if the patient appeared to be restless. From the following table one may observe that Demerol and scopolamine premedication will cut down the necessity of pentothal anesthesia with its associated additional hazard to mother and child. Apparently, this may be done without jeopardizing the health of the child.

TABLE 3.—PREMEDICATION

Premedication	Total Cases	Cases with Spinal and Pentothal	Weight of Babies in Fair to Poor Condition (Pounds)
None	12	11 (92%)	6.6; 3.9; $4^1/_2$; 8
Demerol 100 mg.; scopolamine 0.4 mg.	39	19 (50%)	8; 7.7; 7.4 (hydrops)
Demerol 100 mg.; atropine 0.4 mg.	4	4 (100%)	4.2
Demerol 100 mg.	2	2 (100%)	
Pantopon 8 mg.; scopolamine 0.4 mg.	3	2 (66%)	

For the administration of anesthesia the patient is placed on her side on the operating table. The latter has been inspected to make sure that it is level. The blood pressure and fetal heart have been checked. A catheter is already in place. The anesthetic agent is introduced without barbotage through a needle into the second lumbar interspace. After the injection the patient is immediately placed flat upon her back with head and shoulders supported by a small pillow. We have had the greatest measure of success by using 5 mg. of pontocaine or $^1/_2$ cc. of a 1 per cent solution combined with $^1/_2$ cc. of 10 per cent glucose solution. The total volume of solution for use then is 1 cc. As a general rule, a satisfactory level of anesthesia reaching to just above the umbilicus will result. It may take about three minutes before anesthesia to this level is secured. Surgical preparation of the abdomen is carried out immediately. We have found that if the upper towel clips can be secured to the skin the anesthesia will be satisfactory.

If the level is found to be not high enough, we feel that it is not advisable to tip the patient and so permit the hyperbaric solution to roll further up the spinal canal. Although the solution would be very dilute by the time it reached the cervical segments, nevertheless it could produce respiratory embarrassment. This might prove to be a cause of considerable anxiety for the anesthetist. We have one patient in our series who was tipped into Trendelenburg for one minute with resulting partial paralysis of the intercostal muscles, necessitating the use of oxygen. If she had been subject to a higher dosage than 5 mg. of pontocaine she might have died from respiratory failure. In still another patient, after the heavy pontocaine ran up the spinal canal as the result of the table being tipped, partial anesthesia was secured to the nipple line, but not sufficient concentration was left over the lower segments to provide pain relief. We feel that if the degree of pain relief is not immediately satisfactory, it is better to combine small amounts of pentothal sodium by continuous drip as needed.

We use a 0.2 per cent solution of pentothal sodium resulting from the mixture of a 1-Gm. ampule and 500 cc. of sodium chloride solution. It is run in at the slowest rate possible that will give the result desired. Obviously, if the patient experiences pain, she may need more pentothal than one who merely is nervous and would prefer being asleep. The usual rate of flow is about 20 to 30 drops a minute. If at all possible, we prefer to have the baby delivered before the intravenous anesthetic is given. The greatest total amount of pentothal used was 0.8 Gm. On the average, when needed, $^1/_4$ to $^1/_2$ Gm. was the amount used.

Of course, the patient's blood pressure, pulse, and general condition are reviewed frequently throughout the procedure. She is advised from time to time about the progress of the operation and is permitted to see her child.

Results and Complications

Out of the entire group, two cases may be classified as complete failures and needed additional anesthesia other than the spinal even to begin the operation. Twenty-three received nothing but the pontocaine. Most of the others began to complain of discomfort near the end of the operation and received pentothal. The amount was so small that at the end of the operation the patient would be awake before leaving the room. We did not break speed records operating. The average time of operation was sixty-two minutes. The shortest was thirty minutes and the longest was one hundred twenty minutes. Included in the series are two cesarean hysterectomies that took seventy-five and eighty minutes, respectively. Both needed additional pentothal. There was one Latzko extraperitoneal cesarean section that was done under 5 mg. of pontocaine alone. In eight cases tubal sterilization was carried out. This additional operation did not seem to indicate additional anesthesia. Practically all of the other cases were of the laparotrachelotomy type. One laparotrachelotomy, requiring seventy-five minutes, was done through a Pfannenstiel incision under 4 mg. of pontocaine alone. Eight operations out of 23 over an hour long did not need pentothal. The longest duration of operation under 5 mg. of pontocaine alone was ninety minutes. Only two other cases in the entire series, one of one hundred twenty minutes and another of one hundred minutes extended for a longer period of time. Thus, for the vast majority of sections 5 mg. of pontocaine can provide anesthesia of long enough duration.

Why did only some of the cases need pentothal? As already pointed out, the use of Demerol and scopolamine premedication obviates its use in over half the cases. The operating table should be flat so as to permit as high a spread of anesthesia as is possible within safe limits. No doubt, in some obstetric patients at term, enough lordosis exists to run the hyperbaric solution rapidly caudad when inserted at the second to third lumbar interspace, without diffusion to the levels immediately above. Thus, if a patient seems to present considerable lordosis, the first or second interspace probably should be selected.

It is difficult to make an impression concerning the effect of the anesthesia on blood loss and contractile power of the uterus. Probably these features are not influenced one way or the other. Twenty-seven patients received blood transfusions during or after operation. This is a high percentage. Having 1,000 cc. of free county bank blood available at the time of every cesarean section makes for greater freedom in the use of blood. Certainly most of the cases did not present absolute indications for transfusion, namely, shock, atony, or hemorrhage. Nevertheless, in light of the statistics, we would certainly be taking a great deal for granted if we maintained that this type of anesthesia would result in less blood loss than any other.

Nausea and vomiting occurred six times. It was always of very brief duration and usually responded to deep breathing or oxygen inhalations. Some of these cases followed the use of intravenous ergonovine or irritation of the peritoneum. Those that occurred late in the operation probably could not be attributed to the anesthetic.

The blood pressure remained stable in 39 out of the 60 cases. It was not depressed at all in the four toxemia cases. The lowest systolic blood pressure reading in the series was 80 mm. (six cases). A reading below 100 mm. was found nine times. The greatest drop of 40 mm. occurred in a patient who started at 140/70 and stabilized at 100/60. There were no severe drops in pressure. Of the 21 individuals who sustained a drop in blood pressure, ten received blood during the operation because of hemorrhage so the drop was not necessarily related to the anesthetic agent. In several cases the hypotension responded to ephedrine or neosynephrine. Table 4 demonstrates the possible effect of the spinal anesthesia on the blood pressure.

TABLE 4.—DEPRESSION OF BLOOD PRESSURE

Amount of Depression	Number of Cases
No drop	39
10 mm.	4
20 mm.	10
30 mm.	6
40 mm.	1
Over 40 mm.	0

Postoperative complications are listed in Table 5. In most cases ambulation of the patients was carried out on the first or second postoperative day. No cases of pneumonia developed. The 15 per cent incidence of postlumbar puncture headache resulted from the use of 20- and 22-gauge needles. From our experience on 200 cases of vaginal delivery under low spinal anesthesia administered through a 24-gauge needle, the incidence of headache could be reduced to 2 per cent. Moreover, they would not last as long or be as severe.

TABLE 5.—Postoperative Complications

Complications	Number of Cases
Postlumbar puncture headache	9
Postoperative morbidity	7
Phlebothrombosis or thrombophlebitis	6
Urinary retention requiring catheterization	5
Mastitis	1
Pyelitis	1
Wound dehiscence	1

Conclusions

Some will feel that this series is too small to be significant. From our experience, however, we are satisfied that the method provides both safety for the patient and all the advantages of spinal anesthesia. After reviewing our cases, one must come to the conclusion that by the use of 5 mg. of pontocaine in glucose, not all of the patients will have satisfactory anesthesia for an hour. We feel that the safest compromise is the addition of small amounts of sodium pentothal rather than larger, more dangerous doses of the intrathecal agent. Continuous spinal anesthesia can circumvent this criticism, but the technic is more difficult and the problem of postlumbar puncture headache great.

We do not wish to give the impression that we are advising a system of anesthesia that may be given by anyone of little or no experience. A good anesthetist is as important as a good operator. He is a great source of comfort to the surgeon. Women have died, however, from spinal anesthesia, given even by capable anesthetists. We have been searching for a method that offers the patient and child the greatest amount of protection and at the same time a minimum of discomfort. This method minimizes the hazard of both spinal and pentothal anesthesia and yet makes use of the advantages of both.

Summary

1. A minimal type of spinal anesthesia is suggested.

2. This method will provide enough anesthesia to complete most cesarean sections.

3. Small amounts of continuous pentothal sodium may be necessary to augment the 5 mg. of pontocaine-glucose solution.

4. Premedication with Demerol and scopolamine seems to be advisable in most cases and is without detriment to the child.

5. This premedication will often obviate the use of pentothal.

6. Nausea and vomiting and drop in blood pressure do not seem to be a problem.

7. The technic is not difficult.

8. It seems to be well adapted to a large majority of cases.

Grateful appreciation is extended to Dr. Harold Shulman and Dr. Milton Carvalho for their suggestions and technical assistance.

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DELAYED PRIMARY CLOSURE OF WOUNDS

Under certain circumstances, delayed primary closure of wounds is justified in civilian private practice as well as in war surgery. Such a procedure permits reactionary swelling to subside, thus avoiding tension and subsequent breakdown of the wound; allows separation of nonviable tissue, and provides intact skin coverage at the earliest opportunity.

Indications for delayed primary closure are: crushing wounds grossly contaminated; where the patient is seriously debilitated or the wound occurs in an ischemic limb; infected wounds, including compound fractures where treatment was delayed, and chronic infections, including osteomyelitis and diabetic ulcerations.

Formerly called "secondary closure," the delayed closure was made after the first two weeks or longer. Because skin edges remained mobile for only about ten days, however, the required undercutting for approximation offset any advantages of waiting. The fourth or fifth day was hit upon as the optimum time, while tissues were still mobile and before edematous granulation filled the wound.

—Frank S. Babb, M.D.,Minnesota Medicine, August, 1949

A COMPARISON OF THE MALLEABLE NEEDLE AND CATHETER TECHNICS FOR CONTINUOUS SPINAL ANESTHESIA

Robert D. Dripps, M.D., Philadelphia, Pennsylvania

(From the Department of Anesthesiology, Hospital of the University of Pennsylvania, and the Harrison Department of Surgical Research, University of Pennsylvania School of Medicine)

THE single-dose technic of producing spinal anesthesia imposed a time limit upon the surgeon, regardless of the anesthetic agent administered. Whenever procaine was used, its brief duration of action frequently proved annoying or even dangerous. As the effect of the drug wore off and the patient experienced discomfort, supplemental general anesthesia was begun, the induction of which was often accompanied by excitement, vomiting, and anoxia. Primarily for these reasons, continuous (fractional or serial) spinal anesthesia was welcomed on its introduction in 1940 by Lemmon, who suggested use of a malleable needle left in position during the operation.[1] In 1945, Tuohy modified the technic by inserting a catheter 4 to 5 cm. into the subarachnoid space.[2] These two methods have enjoyed widespread and deserved popularity.

So far as we know there have been no published data comparing these two methods. In this paper we plan to compare them primarily from the standpoint of technic. Furthermore, since the practice of anesthesiology has changed significantly during the past decade we believe that the indications for the use of such methods should be redefined.

Material

In this clinic, from 1943 to 1950, the malleable needle method was used 1,107 times in 1,005 patients and the catheter 506 times in 488 patients. A total of 1,493 patients received continuous spinal anesthesia 1,613 times. The experiences of this seven-year period form the basis of the present report. The data appear to warrant the following views:

1. More failures can be expected with the catheter technic than with the malleable needle method.
2. The catheter technic should be regarded as potentially more traumatic than that with the nonrigid needle.
3. Neither method should be used unless an absolute indication exists.

Method

It is difficult to be certain that the two groups of patients were comparable. Other studies in this hospital have revealed that the types of cases selected for spinal anesthesia are remarkably constant throughout the years.[3] Table 1 indicates a reasonable comparison as far as age and sex were concerned. We have assumed that in such a large series many variables which might affect the technical success or failure of a particular method of spinal anesthesia would equalize themselves. These would include calcification of interspinous ligaments, abnormal curvature of the vertebral column, spurs or lipping of the spinous processes, obesity, and the degree of body musculature. The patients were unselected, and every instance involving the administration of continuous spinal anesthesia was included. We have selected as a control group 1,921 administrations of spinal anesthesia given by the single-dose technic. These were all done in 1948 and were so chosen primarily for convenience. Failure of this series to be spread over a longer period of time should be of no significance.

Malleable Needle.—A skin opening was made with a 17- or 18-gauge standard intravenous needle. A 19-gauge malleable needle, previously straightened as much as possible, was gripped close to its point and introduced through the opening. No stylet was used. Entry into the epidural space was evidenced by a sucking sound or by the suck of a drop of fluid placed within the hub. Further forward movement of the needle usually brought entrance into the subarachnoid space, often accompanied by an audible or palpable snap or click.

With the tubing connected, aspiration was then attempted with the syringe, or flow was observed by disconnecting the syringe and opening the

Table 1.—Age and Sex Distribution of Patients Receiving Continuous Spinal Anesthesia

Age (Years)	Malleable Needle			Catheter		
	Male	Female	Total	Male	Female	Total
10 to 19	7	5	12	2	2	4
20 to 29	32	48	80	12	9	21
30 to 39	61	76	137	30	38	68
40 to 49	107	113	220	77	50	127
50 to 59	152	142	294	95	62	157
60 to 69	115	81	196	63	35	98
70 to 79	40	22	62	9	4	13
80 to 89	2	2	4	0	0	0
	516	489	1,005	288	200	488

Presented, by invitation, at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Anesthesiology, May 10, 1950.

This study was supported in part by a grant from the Department of the Army, Office of the Surgeon General.

stopcock. If the needle became displaced, readjustment was attempted with the ungloved hand either by moving the needle in or out, or by partial rotation. Similar efforts were made during the operation if dislodgment occurred.

Certain maneuvers tended to increase the chance of a successful anesthesia. In obese patients or in those with marked calcification of interspinous ligaments, spurs, or abnormal curvatures of the spine, an ordinary, stiff lumbar puncture needle was frequently used for direction, even to the point of entering the subarachnoid space. This needle was usually withdrawn and an attempt made to introduce the malleable needle along its path. In 28 patients the rigid needle was left in place and connected to the tubing and syringe to complete the procedure. On withdrawal this needle was often found bent. The wisdom of this procedure is questionable.

If it was believed that the subarachnoid space had been entered and no cerebrospinal fluid was seen in the needle, a small amount of solution was injected. This frequently freed the needle of a plug of tissue, picked up because of the absence of a stylet.

Displacement of the needle may occur unless care is taken in turning the patient after lumbar puncture. Extension of the patient's back must be avoided as much as possible. Two or three attendants should pick up the patient bodily, move him to the far edge of the mattress, and allow him to fall slowly back into the supine position.

Catheter.—A $3^{1}/_{2}$ French, radiopaque catheter was passed through a 16-gauge Huber point needle in every instance. The needle opening was cephalad in all but 15 patients. In the earlier cases the catheter was introduced 4 to 8 cm. into the subarachnoid space. It is now our practice to advance the catheter tip only 1 to 2 cm. beyond the needle point in an effort to reduce the incidence of paresthesias.

A wire stylet inserted to within 0.5 cm. of the end of the catheter appeared to make it easier for us to pass the catheter beyond the needle point. The stylet was withdrawn as the catheter was advanced into the subarachnoid space. Rigidity of the catheter also made for easier introduction. Excessive sterilization (autoclave) was avoided for this reason. It was believed that the greater the angle of the needle as it was inserted through the interspinous ligaments, the more likely was the catheter to pass in freely. Slight withdrawal of the needle as the catheter was advanced was also helpful. When obstruction was met at the needle point, another useful maneuver was rotation of the needle. We have had no experience with smaller bore needles or with plastic catheters.

TABLE 2.—NUMBER OF TECHNICAL PROBLEMS

	Total Number	Absolute Failure
Single dose (1,921)	57 (3%)	28 (1.5%)
Malleable needle (1,107)	101 (9%)	33 (3.0%)
Catheter (506)	78 (15%)	43 (8.5%)

Results

Types of Problems and Number of Absolute Failures.—Table 2 indicates that, in our experience, the catheter technic was less dependable than that with the malleable needle, both from the standpoint of the total number of problems recorded and the number of failures. There were almost three times as many failures and approximately 50 per cent more problems with the catheter. The control group of single-dose administrations had the least number of problems.

The difficulties encountered with the two continuous spinal technics were not identical.

MALLEABLE NEEDLE.—The most common problems with a malleable needle were displacement of the needle tip from the subarachnoid space or inability to insert the needle properly. Displacement of the needle was the most frequent cause of absolute failure. This complication can probably never be avoided entirely, even if the weight of the needle and tubing be reduced or the patient turned with utmost caution. It is of note that satisfactory readjustment of the position of the malleable needle was obtained in 23 of 41 cases and that substitution of a rigid needle for the German silver needle enabled the provision of satisfactory anesthesia on 26 of the 28 occasions when the malleable needle could not be introduced. Technical difficulties with the stopcock such as inadvertent opening, freezing, or leaks were met on six occasions (Table 3).

In addition to the problems listed in the table, certain others should be mentioned for the sake of completeness. If the malleable needle tech-

TABLE 3.—TYPES OF PROBLEMS

	Number	Failures
Malleable Needle (1,107)		
Displaced needle	41	18
Slow rise, inadequate level	24	9
Unable to insert needle, use of rigid needle	28	2
Equipment errors	6	2
No anesthesia	2	2
	101	33
Catheter (506)		
No anesthesia	18	18
Slow rise, inadequate level	29	16
Difficulty, or inability to pass catheter	22	7
Difficulty with drugs	7	0
Catheter plugged with blood	2	2
	78	43
Single Dose (1,921)		
Slow rise, inadequate level, inadequate intensity	49	30
No anesthesia	6	6
Difficulties with drugs	2	1
	57	37

TABLE 4.—Personnel Involved in Problems

	Single Dose	Malleable Needle	Catheter
Senior staff	396 (11, 3%)	435 (33, 8%)	166 (25, 15%)
Resident	1,274 (37, 3%)	482 (50, 10%)	310 (50, 16%)
Intern	169 (7, 4%)	156 (13, 8%)	26 (3, 11%)
Others	82 (2, 2%)	34 (5, 14%)	4 (0, 0%)
	1,921	1,107	506

TABLE 5.—Trauma During Induction

	Single Dose (1,921)	Malleable Needle (1,107)	Catheter (506)
Bloody taps	42 (2.2%)	16 (1.4%)	22 (4.4%)
Paresthesias	244 (13%)	61 (6%)	170 {105 needle 65 catheter} (33%)

nic is to be used with the special Lemmon mattress, one cannot use a kidney rest or obtain flexion of the table satisfactorily. There is the possibility of back strain if the patient sags into the opening of the mattress. It should be pointed out that new lengths of rubber tubing must be carefully cleansed to remove dirt and sulfur products before use. Failure to heed this warning may result in serious irritative reactions, as this foreign material is deposited within the subarachnoid space.

Catheter.—The most frequent difficulties experienced with the catheter technic were absence of anesthesia or an inadequate degree of block (Table 3). We have assumed that the major cause for such absolute failures was that the distal end of the catheter did not lie within the subarachnoid space. This seems almost axiomatic if cerebrospinal fluid cannot be obtained from the catheter. The following possibilities might explain this: The catheter tip (1) may pass through the dura on either the distal or proximal side to lie epidurally, (2) may split the dura and pia-arachnoid and lie in the subdural space, or (3) may pass out along the meningeal outpouching covering the nerve roots as they leave the vertebral canal.

Failure to obtain cerebrospinal fluid from the catheter after withdrawal of the needle presages trouble. Rarely will anesthesia be satisfactory under such circumstances. In a few instances in our series fluid could be withdrawn or would drip from the catheter, yet injection of various anesthetic solutions provided little or no nerve block. We have speculated that this might be explained by the presence of meningeal openings made by the needle which were large enough to cause a leak of cerebrospinal fluid into the epidural space. Such fluid might then appear in a catheter placed in this area.

The seven patients listed under "difficulty with drugs" were those in whom no anesthesia resulted from injection of acceptable doses of the first drug selected (pontocaine on four occasions, procaine on three). A satisfactory block was achieved in these individuals by substituting another local anesthetic agent. The explanation for these failures is not apparent. Resistance to a local anesthetic drug has been reported. This may be a cause for failure, although seven such resistant patients in a group of 486 seems excessive. The possibility must be considered that in some instances the initial solution contained only the solvent (glucose or cerebrospinal fluid).

Other potential problems with the catheter technic will be listed. The catheter is difficult to clean because of its length. For the same reason and particularly if a stylet is used, there is likelihood of contamination of the catheter as it is being readied for introduction into the needle. The possibility of bits of the catheter shearing off must be considered. This may occur either when the needle is withdrawn or, less likely, when the catheter is withdrawn at the end of operation. Finally, although we are not offering data on postspinal headache or meningeal reactions, it is well to call attention to the fact that after withdrawal of the needle we have seen a relatively free flow of cerebrospinal fluid continue alongside the catheter in the needle track. Furthermore, after removal of the catheter at the end of the operation a similar leak of fluid has been observed. The hazards of such a pathway are obvious.

It will be noted that in 53 (3.3 per cent) of the 1,611 administrations there was a slow onset of anesthesia, a slow rise in the level of anesthesia, or an inadequate block. These difficulties were encountered with both technics and occurred equally with procaine crystals dissolved in cerebrospinal fluid or with "weighted solutions" such as mixtures of pontocaine and glucose. If the catheter bends and advances caudad, one might expect anesthesia similar to that reported with a directional needle with its opening directed toward the caudal canal.[4] If the malleable needle were only partially within the subarachnoid space, a similar effect might be noted. If technical difficulties such as these can be excluded, we have no other explanation for these troubles which appeared in 49 (2.6 per cent) of the 1,921 single-dose administrations as well.

Relation Between Skill and Experience of the Anesthesiologist and Number of Problems.—The status of the physicians involved in this series of cases is given in Table 4. There is a slight difference in the malleable needle data between the senior staff and resident groups. These is no significant difference among the groups using the catheter or single-dose technics. Interns were supervised by more experienced associates. Although it cannot be denied that facility should increase with clinical experience, there appear to be certain difficulties inherent in the methods for continuous spinal anesthesia.

Degree of Trauma.—Any technic of spinal anesthesia involves the possibility of injury to interspinous ligaments, periosteum, blood vessels (with subsequent hematoma formation), meninges, or nerve tissue. It is difficult to evaluate the role of trauma in causing such postoperative complaints as backache, paresthesias, or pain in the extremities, leg weakness, and so forth. On the other hand, it is foolish to deny a possible cause and effect relationship.

Table 5 compares the instances of "bloody tap" and paresthesias with a rigid (20 gauge) needle, a malleable (19 gauge) needle, and the combination of the Huber point (16 gauge) needle and the catheter. It is evident that the catheter technic causes more local trauma. We believe that this would be the case if the catheter were introduced only a few millimeters into the subarachnoid space. Certainly it is true if the catheter were advanced many centimeters.

The lowered incidence of trauma with the malleable needle as compared to a standard 20 gauge rigid needle is of interest. This may be explained in two ways: the majority of the malleable needle administrations were carried out in the years 1943 to 1946. Six hundred sixty-nine of these were done by two physicians who consequently became more skilled as their experience enlarged.

Comment

Because of the number of failures, the technical problems, the degree of trauma, and the increased likelihood of loss of cerebrospinal fluid inherent in methods for continuous spinal anesthesia, it is our belief that such methods should be used less frequently. This contention will receive further support if present impressions of an increased incidence of postanesthetic headache, diplopia, and other neurologic sequelae following continuous methods are substantiated. Satisfactory substitutes for continuous spinal anesthesia can be provided in many instances.

It is now common practice to supplement all types of spinal anesthesia with general anesthesia almost from the start of the operation. This is done deliberately in an effort to minimize apprehension and eliminate unpleasant subjective reactions such as nausea, vomiting, and pain which occur so frequently if the patient remains awake. Should spinal anesthesia wear off before completion of the surgical procedure, it is relatively easy to increase the intensity of the supplemental general anesthesia to a satisfactory degree. Thus, one of the limiting factors to the single-dose method mentioned in the introduction has been removed.

For many years there was a hesitancy to administer the longer-acting local anesthetic drugs for the production of spinal anesthesia. In the author's opinion there is no convincing evidence of the greater safety of procaine in comparison with pontocaine when these drugs are administered in therapeutic equivalents for the production of subarachnoid block.* The greater duration of action of pontocaine recommends the use of this substance as the anesthetic agent of choice for more prolonged operative procedures. If current investigations substantiate the claims that epinephrine or neosynephrine injected into the subarachnoid space significantly increase the duration of action of pontocaine without change in toxicity (local or systemic), this combination may be used even more than at present. These changes in thinking enable one to avoid the use of technics of continuous spinal anesthesia in those instances in which the operative procedure is expected to be completed in three to four hours. If a single dose of the drug is insufficient, the supplemental general anesthesia can be deepened for completion of the operation.

Some authorities have stressed the importance of being able to inject serially small doses of local anesthetic drugs into patients whose physical status is poor.[5] In our opinion the majority of substandard patients are better managed without spinal anesthesia of any type. Others advance the argument of the value of being able to terminate spinal anesthesia reasonably promptly by use of a short-acting drug such as procaine and by withdrawal of drug-containing cerebrospinal fluid. This may be valid and might mitigate against the administration of longer lasting substances. In our experience, however, this has rarely been an important consideration.

We are in no sense suggesting that either the malleable needle or catheter technics be abandoned entirely. The methods may well have merit for operations of greater duration than three to four hours, particularly those which might require considerable muscular flaccidity for their successful conclusion. We have merely attempted to point out some of the possible sequelae of the technics.

If a technic of continuous spinal anesthesia *is* selected, it would appear, on the basis of the data presented, that fewer failures and less trauma would follow the use of a malleable needle.

Summary

1. A comparison of the technical problems

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* There is even a good bit of data suggesting that the same is true for Nupercaine.

encountered in a series of 1,613 administrations of continuous spinal anesthesia has been reported. The malleable needle technic was used on 1,107 occasions, the catheter technic in the remainder; 1,921 single-dose administrations of spinal anesthesia served as control observations.

2. On the basis of the experience in this clinic it is evident that the catheter technic is associated with the highest incidence of local trauma, technical problems, and complete failures.

3. The role of methods for continuous spinal anesthesia in the management of surgical patients is discussed.

The author wishes to acknowledge the technical assistance of V. C. Deckman in the preparation of this material.

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TAX LAWS UNFAIR TO PROFESSIONS

Present Federal income tax laws discriminate against physicians and other professional men and women, Frank G. Dickinson, Ph.D., Chicago, economist and statistician of the American Medical Association, points out. Because a considerable portion of physicians' lifetime earnings are "bunched" into a relatively few peak earning years, they pay more income taxes than other persons who receive the same lifetime incomes spread more evenly over a greater number of years, Dr. Dickinson says in an article in the April 29 issue of the *Journal of the A.M.A.* This discrimination in lesser degree applies to a number of other professions, according to the article.

"A physician undergoes a long training period (the longest among the professions) during which he foregoes income and incurs expenses accumulating to approximately $35,000 at the time of entering medical practice, at approximately age twenty-eight," Dr. Dickinson says. "The working lifetime remaining after this prolonged training period is shortened. To pay off this investment in training in annual installments, his annual gross earnings would have to be at least $5,000 more than those of a person whose earning period started at age eighteen.

"Under the 1942 Federal Internal Revenue Code, funds used by companies for the purpose of providing employes with pensions or shares in profit-sharing trusts are deductible from gross receipts as business expenses and thus are not a taxable part of the employer's or company's income, if the particular plan is approved by the Bureau of Internal Revenue.

Since the provisions are restricted to employes, professional men who can qualify as employes—for example, company lawyers and company physicians— can receive the benefits of these pensions and profit-sharing trusts, while those who conduct their professions as single proprietorships or partnerships may not qualify for these benefits.

"The Board of Trustees of the American Medical Association authorized its representatives to record, at a meeting of the Association of the Bar of the City of New York, its support in principle, of the proposal that the Internal Revenue Code be amended to permit physicians who practice as individual proprietors or partners to declare as business expenses the costs of pension programs for themselves, with the proviso that there should be a reasonable maximum pension. The American Medical Association believes that such an amendment would appreciably reduce the present discrimination."

QUOTABLE QUOTES

Most of us regard mottos and maxims—the sort of epigrams that appear in this magazine—with what might properly be described as mixed feelings. We read them, chuckle over them, quote them, even tuck them under the glass on our desks. But we are frequently irritated by them because so often they're true. Like a nagging wife they constantly exhort us to do what we know perfectly well we ought to do.

. . .

It's more fun to plan the lives of other people than to let other people plan yours.

. . .

Some people are so well liked that they live in a state of sheer exhaustion.

. . .

At what room temperature, if any, can a man and woman be comfortable when the woman is wearing one pound of clothing and the man is wearing nine?

. . .

In learning about a foreign country, prospective visitors like to know especially about its diet and morals, which indicates what is uppermost in their minds.

. . .

Until we've located our own mug in a group picture, nobody else's face interests us.

. . .

Do waiters really pass on to the bartenders those involved instructions from the customers?

. . .

—William Feather, Scully-Walton Magazine, February, 1950

COLLEGE OF

ANESTHESIA FOR EMERGENCY SURGERY FOLLOWING MASSIVE UPPER GASTROINTESTINAL BLEEDING

E. Dean Babbage, M.D., and Joseph J. Bellas, M.D., Buffalo, New York

(From the E. J. Meyer Memorial Hospital)

WHILE much has been written from the surgical viewpoint in the past few years concerning immediate or emergency surgery following massive upper gastrointestinal hemorrhage, little discussion concerning the problems in anesthesia in such cases has taken place. This paper will cover a carefully recorded series of 106 such cases. Surgery was performed on 64 of these.

To be included in this series a patient has to fulfill the following criteria:

A. Gross evidence of bleeding within past week.

B. Red blood cell count of 2 500,000 per cu. mm. or less, or total circulating red cell volume 60 per cent of normal or less.

C. Reasonably good evidence for the diagnosis of peptic ulcer.

D. At least 2.5 L. of blood available.

E. Adequate surgical facilities at hand.

As can be seen by the above, these patients are in impending hemorrhagic shock, are in shock, or have recently been in a shock condition from loss of blood. This is a controlled study, carried out under the direction of Dr. John D. Stewart, chairman of the Department of Surgery of the E. J. Meyer Memorial Hospital. No patient has been denied an operation because of physical status. If one falls into the category and gives permission for surgery, surgery is performed as soon as the laboratory work is completed. In a few cases, anesthesia has been started when the blood pressure was extremely low. Nothing is to be gained by waiting; experience has proved such patients can safely be given an anesthetic. In other words, once operation has been decided upon, it should be started immediately. With few exceptions, these patients are from a very low economic group.

Procedure

Before the patient is brought to the operating room, a nasogastric tube is inserted. Previous to induction, an 18-gauge cannula is placed in each saphenous vein at the ankle by the cut down method, using local anesthesia. The average amount of blood each patient received was 3,000 cc. It is imperative that means be available for rapid infusion. A suction machine with a large tonsil aspirating tip is available for the use of the anesthetist only. Even though constant suction is being maintained on the nasogastric tube, a patient may suddenly vomit blood during induction. Shoulder pieces are placed on the operating room table so the patient can be quickly tipped into steep Trendelenburg position if necessary.

Pentothal (2.5 per cent) is given into a suitable vein in the arm under the direction of the anesthetist. As soon as the patient is asleep, nitrous oxide and oxygen are given by mask, and then ether is slowly added. No cyanosis is allowed to occur. Further pentothal is added from time to time, care being taken that no gagging or retching occurs during the induction with ether. In a few cases, curare has been used during induction, but its value has been debatable. As soon as deep second plane is reached, a number 6 Magill intratracheal tube is passed by the oral route. The addition of an inflatable cuff on the tube is not stressed. Following induction, the anesthesia consists of ether and oxygen. The average operating time in this series, after induction of anesthesia, is three hours and fifty minutes, the longest being seven hours and five minutes.

As might be expected, a drop in blood pressure is noticed in many patients when the anesthesia is deep enough to pass an intratracheal tube. This drop recovers promptly when anesthesia is lightened. Likewise, a drop in pressure occurs when the patient is again carried deeper at the time the peritoneum is opened and preliminary exploration by the surgeon is being performed. As soon as the gastric resection itself is started, anesthesia can be lightened, and the pressure again rises. No difficulty has been encountered in any case in carrying a suitable blood pressure once the operation has commenced.

Results

In this series, 92 per cent were operated upon within twenty-four hours of admission, and the other 8 per cent within forty-eight hours. In the accompanying chart, respiratory complications and deaths are listed according to age groups (Fig. 1). There have been seven deaths in 64 operative cases, giving a mortality of 10.9 per cent. In the control group of nonoperated cases,

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Anesthesiology, May 11, 1950.

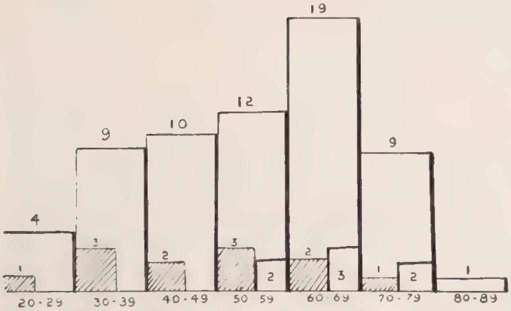

FIG. 1. Chart showing respiratory complications and deaths listed according to age groups. Large blocks indicate number of cases in each age group; shaded blocks, respiratory complications, and plain blocks, deaths.

there have been nine deaths in 42 cases, giving a mortality of 21.4 per cent. The control group consists of patients who fall into the above category but who refuse surgery. All the respiratory complications have been listed as pneumonitis, although some of these are on an atelectatic basis.

Of the seven mortalities, one died on the forty-first postoperative day from tuberculosis; one died on the forty-fifth day from subphrenic abscess and peritonitis; one suddenly from cardiac failure on the third postoperative day. One died from continued hemorrhage on the fifth day. Three of the nine might be classified as anesthetic deaths. One died on the third day from peritonitis, bronchopneumonia, and lower nephron nephrosis.

One died twenty-four hours postoperatively from cerebral softening. This patient was a seventy-four-year-old man who had bled profusely before admission. He had been in a state of shock for several hours and before anesthesia was started showed such cerebral changes as twitching of the face, incoherence of speech, and lassitude. During the course of surgery, his blood pressure rose rapidly, and marked distention of his neck veins was observed. He received a total of 8,000 cc. of blood from the time of admission to death. The overzealous use of blood in this case contributed to overloading the circulation.

The third anesthetic death was that of a sixty-one-year-old man with a marked kyphoscoliosis. Before anesthesia was started, it was noted that his method of breathing was to flex the torso on the thighs to exhale and then to lean back to inhale. He stated he had breathed that way for years. There was no intercostal breathing. His condition remained good during surgery, following a rather slow induction. At the conclusion of surgery, his trachea was aspirated, and he ceased breathing. Coramine and metrazol were given, and he resumed spontaneous respirations at the rate of 3 or 4 per minute. Pulse and blood pressure were essentially normal. This condition remained for about four hours, and then he began to deteriorate, dying seven hours after completion of surgery. The pathologist found pulmonary hyperemia and edema with chronic pneumonitis, severe coronary sclerosis, and chronic cor pulmonale.

Blood volume studies have been done on every case in this series, both preoperatively and postoperatively. Preliminary investigative work has shown that the time-honored methods of determining blood loss—namely, hematocrit, red cell count, and hemoglobin determinations—give a false picture as to the exact status of the patient. Hematocrit reading alone does not reflect the true degree of hemorrhage until twenty-four hours have elapsed. By utilizing T-1824 dye in determining plasma volume, a reasonably accurate reading of the red cell volume can be obtained. When the red cell volume is known, a yardstick is established for replacement needs with whole blood. However, a note of warning must be interjected at this point. Even though laboratory work shows a lack of circulating red blood cells, clinical judgment and observation must be used at all times in order to forestall overloading the circulation. This overloading is made evident by distention of veins and a rapid unexplained rise in blood pressure. Later, pulmonary edema may develop.

Summary

1. Patients suffering recent severe massive hemorrhage from peptic ulcer can safely be operated upon, using general anesthesia.

2. There is no need to wait until a normal blood pressure and pulse have been established; these can be secured during the progress of surgery.

3. Pentothal, ether, and oxygen are desirable anesthetic agents.

4. Total circulating red cell mass determination is a valuable clinical aid in estimating replacement needs and in evaluating the physical status of the patient.

The authors desire to give credit to Drs. Frank W. Spicer, Jr., Irving Rudman, Coleman Citret, and Carrol Shaver, to Mrs. Ruth Hanavan, Mrs. Florence Drews, and Mrs. Elva Wilkinson for their assistance and cooperation in performing the special laboratory work, and to Pauline Carey, R.N., for the preparation of charts.

A METHOD OF SPLINTING THE HAND AND FINGERS

SEYMOUR W. MEYER, M.D., F.A.C.S., Brooklyn, New York

(From the Hand Services of St. John's and Beth-El Hospitals)

PROPER immobilization of the hand and fingers after surgery for infection and repair of injured parts is equally as important as the definitive surgery itself. Many hands and fingers have been rendered partially or completely useless, even after excellent surgical repair has been performed, only because of a lack of understanding of the anatomic and physiologic principles involved in immobilization of the hands and fingers.

One of the most frequently used positions for immobilization is that obtained by placing the hand in the "position of function." In this position, the forearm is midway between pronation and supination, the wrist is in 30 to 35 degrees of dorsiflexion, the fingers are separated from each other and slightly flexed in each of the joints, and the thumb is forward from the hand with its joints slightly flexed.

Allen and Mason in 1947 described a "universal splint" for immobilization of the hand in the position of function.[1] They have found this splint applicable in about 90 per cent of cases of hand infections and injuries. These splints were hammered out of single sheets of aluminum (Fig. 1A). Although many have been impressed with the excellence of this splint, the author sought a simpler method of preparation.

A model was designed and carved out of wood, after a pattern suggested by the Allen-Mason splint (Fig. 1B). This was then used as a mold on which plaster of Paris splints could be made, simply by carrying a plaster of Paris roller bandage up and back on the mold, in the same manner as the usual plaster of Paris molded splint is made. After hardening, these are removed from the wooden mold and are ready for use (Figs. 1C and 1D). A thin layer of vaseline, applied to the wooden mold before the plaster, prevents adherence of the plaster to the wood and facilitates removal. These splints are prepared prior to operation and are firm and ready for use at the conclusion of the operative procedure. The same splint may be used for either hand.

The author has found one added advantage of this method of splinting over the aluminum splint. With the latter method, all of the fingers are immobilized on the splint, since it allows for no variation in technic. In many cases, such complete immobilization may be desired. However, with the wooden mold-plaster of Paris technic, it is possible to immobilize the thumb or any of the other fingers alone, or in combination, without immobilizing the noninvolved fingers. At the same time, the wrist is maintained in the position of function. Thus, in a splint prepared for the thumb, the splint may be prepared as previously shown (Fig. 1C); however, before drying, a portion is cut out, so as not to immobilize the other four fingers beyond the metacarpophalangeal joints (Fig. 1E). Similarly, the basic splint may be altered to maintain any of the other fingers in any desired positions (Fig. 1F).

As with the aluminum splint, these plaster of Paris splints are thoroughly covered and padded and so may be used repeatedly.

Summary

A method has been presented for the immobilization of the hand and fingers in the position of function, incorporating the basic principles of the Allen-Mason universal splint but having the added advantages of greater ease of preparation and greater variation in the extent of individual finger immobilization.

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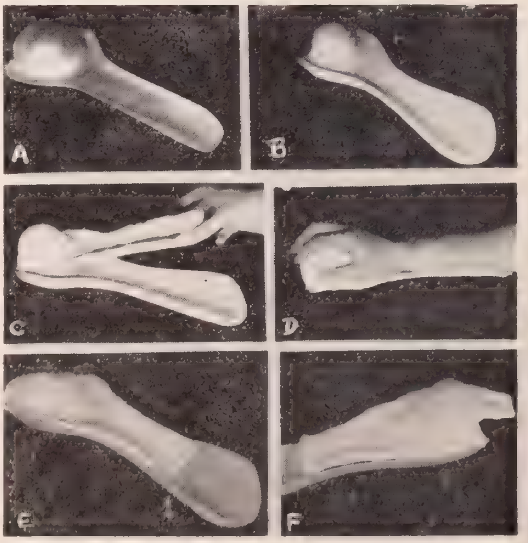

FIG. 1. (A) Allen-Mason universal splint made of aluminum, (B) of wood. (C and D) Plaster of Paris splint made from wooden mold. (E and F) Altering of basic splint to maintain any of fingers in desired position.

HEART DISEASE AND INDUSTRIAL MEDICINE

Recent Trends in the Evaluation of the Cardiac Worker

Albert Salisbury Hyman, M.D., F.A.C.P. New York City

(From the Cardiac Service of Beth David Jewish Memorial, and New York City Hospital)

During the past sixteen years the cardiovascular diseases have played an increasingly important role in the over-all extension of industrial medicine; in 1933, the New York Superior Court held that disabilities of the heart and blood vessel system arising out of or developing as the result of occupational hazards shall be construed as traumatic or accident equivalents in so far as the Workmen's Compensation Act is concerned.

When a worker suffers a heart attack, for example, an acute coronary occlusion, his loss to industry in terms of man hours and production may be just as great as an individual who experiences a major traumatic disability; in many instances, the convalescence from even a moderately severe cardiac episode may require an extended period before the worker can be safely permitted to return to his job. Compared to such serious surgical conditions as compound leg fractures, extensive body burns, and crushing injuries to the chest or skull, the mortality figures as well as time lost show that cardiovascular disease vies in equal importance.

From the very beginning of the Workmen's Compensation Act, the interpretation of the causal relationship between trauma or physical strain and the development of cardiovascular disability has been a problem which has engendered much bitter controversy over the years; equally qualified cardiologists have arranged themselves on both sides of the debate. There are those who maintain that trauma and physical strain play no part in the development of coronary occlusion; when such an attack occurs while the worker is at his employment, the condition should be considered purely coincidental, since experience has shown that many individuals develop similar attacks when not working and even while at rest in bed.

This group also points out that there has never been any clear-cut experimental evidence to show that trauma or physical strain in controlled laboratory animals has resulted in coronary thrombosis or occlusion comparable to that seen in the human heart. There have been a number of investigations reported in which various animals, particularly the dog, goat, sheep, and calf, have been subjected to muscular strain to the point of preagonal exhaustion without the development of irreversible coronary changes. In one well-controlled series, dogs and calves were struck upon the chest in the precordial area; until there were actual fractures of the sternum and ribs no distinctive electrocardiographic abnormalities were noted. When the pericardium was injured and the heart lacerated, cardiac symptoms were noted, but on postmortem examination no involvement of the intracoronary system was discovered, and in no instance was a typical thrombus found.

Opposing this school of thought are those who believe that both trauma and physical strain play a decisive and provocative role in the initiation of many coronary episodes. They point out an increasing volume of statistical data showing the relationship between unusual or prolonged physical stress and the onset of acute coronary disease in industrial medicine. The worker with no previous cardiac symptoms who lifts a heavy object and immediately complains of heart pain and subsequently shows an acute coronary occlusion clinically is the typical instance given to demonstrate a common causal relationship.

This group of cardiologists challenges the interpretation of the experimental evidence offered above; all of the laboratory animals used in the various traumatic and exhaustion tests started with a normal cardiovascular system. Moreover, most of the animals were young and cannot be compared biologically with workers in the industrial age groups in which coronary disease is most likely to occur. Within the past year, thiouracil-controlled dogs on high cholesterol diets with advanced intimal atheromatous disease of the coronary arteries similar to that seen in the human heart have been subjected to physical exhaustion tests; a preliminary report suggests that acute coronary occlusion has been discovered in a small series. Wolffe at the Valley Forge National Heart Institute and Hospital has shown that ducks and geese, forced-fed with high fat-cholesterol diets, develop atheromatous coronary disease and myocardial infarction; after the exhaustion tests the incidence of coronary occlusion increased more than 80 per cent.[1]

Presented at the First Training Course in Industrial Medicine for Officers of the Reserve Medical Corps of the U.S. Navy at the School of Public Health, Columbia University, September 24, 1949.

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These experimental observations may pave the way for a more rational middle course between the two opposing schools of thought. Where there is evidence that an individual has a pre-existing and thus predisposing change in the intimal lining of his coronary arteries, the factors of physical and emotional stress may temporarily convert a relative insufficiency of his coronary circulation into an acute functional obstruction and secondarily to myocardial infarction. The causal relationship is clear when symptoms of the cardiac episode follow promptly after the performance of the exhaustion phenomenon.

The relationship, however, becomes debatable when the time period between the provocative stress and the development of the acute heart attack is lengthened beyond a "reasonable" time. This reasonable time has also been the subject of considerable medical and legal controversy; most cardiologists believe that the symptoms of the cardiac episode should develop within a few minutes or hours. The upper time limit is usually given as eight to ten hours. The courts, however, have been more liberal in the interpretation of the time relationship, and in several cases twenty-four hours have been allowed; there are instances of thirty-two, thirty-six, and forty hours elapsing which have been accepted in contested industrial medical insurance cases.

In 1940, a special committee of the New York Cardiological Society was set up to study the relationship between physical strain and the development of coronary occlusion; the case records from a number of the larger hospitals in New York City were carefully investigated, and a statistical survey was attempted. Before the study was interrupted by the war, sufficient data had been collected to indicate that in industrial medicine there is a very close association between unusual or prolonged muscular work and the onset of the clinical syndrome diagnosed as acute coronary thrombosis and occlusion. In about 70 per cent of the cases, the episode occurred within six hours after the alleged stress had taken place; 44 per cent developed coronary occlusion within an hour.

Of particular importance was the discovery that in nearly every instance there was a presumptive or actual history of pre-existing coronary insufficiency. The diagnosis of coronary insufficiency as a clinical entity with distinctive symptoms and objective findings has been one of the major advances made in cardiology during the past decade; as a factor in preventive medicine its definitive value cannot be overemphasized in either industrial or general practice. It might be worth while to consider this syndrome briefly.

In the normal heart of all age periods there is a well-balanced ratio between the contracting power of the myocardium and the blood supply to and from the areas of cell metabolic activity; the vascular bed of the coronary circulation is very rich in terminal arterioles. The reserve capacity of the heart in experimental animals is said to be as high as 300 per cent. When the heart is receiving a physiologically adequate blood supply, no symptoms develop, regardless of the amount of work performed, but even the normal heart is eloquent when the balance is disturbed. Dyspnea, palpitation, tachycardia, and heart pain occur in well-trained athletes after maximal physical strain. In the normal heart, however, the complicated anoxial changes which develop in the myocardium are temporary and reversible; within a brief period of rest all of the symptoms clear up, and the objective findings, if any, tend to disappear quickly.

When the coronary bed is diminished by any one of a number of disease processes, the ratio between demand and supply tends to become unfavorable, and symptoms of myocardial anoxia develop sooner. The working capacity of the cardiovascular system in any given individual is thus a more or less mathematical function of an adequate metabolic balance; it is possible, by suitable clinical examinations, to measure this disturbance in balance and thereby make a presumptive diagnosis of coronary inadequacy or insufficiency.

A number of exercise tolerance tests for the determination of coronary capacity for work have been developed during the last twenty years; by far the simplest is the stair-climbing test utilized during the war by the Navy Medical Department. This is a modification of the Schneider test for pilot fitness. The individual is required to perform 10,000 foot pounds of work based upon his weight and the number of steps climbed. Before the test, pulse rate, blood pressure, respiratory rate, and vital capacity are recorded; an electrocardiogram is also made. Directly after the test, these figures are again obtained as well as the electrocardiogram; the final observation is made three minutes later. In the normally adjusted individual the first set of figures and the last should be the same.

While this test was originally developed for the routine examination of healthy young males, it has proved to be extremely informative in persons with presumptive or actual heart disease. In addition to the basic figures given above, the quality, type, and distribution of murmurs can be determined before and after the test; irregularities of rhythm developing after stress can be discovered. The occurrence of marked dyspnea, palpitation, heart pain, vertigo, or weakness can be noted. The electrocardiogram is especially revealing; typical changes in the ST segments and

T waves, usually in leads 1 and 2 and in certain of the unipolar and precordial leads, are diagnostic of various grades of coronary insufficiency.

In disease damaged hearts, this test, as indeed any other similar diagnostic procedure, must be performed with caution; in certain instances only a half-test of 5,000 foot pounds of work should be attempted. The examining physician must use seasoned judgment in estimating the coronary function in patients with known myocardial disease; skillfully handled, however, the test is of great diagnostic, and sometimes of valuable prognostic, significance in all types of cardiovascular disability.

What happens if the exercise tolerance test is pushed beyond the functional reserve capacity of the coronary circulation and the failing myocardium? When the contracting heart muscle fails to receive a blood supply adequate for its metabolic requirements, a physiologic state of anoxia promptly develops; vital changes in cell chemistry occur which, unless quickly restored to a more normal pattern, lead to pathologic breakdown of the tissue segments involved. These changes may be irreversible, and infarction of the myocardium occurs. It is possible, therefore, to produce infarction necrosis of the heart muscle by functional insufficiency of a coronary branch without actual occlusion of the vessel itself. Such myocardial infarctions without coronary occlusion are common; they are usually seen as subendothelial hemorrhagic areas in the postmortem specimen. Clinically, such infarction cannot be differentiated from major occlusions; the symptoms and objective findings are the same.

If several such small infarcted areas tend to coalesce during the acute inflammatory stage which immediately follows the necrosis, the process may tend to involve an adjacent artery which then undergoes a thrombotic reaction. If this artery supplies a larger and more distant segment of the myocardium, a secondary and usually a more serious infarction takes place.

This, in rather sketchy manner, is apparently the explanation of the lapse of time seen in industrial medical cases between the performance of unusual work or strain and the onset of coronary infarct symptoms. The causal relationship, as indicated previously, is clear when there is evidence of pre-existing coronary insufficiency.

The establishment of the pre-existing condition underlines one of the most important phases of industrial medicine—the need for pre-employment physical and psychiatric examination. During the war years, considerable advance was made toward this goal; labor abandoned its age-old antagonism toward such examinations, and management relaxed many restrictions against various types of physical disability.

When pre-employment examinations have been made mandatory, the available statistics show that the incidence of acute coronary heart disease developing during working hours is about one fifth of that found in industry as a whole; these cases usually occurred in employes with long occupational records, most of them after twenty years service. A simple physical examination will reveal the potential cardiac patient; high blood pressure, murmurs, tachycardia, irregularities, and abnormal electrocardiograms will immediately screen out the candidate most likely to become an industrial medical casualty.

If this presentation has been chiefly confined to a consideration of coronary heart disease, it is because other types of cardiovascular disability play a relatively minor role in industrial medicine. In a series of 100 cardiac cases seen in industrial practice and selected at random, there were 79 instances of coronary disease, eight hypertensives with hemiplegias, six acute congestive failures with valvular heart disease, two patients with irregularities and secondary psychosomatic syndromes, and two cardiacs who developed a second attack of rheumatic fever as the alleged result of exposure to cold and dampness while working. All of these cases could have been anticipated if a pre-employment examination had been made.

While unusual physical strain and continued muscular stress may aggravate all types of pre-existing cardiovascular disease, it is doubtful whether these factors can initiate disease processes in the heart or blood vessels. The animal experimental work previously quoted suggests that physical exhaustion alone is insufficient to produce heart disease.

There are few health hazards in industry capable of causing disease to the normal heart per se. However, when blood vessels are involved as in lead and certain other heavy metal poisonings, the coronaries may be affected; in most instances other arteries are chiefly involved. The coronaries appear to be spared at the expense of the peripheral vessels and those of the kidney, brain, and gastrointestinal tract in severe cases of lead poisoning.

Occupational diseases of the lung, in so far as the lesser circulation may be involved, may be productive of various grades of cor pulmonale; the inhalation of industrial dusts with subsequently developing chronic bronchitis, bronchiectasis, and emphysema may cause right-sided heart failure. The diagnosis of cor pulmonale may be difficult when associated with valvular heart disease or hypertension.

The cardiac patients who develop a second attack of rheumatic fever while working under alleged conditions of cold and dampness open up another controversial debate concerning causal relationship. In spite of the well-organized program for the investigation of rheumatic fever carried out during the war by the Navy, the etiologic background of the disease is still unknown. Remarkable data was obtained by Coburn and others in demonstrating the relation of the B-hemolytic streptococcus to the development of acute rheumatic fever; the prophylactic effect of the antibiotics was also discovered, but no constant relationship was found either in the penicillin protected group or the control series in regard to exposure to the factors of cold and dampness. While it has been a generally accepted theory that acute rheumatic fever is prone to develop in individuals so exposed, a carefully compiled series was made at the U.S. Naval Hospital at Crotona, California, from 1944 to 1946; this institution was set up as a rheumatic fever center for Navy and Marine personnel. About 6,000 cases were studied; less than 20 per cent gave a history of exposure to cold and dampness, while more than 55 per cent had been exposed to or actually had B-streptococcus infections.

Exposure to cold or dampness is thus not a primary factor in initiating the disease; it may however, be one of the contributing factors in reactivating a quiescent rheumatic infection. Poor nutrition, low resistance to upper respiratory tract infections, the anemias, and certain other debilitating conditions may be equally important.

Since acute rheumatic fever is the most common cause of valvular heart disease and since rheumatic fever is the number one cause of death under the age of fifteen, the prevention and treatment of this disease may well become a problem in industrial medicine. Valvular heart disease can be picked up in most instances on pre-employment examination; such individuals should be given work under a less exposed environment.

Before concluding, a word or two should be said about the rehabilitation of the so-called "cardiac cripple." While the word cripple is objectionable from many points of view, it does serve to highlight the postwar emphasis on various grades of physical disability. Few individuals in the industrial age groups are 100 per cent disabled; even the blind, the paraplegics, and the multiple amputees have been taught to support themselves by selected gainful occupations. The worker with heart disease may, in many instances, continue with his usual occupation, provided that such employment does not reduce his cardiovascular reserve.

A number of important surveys have been made in regard to the rehabilitation of the cardiac worker; all of the data indicate that, where a job can be fitted to the physical limitations of the specific heart condition, the employe has a better than average service record. Absenteeism was less, and the accident rate was lower than in other comparable industrial groups. In certain trades where the experiment was carried out under the direction of various heart associations, it was found that many cardiac patients excel in such skills as watch repairing, manufacture of jewelry and electrical small parts, piano tuning, typing, photography finishing, and a host of other interesting and important trade positions. With continued medical supervision, many such individuals with cardiac disabilities have been able to carry on their ordinary life expectancy.

Industrial medicine has thus a dual role to play in the consideration of the worker handicapped by potential or actual cardiovascular disease. The first, and perhaps the most important in so far as management is concerned, is the detection of the candidate for coronary disability before the episode occurs; millions of man hours and millions of dollars are lost every year in the United States by worker breadwinners stricken by this condition. It is the number one cause of death among men of all age groups above forty-two. Experience has shown that severe and disabling coronary heart disease can be postponed and sometimes prevented; the formula is simple. In the aging heart, the demand for an adequate myocardial circulation must never be greater than the functional supply. The worker with an impaired coronary mechanism must not be permitted to attempt physical strain beyond toleration limits. Industrial medicine by comprehensive physical examination both at the pre-employment level as well as regular semiannual follow-up surveys can and must lead the way to a better industrial health record among American workers.

Industrial medicine has another great part to play in the nation's welfare; this concerns the worker himself when he is the victim of heart disease. Industrial medicine must find a place in the scheme of occupational self-sufficiency for such employes; their various skills and experience constitute a rich supply of manpower which has been sadly overlooked and neglected. Industrial medicine must emphasize its rehabilitation programs to the end that cardiac cripples, as well as all others with physical disabilities, may have an opportunity to share in this great country's productive capacity.

8 East 64th Street

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RESULTS OF SYMPATHECTOMY IN DIABETIC ARTERIOSCLEROTIC PERIPHERAL VASCULAR DISEASE

FRANK RICHARD COLE, M.D., Flushing, New York

(From the Horace Harding Hospital)

THE incidence of infection is a serious affair in the diabetic patient. It usually requires extreme care to maintain the glycemic level and to eradicate the source of infection. When this infection occurs in the lower extremity of an elderly individual with sclerosis, the prognosis concerning the viability of the extremity is of grave concern. Obliterative endarteritis in diabetics with infection of the extremities results in long-enduring, indolent infection.

In discussing diabetic peripheral vascular disease we have one factor which has until recently been constant and free from surgical attack. The factor, increased blood flow, is the variable that may turn the tide in increasing the salvage rate of these people. The means of attack is the operation of sympathectomy. This procedure was held of no value formerly by the great majority of internists and surgeons. This has not been the view of recent investigators nor our experience in the small number of cases cited herewith.

Ives reported the results of sympathectomy on seven patients with endarteritis due to arteriosclerosis and reported good results in six.[1] Freeman and Montgomery reported improved walking capacity of six patients with arteriosclerotic vascular disease who had sympathectomy.[2]

De Takats emphasized that the removal of the lumbar sympathetic chain frees the corresponding extremity from the fluctuations of vasomotor tone.[3] There is benefit when these fluctuations do not hamper the extremity which is already limited by a small basal inflow. De Takats emphatically states that the sclerotic extremity will benefit, providing the terminal arteriolar extremity bed is intact. However, the statement that the paravertebral block must show a rise in skin temperature and walking ability is not necessarily true.

Coller recently stated that the benefit to sclerotic vessels is not from the release of the so-called spasm but from the effect of the block on the release of the functional factor.[4] The latter is mediated through the sympathetics. The functional factor consists of the action of food, pain, and emotions on the already sclerotic vessels, causing fluctuations which further diminish the small basal inflow. Purely medical treatment is temporary and does not give a permanent interruption so necessary to cure.

Regan claims the most accurate preoperative test to insure success of the sympathectomy is to note the result with the sympathetic block.[5] This should result in increased warmth and increased walking ability. Atlas also stresses the increased walking ability in patients who had preoperative blocks.[6] De Takats stresses the above facts but also notes that the blocks may not produce any of these facts, and still a sympathectomy may be in order.[7] The effect of pain as one of the emotional factors must be estimated. The pain may be due to an ischemic neuritis which may act like the causalgic state does. Doupe suggests it may well be due to a volley of sympathetic impulses acting on the demyelinated fibers.[8]

TABLE 1.—PREOPERATIVE STATUS OF SEVEN PATIENTS WITH DIABETIC PERIPHERAL VASCULAR DISEASE

Name	Sex	Age	Site of Infection	Length of Symptoms	Previous Surgery	Preoperative Oscillometry (Calf)	Postoperative Oscillometry (Calf)	Preoperative Pulsations (Dorsalis Pedis)	Postoperative Pulsations
A. B.	F	68	Toes	13 months	Incision, drainage	0–0.5	0	0	Faint
E. D.	F	62	Toe	2 years	Incision, drainage	1	0.5–1	0	Faint
A. J.	F	54	Toe	6 months	Incision, drainage	0	0	0	0
A. K.	F	63	Toe	15 months	Incision, drainage	1–1.5	2	Faint	Palpable
B. L.	F	61	Toe	3 months	Left thigh amputation	0.5	0.5	0	0
R. L.	F	56	Sole of foot	2 months	Left thigh amputation	0	0	Palpable	Palpable
A. M.	F	71	Toe	30 months	Incision, drainage	0	0	0	0

TABLE 2.—RESULTS OF LUMBAR SYMPATHECTOMY IN SEVEN PATIENTS WITH DIABETIC PERIPHERAL VASCULAR DISEASE

Name	Chief Complaint	Result of Block (Warmth, Pain)	Result of Walking Test	Length of Follow-up	End Result	Diabetic Status	
						Preoperative	Postoperative
A. B	Marked pain in foot and leg	Fair	Refused	11 months	Excellent	Difficult to control	Easily controlled
E. D.	Severe pain in leg thigh, and foot	Evanescent	Improved	7 months	Excellent	Difficult	Insulin not required
A. J.	Severe pain in leg	Poor	Poor	6 months	Excellent	Controlled easily	Controlled easily
A. K.	Severe pain in leg and foot	Poor	Improved	3 months	Good	Difficult to control	Insulin not required
B. L.	Pain in leg and hip	Poor	Improved	8 months	Good	Controlled	Easily controlled
R. L.	Pain in foot and cold extremities	Good	Improved	2 months	Excellent	Controlled	Controlled
A. M.	Pain in thigh and leg	Poor	Poor	2 months	Poor, amputation required	Difficult to control	Difficult to control

Failures in sympathectomy may be due to poor technic, as well as differences in innervation. Smithwick states the removal of the first, second, and third lumbar ganglia results in complete denervation of the thigh and the leg.[9] Removal of the second and third lumbar ganglia results in denervation from the knee distally, but the effect on the thigh is not complete. Richter and Woodruff determined by skin resistance methods that, in a series of patients who had removal of the first, second, and third lumbar or the first and second lumbar, 52 per cent of these patients had denervation up to the groin.[10] In 48 per cent, where there was incomplete denervation, the first lumbar was not removed.

This study represents an analysis of seven patients with diabetic peripheral vascular sclerosis who had sympathectomies done at the Horace Harding Hospital (Tables 1 and 2). It is noteworthy that all had marked pain, and it was for the latter symptom, even though the vascular tests were poor, that sympathectomy was done.

Analysis of the seven cases should permit the following conclusions:

1. Six of the seven cases had good or excellent results from the lumbar sympathectomy, were able to return to their occupation, and were free from disability.
2. Procaine blocks gave poor results, but sympathectomy in these four cases gave good results.
3. The walking test is better as far as prognosis is concerned than the increase of warmth or pulsations in the involved limb.
4. In three cases where the diabetes was hard to control, the diabetes was easily managed after sympathectomy.
5. One case from the seven had an amputation later. In this case the block gave poor results as far as increase in warmth, pulsations, or walking.

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ONE DOCTOR FOR EVERY 750 PERSONS IN U.S.

The United States at the beginning of 1950 had one doctor for every 750 persons. This is the best showing for any nation in the world, with the exception of Palestine where a temporarily high ratio exists because of an influx of refugee doctors.

Next to the United States, the largest supply of doctors in relation to population exists in Great Britain where, based on latest available official figures, there was one doctor for 870 persons. Other countries in order are: Iceland, 890; Denmark, 950; Canada and New Zealand, 970. Other nations range from 1,100 persons per doctor to 25,000 persons per doctor, a situation which exists in China. —*A.M.A. News Release*

Case Reports

THE TREATMENT OF PRURITIS WITH ADENOSINE-5-MONOPHOSPHATE (MUSCLE ADENYLIC ACID)

Richard J. Kennedy, M.D., New York City

(From the Medical Division, St. Vincent's Hospital)

IN A group of patients, suffering from Hodgkin's disease, Rottino reported relief of pruritus following the administration of adenosine-5-monophosphate in two of three patients suffering from this symptom.[1] Since the initial report, he has used adenylic acid with gratifying results in pruritus cases of diverse etiology.[2] The following four cases in which adenosine-5-monophosphate was used for the relief of itching are briefly summarized.*

Case Reports

Case 1.—J. H., a forty-seven-year-old female, was admitted with chief complaint of generalized itching of the skin of ten days duration which was severe enough to prevent sleep. Her illness began with discrete papules on the inner sides of the thighs. The papules became more numerous and the skin erythematous and swollen. The papules became vesicular, broke down, and discharged a serous fluid. By the third day, the rash spread to the arms, neck, hands, and face. She had been treated at another hospital with antihistamine substances orally and locally without relief of the intense itching. Phenobarbital was the only drug the patient had taken prior to the onset of the rash. The patient was inclined to incriminate a black nylon slip as the cause of the rash, but the distribution of the lesion did not conform to the contact areas of this article of clothing.

Examination revealed a diffuse, papulovesicular, erythematous rash over the face, neck, arms, hands, and inner aspect of the thighs. The face was markedly edematous and the eyes almost closed. The rash for the most part was dry and scaling with moist areas in the folds of the neck, groin, and forearms. A blood smear revealed a 15 per cent eosinophilia.

Treatment consisted of boric acid compresses to the moist areas and boric acid ointment to the dry, scaly parts of the skin with no relief of the swelling or the pruritus. On the second day, 20 mg. of adenosine-5-monophosphate were given intramuscularly every hour for five doses. Itching was sufficiently relieved to allow her to sleep that night and in twenty-four hours practically disappeared. The drug was continued in the above doses for two subsequent days with complete relief of pruritus. By the third day of treatment oozing had ceased. She was discharged in the seventh day with complete clearing of the skin except for slight erythema on the inner aspect of the thighs.

Case 2.—F. B., a sixty-five-year-old female, had a chief complaint of rash of four days duration. The eruption began on the neck and forehead following the use of hair dye. She had previously suffered from intense dermatitis attributed to intramuscularly administered Mercuhydrin. This sensitivity was confirmed by the skin test.

The skin was dry and scaly on the trunk and sodden and macerated on the face, neck, arms, hands and legs. Numerous excoriations were present over the chest and abdomen.

No local treatment was used. She was given adenosine-5-monophosphate, 20 mg. intramuscularly every hour for five doses daily. At the end of twenty-four hours, itching was slightly relieved. By the third day of treatment it had ceased. The drug was continued through the fourth day, and by that time the moist areas had become dry, and edema of the hands and face had disappeared. Exfoliation proceeded without itching, leaving a smooth erythematous skin.

Case 3.—F. K., a forty-three-year-old male, had suffered from pruritus ani for fifteen years. He had been treated with a variety of anesthetic ointments over the years and lately with antihistamine drugs orally without relief. For the past six years he had also suffered from generalized pruritus after bathing which lasted several hours. Experimentation with many different soaps gave no relief from this complaint. Examination revealed the perianal area to be reddened, the skin thickened and excoriated. He was given adenosine-5-monophosphate, 20 mg. intramuscularly every hour for five doses daily. At the end of the second day he reported complete relief of pruritus ani. The drug was continued through the third day. Re-examined three months after cessation of treatment, he reported no recurrence of anal pruritus. The skin was not reddened, and no scratch marks were present. Bath pruritus was relieved for one month following treatment but had since recurred in a milder form.

Case 4.—M. C., a twenty-eight-year-old woman was seen when she was twelve days postpartum. She complained of pruritus of the breasts, trunk, legs, and arms. The patient was irritable because of the lack of sleep due to the pruritus and anxious because she had not been able to take care of her infant. The skin appeared normal except for scratch marks over the affected areas and crusted excoriations on the forearms and beneath the breasts. She had been taking Benadryl without relief for two days. The patient, a registered nurse, was instructed to take adenosine-5-monophosphate, 20 mg. intramuscularly every hour for five doses daily. She reported moderate relief of itching at the end of the second day. The drug was discontinued at the end of the third day, the patient stating that the pruritus was mild and that it did not interfere with sleep. On the fifth day, she had a recurrence of itching and requested that she be allowed to continue the drug. She was given the medication for two additional days, at the end of which time the pruritus was completely relieved, and there were no recurrences.

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* The preparation used was My-B-Den, made and supplied by Ernst Bischoff Co., Inc.

Comment

The efficacy of adenosine-5-monophosphate in relieving pruritus accompanying a variety of conditions of obviously different etiology raises the question of whether the sensation of itching arises from a common mechanism, be the stimulus chemical or psychogenic. The theory of Lewis that the common denominator in itching is histamine or H substance cannot be accepted in all cases, for histamine in doses necessary to produce itching also produces a characteristic triple response of local redness, wheal, and flare which is lacking in many pruritic conditions. Furthermore, epinephrine relieves pruritus due to histamine, yet is useless in other pruritic conditions in which there are no visible changes attributable to histamine. To date, adenosine-5-monophosphate has not been used in uncomplicated urticaria or angioneurotic edema so that its effects in a histamine mediated pruritus are not known. If it should prove to be effective, it would demonstrate that a common factor, not histamine, is probably responsible for the pruritus of diverse skin conditions.

Further work needs to be done to determine the optimum dosage of adenosine-5-monophosphate. Less frequently administered doses over a longer period of time have relieved pruritus in several cases.

Summary

1. Adenosine-5-monophosphate was effective in relieving the pruritus in two cases of eczematoid dermatitis, one case of pruritus ani, and one of postpartum dermatitis that was probably an early neurodermatitis.
2. The possibility that a common denominator, not histamine, is responsible for pruritus is considered.

103 East 84th Street

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HERNIATED INTERVERTEBRAL DISK

Although surgical intervention may be necessary in some cases, most cases of herniated intervertebral disk respond to conservative treatment. Wide variations in severity and uncertain prognosis make it well to err, if at all, on the conservative side. If, after judicious use of traction, local heat, rest, corsets, and body casts, symptoms continue unduly long or recur frequently, surgery may be indicated. At operation, stabilization may be required in addition to excision of the herniated disk. Although, in some cases, excision alone is required, a secondary stabilizing operation may be necessary where low back symptoms persist. Because of this, there is an increasing tendency toward carrying out both procedures at the same time.

Conservative treatment: To minimize weight bearing the patient should be put on bed rest, his position as to spinal flexion or extension dictated by his comfort. Traction to legs or pelvis is of help. While local heat is beneficial, deep heat tends to aggravate the discomfort. Earlier activity may b permitted by use of corsets or body casts. If thes measures bring relief, continuance looks to th gradual return of the patient to normal activity.

Surgical treatment: When the newer technics fusion of the spine are used, ambulation is achieve as early as when excision of the disk alone is don The surgeon should be qualified to do both excisio and stabilization and should be ready to meet th unexpected, which is often encountered, since oth pathologic conditions of the spine and nerve elemen are possible. The treatment of cervical disks based upon the same principle as those of the lumb region.

—*Fremont A. Chandler, M.D., Industrial Medicin July, 1949*

PITUITARY MYXEDEMA WITH AUTOPSY FINDINGS

Samuel Levine, M.D., Hyman W. Karp, M.D., and Sidney Feldman, M.D.
Brooklyn, New York

(From the Beth-El Hospital)

UNTIL the past decade, myxedema was believed to be the result of a deficiency in the production of thyroid hormone. The cause of this deficiency may be due to complete removal or destruction of the thyroid tissue either by operation, thyroiditis, or atrophy of the gland. It was accepted that the changes in the thyroid gland were responsible for the clinical picture of myxedema.

From 1935 until 1944, we had the opportunity of observing a patient in whom we were able to prove that the clinical myxedema which she showed was due not to primary thyroid disease, but to pituitary insufficiency.

Case Report

B. K., a white female, aged forty-five, was admitted to the medical service of the senior author (S.L.) at the Beth-El Hospital on September 26, 1935. She had stopped menstruating in 1922 when she was only thirty-two years of age. There were no other symptoms until 1931. At that time she had an attack of influenza and pneumonia which required two weeks of bed rest for recovery. Since then the patient was never quite well. She complained of dyspnea on exertion, poor memory, anorexia, headaches, dizziness, and puffiness of the face, hands, and ankles. A few months later she developed diarrhea without blood or mucus in the stool. With diet and rest, the diarrhea improved but did not cease. For this complaint the patient was admitted to the Kings County Hospital in Brooklyn in 1933. After two weeks, she was discharged with only slight improvement. In the following months, the patient's diarrhea, dyspnea, weakness, poor memory, and anorexia became aggravated. Three months prior to admission to this hospital, the patient began to vomit one or more times daily. The vomiting was preceded by nausea and a sense of fullness in the throat; no pain was present. Blood was never seen in the vomitus. Two weeks later, the patient developed severe pain and weakness in the left lower extremity and shooting pains in her right lower extremity. She had lost about 25 pounds in the preceding six months.

Physical examination revealed a chronically ill woman. There was a pasty pallor with some cyanosis of the face. The skin of the upper part of the chest was dry and scaly. The hair was thick, wiry, and dry but not diminished. The teeth were in poor condition. The lungs appeared normal. The heart was small, the apical sounds distant. A rough systolic murmur was heard over the pulmonic area. The second pulmonic sound was accentuated. The abdomen felt doughy. No masses were felt, and the liver and spleen were not palpable. The uterus was small. There was no motor impairment of either extremity, but there was exquisite tenderness on pressure over the left lower extremity. The eyegrounds were normal.

During this hospital stay, her temperature was normal throughout. The pulse ranged from 72 to 95. The blood pressure was 100/62. Respirations were normal. The urine showed a specific gravity ranging from 1.006 to 1.010 but otherwise normal. The hemoglobin was 60 per cent. The red cell count was 3,310,000 and white cells 9,000 with normal differential. Blood chemistry showed the following: glucose on three occasions was 71, 77, and 74; urea nitrogen was 16, creatinine 1.4, cholesterol 196; total blood protein was 6.2 Gm.; albumin was 3.4, and globulin 2.8. A glucose tolerance test was done. One hour after ingestion of 100 Gm. of glucose, the blood sugar was 111; after two hours it was 80. The basal metabolic rate ranged from plus 8 to minus 42.

An electrocardiogram showed low QRS complexes and low T waves consistent with myxedema. An x-ray of the chest showed the heart to be of normal contour and of small size; the lungs showed a general prominence of the pulmonic markings, with a calcific shadow in the right midpulmonic field suggesting an old Ghon's node. X-rays of the lower extremities revealed cortical and periosteal thickening in the midportions of both fibulas. A barium enema showed no abnormality other than spasticity, especially of the decending colon and sigmoid. Gastric analysis revealed achlorhydria, even after histamine stimulation. The spinal fluid was clear and not under increased pressure but with 1 plus albumin and 2 plus globulin. Three cells were present. X-ray of the sella turcica showed it to be somewhat enlarged and deepened, but there was no bone necrosis. The findings were considered to be caused by an enlarged pituitary gland, probably nonmalignant.

The diarrhea cleared spontaneously. Treatment consisted of deep x-ray therapy to the pituitary gland; anterior pituitary extract, 1 cc. daily, reduced iron, dilute hydrochloric acid, and thyroid extract. With this treatment, the patient appeared to be improved. Her general appearance was better, and her memory became more normal. She was discharged on October 5, 1935. The following note was recorded: "Patient seems to present a form of Simmond's syndrome as evidenced by amenorrhea at the age of thirty-two, her general asthenia, anorexia, poor memory, and low basal metabolic rate. The diarrhea may well have been due to endocrine disturbance rather than to colitis, since there was at no time any blood or mucus in the stool. In addition to the pituitary involvement, other endocrine glands are most likely also involved—the ovaries and, particularly, the thyroid."

Second Admission.—The patient was readmitted on March 4, 1936. She had been on anterior pituitary therapy since her discharge from the hospital and had gained 25 pounds in weight. Six days before she had had acute laryngotracheitis, and on the day of admission she developed diarrhea, cramping pains in the abdomen, and vomiting.

She was in coma on arrival at the hospital. The pulse rate was 66 and blood pressure 98/60. Her face and body were edematous, the skin was coarse and dry, and the lips were cyanotic. The heart sounds were faint. The lungs were negative. The reflexes were normal. The urine was negative, and hemoglobin was 80 per cent. The red cell count was 3,110,000, white cells 7,900, with 69 polymorphonuclears and 31 lymphocytes. The blood sugar was normal, as were the chlorides, urea nitrogen, and cholesterol. The total protein was 7.5, albumin 2.3, and globulin 5.2. The temperature dropped to normal the next day. She responded to questions and was cooperative. The puffiness of the eyelids remained. Eight days later the basal metabolic rate was minus 25. Thyroid extract and pituitary extract were given. On March 19, 1936, fifteen days after admission, she was discharged much improved with instructions to continue her medication.

Third Admission.—The patient was readmitted to the medical service on August 25, 1937. She had been in fair health until the day before. Following the ingestion of some watermelon, the patient developed loose and frequent bowel movements. She felt cold the next morning. That night her temperature rose to 105 F.

She was in coma. The blood pressure was only 58/50, temperature 105.6 F., and pulse 100 and thready. The face was pale and puffy; heart sounds were distant.

Treatment consisted of 3 per cent saline, 15 cc. intravenously every four hours for six doses. In addition, she received one ampule of anterior pituitary extract daily and thyroid extract.

The next day, blood sugar was only 47, urea nitrogen 18.7, and cholesterol 133. Glucose was then administered intravenously, and she improved remarkably. The temperature dropped to normal in two days, and she became fully conscious.

On September 2, the basal metabolic rate was minus 33. Repeated basal determinations at weekly intervals showed an average of minus 36 and on one occasion was as low as minus 52. X-ray of the sella turcica at this time showed it to be only slightly enlarged with no evidence of bony destruction.

It is interesting to note that the patient's response to anterior pituitary extract at this time was not as favorable as it had been during and after her first admission. She had been treated with thyroid extract on several occasions but could not tolerate this medication. It was always followed by severe pain in both legs. "Thyroid is a poison to me," was a frequent remark. This statement was not fully appreciated by us at that time. A discharge diagnosis of hypopituitarism was retained with a comment that most of the other endocrine glands were also involved.

Fourth Admission.—The patient was rehospitalized on February 9, 1944, after a lapse of six years. During this period there were no acute episodes of illness, but her anorexia, easy fatiguability, feeling of coldness, and poor memory were the same as they had been. Her chief complaint on admission was diarrhea alternating with constipation and marked dyspnea on exertion.

She did not appear acutely ill. There was an absence of hair on the outer parts of both eyebrows, but otherwise there was no change in her appearance. Her speech was thick and slow. The temperature was 99.8 F., pulse 84, and blood pressure 128/70. The following day the temperature rose suddenly to 105.6 F. and pulse 104. The fever lasted for five days and then gradually dropped to normal. The hemoglobin was 11 Gm., red blood cells 4,000,000, and white blood cells 7,400, with a normal differential. The fasting blood sugar was 86, cholesterol 283 with ester of 180. X-ray revealed the heart to be proportionately small.

She was treated with intravenous glucose in normal saline, thyroid, and anterior pituitary extract. Sulfadiazine was given for the fever. She vomited occasionally. Only 2 grains of thyroid were given daily because of her intolerance to larger doses. It should be noted that with this dose of thyroid, together with the anterior pituitary extract, the basal metabolism had risen from minus 40 to minus 12. However, we were at this time still unable to offer a valid explanation of the cause of the patient's episodes of fever and coma. On March 4, 1944, she was discharged improved with a diagnosis of pituitary insufficiency with associated myxedema.

Fifth Admission.—The patient was readmitted May 30, 1944, complaining of weakness and dizziness.

She was pale, the eyelids were puffy, the hair was coarse and dry. Her speech was slow and thick. The pupils were contracted and did not react to light. Her tongue was dry and coated. The lungs showed an expiratory wheeze. The heart sounds were weak and distant. A systolic murmur was heard at the base. The blood pressure was only 60/42. The genitalia were small. The pubic hair was sparse, the axillary hair absent. The hands and feet were edematous.

On admission the temperature was 103.6 F., pulse 88, and respirations 24. The urine was normal. The examination of the blood revealed a moderate hypochromic anemia; the white cell count was 8,500 with normal differential.

Because of the possibility that acute adrenal insufficiency has been produced by thyroid therapy in a case of pituitary myxedema, as had been reported by Means and his associates, thyroid was discontinued.[1] Adrenal cortical extract, 10 cc. every four hours, and injections of anterior pituitary extract were given. Intravenous infusions of 10 per cent glucose in normal saline, Digifolin, and oxygen were also administered. In spite of this the patient lapsed into coma and died about fifteen hours later.

Autopsy Findings

The important observations on the gross examination were as follows:

The body was that of a moderately obese, white woman, weighing about 180 pounds. The hair was black, coarse, and streaked with gray. The skin over the entire body, but particularly over the extremities, was thin and translucent. While no pitting could be demonstrated in the legs, they appeared profusely edematous.

The brain was markedly edematous. The sella turcica was quite deep; *no gross pituitary tissue could be recognized;* the sella was filled with what appeared to be a soft blood clot in which a few fragments of grayish friable tissue were present.

The pleural cavities contained about 200 cc. of clear yellowish fluid; the pericardial sac contained about 100 cc. of a similar fluid. The lungs were extremely edematous and congested with numerous foci of bronchopneumonia. The heart was small, weighing 182 Gm. The myocardium was flabby and light brown in appearance.

The thyroid weighed 24 Gm. The surface was smooth. No thymic tissue was discerned.

The peritoneal cavity contained about 200 cc. of clear, straw-colored fluid. The panniculus measured about 4 cm., the fat was yellow and edematous. The liver weighed 1,162 Gm. The spleen weighed 177 Gm. The capsule was smooth and tense. The adrenals were extremely small and difficult to find in the surrounding fat but, when found and dissected, showed the normal convolutions, with capsules intact; the cortex was pasty gray in color and about 1 mm. in width; the medulla was intact and hairline in width. Together the adrenals weighed only 4.6 Gm. The kidneys weighed 213 Gm. and were normal.

The uterus was small and atrophic. The endometrium was pale, thin, smooth, and glistening. The myometrium was moderately fibrosed. The ovaries were small, firm, and scarred.

Microscopic Examination.—What seemed to be the pituitary gland was replaced by an old and also recent blood clot in which a few cells were seen suggestive of, but not sufficiently preserved to distinguish definitely, an oxyphilic and chromophobe character.

The heart muscle showed moderate muscle fiber hypertrophy and marked brown atrophy. The coronary vessels were sclerosed. The lungs showed widespread focal bronchopneumonia and marked edema and passive congestion of the alveoli. The liver showed marked passive congestion with moderate central lobular atrophy. The spleen showed marked congestion and reticulum cell hyperplasia of the pulp.

On section the thyroid showed a moderate degree of parvilobular hyperplasia. Colloid was not seen. The adrenals were extremely small; the cortex contained no lipoid material, and the medulla was intact. The uterus had an atrophic endometrium. The ovaries showed marked sclerosis and atrophy. The pancreas, gallbladder, and intestinal tract were histologically unaltered.

Comment

While it was obvious from the patient's appearance that she had myxedema, it was, nevertheless, believed that she suffered from a primary pituitary disease rather than from a primary thyroid disorder. We were led to this diagnosis by the presence of a number of findings which could not be explained solely by the absence of thyroxin but suggested rather a definite involvement of the pituitary gland as well.

We particularly call attention to the early amenorrhea at the age of thirty-two, together with a loss of libido and lack of menopausal symptoms such as flushes. Another reason for doubting the presence of purely thyroid myxedema was the fact that our patient could not tolerate the thyroid medication even in moderate dosage. The extremely low basal metabolic rate—at one time it dipped to minus 52—was associated with a normal blood cholesterol. Since myxedema of the thyroid variety is usually associated with a high cholesterol, we looked for an explanation for this discrepancy.

The attacks of nausea, vomiting, abdominal cramps, diarrhea, fever, and even coma could well have been caused by an acute adrenal insufficiency, produced, in part, by thyroid therapy. This latter observation has been noted by several investigators.[1–4] The hypotension and hypoglycemia which our patient showed during the bouts of acute illness were undoubtedly other manifestations of adrenocortical insufficiency in a patient suffering from anterior pituitary disease.

The genital atrophy with sparse pubic and axillary hair was an expression of gonadal insufficiency.

It will thus be seen that the differential diagnosis between pituitary myxedema and primary thyroid myxedema depends to a great extent upon the recognition of other endocrine disturbances coexisting with the hypothyroidism.

Unfortunately, the concept of pituitary myxedema, as described by several investigators in 1940, was unknown to us in 1935 when our patient first came under our observation.[1] In some cases of severe postpartum hemorrhage, Sheehan found necrosis of the pituitary gland.[5] In our patient there was no history of postpartum hemorrhage. The laboratory tests now in use for evaluating the status of the various endocrine glands which may be affected by disease of the anterior pituitary are as follows:

1. Glucose tolerance curve and, more particularly, the insulin tolerance curve which shows a more rapid drop than in normal people and a slower rate of recovery after insulin injection.
2. Excretion of 17-ketosteroids, which is absent in adrenocortical insufficiency of pituitary origin. It is, of course, also absent in primary adrenal insufficiency in women.
3. Follicle stimulating hormone test which, if negative past the menopause, suggests anterior pituitary disease.

Of the laboratory tests mentioned, only the glucose tolerance test was done by us. The result of this test, which showed a flat curve, is suggestive of pituitary disease.

The autopsy showed conclusively that our patient suffered from a disease of the pituitary gland. In fact, the contents of the sella turcica contained only remnants of pituitary tissue.

Summary and Conclusions

1. A case of myxedema of the pituitary type has been presented.
2. The diagnosis of this type depends upon the finding of other endocrine disturbances, in addition to the hypothyroidism as proved by clinical observation and laboratory tests. In our case a correct diagnosis was made on clinical grounds only.
3. The relation of onset of illness to sex factors such as menses, childbirth, libido, and menopause should be investigated.
4. All episodes suggesting adrenocortical insufficiency must be evaluated in terms of anterior pituitary diseases.
5. Thyroid extract, while needed for the treatment of the myxedema, must be given cautiously and with addition of salt to prevent the onset of adrenal crisis.

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SMALL BOWEL OBSTRUCTION DUE TO A PHYTOBEZOAR

Leonard K. Stalker, M.D., and Ivan J. Gotham, Jr., M.D., Rochester, New York

(*From the Department of Surgery, Highland Hospital*)

PHYTOBEZOAR, or "food ball," is an unusual cause of intestinal obstruction, of which an example is here presented.

Case Report

The patient, a man fifty-three years of age, was admitted to the hospital in March, 1949, complaining of nausea, vomiting, and severe abdominal cramplike pain of eighteen hours duration. He was an employe of a fruit canning company and had developed the habit of eating dried and fresh fruit while he worked. On the day of the onset of his present illness he recalls having eaten at least two oranges which had been cut into quarter sections. The skin was swallowed intact with the pulp. Some eight years ago he had had a subtotal gastric resection performed elsewhere for a bleeding duodenal ulcer. Following this operation, he had remained so well that it had not been necessary for him to consult a physician until the present illness. Approximately eighteen hours before his admission to the hospital, he was awakened at 3:00 A.M. with lower abdominal crampy pain. This was associated with nausea and vomiting. The pain was intermittent in nature but persistent. He vomited at least 24 times during this eighteen-hour period. The vomitus consisted mostly of mucus, bile, and whatever was taken by mouth. He passed no gas following the onset of the vomiting.

On examination at the time of his admission the patient was found to be dehydrated, and he complained of intermittent, crampy pains just below and to the left of the umbilicus. His temperature was 99.8 F., the pulse 120, and blood pressure was 150/106. The abdomen was moderately distended and tympanitic to percussion. No masses were felt. The bowel sounds were silent except for an occasional rushing which was coincident with the patient's pain. Rectal examination was negative. The results of the urinalysis were negative. A white blood count showed 14,400 leukocytes with 95 per cent polymorphonuclear cells per cu. mm. of blood. A roentgenogram of the abdomen revealed several loops of small intestine filled with gas. A diagnosis of small intestinal obstruction, probably secondary to his previous surgery, was made, and an operation was advised. Continuous Wangensteen type of suction was instituted, and the patient was hydrated with intravenous fluids as a preoperative measure.

Under cyclopropane, oxygen, curare anesthesia, a small primary mid-right rectus incision was made. There was a complete obstruction of the terminal ileum with dilatation of the proximal portion of the bowel to ten times normal size. This obstruction had taken place approximately 10 cm. from the ileocecal junction and wedged into this portion of the ileum was a semisoft mass which could not be moved either up or down the intestine. The mass was approximately 8 cm. in length and width. Exploration showed that a previous gastric resection had been done. At least 50 per cent of the stomach had been removed and an anterior gastrojejunostomy performed. The jejunum had been hooked up to the entire open end of the stomach, and the anastomosis easily admitted the tips of three fingers. There was no evidence of a gastrojejunal ulcer. Ten centimeters below this anastomosis was a well-functioning enteroanastomosis. There were no significant adhesions or other pathology present.

A rubber-covered clamp was placed on the ileum above and below the obstruction and a longitudinal incision made over the obstructing mass. This mass was removed in its entirety, and then the opening in the small intestine was closed in a transverse fashion. The closure was done in three layers using chromic catgut and interrupted fine silk sutures. The foreign body removed was a cohesive, semisolid, tumor mass. This was approximately 8 to 10 cm. in length and width. It was subsequently broken down in the laboratory and proved to be a phytobezoar which consisted of a number of irregular masses of orange pulp and skin (Fig. 1).

The patient made an entirely uneventful convalescence and was dismissed from the hospital on his fourteenth postoperative day. He remained well throughout the following several months.

Comment

It is highly probable that this phytobezoar would not have occurred had this patient had a normal stomach. Under ordinary circumstances it would not be reasonable for an individual to pass so much solid material through the pylorus, for it would probably be vomited up from the stomach. In this particular case the patient had a large gastroenterostomy secondary to his previous gastric resection. This made it possible for the large pieces of orange skin and pulp to pass on into the small intestine where they gradually became jelled together, and a phytobezoar which produced a complete obstruction of the terminal ileum was formed. Fortunately, this is a relatively infrequent occurrence, but it must be suspected as a possibility in intestinal obstruction.

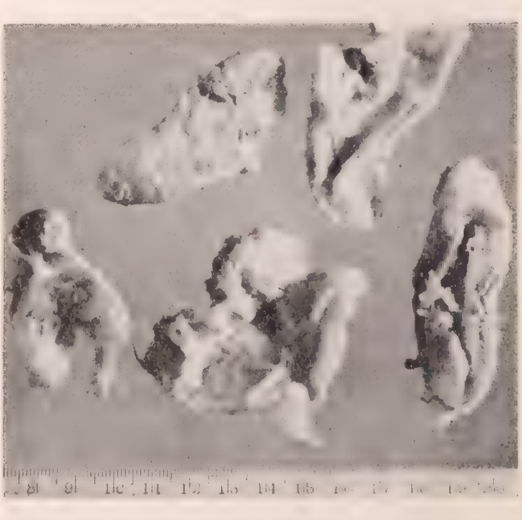

Fig. 1. Material comprising phytobezoar.

SUCCESSFUL MEDICAL TREATMENT OF OBSTRUCTIVE HYDROCEPHALUS IN TUBERCULOUS MENINGITIS

Joseph H. Lapin, M. D., New York City

(From the Pediatric Service of Bronx Hospital)

MANY clinicians have experienced the gratification of saving a considerable percentage of their cases of tuberculous meningitis by treatment with streptomycin with or without promizole, para-aminosalicylic acid, etc. One of the commonest causes of failure is the development of obstructive hydrocephalus which postmortem experience shows is usually due to formation at the base of the brain of a gelatinous fibrinous exudate.[1] Surgical efforts to relieve this obstruction have not been very successful.[1] Medical treatment has so far been limited to the intrathecal administration of heparin or streptokinase in conjunction with streptomycin.[2,3] Heparin given in 30-mg. doses intraspinally has the disadvantage of precipitating streptomycin, and, therefore, at least forty-eight hours must elapse between injections of these two drugs. It is difficult to form an opinion of its value.[1] Streptokinase or, properly speaking, streptofibrinokinase has a lytic effect on fibrin in vitro and has been employed in intraspinal therapy in England and in this country.[3] Like all intrathecal therapy, there are serious objections to its use.[4]

This writer has experimented with the medical treatment of hydrocephalus in tuberculous meningitis in three ways: first, by the use of hyaluronidase in the streptomycin mixture injected intrathecally; second, by injections of "depo-heparin" intramuscularly; and third, by the oral administration of Dicumarol. This article is a preliminary report on a patient with tuberculous meningitis in whom the development of obstructive hydrocephalus made the prognosis seem hopeless, who was refused surgical intervention, and who went on to seemingly complete recovery with streptomycin treatment combined with Dicumarol.

Case Report

A three-year-old boy, known to be tuberculin positive, was admitted to the Bronx Hospital with a history of eight days of abdominal pain and fever not responding to sulfonamide or penicillin. Chest x-ray and other laboratory work was negative, but a spinal tap on the third hospital day showed an increased cell count, mainly lymphocytes, protein of 100 mg., sugar 34 mg., chlorides 650 mg., and the direct smear and culture were negative. This was considered sufficiently diagnostic to institute the combined streptomycin and promizole treatment for tuberculous meningitis, in the dosage schedule recommended by Lincoln.[5] One week later, tubercle bacilli were cultured from his spinal fluid, and six weeks later, the guinea pigs inoculated with the first spinal fluid showed typical generalized tuberculous infection from which acid-fast organisms were recovered. A large number of diagnostic spinal taps showed the same elevated cell count (mainly lymphocytes), high protein, low sugar, and a gradual fall in chlorides. The clinical course was stormy with anorexia, semicoma, and fever spiking to 104 F. After three weeks of treatment with streptomycin intramuscularly and intrathecally and promizole orally, the temperature became practically normal, and the child seemed clinically much improved.

After two weeks more, however, profound muscular weakness, apathy, frequent vomiting, and subfebrile temperature made the diagnosis of obstructive hydrocephalus likely. At this point, an x-ray of the skull showed separation of the longitudinal coronal sutures, although eyegrounds examination was still normal. X-ray of the chest showed slight enlargement of the mediastinum to the right; a pinpoint density present in several films just over the right diaphragm with a few similar areas in the lower right root was interpreted as tuberculosis, minimal healing, first degree. At this period Lincoln, in consultation, felt that the picture was that of an acute obstructive hydrocephalus in the course of a well-treated tuberculous meningitis and that, since the child's mental condition was so clear, a surgical effort to relieve the obstruction was worth while.

On the forty-third hospital day, a neurosurgeon did a ventriculotomy. A small incision was made in the right parietal area, a burr hole made, and the dura incised. A ventricular needle was inserted into the right lateral ventricle (anterior horn), and clear spinal fluid escaped under pressure after which the cortex was seen to pulsate. Two cubic centimeters of neutral phenolsulfonphthalein were injected into the lateral ventricle, and the wound was closed in layers. The patient was then turned on his left side and a lumbar puncture performed, which revealed no gross phenolsulfonphthalein twenty minutes after the initial injection. Analysis showed only a trace in the cerebrospinal fluid five minutes and twenty-four hours later. The results of this dye test obviously showed a blockage of the cerebrospinal fluid system somewhere between the lateral ventricle and the lumbar area of the spinal canal.

On the forty-sixth hospital day, in order to determine the resorptive capacity of the subarachnoid space, 2 cc. of neutral phenolsulfonphthalein were injected into the spinal canal. A two-hour urine specimen was collected by catheter and the phenosulfonphthalein was determined as 1.7 mg., less than 15 per cent. If the saturation with phenolsulfonphthalein in the two-hour urine specimen is higher than 40 per cent, resorption of ventricular fluid liberated by ventriculostomy is possible. If the saturation is below 35 per cent, the resorptive capacity of the cerebrospinal membranes is obviously impaired, and the child will not be benefited by an artificial communication between the ventricular and subarachnoid system.[6]

Since no help could be expected neurosurgically, it was determined to try medical treatment. To repeat, it was theorized that the failure of streptomycin in some cases resulted from the blockage of the subarachnoid space at the base of the brain with a thick, gelatinous, fibrinous exudate and thick tuberculous granulation tissue.[7-11] A recent worker could find no convincing evidence that streptomycin increases the chance of this complication by stimulating the production of reparative tissue.[12] It was further theorized that if Dicumarol could prevent further deposition of fibrin in this exudate, natural fibrinolytic ferments could operate on the fibrin already deposited and perhaps both relieve the obstruction and allow the streptomycin to permeate completely.

For this reason, it was decided to give the child one dose of heparin and then Dicumarol in doses sufficient to bring the prothrombin bleeding time down to 20 per cent of normal. It was recognized that a low prothrombin concentration with a resulting lack of fibrin might result in a more extensive spread of infection, since fibrin deposition undoubtedly plays a part in the localization of some infections, but it was felt that mechanical obstruction of the cerebrospinal fluid system was the immediate danger in this case and the risk of spreading the infection had to be taken.[13] In addition, the ever-present danger of hemorrhage was recognized. A bloody spinal tap at one period, with xanthochromic fluid a few days later, resulted in the omission of treatment for several days.

Dicumarol was given orally in dosages of 25 to 200 mg. per day, starting on the seventieth day of illness, and was carried on for thirty-eight days, the dose being varied to keep the prothrombin time to 20 per cent of normal. Streptomycin, 0.5 Gm. every six hours, was given intramuscularly and promizole, 0.5 Gm. every six hours orally, and 50 mg. of intrathecal streptomycin were given daily for only fourteen days. There was a striking improvement in the clinical course, the temperature becoming normal, the appetite and strength better, and the somnolence disappearing.

Since the cessation of Dicumarol treatment, seventy days have passed to date (October 15); no hemorrhage or embolic phenomena have occurred, the child has no neurologic sequelae or evidences of streptomycin toxicity, and the temperature has now been normal for seventy-six days. The child walks and runs around the yard all day, eats fairly well, and has gained three pounds since his illness commenced. The spinal fluid has now been completely sterile for seventy-six days. Recent taps show 35 to 40 cells, 80 per cent lymphocytes, 52 to 59 mg. of sugar, protein 100 mg. or more, Pandy strongly positive, and gold curve 5, 5, 5, 2, 2, 1, 100. The spinal fluid is under no pressure with Queckenstedt test showing no block on either side. Recent x-rays of the skull fail to show the separation of the sutures demonstrated earlier in the course, the site of the burr hole is shrunken, and the neurosurgeon feels that evidence of relief of the obstructive hydrocephalus is so great that the risk of dye absorption tests or encephalography is no longer justified. Streptomycin has been stopped; if the protein falls within six weeks, no further treatment will be given, but if it remains high, more streptomycin will be given to avoid a relapse.

Comment

The use of Dicumarol is attended with one grave objection, the necessity for daily prothrombin determinations on venous blood. It may be that one of the micromethods for prothrombin determination will be developed so that only fingertip blood is necessary. Another possible alternative is the use of heparin, in the form of intramuscular injections of "depo-heparin" every forty-eight hours or so, which has the advantage that bleeding or coagulation times on capillary blood can be easily done daily to check on the possibility of hemorrhage.[14]

Another suggestion along a different mode of attack would be the use of hyaluronidase together with intrathecal streptomycin in the hope that this "spreading substance" would succeed in forcing streptomycin, rather than tuberculous infection, into previous y untapped areas of the meninges and brain. In vitro tests showed no precipitation when therapeutic doses of streptomycin (50 mg.) and hyaluronidase (150 turbidity reducing units) were mixed together in saline or glucose solution. However, the objection to using hyaluronidase or streptokinase intrathecally is the same well-recognized feeling that intrathecal medication must be avoided whenever possible.[4]

The author recognizes his temerity in presenting one case and admits that it is perfectly possible that the good result in this one case was completely fortuitous with no relationship to the Dicumarol therapy. He agrees with Cathie who says, "The development of hydrocephalus is no indication to stop treatment because spontaneous restitution and amazing improvement has been seen after hydrocephalus so marked that the presence of brain substance was highly doubtful."[1] However, the theoretic possibilities of medical treatment of the hydrocephalus occurring in the course of tuberculous meningitis are so poorly realized that this report was presented in the hope that work in this phase might be stimulated.

Summary

Dicumarol therapy was employed in a case of hydrocephalus complicating tuberculous meningitis, and a remarkable remission resulted. No claims are made, but it is hoped that other clinicians may establish the value or lack of value of this treatment in large, well-controlled series.

Addendum: After three months out of the Hospital, the child had a relapse and died within three weeks. The parents had refused follow-up examinations, and treatment was also delayed.

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GALLSTONE ILEUS

FRANK D. CONOLE, M.D., Binghamton, New York

(From the Binghamton City Hospital)

INTESTINAL obstruction in its various forms is frequently a surgical problem of great proportion. The surgeon of today can look upon this condition with better discernment because there has evolved an increased knowledge of the physiologic derangements so profoundly disturbed when obstruction occurs. The mortality rate, very high until more recent years, is now less than 10 per cent.

An impacted gallstone, usually lodging in the terminal ileum, accounts for 1.7 per cent of cases, almost 90 per cent of which will occur in the female.[1] The surgical mortality is very much higher (50 per cent) in this type of obstruction, principally because of delayed surgical intervention. The transit of the calcified mold of the gallbladder into the intestinal tract illustrates the resistive efforts set up by nature to expel a foreign body. One comes to realize that the so-called "silent gallstone" is a myth and that calculous cholecystitis calls for early surgical intervention. The enteric fistula is usually cholecystoduodenal. However, there can be a communication between the gallbladder and the stomach, jejunum, or colon. In most instances, the fistulous passage closes following the egress of the stone. Ascending cholangitis is reported to be a factor of definite import in the colonic type. The size and shape of the stone is important: the egg-shaped cast of the gallbladder is apt to be a solitary stone, while the faceted stone is more likely one of several.

This type of obstruction warrants early surgical intervention. Flat plates of the abdomen will reveal small bowel pattern, and in rare instances a calcified opaque body can be recognized. Rigler, Borman, and Noble stress the importance of barium in filling the biliary radicals.[2] The tentative preoperative diagnosis, due to the age of the patient, etc., is that of intra-abdominal malignancy.

As the stone passes along the small bowel, it comes to lodge in the narrowest portion, the terminal ileum. The mechanism of obstruction then develops; the site of lodgment may become gangrenous. Perforation and peritonitis, if allowed to develop, explain the high mortality incident to this condition. An early attack allows for simple incision of the bowel and removal of the stone. In the event of a gangrenous bowel, resection with anastomosis or some type of exteriorization is necessary. Localized abscess or peritonitis calls for exteriorization and some type of "air vent drain" with continuous suction. When simple incision and removal of the stone with bowel closure is possible, the gallbladder area should be palpated. Surgical removal at this time is seldom indicated, but it must be kept in mind that not infrequently, particularly in the faceted stone, other stones may be found in the gallbladder.

Case Report

The patient, a fifty-eight-year-old white female whose apparent age was more than her actual age, was admitted to the hospital on November 4, 1949, and discharged on November 21, 1949. The onset of the present illness occurred three days previously, at which time she first noticed gaseous distress and a feeling of abdominal fullness. These symptoms persisted for a period of forty-eight hours and were made more intolerable by the development of a dull, aching type of abdominal pain. She could not move her bowels, and enemas given at home were ineffectual.

Examination of the abdomen at this time revealed some abdominal distention and no palpable masses but a definite tenderness about the umbilicus without muscle guarding. Auscultation of the abdomen was not helpful because the peristaltic sounds were quiet and those detected seemed to be normal. Temperature, pulse, and respirations were not elevated. The symptoms of abdominal discomfort did not abate, and because of a feeling of nausea, a Miller-Abbott tube with continuous suction was introduced. The return fluid, at first bile colored, changed to fecal contents as the tube passed through the duodenum and jejunum.

In June of last year, six months previously, while a patient in the hospital, she had received digitalis and supportive therapy because of an enlarged liver due to cardiac decompensation. Some abdominal discomfort was complained of at that time, and a complete gastrointestinal x-ray series (barium enema included) was done. No organic lesion of any kind could be demonstrated. During the interim period, she was quite well and did not receive medical attention of any kind until the onset of the present bout of abdominal discomfort.

The fecal drainage, along with the persistent abdominal tenderness, indicated in part a surgical condition in the abdomen; a tentative diagnosis of intestinal obstruction due to malignancy was entertained, and it was decided to do a laparotomy.

A right paramedian incision, approximately 4 inches in length with the midportion at the level of the umbilicus, was made. The terminal ileum was found to be collapsed, and with this as a starting point, the area of obstruction was located at a site approximately 2 feet from the ileocecal valve. Within the lumen of the bowel there could be felt a hard stone measuring 4 by 3 by 2 cm. The bowel was incised transversely, and an egg-shaped, solitary type of stone representing a cast of the gallbladder was removed. The opening in the bowel was closed with a layer of continuous chromic catgut followed by a layer of fine interrupted chromic, and the abdominal wound was approximated in layers.

Convalescence was uneventful. The nasogastric tube, which replaced the Miller-Abbott tube, was removed on the third postoperative day.

Comment

If the mortality in this serious condition is to be lowered, a careful and adequate surgical regimen with a full measure of judgment will be required during the preoperative, operative, and postoperative periods.

76 Front Street

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THYROTOXICOSIS COMPLICATING PREGNANCY

Louis Eisenberg, M.D., Canisteo, New York

(*From the St. James Mercy Hospital, Hornell*)

THIS is the report of a case of thyrotoxicosis complicating pregnancy which was treated with propylthiouracil up to the time of delivery.

There are few such cases reported in the literature which is reviewed in the article by Mussey and his associates from the Mayo Clinic.[1] Although they found that most of the cases reported normal infants being born, there were, nevertheless, three cases with enlargement of the fetal thyroid gland. Eaton reported one patient treated with thiouracil during the last seven months of pregnancy and delivered of an infant with an enlargement of the thyroid that was soft.[2] It produced no ill effects and disappeared in three months. In another case, reported by Davis and Forbes, a woman taking thiouracil expired suddenly in the sixth month of pregnancy.[3] Postmortem examination of the fetus showed an enlarged thyroid gland having a histologic appearance similar to that found in adults with thyrotoxicosis. The third case, reported by Freiesleben and Kjerulf-Jensen, was a woman treated with methylthiouracil in which the fetus was removed in the fifth month of pregnancy because of complicating heart failure.[4] Examination revealed the fetal thyroid gland to be hyperplastic.

Bain is the only investigator to report a case of thyrotoxicosis during pregnancy further complicated by toxemia and heart failure and successfully treated with propylthiouracil.[5]

In their discussion, Freiesleben and Kjerulf-Jensen state that, on the basis of experiments on both animals and humans, the thiouracil derivatives, thyroxin, and the thyrotropic hormones can pass through the placental barrier to the fetus.[4] According to these same authors, the antithyroid drug has little effect on the fetus directly, "...but the influence of this substance on the fetus probably depends on the effective amount of thyroid hormone present whether originating from the fetus itself or from the mother. Accordingly, when a pregnant woman suffering from hyperthyroidism is treated with a thiouracil derivative there should, theoretically, be no chance of injuring the fetus with the thiouracil as long as the mother's metabolic rate is kept within normal values, but if the mother becomes afflicted with an artificial myxedema, the fetus will share the same fate. For that same reason, overdosage during pregnancy is detrimental to the fetus."

In general, it appears that pregnancy does not materially alter the course of the hyperthyroidism, and proper treatment of the hyperthyroidism allows the pregnancy to proceed normally; however, it should be mentioned that there is a great danger of toxemia and hypertensive cardiovascular disease complicating these pregnancies.

Case Report

F. V., a thirty-six-year-old white woman, gravida 11, Para 7, was first seen on July 18, 1949, complaining of extreme nervousness, palpitation of the heart, and diarrhea of approximately four hours duration. The patient was eight months pregnant, August 27 being the expected date of delivery.

Past history revealed that, except for measles and chickenpox during childhood, the patient had always been in good health. About twelve years ago, three weeks after the delivery of her third child, the patient first noticed an enlargement of the right side of her neck which had repeatedly been diagnosed as a goiter. It had never produced any discomfort and had remained the same size for years. The patient's weight had remained constant at about 140 pounds. She was not aware of any unusual breathlessness or nervousness in the past.

Obstetric history revealed that the first nine pregnancies were apparently uncomplicated (six of these being home deliveries). The last pregnancy, two years ago, terminated in the eighth month by a hemorrhage due to placenta previa; a stillborn was delivered.

Physical examination revealed a poorly nourished, apprehensive female who was perspiring profusely and obviously acutely ill. Blood pressure was 165/94; pulse 140; temperature 99 F. The face was flushed; pupils reacted equally to light and accommodation, and no exophthalmos or other pathologic eye signs were found. Attached to the right lobe of the thyroid gland was a smooth, regular, and nontender mass the size of a small lemon. It was somewhat cystic in its superior aspect with a rather firmer consistency to its broad base. The heart did not appear to be enlarged; the sounds were regular and of good quality; no murmurs or thrills were noted. The patient's abdomen was enlarged and approximately the size of an eight-month pregnancy; fetal heart sounds were of good quality. There was a rapid, fine tremor of the hands.

The preliminary diagnosis was a pregnancy in the eighth month complicated by a toxic thyroid adenoma. Immediate hospitalization was advised. Laboratory findings on admission were: red blood cells, 4,000,000; hemoglobin 10 Gm.; white blood cells, 6,850 with 82 per cent polymorphonuclears, 14 per cent lymphocytes, and 4 per cent monocytes. The urine was negative for albumin and 2 plus for sugar, and the centrifuged sediment contained 10 to 15 white blood cells per high power field. Blood sugar was 100 mg. per cent. The basal metabolic rate was plus 87. An x-ray of the chest showed some generalized increase in pulmonary markings and a 12 per cent increase in heart size for the patient's height and weight. The patient was placed on Lugol's solution, 10 drops three times a day, and propylthiouracil, 100 mg. twice a day. On July 27, nine days after admission, the basal metabolic rate was plus 62; on August 3 it was plus 60. Blood pressure dropped to 140/82; pulse varied between 90 and 110. Clinically, the patient appeared to be improving but continued to show marked intolerance to heat. Following the recommendation of Bartels, the propylthiouracil was increased to 300 mg. per day, and the Lugol's solution was discontinued.[6] On August 10, the basal metabolic rate was plus 63. An interesting finding during this period was the diurnal fluctuation in the pulse rate: at approximately 8:00 P.M. a sharp rise would be noted; in the morning the pulse rate returned to its low level. Ravdin and his associates have called attention to the importance of achieving diurnal uniformity in the pulse rate before attempting thyroid surgery.[7]

At 6:00 A.M. on August 13, the patient went into labor spontaneously with the passage of some amniotic fluid and the occurrence of a few irregular labor pains. The uncomplicated delivery of a male child weighing 7 pounds took place at 1:00 A.M. on August 14. The infant cried immediately and had good color. It appeared perfectly normal except for bilateral undescended testicles.

The patient's postpartum course was uneventful except for the flattening of the pulse curve after delivery. On August 23, the basal metabolic rate was plus 40. The propylthiouracil was continued in the dosage of 300 mg. per day, and on the seventeenth postpartum day (August 31) the patient was discharged with instructions to continue taking the medication at home.

A repeat basal metabolic rate taken on October 5 was minus 1. The propylthiouracil was discontinued, and Lugol's solution, 10 drops three times a day, was started. An enucleation of the thyroid adenoma was performed on October 12 under cyclopropane anesthesia. A second adenoma, found beneath the inferior pole of the right lobe, was also removed. The postoperative course was uneventful; the patient was allowed out of bed on the second day and discharged on the sixth day in good condition.

The newborn infant, when examined seven weeks after delivery, was found to be normal in all respects. The testicles had both descended, and there was no visible or palpable thyroid enlargement.

Summary

A case history is presented of a woman with a thyroid adenoma of twelve years duration which became toxic during a pregnancy. She was treated with propylthiouracil for one month and delivered a normal infant at term. A rapid subsidence of the clinical signs of hyperthyroidism and the basal metabolic rate took place after delivery.

22 Greenwood Street

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IN ENGLAND NOW

He was a little Cockney of thirty-two, looking as if he had all the cares of the world on his shoulders and seldom got a night's sleep. He surveyed sister, the x-ray tube, the shining array of syringes and bottles and nozzles, and especially me, with a silent glowering mistrust. I explained that a bronchogram was quite painless; he would feel nothing but a tickle in the back of his throat. He was mollified enough by this to take his dessicaine lozenge, but after sucking it for a minute his mistrust returned and he grimaced fearfully as he croaked: "It's freezing me froat, guv'nor, an' I can't talk proper." I tried more reassurance, and suddenly his expression changed. A smile crossed his face like a patch of sunlight on the hillside on a cloudy April day, and in a hoarse but urgent whisper he asked: "Got a few o' them tablets to spare?" "What on earth. . .?" I began, but he went on wistfully: "If I could 'ave a few for me muvva-in-law, doctor . . ."—*The Lancet, April 15, 1950*

TETANUS RESULTING FROM A FOREIGN BODY IN THE NOSE

Matthew Linker, M.D., Ira M. Rosenthal, M.D., and Joseph Golomb, M.D., New York City

(From the Pediatric Service of Fordham Hospital)

TETANUS occasionally develops without a characteristic wound history. In some cases the avenue of infection is never determined; in others, unusual sites of entry of infection are discovered. Holt and McIntosh refer to a case in which a splinter in the nose led to tetanus.[1] We have been unable to find in the literature another case of tetanus induced by a foreign body in the nose. The case here reported developed secondary to the presence of a paper matchstick.

Case Report

A seventeen-month-old Negro male child was admitted to Fordham Hospital on August 12, 1948. Five days before admission, he began to have difficulty in swallowing and refused food. He developed a purulent nasal discharge and was seen on August 11 by a physician who prescribed sulfadiazine and nose drops. Three hours prior to admission, while his mother was attempting to force him to take his medication by holding his nose, the child suddenly stopped breathing and became unconscious. He began to breathe again spontaneously and was brought to Fordham Hospital and admitted.

There was no history of previous illnesses, and there had been no immunizations.

Admission examination revealed a well-developed infant in acute distress with noisy and irregular respiration. His temperature was 100 F. It was not possible to examine his mouth and throat because of trismus. There was a profuse purulent discharge from both nostrils. Examination of the chest revealed many coarse rhonchi over both lung fields. Tachycardia was noted. The abdomen and extremities were normal. The neck was supple; Kernig and Brudzinski signs were negative, and the deep reflexes were equal and active. No evidence of a wound was found on the body.

The patient's nose was aspirated. Following this he appeared more comfortable and was able to sit up and drink from a bottle. The purulent material obtained from nasal aspiration was sent to the laboratory for culture. Chest roentgenogram and roentgenograms of the neck and pharynx were negative. Initial blood was 9,000 white blood cells, 83 per cent neutrophils, 15 per cent lymphocytes, and 2 per cent monocytes. Hemoglobin was 10.0 Gm. Urinalysis was negative. Aqueous penicillin, 100,000 units every three hours intramuscularly, was begun. Another attempt to examine the child's mouth was unsuccessful.

After a fairly comfortable night, the child was noted to be slightly dyspneic the next morning. Much mucopurulent material was aspirated from both nostrils. Finally, a paper matchstick was aspirated from the right nostril. A diagnosis of acute purulent nasopharyngitis secondary to the foreign body was made. The matchstick was cultured aerobically and anaerobically. It was still not possible to examine the child's mouth or throat. Because Escherichia coli as well as Staphylococcus aureus was reported recovered from the culture of the nasal discharge made on the previous day, the child was placed on 0.125 Gm. of streptomycin every three hours in addition to penicillin.

Late that morning an attempt was made to examine the child's mouth using force. During the attempted examination, the child stopped breathing and became unconscious and cyanotic. Artificial respiration and oxygen quickly restored the patient to consciousness. The child again appeared comfortable. No further attempt was made to examine his mouth.

At 5:30 P.M. the child spontaneously developed tetanic convulsions. His body became stiff, and his legs and arms were extended with fists clenched. His head was retracted, and his body was opisthotonic. Risus sardonicus was noted. He soon experienced difficulty in breathing, then stopped breathing, and became cyanotic. He was maintained by means of artificial respiration. This period of apnea was succeeded by alternating periods of hyperpnea and apnea which continued for about a half hour and were followed by more tetanic seizures. Phenobarbital was given intravenously and intramuscularly, calcium gluconate intravenously, and magnesium sulfate intramuscularly. Tetanic convulsions continued for over two hours and gradually subsided. At 9:00 P.M. the child regained consciousness and then sank into a deep sleep. A diagnosis of tetanus was considered likely because of the typical tetanic convulsions and trismus. Because there was no typical wound history, the development of tetanus secondary to the nasopharyngeal infection resulting from the matchstick was thought possible. This diagnosis was confirmed later when Clostridium tetani was recovered from the culture of the matchstick.

Forty thousand units of tetanus antitoxin were injected intramuscularly with no untoward reaction. Fluids were taken well by mouth. During the night the patient's temperature rose to 104.8 F. and remained that high until 6:00 A.M. the following morning, August 14. It then slowly declined to 101 F. at 2:00 P.M. Throughout the day the child was heavily sedated with barbiturates, magnesium sulfate, and paraldehyde. There were no convulsions. The nasal discharge diminished considerably. Forty thousand units of tetanus antitoxin were again given intramuscularly with no untoward reaction.

On August 15 the child appeared weaker. Since his intake of fluid was no longer satisfactory, a clysis was given. Sedation was continued, and another 25,000 units of tetanus antitoxin were injected intramuscularly. On August 16 the child has several short tetanic convulsions and gradually became weaker. Toward midnight his temperature rose to 107 F. He expired at 2:00 A.M. on August 17. Postmortem examination was not permitted.

Comment

This case illustrates the possibility of developing tetanus from a contaminated foreign body in the nasal passages. It also demonstrates the necessity of seriously considering tetanus when symptoms are suggestive, despite the absence of a characteristic wound.[2] The importance of routine immunization of children against tetanus is evident. It is possible that, with earlier diagnosis, tracheotomy or the use of tribromethanol, curare, or mephenesin might have contributed to a more satisfactory result in this case.[3-5]

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LEUKEMIA OCCURRING IN MAN AND WIFE

Walter W. Street, M.D., F.A.C.P., and Ellery G. Allen, M.D., F.A.C.P.,
Syracuse, New York

(*From the Memorial Hospital*)

ALTHOUGH leukemia is a rare disease, still rarer reports of its familial or congenital incidence have occasionally been recorded. Morrison and Kelsey have recorded instances of congenital leukemia, and Curschmann, Kracke, and Vaughan have cited instances of its familial occurrence.[1-5] As far as we know, no previous report has been published describing the disease in man and wife. In the cases reported below, the husband had been under treatment for several years for chronic myeloid leukemia, when the wife developed acute leukemia and died.

Case Reports

Mr. C. T., age sixty-three, a Greek importer, was first examined on November 7, 1946. His complaints were weakness, dizziness, and loss of weight of six months duration. His previous history included an attack of afebrile jaundice lasting two months in 1943.

Physical examination showed the following abnormalities: The right ear drum was perforated. A small lymph node, freely movable and nontender, was palpable in the right axillary space. The liver and spleen were palpable two or three fingerbreadths below the costal margin on inspiration. The prostate was moderately enlarged, and external hemorrhoids were noted.

Examination of the blood showed hemoglobin 12.1 Gm.; erythrocytes, 6,500,000; leukocytes, 97,850; differential white count—polymorphonuclears 56, lymphocytes 4, monocytes 4, eosinophils 4, basophils 11, myelocytes 11, and myeloblasts 10. An occasional normoblast was seen. The platelets were not reduced; the erythrocytes exhibited hypochromia and some polychromasia; occasional stippled cells were present. Sixty-four per cent of the polymorphonuclear leukocytes were nonfilamented.

The patient had been treated with spray radiation, oral urethane, iron, and transfusions. He was still fairly well, active, and engaged in business. His leukocyte level fluctuated between 18,750 (lowest) and 310,000 (highest). On February 14, 1949, the hemoglobin was 10.8 Gm., red blood cells 5,040,000, and the leukocytes 101,600. Figure 1 is a photomicrograph of the husband's blood smear.

Mrs. C. T., a Greek woman, age fifty-five, wife of Mr. C. T., was examined in the Memorial Hospital on October 8, 1948. The following history was obtained: one week prior to admission she had noted a painful swelling of the right side of the neck. The following day the throat became very sore, and a physician gave an injection of penicillin. Three days later, she began to experience nausea, vomiting, and was unable to retain food or fluid. Her previous history was relatively unimportant, although she had been operated for acute appendicitis at the age of nineteen, followed by drainage of an abdominal abscess.

Physical examination showed a very ill woman, complaining of nausea and frequent retching. The temperature was 102 F., pulse 88, respiration 20,

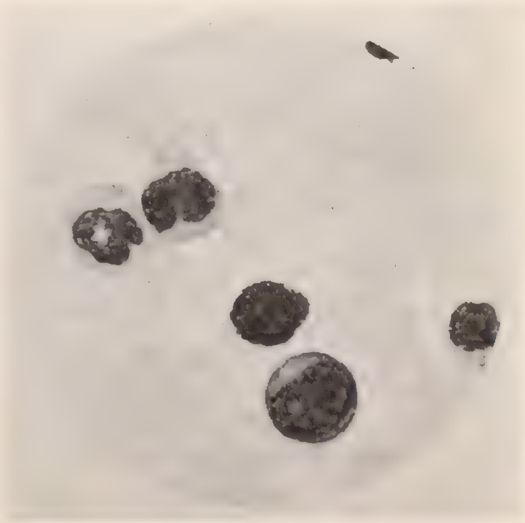

Fig. 1. Photomicrograph of husband's blood smear. (1200 ×)

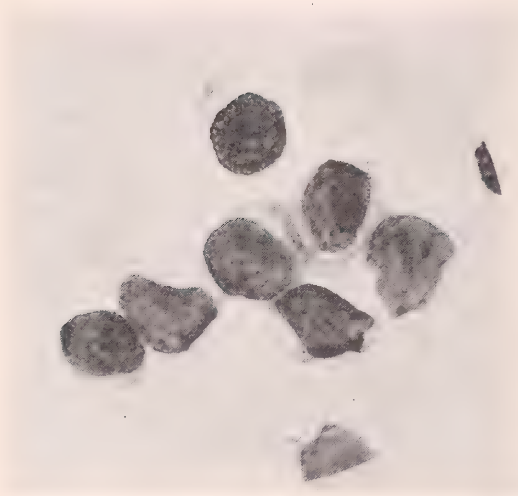

FIG. 2. Photomicrograph of wife's blood smear showing extremely immature leukocytes. (1200 ×)

blood pressure 120/80. Several palpable, nontender cervical glands were noted in the posterior triangles. The skin and mucous membranes were very dry, and there was questionable tenderness in the right costovertebral angle.

Examination of the blood showed the following: red blood cells, 3,400,000; hemoglobin 11.5 Gm.; white cells 215,000. Nearly all of the leukocytes were extremely immature (Fig. 2). The platelets appeared to be reduced. The patient failed to respond to any type of therapy and expired on October 12, 1948, six days after admission to the hospital.

Comment

It was our impression that the wife was suffering with the acute type of monocytic leukemia. We interpreted the leukocytes as being principally young monocytes, but a fair number of monoblasts appeared to be present. Dameshek, who kindly reviewed the blood smears, was of the opinion that this woman had subacute leukemia and stated that "the blood is filled with primitive cells which are hard to define as between myeloblasts, lymphoblasts, and monoblasts."[6]

Summary

Leukemia occurring in husband and wife is reported. The husband was found to have chronic myeloid leukemia and had survived several years. The wife succumbed to acute leukemia, the exact cell type undetermined. As far as could be learned, there was no familial relationship between husband and wife. It is believed this is the first recorded instance in which leukemia is known to have occurred in a husband and wife.

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"DOCTOR JONES" SAYS—

"Keep your shirt on!"—that's advice a doctor has to give a male patient now and then. But there's times when taking a shirt off is a remedial measure, according to one of my medical journals. This was another of those "Queries and Minor Notes" items.

A New York doctor wrote in and said he had a patient, a middle-aged man, who every time he put on a new white dress shirt, developed an urticarial eruption. It started on his trunk and spread to his face. "Urticarial"—that's like you get with hives or nettle rash; raised spots that appear more or less suddenly and itch. He had trouble, in fact, until the shirts had been through the laundry several times. The doctor wanted to know if there might be something in new shirts that could cause such skin reactions.

The answer, it seems, is "Yes." Most new fabrics that're used for wearing apparel, the experts say, have "finish" on 'em that's designed to make 'em look and wear better, prevent runs and so on. These finishes usually contain a synthetic resin, and sensitivity to resins is, as they put it, "not uncommon."

Resins? Well, you know what pine resin is (it's usually spelled "rosin"). They're chemical substances of the same class; won't dissolve in water but will in alcohol and what not. They're from various plants and trees. The synthetic ones—of course they're made artificially. A synthetic resin in wearing apparel, they say, was responsible for an outbreak of skin trouble that was reported in 1940. The dress shirts, they figure, may have more of such stuff in 'em than the "everyday" shirts.

How to avoid the trouble—well, most of us apparently aren't allergic to the resins. Maybe we haven't bought enough shirts to get sensitized. But those that are and still have to wear new shirts: unless they can find a resin-free brand or get 'emselves desensitized, they'd better have 'em laundered a few times before they put 'em on. The laundrymen probably won't mind.—*Paul B. Brooks, M.D., April 17, 1950*

PULMONARY MONILIASIS ASSOCIATED WITH CARCINOMA OF THE LUNG

Milton M. Greenberg, M.D., and Jacob Plotkin, M.D. Brooklyn, New York

(From the Kings County Hospital)

MONILIASIS of the lung associated with carcinoma of the lung and the simultaneous isolation of Monilia albicans in the pleural effusion and in the mouth is infrequent. A search of the literature fails to reveal any recent reports of this combination of findings. One of the most recent reports of bronchopulmonary moniliasis is that of Robertson.[1] However, in that report no mention is made of pleural effusion being infected with monilia.

A study of medical textbooks reveals references to the isolation of Candida albicans (yeastlike organisms) from the skin and nails, mouth, intestinal tract, and the vagina of normal individuals. The organism has also been found in certain cases of endocarditis, meningitis, systemic infections, and in lung disease. However, it has not been noted in the pleural cavity. It is for this reason that we are presenting the following case.

Case Report

A. B., a fifty-one-year-old white female of Jewish ancestry, was first observed at Kings County Hospital in the Outpatient Department. At that time her chief complaint was hypertension. Six months earlier she had sustained a right-sided hemiplegia. When seen in the Outpatient Department she was already recovering most of the function of her right side. With the institution of intensive physiotherapy the return of function was practically complete. Only a very few stigmata of paresis remained. The blood pressure at that time was recorded as averaging 140/80.

She was again seen in the Outpatient Department six months later in December, 1940. At this time she was treated for diffuse back pains, obesity, and varicose veins. She was observed intermittently from this time until September, 1948. In April, 1943, radiographic examination of her chest was made. This revealed "a moderate increase in transverse diameter of the heart with elongation and torsion of the aortic arch" (Report of radiologist). There was no evidence of recent pulmonary or pleural infiltration at this time. Early in 1947, pains appeared in the right shoulder. Physiotherapy was at first effective against these pains but was subsequently ineffective. A repeat radiographic study was made of the chest in September, 1948. It was at this time that lung parenchymal changes were noted for the first time. This x-ray study revealed a segmental area of atelectasis in the region of the right upper lobe. At this time also a mild productive cough appeared. Hemoptysis had not been noted at any time. The cough and pain in the right shoulder were persistent. The patient stated that when she coughed there was some pain in the lateral portions of the chest on the right.

Because of the increasing complaints and symptoms, she was admitted to the inpatient medical service on October 7, 1948. On admission she showed 1 to 2 plus pitting edema of the dependent parts and was believed to be in mild congestive failure. She was placed on a cardiac regimen and improved so that she could be discharged in ten days. It was during this hospital stay that a presumptive diagnosis of adenocarcinoma of the bronchus was made. Bronchoscopic examination was carried out on October 13, 1948. All the bronchial apertures were explored. A mass was noted in the right main bronchus, and there was thickening of the mucous membranes throughout this area. Bronchial secretions were negative for malignant cells at this time. The chest x-ray showed an extension of the process previously observed. There was now moderate elevation of the right diaphragmatic leaf, and all the superior mediastinal structures including the trachea were retracted to the right. An infiltration was noted, extending from the right hilar region to the periphery of the upper lung field. "These findings are consistent with atelectasis in this region." X-ray taken three days later revealed an increasing opacity in the right upper lobe region and was interpreted as increasing atelectasis. The thoracic surgical service was called in consultation. Their opinion was that operative intervention was contraindicated due to decreased vital capacity and dyspnea of the patient.

Blood chemistry and peripheral blood studies were within normal limits. Repeated sputum studies were made for acid-fast organisms. These were persistently negative. However, the sputum did reveal the presence of Staphylococcus aureus and yeastlike cells on culture. There was a low-grade pyrexia for the first few days of this admission. She showed considerable improvement on bed rest, and when the dyspnea decreased, she was discharged.

The patient was readmitted about three weeks later complaining of increasing right shoulder pains, dizziness, and cough. The cough was now paroxysmal, distressing, and nonproductive. There had been several small hemoptyses immediately preceding this admission. Her weight had gone down in two months from 202 pounds to 184 pounds. Physical examination at this time revealed a friction rub over the right lung posteriorly, dullness, and diminished breathing at the right base. The x-ray now revealed an almost complete homogeneous density over the right lung field. The trachea was deviated markedly to the right. Repeated thoracenteses were necessary in order to relieve the dyspnea. The fluid was always cloudy and blood-tinged, In all, five thoracenteses were done between November 16 and December 23. Examination of the fluid revealed M. albicans and numerous malignant epithelial cells. Cultures of the pleural fluid revealed the same fungus forms that were cultured from the sputum. The patient received 30 drops of a saturated solution of potassium iodide three times a day. In addition, she was given 4,000 roentgen units of radiation over the right upper lobe between November 3, 1948, and January 7, 1949. On this regimen the dyspnea and pleural effusion disappeared, and there was marked subjective improvement. No evidence of metastatic involvement other than that of the pleura could be demonstrated. Although a small amount of pleural effusion remained on the right, there was a definite decrease in the right upper lobe infiltration following radiation therapy.

On May 3, 1949, the patient was transferred for custodial care.

Comment

This case was observed from December, 1940, to May, 1949. She first began to complain of right chest pain and right shoulder pain in April, 1947. At that time a diagnosis of primary carcinoma of the lung with right pleural effusion was made.

Thoracentesis revealed a combination of tumor cells and moniliasis.

The patient was treated with potassium iodide for the fungus infection and received radiation therapy for the carcinoma. She showed some clinical improvement and was transferred for custodial care.

Summary

A case of pulmonary moniliasis associated with carcinoma of the lung with pleural effusion revealing moniliasis is reported. A search of the medical literature does not reveal a similar case with involvement of the pleural cavity.

4910 Fifteenth Avenue
1160 Union Street

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SYNTHESIS OF ACTIVE PORTION OF ACTH

Recent research should make possible the eventual synthesis of an "active fragment" of ACTH for relief from symptoms of rheumatoid arthritis. Synthesis of ACTH in the laboratory has been considered to be of insurmountable difficulty, owing to the weight of the molecule and the fact that it is protein in nature. Choh Hao Li of the Institute of Experimental Biology, University of California, Berkeley, and Norman G. Brink, Melvin A. P. Meisinger, and Karl Folkers of the Research Laboratories of Merck and Company, Rahway, New Jersey, have participated in this work.

With the activity of ACTH being confined to a relatively small molecular weight compound, it should be possible eventually to synthesize this active fragment in the laboratory. This, in turn, would free the amount of the drug which could be produced from the pituitary glands available.

In further processing of the fragmentary product, the Rahway chemists found it to contain at least seven common amino acids, compounds which serve as building blocks for the body.

The natural supply of ACTH from pituitary glands of hogs definitely is limited by the source and, as the situation now stands, could never approach the demand. Armour and Company estimated that some 70,000,000 hogs will be processed commercially between November 1, 1949, and November 1, 1950. If every pituitary could be saved, which is impossible, and if one milligram of ACTH, which is high, could be extracted from each gland, there would be obtained a theoretic amount which would give only one dose each per year to less than half the persons with arthritis in the nation. At present, the supply of ACTH still is inadequate to meet all the research requirements of groups desiring to study the hormone.—*Editorial, J.A.M.A., April 29, 1950*

SUPERVISION AND CONTROL OF BOXING

The Joint Committee on Health Problems in Education of the National Education Association and the American Medical Association has passed a resolution disapproving boxing as an interschool activity. The Committee based its action primarily on the premise that boxing is one of the few sports in which the offensive goal is to strike the opponent and in which the head is a principal target.

There is a resultant potential of permanent injury to the central nervous system, particularly the brain, that may eventuate in a loss of mental power and physical coordination. Realizing that boxing would be continued, the Committee also outlined exacting health and safety precautions that should be taken when the activity is conducted. It was the feeling of the Committee, however, that few schools are in a position to provide the essential equipment and facilities, the trained teaching personnel, and the careful medical supervision needed to assure optimum conditions of safety for participants.

Professional boxing and amateur boxing conducted outside the school, under a variety of sponsorships, are somewhat different. The contestant is usually more mature and chooses to participate "on his own" and without the stimulus furnished by the sanction and implied approval of an educational institution. No amount of regulation can completely remove the hazards of the activity, but every effort must be made to provide the safest possible competitive conditions. The New York State Boxing Commission, through its Medical Advisory Board, recently set up a strict code for medical supervision of boxers and wrestlers participating under its jurisdiction.

Recent ring deaths, usually following brain injury, have spurred regulatory bodies to careful scrutiny of boxing codes in various states.—*Editorial, J.A.M.A., April 22, 1950*

Special Article

RESPONSIBILITY OF HOSPITALS TO DOCTORS IN THE COMMUNITY

Norman S. Moore, M.D., Ithaca, New York

(From the Department of Clinical Medicine and the School of Nutrition, Cornell University)

IN THESE times of tensions, the inevitable result of two world wars plus the impact of two emerging world ideologies, we must all share in the defense of our democratic culture against the inroads of trends which may threaten our social order. This is the time when institutions must mobilize their strength, review and correct such weaknesses as have crept into their thinking, weaknesses which could act as corrosive material on the strong structural framework of our democratic society. One of the most essential institutions in any community is the general hospital. The prestige which the hospital gained during its evolution has made it a symbol of strength. The entire community is now dependent upon its services. More and more citizens have insight into the fact that the general hospital is something more than a hedge against community disaster. It is now recognized as the center of community medical knowledge—the wheelhorse always ready to start treading, day or night, when a sick or injured person comes to its doors. In addition to medical and nursing services, the general hospital has become more and more the center of medical education. It accepted the responsibility for nurse training nearly a hundred years ago. At a later time in the nineteenth century it accepted its role in medical education. And now, although few people realize it, the medical profession has become deeply dependent on the hospital for its day-to-day educational stimulus—one of the profession's important defenses against deterioration. Therefore, the general hospital today faces greater responsibility for maintaining the quality of medical care in the community than it formerly did, while we of the medical family must guard against any practice which threatens the high standard of medical care now current in this country.

The community hospital as it exists today has evolved because it had freedom to adjust to current medical trends. Early in its evolution the custodial and nursing care overshadowed its medical advantages. As the medical profession met the challenge of the mid-nineteenth century, demanded the closing of proprietary schools, consolidated its scientific position, and launched programs of research, the community hospital was free to mold itself to fit the needs of the changing times. A large number of the hospitals built during this period were designed for surgery. The discovery that appendicitis, viscus perforations, extrauterine pregnancies, etc., could be successfully treated as the result of the work of Pasteur and Lister, coupled with public acceptance of surgery following the discovery of anesthesia, made the latter part of the nineteenth century possibly one of the greatest eras for benefit to mankind that the world had yet seen.

In the twentieth century, medicine has traveled fast, especially following the research era of World War I. The impetus to medicine that came from the discoveries of insulin and liver extract changed the whole complexion of the general hospital. Where, formerly, patients with diabetes and pernicious anemia came to the hospital with little hope of improvement, they soon learned that the hospital was their haven. Other patients were saved by specific sera for pneumonia; later others survived infections formerly fatal because of treatment with sulfonamides and antibiotics. People saw medical as well as surgical advantages in hospital treatment and quickly accepted it. As they felt the pinch of bed shortage, surgeons began to complain that "their hospitals" were being encroached upon by medical patients. A host of diagnostic procedures leading to earlier diagnosis and treatment has made the public aware that both medicine and hospitals have much to offer. Surgery, too, has kept its place in the race. Research between the wars, coupled with advances in medicine, provided opportunity to develop surgery in fields formerly thought impenetrable to surgical methods, as, for example, neurosurgery, thoracic surgery, and delicate operations on the gastrointestinal tract made possible by the understanding of the relationship of good nutrition to better surgical prognosis.

We thus find general hospitals in the modern setting as great institutions of service requiring background skills in engineering, hotel operation, food service, economics, fund raising, accounting, and administration, in addition to an understanding of the needs of physicians and their patients. Whether supported by taxation or by funds from voluntary sources, their responsibility is the same.

Today the general hospital is the center of medical activity. Its freedom in the past has been justified by its willingness and ability to care for the sick of the community. In recent years, the general hospital has picked up some important dependents—the medical practitioners of the community, persons destined to play a part in the preservation of the American way of life. Appropriate provision for these dependents is more difficult now than ten years ago; it will be even more difficult ten years hence. While hospital affiliation has always been a sine qua non for the surgeon, it is important for the physician as well, for he also needs to walk in the regular medical channels to keep his skills from deteriorating. A high percentage of physicians in

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large cities have no hospital appointments. Thus, a large number of physicians are threatened with deterioration. Their defense against retrogression is not great. They tend to develop the ills all professional persons acquire when isolated from their educational experience. They read less and less and thus lose the habit of study, learned through hard toil in medical school. They attend fewer and fewer meetings. They are apt to rely more and more on the drug salesman. They may give a disproportionate amount of their time to nonprofessional activities; those who become proficient in these activities often become so at the expense of their medical skills. They tend to practice rule-of-thumb medicine. Much of this happens to those who succumb to the evils of isolation. How many actually do succumb is not known; however, the advantage is on the devil's side, and it is a good bet that many do. Those who fail to keep step with a fast-moving medical parade are practicing medicine on the people who cannot discriminate between those who do and do not know.

What is the answer to this apparently deliberate contribution to stagnation of a segment of the American people? Ginzberg has recognized the problem.[1] In his report he says, "The voluntary hospital conventionally restricts the use of its facilities to selected doctors of the community by means of the closed staff. This approach has been based in part on the fact that graduates of many medical schools, particularly in former decades, received training inferior to those who graduated from the best Class A schools. In addition to the resulting differences in qualifications, there were marked differences in the ethical standards maintained by practitioners and specialists. Many hospitals, desirous of protecting their patients from the incompetent and unscrupulous doctor, adopted the principle of the closed staff." He continues, "The gross inequalities in medical education which existed twenty and thirty years ago have been largely eliminated. Today, there are only Class A medical schools. Thus, one major justification for the closed staff has been greatly weakened, although not eliminated. The inability of competent doctors to secure a staff appointment has more serious implications today than in the past. The advances in medicine have made it essential for a doctor who desires to remain proficient in his work to be in close contact with new developments in theory and practice. The hospital is the logical focus for this contact. Consequently, the doctor without a staff appointment is handicapped in his effort to maintain and improve the level of his professional skill. A few decades ago, when the hospital was used mainly by surgeons, the failure of many doctors to secure a staff appointment had less serious implications. Thus, the closed staff, which has contributed materially to raising the quality of hospital care, can continue to justify itself only if maximum efforts are made to provide at least one staff appointment to each qualified doctor in the community . . ."

Before we come to the final proposal for a solution of this vast problem, let us discuss for a moment the attitudes on which a solution depends. In search for a system of attitudes, I turned to history for assistance. I didn't have to look far. In recent contemporary history in my own environment was, in my opinion, a delineation of attitudes which we would do well to observe. In an address to the graduating class at Cornell University in 1947, President Edmund E. Day opened his remarks by saying: "In the age-old quest for a better life, mankind has evolved certain ideas which are recognized as good by those who live in a democracy such as ours. Some of these ideas come to mind: the idea of God, the idea of peace, the idea of justice, the idea of brotherhood, the idea of freedom, and this idea of tolerance."[2] He commented further that those guiding ideas were, to a considerable extent, inter-related, that tolerance was the firm substance which joined freedom and responsibility. "Without tolerance," he said, "we evade a primary phase of the responsibility which freedom imposes. Without tolerance, there can, in fact, be no real freedom." Dr. Day called attention to the many meanings of tolerance and noted that, while it was used in engineering as an index of allowable deviation from normal, in medicine as the inborn ability to handle a drug or ability to withstand cold or trauma, that the meaning which provided the binding substance was referable "to a very admirable characteristic or habit of mind; making allowance for the existence of beliefs or practices that are different, displaying freedom from bigotry, understanding the beliefs of others without necessarily sharing them." He then asked, "Can we have too much tolerance?", and answered his own question by pointing out that our tolerance of excessive death on the highway and of the increasing divorce rate was tolerance to the point of indulgence. Could it be that within the area of excessive tolerance we have been guilty of tolerating the fact that general hospitals do not provide an appointment for more medical men in the community? Have not both administration and medical staffs of many hospitals been guilty of tolerating the dearth of educational programs in the hospital? In some communities, has not the public been excessively tolerant of obsolescence in hospital equipment and buildings, of failure to promote healthy, strong community loyalty attitudes toward the community hospital? Have not some hospital administrators been excessively tolerant of the laissez faire attitude of both physicians and the public? Surely hospital administration cannot provide attendance at medical meetings or absorption of educational pearls of wisdom, or put to work those pearls in the everyday treatment of patients. This is the responsibility of the medical staff, some of whom, unfortunately, have been known to deteriorate within the very walls of the institution which plays such an important role in the prevention of deterioration. Likewise, some hospital administrations deteriorate in spite of alert medical staffs. Difficult personnel relationships may create resentments which promote irascibility and querulous reaction to the point that many in the community lose confidence in their local hospital and seek medical and hospital service elsewhere. Excessive tolerance here can lead to serious consequences both to the public and the medical profession.

Dean Herman Weiskotten, in a recent paper on the responsibility of the medical profession for the promotion of education standards, said, "The medical profession would clearly be failing to meet one of its primary responsibilities if it did not seek to maintain an effective program for promoting high educational standards in all phases of medical education."[3] While the chairman of the Council on Medical Education and Hospitals of the American Medical Association was undoubtedly referring mainly to formal medical education, he does recall in the same report that, because there were no government regulations controlling either medical education or medical practice in this country, the organized medical profession was the only group in position to take leadership—and they did. He continues, "Fortunately for its own honor and for the public interest, the medical profession had recognized this responsibility. It is well known that the American Medical Association was established primarily for the purpose of elevating the standards of medical education in this country." In another recent paper, Dr. John E. Dietrich, director of the present survey of medical education, discussing trends which the current undertaking must investigate, states that, among other important trends, ". . . heavy demands have been made on medical colleges . . . for supervision and conduct of community health services in order to improve the quality of medical service to the people. Medical colleges are being urged to develop affiliations and cooperate with local and regional hospitals, nursing services, public health departments and other health and welfare agencies in their service programs."[4]

No one can discount the responsibility of the community general hospital in these undertakings. The medical profession, through its successful elevation of the standards of medical education, has been enabled to use the tools given it by medical pioneers, workers in basic science, and contributors from other disciplines. The public through voluntary or tax sources has decreed that the hospital be one of the indispensable units of the community. Southmayed and Smith tell the story that, when a community hospital was opened in an Illinois town in 1942, one of the local papers editorialized the fact that nothing had caused more stir in the community since the first railroad came through in 1869.[5]

In their zeal to comply with the American system of labels, many hospital administrators and boards of trustees, together with a few medical men having the proper labels, often have prevented men with good qualifications from working in hospitals. As a rule, it was the general practitioner who was shut out. Where there is too little tolerance toward the men who have not received the label, there frequently is excessive tolerance by both the medical and administrative boards of many hospitals toward the injustice to the men who are kept out.

Ginzberg reports that a major factor in the development of proprietary hospitals in New York City and its suburban area is the inability of many doctors to gain access to the staff of the voluntary hospitals. Nevertheless, he believes that, despite the serious abuses inherent in the system of the closed staff, it would not be reasonable to open hospitals to all licensed physicians and to permit them complete freedom in their work. He infers that such freedom could not be matched by the responsibility of that group.[1] Obviously, then, a compromise solution involving a series of adaptations and, probably, reforms must be effected.

In 1945, the House of Delegates of the American Medical Association expressed approval of the establishment of a Section on General Practice of Medicine and approved the organization of sections on general practice in state and county societies.[6] In 1946, the House urged the establishment of general practice sections in hospitals not having them. It was urged that appointments to the general practice section be made by hospital authorities on the merits and training of the physician. The House gave assurance that such a general practice section per se would not prevent approval of a hospital for the training of interns and residents.

The American College of Surgeons provides in its rules, regulations, and bylaws for medical staffs for a nonspecialist as well as a specialist division of the medical staff. Court decisions have upheld repeatedly the right of boards of trustees to determine, by reasonable rules, which practitioners may be granted the privileges of the hospital.[6] The American Medical Association through its Council on Medical Education and Hospitals has pointed out that any hospital policy limiting medical staff appointments to physicians certified by specialty boards or holding membership in certain special societies is contrary to the principle of the Council and the Advisory Board for Medical Specialties. Hospital staff appointments should depend upon the qualifications of physicians to render proper care to hospitalized patients, as judged by the professional staff of the hospital, and not upon certification or specialty society memberships. It thus appears that boards of trustees and administrators of hospitals are in a key position to assume a major share in elevating and clarifying the position of the general practitioner. There are no objections from approval agencies—the A. M. A., the Advisory Board for Medical Specialties, or the American College of Surgeons.[7]

I come from a town of 30,000 people. Its community hospital has had a bad reputation for years with men like Carl Wright. It has had frequent changes of administrators; it has had the misfortune to be dominated, at times, by minority rule from a little medical czar; it has been through the convulsions of medical, administrative, and popular strife, respectively and collectively; formerly, it had no real educational program; it had perpetual financial difficulties; it led the New Deal in deficit financing. Then came the war. The people rallied to the support of their hospital. It became an anchor to windward in times of tension when the anxiety of disaster through sabotage or enemy action was acute. Following the war, our community was told that the annual recurring deficit of the hospital would be greater than the community could meet. While responsible community people studied the problem of its future economic course, a residency in internal medicine was created, a medical section came into being, regular medical meetings were held—at first attended by the residents and a few staff members only, later by almost all medical men. The idea took fire. The surgical staff organized. The bylaws were amended and brought up-to-date; a section for the general practitioner was provided; a place was made in the hospital for everyone to participate to the limit of his educational and practice qualifications.

The organization chart shows a medical board, made up of the chiefs of medicine, surgery, obstetrics, and general practice. Rules for the safety of the patient were set up. Freedom was allowed, and while responsibility was demanded, it was assumed voluntarily, as the specialist's attitude toward the general practitioner became less hostile. When a rule of the hospital was involved, no remuneration was allowed to the consultant. The chief of the general practice section has enjoyed excellent cooperation from his mates, who have been able to care for their patients in the hospital.

With this program has come a tremendous boost in morale. Doctors who had drifted away from the idea of "keeping up with the medical stream" have drifted back to meetings and have been eager to participate. For many physicians a trend toward stagnation was checked, and the tide was turned in favor of preservation of skills. The uplift carried further than the sections of internal medicine and general practice. The surgeons copied the idea. Surgical section meetings were started; a program for resident surgeons was instituted. Administration assisted the staff to obtain funds for a library—a good one, well-balanced with medical, surgical, and specialty journals and books. The medical board began to look at other problems—personnel relationships, functional efficiency of units of the hospital, nursing difficulties, and the like. This led to better morale in the whole team.

When this movement began, our hospital was a voluntary agency. In the middle of the development of an educational program, the hospital was taken over by the county under authority of the General Municipal Law of the State. This did not change either the rate of development of the program or the attitude of administration and physicians regarding its importance. Money did, however, become available to replace obsolete equipment.

One obligation of administration remains unfulfilled. Because of the lack of a positive public relations program, the public is not aware of the high level of medical competence which the community enjoys. It is quite apparent to one who views the operation objectively that administration could be of great value to the medical profession if its public relations responsibility were adequately discharged.

This story points out some interesting facts:

1. That if the administration and the medical staff of a hospital can get together on an educational program, a great stimulus for self-improvement occurs in the medical staff.

2. When administration recognizes the fact that obsolescence is holding back progress and does something about it, another boost in the level of medical competency in the community occurs.

3. When the administration and medical staffs provide a compromise solution for the general practitioner who has no hospital privileges, an excellent hedge against deterioration of the doctor is created, and the hospital has fulfilled its obligation as a forthright American democratic institution.

4. When administration neglects an adequate public relations program, much of the community remains unaware of the level of medical competence and hence remains indifferent and disinterested in the community hospital's problems.

The community hospital has a definite responsibility to medicine and to the community. The educational programs which include use of the community hospital for intern as well as resident training must be accepted as a hospital responsibility to medical education. The hospital must use the many devices which make it less burdensome for busy, responsible men with a high degree of medical skill to retain and improve their skills. The hospital must contribute to the doctors' defense against deterioration by providing appointments for a maximum number of doctors, some of whom must necessarily be restricted in privileges. In those institutions equipped to do so, provision should be made for the intellectual rehabilitation of the long-isolated general practitioner. The hospital must be on the alert for deterioration in its own nonmedical group. It must face up to its public relations responsibility if it would discharge its responsibility to the medical profession and the community. Rumor and gossip with consequent loss of confidence almost always occur when the public has not been given positive chips upon which to chew. Where the people of a community become nomadic in search for medical care because of fear of their own hospital, the whole community suffers but the medical profession most of all.

Defense against deterioration in business in this country is largely carried out by hard-headed men keeping their machinery and equipment from becoming obsolete. These men work for democracy. Educational institutions are doing their best to turn out students adequately prepared with the "know-how" and the moral courage to face the world of today. The professions must likewise keep the faith if the American people shall continue to be served with high quality professional service. The medical profession is an important segment of American professional achievement; it is imperative that it be given the incentive to move forward. Because of the freedom with which hospitals have been endowed over the years, it is fitting that they accept responsibilities which have emerged from their growing pains and share in the general defense against trends which threaten us with weakness. If it is true that institutions have personalities and reflect the philosophy of those at the top, then it is the responsibility of those persons charged with hospital management, administrators and doctors alike, to exhibit and promulgate tolerance, the connective tissue which joins responsibility to freedom. With such thinking within the medical family, we fulfill with diligence our part toward the preservation of the American way of life.

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DEPARTMENT OF MEDICAL CARE INSURANCE

CONDUCTED BY GEORGE P. FARRELL, DIRECTOR

Membership in Blue Shield Plans Exceeds Two and a Quarter Million

MEMBERSHIP in New York State Blue shield plans as of March 31, 1950, was 2,261,300, an increase of 181,947 for the quarter ending March 31, 1950.

Earned premium income during the quarter was $4,024,220, as compared to $3,004,406 for the same period in 1949, representing an increase of $1,019,814.

Benefits paid for services rendered to members during the quarter amounted to $2,827,430, as compared to $1,879,745 for the same period in 1949, or an increase of $947,685.

TABLE 1.—COMPARISON OF INCURRED CLAIM AND ADMINISTRATIVE EXPENSE RATIOS TO EARNED PREMIUM INCOME FOR QUARTERS ENDING MARCH 31, 1950 AND 1949

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Totals
Earned Premium Income							
March 31, 1950	$2,967,379	$391,529	$159,815	$70,659	$271,004	$163,834	$4,024,220
March 31, 1949	2,190,798	292,460	122,113	56,463	226,371	116,201	3,004,406
Claim Expense							
March 31, 1950	$2,184,817	$312,866	$108,573	$57,669	$203,004	$129,079	$2,996,008
March 31, 1949	1,359,715	232,493	86,623	47,936	175,589	91,560	1,993,916
Administrative Expense							
March 31, 1950	$ 593,476	$ 28,661	$ 20,991	$ 8,645	$ 36,601	$ 17,091	$ 705,464
March 31, 1949	446,230	25,624	16,850	6,710	30,844	12,123	538,381
Claim Expense Ratio to Earned Premium Income							
March 31, 1950	73.63	79.91	67.94	81.62	74.91	78.79	74.45
March 31, 1949	62.06	79.50	70.93	84.90	77.56	78.79	66.36
Administrative Expense Ratio to Earned Premium Income							
March 31, 1950	20.00	7.32	13.13	12.23	13.51	10.43	17.53
March 31, 1949	20.37	8.76	13.79	11.88	13.62	10.43	17.91

TABLE 2.—COMPARATIVE CLAIM DATA FOR QUARTERS ENDING MARCH 31, 1950 AND 1949

	1949 (Paid Basis)			1950 (Paid Basis)		
Plan Location and Types of Contracts	Number of Claims	Amount	Ratio to Earned Premium	Number of Claims	Amount	Ratio to Earned Premium
New York						
Surgical Expense Indemnity	14,399	$ 904,581	67.95	20,408	$1,280,028	73.28
Surgical, In-Hospital Medical	5,809	319,971	49.39	10,790	590,615	63.21
General Medical	9,689	114,600	56.68	17,931	204,164	71.33
Total	29,897	$1,339,152	61.39	49,129	$2,074,807	69.92
Buffalo						
Surgical	5,404	$ 164,462	71.77	9,248	$ 253,421	76.21
Surgical, In-Hospital Medical	1,823	40,467	63.91	1,585	36,176	61.30
Total	7,227	$ 204,929	70.07	10,833	$ 289,597	73.96
Rochester						
Surgical Expense Indemnity	1,708	$ 61,357	50.24	2,813	$ 97,632	61.09
Syracuse						
Surgical	149	$ 3,753	60.86	202	$ 5,780	65.03
Surgical and Medical	2,694	40,741	81.00	2,854	50,816	82.26
Total	2,843	$ 44,494	78.80	3,056	$ 56,596	80.10
Utica						
Surgical (including Medical Call Riders)	6,233	$ 156,734	69.23	8,338	$ 200,281	73.90
Albany						
Surgical, In-Hospital Medical	1,739	$ 73,079	62.89	2,530	$ 108,517	66.14
Grand Total	49,647	$1,879,745	62.77	76,699	$2,827,430	70.26

TABLE 3.—MEMBERSHIP PROGRESS—QUARTER ENDING MARCH 31, 1950

By Types of Contracts	New York	Buffalo	Utica	Syracuse	Rochester	Albany	Totals
Surgical							
March 31, 1950	1,154,780	218,042	129,337	5,164	99,237		1,606,560
December 31, 1949	1,064,736	192,401	132,034	4,778	93,487		1,487,436
Increase	90,044	25,641	−2,697	386	5,750		119,124
Surgical, In-Hospital Medical							
March 31, 1950	463,566	18,614				77,341	559,521
December 31, 1949	415,371	18,976				69,136	503,483
Increase	48,195	−362				8,205	56,038
Surgical-Medical (Home, Office, Hospital)							
March 31, 1950	73,811*			21,408			95,219
December 31, 1949	67,565			20,869			88,434
Increase	6,246			539			6,785
Grand Totals							
March 31, 1950	1,692,157	236,656	129,337	26,572	99,237	77,341	2,261,300
December 31, 1949	1,547,672	211,377	132,034	25,647	93,487	69,136	2,079,353
Increase	144,485	25,279	−2,697	925	5,750	8,205	181,947

* Includes 13 members in the Medical Expense Fund of New York.

NOTE: 62,818 members in the Utica Plan were covered by Medical Call Riders as of March 31, 1950, an increase of 1,722 during the quarter.

TABLE 4.—COMPARATIVE MEMBERSHIP INCREASES FOR QUARTERS ENDING MARCH 31, 1950 AND 1949

By Types of Contracts	New York	Buffalo	Utica	Syracuse	Rochester	Albany	Totals
Surgical							
March 31, 1950	90,044	25,641	−2,697	386	5,750		119,124
March 31, 1949	102,809	15,182	5,883	161	8,368		132,403
Surgical, In-Hospital Medical							
March 31, 1950	48,195	−362				8,205	56,038
March 31, 1949	54,800	−853				3,258	57,205
Surgical-Medical (Home Office, Hospital)							
March 31, 1950	6,246			539			6,785
March 31, 1949	8,074			744			8,876
Grand Totals							
March 31, 1950	144,485	25,279	−2,697	925	5,750	8,205	181,947
March 31, 1949	165,683	14,329	5,883	905	8,368	3,258	198,426

NOTE: In the Utica Plan, Medical Call Rider members increased as follows: March 31, 1950—1,722, and March 31, 1949—3,601.

TABLE 5.—CLAIM DATA (PAID BASIS)—YEAR TO MARCH 31, 1950*

Plan Location	Number of Claims	Amount	Ratio to Earned Premium	Average Cost per Claim	Claim Incidence per 1,000 Participants per Annum	Average Exposure Participants
New York						
Surgical Expense Indemnity	20,408	$1,280,028	73.28	$62.72	73.5	1,110,983
Surgical, In-Hospital Medical	10,790	590,615	63.21	54.74	98.1	440,057
General Medical	17,931	204,164	71.33	11.39	1007.6	71,179
Total	49,129	$2,074,807	69.92	$42.23		
Buffalo						
Surgical	9,248	$ 253,421	76.21	$27.40	178.6	207,134
Surgical, In-Hospital Medical	1,585	36,176	61.30	22.82	336.9	18,818
Total	10,833	$ 289,597	73.96	$26.73		
Rochester						
Surgical	2,813	$ 97,632	61.09	$34.71	115.5	97,397
Syracuse						
Surgical	202	$ 5,780	65.03	$28.61	162.5	4,971
Surgical and Medical	2,854	50,816	82.26	17.80	540.0	21,138
Total	3,056	$ 56,596	80.10	$18.52		
Utica						
Surgical	7,694	$ 187,420	83.26	$24.36	235.4	130,685
Medical Call Rider	644	12,861	28.01	19.97	41.6	61,957
Total	8,338	$ 200,281	73.90	$24.02		
Albany						
Surgical, In-Hospital Medical	2,530	$ 108,517	66.14	$42.89	138.1	73,238
Grand Total	76,699	$2,827,430	70.26	$36.86		

* By types of contracts.

NECROLOGY

Dixon Lawrence Austin, M.D., of Baldwin, died at his home on May 30 at the age of fifty-nine. Dr. Austin received his medical degree from Fordham University Medical School in 1915. He had been physician for the Home Insurance Company and for Bickford's restaurant chain, both in New York City, before his retirement several years ago. During World War I Dr. Austin was a member of the Harvard Surgical Unit and also worked for the Red Cross in Serbia for six months after the war.

Trigant Burrow, M.D., of New York City and Greens Farms, Connecticut, died at his home in Greens Farms on May 24 at the age of seventy-four. Dr. Burrow received his medical degree from the University of Viginia Medical School in 1899 and from 1900 to 1910 did graduate work at the Universities of Virginia, Munich, Vienna, and Zurich, as well as at Johns Hopkins in Baltimore, Maryland. Dr. Burrow studied with Dr. Sigmund Freud and Dr. Carl Jung in Vienna and was founder and former president of the American Psychoanalytic Association. He had been scientific director of the Lifwynn Foundation for Laboratory Research in Analytic and Social Psychiatry in Westport, Connecticut, since its establishment in 1927. Since 1919 Dr. Burrow had done extensive research in the science of phylobiology and was the author of several books, including *The Neurosis of Man, The Social Basis of Consciousness, The Structure of Insanity,* and *The Biology of Human Conflict.*

Dr. Burrow was a member of the American Psychopathological Association, the American Psychiatric Association, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William J. Carr, M.D., of Newburgh, died on May 30 at St. Luke's Hospital in Newburgh at the age of eighty-four. Dr. Carr received his medical degree from the Bellevue Hospital Medical College in 1894 and had practiced in Newburgh for fifty-three years until his retirement. For more than forty years he had been a member of the medical and surgical staffs of St. Luke's Hospital, serving as consultant in surgery at the time of his death. Dr. Carr was a member of the Orange County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert Morris Daley, M.D., of New York City, died on June 3 at his home in Southold at the age of seventy-five. Dr. Daley was graduated from the College of Physicians and Surgeons, Columbia University, in 1896 as the highest ranking student in his class. He interned at Bellevue Hospital from 1896 to 1898 and began his practice in New York City in 1899. In 1911 Dr. Daley became assistant medical director of the Equitable Life Assurance Society of the United States, in New York City; in 1916 he was appointed associate director, and in 1936 became medical director. He retired in 1947.

In the Spanish-American War Dr. Daley had served as a first lieutenant and assistant surgeon of the Fighting Sixty-ninth Infantry. He was a captain and assistant surgeon for the Sixty-ninth, New York National Guard, from 1899 to 1900. Dr. Daley was president from 1928 to 1930 of the Association of Life Insurance Medical Directors and was a member of several insurance medical committees and the author of many articles for medical journals of life insurance groups. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Jacob Bettinger Deuel, M.D., of Rochester, died on May 31 at the age of sixty-two. Dr. Deuel received his medical degree from the New York Homeopathic Medical School in 1915 and served in the U.S. Army Medical Corps during World War I. He was consulting roentgenologist at the Monroe County Infirmary and consulting physician at the Park Avenue Hospital, both in Rochester. Dr. Deuel, former national president of Phi Alpha Gamma medical fraternity, was a member of the Rochester Radiology Society, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Pugh Eidson, M.D., of New York City, died on December 8, 1949, at La Jolla, California, at the age of sixty-one. Dr. Eidson was graduated from the Johns Hopkins University Medical School in 1916. A Diplomate of the American Board of Psychiatry and Neurology, Dr. Eidson was a member of the American Psychiatric Association, the New York Society of Clinical Psychology, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Edward Free, M.D., of Odgensburg, died of a heart attack on May 31 at the age of fifty-five. Dr. Free received his medical degree from the University of Vermont Medical School in 1918. He was chief surgeon at the A. Barton Hepburn Memorial Hospital in Ogdensburg, consulting physician at Potsdam Hospital, consulting physician and surgeon at the Stephen B. Van Duzee Hospital, Gouverneur, and attending surgeon at the St. Lawrence State Hospital. A Fellow of the American College of Surgeons, Dr. Free was a member of the St. Lawrence County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William David Johnson, M.D., of Batavia, a former president of the Medical Society of the State of New York, died at his home on June 1 at the age of eighty. Dr. Johnson was graduated from the Syracuse University College of Medicine in 1892 and had practiced in Batavia for forty-eight years when he retired in 1948. In 1931–1932 he was president of the State Society. Dr. Johnson was chief surgeon at St. Jerome Hospital in Batavia and consulting surgeon at the Veterans Administration Center, in Bath; the Mercy Hospital, Buffalo; Craig Colony, Sonyea, and the Medina Memorial Hospital, Medina.

A Fellow of the American College of Surgeons, Dr. Johnson was a member of the Genesee County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles C. Kastenbaum, M.D., of the Bronx, died on May 23 at the age of fifty-two. Dr. Kastenbaum received his medical degree from the New York University and Bellevue Hospital Medical School in 1920 and interned at Fordham Hospital. He was attending physician at St. Joseph's Hospital, visiting physician at Fordham Hospital, and chief of the chest clinic of the Fordham Hospital Outpatient Department. A Fellow of the American College of Chest Physicians, Dr. Kastenbaum was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Donald Esterbrook McKenna, M.D., of Brooklyn, died suddenly on June 6 at the age of fifty-six. Dr. McKenna was graduated from the Jefferson Medical College, Philadelphia, Pennsylvania, in 1916. He was chief orthopedic surgeon at the Brooklyn Hospital, consulting orthopedic surgeon at the Methodist Hospital, Brooklyn; the North Country Community Hospital, Glen Cove; the Eastern Long Island Hospital, Greenport, and St. John's Hospital, Brooklyn. A Diplomate of the American Board of Orthopaedic Surgery and a Fellow of the American College of Surgeons, Dr. McKenna was a member of the American Academy of Orthopedic Surgery, the New York Academy of Medicine, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John James O'Connor, M.D., of Elmhurst, died after a heart attack in Belmont State Park on May 20 at the age of fifty-nine. Dr. O'Connor was graduated from the Fordham University Medical School in 1916. For twenty-two years he was associated with the United States Public Health Service, being attached to the Marine Hospital in New York City. Dr. O'Connor had, since 1943, been regional medical director of the United States Civil Service Commission for New York and New Jersey.

Solomon Rottenberg, M.D., of Lake Success, Long Island, died on June 2 in Park West Hospital at the age of seventy-seven. A native of Hungary, Dr. Rottenberg received his medical degree from the College of Physicians and Surgeons, Columbia University, in 1895. A Fellow of the American College of Surgeons, Dr. Rottenberg was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Michael D. Stevenson, M.D., of Albany, died on May 30 at his home at the age of ninety. Dr. Stevenson was graduated from the Albany Medical College in 1844 and had practiced medicine in Albany for more than fifty years until his retirement six years ago. Dr. Stevenson first practiced in Mariaville before returning to Albany to start his practice there in 1890. He was a member of the Albany County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Johan Hendrik Wijnand van Ophuijsen, M.D., of New York City, died on May 31 at his office at the age of sixty-eight. Born in Padang Sidempooan, Sumatra, Dr. van Ophuijsen received his medical degree from the University of Leiden, The Netherlands, in 1909. He was a former associate of Drs. Sigmund Freud, Ivan Pavlov, Carl Jung, and A. A. Brill, and was a founder of the Netherlands Psychoanalytic Society and an organizer of the first International Psychoanalytic Congress. In 1935 Dr. van Ophuijsen came to the United States to teach at the New York Psychoanalytic Institute. He was on the psychiatric staffs of Mount Sinai and Lenox Hill Hospitals and was attending psychiatrist for the Veterans Administration. This year Dr. van Ophuijsen was appointed director of the Creedmoor Institute for Psychobiologic Studies at the Creedmoor State Hospital, in Queens Village.

A Diplomate of the American Board of Psychiatry and Neurology, Dr. van Ophuijsen was a member of the American Psychiatric Association, the American Orthopsychiatric Association, the American Psychoanalytic Association, the New York Psychoanalytic Society, the New York Society for Clinical Psychology, the New York Psychopathic and Psychotherapy Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas Joseph Walsh, M.D., of Buffalo, died on May 19 at the age of seventy-one. Dr. Walsh was graduated from the University of Buffalo School of Medicine in 1902 and did postgraduate work at the Cornell University Medical College, New York Post-Graduate Medical School, and in Berlin and London. Until his retirement two years ago because of ill health, Dr. Walsh had practiced forty-six years in Buffalo. For twenty-five years he taught at the University of Buffalo School of Medicine and for thirty years headed the medical department at Sisters Hospital. He was also consulting physician at Mercy and Meyer Memorial Hospitals. During World War I, he served on the Medical Advisory Board.

Dr. Walsh was formerly vice-president of the American Medical Association and of the Erie County Medical Society and past president of the Buffalo Academy of Medicine and of the Eighth District Branch of the Medical Society of the State of New York. A Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, Dr. Walsh was a member of the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL NEWS

$670,000 Voted for Studies of Heart Disease

THE Life Insurance Medical Research Fund at its annual meeting recently approved $670,000 in awards to medical schools and other research centers in 1950 for study of heart disease and training of research scientists. The meeting was held at the Academy of Medicine Building.

Fifty-one research programs will be supported by grants of $548,000 to thirty-six institutions. The largest grant is $21,000.

An additional $122,000 will go to thirty-four research fellows. This sum is designed to help overcome the lack of trained research workers which, according to the fund, has proved a "serious handicap" in the study of heart disease.

"Because diseases of the heart and arteries are by far the commonest cause of death in America," said a fund announcement, "the fund has so far restricted its activities to this field, particularly to the study of high blood pressure, hardening of the arteries, and rheumatic fever."

The fund has given $3,200,000 in awards since its organization in 1945. It received the Lasker Award from the American Public Health Association last year for its contributions to the advancement of medical science and public health.

Dr. C. N. H. Long of Yale University was chosen chairman of the fund's advisory council for the coming year. Three new council members are Dr. Wallace O. Fenn of the University of Rochester, Dr. Thomas Francis, Jr., of the University of Michigan, and Dr. O. H. Lowry of Washington University, St. Louis.

Claris Adams, president of the Ohio State Life Insurance Company, was elected to the board of directors. M. Albert Lincoln, fund chairman and president of the Provident Mutual Life Insurance Company, and Leroy A. Lincoln, president of the Metropolitan Life Insurance Company, were reelected to the board.

Dr. Earl C. Bonnett of the Metropolitan Life Insurance Company was chosen by the Association of Life Insurance Medical Directors as the fund's new medical directors' representative.

Dr. Francis R. Dieuaide, scientific director, said the fund was supported by 147 life insurance companies in the United States and Canada to make joint contributions to medical research.

Included in the grants are the following to New York institutions and individuals:

Columbia University, College of Physicians and Surgeons: for research by Dr. Zacharias Dische on cardiac metabolism and energy transfer, $10,500; for research by Dr. Robert F. Loeb on the norepinephrine and epinephrine content of adrenal medulla, sympathetic chain, and urine, $8,925; for research by Dr. Dickinson W. Richards, Jr., on the action of cardiovascular drugs on the circulation, $16,800; for research by Dr. Beatrice Carrier Seegal on biologic activities of streptococci which may play a role in the pathogenesis of rheumatic fever, $8,500.

Cornell University Medical College: for research by Dr. Robert F. Pitts on respiratory and renal interrelationships in acid-base balance, $15,750.

Long Island College of Medicine, Brooklyn: for research by Dr. Jean Oliver on the renal structure and function in its relation to the cardiorenal vascular system, $15,750.

Syracuse University College of Medicine: for research by Drs. W. W. Westerfeld and John M. McKibbin on the effect of lipotropic substances on lipid distribution, $6,825.

University of Rochester School of Medicine and Dentistry: for research by Dr. Elmer H. Stotz on heart muscle metabolism, $12,600.

Postgraduate research fellowships, carrying stipends from $3,000 to $4,000, included the following:

Dr. Arthur B. DuBois, New York City, for research under the supervision of Dr. Wallace O. Fenn at the University of Rochester School of Medicine and Dentistry.

Dr. William P. McCann, Rochester, for research under the supervision of Dr. C. Disney Burwell at Harvard Medical School, Boston Massachusetts.

Dr. Roy C. Swan, Jr., New York City, for research under the supervision of Dr. George W. Thorn at Harvard Medical School, Boston, Massachusetts.

Dr. John R. West, III, New York City, for research under the supervision of Dr. Dickinson W. Richards, Jr., at Columbia University, College of Physicians and Surgeons, New York City.

MEDICALLY SPEAKING—

Research Team to Study Facial Deformities and Plastic Surgery—A research grant of $52,379 to finance a two-year study of the psychologic and sociologic aspects of facial deformities and plastic surgery by a team of scientists at the New York University-Bellevue Medical Center has been made by the National Institute of Mental Health, of the U.S. Public Health Service.

The research project will utilize the technics of sociology, anthropology, psychiatry, psychology, and surgery to make a study of the problem of persons with facial disfigurements. The project is being coordinated by Frances C. Macgregor and is under the direction of Dr. John M. Converse, a faculty member of the Department of Surgery, New York University College of Medicine.

Although recent years have seen great advances in the technics of rehabilitation of the physically handicapped, such as the deaf, the blind, and the crippled, little or no organized study has been made to date of the problems of the facially disfigured. At the same time, traffic accidents, industrial hazards, and the growing use of explosive fuels have resulted in severe facial injuries to an increasing number of persons, in addition to those who are handicapped by congenital deformities or diseases such as cancer and those resulting in paralysis.

Elect Officers—At a recent meeting of the Women's Medical Association of New York City officers were elected for a two-year term for 1950 to 1952, as follows: Dr. Leoni N. Claman, president; Dr. Rosa

Lee Nemir, first vice-president; Dr. Regina Gluck, second vice-president; Dr. Helen J. Neave, treasurer; and Dr. Margaret S. Tenbrinck, secretary.

Navy Offers Internships to Medical School Graduates—Rear Admiral C. A. Swanson, Surgeon General of the Navy, has announced that 200 rotating internships in U. S. Naval Hospitals will be available to qualified medical school students who will graduate in 1951. Applications for the Naval internships will be accepted beginning on December 19, 1950, in accordance with the Association of American Medical Colleges' cooperative plan for appointment of interns. However, a Naval intern must meet all requirements for commission in the Medical Corps of the U. S. Naval Reserve, and it is necessary, therefore, that applications for Naval Reserve commissions be submitted prior to the December date.

Prospective applicants for internships should visit the Naval Officer Procurement office nearest their homes as soon as possible and apply for a Naval Reserve commission, so that this application may be processed well in advance of February 20, 1951, the deadline for notification of successful internship candidates. Applications and further information concerning the program may be obtained from any office of Naval Procurement, or by writing to the Personnel Division, Bureau of Medicine and Surgery, Navy Department, Washington 25, D.C.

Cornerstone of First Unit of Medical Center Laid—The cornerstone of the first unit in the $32,000,000 development program of the New York University-Bellevue Medical Center was laid during ceremonies May 24 attended by such distinguished civic and medical leaders as Bernard M. Baruch, Mayor William O'Dwyer, Winthrop Rockefeller, Chancellor Harry Woodburn Chase of New York University, New York City Commissioner of Hospitals, Dr. Marcus D. Kogel, Edwin A. Salmon, Director of the Medical Center, and others.

Mr. Baruch was the first to put into position the cement that sealed the cornerstone of the building that will house the Center's Institute of Physical Medicine and Rehabilitation. Comprising the northern wing of the new University section of the Medical Center, this first unit is being constructed at a cost of $2,055,469.

The following items were sealed into the time capsule contained in the cornerstone: predictions made by medical and civic leaders as to the future of medicine; the front page and the editorial page of each daily newspaper published in New York City on Tuesday, May 23; the first Annual Report of the Medical Center (1949), and several printed publications concerning the work of the Medical Center.

Plastic Surgery Award—The Foundation of the American Society of Plastic and Reconstructive Surgery offers as its 1950 award $500 (first prize of $300, second prize of $200) and a certificate of merit for essays on some original unpublished subject in plastic surgery. Competition is limited to residents in plastic surgery of recognized hospitals and to plastic surgeons who have been in such specific practice for not more than five years.

The first prize essay will appear on the program of the annual meeting of the American Society of Plastic and Reconstructive Surgery, to be held in Mexico City, November 27 through 29, 1950. Essays must be in before August 15, 1950.

For further information write the secretary, Dr. Clarence R. Straatsma, 66 East 79th Street, New York City.

Long Island Group Elects Officers—Officers for 1950–1951 were elected at a recent meeting of the Long Island Psychiatric Society held at the Central Islip State Hospital, Central Islip. These include: Dr. Arnold A. Schillinger, president, Northport Veterans Hospital; Dr. Jesse L. Bennett, vice-president, Creedmoor State Hospital; Dr. Ulysses Schutzer, secretary-treasurer, Central Islip State Hospital; Dr. Henry Brill, counselor, Pilgrim State Hospital, and Dr. Pompeo Milici, counselor, Kings Park State Hospital.

Dr. Schillinger has been appointed chief of professional services at the new Franklin Delano Roosevelt Veterans Hospital in Montrose, but will continue as a member of the Long Island Psychiatric Society.

At the meeting Dr. Lawrence E. Hinkle of the New York Hospital, Commonwealth Fellow, Cornell University Medical College, presented a paper on "Psychosomatic Factors in Diabetes Mellitus."

Research Fellowships, American College of Physicians—The American College of Physicians announces that a limited number of fellowships in medicine will be available from July 1, 1951, to June 30, 1952. These fellowships are designed to provide an opportunity for research training either in the basic medical sciences or in the application of these sciences to clinical investigation. They are for the benefit of physicians who are in the early stages of their preparation for a teaching and investigative career in internal medicine. Assurance must be provided that the applicant will be acceptable in the laboratory or clinic of his choice and that he will be provided with the facilities necessary for the proper pursuit of his work.

The stipend will be from $2,200 to $3,200.

Application forms will be supplied on request to the American College of Physicians, 4200 Pine Street, Philadelphia 4, Pennsylvania, and must be submitted in duplicate not later than October 1, 1950. Announcement of awards will be made in November, 1950.

Academy Library Exhibit—The Library of the New York Academy of Medicine, 2 East 103rd Street, New York City, this summer is featuring an exhibit of the literature prepared by the staff of the Library dealing with the employment of Cortisone and ACTH in the treatment of rheumatoid arthritis. A complete bibliographic list numbering 126 items is available on request.

Specialized Training in Cerebral Palsy—Eight scholarships for specialized training in cerebral palsy were announced in May by the executive committee of the National Society for Crippled Children and Adults. The awards total $3,400.

The scholarships, financed by a grant of Alpha Chi Omega, national women's fraternity, are awarded by the National Society to physicians, therapists, and educators who will assist member societies of the National Society in developing and operating centers for the use of all public and private agencies interested in helping cerebral palsied persons. Since the inauguration of the scholarship program, 44 scholarships have been awarded, that number including nine physicians, eight occupational therapists, 22 physical therapists, four speech pathologists, and one educator.

Add New Section to Heart Journal—A new section reviewing the latest advances in the cardiovascular fields and pointing out their practical application where appropriate will be added to *Circulation*, the Journal of the American Heart Association, in the fall of 1950. The new section, to appear monthly under the heading, "Clinical Progress," will be edited by Dr. Hermann L. Blumgart, professor of medicine, Harvard Medical School. The new section will include contributions by recognized authorities ranging from 4,000 to 8,000 words, and representing critical judgments of the current status of the subjects handled. While historical reviews of the subject will not be included, six or eight important bibliographic references will be made.

Fellowships Are Awarded—Four fellowships for the academic year of 1950–1951 have been awarded by the faculty of New York Medical College, Flower and Fifth Avenue Hospitals, to Dr. C. Donald Kuntze, Dr. Forris Beecham Chick, Dr. Edward J. Nightingale, and Dr. Fey Chu, all of New York City. Dr. Kuntze and Dr. Chick received Teaching Fellowships in the Faculty of Medicine, Dr. Kuntze in obstetrics and gynecology, and Dr. Chick in medicine. Dr. Nightingale and Dr. Chu received U. S. Public Health Grant fellowships, Dr. Nightingale in medicine and Dr. Chu in surgery.

Elected President—Dr. Sidney Licht, Boston, Massachusetts, formerly of New York City, was elected president of the New England Society of Physical Medicine at the annual meeting of the group held May 17 in Boston. Dr. Licht is also the president of the New York Society of Physical Medicine.

Examination for Medical Officers—A competitive examination for appointment of Medical Officers in the regular corps of the United States Public Health Service will be held on October 9, 10, and 11, 1950. Examinations will be held at a number of points throughout the United States, located as centrally as possible in relation to the homes of candidates. Applications must be received no later than September 11, 1950.

Appointments will be made in the grades of Assistant Surgeon (equivalent to Army rank of First Lieutenant) and Senior Assistant Surgeon (equivalent to Captain). Application forms and additional information may be obtained by writing to the Surgeon General, United States Public Health Service, Federal Security Agency, Washington 25, D.C. Attention: Division of Commissioned Officers.

Applications received after September 11, 1950, cannot be accepted.

Group Health Insurance, Inc., Holds Annual Meeting—At the annual meeting of Group Health Insurance, Inc., officers were re-elected and new members were elected to the board of directors and medical advisory board. New directors include: Dr. Benjamin R. Shore (nominated by the New York County Medical Society); Dr. Andrew A. Eggston (nominated by the Westchester County Medical Society); Dr. Russell L. Cecil (nominated by the New York Academy of Medicine), and Dr. Wallace Murphy. New members of the medical advisory board are Dr Kenneth Lewis, president of the New York County Medical Society, and Dr. William Bayard Long.

H.I.P. Elects Officers—Dr. George Baehr, former president of the New York Academy of Medicine, was elected president and medical director of the Health Insurance Plan of Greater New York at the annual board meeting held May 25 in New York City. Among new directors elected are Dr. Claude Heaton and Dr. John B. Pastore, executive director of the Hospital Council of Greater New York.

MEETINGS

PAST

World Health Organization

The third World Health Assembly of WHO was held May 8 to 27 in Geneva, Switzerland. The Rajkumari Amrit Kaur, minister of health of India, was elected president, and Dr. Heitor Praguer Froes, director general, National Department of Health, Brazil; Professor G. A. Canaperia, of Italy, and Colonel M. Jafar, of Pakistan, were elected vice-presidents. Delegates and observers from 63 countries and territories were in attendance at the sessions.

Programs adopted for 1951 include: continuation of the campaigns against malaria, tuberculosis, and venereal disease; expansion of activities in the field of communicable diseases, particularly cholera, plague, and trachoma, and further research on various diseases such as rabies, influenza, poliomyelitis, rheumatism, hepatitis, and dental hygiene.

Society for Clinical and Experimental Hypnosis

The first annual scientific meeting of the Society for Clinical and Experimental Hypnosis was held on May 13 in New York City. The program included the following speakers and papers:

Chairman's Remarks, Dr. Jerome M. Schneck, Long Island College of Medicine.

"Recall of Memories from the Ninth and Seventh Month in Hypnoanalysis," Dr. Edith Klemperer New York City.

"Radical Hypnotherapy in Apparent Medical and Surgical Emergencies," Dr. Harold Rosen, Johns Hopkins University School of Medicine, Baltimore, Maryland.

"Hypnotic Production of Visual Imagery: A Clinical Report," Dr. Earl A. Loomis, Jr., University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania.

"The Differential Recognition of Simple Visual Patterns Under Hypnosis," Dr. Andre M. Weitzenhoffer, Wayne University College of Medicine.

"Hypnosis and Symptom Treatment," Dr. F. L. Marcuse, Cornell University.

New York Psychoanalytic Society

The 327th meeting of the New York Psychoanalytic Society was held on May 23 in New York City with Dr. Herman Nunberg, president, presiding. A memorial program for the late Dr. Paul Federn was held with Dr. Bertram D. Lewin as speaker.

During the scientific session, Dr. I. Peter Glauber presented a paper on "The Mother in the Etiology of Stuttering."

Physicians Guild of Kings County

The sixth annual dinner of the Physicians Guild of

Kings County was held June 13 in Brooklyn. New officers of the group, elected at the May meeting, are as follows: Dr. Morris Weintrob, president; Dr. Aaron Kottler, first vice-president; Dr. Ernest Buffone, second vice-president; Dr. Lawrence Ames, secretary, and Dr. C. J. [illegible], treasurer.

Tuberculosis Sanatorium Conference of Metropolitan New York

The annual summer meeting of the Tuberculosis Sanatorium Conference of Metropolitan New York was held on June 14 at the Nassau County Tuberculosis Hospital, Farmingdale, with an all-day program including inspection of the hospital, luncheon, and a business and scientific session.

Papers presented included:

"The Effect of Chemotherapy on the Over-all Treatment of Tuberculosis," Dr. H. McLeod Riggins, assistant clinical professor of medicine, Columbia University College of Physicians and Surgeons.

"Pregnancy with Tuberculosis: Its Management and Prognosis," Dr. James M. Bailey, medical director, Schenectady County Sanatorium, Schenectady.

"The Nurse and Surgical Treatment of Pulmonary Tuberculosis," Dr. J. Maxwell Chamberlain, visiting surgeon, Nassau County Tuberculosis Hospital.

Chairman of the Tuberculosis Sanatorium Conference is Dr. William G. Childress, physician in charge of the Tuberculosis Division, Grasslands Hospital, Valhalla.

FUTURE

American Congress of Physical Medicine

The American Congress of Physical Medicine will hold its twenty-eighth annual scientific and clinical session August 28, 29, 30, 31, and September 1, 1950, at the Hotel Statler, Boston, Massachusetts. All sessions will be open to members of the medical profession in good standing with the American Medical Association. The annual instruction seminars will be held in two groups, with one set of ten lectures consisting of basic subjects, attendance limited to physicians, and the second ten lectures more general in character and open to physicians as well as to therapists.

Full information may be obtained from the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

International Congress on Diseases of the Chest

The first International Congress on Diseases of the Chest will be held at the Carlo Forlanini Institute, Rome, Italy, from September 17 through 20, 1950, under the co-sponsorship of the American College of Chest Physicians, Council on International Affairs, and the Carlo Forlanini Institute, with the patronage of the Italian government and the Italian Federation Against Tuberculosis.

Among the over one hundred physicians who will take part in the program are the following from New York State: Dr. Frank R. Ferlaino, New York City, "Industrial Pulmonary Dust Diseases and Control of Hazards"; Dr. Edgar Mayer, New York City, "Pulmonary Fibrosis," and Dr. Samuel A. Thompson, New York City, "The Surgical Revascularization of the Coronary Cripple."

American Association of Blood Banks

The third annual meeting of the American Association of Blood Banks will be held October 12, 13, and 14, 1950, at the Stevens Hotel, Chicago, Illinois. The program is being planned for blood bank personnel, hospital executives, pathologists, clinicians, surgeons, and other people interested in the procurement, preservation, and administration of blood and blood derivatives.

For further information write the Office of the Secretary, 3301 Junius Street, Dallas 1, Texas.

World Medical Association

The World Medical Association will hold its fourth general assembly at the Hotel Roosevelt, New York City, from October 16 through 21, 1950. A conference of medical editors will be held in conjunction with this assembly on October 17 and 18. A scientific program will be given on Wednesday, October 18, including presentations of the most important research in modern medicine.

American Occupational Therapy Association

The annual convention of the American Occupational Therapy Association will be held in Glenwood Springs, Colorado, from October 15 through 20, 1950. Medical authorities in the various fields will present new developments and their application to occupational therapy. Exhibits of occupational therapy materials and equipment will be displayed.

Headquarters will be at the Colorado Hotel, famous mountain resort.

National Rehabilitation Association

Marking the twenty-fifth anniversary of its founding, the National Rehabilitation Association will hold a national convention at the Hotel Statler, New York City, from October 23 through 26, 1950.

American College of Surgeons

The thirty-sixth Clinical Congress of the American College of Surgeons will be held in Boston, Massachusetts, from October 23 to 27, 1950, according to an announcement by Dr. Paul R. Hawley, director. Color television of surgical procedures from Massachusetts General Hospital will be one of the features of the sessions, and twenty-four hospitals in Boston and vicinity will hold operative clinics for visiting surgeons during the week.

At the meeting on Monday night, October 23, Dr. Henry W. Cave of New York City will be installed as president, succeeding Dr. Frederick A. Coller of Ann Arbor, Michigan.

National Society for Crippled Children and Adults

The annual convention of the National Society for Crippled Children and Adults will be held October 26, 27, and 28, 1950, at the Stevens Hotel, Chicago, Illinois. Marking twenty-nine years of service by the Society, the convention will feature the presentation of the latest developments in the treatment, training, and care of the nation's handicapped children and adults.

CORRESPONDENCE

THE MEDICAL TREATMENT OF BURSITIS

To the Editor:

After reading the article on "A Medical Treatment for Acute Bursitis (Bursoarthritis)" by Dr. Ernest Leibholz, published in the March 1 issue of 1950 on page 565, I wish to enumerate a few inconsistencies in the article.

In the first paragraph Dr. Leibholz states that although it is nearly axiomatic that the pathologic process should be restricted to the bursa, yet he goes on to say in the following paragraph that the joint proper has not been sufficiently stressed.

Further on he states that, although in all these cases most authors agree on the concept of traumatic etiology, there were only two instances where an acute trauma preceded and probably precipitated the inflammation. He also states that chronic wear and tear of daily use plus an acute trauma comprise one of several predisposing causes, but he attributes the major etiologic factor of calcium deposits to a condition similar to gouty diathesis.

He further states that in the second and more frequent type of bursitis a certain pain occurs that radiates toward the neck and elbow.

I wonder whether the author is not confusing this above description with a cervicobrachial radicular syndrome.

Under x-ray findings the author seems to concern himself mainly with calcium within the bursa. However, he forgets one very important diagnostic sign of an acute bursitis; namely, the squaring-off of the greater humeral tuberosity.

Under therapy he fails completely to suggest anything along the line of x-ray therapy, even though he mentions about forcible abduction, operative procedures, needling, etc.

I might further state that a bursitis per se has nothing to do with arthritis whatsoever, nor is the association logical. There are millions of cases of osteoarthritis that have no complications of bursitis whatsoever, and vice versa.

I submit this criticism to you inasmuch as I have treated over 300 cases of bursitis alone with x-ray therapy with only two failures. These cases were referred to me after medical men had tried diathermy, injections, and diets.

LOUIS J. GELBER, M.D.

390 Merrick Road
Rockville Centre, New York
March 13, 1950

Reply by Dr. Leibholz

To the Editor:

I am grateful for Dr. Gelber's criticism because it gives me an opportunity to clarify my statements, and shall answer his remarks paragraph by paragraph.

1. It certainly is "nearly" axiomatic in present-day teachings that the pathology is restricted to the bursa (exception: see Reference 8 in my article), but I doubt it and have tried to produce evidence, circumstantial to be sure, that there is some involvement of the joint as well.
2. I have tried to make it clear that in my opinion several causes have to coincide in order to produce the picture of the acute attack of bursitis, trauma (acute or chronic) plus a systemic disturbance, which for want of a better definition I have compared but not identified with gout. It is a commonplace experience in medicine that several competent producing causes have to be present in order to evolve a certain pathologic picture.
3. I have taken pains to arrive at correct diagnoses and do not believe to have ever confused bursitis with cervicobrachial radicular syndrome. After all, the differential diagnosis is not too difficult: in acute bursitis (the only form with which I am dealing) there should be pain on pressure below the acromion, often extending around the joint cleft, with more or less swelling over the joint; the protective muscle spasm; x-ray findings, and last but not least, a good response to my systemic treatment (which is not effective in radiculitis). We deal with radiating pain everywhere in medicine. How much easier would be abdominal diagnosis, if pain were felt only where it originates, and yet a typically radiating pain is often helpful in diagnosis. It is good to know that in acute bursitis the whole upper arm may hurt, from the neck down to the elbow.
4. The radiologic sign "squaring-off" or eburnation of the greater tuberosity, which I did not mention in my paper as of less importance, is an addi-

tional proof that the inflammation of the bursa tends to spill over its boundaries and invade the adjacent structures—bone and joint.

5. I have not failed to mention x-ray therapy. It was mentioned in passing under "Therapy."

6. I agree with Dr. Gelber that a bursitis per se has nothing to do with arthritis; for instance, a housemaid's knee does not lead to joint involvement, and osteoarthritis not to bursitis. But, in my opinion, the object of our discussion (Dupley's Disease) is not just a simple bursitis per se but a much more complex condition, which affects the bursa and the joint as well. Considering our scanty knowledge of the mechanism of rheumatic diseases, we should hesitate to solve the question with logic, but rather use observation.

Dr. Gelber is to be congratulated upon his excellent results with x-ray therapy. In older and chronic cases I never hesitated to avail myself of the benefits of this therapy. But in acute cases I find my simple, systemic treatment of at least equally good effect. In a personal communication, Dr. Leonard B. Goldman, Elmhurst, suggested a combination of x-ray and systemic therapy. Once the value of my systemic treatment is established in extended trials, I should consider running another series combining both treatments. Perhaps we may thus be able to knock off a few more days from the time of disability.

Ernest Leibholz, M.D.

54–55 69th Lane
Maspeth, New York
May 6, 1950

THE EFFECTS OF FORCEPS DELIVERIES

To the Editor:

In the March 15, 1950, issue of the New York State Journal of Medicine there is an article on "The Effect of Glutamic Acid on Borderline and High-Grade Defective Intelligence" by F. T. Zimmerman, M.D., and B. B. Burgemeister, Ph.D. Under the authors' comment, there is a paragraph which reads: "Our case histories leave one with the suspicion that the routine application of forceps and surgical procedures applying or producing undue force may be one responsible factor. Perhaps, if this is so, this is the price modern woman must pay in exchange for a more expeditious delivery."

As obstetricians, this is one of the questions about which we frequently wonder, but seldom have the opportunity to study. If the doctors have any definite conclusions drawn regarding "an increased number of mentally retarded children following the routine application of forceps," I feel that all obstetricians would be interested. Would you please bring this matter to Dr. Zimmerman's and Dr. Burgemeister's attention. Facts such as this are vitally important to us all, but suspicions are bad in medical literature.

John B. Phillips, M.D.

Medical Arts Building
Schenectady, New York
March 22, 1950

Reply by Dr. Zimmerman

To the Editor:

I must disagree with Dr. Phillips. Suspicions based upon observation, as well as related experimentation, are not bad in medical literature and serve to focus the attention of the medical profession more pointedly upon a particular problem, so that they perhaps may be stimulated to further investigative work upon the particular problem.

While Dr. Phillips did not mention this to you in his letter of March 22, 1950, in the same paper we gave the results of the application of graded force to the cortex of 195 cats. When this experiment is considered in context with direct clinical observation, we feel that these observations should be passed along to the medical profession. After all, we are writing for physicians and not for laymen who may jump to unwarranted conclusions on the basis of our findings. Medical progress is rarely the result of the efforts of just a few individuals, and we hope that our laboratory experiments and clinical observations may enlist the aid of other investigators in the solution of this problem.

Frederic T. Zimmerman, M.D.

700 West 168th Street
New York City
May 9, 1950

BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

BOOKS REVIEWED

Selective Partial Ablation of the Frontal Cortex. A Correlative Study of Its Effects on Human Psychotic Subjects. By The Columbia-Greystone Associates. Editor, Fred A. Mettler, M.D. Quarto of 517 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $10. (Problems of the Human Brain.)

This tome of over 500 pages is an excellent example of what can be accomplished by the combined efforts of several investigators. It is truly a correlative and cooperative study of the effects of partial ablation of the frontal lobes on 24 psychotic patients, 24 other patients being used as a control group. The work was carried out at the New Jersey Hospital at Greystone Park and was under the auspices of the Department of Neurology of the College of Physicians and Surgeons, Columbia University. Personnel from several other institutions also took part in the investigation.

The surgical procedures, the medical survey, and the psychologic and psychiatric investigations are detailed in the protocols which are presented. There were no fatalities and no complications in the 24 patients who were operated upon. Various portions of the frontal lobes were ablated in order to determine the most efficient and least dangerous site for the procedure.

The operations offered the investigators the opportunity to study the functions of the frontal lobes, their cytoarchitecture, and many problems relative to this portion of the brain. The results are set down as factual material, although comparisons with previous knowledge are made.

It is a most provocative book and should be read carefully and at leisure by all who are concerned with functioning of the cerebrum. The findings and conclusions deserve a more comprehensive review than space permits.

Joseph L. Abramson

Atlas of Surgical Operations. By Elliott C. Cutler, M.D., and Robert M. Zollinger, M.D. Illustrated by Mildred B. Codding, M.A. Second edition. Folio of 225 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $9.00.

The second edition of this popular work has a number of added procedures and many of the illustrations have been redrawn for greater clarity. The drawings by Mildred B. Codding are, in general, excellent. Procedures are shown step-by-step, with drawings and explanatory text on facing pages. Preoperative care, indications, etc. are gone into briefly. The standard operations in general surgery are covered. A very helpful atlas for the student, intern, resident, or young surgeon.

John H. Bogle

Memories of Eighty Years. By James B. Herrick, M.D. Octavo of 270 pages, illustrated. Chicago, University of Chicago Pr., 1949. Cloth, $5.00.

After reading this autobiography from cover to cover, it is interesting to observe how closely parallel are the experiences of men who have reached a ripe age (and I advisedly omit "old") and who, after varying degrees of hardship, finally reach their coveted goal, the degree of M.D.

The author received his in 1888. That was the period when almost primitive medicine was in the process of great changes. These are vividly described in his experiences as intern, as hospital physician, and as teacher.

Opportunities to meet the prominent physicians and surgeons of that day greatly influenced his career; that was inevitable. These men are named and brief sketches of their lives and work are given. Some of them are names well-known to this day, such as J. B. Murphy, Nicholas Senn, Frank Billings, Bertram Sippy, Dean Lewis, and others. These sketches add considerably to the merit of the book.

Limited space prevents a more detailed account of many other features of interest to medical men of any age. The writing, while not brilliant, is of an agreeable narrative style, nevertheless.

The author having completed his book at the age of eighty-seven, his final chapter entitled "Old Age," contains the statement, "I don't like old age." And yet he gracefully surrenders to the inevitable. Like the last chapter of worth-while autobiographies of men who have reached a very mature age, there is a note of impressive sadness that in more than one instance closes the book "with the words of Weir Mitchell who wrote what may be termed the doctor's farewell:

I know the night is near at hand,
The mists lie low on hill and bay,
The autumn sheaves are dewless, dry;
But I have had the day."

S. R. Blatteis

Medical Meeting. By Mildred Walker. Octavo of 280 pages. New York, Harcourt, Brace & Co., 1949. Cloth, $3.00.

This is a novel of medical research centering around a young doctor in an obscure upstate sanitarium. Henry Baker and his wife work patiently and diligently for years on a soil mold, microcydin. When they come to Chicago to the annual A.M.A. meeting, they find that a similar discovery has been made by workers in a university laboratory. How they meet this problem and the others arising from it makes a moving and believable story. The atmosphere of a big meeting, the kinds of doctors that go to make up a "medical meeting," and the unhistrionic courage of the young physician are skillfully woven together.

Milton Plotz

Massage and Remedial Exercises. In Medical and Surgical Conditions. By Noël M. Tidy. Eighth edition. Octavo of 487 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.25.

This is a small book of 23 chapters and 468 pages. It is principally written for medical gymnasts in England. It is a small book with a considerable degree of coverage. There are many things in the book which could be left out and would better the volume if they were left out. It tends to cover too great a line of material in the medical and allied conditions.

John J. Hauff

Gynaecological Histology. By Josephine Barnes, D.M. (Oxford). Octavo of 242 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $6.50.

This is a very enlightening review of histology and pathology. The illustrations are clear and stand out in one's mind. This book should be part of every gynecologist's library.

Nathan Reibstein

Surgical and Maxillofacial Prosthesis. By Oscar Edward Beder. Quarto of 51 pages, illustrated. New York, King's Crown Press, 1949. Paper, $3.00.

In this book, the author has presented the theory and detailed technics for the prosthetic restoration of structures lost through congenital or acquired causes. The procedures described are of such a variety that, with but minor changes, the most radical cases can be properly treated.

Although all cases should be diagnosed and planned through the joint efforts of a physician and dentist, it is the dentist who finally prepares the appliance which acts as or for the support of the restoration.

Following on the steps of a violent and mechanical war from which countless numbers of individuals returned with disfiguring wounds and unesthetic losses, this guide can be adequately applied to aid in the successful rehabilitation of countless patients.

J. Martin Hanover

The Value of Hormones in General Practice. By W. N. Kemp, M.D. Quarto of 115 pages, illustrated. Minneapolis, Burgess Publishing Co., 1949. Paper, $3.00.

This is a short résumé of some salient facts on endocrinology, chiefly for the general practitioner. It is merely a guide and incomplete as well as controversial. For example, the author feels that "adequate doses of estrogen should be continued for the rest of the patient's natural life."

Andrew Babey

Stedman's Medical Dictionary of Words Used in Medicine with Their Derivations and Pronounciation Including Dental, Veterinary, Chemical, Botanical, Electrical, Life Insurance and Other Special Terms; Anatomical Tables of Titles in General Use, the Terms Sanctioned by the Basle Anatomical Convention; the New British Anatomical Nomenclature; Pharmaceutical Preparations Official in the U.S. and British Pharmacopoeias or Contained in the National Formulary; and Comprehensive Lists of Synonyms; Biographical Sketches of the Principal Figures in the History of Medicine. Edited by Norman Burke Taylor, M.D., in collaboration with Allen Ellsworth Taylor, M.A. Seventeenth revised edition. With Etymologic and Orthographic Rules. Octavo of 1,361 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, with thumb index, $8.50; without thumb index, $8.00.

The seventeenth edition of Stedman's dictionary is a superb volume. It has been well revised and continues to be a reasonable, accurate, and readable dictionary which may be safely recommended to all.

Milton Plotz

Injuries of the Brain and Spinal Cord and their Coverings. Neuro-Psychiatric, Surgical, and Medico-Legal Aspects. By twenty-eight contributors. Edited by Samuel Brock, M.D. Octavo of 783 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

This is an excellent book on the relationship of trauma and affections of the nervous system. There are 28 contributors, who thoroughly cover the many pathologic and clinical syndromes. The subject is so controversial that it is easy to find fault with some of the opinions rendered, especially when the writer bases his discussion on a review of the literature rather than on his own experience. Many of the chapters are excellent and authoritative.

This reviewer recommends this volume as the best available for reference as well as information.

A. M. Rabiner

Digitalis and Other Cardiotonic Drugs. By Eli Rodin Movitt, M.D. Second edition. Octavo of 245 pages, illustrated. New York, Oxford University Pr., 1949. Cloth, $5.75.

Recently developed methods of investigating the action of the normal and failing heart have resulted in broadening our knowledge of the action of digitalis and similar drugs. These advances are adequately covered in the second edition of Movitt's monograph which continues to be the standard work on the subject. It belongs in the library of the cardiologist and of all others specially interested in internal medicine or therapeutics.

Milton Plotz

A Textbook of Surgery. By American Authors. Edited by Frederick Christopher, M.D. Fifth edition. Quarto of 1,550 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $13.

In view of the continued, rapid advance in all fields of the medical sciences, the editor has been forced to revise the text in order to keep abreast of surgical progress. Once again quality is attested by the long list of eminent contributors and collaborators, many of whom are teachers in our medical schools and teaching hospitals. The academic approach has thereby been conserved in this fifth revision as in the preceding ones.

Etiology, pathology, clinical diagnosis, and complications have again been stressed. Many new observations based on standard and generally accepted principles have been included in treatment. However, as in previous editions, operative technic and alternative methods of surgical attack are, in general, briefly dealt with and reserved for texts primarily dealing with operative surgery. Significant revisions have been added throughout. Likewise, important deletions have been made, and many new sections have been added. A noteworthy one is the section on "Military Surgery" by Dr. E. H. Churchill which was originally prepared by the author. On account of military exigencies it was not ready for inclusion in the fourth revision. Similar and equally enlightening and meritorious sections could be mentioned if space permitted.

The reading matter comprises 1,516 pages neatly arranged in two-column style. There are many informative references and an extensive index. In the reviewer's opinion the fifth edition once again makes the Christopher *Surgery* one of the most outstanding and comprehensive single-volume texts. Like the preceding editions, the fifth will undoubtedly enjoy a wide acceptance. It is unreservedly recommended alike to both student and practicing surgeon.

Arthur Goetsch

[Continued on page 1642]

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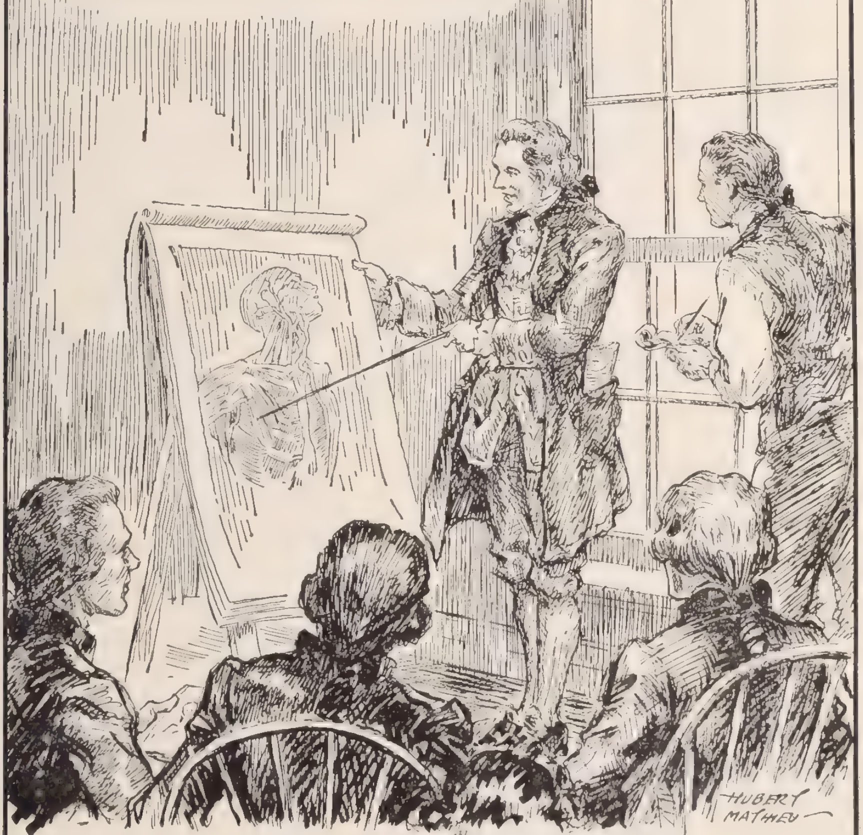

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[Continued from page 1640]

Clinical Audiology. By Maurice Saltzman, M.D. Octavo of 195 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $5.00.

The reviewer attests to the fact that he actually read this book from cover to cover, not only as a "reviewer" but also as an otologist who found the subject matter most interesting and instructive. Dr. Saltzman has compiled in a small volume a wealth of material including graphs and tables and a fine bibliography. Your reviewer has for many years pursued the literature both of the present and the past, because of his interest in the problems of the hard of hearing. Therefore, when he states that he was tremendously pleased with Dr. Saltzman's book, he includes in that compliment a recommendation to all otologists and lay workers in the field to read carefully and study this volume. The author has apparently spent a great deal of time and effort in preparing the subject matter, and he has devoted every effort in simplifying a subject which in most texts is so complicated as to defeat the purpose of a treatise on the subject of audiology. We recommend Dr. Saltzman's book most highly, for in it one will find the answers to many questions which in the past have been hard to find and to understand.

Samuel Zwerling

Medical Clinics on Bone Diseases. A Text and Atlas. By I. Snapper, M.D. Second completely revised and augmented edition. Quarto of 308 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $20.

There is need for a monograph covering completely the subject of the nonsurgical diseases of bone. Dr. Snapper's book only partially fills this need. The conditions mentioned are covered with varying degrees of thoroughness, and in most cases the student or graduate worker will have to turn elsewhere for further information. For the considerable price charged for this volume, one might have expected more material in the text and greater clarity in some of the illustrations. It must be said, however, that Snapper writes with authority, that the roentgen pictures are profuse, and that there seems to be no other single volume which covers the same field.

Milton Plotz

Malaria. The Biography of a Killer. By Leon J. Warshaw, M.D. Octavo of 348 pages. New York, Rinehart & Co., 1949. Cloth, $3.75.

This is an extremely interesting, nontechnical story of malaria which furnishes enjoyable and worth-while reading. Having the biography of malaria under one cover makes it a valuable asset for any library because it is so comprehensive. It is well written and presents many facts about which the general medical man would never have any information unless he were a very extensive research reader.

It is a "must" for a medical library.

M. J. Fein

Bone and Joint Radiology. By Emerik Markovits, M.D. Quarto of 446 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $20.

The author of this book is obviously an experienced writer on the subject. He has previously written two volumes in German, presenting radiographic diagnosis in tabulation form. In the present volume, he continues a similar pattern of presentation. The book suffers somewhat from this in that the theoretic considerations, discussions of physiology, physiologic chemistry, etc. are somewhat trivial. However, the book gains immeasurably in its field of usefulness because of the pattern of presentation.

The book is comprehensive, easily readable, and simple to use as a reference book, and as such is highly recommended. It is a particularly valuable volume for resident training. The subject presented is so well systematized and orderly that it is made to order for teaching purposes.

Unfortunately, as every experienced radiologist realizes, radiographic diagnosis of bone and joint pathology is not so clear and definite that it can always be tabulated, and diagnosis in the x-ray reading room is frequently less definite than one would gather from the reading of selected material in tabulation form. Therein perhaps lies the unavoidable weakness of this volume.

Asa B. Friedman

Ophthalmic Medicine. By James Hamilton Doggart. Octavo of 329 pages, illustrated. Philadelphia, Blakiston Co., [1949]. Cloth, $8.00.

This book is primarily a treatise on medical ophthalmology. It emphasizes the necessity for experience and skill in the diagnosis and prognosis of diseases of the eye. It omits detailed surgical technic, methods of refraction, and therapeutic details in order to emphasize the medical aspects of the pathology of the eye.

The author tries to emphasize the relationship of the eye to the rest of the body and shows its connection with remote parts of the body and immediate adjacent structures such as the sinuses.

There are interesting chapters on allergy, endocrines, virus, the fundi, cardiovascular disorders, and a particularly interesting discussion of migraine.

This book should be useful to the ophthalmologist, the internist, and the general practitioner, since it is written so clearly and fluently.

Norris C. Elvin

Textbook of Medicine. By Various Authors. Edited by Sir John Conybeare, D.M. (Oxon.). Octavo of 875 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $8.00.

Now in new format, octavo and 856 pages of text, this well-known volume on internal medicine appears in its ninth edition, in every way deserving the praise given earlier editions.

Clarity, thoroughness, and excellent editorial supervision characterize it. Dry discussions are a bit British, but clinical emphasis is adequate, and the volume can be recommended for frequent personal use. Conybeare and his 17 English contributors can again be heartily congratulated.

Frank Bethel Cross

Clinical Chemistry in Practical Medicine. By C. P. Stewart, M.Sc. (Dunelm.), and D. M. Dunlop, M.D. Third edition. Octavo of 324 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

This book, which is in its third edition, has been entirely rewritten and brought up to date. It includes the more important chemical tests which are required in everyday medical practice. There are chapters dealing with the practical application of such tests as basal metabolism, salt and water metabolism, and carbohydrate metabolism including glucose tolerance tests. Also the various tests and their interpretation of renal function, hepatic function, gastric, and pancreatic function are well presented.

Edward H. Nidish

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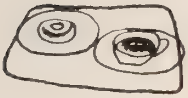

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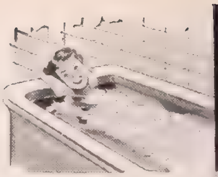

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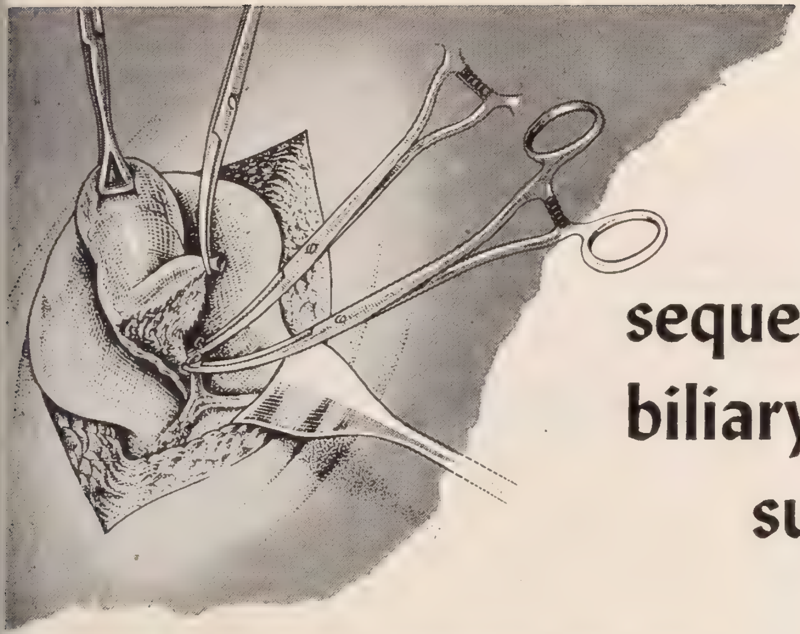

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2. KARNOSH, L. J. and ZUCKER, E. N.: A Handbook o Psychiatry, St. Louis, Mosby, 1945.

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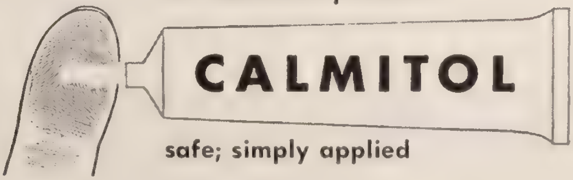

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ACTIVE INGREDIENTS:

Chloroform	3.7%	Methyl-Salicylate	10.2%
Cresol	0.5%	Saturated Formaldehyde Solution	0.5%
Iodine	0.8%	Thymol	1.7%
Menthol	2.5%	Zinc Phenolsulphonate	0.8%

* Auxiloderm Ointment is sold only by prescription and is packed in 1 oz. and 8 oz. jars.

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A Better Antipruritic Therapy

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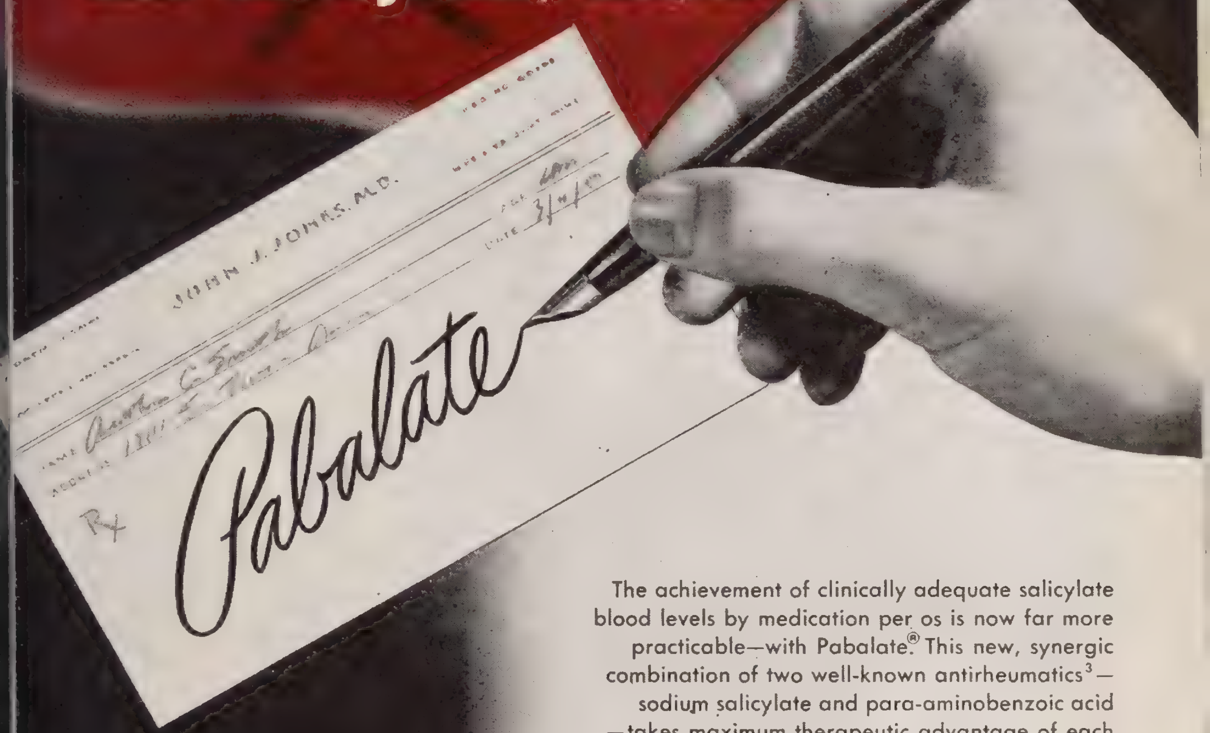
not salicylate, but...



The achievement of clinically adequate salicylate blood levels by medication per os is now far more practicable—with Pabalate® This new, synergic combination of two well-known antirheumatics[3]—sodium salicylate and para-aminobenzoic acid—takes maximum therapeutic advantage of each drug's remarkable ability to elevate materially the blood level of the other,[1,2,4] when given together.

Particularly in cases resistant to the maintenance of requisite blood levels, Pabalate affords an effective agent for more successful antirheumatic action.

. It is available in two forms: *Tablets* (enteric-coated to obviate gastric irritation), and chocolate-flavored *Liquid* (highly acceptable at all ages, particularly by children).

Each Pabalate Tablet or each 5 cc. (one teaspoonful) of Pabalate Liquid contains: Sodium Salicylate, U.S.P. (5 grs.) 0.3 Gm.; Para-aminobenzoic Acid (as the sodium salt) (5 grs.) 0.3 Gm.

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SUPPLIED: Pabalate Tablets in bottles of 100 and 500. Pabalate Liquid in pints and gallons.

REFERENCES: **1.** Belisle, M.: Union Med. Can., 77:392, 1948. **2.** Dry, T. J. et al.: Proc. Staff Meetings Mayo Clin., 21:497, 1946. **3.** Rosenblum, H. and Fraser, L. E.: Proc. Soc. Exper. Biol. and Med., 65:178, 1947. **4.** Salassa, Bollman and Dry: J. Lab. Clin. Med., 33:1393, 1948.

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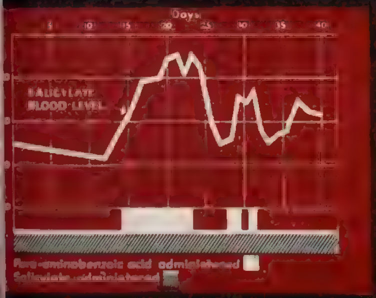

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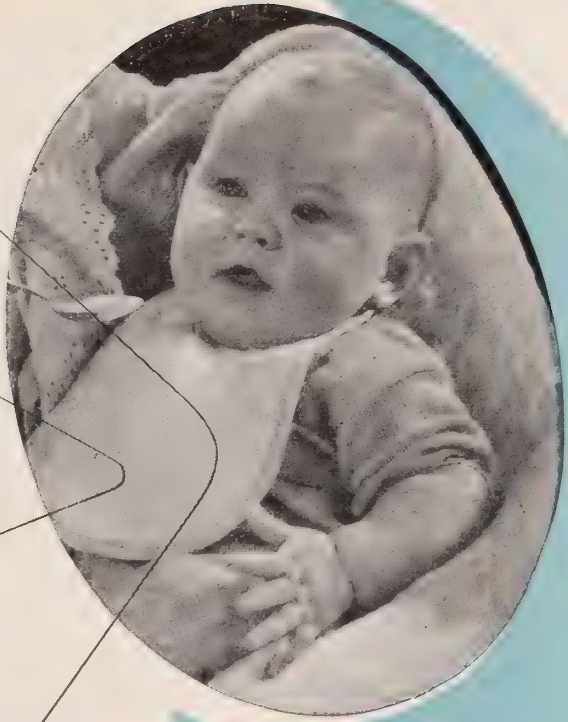
Younger Infants



Rennet-custards, made from uncooked milk with "Junket" Brand Rennet Powder or Tablets, are among the first desserts advised by pediatricians for young infants. These delicious, eggless milk desserts, more easily digested than milk itself, help to cater to the younger infant's developing preference for solid foods—thus permitting early spoon feeding of a pleasing new texture in a desirable variety of flavors and colors. Quickly prepared, and in no way changing the nutritive values of uncooked milk, rennet-custards afford a welcome diversity to, and heightened interest in, this all-important food for the younger infant. Mothers will appreciate your specific recommendation on your Diet Lists.

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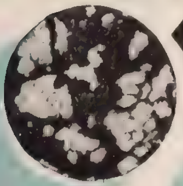
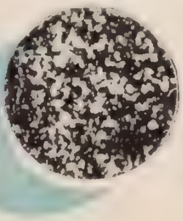


Untreated Milk—showing coarse, tough curds, often hard to digest.



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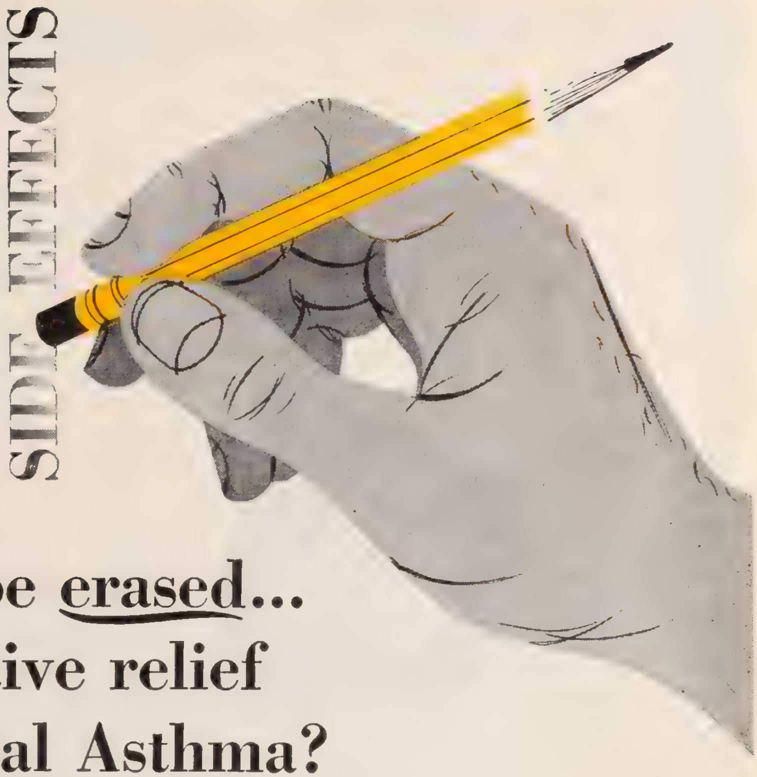

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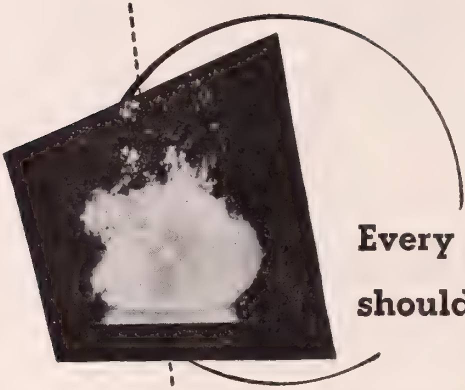
[1] Hansel, F.K.: Ann. Allergy, 5:397, 1947



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Ovaltine in Milk, 3 Servings*	676	32	1.12	0.5	12	0.94	3,000	1.16	2.0	6.8	30	417
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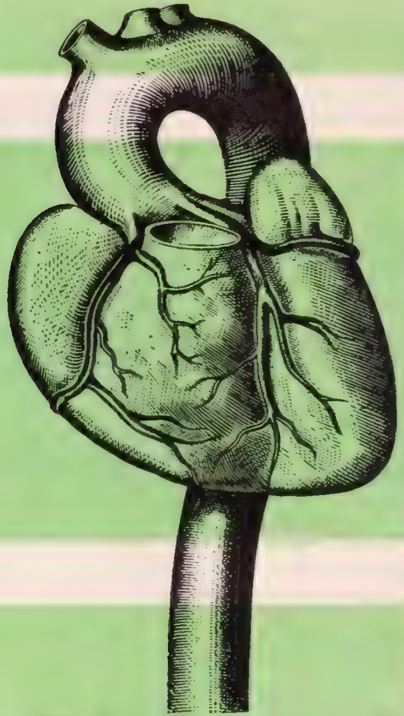
the weapon you have always wanted
in the control of hypertension



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A potent alkaloidal extract of Veratrum viride--biologically standardized for hypotensive activity in mammals--a new active principle not heretofore available, for the treatment of all forms of hypertension

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- **UNIFORM POTENCY.** Biologic standardization of the purified extract in dogs, *using depression of the blood pressure as the end point,* insures absolute constancy of pharmacologic activity.
- **PROMPT, SUSTAINED CLINICAL EFFECT.** While individualization of dosage is essential for maximum therapeutic benefit, in the majority of patients the average dose of Veriloid—2.0 mg. to 5.0 mg. three or four times daily after meals and at bedtime—produces a sustained lowering of the arterial tension. The degree of drop usually results in marked subjective improvement. Veriloid is indicated in all forms of hypertension.

Veriloid is available on prescription through all pharmacies in slow dissolving tablets containing 1.0 mg., in bottles of 100 and 200.

***REFERENCES**

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Patient experiences great relief with application of Camp reinforced Lumbosacral Support. Rest and support is given to the lumbosacral joint, its ligaments and to the erector spinae muscles, thus improving the body mechanics, note especially the decreased dorsal curve. The downward pull of the gluteal muscles on the posterior crests of the ilia is relieved.

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When the dorsal region of the spine is involved, higher supports than the one illustrated are provided by Camp. All lend themselves readily to reinforcement.

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2 *Pectin*, 1.0%

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Diarrhea is a nuisance, "one of the commonest symptoms of illness in the human race,"* and a real menace, accounting for nearly 1% of deaths reported in the United States. In ten Southern states, in 1946, more deaths were reported due to diarrhea than to typhoid and scarlet fevers, pertussis, diphtheria, malaria, measles, and poliomyelitis combined!*

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*Gray, A. L.: Southern Med. J., 43:320, April, 1950.

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The carefully adjusted, low surface tension of Koromex Jelly and Cream, assures even spreading over the entire vaginal mucosa. This results in greater penetration, increased barrier action and faster spermicidal time.

ACTIVE INGREDIENTS: BORIC ACID 2.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02% IN SUITABLE JELLY OR CREAM BASES

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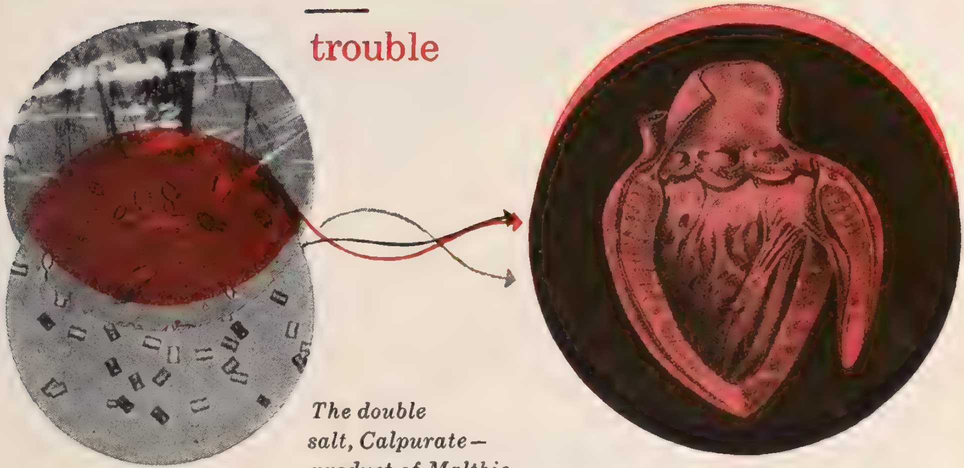

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Tablets and Powder

Calpurate *with Phenobarbital*

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For Trouble-Free Prolonged Cardiac Therapy

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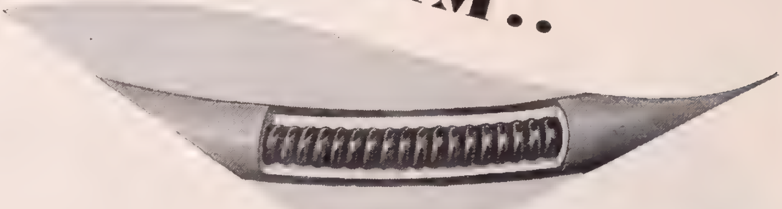
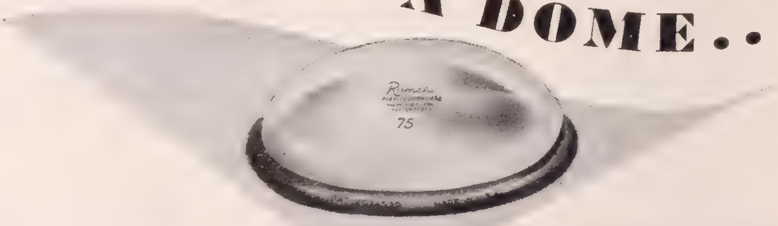


Rim of a "RAMSES" Diaphragm exposed showing coil spring completely encased in cushion of soft gum rubber.

A coil spring with the necessary tension to hold it firmly against the vaginal walls can produce discomfort unless it is properly cushioned. Examine the rim of the "RAMSES"* Diaphragm and you will find that the coil spring is encased in soft rubber tubing, which acts as a protective cushion. This construction is patented and available only in the "RAMSES" Flexible Cushioned Diaphragm.

PROTECTION IN A DOME..



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A diaphragm dome must not only occlude the cervix—it must have a reasonably long life. The exclusive process used in manufacturing the dome of the "RAMSES" Diaphragm from pure gum rubber produces velvet smoothness, plus flexibility and long life.

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NOW ALSO
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(including B_{12})

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Mol-Iron	198 mg.
Desiccated Whole Liver (equivalent to 1.8 Gm. whole liver—minus water content only—not a fraction or an extract)	0.45 Gm.
Thiamine hydrochloride	1 mg.
Riboflavin	1 mg.
Vitamin B_{12}	1 µg.
Nicotinamide	5 mg.
Pyridoxine hydrochloride	0.5 mg.
Calcium Pantothenate	1 mg.

Supplied in bottles of 100 capsules. Average dose 1 to 2 capsules three times daily after meals.

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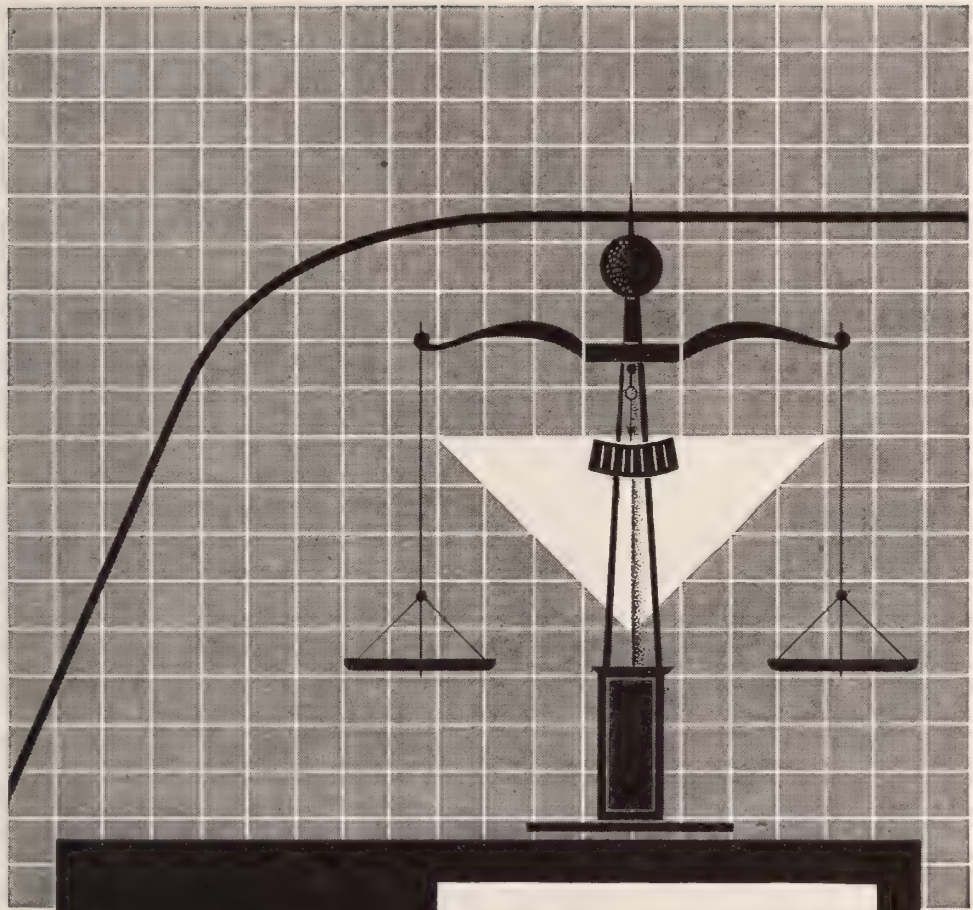

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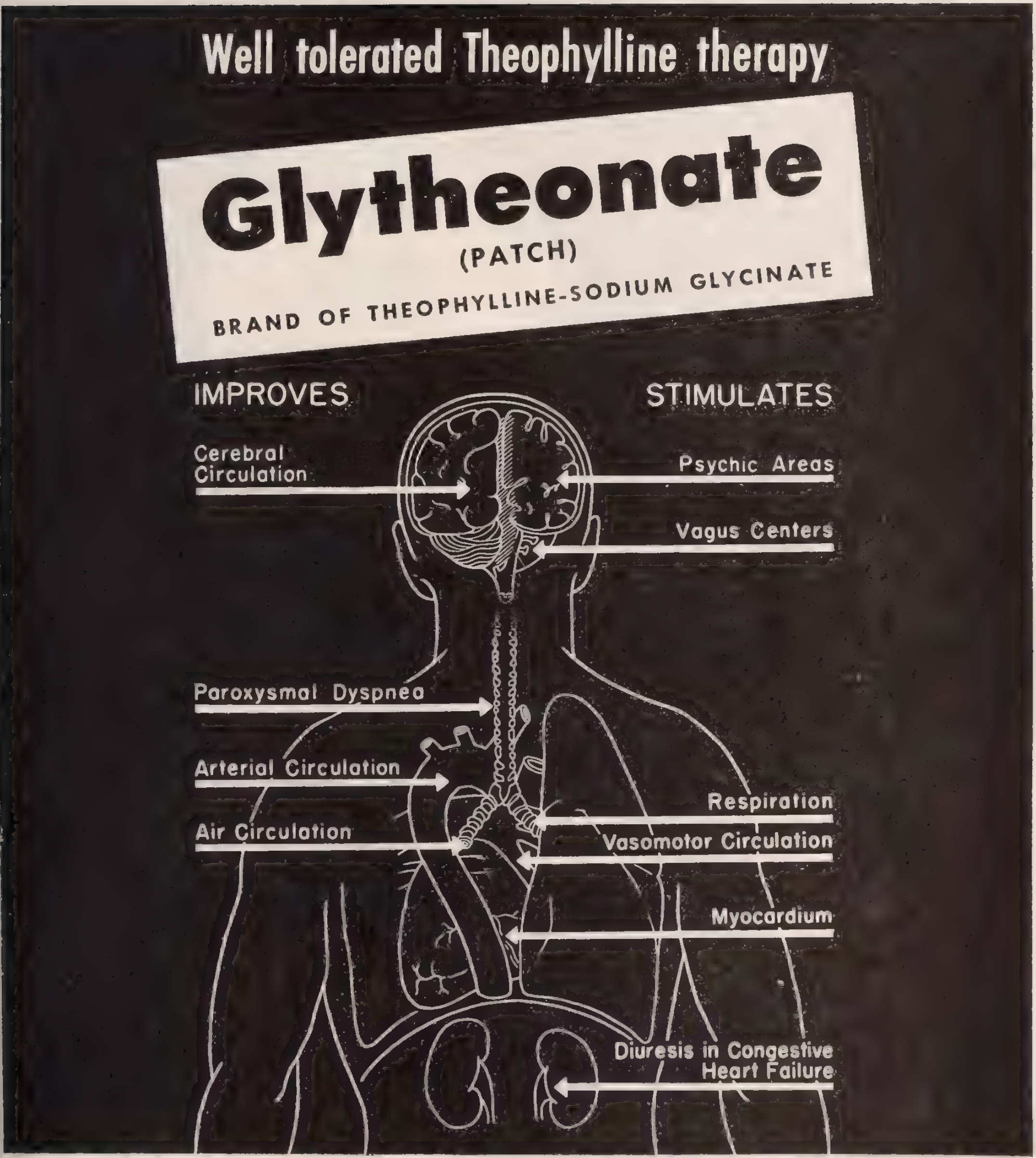
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GLYTHEONATE permits intensive oral theophylline therapy with minimal gastric irritation[1, 2] in treating bronchial asthma and Cheyne-Stokes respiration, and in relieving paroxysmal attacks of cardiac dyspnea. Indicated in all cases where aminophylline is used.

1. Paul, W. D., and Montgomery, A. E.: J. Iowa State M. Soc. *38*:237 (June) 1948.
2. Bubert, H. M. and Cook, S.: S. Med. Journ. *41*:146 (Feb.) 1948.

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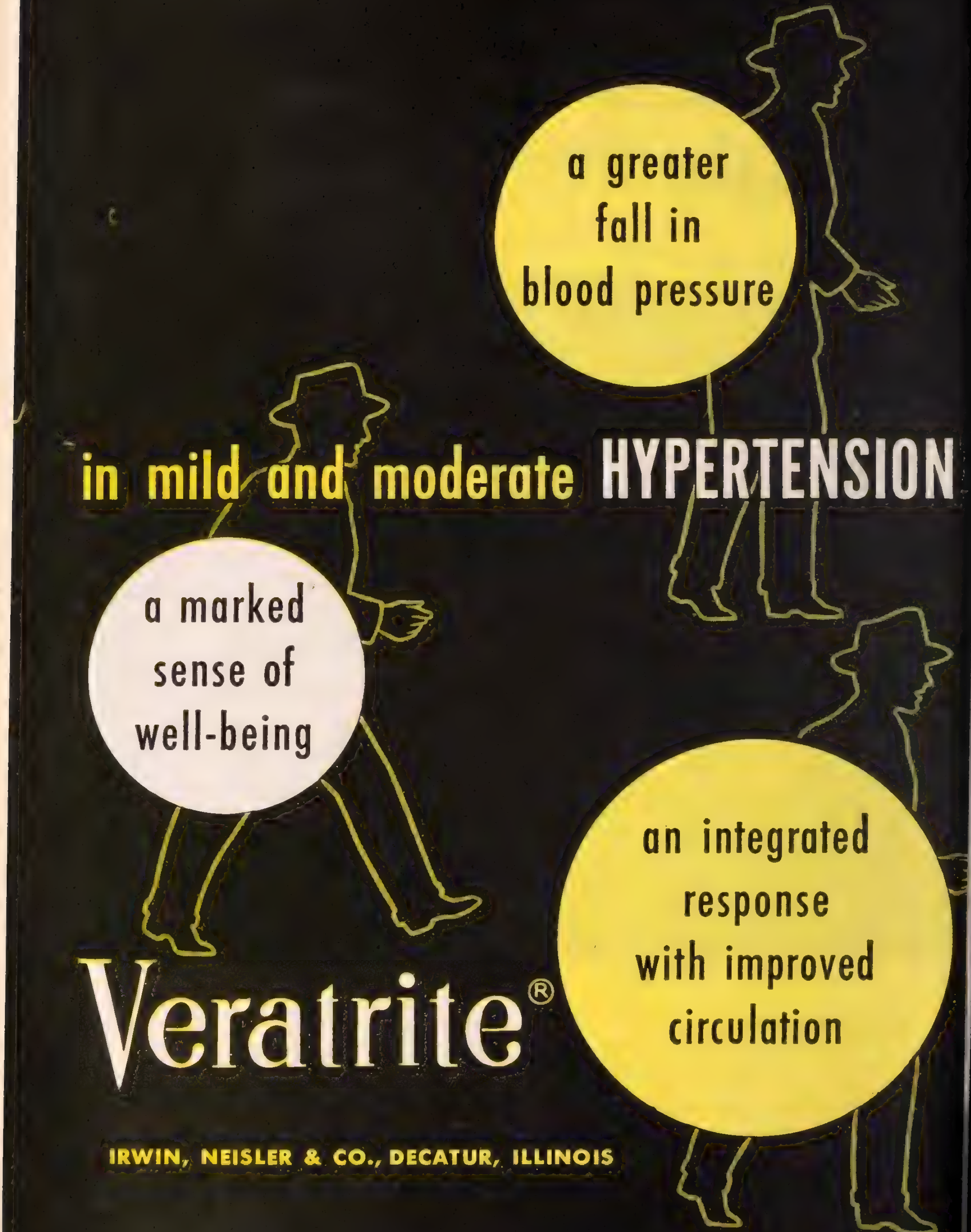

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a marked sense of well-being

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OF THE MANY DRUGS commonly used to lower arterial pressure in essential hypertension, veratrum viride Biologically Standardized in CRAW UNITS is *the drug that produces a physiologic fall in blood pressure.* A prominent feature in the integrated response to oral doses of veratrum viride in CRAW UNITS is a reduction in peripheral resistance without disrupting circulatory equilibrium.

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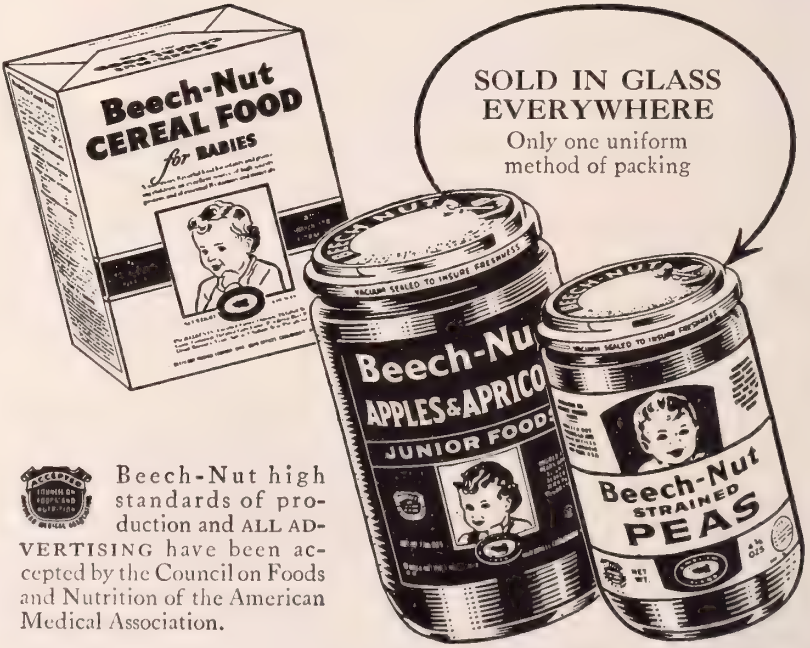
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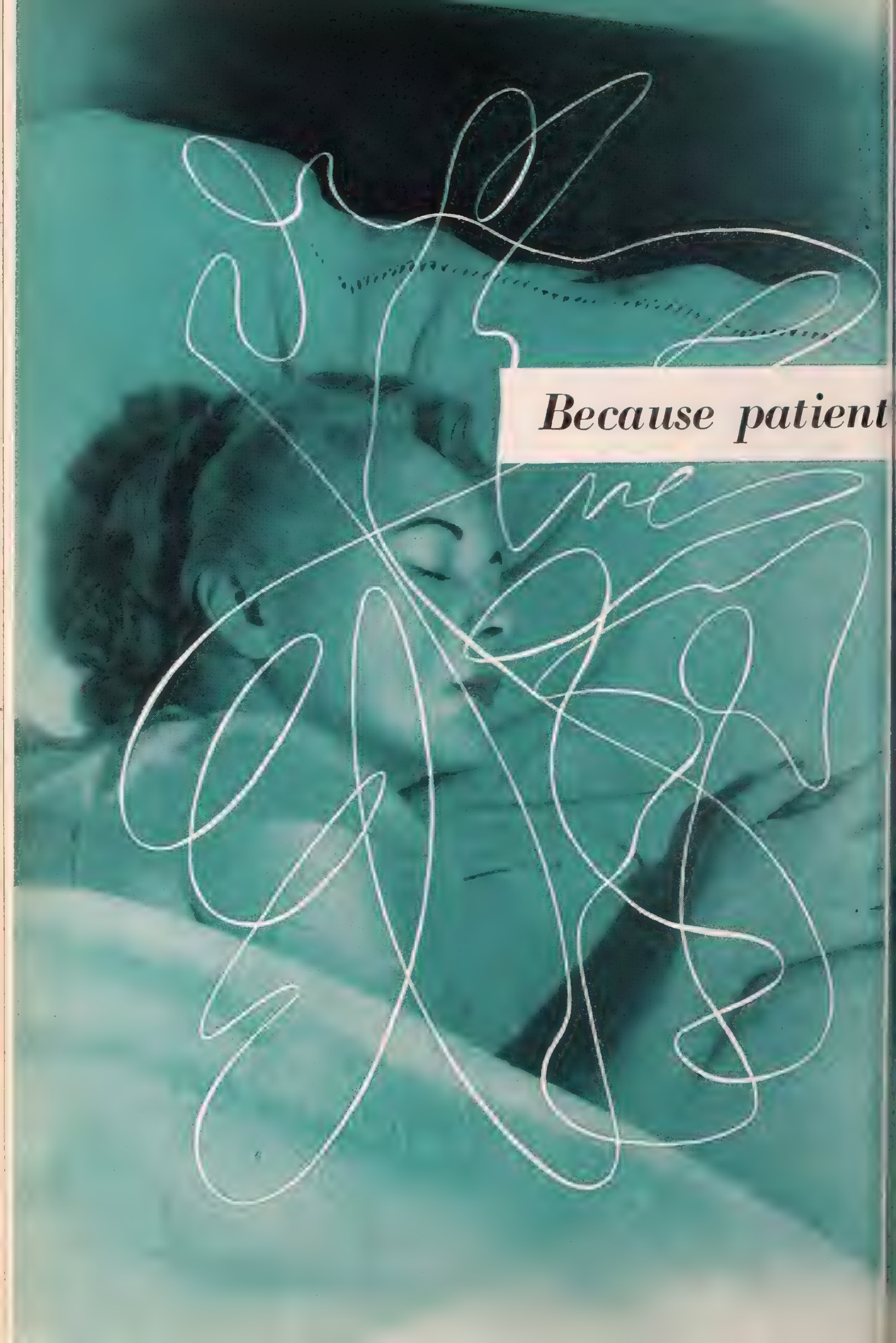
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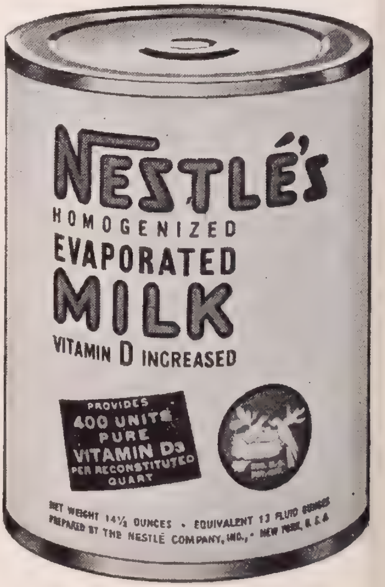
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*Perloff, W. H.: Am. J. Obst. & Gynec. 58:684 (Oct.) 1949.

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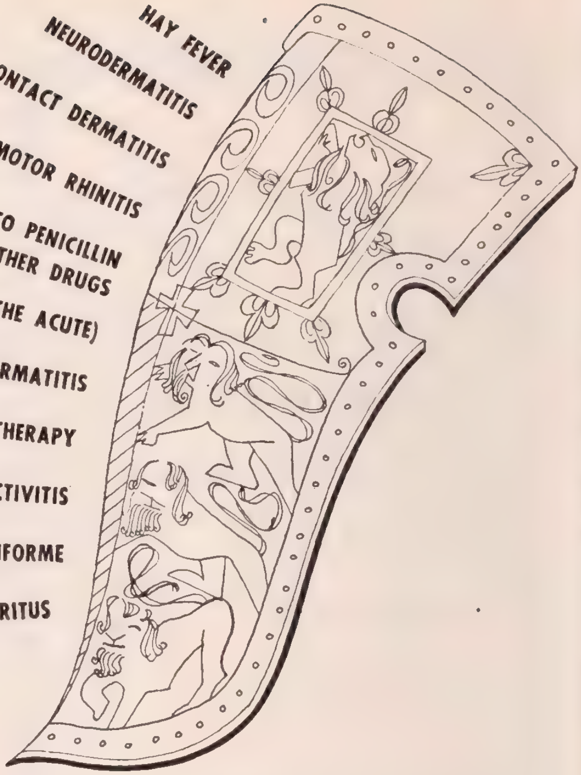

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References

1. Combes, F. C., Zuckerman, R. and Canizares, O: Diatrin Hydrochloride; A New Antihistaminic Agent for the Treatment of Pruritus and Allergic Dermatoses, *Ann. of Allergy*, *7*:676, 1949.

2. Kugelmass, I. N.: Antihistaminic Therapy of Allergic Disorders in Infants and Children, *N. Y. State J. M.*, *49*:2313, 1949.

3. Combes, F. C., Zuckerman, R. and Canizares, O.: Diatrin Hydrochloride; Clinical and Toxicologic Studies of a New Antihistaminic Agent, *J. Invest. Dermatol.*, *13*:139, 1949.

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"**NO toxic reactions** or signs of intolerance were observed." Payne, E. H.; Knaudt, J. A., and Palacios, S.: J. Trop. Med. & Hyg. *51*:68, 1948

"**NO symptoms or signs of toxic effects** attributable to the drug were observed." Ley, H. L., Jr.; Smadel, J. E., and Crocker, T.: Proc. Soc. Exper. Biol. & Med. *68*:9, 1948

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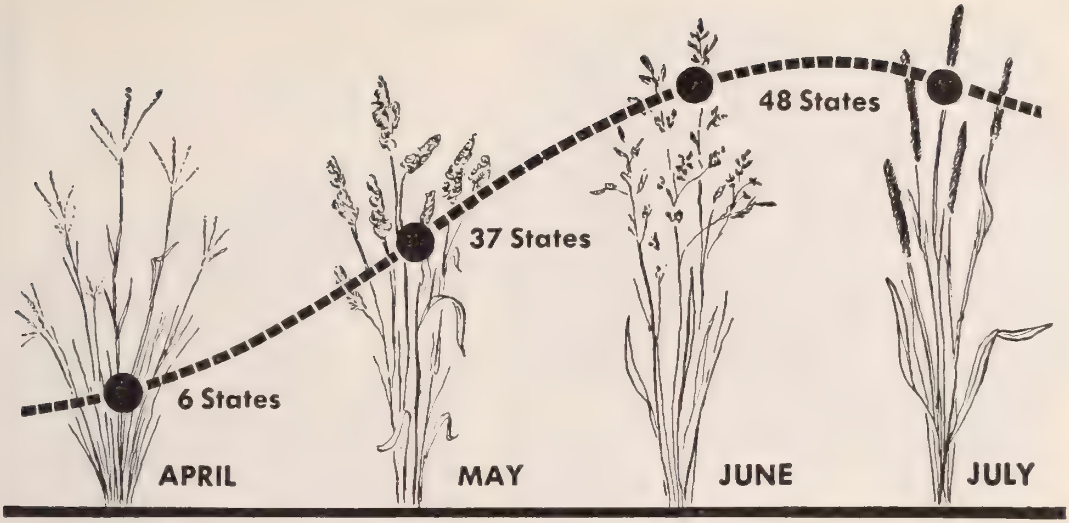

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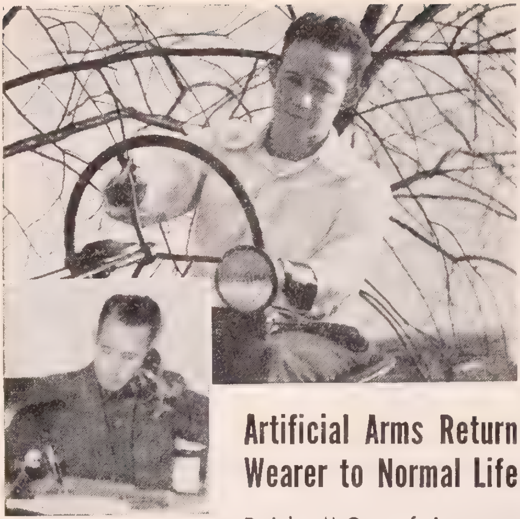

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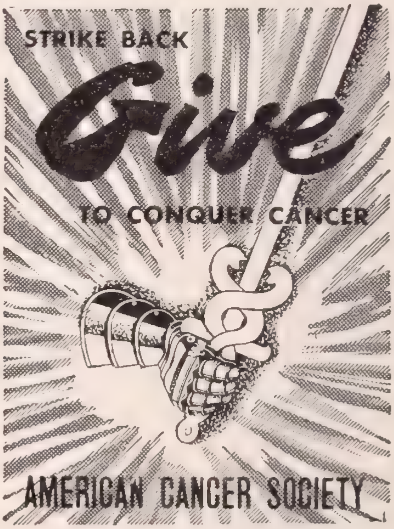

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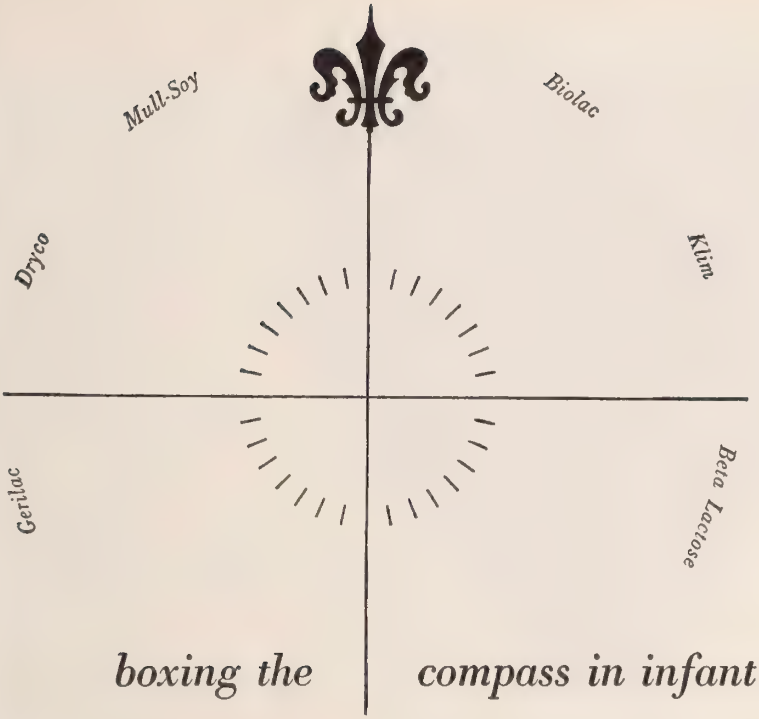

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Editorials

Retirement

The prominence recently accorded to retirement and pension plans in labor union negotiations with industry, accompanied for the most part by simultaneous demands for wage increases, brings us inevitably to a thoughtful consideration of the effect of these things upon the medical profession. For the most part, physicians as self-employers must provide for their own needs out of earnings; it is part of the price of independence.

However, provision for old age and retirement necessarily has to be made over a long period of time. During this time interval what happens to the national economy is of the greatest importance. Anyone who has tried to fill a bathtub with the drain improperly stopped is in a position to know the result, but few apparently apply the knowledge thus gained to a consideration of their future under a nationally unbalanced budget.

Deficit spending is an insidious evil, because it causes a slow and relatively unnoticed shrinkage in dollar value. When government borrows to meet current bills, its most convenient source of cash is commercial banks. The fact that they do not have the money on hand is no trouble at all. The banks merely ask Uncle Sam for some IOU's called bonds, and in return they give him a checking account equal to the figures printed on the bonds. Then Uncle Sam writes checks to pay his bills, and everybody is happy. More dollars are put in circulation, but the supply of goods that can be bought remains the same. So, every dollar in the nation loses value. "Dollars of your savings account, your salary, pension, life insurance, and bonds slowly shrivel. During World War II, such wildcat financing shrunk your dollars in half."[1]

A little thought ahead will certainly raise the question in every doctor's mind: What will my accumulated dollars be worth when it comes time for me to retire, if this shrinkage continues?

Already it has become necessary to increase social security benefits and welfare allowances to keep pace with rising costs and shrinking dollar values, and no attempt has yet been made to reduce the enormous public debt. Medical schools and hospitals are facing huge deficits unless they accept subsidy. Powerful labor union pressure is continuing for increased wages, shorter hours, pensions, welfare schemes, in spite of dwindling foreign markets for paid-for, not give-away goods. What price your savings? How long can we spend more than we make without disaster?

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[1] Release No. 117, Committee for Constitutional Government, April, 1950.

If you plan at some time to retire or even to continue working, give these things some thought. Coming elections afford the opportunity for every citizen-taxpayer to make his views known. Will you condone deficit spending and mounting debt by your silence?

Current Editorial Comment

Nonpolitical Medical Care? In an effort to popularize President Truman's national health program, the Democratic National Committee announced recently that it was distributing to party leaders throughout the country a booklet titled: "Better Medical Care That You Can Afford."

The booklet, simply illustrated and simply written, explains that the President wants to spur medical education and research, hospital and health-center construction, public health work, and the protection of babies and children.

The booklet says that "medical care will not be shared fairly while the dollar barrier stands. What can we do about that? The President proposes a common-sense plan—remove the dollar barrier by everybody paying his share of the cost of medical care in small, regular payments."

Details of this plan—compulsory national health insurance—are then outlined. It is described as "just one more way of using the insurance principle—like accident or life insurance."

Payments, it says, would cost no worker more than $6.00 a month and would be deducted from pay in the way the premiums for old age and survivors' insurance now are. It states that employers would match premiums paid by their employes.

It adds that the plan contemplates control by the states, with the right reserved for the patient to choose his doctor and the doctor to choose his patient, just as is now the case.

> William M. Boyle, Jr., Democratic National Chairman, said the booklet was "deliberately devoid of the emotional arguments and of the distortions used by opponents of the measure in their multimillion-dollar campaign of opposition" because of the committee's conviction "that the people are more interested in the facts than in name-calling."[1]

Whether the announcement of this move by the Democratic National Chairman on May 1 is purely coincidental we would not, of course, know. Time will tell; time and the Federal tax bills. We might have more confidence in the ability of the Democratic National Committee to make good the advertised slogan "Better Medical Care That You Can Afford," if the government had not already piled up a staggering indebtedness for so many things you could *not* afford.

Better medical care, like better public health, is purchaseable only to a certain extent. We are already purchasing more of everything than we can afford, as evidenced by current fiscal deficits on top of the existing public debt. National compulsory health insurance, far from providing better medical care, in our view would result in widespread but mediocre care at a price nobody can afford. England has experimented with it, with the Marshall plan funds to help absorb the costs. Who or what would subsidize our experiment? The Democratic National Committee?

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[1] New York Times, May 1, 1950.

A man without foresight is like a ship at sea without a rudder.—Anonymous

Panel Discussion

CHRONIC ALCOHOLISM AS A MEDICAL PROBLEM

Milton G. Potter, M.D., Buffalo, New York, Moderator

Dr. Charles D. Post of Syracuse, member of the Council Committee on Public Health and Education of the Medical Society of the State of New York, made the following introduction:

DR. POST: This program has been developed over the last few years by the Council Committee on Public Health and Education of the Medical Society of the State of New York. This Teaching Day is for the purpose of bringing out a program that was not specifically taken care of in the general meetings. This particular meeting has been expanded into a special field which has been under the direction of Dr. Milton G. Potter, who is chairman of the State Society Committee on Alcoholism. The program this afternoon has been developed by him and by the State Department of Health.

DR. MILTON G. POTTER: It is my pleasure this afternoon to act as moderator for the first panel discussion ever to take place within this or any other state medical society, so far as I know, on the subject of "Chronic Alcoholism."

The procedure will be as follows: Cards have been distributed for your questions. If you will please place the name of the speaker addressed along with the questions, these will later be collected and answered following the speeches. Approximately two minutes will be allowed for each question.

Alcoholism is a very complex problem, and, while the general public has been more or less interested in the subject, until recently it has shown little if any tendency to base opinion and action on scientific findings relating to alcoholism. The chief obstacle to progress in the scientific solution of problems concerning alcoholism has been the existence of a prevailing body of public opinion which has been apathetic to this approach. Fortunately, through the activities of the National Committee for Education on the Problems of Alcoholism and through the media of press, radio, and platforms, this public opinion has gradually changed. An emotional tone, which a favorable public opinion requires, has been successfully created in the form of sentiments which express the positive attitude, namely: (1) that the alcoholic is a sick person; (2) that the alcoholic can be helped; (3) that he is worth helping, and (4) that this is a medical and a public health responsibility.

This attitude and approach is capturing the public mind, and the required approvals for changing existing situations are being slowly gained. Without this approval, science remains inert.

A large proportion of the general practitioners have remained indifferent to the problems of the alcoholic. The general practitioner must be persuaded to accept these concepts, for he is the middle man between scientific research and the public. As long as he is not convinced, his noncooperation will constitute a serious obstacle to the complete winning of the public. It is, therefore, of great importance to consider the attitude of the general practitioner.

Dr. Potter introduced the members of the panel, whose papers will follow in the order of their presentation.

Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Teaching Day, May 9, 1950

ALCOHOLISM—THE GENERAL PRACTITIONER'S VIEWPOINT

Marvin A. Block, M.D., Buffalo, New York

(*Chairman, Committee on Problems of Alcoholism, Medical Society of the County of Erie*)

Of THE estimated 65 million people in this country who partake of alcoholic beverages, there are about four million problem drinkers; 300,000 of these reside in New York State. Of the 750,000 confirmed alcoholics in the country, about 10 per cent are residents of this State. I dare say that, of this tremendous number of sick people, only a very insignificant percentage ever consult a physician about the illness. Responsibility for this apathy, I believe, rests not with the patients themselves but with the medical profession. Most doctors' attitudes in the past years have relegated these sufferers to the limbo of the social pariah with an unwarranted stigma attached.

It is not so long ago that victims of tuberculosis, cancer, and mental disease were treated as untouchables, and the ailments from which they suffered were discussed in whispers. However, since the medical profession has studied the prevention, causes, and effects of these illnesses, discussion of these diseases has been brought into the light where all can learn. The public has been educated to regard them as recognizable entities, responsive to treatment, and, more important, preventable, for the most part, by early detection and prompt therapy.

For many years alcoholics have been regarded as moral renegades, lacking in will power, addicted to drink by a weakness of character. They have been preached to, shouted at, punished, and ridiculed, as though any of these measures have ever been effective in aiding any sick person in recovering from an illness. It is comparatively recently that the medical profession has taken an interest in these people as patients, human beings suffering from an illness from which they cannot recover without help—help from people who have made a study of this illness and evolved formulas whereby it can be treated.

As has been true many many times in the history of medicine, persons outside of the profession have pioneered in ministering to these patients. Perhaps the first group to prove effectively that alcoholism as an illness was controllable was the organization known as Alcoholics Anonymous. Here, through sheer desperation, a group of people afflicted with this malady found a way of helping themselves. They did not know exactly how they achieved their results but only that people exposed to their theories were helped. If laymen, without technical experience, could arrive at such a formula, certainly trained minds with a knowledge of anatomy, physiology, chemistry, and psychiatry should be able to evolve some treatment for these people. It is the responsibility of the medical profession to do this job.

By the very nature of the illness, the doctor treating the alcoholic should be the general practitioner. Alcoholism is not only a medical problem, it is also a psychologic and sociologic one. Who is better fitted to combine all of these phases than the family doctor, the one who knows or should know the background, sociologically, psychologically, and economically, as well as physically, of the patient whom he treats?

All of these phases must be part of the armamentarium of the physician who treats alcoholics. By treatment, I do not only mean sobering up drunks; that is but a minor part of the treatment. Uncovering of the physiologic defects and delving into the deeply rooted mental conflicts and frustrations that so often constitute the etiology of the problem drinker—that is the proper treatment of the alcoholic so that a correction of the physiology and a resolution of these problems, as well as an ability to know himself and his trouble, can return this sick individual to society, well-integrated mentally and physically.

Treatment of the acute phase of alcoholism is the same, practically, as the treatment of any acute intoxication: fluids intravenously, adequate elimination to dilute toxic agents, and sedation where indicated. Where prolonged indulgence has precluded proper diet, supplemental treatment with vitamins and minerals is essential. The newer glandular products are helpful where indicated, especially when delirium tremens has already set in. Damaged liver or kidneys or other organic disturbances must be taken into consideration and treated accordingly.

The important factors in treatment from the point of view of prevention and with a view to rehabilitation come after the acute phase has passed. This is the time when the groundwork for recovery is laid, and, interestingly enough, this is the most difficult phase. Laymen and doctors alike are prone to believe that alcoholics are such only when they are drinking. With recent study, I believe it is now acknowledged that the alcoholic is a personality, even though alcohol is sometimes not involved. In most cases, he is a highly neurotic individual who finds in alcohol an escape from the conflicts and frustrations which give him an uncontrollable anxiety. Alcohol, the crutch which he starts using only as a temporary support at infrequent intervals when his anxiety becomes most acute, becomes an indispensable necessity as time progresses, with more and more dependence upon it by the patient as the neurotic exacerbations become more frequent. Then there is the social drinker who takes alcohol through enjoyment of the taste and requires more and more of the beverage to get the effect he likes and eventually prefers it to anything else, including food. These people are likely to seek a doctor only after they are physiologically crippled by organic degeneration, coming as a result of the body's deprivation of the necessary nutritional elements.

The treatment of alcoholics takes a dual role—the treatment of the acute phase described and the eventual rehabilitation of the patient on a long-term basis. The detoxifying process is comparatively short and consists of measures such as those outlined. Rehabilitation, however, requires a great deal more time, but it is time well spent, for the recovery of one of these cases to eventual normality is as gratifying to the physician as it is to the patient. Not to be overlooked are the physiologic, glandular disturbances which might contribute to the constitutional and emotional immaturity of the individual. When we stop to think of the sensational recoveries of patients suffering from pernicious anemia, arthritis, and other such diseases by the use of the new agents recently developed, we are inclined to marvel at the strides which medicine has made. The recoveries from chronic alcoholism by employment of the proper measures are no less dramatic.

Where the doctor is confronted by an underlying mental condition overlaid by alcoholism—and this includes a fair percentage of alcoholics—it may be necessary to consult with a psychiatrist, for many potential psychoses are hidden under what appears to be alcoholism. In most cases, however, a competent general practitioner can handle these patients satisfactorily, and today's medical graduate has within his grasp a good understanding of psychiatry and psychosomatics.

After a complete physical and laboratory checkup, the doctor may feel that the underlying cause of excessive drinking is an unhappy home environment, an economic insecurity, or an untoward emotional strain. These must be exposed and, if indicated, the patient removed from his environment until he has made his adjustment.

There is a division of opinion as to what constitutes recovery in these cases. Some have voiced the opinion that recovery can be complete to the point where the patient can drink normally. However, until there is more evidence forthcoming, I feel that an alcoholic, once established as such, cannot drink normally again, and, in my opinion, he should not try. I have never found one who gained anything by the test, and there have been any number who have lost a great deal of ground trying to convince themselves and their doctors.

The doctor cannot help the alcoholic without studying the condition himself and striving for an understanding of the illness. This requires a desire to learn and a willingness to spend a great deal of time with the patient. There is no short cut to helping the alcoholic. There is no simple, specific medication as yet, and there is no secretive way of administering, unknown to the patient, anything which will inhibit the desire for alcohol.

Of late, drugs such as Antabus have been put on the market to help the alcoholic patient. In this country, as yet, these drugs cannot be bought without prescription. Those of us who have seen the effects of this drug feel that there is trouble and danger in its indiscriminate use, and I hope it will never be made available to the general public. It should be administered only under the direction of a competent physician. It should never be used except under controlled conditions and not until the patient has been thoroughly checked physically. Its reactions are drastic and can be dangerous in the presence of certain physical defects. It belongs in the class of revulsion treatment, and, to be effective, cooperation of the patient is imperative.

Perhaps the most effective treatment in the rehabilitation of the alcoholic is that which is effective with other neurotic patients, a philosophy of living which is compatible with the individual and his family, an absorbing faith in himself which comes only after he has learned to understand himself, and a close association with others whose experiences parallel his own. The physician's cooperation with Alcoholics Anonymous is one way of obtaining these things for his patient. There are enough chapters of this organization for any physician to contact them on behalf of his patient, and he will find them willing and able to help the patient at all times. Their thorough understanding of what the patient is experiencing cannot be overestimated, and their sympathetic attendance at trying times is of great therapeutic value. In cooperation with the physician, they form an indispensable adjunct to the treatment of alcoholics and can often take over interim treatment between visits to the doctor. Their teachings are on a level with the understanding of most people, and they help to give the patient a faith in himself and his fellow men which is often lacking in alcoholic individuals.

The alcoholic is a sick man. He must be treated as a sick man. When the economic loss in this country through this illness runs to about a billion dollars annually, it is revealing to note that less than a million dollars is spent on the proper treatment of these people. The loss in human suffering and the effect upon their families cannot be computed in dollars. Surely, with this tremendous waste, it is worth the while of the doctor to devote his time and effort to treating these sick people so that they can recover and lead healthy and well-integrated lives.

PROBLEMS OF ALCOHOLISM—THE HOSPITAL VIEWPOINT

C. Nelson Davis, M.D., Malvern, Pennsylvania

(*Medical Director, Malvern Institute*)

The public interest in problem drinking has increased considerably in the past ten years. Alcoholics Anonymous has played an important role in the awareness of the average citizen of this disease. As it is becoming alerted to this disease, the public is demanding and asking for better service and knowledge of this condition on the part of institutions and hospitals—in fact, pleading for a greater concern about this disease on the part of physicians as a whole. The medical profession, although long indifferent to the need for a vigorous attack on problem drinking, is being pleasantly awakened to the tremendous possibilities offered in coming to grips with this disease which has plagued mankind since the beginning of civilization. The present general interest has a stimulating effect on the profession and will eventually involve the institutions in which doctors work.

Hospitals can and will play a creditable part, eventually, in bringing aid to these afflicted people at a time most appropriate to acquaint the person with his problem, at the clinical level, informing him of the true nature of the disease from which he suffers.

Present Facilities and Attitudes

It is fair to state that present hospital management is not favorably inclined toward the acceptance of the alcoholic patient. One cannot criticize the general hospital for this attitude, because of the scarcity of beds for more urgent cases, at least apparently considered more urgent. In the light of present knowledge, however, this antagonism belongs to another day and has no proper place in the present era of the treatment of the alcoholic patients. Most general hospitals have in their plants buildings or sections that can readily be converted to the care of the problem drinker, with little expense to the hospital. The physical plant raises few problems if there are doctors on the staff willing to take care of the problem drinker. Hospitals can and should accept the problem drinker for treatment. Fundamentally, every period of sobriety is an opportunity to instruct the patient about the nature of his disease so that he can do something about his affliction.

The present facilities include the general hospital which is disinclined to accept the alcoholic patient. When the alcoholic is admitted, the diagnosis is hidden, thus forming a poor medium in which to work with the alcoholic. If the condition was openly admitted, it would be mutually beneficial to the patient and the hospital. This is not asking too much and would make available in general hospitals a section to handle difficult patients.

As a psychiatrist I have never entered a general hospital where there were not several unruly patients disturbing other very sick patients. The hospital attitude is one which resents the presence of the disturbed patient but does little about the problem confronting him.

Who are the disturbed patients? To mention a few, some acute infections with high fever, postoperative prostatectomies, appendectomies, and debilitating diseases can mentally decompensate the patient. How many times has an obstetric delivery been complicated by mental decompensation of fleeting character? These cases are considered unfortunate difficulties, but in spite of the difficulties occurring again and again, no real steps are taken for proper care of the acute mentally decompensated patient.

It is the speaker's belief that general hospitals can adequately handle the many cases of fleeting mental decompensation which are constantly present and which they cannot avoid in a general hospital census. It seems, however, that no active steps are taken to correct this problem.

The acceptance of this problem of acute mental decompensation would make available three to four beds per hundred of hospital census. In a properly designed area of the hospital, a section with proper facilities for the care of the disturbed patient would be an asset to the hospital. It would furnish the means to care for this type of patient, who is always present in the general hospital.

If such a section existed, it could be utilized for the problem drinker. In the modern treatment of the alcoholic, the majority of cases are eating and fairly comfortable in twelve to forty-eight hours and are usually very cooperative. At this time they could be transferred to any part of the hospital. Alcoholism is a disease and should be so considered by medicine at large.

Mental Hospitals

At long last, it is finally being accepted that mental institutions form a poor soil to cultivate sobriety. The mental institution forms the soil that usually cultivates the most intense antagonism in a patient. No one denies that, when the alcoholic is in the full bloom of a binge, he is mentally sick and without hesitation can be called crazy. Hospitalized, the fog of alcoholism soon disperses, and he is immediately aware of his environment. The patient, mentally compensated, immediately seeks the physician in charge stating, "I'm not nuts—get me out of here." No real therapy can be instituted with a rebellious patient, a fact known to medicine through the ages but one which medicine has been slow to accept in its application to the problem drinker.

Psychiatry through observation has learned that mental institutions are handicapped in treating the alcoholic and find it most difficult to introduce the patient to a sustained sobriety. Likewise, the commitment of the alcoholic, although at times essential and the lesser of two evils, is a poor tool to use if sobriety is the ultimate goal.

In spite of modern treatment, there are and probably always will be a certain percentage of alcoholics who will need care in mental hospitals, thus protecting the patient and, equally important, protecting the family. This is most essential, because, of all afflictions of man, the alcoholic is the most difficult to live with.

Then, too, we must consider the large group of individuals in whom alcoholism is a secondary invader, the major difficulty being a malignant mental condition as the primary cause.

Alcoholic Clinic or Institute

The hospitals and clinics, of which there are now several scattered throughout the country, seem to offer the ideal setup for the treatment of the problem drinker. They may operate as a single unit or in conjunction with a general hospital. They are usually administered so that all the patients have the freedom of mingling with one another; this offers an easy means of making group therapy available to the patients, which seems to be most helpful. Alcoholics Anonymous participates to some degree in most of these clinics. All the clinics inform their patients about the work of A.A. and tell them how contact can be made with this organization.

Institutions and the Physician

Recently, at a forum on problem drinking, six physicians entered into the discussion period, three of them problem drinkers and the other three social drinkers. This small group was unanimous in deploring the poverty of information about problem drinking among the medical profession. Those afflicted detailed their difficulty in getting proper treatment. They especially called attention to the absence of proper teaching about problem drinking in our medical schools. They recognized that, when they went to school, medical teaching about alcoholism did not exist, except as a hopeless attitude, and at the present time, for the most part, the same attitude prevails.

It would be singularly helpful if the large body of physicians would recognize that the only drink a problem drinker can control is the first one; failing in the avoidance of the first drink, the drinks naturally multiply until the "binge" is reached with all its physical difficulty, accompanied by the stupid, idiotic behavior that is problem drinking. If physicians as a whole would recognize the dynamite in the first drink and inform all alcoholics that they cannot drink wine, beer, or whiskey, it would be a most forward step in disseminating information which is so vitally necessary for the problem drinker to keep in mind if he is to live in sobriety.

In conclusion, the physician should inform the alcoholic that he cannot drink wine, beer or whiskey. Even medicaments containing alcohol such as cough mixtures or aromatic spirits of ammonia are taboo.

It is also the responsibility of the physician to warn the alcoholic against taking sedative drugs. Sedatives are a direct invitation to another binge. Then, too, the problem drinker is readily susceptible to barbiturate addiction. A warning against sedatives is most appropriate.

Summary

1. General interest in alcoholism is apparent.
2. General hospitals should participate more actively in the care of the alcoholic.
3. Teaching in medical schools should include a modern attack on problem drinking.
4. Physicians should be informed about problem drinking so that they can properly advise patients and families when they seek help.

CHRONIC ALCOHOLISM AS A PUBLIC HEALTH RESPONSIBILITY

I. Jay Brightman, M.D., Albany, New York

(Assistant Commissioner, Division of Medical Services, Department of Health, State of New York)

FEW physicians, sociologists, or economists who have given serious consideration to the syndrome of chronic alcoholism, or true compulsive drinking, will fail to recognize it as a public health problem. Dr. Thomas Parran defined the latter as a disease which is so widespread in a population, so serious in its effect, so costly in its treatment, that the individual unaided cannot deal with it himself.

Widespread? Estimates indicate that there are over four million excessive drinkers in the country, of whom 750,000 drink compulsively. The estimates for New York State are 280,000 and 72,000, respectively. Besides the drinkers themselves, there is the problem of the vast numbers of their dependents whose lives are so adversely affected.

Serious? The progressive physical and mental deterioration and the associated social and economic upheavals place alcoholism among the most devastating of the long-term illnesses.

Costly? The few available adequate facilities are mostly private and financially out of reach of the majority of compulsive drinkers. Although chronic alcoholism affects persons at all economic levels, it does not take too long before this syndrome serves as the great leveler, due to cessation of income, wasting of available funds, and, in many instances, costly attempts at ill-advised forms of treatment. In New York State, only psychotic alcoholics are admissible to the State mental hygiene institutions, and these make up only 8 to 10 per cent of all problem drinkers.

Objectives of a Public Health Program in Chronic Alcoholism

The prime theme of any public health program is prevention. This may be considered from two aspects: primary prevention which implies complete avoidance of the disease in question and secondary prevention which calls for arrest of the course of an existing disease, with avoidance of deterioration and complications. These are the two objectives of the alcoholism control program, the achievement of which calls for numerous functions being carried out by official and voluntary agencies at the State and community levels.

Primary Prevention.—Primary prevention requires a program directed at potential drinkers. This group is composed largely of emotionally immature and unstable persons who must be assisted in securing adjustment to the daily demands of life. Not all such people become alcoholics, and it is not possible to predict which ones will. Obviously, all need help and this at the earliest possible period of life. Epidemiologically speaking, the emotionally immature person is a susceptible host; alcohol is a substance which may be noxious to such a person, and an unusually taxing series of events may be the trigger mechanism which brings the two together and makes the individual dependent upon the beverage. Attempts to make alcohol inaccessible have been proved failures. Even if successful, the immature persons with a problem would seek another form of crutch, equally disastrous. Trying experiences in everyday life may be reduced but not entirely avoided. Therefore, the most logical approach is to attempt to strengthen the individual.

This aspect must not be considered an alcoholism control program per se but rather as a part of an over-all mental health service. It calls for an intensive public educational activity directed at improving the adjustment of children and adults in their homes. Not only medical and public health facilities but the forces of family guidance agencies, the churches, and the schools must all be brought into play. It is gratifying to observe that several health agencies, official and voluntary, are including programs in mental health as part of their regular activities.

Secondary Prevention.—Secondary prevention, which involves the arrest of the progress of the disease, calls for a complete evaluation of the patient regarding his physical and mental status and his socioeconomic background so that all factors contributing toward the state of alcoholism can be determined and a rational mode of therapy prescribed. Most patients who have not yet shown signs of serious mental or physical deterioration and whose course might be considered reversible can be managed on an ambulatory regime, possibly augmented by a short period of hospitalization. This has been well indicated by the experiences of many medical agencies, particularly the Yale Plan Clinics, which were recently taken over by the Connecticut Commission on Alcoholism. Clinic and short-term hospital services are expensive, particularly when one considers the relatively small number of alcoholic patients who can afford to pay their own way. However, they have the advantage of (1) providing care for persons who are in the early stages of compulsive drinking and who, therefore, have the best chances for rehabilitation, (2) offering a type of service of high caliber and dignity which patients will or can be educated to accept, (3) keeping the patient in the environment in which he must learn to adjust, (4) allowing him to maintain or regain employment while under treatment, and (5) being much less expensive than prolonged institutional services required by advanced patients whose prognoses are so much poorer. A given amount of funds will provide more service to more patients, with better chances of success, if applied to a clinic short-term hospital program than if devoted to a long-term institutional program.

It is quite true that many of the large numbers of alcoholics plaguing the police and the courts do require long-term institutionalization. These agencies are appealing for institutions or farm colonies to which such patients may be sent. How many of these chronic offenders can be helped by institutionalization is debatable. A large percentage require custodial care, which could hardly be considered part of the public health program. Obviously, all patients should be given the full benefits of a medical approach to rehabilitation before being assigned for custodial care.

New York State Approach

The problem of chronic alcoholism has been give due consideration in New York State. In 1947, the Governor and the State Legislature received resolutions from many medical, civic, and correctional agencies, calling on them to give consideration to a State program to provide services to the chronic alcoholic patient. The matter was referred to the Interdepartmental Health Council which appointed a Subcommittee on Problems of Alcohol to investigate the matter.

Reporting to the Council in November, 1947, the Subcommittee recommended that a comprehensive public health program in alcohol control should provide an active public educational campaign, clinical and related services, training of personnel, graduate and undergraduate teaching in the medical, nursing, hospital administration, and social service fields, and research.

Recognizing that funds would be very limited, at the beginning at least, the Subcommittee recommended that the initial approach should be the establishment of one demonstration center which would serve to test the effectiveness of the best available methods now utilized in the management of the compulsive drinker, to experiment with procedures directed at the improvement of those methods, and to serve as a model upon which activities in other areas might be patterned. The plan called for the establishment of an outpatient service, providing the necessary medical, psychiatric, psychologic, and social services required by the alcoholic patient, and a hospital service for the short-term care of psychiatric or medical complications. Such a plan could best be established in an area where there was an active public educational campaign so that the program could be properly interpreted to the community and general support thereby received.

Several cities in New York State had undertaken pioneer work in chronic alcoholism, had made considerable progress in the establishment of educational and informational services, and were ready to take on a demonstration program of this type. The City of Buffalo was finally selected as the area having the largest number of favorable factors which might lend themselves to a successful demonstration, and the program was begun there in December, 1948. The University of Buffalo School of Medicine has provided the space for the clinic with funds provided by the State. The Edward J. Meyer Memorial Hospital has provided hospital beds for approximately 40 patients for short-term care. The Western New York Committee for Education on Alcoholism has inaugurated an active educational program with funds made available to it by the Community Chest. In addition, the project has the active interest of many voluntary agencies, including the Erie County Medical Society and the Council of Social Agencies. Also, the existence of an active county health department and a State mental hygiene institution favors the situation by making the specialized personnel of these two agencies available to the clinic in either a consultive or actual service capacity.

Beginning with the current fiscal year, funds have been appropriated to the State Department of Health for the operation of a Chronic Disease Research Institute in a group of buildings loaned for the purpose by the United States Public Health Service. This program will be operated by the University of Buffalo School of Medicine with the funds made available by the State Department of Health. The Alcoholism Control program will become part of the Institute, thus clearly establishing alcoholism as a chronic illness and a very important medical and public health problem.

Evaluation of Activities

In the development of any program, it is important for us always to keep in mind just what our objectives are and how close we are coming to achieving them. It is necessary to evaluate each function we employ to determine how well it is serving its purpose. We must try to apply quantitative and qualitative criteria wherever applicable. We must study and restudy our methods to be certain that they are reasonable and have the potentiality of a successful result.

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THE ENDOCRINE BASIS AND HORMONAL THERAPY OF ALCOHOLISM

James J. Smith, M.D., New York City

(*From the Department of Medicine, New York University-Bellevue Medical Center*)

EDUCATIONAL campaigns during the past decade have brought to the public the realization that alcoholism is a disease. As a result, the practicing physician now finds that alcoholics and the families of alcoholics more and more frequently turn to him for treatment of this disease. Fortunately, research in recent years has resulted in specific medical therapy for various states of alcoholism, which can be successfully applied by the practicing physician.

The prevailing concept of alcoholism as a disease is that it is a personality problem resulting from emotional immaturity, in which the afflicted individual attempts to escape reality by using alcohol. When I first became aware of alcoholism as a problem, this seemed to be a reasonable point of view, and I adopted it as a working hypothesis. However, the more I saw of alcoholics at Bellevue Hospital the more clearly were metabolic factors in the disease evident.

The most striking of these were the biochemical and clinical similarities between delirium tremens and Addisonian crisis. To the proved regime of the treatment of delirium tremens with saline and glucose infusion and generous amounts of ascorbic acid, we added the use of adrenal cortical extract (ACE) and desoxycorticosterone. Patients so treated responded far more rapidly than before. We were thus successfully treating delirium tremens precisely as we treat Addisonian crisis. These observations led us to explore the possibility that the alcoholic's problem was caused by disturbances in his internal environment, or body chemistry, rather than by difficulties in his external environment and that alcoholism might, indeed, be a metabolic disease.

During the past several years, we have, therefore, carried on extensive biochemical investigations into alcoholism. These investigations have been mainly endocrinologic and have been directed toward the pituitary-adrenal-gonadal triad. In the brief time at my disposal, I cannot attempt to list the results of all of the studies which we have done, but I should like to present to you the findings most significant of endocrine abnormalities.

In many of these studies, deficiencies of both adrenal cortical and hypophyseal function are evident. For example, fasting hypoglycemia is frequently found in alcoholics, particularly in the post-drinking stage. In addition, "hyperinsulin" glucose tolerance curves are frequently found. I think it important to note that there appears to be no correlation between the degree of hypoglycemia and the desire for alcohol. Alcoholics with blood sugar values as low as 10 or 20 mg. per cent refuse alcohol and demand food.

These low blood sugar values were obtained after intravenous insulin. Our purpose was to discover whether or not hypoglycemia in itself was the cause of convulsions in alcoholics with a history of alcoholic convulsive seizures. We found that, although their blood sugar values fell to low levels, convulsions did not occur. In some of these patients ACE was given intravenously with the insulin. This did not alter the hypoglycemic curve, although the patients did feel better than when given insulin alone.

A large number of alcoholics have shown an abnormal water tolerance test and many show low serum sodium and chloride.

Although the 17-ketosteroid values were quite low following delirium tremens and in patients with severe peripheral neuropathy, the 17-ketosteroid values in over 100 other alcoholic patients were, on the average, only slightly below normal.

It is interesting that we have found that ascorbic acid, which is necessary for adequate adrenal function, is usually at a very low plasma level in the alcoholic.

We have, then, biochemical evidence which indicates that there is diminished function of both the adrenal and pituitary glands in alcoholism.

It seemed important to determine what effect alcohol itself has on these glands. We have given alcohol to well over 200 normal and hypophysectomized rats. We found that doses of alcohol producing moderate intoxication in the rat caused a fall in the ascorbic acid and cholesterol content of the adrenal gland. We, therefore, concluded that alcohol stimulates adrenal function. We found, however, that these changes were not produced by alcohol in the hypophysectomized rat. From this we concluded that alcohol stimulates the adrenals through the pituitary. Interestingly enough, hypophysectomized rats dehydrated themselves and drank their own urine rather than drink alcohol, and doses of alcohol which were tranquillizing in normal rats killed the hypophysectomized rats.

In the human, then, the crucial point to be settled was whether the diminished adrenal function was primary in the gland itself or secondary to inadequate pituitary function. The blood eosinophil responses of the alcoholic to adrenocorticotropic hormone (ACTH), to adrenalin, and to alcohol have solved this problem. Twenty-five milligrams of ACTH produce a profound fall in the circulating eosinophils of the alcoholic. This fall is maximal at four hours and is identical with that seen in normal subjects. This means that the alcoholic has good adrenal cortical reserve. To elucidate the role of the pituitary we tested the eosinophil response of the alcoholic to adrenalin and to alcohol. As we have shown, alcohol stimulates the adrenal by way of the pituitary. Other investigators have shown that adrenalin causes adrenal cortical activity by stimulating the pituitary. The alcoholics' eosinophil responses both to adrenalin and to alcohol were poor. This indicates that the pituitary gland of the alcoholic is not capable of stimulating the adrenal cortex adequately. We have further evidence of inadequate pituitary function in alcoholics in their generally elevated blood uric acid and in their negative response to the specific dynamic action of proteins.

It appears, then, that the metabolic defect in alcoholism is primarily pituitary insufficiency to which adrenal cortex inactivity is secondary.

The hypothalamus must always be considered in the etiology of pituitary disturbance. Although we have not yet unraveled the role which the hypothalamus may play in alcoholism, clinical observations forcibly suggest that the hypothalamus is involved. Sleep disturbances and disturbances in appetite are profoundly characteristic of the alcoholic. These functions, sleep and appetite, are known to be governed, at least in part, by the hypothalamus.

A fundamental question in alcoholism is whether or not the metabolic aberrations are the result of chronic alcohol intoxication or whether the metabolic aberrations antedate and induce alcoholism. The evidence indicates that endocrine dysfunction precedes alcoholism. A constitutional survey of over 2,000 male alcoholics has revealed a specific body hair pattern; head hair is generally abundant in alcoholics, whereas body hair is scarce and shows a feminine pattern. In female alcoholics, infantile uteri are frequently found. These constitutional characteristics are well established before the age at which alcoholism usually begins. Acne occurred in only 4 to 5 per cent of the 2,000 male patients studied, although, in the general population, acne is variously estimated to occur in 25 to 40 per cent of boys. Here again, we have a characteristic display of endocrine behavior antedating alcoholism. Our surveys have further shown that diabetes is rare in alcoholics, that well-established alcoholism usually remits during pregnancy, and that alcoholism may begin in the menopausal period, either surgical or natural. In male alcoholics, the peak of alcoholism is in the forties, and some alcoholics show marked exacerbation of drinking in the fifth and sixth decades. Thus, fluctuations in endocrine function appear to be correlated with phases of alcoholism.

What treatment has resulted from this research? The treatment of acute alcoholism no longer presents a problem.

Patients with acute alcohol intoxication, acute alcoholic hallucinosis, or acute Korsakoff psychosis will be brought under control well within twenty-four hours by adrenal cortical extract given intravenously. During the first twenty-four hours a total of 20 to 40 cc. of ACE may be administered. Although injections at six-hour intervals usually work out well, we have sometimes found the patient to respond more quickly when given the first two or three doses at intervals of two to three hours. Vitamin C should be given concomitantly, either by mouth or by vein. In the succeeding twenty-four hours, 5 to 15 cc. of ACE may be given, either intravenously or intramuscularly in divided doses, the patient taking vitamin C orally. If the patient appears dehydrated or profoundly agitated, an infusion of 1 to 2 L. of glucose and saline should be administered. The ACE and the ascorbic acid in the dose of $^1/_2$ to 1 Gm. may be put directly into the infusion flask, together with a sedative if required.

What happens to the patient when this regime is followed? His craving for alcohol disappears, a sense of well-being is induced promptly, appetite is restored, the nervous tension and jitteriness disappear, the patient becomes calm and usually sleeps without sedation.

Hangover, which is not peculiar to alcoholics but which is a sequel to overindulgence in alcohol by any person, can be abolished quite readily with the use of ACE, either intramuscularly or intravenously, depending on the severity of the symptoms. Usually, 5 to 15 cc. of ACE in divided doses over a twelve-hour period abolish the hangover, and the patient feels well. Vitamin C in doses of 100-mg. tablets may be taken every three hours.

In delirium tremens, 100 to 150 mg. of ACTH given intramuscularly in divided doses over a twenty-four to thirty-six-hour period is the most highly effective treatment we have ever used. The patient begins to show improvement on this regime within six to twelve hours. Saline and glucose infusions with vitamin C may hasten recovery, but ACTH will terminate delirium tremens promptly on its own. If ACTH is not available, the treatment of delirium tremens will be highly successful with the therapy outlined for the treatment of acute alcohol intoxication. I should add that patients in acute alcohol intoxication will never go into delirium tremens on this regime.

The acute phase of alcoholism having been successfully treated, the more important problem of chronic alcoholism remains to be managed. In our clinic for alcoholics at Bellevue Hospital, we have developed what I may be pardoned for calling the "silent" treatment of alcoholism. Because it is evident that the alcoholic is suffering, fundamentally, from pituitary insufficiency with its sequelae of secondary adrenal cortical and gonadal hypofunction, our treatment has been solely endocrine. The aim of this treatment is to make the patient feel well, and the only question a patient is asked in the clinic is how he feels.

Female patients whose alcoholism began following either surgical or natural menopause are treated with estrogens and ACE. The majority of our patients respond very well to injections of 1 to 2 cc. of ACE intramuscularly three times a week.

Certain male patients respond well to 10 to 25 mg. of testosterone propionate given intramuscularly three times a week. Some male patients require 2 cc. of ACE with their testosterone injection. Methyl testosterone has been used in doses of 5 to 10 mg. daily in some male patients with good success.

The majority of alcoholics respond best to ACE. Our practice following the first twenty-four to forty-eight hours of treatment for acute alcoholism is to give the patient 2 to 3 cc. of ACE intramuscularly daily for four or five days and then maintain the patient on 2 cc. of ACE three times weekly. We have used ACTH and cortisone in the treatment of chronic alcoholics, but inasmuch as these substances are not generally available in sufficient quantities for the treatment of chronic alcoholics, there seems to be no point in outlining their use here.

The dosages I have given are, of course, average doses and may be varied to suit the needs of the individual patient.

Despite the effectiveness of the treatment which I have outlined, and despite the fact that the alcoholic so treated remains sober and feels well, I do not consider the problem of alcoholism solved; for even with this treatment the alcoholic cannot drink. The goal in the treatment of alcoholism must be to devise therapy which will enable the person who is today an alcoholic and who, today, cannot drink, to drink normally. Although this goal has not yet been reached, work being done at present indicates that its attainment is in sight, and I think that it will be reached well within five years time.

SOME ASPECTS OF THE PROBLEM OF ALCOHOLISM

Harry M. Tiebout, M.D., Greenwich, Connecticut

(Director, National Committee on Alcoholism)

YOUR Moderator has assigned me two different jobs in the ten minutes allotted. The first is to tell why alcoholism is considered a disease, and the second is to portray briefly my concept of why the alcoholic stops drinking, if and when he does. As you may gather, this dual assignment is no small task.

The disease, alcoholism, is characterized by the compulsive quality of the drinking. Compulsion, a psychiatric term, refers to a form of mental pathology in which the individual is impelled to do things against his will and judgment. The person who washes his hands beyond all reason or necessity but who otherwise seems normal is said to be suffering from a hand-washing obsession or compulsion. Similarly, the parallel is made to the person who drinks too much. He, too, is thought to be suffering from a compulsive tendency, this time directed toward imbibing alcohol in one form or another.

Translated into English, the term means that, deep down in the person's psyche, something may get started rolling which the conscious mind cannot seem to stop. The activity may be in the direction of hand-washing, or drinking, or some other form of behavior. The important point to stress is that it is not willed by the patient nor stopped by will power either.

This compulsion to drink is often loosely referred to as a craving to drink, or an urge, or a desire. All such words have an unfortunate connotation since they imply an inner pressure which should be subjected to the rule of reason and judgment, which is simply not the case and should be clearly kept in mind.

The diagnosis of uncontrolled or compulsive drinking is a whole paper in itself. To date no criteria have been established. No one, however, any longer questions the fact; the only question is when should the diagnosis be applied. One criterion is pretty well settled upon, namely, that alcoholism is a progressive ailment which grows easier to diagnose the longer it has been in existence. The sot whose every waking thought is of liquor and how to get money to obtain more is clearly the victim of a drive to get under the influence of alcohol. He represents the end stage of a deteriorating process and comprises a relatively small proportion of living problem drinkers. The individuals in this stage die off rapidly.

Then there is the far larger group who are on the way down. They often seem to drink in a normally controlled fashion, but with increasing frequency they will be having times when liquor takes over and runs them—Saturday night drinkers who begin Friday and extend through Sunday. Sprees will occur at shorter intervals. Work efficiency will lag. Home responsibility will more and more be sidestepped. Thoughts of when to drink and when not to will increasingly dominate the thinking. No single way of behaving is significant; it is the growing importance which liquor assumes which betrays its compulsive march. In this stage the diagnosis is easier and easier to make as time goes on.

The initial stage of the illness cannot be separated from normal drinking as far as surface manifestations are concerned. While undoubtedly the process is getting under way, it is impossible to differentiate it from ordinary drinking of a fairly heavy sort. Diagnostic efforts at this point are pure guesswork. In other words, attaching the label of compulsive drinking is most safely based on a history of drinking increasing over the years. It means that, although the downhill pattern is clearly visible and should cause the individual to exercise some restraint, he continues to drink to excess. The compulsive element has taken over.

Incidentally, it should be pointed out that the patient is always way behind everybody else in making the diagnosis. The alcoholic's pride will not permit him to recognize that he cannot manage his drinking successfully. The proof that he cannot has to be overwhelming before he can bring himself even to take a peek at this possible flaw in his makeup. He can even die proving he can learn to drink normally like everybody else.

This inability to acknowledge his weaknesses leads directly to a consideration of the second point in my remarks, namely, my understanding of why the alcoholic stops drinking. Since my thinking along these lines was initially stimulated by W.G.W., one of the founders of A.A., it would be ungrateful indeed not to mention my obligation to him and many others in that organization. One of the first things I learned was the necessity to "hit bottom," to go through some crisis experience which would jar the individual loose from his complacency and bring him face to face with the grim prospect ahead if his drinking continued.

The phrase "hit bottom" requires further elucidation. It refers to a period in the life of an individual when he feels helpless and completely at the end of his rope. Prior to that moment the person has recognized lows when he was discouraged and blue, but, even so, at the same time he somehow felt he could go on. He had this way or that way out of his dilemma. Some shred of hope brightened his horizon. Finally, the time comes when not one ray of hope can be discerned. The outlook is completely bleak and pitiless. In that state of crisis the individual is said to hit bottom emotionally. His spirits just cannot go any lower.

Hitting some kind of an emotional bottom seems an essential preliminary to taking help of any kind. It is only as one feels down and out, or on the verge of it, that one can bring one's self to lower one's defenses and admit "I can't do it alone." A.A. experience seems to prove the necessity for hitting a bottom of some kind. The first of their twelve steps reads "We admitted we were powerless over alcohol, that our lives had become unmanageable." Unequivocally, it brings the individual face to face with the indisputable fact that his drinking is out of hand and is causing him to behave in an irresponsible fashion.

To the ordinary person this might not seem a very difficult admission to make. To the alcoholic it is a major admission of defeat. Filled as he is with an ego a yard wide, his pride and his arrogance insist they will be licked by nothing, particularly liquor. Hence, when the individual concedes he is powerless over alcohol, that very concession is evidence that his ego is broken down and has given up the hopeless fight against alcohol. That step of giving up the fight is a major move psychologically. I have labeled it an Act of Surrender.

Surrender means quitting the struggle and is followed by inner peace and quiet. This state, maintained and broadened, provides the necessary inner base for sobriety and for continued successful living as a human being.

There is no palliation of the word surrender. One has to give up and give up completely, or before long that old pride and arrogance will creep back into the picture. Lessons of the past will be forgotten and the person will soon be back in the midst of his old struggle.

The word "completely" is used advisedly. You cannot submit to the fact that you cannot drink. Neither can you resign yourself, nor yield, nor admit. The fight must be given up entirely, the surrender a hundred per cent, or that little remnant of ego down inside, shattered though it may seem to be, will slowly develop new life and vitality, and before long the old conflict will again be raising havoc.

For modern man who aspires to conquer the material universe, the concept of surrender is most uninviting. It conjures up weakness and helplessness, an outlook most distasteful. In no way does it suggest the biblical phrase, "For he who would save his life (would not surrender) will lose it; but he who loses (surrenders) his life for My sake will find it" (*Matthew* 16: 25). Yet that is what happens, a kind of rebirth experience which the man of today tends to disregard as mystical and meaningless. Giving up the fight seems outdated, not in keeping with the spirit of free enterprise and boundless opportunity. Yet giving up the fight works, as attendance at any A.A. meeting will amply demonstrate. And if you go, any fears of weakness and helplessness will be promptly allayed because they are not a weak and dependent group by a long shot.

How to induce people to surrender is not certain, but that they must do so and hang on to what happens does seem certain. A.A. has found a way to bring about that surrender and to keep it alive. It has no copyright on its technics. Some day we all may be able to borrow enough from what they have learned to be more directly helpful to our patients.

In summary, I have discussed two aspects of the problem of alcoholism. First, I have stressed the compulsive nature of the ailment with its ultimate mental deterioration. Second, I have presented the theory of surrender as an essential element in the treatment process. I trust that, despite the sketchiness of my presentation, I have helped you to gain a little clearer picture of the nature and treatment of the alcoholic patient.

I would like to warn the audience that the time when drinkers can safely drink normally may be five years away, but I think it will be longer before we can be sure what the factors are that are involved in the different aspects of this problem.

ALCOHOLICS ANONYMOUS

W. G. W., New York City

(*Cofounder, Alcoholics Anonymous*)

THE first Alcoholics Anonymous group became a reality at Akron, Ohio, in June, 1935. Our fellowship has since expanded into 3,500 groups comprising 100,000 well-recovered members. Originally centered in the United States and Canada, A.A. has spread rapidly throughout the world. About 2,000 recoveries now take place each month. Of those alcoholics who wish to get well and are emotionally capable of trying our method, 50 per cent recover immediately, 25 per cent after a few backslides. The remainder are improved if they continue active in A.A. Of the total who approach us, it is probable that only 25 per cent become A.A. members on the first contact. Carrying a certain amount of indoctrination, the remainder depart for the time being. Eventually, two out of three of these return to make good, for once the A.A. program has been well presented to the alcoholic, he can never be the same person again. A list of 75 of our early failures today discloses that 70 returned to A.A. after one to ten years. We did not bring them back; they came of their own accord. When asked why, these persons invariably answered: "For us it became a question of A.A. or else. We found all other exits blocked. Death or insanity was the only alternative. So, here we are." While not accurate statistics we believe these statements conservative approximations.

Alcoholics Anonymous once stood in a No-Man's Land between medicine and religion. Religionists thought we were unorthodox; medicine felt we were totally unscientific. The last decade brought a great change in this respect. Clerics of every denomination declare that, while A.A. contains no shred of dogma, it has an impeccable spiritual basis, quite acceptable to men of all creeds, even the agnostic himself. You gentlemen of medicine also observe that A.A. is psychiatrically sound so far as it goes and that A.A. refers all bodily ills of its membership to your profession. Therefore, it is now clear that Alcoholics Anonymous is a synthetic construct which draws upon three sources, namely, medical science, religion, and its own peculiar experience. Withdraw one of these supports and its platform of stability falls to earth as a farmer's three-legged milk stool with one peg chopped off. That you have invited me, an A.A. member, to sit in your councils today is a happy token of that fact, for which our society is deeply grateful.

What, then, has Alcoholics Anonymous contributed as third partner of the recovery synthesis which promises so much to sufferers everywhere? Does Alcoholics Anonymous contain any new principle? Strictly speaking, it does not. A.A. merely relates the alcoholic to time-tested truths in a brand new way. He is now able to accept them where he couldn't before. Now he has a concrete program of action and the understanding support of a successful society of his fellows in which he carries that out. In all probability, these are the long-missing links in the recovery chain.

To illustrate, in 1934, I was pronounced utterly hopeless by a competent physician. Commitment seemed indicated. The usual approaches had been tried. Came, then, a school-time friend, himself once a chronic in even worse shape than I. He told me that he had been "released" from his alcohol obsession. When I asked how, he replied, to my considerable consternation, that he had "got religion." Maybe, I thought, he had substituted one form of insanity for another. Being scientifically trained, I had a phobia about tub-thumping evangelism. But nothing of the sort came out of him.

He first told me his drinking experience, accent on its more recent horrors. Of course, his identification with me was immediate, and, as it proved, deep and vital indeed. One alcoholic was talking with another as no one except an alcoholic can. Then he offered me his naïvely simple recovery formula. Not one syllable was new, but somehow it affected me profoundly. And, in paraphrase, this is the substance of what he had done to get well:

1. He admitted he was powerless to solve his own problem.
2. He got honest with himself as never before, made an examination of conscience.
3. He made a rigorous confession of his personal defects.
4. He surveyed his distorted relations with people, visiting them to make restitution.
5. He resolved to devote himself to helping others in need, without the usual demand for personal prestige or material gain.
6. By meditation he sought God's direction for his life and help to practice these principles at all times.

And there he sat, recovered, an example of what he preached. You will note that his only dogma was God, which for my benefit he stretched into an accommodating phrase, a Power greater than myself. That was his story. I could take it or leave it. I need feel no obligation to him. Indeed, he observed I was doing him a favor by listening. Besides it was obvious he had something more than ordinary "water-wagon" sobriety. He looked and acted "released"; repression had not been his answer. Such was the impact of an alcoholic who really knew the score.

Although I drank on for a time, I couldn't get that conversation out of my mind. I still gagged on his God concept, but finally realized I had better try the formula. I knew I had "hit bottom"; I knew I had an insane obsession to drink that had killed off many a better man than I. All else had failed; this was my only hope.

So I betook myself to my friend of medicine, Dr. William D. Silkworth of Towns Hospital, New York. He had previously taught me the grave nature of my malady. I had been one of his few hopeful cases. But he had finally given up and had told my wife the worst. Once more he put me to bed and medicated me into sobriety. Three days later, my friend of school days turned up and repeated his simple prescription.

When he had gone, I fell into a black depression. This crushed the last of my obstinacy. I resolved to try my friend's formula, for I saw that the dying could be openminded. Immediately on this decision, I was hit by a psychic event of great magnitude. I suppose theologians would call it a conversion experience. First came an ecstasy, then a deep peace of mind, and then an indescribable sense of freedom and release. My problem had been taken from me. The sense of a Power greater than myself at work was overwhelming, and I was instantly consumed with a desire to bring a like release to other alcoholics. It had all seemed so simple—and yet so deeply mysterious. The spark that was to become Alcoholics Anonymous had been struck.

This, gentlemen, is the essence of what has been happening to A.A.'s ever since, although I naturally make haste to add that most of their so-called "spiritual experiences" are not sudden at all. What happened to me in six minutes happens to them in six weeks or six months. But it is the identical thing, the results are the same. Seldom, indeed, does A.A. work without the Higher Power concept. We have verified that fact thousands of times.

Because, I presume, of a deeper personality disorder, my friend eventually backslid and never quite got well. But I have not had a drink since that day in the hospital, and, of course, I immediately began to present these ideas to other alcoholics. Dr. Silkworth, great human being that he is, offered me nothing but encouragement. Had his scientific conviction got the better of him and had he pronounced my conversion hallucinosis, I shudder to think how many alcoholics would now be dead. So he and I went on together here in New York, at first with no success. I soon learned, however, that working with other alcoholics was a powerful factor in sustaining my own recovery.

Six months later, I met a well-known Akron physician, an alcoholic in a bad way. Partners, then, in that town, we formed the first successful A.A. group in 1935. My friend, the surgeon, has since treated medically and brought A.A. to some 4,000 alcoholics, all without a cent of remuneration. And thus he became a cofounder of Alcoholics Anonymous.

Around us a wonderful society grew up. In 1939, our Society published a book, titled *Alcoholics Anonymous*, which amplified the original "word-of-mouth" program into the well-known A.A. "Twelve Steps of Recovery," which I leave to a footnote.* This book described the specific application of these steps to the problem of alcoholism, and it is documented by 30 case histories of recovery. Aided by immense publicity and traveling A.A. members, this publication has found its way to all parts of the world. In many cases, reading the book has proved to be a spectacular specific for alcoholism, although readers at a distance usually form groups around them to insure their own sobriety.

To sum up, now, and more clearly, I trust you see how A.A. is bridging the chasm that formerly existed between the alcoholic, his doctor, his clergyman, and his friends; how we secure that powerful identification with each other; how we have created a society with a favorable atmosphere, and how at last we have given each alcoholic something vital to do—and to be—in carrying the message to still others as part of his own recovery.

So, then, it is fair to state that on the surface A.A. is a thing of great simplicity, yet at its core a profound mystery. Great forces surely must have been marshaled to expel obsession from all these thousands, an obsession which lies at the root of our fourth largest medical problem and which, time out of mind, has claimed its hapless millions.

Please know that we hold ourselves ready for scientific investigation; that we fully realize that we are but a small part of the total effort going on in this broad field and so wish to aid where we can. And, once more, may I say thanks to you on behalf of our entire membership.

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* THE TWELVE STEPS

Here are the steps we took—which are suggested as a Program of Recovery.

1. We admitted we were powerless over alcohol—that our lives had become unmanageable.
2. Came to believe that a Power greater than ourselves could restore us to sanity.
3. Made a decision to turn our will and our lives over to the care of God, *as we understood Him.*
4. Made a searching and fearless moral inventory of ourselves.
5. Admitted to God, to ourselves, and to another human being the exact nature of our wrongs.
6. Were entirely ready to have God remove all these defects of character.
7. Humbly asked Him to remove our shortcomings.
8. Made a list of all persons we had harmed and became willing to make amends to them all.
9. Made direct amends to such people wherever possible, except when to do so would injure them or others.
10. Continued to take personal inventory, and when we were wrong promptly admitted it.
11. Sought through prayer and meditation to improve our conscious contact with God, *as we understood Him*, praying only for knowledge of His will for us and the power to carry that out.
12. Having had a spiritual awakening as the result of these steps, we tried to carry this message to alcoholics and to practice these principles in all our affairs.

DISCUSSION

Dr. Potter: I would like to ask Dr. Davis how an Alcoholics Anonymous can obtain more and cheaper hospitalization for this new treatment?

Dr. Davis: That is a very important economic question. With wages sky high and the hospital beds filled, it is difficult to answer. However, let us not be discouraged by the problem. It has been with us a long time, and many of us have been working with the alcoholic for many years, but there is gradually coming more and more aid. But, even with the help of private individuals, the various social agencies, and State help, it will be some time before hospital beds will be available to all. However, throughout the country more and more beds for alcoholics are ready and are being made ready at reasonable rates.

Dr. Potter: I would also like to add to Dr. Davis' remarks that in many communities the Blue Cross now recognizes this illness as a disease and will pay for the hospitalization of the acute cases. . . . Dr. Brightman, to what facilities may we refer those who suffer from maladjustments in addition to alcoholism?

Dr. Brightman: Assuming that you are referring to physical and mental abnormalities in association with alcoholism, we are developing more and more mental and health facilities in the State. Some county health offices have their own facilities to care for these patients, and we hope to see more through the years. Of course, we do not want to wait until the patient has developed a psychosis and is eligible for entrance into a State mental institution. That is what we are trying to avoid.

Dr. Potter: I would ask Dr. Block how an alcoholic can best relate himself to the family physician?

Dr. Block: I think a good deal of that reply was covered in my paper. We do find, as Dr. Tiebout stated, that the alcoholic himself is the last to recognize the fact that there is a problem, and his ego does not let him admit that he cannot handle the situation himself. We have any number of telephone calls from families, friends, landlords, and neighbors when these alcoholics get into a state where they will not accept help but will continue to create a disturbance. The family physican cannot prevail upon the individual patient to follow his directions. I cannot tell you what people in other localities are doing about this, but I can tell you what we are doing or trying to do in the western end of the State. We are, through the press, trying to perfect a procedure whereby we have the cooperation of the Health Department and the Police Department. These individuals will, at the call of the family physician, take the patient into the hospital and on the recommendation of the physician keep him for a quarantine period. That does away with the necessity of committing the man under arrest and giving him a police record. At the same time it gives them the opportunity to have the man at the hospital for a specified number of days. When the acute phase has passed the physican will be able to reach the patient in a more efficacious way. He can then take care of the patient where the patient himself will not ask for that help from his own doctor.

Question (from the floor): Can anything be done for a severe alcoholic who refuses to recognize that he is an alcoholic?

Dr. Tiebout: I think it is always a mistake to assume that every alcoholic is just a stubborn mule. He is a stubborn mule, but he soon recognizes that he is going down a one-way street, but until we can get him sobered up sufficiently to recognize that he is going down a one-way street he is constantly going in that direction. You cannot expect him when you first see the alcoholic to say, "Yes, I am going to quit drinking," but you can begin to plant some seeds of doubt. Our cofounder talked about indoctrination. I think that is pretty good advice to give. The family doctor and friends can help in a better way than scolding, and gradually the patient comes to recognize the need of help.

Question: Dr. Smith, by what means have you followed up your patients after release from the hospital in order to determine the long-range success of your treatment?

Dr. Smith: Well, I never give figures, that is, percentages of cures, because I do not think we can. I think it is of the utmost importance in evaluating the number of alcoholics cured to consider the time element. If he stops drinking for three to six months, I do not think you have done much for him that could not be done by other means. The patient that we have kept longest was for three years and other patients for various time intervals. I think the most striking thing is that our patients feel well and that is what we are trying to induce, a feeling of well-being. We never ask the patient if he has been drinking. All that I can say is that the patients keep coming to the clinic.

Question: What should be the relationship between the Alcoholics Anonymous and the clinics in a given community?

W.G.W.: I think that the Alcoholics Anonymous groups have settled upon a very definite policy in that respect, and that is that we as individual members would like to be in a cooperative relation with all facilities that can be of help to the alcoholic. We are, for our own protection, on the lookout for customers, and whenever our technicians can be used they will be supplied. We would like to keep them in cooperation without advising any institution or any treatment. Otherwise we shall be terribly compromised.

Dr. Potter: I understand that the project at Buffalo is on a limited experimental basis. How long before it will be on a full basis, and how will it work?

Dr. Brightman: It is an experiment in how the alcoholic can be given service and rehabilitation, and also as to the cure of alcoholism. You can separate the two. As far as I know, it will stay as an experiment for several years. I would like to emphasize the point of making known what we are doing. We need some statistics. There has been some very fine work done by individuals and groups. The Alcoholics Anonymous has certainly paved the way. There are various hospitals, all of which have made great contributions. And yet when you see how many patients start off with therapy and how many finish up, we still have lots to learn.

It is not easy to evaluate the alcoholic problem. That would be a very crude criterion. Every method of therapy would have some success. Other criteria are the ability of the person to locate a job, to restore the household, or, where threatened, to maintain himself. Conditions have improved to a great degree. How long it will take to evaluate these trends in Buffalo I cannot say. We think about three years easily. We do not feel justified in making a greater extension of public funds until we know more about our present approach.

QUESTION: Why are sedatives dangerous in the treatment of the problem drinker in the late recovery phase of this disease?

DR. BLOCK: One of the greatest problems in dealing with the alcoholic is the use of sedatives. He gets the same effect from sedation. In other words, his problems are put away, he is asleep, and it is not too difficult for an alcoholic to go from alcohol to sedatives. They easily become addicted to this sedation to the point where one problem is superimposed upon the other, and the last is almost greater than taking alcohol. For that reason it is necessary to consider it seriously. Sedatives should be avoided if possible, and if used should be used so as not to have the patient lean upon them too heavily.

QUESTION: What is the general hospital's relation to the alcoholic patient?

DR. DAVIS: I feel very definitely that some means can be obtained whereby the general hospitals can admit and take care of the alcoholic during the acute phase of the illness, when he is a danger to himself and a greater danger to innocent people. I think Dr. Block mentioned a very important thing they are doing in the western part of New York State, and that is the use of a quarantine period because it avoids commitment and arrest. Certainly these people in a fog of alcoholism are not responsible and, if driving an automobile, may kill your child or mine. There should be a means of quarantining them until they are alert mentally and can act as human beings.

QUESTION: Can a doctor contact the Alcoholics Anonymous group, and how?

W.G.W.: Well, it depends upon where you are. If you are in a large metropolitan area, you will usually find an office where you can be interviewed and make hospital arrangements, etc. We get about a hundred calls a day and have secretaries on the job. In the smaller communities you will find Alcoholics Anonymous attached to some telephone service. Often the Police Department is called, and they will put you in communication with the proper persons.

DR. BRIGHTMAN: The District Health Officers have received lists of the telephone numbers of Alcoholics Anonymous in all areas of the State. So any doctors wishing to find out about the Alcoholics Anonymous group can call the Health Officer.

QUESTION: Dr. Tiebout, can the "surrender" of which you speak be produced by psychiatric means, or by the voluntary act of the patient?

DR. TIEBOUT: I can answer the second part of that question first by saying that I have never seen it actually happen that a patient could will himself to surrender, because the very use of will power means that you are not surrendering. As to the first part of the question, I can only say hopefully that the psychiatrist can often bring the man to realize his condition and need for help.

QUESTION: Dr. Smith, when referring to the adrenal extract, do you mean whole extract or DOCA?

DR. SMITH: We use both, but I refer principally to the watery extract.

DR. POTTER: There are hundreds of questions which it will be impossible to answer at this time. I can refer these questions to the individual members of this panel who will be asked to reply. Such questions and replies will be forthcoming, along with the discussions of the papers presented here today, in the NEW YORK STATE JOURNAL OF MEDICINE in the near future (*see* Addendum). It is also hoped that many thousands of reprints of these papers and questions and answers will be available for distribution.

So I would say that a brief summary of the remarks made this afternoon would reveal that the Medical Society of the State of New York and the New York State Department of Health recognize chronic alcoholism as a chronic progressive disease; that it is characterized by compulsive drinking which lies at the root of this very important medical and public health problem. Both organizations recognize their obligations in this matter. The New York State approach will be along the lines of prevention.

The program will embrace primary prevention, which calls for avoidance of the disease through progressive public educational activity. And this part of the program will bring into play not only medical and public health facilities, but forces of family guidance agencies, the churches, and the schools. The remaining part of the program will relate to secondary prevention, which involves the arrest of the progress of the disease. This calls for complete evaluation of the patient regarding his physical and mental status and his socioeconomic background, so that all factors contributing toward the state of alcoholism can be determined, and a rational mode of therapy prescribed.

The alcoholism control program will be carried out in Buffalo on an experimental basis within the Chronic Disease Institute, of which it is a part. Here practical methods of therapy will be evolved and evaluated and then applied to the needs in other areas of the State.

It was emphasized that no program can progress very far without the aid of Alcoholics Anonymous. This synthetic connection offers definite contributions to the recovery of the alcoholic. In a new way the alcoholic is introduced to time-tested truths which he is able to accept, and which he couldn't accept before. This is brought about by:

1. Emphasizing the importance of an emotional crisis ("hitting bottom" emotionally) as an essential preliminary before an alcoholic will accept any kind of help.
2. In offering a concrete program of action.
3. Offering the support of an understanding successful society in which the alcoholic carries out that program.
4. Accepting a "Higher Power" concept.

These are evidently the long-missing links in the recovery chain.

Disagreement on the origins of the illness was noted. One school of thought leaned toward the psychogenetic theory, while another favored a physiologic origin. Further research is definitely indicated.

It was agreed that the acute alcoholic should be treated as an acute medical emergency; that general hospitals must be opened for this type of case, and that after the acute phase of the disease has passed the real therapy should commence.

Long-sustained therapy involves the coordinating efforts of medicine, sociology, religion, and Alcholics Anonymous. It must be a cooperative effort. At long last this effort is being made in New York State on an experimental basis.

ADDENDUM

Dr. Marvin A. Block

Q. What should be the role of group practice in treating the alcoholic?

A. The proper group practice should welcome the opportunity of taking care of alcoholics. It forms a little clinic in itself. From the original interviewer to the internist, laboratory worker, and thence, if necessary, to the psychiatrist, the patient should have these facilities more available than any other way.

Q. Have you anything to suggest about Antabus?

A. This drug should be used only in very carefully selected cases. Complete physical and laboratory work should be done to insure good physical condition. The test with alcohol should be made under controlled conditions in a hospital. The drug is best administered under supervision of another member of the family.

Q. In what way are the chronic alcoholics classified?

A. Any alcoholic who has had repeated bouts, blackouts, or where the drinking has interfered or does interfere adversely with his daily life can be considered a chronic alcoholic. There is no definite line of demarcation between the problem drinker and the chronic alcoholic. No one can tell when the patient slips from one state into the other. Alcoholics have been divided by some into the symptomatic drinker, the primary compulsive drinker, and the secondary compulsive drinker, the first classification being that in which the drinking covers a more deeply seated, usually mental, trouble, and the two latter being a gradation of the compulsion.

Q. You stated that there are four million problem drinkers but only 750,000 alcoholics. Will you explain the difference between these two groups and how you can be sure that there is a difference?

A. There is no definite line of demarcation between a problem drinker and an alcoholic. One may slip from one classification into the other without anyone's being aware of it, especially the person himself. The problem drinker could be considered the person who drinks because he needs a drink for any one of a thousand reasons that he can give you. Briefly, the alcoholic is one who drinks because he cannot help himself. He is compelled to drink.

Q. What is to be done with patients too sick for outpatient care who are not accepted by State hospitals because their psychiatric diagnosis is obscured by alcoholism and they cannot afford a private sanitarium?

A. Here is where the influence of a county society must be brought to bear. The patient caught upon the horns of such a dilemma without proper provision for his care is the likely candidate to cry for government medicine. He and his family can be considered somewhat justified if they look to the government for care under such circumstances. The doctors of the county, by concerted effort, must insist that provision for these patients be made in the available general hospitals. With united effort it can be done.

Q. Where the patient is resistant to treatment, what do you think of removal of the patient to a psychiatric hospital, State or private, while the patient is in a stupor? If not this, what would be the best way of making a beginning with a resistant patient?

A. I do not believe in tricking a patient. Please refer to my answer regarding family-doctor relationship and quarantine period. There is always the police department when the family is willing to use these methods.

Q. Since it is bad to use a psychiatric hospital and since general hospitals won't take these cases, the patient must apparently be treated at home. What specifically can you do in the first two to three days to stop the use? How can you sedate the patient since barbiturates are undesirable?

A. Paraldehyde orally or intramuscularly will quiet the patient. Intravenous 5 per cent glucose in saline in daily 1,000-cc. doses fortified with vitamin B complex in liberal doses and ascorbic acid is good treatment. Adrenal cortical extract sometimes hastens the sobering up. Insulin can sometimes be used to promote appetite.

Q. With the early alcoholic, is there any reading material or line of talk which may be expected to induce him to want to be treated? Everything else failing, if it is necessary first to hit bottom, would you ply him with liquor to compress the time for development of this state so that treatment may begin that much sooner?

A. I do not believe in giving alcohol to alcoholics. It would take too long to give a complete outline to the approach, but literature can be obtained from many sources, including the Department of Health. Alcoholics Anonymous in these cases are of wonderful help.

Q. How may physicians be better informed on problem drinking, especially at the medical school level?

A. With four million people suffering from this malady, I feel that it is high time that the medical schools realize that it is a recognized entity. A definite number of hours in the medical curriculum should be devoted to alcoholism as a medical sociologic problem.

Q. What steps might be in order so that hospital management would be receptive to the problem drinker?

A. One cannot expect the hospitals to take an interest in this problem until the medical staffs of these hospitals take that interest. An educational program designed so that at least one staff meeting each year be devoted to the subject is a good plan. A committee in each county society on the problems of alcohol should be effective. With this education and a working committee and with the recognition by Blue Cross of alcoholism as an illness, it should not be long before this type of patiént will be as welcome in a general hospital as a person suffering from any other disease.

Dr. I. Jay Brightman

Q. What measures to control alcoholism will be taken in the areas of the State outside Buffalo?

A. The Buffalo Rehabilitation Center for chronic alcoholic patients is the only State-supported service of this type now being operated. The Buffalo project is considered to be a demonstration program designed to serve as a model community service which could be used as a pattern for other communities. There is much to be learned as to the best methods of managing the problem drinker, and it is planned that at least some of these questions will be solved by the investigative work being done as part of the project.

Q. How much is the New York State Department of Health spending for research and treatment on alcoholism this year?

A. During the current fiscal year, the State Department of Health has allocated approximately $50,000 for the operation of the outpatient service of the Buffalo Rehabilitation Center. This center is operated by the University of Buffalo under a contract with the State Department of Health. Actually, the amount will be somewhat greater, as the Rehabilitation Center is to be part of the Chronic Disease Research Institute in Buffalo, and the general administrative costs will be absorbed by the Institute. Eventual plans call for hospitalization of small numbers of chronic alcoholic patients, but it is not yet certain whether this stage of the program will get under way during the current fiscal year.

Dr. James J. Smith

Q. Have you made postmortem studies which show glandular variations from normal?

A. There are numerous reports in the literature which show postmortem variations from normal in the glands of alcoholics. In particular, there are reports of abnormal postmortem findings in the pituitaries, adrenals, and testes of alcoholics.

Q. Do you use Tolserol in the acute or chronic phase?

A. We have used Tolserol experimentally, but not on a sufficiently large scale to draw any conclusions.

Q. Discuss alcoholism as a drug addiction comparable with morphinism or tobacco habit, and the bearing of this aspect on continued drinking.

A. Both morphinism and alcoholism are forms of addictive behavior, because of which the individuals so afflicted become socially and financially irresponsible. It is obvious that the use of tobacco does not fit in this category. There is a certain amount of interchangeability between morphinism and alcoholism in that morphine addicts sometimes become alcoholics and vice versa. On theoretic grounds I suspect that the answer to the problem of morphinism will be found in a better understanding of the biochemical pattern of the morphine addict.

Q. Would you compare your views of constitutional factors in alcoholism with such factors in other diseases—e.g., peptic ulcer and asthma—generally conceded to be psychosomatic in nature?

A. The use of the term psychosomatic in this question precludes my answering it either to my own satisfaction or to that of the inquirer. Since we cannot go into a definition of terms at this time, I can only say that I think that constitutional characteristics are only one outward expression of the functioning of a metabolic continuum which determines many of the behavioral reactions as well as physical characteristics of a given individual.

Q. Does hormone therapy have to be continued indefinitely to remove the desire for alcohol in alcoholics, and by what means do you plan to make it possible for the alcoholic to drink normally?

A. In the present state of our knowledge it is impossible to say how long endocrine treatment must be continued in any individual case. With respect to our ultimate goal of enabling the alcoholic to drink normally, if he wants to, our aim is to reconstitute the metabolic pattern of the alcoholic so that he will be able to handle alcohol in the fashion of the person who drinks normally.

Q. Do you believe that the alcoholic can recover or be cured without a corrective change taking place in his mental processes?

A. It has been our experience that the mental processes of the individual, as well as his behavior towards alcohol, both change for the better during the endocrine treatment of alcoholism, without any therapy directed toward the mental processes per se.

Q. Will it be possible to reconcile the approach within A.A. with a theory that some endocrinologic imbalance antedates alcoholism?

A. The A.A. approach is very readily reconciled with the concept that a metabolic disturbance precedes alcoholism. One of the main tenets of A.A. is that the alcoholic cannot take even one drink. In the present state of our knowledge we agree completely with this dogma. The alcoholic cannot take even one drink, because his endocrine system is such that he is unable to handle it in normal fashion.

Q. Can an easy test be made available to hospitals for immediate determination of alcohol blood levels?

A. There are many methods described in the literature for the determination of blood alcohol levels. Furthermore, simple tests to determine body saturation with alcohol exist. These methods depend on the determination of the amount of alcohol present in a given volume of expired air. In some states the police departments are using these tests in instances of drunken driving.

Q. On the basis of the hypothesis of pituitary insufficiency (granted the findings regarding hair distribution and eosinophil studies) what about more profound findings re the extremes being Simmonds with its subsequent effect on target glands?

A. It is important to keep in mind in endocrinology that there are degrees of glandular insufficiency, and that different degrees and combinations will present different clinical pictures. All hypopituitarism is not Simmond's disease, although all Simmond's disease is hypopituitarism. All hypoadrenia is not Addison's disease, although all Addison's disease is hypoadrenia.

Q. What is the principle of treatment at Bridge House?

A. I am not identified with the treatment at Bridge House, and what I know of the principle of their treatment I have gathered from statements published by Bridge House and from patients who have been there. It is my understanding that the principle of treatment is that distorted thinking makes an alcoholic, and that the reorientation of his thinking cures him.

Q. Why was the obvious liver damage of alcoholics not mentioned?

A. In a ten-minute talk one cannot give a compendium on a subject. One is fortunate to have sufficient time to develop one phase only.

Q. Did your alcoholics respond as well to placebo injections as to active hormones?

A. Placebo injections in the sense of nonspecific, ineffective remedies have been used for years with poor results. We, too, have given various substances by injection which have been quite ineffective in the treatment of alcoholism.

Q. As far as I remember Jolliffe recommended years ago to treat delirium tremens with vitamin B. Why now C? What about the value of B?

A. It is quite clearly established that thiamin is nonspecific in the treatment of delirium tremens, although it is highly beneficial in the peripheral neuropathy seen in alcoholism. Ascorbic acid appears to be necessary for the proper cellular utilization of cortical hormone, and we use it for this reason. Furthermore, we have found very low blood levels of ascorbic acid in many alcoholics.

Q. Are you sure that the supposed impairment of the functions of the pituitary and adrenals are not due to insufficient nutrition in alcoholics?

A. I believe I have answered this question in the body of my paper. Undoubtedly the inadequate nutrition of the alcoholic plays a contributory role in endocrine dysfunction.

Dr. Harry M. Tiebout

Q. What per cent of chronic alcoholics have returned to the use of alcohol within one year and within five years after the completion of a good course of treatment?

A. No statistics are available. So many patients who have been under psychiatric treatment are apt to ally themselves with A.A. that it is impossible to say whether their long abstaining from drinking has been due to psychotherapy or to A.A. The current trend seems to be that most alcoholics take a trial run with A.A. and succeed or don't. Those that don't sometimes come to psychiatry and are sometimes helped. Often those who get help from A.A. find that they will profit by help from psychiatry and will go through a course of treatment.

Furthermore, every statistic is hedged in with the phrase "if the patient really tries or really wants help," and since that is an elastic phrase all statistics as yet are subject to very considerable deviations.

Q. If you subscribe to the personality factor alone—how do you account for the nonalcoholic with similar personality who does not drink—or more importantly, when he does no compulsion develops?

A. This is a very pertinent question but it has one hitch, namely, it assumes that there are nonalcoholics with similar personalities. That is debatable. To my way of thinking, the alcoholic has his own peculiar personality structure just as a manic depressive, or schizophrenic, or paranoid. While the search for the physical factor is alluring and glittering in its promises, it unfortunately tends to distract from more intensive study of the alcoholic character. While I do not oppose investigations on the physical side, I believe unless they are matched by equally penetrating studies on the psychologic side a one-sided emphasis will be developed.

Q. What resources do general practitioners in smaller cities and towns have for helping alcoholic patients?

A. To some extent this question has already been answered. Almost certainly every practitioner can, without much trouble, get hold of somebody in A.A., either through the local health officer, the local law enforcement agency, or through the social welfare agency, and talk with a member of that organization who will be acquainted with the local resources and can advise accordingly.

W. G. W.

Q. Dr. Block said that if a group of laymen (A.A· members) were able to contribute to the solution of the problem of alcoholism, then physicians with a knowledge of physiology, psychiatry, etc., should be able to contribute more. Since A.A. places such emphasis on dependence upon "a Power greater than ourselves" as part of therapy for the alcoholic, do you feel that "scientific" men may be missing the boat in leaving this out?

A. As already remarked, I feel that Alcoholics Anonymous is no cure-all, despite the fact that A.A. has seemingly worked well in 100,000 cases.

In my belief scientific men ought to have every encouragement as they try to develop new technics for treatment of both physical and emotional aspects of alcoholism. A.A's ought to respect and use these developments whenever they prove valuable. Likewise physicians ought to have respect for what works in A.A. And if that be respect for God, then so much the better!

Q. How can the anonymity of the members of your organization be guaranteed in a small community? One of my alcoholic patients refuses to join your organization because he is afraid it would hurt his business.

A. Preservation of anonymity in small towns is sometimes difficult. You might, in the case you cite, call in an A.A. and charge him with special secrecy. Let the A.A. then make an approach. He can generally point out to the patient that probably every one in town knows he drinks anyhow and that A.A. is now so generally respected there is no stigma really attached. It is getting to be an honor to belong.

If the "patient" happens to be a doctor, his practice will seldom be harmed once the townsfolk are convinced he is really going to stay sober. And, strangely, that conviction usually develops in a matter of months. If the patient can't get well without A.A.—and he probably can't—then everybody will eventually know anyhow. Today A.A. infiltrates the small town with little resistance—a great change over earlier years.

Q. What should be the relationship between A.A. and a medical clinic for alcoholics in a given community?

A. The A.A. groups ought to maintain a purely cooperative relation with all agencies trying to help the alcoholic, neither endorsing or disapproving any. Where A.A. members are asked to help an alcoholic in a clinic or hospital, they are invariably willing to do so and will greatly appreciate special visiting privileges.

Cooperate with all, but endorse none—that is the tradition of our society.

FOR FURTHER INFORMATION about the work of the Special Committee of Problems of Alcoholism of the Medical Society of the State of New York or for any further questions in regard to the material presented in the preceding panel discussion, please write to the chairman of the committee:

Dr. Milton G. Potter
186 Chapin Parkway
Buffalo 9, New York

A REVIEW OF CHLOROFORM ANESTHESIA IN OBSTETRICS

Rose M. Lenahan, M.D., and E. Dean Babbage, M.D., Buffalo, New York

(From the Department of Anesthesia, Millard Fillmore Hospital)

IN THE year 1831, a year of experimentation and discovery, three chemists, Soubeiran in France, Liebig in Germany, and Guthrie in America, unaware that they were working on a common project, first prepared and described chloroform. However, the anesthetic properties of the drug were not demonstrated until 1847 when Sir James Y. Simpson, of Edinburgh, used it in the field of obstetrics. That same month he reported its clinical use in surgery and obstetrics to the Medico Chirurgical Society of Edinburgh.[1]

The death of a young woman from a chloroform anesthetic in 1848 proved that this previously considered safe agent was dangerous.[2] However, in 1853 this drug received helpful publicity when it was stated that chloroform analgesia was administered by John Snow to Queen Victoria for the delivery of her eighth child. At this time Snow pointed out the desirability of giving chloroform gently at first and later increasing its quantity a little with each pain. After careful investigation he reached the conclusion that death resulting from chloroform was caused primarily by cardiac failure.[3]

A few years later, during the Civil War, there were 8,900 cases of anesthesia recorded. Of these, chloroform was used in 76.2 per cent, ether in 14.7 per cent, and a mixture of chloroform and ether in 9.1 per cent. Chloroform was used almost uniformly in field hospitals, while ether was more often the anesthetic used in the general hospitals. Chloroform was also the anesthetic agent, either of choice or of necessity, in many of the British Colonial Wars.[4] Ensuing discussions of the relative merits of ether and chloroform compelled systematic, scientific investigations of their properties, which eventually resulted in the establishment of the specialty of anesthesia.

After meticulous experimentations, Levy concluded that sudden death usually occurred during the induction period or excitement stage of chloroform anesthesia.[5] He discovered that during this anesthesia there was a marked tendency for abnormal beats and increased irritability of the heart. From electrocardiographic records taken on cats, Levy observed that irregularities might result in fatal ventricular fibrillation early in the administration of chloroform, especially if there was an additional burden upon the heart, such as nervous excitement or the addition of small amounts of epinephrine. He also concluded that this irritability decreased under deeper anesthesia.

Chloroform had enthusiastic advocators in World War I. Various mixtures of chloroform and ether or chloroform, ether, and ethyl chloride were used to secure a quicker, more quiet induction. Notwithstanding the possibility of toxic effects, chloroform was suggested by some in the last war because of its portability and noninflammability.[4]

However, Kaye in 1942 stated that chloroform's portability might be expected to recommend it to field units, but its disadvantages were well understood in the Army.[6,7] He believed that, even in the heat of the Egyptian summer, adequate muscular relaxation was obtained with ether; seldom was it necessary to supplement ether with chloroform during induction. His impressions were based upon experiences in an Australian General Hospital and in a large military base hospital in the Middle East.

The history of chloroform anesthesia would not be complete without mentioning one of its ardent supporters, Irving W. Potter of Buffalo, New York. This internationally known obstetrician has advocated and used chloroform for the majority of his deliveries for the past fifty-eight years. He believes that this drug, properly administered, is not only a suitable but also a safe anesthetic.[8] He considers his maternal deaths resulting from chloroform to be only two out of approximately 25,000 deliveries. His son, Milton G. Potter, has had similar experiences with this anesthetic agent for the past twenty-five years.[9] He is also a proponent of chloroform anesthesia for obstetrics. Chloroform is particularly adaptable for their method of delivery, version and extraction, because deep anesthesia is required early in the delivery for the version, while lighter anesthesia is sufficient for the extraction.

Evaluation of Chloroform Anesthesia

Advantages.—There are many advantages in using chloroform for obstetric analgesia and anesthesia. One of the most important of these is the rapidity of action. Its effects also wear off quickly. Although it has been shown that chloroform crosses the placental barrier, there is little or no respiratory depression of the

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TABLE 1.—Tabulating Sheet

Hospital ———	Delivery ———
	Spontaneous ———
Date ———	Episiotomy ———
	Low forceps ———
Hospital or Case Number ———	Mid forceps ———
	High forceps ———
	Version extraction———
Patient's Initials ———	Cesarean ———
	Infant
Anesthetic	Born dead, cause———
General agent used———	Died after birth, cause ———
Spinal, caudal, local—specify ———	Cried spontaneously ———
	Resuscitated ———
Administered by	
Doctor ———	Maternal death, brief note ———
Nurse ———	

fetus.[3,10,11] In equatorial countries its even, slow vaporization has made it the agent of choice over ether.[12] Lundy mentions its production of relaxation, noninflammability, nonexplosiveness, relative inexpensiveness, and convenience of handling, among its desirable properties.[13]

Cumbersome apparatus is unnecessary for its administration. No preliminary induction agent is needed—thus it may be quickly and easily used. Lull and Hingson, as well as Goodman and Gilman, have reported less excitement and less pulmonary irritation than with ether.[12,14] We also believe that the production of mucus is usually at a minimum, even though most of the obstetric patients receive no premedication.

Disadvantages and Dangers.—We know that chloroform has definite disadvantages. The two greatest hazards in its use are possibilities of either cardiac or hepatic damage. Chloroform causes increased irritability of cardiac muscle and sensitizes the heart to the action of epinephrine. Thus, even in early stages of this type of anesthesia, there may be arrythmias, ventricular fibrillation, or even sudden cardiac arrest. For this reason epinephrine should never be used just before, during, or directly after chloroform anesthesia.

Another important danger is liver damage. This may vary from a mild hepatitis to acute degeneration of the liver. In these cases, the pathology reveals central necrosis of the lobule in contradistinction to a peripheral necrosis in eclampsia. Even though chloroform is not inflammable, it should never be used in the presence of an open flame, because it may decompose to form phosgene. Great care should be used so that it does not come in contact with the skin or mucous membrane, as it causes irritation and blistering. Another disadvantage to the drug is its depressant effect on the vasomotor center, as well as on the myocardium, and its decrease in cardiac output.[14,15] It also causes a rise in blood glucose and a decrease in carbon dioxide combining power.

TABLE 2.—Cases Delivered at 8 Buffalo Hospitals from 1947 to 1948 Using Chloroform Anesthesia

	Number of Cases	Per Cent
Total deliveries	12,311	
Total chloroform anesthesias	9,724	79.0
Chloroform alone	9,441	76.7
Chloroform plus other agents	283	2.3
Number administered by physicians	11,164	
Number administered by nurses	1,410	

Contraindications.—There are a few definite contraindications to the use of this drug, in view of the aforementioned dangers. First and one of the prime contraindications is eclampsia and other diseases affecting the liver, such as infectious hepatitis and cirrhosis. Likewise, in any form of cardiac disease it should be avoided.

Chloroform causes ventricular fibrillation much more readily than does any other anesthetic agent. Even when clinical observation of the patient under chloroform anesthesia reveals no abnormalities of cardiac functions, electrocardiographic evidence of ventricular irregularities may be seen. Hill restudied the effects of chloroform on the human heart and confirmed clinically the previously mentioned experimental findings of Levy.[14] Chloroform as well as ether causes some irritation of renal epithelium. This, together with a decreased cardiac output, causes some diminution of renal blood flow. Thus, in severe kidney disease the drug should not be employed.[14,15] Patients who have fasted for long periods or who have had pernicious vomiting tolerate chloroform poorly and have a greater chance of developing hepatitis.[12,15] It has been shown in animals that diets rich in carbohydrates have a marked protective action, while those on high fat diets show a maximal susceptibility to liver injury from this anesthetic agent. Liver damage due to chloroform anesthesia increases in degree as the protein stores in the liver and body tissues of dogs are depleted. Miller, Ross, and Whipple have shown that methionine gives almost complete protection to the liver against injury by chloroform.[17]

Survey

In this paper we are reporting a one-year survey covering 12,311 obstetric cases. The tabulating sheet for collecting these data is shown in Table 1. These statistics, as presented in Table 2, include cases delivered at eight Buffalo hospitals during the period from February 1, 1947, to February 1, 1948. Nine thousand, four hundred forty-one, or 76.7 per cent, of these patients received chloroform alone, whereas 9,724, or 79 per cent, had chloroform alone or combined with another agent such as oxygen,

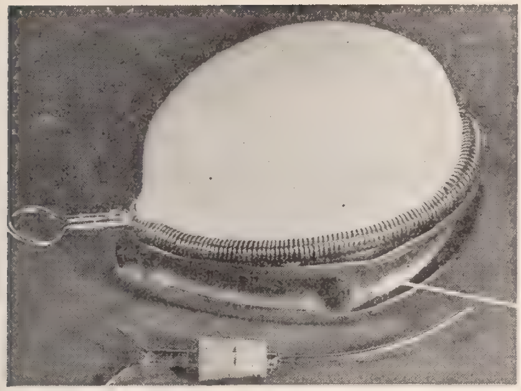

FIG. 1. Chloroform mask in which additional air space is provided automatically. Also shown are dropper and cork insert for chloroform bottle.

ether, or nitrous oxide. The majority of these anesthesias, 11,164, or 88.8 per cent, were administered by physicians, whereas 1,410, or 11.2 per cent, were given by nurses. There is a slight discrepancy between these figures and the total number of deliveries tabulated, because some of the anesthetics were started by nurses and completed by physicians.

There were many other combinations of anesthetic agents used. Vinethene was used a great deal in one hospital, which accounts for 748 cases, or 6.10 per cent. Spinal was administered for 489 cases, or 3.97 per cent of the deliveries. Nitrous oxide, oxygen, and ether were used in 597 cases, or 4.85 per cent, while cyclopropane, oxygen, and ether were administered in 126 deliveries, or in 1.02 per cent of the total. A miscellaneous group of Pentothal, caudal, and heterogeneous combinations of anesthetic agents comprised 0.89 per cent.

It is interesting to note that, in 12,311 deliveries, there were 11,237 infants, or approximately 91 per cent, who cried spontaneously. There were no maternal deaths attributed to anesthesia during our study. However, we would like to present the number of maternal deaths caused by anesthesia in Buffalo for the past four years. According to statistics from the Buffalo Maternal Mortality Committee there were six anesthetic deaths in the period from January 1, 1946, to March 1, 1950. During that time 73,477 women were delivered. In four of these six deaths, chloroform was the anesthetic agent used; in the other two, cyclopropane (Table 3).

Comments

Skill and experience are more necessary in the administration of chloroform than in the administration of ether. There are a few safeguards in the use of chloroform which are of the utmost importance. Chloroform, being more potent than ether, should always be dropped slowly, never poured. The mask should always be removed if the patient is holding her breath, to avoid inhalation of a high concentration when the patient resumes breathing. Also, the mask should never be covered with a towel. A chloroform mask in which additional air space is automatically provided has been used satisfactorily in our city for many years (Fig. 1). Careful attention to any change in respiration or pulse rate is essential, as these are danger signals. If the ordinary ether mask is the one available, it should be held at least two fingerbreadths away from the patient's face. Adriani even suggests discontinuance of the drug for a pulse rate of 50 or less.[15] Stimulation of the patient during induction and recovery should always be avoided, because of the possibility of the release of some of the patient's own epinephrine. As mentioned previously, injections of epinephrine just before, during, or following chloroform anesthesia are absolutely contraindicated. Even though the addition of oxygen slows induction, it is definitely beneficial in preventing deleterious after-effects.

Summary

All known anesthetic agents and combinations of drugs have been tried for obstetric analgesia and anesthesia. In the past few years, since 1942, even another drug, trichlorethylene, the purified product of which is called trilene, has been used and studied for this purpose.

In most parts of this country chloroform has fallen into disrepute because of the possibility of cardiac and hepatic damage. However, it

TABLE 3.—REPORT OF MATERNAL MORTALITY COMMITTEE ON MATERNAL DEATHS DUE TO ANESTHESIA

Year	Total Deliveries	Total Maternal Deaths	Anesthetic Deaths		
			Total	Chloroform	Cyclopropane
1946	16,626	22	1	1	0
1947	18,510	14	2	1	1
1948	17,540	11	2	1	1
1949	17,801	8	0	0	0
1950 (2 months)	3,000	1	1	1	0
Total	73,477	56	6	4	2

has been used extensively in Buffalo over a period of many years in thousands and thousands of deliveries with a maternal mortality of approximately one in 15,000 cases.

Knowledge, training, and utmost care are essential in its administration. With cognizance of its hazards and limitations, as well as its advantages, chloroform can be administered with optimum results. Again we repeat, skill and experience are more necessary in the administration of chloroform than in the administration of ether.[13]

In Buffalo, the number of maternal deaths caused by chloroform has not conformed to the proposed frequency of popular opinion.

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EVALUATION OF A NEW AGENT (METHYL-ISO-OCTENYLAMIDE) IN THE TREATMENT OF VASODILATING HEADACHES

Intramuscular administration of methyl-iso-octenylamide, hereinafter referred to as octin, may be expected to bring complete relief from headaches to about 50 per cent of patients treated. Oral administration, on the other hand, does not appear to be nearly so effective. From their studies the authors have gained the clinical impression that the typical migraine attack is most amenable to treatment by this drug, whereas poorer and more variable results may be expected in the nervous type of headache. While intramuscular administration of octin appears to be a valuable adjunctive form of therapy, orally administered its results are not as good as cafergone. While the consequent elevation of blood pressure after intramuscular injection in some normotensive patients was not sufficient to necessitate abandonment of therapy, the authors feel that it is not a wise policy to administer octin to patients with pre-existing hypertension. Although the ergotamine preparations can be given intravenously, octin cannot, a fact which places the latter at a disadvantage when fast action is desired.

Intramuscular octin hydrochloride, concentration of 100 mg. per cc. of solution, was given in 0.5 to 1.0-cc. doses as early as possible in the attack. The smaller initial dose was used in the earlier trials but was increased to 1.0 cc. when serious side-effects were not encountered. If there was no relief, the dose was repeated in a half hour. Orally, a tablet of 2 grains (0.13 Gm.) of octin muctate was given every half hour until relief occurred, but not more than 4 tablets were used in any one attack.

Included in the study were only those patients having a definite diagnosis of migraine headache, histamine cephalgia, or tension headache.—*Gustavus A. Peters, M.D., and William W. Zeller, M.D., Proceedings of the Staff Meetings of Mayo Clinic, November 9, 1949*

STATEMENT BY SENATOR ROBERT J. TAFT

"The Proposal to create a Department of Health, Education, and Security is designed to carry out an idea that has been current for quite a while. In fact, I once introduced a Bill to establish a new department. The difficulty is that Health, Education, and Security are all different subjects. On the local level in cities they are entirely separate departments. The only respect in which they are grouped together in the present Federal Security Administration is that they all are matters in which the Federal interest is secondary and the matter of principal interest is aid to the States."

RESPIRATORY COMPLICATIONS ASSOCIATED WITH DEMEROL

THOMAS F. McDERMOTT, M.D., and E. M. PAPPER, M.D., New York City

(From the Department of Anesthesia, Columbia-Presbyterian Medical Center)

THE generally accepted thesis is that Demerol (meperidine) produces insignificant respiratory depression. The preparation of this report was prompted by the disparity between this viewpoint and our contrary observations during clinical anesthesia. It will be shown here that depression of respiration and alteration of normal breathing patterns do occur during clinical anesthesia as the result of the action of Demerol. It appears necessary, therefore, to review the information available on the effects of Demerol on the respiratory mechanism, to outline the nature of the problem, and to indicate some of the gaps in our present knowledge.

The initial report of Eisleb and Schaumann in 1939 was largely concerned with the spasmolytic properties of the new synthetic agent which they developed.[1] The structural relationships of Demerol, morphine, and atropine were noted as a basis for the actions of Demerol (Fig. 1). The antispasmodic effect of Demerol was thought to be atropine-like in quality and the analgesic properties associated with the resemblance to morphine. The observation was also made that respiratory depression occurred in dogs following the administration of Demerol, but that the effects were less frequent and less severe when compared with morphine. Respiratory depression was noted in the cat by Duguid and Heathcote as a cumulative effect following the administration of repeated small doses.[2] Respiratory failure in mice has also been observed. Gruber, Hart, and Gruber found this effect in a minority of mice in contrast to the more common manifestations of convulsions and reflex hyperirritability.[3] These workers observed a transient depression of rate and depth of breathing in dogs with the intravenous administration of Demerol. Similar observations in the dog anesthetized with pentobarbital were noted by Yonkman.[4] The depressant effects of Demerol on respiration in laboratory animals were not confirmed by Rovenstine and Batterman.[5] The converse was the case in their experiments. The intravenous injection of 10 mg. of Demerol per Kg. of body weight produced a mild excitement accompanied by hyperpnea of short duration without subsequent change in respiratory rate.

In man the same authors reported the use of Demerol or Demerol and scopolamine as preoperative medication in 338 patients. Severe depression of respiration was observed in eight patients. These workers, and Batterman and Mulholland and Batterman and Himmelsbach stress the fact that respiratory depression is more apt to be encountered in debilitated patients and in those with cerebral arteriosclerosis.[6,7] Brotman and Cullen, in reporting the use of Demerol as an adjunct to nitrous oxide and oxygen anesthesia, found nine instances of depression of respiration in 317 such anesthesias.[8] This complication was reported as minimal when the intravenous dose did not exceed 25 mg. A publication of Guttman warns of the use of Demerol in the presence of intracranial lesions.[9] A series of 20 such patients is presented with uniform respiratory depression, severe in seven patients, with respirations of 12 or less per minute. Batterman, on the other hand, thought Demerol might be a valuable agent in the treatment of pain associated with intracranial disease, since harmful respiratory sequelae were rare in his experience.[10] Finally, Marshall in discussing the use of Demerol in obstetrics mentions two cases of maternal cyanosis.[11] Unfortunately, insufficient data are available in this report for complete evaluation of drug effect on maternal or newborn respiration.

There are reports of two deaths caused by overdosage of Demerol. One of these was suicidal, caused by the oral ingestion of the drug in large

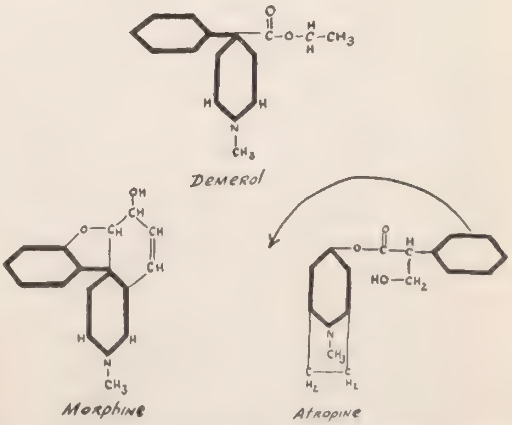

FIG. 1. Structural relationship of Demerol, morphine, and atropine.

Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Anesthesiology, May 11, 1950.

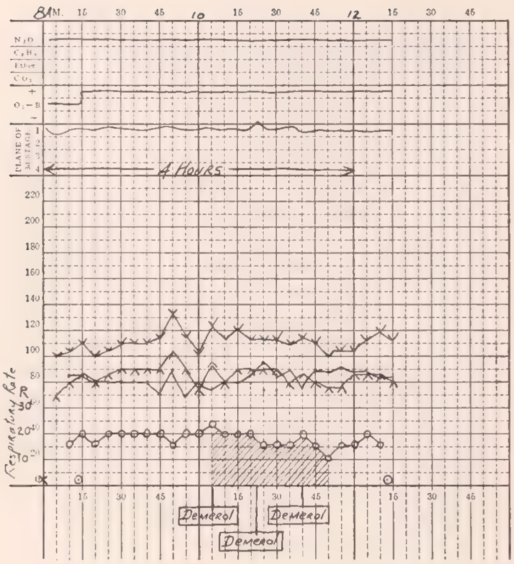

FIG. 2. Rate of respiration during clinical anesthesia with Pentothal and nitrous oxide was depressed by repeated intravenous injections of Demerol. The most pronounced decrease in rate occurred after the third dose of Demerol. (See Fig. 5 for code.)

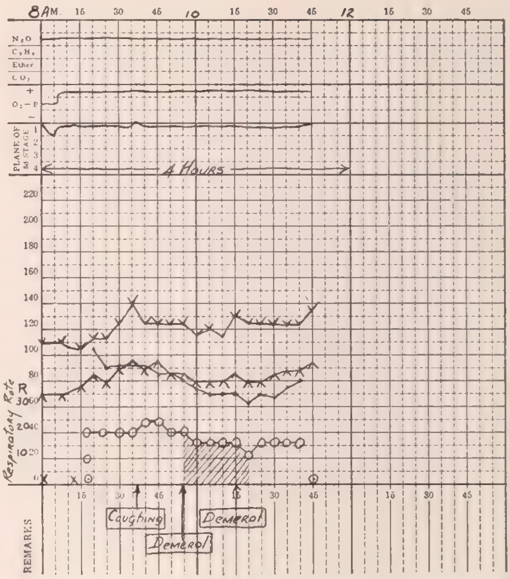

FIG. 3. Pattern of respiratory depression with Demerol is similar to that of Fig. 2. (See Fig. 5 for code.)

dosage.[12] The precise sequence of events leading to death was not known. The other reported death due to overdose of Demerol was a 6.5 Kg. infant with multiple intestinal anomalies, perforation, and peritonitis who received 220 mg. of Demerol subcutaneously. Patchy cyanosis, respiratory arrest, and death occurred in ten minutes.[13]

The preponderance of opinion, however, supports the thesis of a lack of respiratory depression encountered with Demerol.[14–34] Flatt even reports an increased maternal respiratory rate concomitant with its use on obstetrics.[35]

Despite the large body of data which has been reviewed, there is little quantitative evidence available on the effect of Demerol on pulmonary ventilation. It is suggested that such information is needed in unanesthetized as well as anesthetized human subjects. Experiments designed to elucidate the effect of Demerol in quantitative terms are in preparation.

Among the few studies in pulmonary ventilation is that of Gottschalk.[36] Ventilation was estimated with the aid of the body chamber in the newborn infant. It was shown that Demerol combined with scopolamine administered to the mother exerted no depression of respiration in 31 infants when compared with controls where no medication was employed during labor. This work is a basic support of the rational attitude that Demerol has a valuable and safe place in obstetric analgesia.

During clinical anesthesia with Pentothal and nitrous oxide, intravenous reinforcement with Demerol has proved far from innocuous in the effects upon respiration. Although the depression is rarely severe in degree and may not be prolonged, it deserves mention to dispel the idea that Demerol, a drug of unquestioned clinical value, can be used without fear of respiratory depression. Three cases are presented as representative of a frequently observed phenomenon.

Case 1.—This patient was a healthy, forty-four-year-old, white male food worker with a post-traumatic herniated nucleus pulposus between the fourth and fifth lumbar vertebrae. He was medicated with 15 mg. of morphine sulfate and 0.4 mg. of scopolamine at 7:15 A.M. for Pentothal-nitrous-oxide anesthesia which began at 8:00 A.M. The surgical correction of the lesion was begun in the prone position at 8:30 A.M. Shortly after 9:30 the need fo Pentothal became increased, and it was decided t supplement the anesthesia with intravenous Demerol. The effects of three intravenous doses of 2 mg. each of Demerol are well shown in a reductio of the respiratory rate from 24 to 10 per minut (Fig. 2). This is consistent with the findings o Duguid and Heathcote regarding the cumulativ effect of small doses on the cat.[2]

In contrast to Guttmann's findings, sever respiratory depression has not been related to th presence of intracranial lesions. In fact, the pattern of depression of breathing has been noted with equal frequency in patients with or without increases of intracranial pressure. It is of further interest that Apgar did not find any alteration in spinal fluid pressure associated with the use of Demerol.[37]

Case 2.—This thirty-seven-year-old white man had a craniotomy in 1946 for an astrocytoma, and had a recurrence of symptoms in 1949. His general condition was not remarkable, and he was medicated with 50 mg. of Demerol and 0.4 mg. of scopolamine at 7:15 A.M. for re-elevation of his frontal flap at 8:35 A.M. A difficult intubation required 1.2 Gm. of Pentothal. His requirement for this agent continued to be excessive, and at 9:50 A.M. the first of two intravenous doses of 25 mg. of Demerol was administered. The prompt decline of his respirations from 24 to 12 per minute will be noted (Fig. 3).

Case 3.—Figure 4 shows a phenomenon suggestive of Way's work describing the potentiation of the effect of Demerol by barbiturates.[38] This sixty-one-year-old physician's relative gave a history of two previous attacks of coronary artery occlusion (one of them recent), as well as his presenting symptoms of prostatism. Knowing that surgery was mandatory, he was still vehement in his demands that he be completely unaware of his entrance to the operating room. Accordingly, anesthesia was induced in bed with intravenous Pentothal; 425 mg. of this drug was given during his transfer from the wards to the operating room. Reversing the usual procedure, he was then medicated with 50 mg. of Demerol and 0.2 mg. of scopolamine given slowly intravenously. Shortly thereafter, apnea occurred and persisted for nine minutes. With manual pressure on the breathing bag, his condition remained quite satisfactory, and the necessary surgery, a one-stage suprapubic prostatectomy, was accomplished uneventfully. It should be noted here, however, that a more conservative dose of 25 mg. of Demerol and 0.1 mg. of scopolamine, given intravenously during the surgery, did not cause any clinical respiratory depression.

In addition to respiratory depression, which is a fairly constant finding when using Demerol intravenously in conjunction with Pentothal-nitrous oxide anesthesia, bronchospasm has been observed on three occasions with Demerol.

Eisleb and Schaumann, it will be recalled, were searching for a spasmolytic agent when they synthesized Demerol.[1] Its analgesic action was suggested to them only when they noticed that mice being tested with this new compound showed the S-tail phenomenon suggestive of a morphine-like action. Their more detailed researches did reveal relaxation of bronchial musculature. In this country Gruber, Hart, and Gruber found that the perfused guinea pig bronchiolar musculature was relaxed by Demerol only when previously contracted by histamine.[3] Castillo, on the other

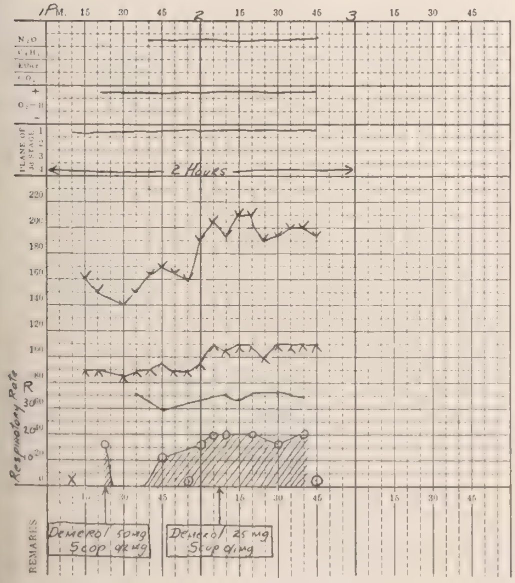

FIG. 4. Apnea was produced during Pentothal nitrous oxide anesthesia by the intravenous injection of 50 mg. of Demerol. (See Fig. 5 for code.)

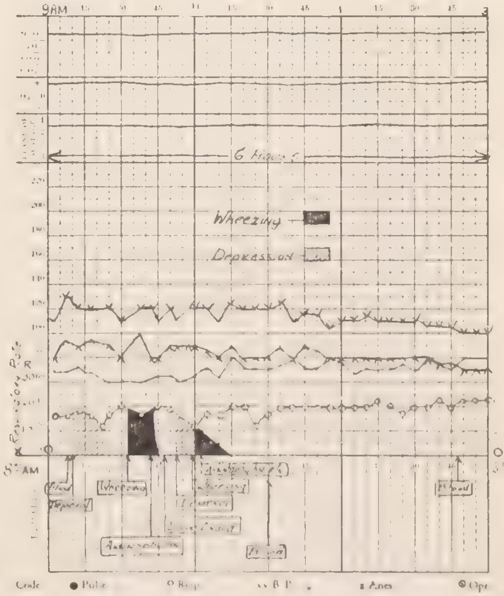

FIG. 5. Demerol intravenously precipitated asthmatic wheezing on two occasions during Pentothal nitrous oxide anesthesia.

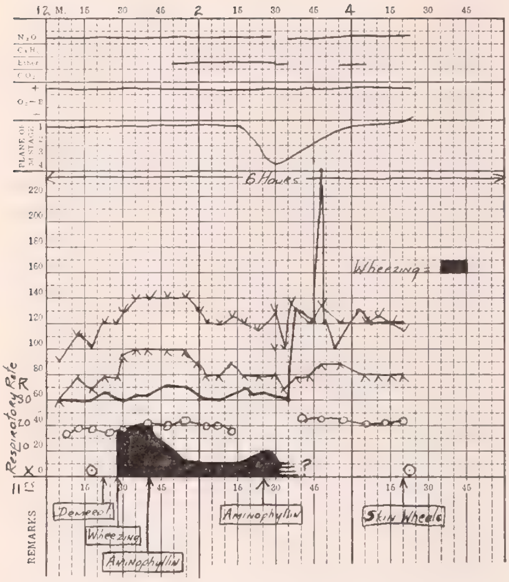

Fig. 6. This is another illustration of development of asthma after the administration of Demerol during anesthesia. (See Fig. 5 for code.)

hand, with tracheal chain studies, was able to show dilatation by Demerol but not in a preparation contracted by histamine.[39] Bronchial dilatation is a pharmacologic action of Demerol that is universally accepted throughout the clinical literature because of the evidence in the therapy of bronchial asthma.[6,7,13,40–47]

Untoward individual complications of Demerol, probably based on sensitivity, have been reported. Some importance was attached to the occurrence of edema of the uvula following the use of Demerol and scopolamine by Steinberg and Jack and Taylor.[48,49] However, the latter authors' mention of Kirschbaum's case of edema of the uvula in 1942 with scopolamine alone makes it difficult to implicate Demerol. Flipse and Flipse recently reported a well-authenticated case of hyperpyrexia due to Demerol.[50] Noth, Hecht, and Yonkman reported one tabetic who received 100 mg. of Demerol three to four times each day for twenty-five days for pain.[51] Following this, codeine sulfate was used as an analgesic for thirty-four days. When Demerol was resumed, the first dose was well tolerated, but following the second dose there occurred a severe vasomotor collapse with bronchial spasm, nausea, and vomiting. This effect was reproduced on two occasions. It is interesting that a dose of 25 mg. in this patient produced no untoward effect whatsoever.

Case 4.—The first case of bronchospasm observed here was a fifty-three-year-old white male who had suffered from bronchial asthma for ten years (Fig. 5). There was a familial history of allergy but no adequate investigation into a possible allergen. The patient found his disease to be nonseasonal and always suspected the ingestion of pork as a causative agent. He was subjected to a laminectomy during Pentothal-endotracheal nitrous oxide anesthesia following scopolamine premedication for the correction of lumbar root pains. Anesthesia was begun at 8:05 A.M., surgery at 9:00 A.M. A transfusion was begun at 9:15 A.M., and 15 mg. of Demerol were given intravenously at 9:20. At 10:05 the patient began to exhibit wheezing respirations. This disappeared following the intravenous administration of aminophylline at 10:20. At 10:40 A.M. 50 mg. of Demerol were given intramuscularly with the onset of wheezing at 10:55. This responded transiently to the administration of aminophylline, recurred, and disappeared again after subcutaneous epinephrine was given. This patient's postoperative course was a rather stormy one with intermittent asthma which had been precipitated during anesthesia and operation.

Case 5.—This was a thirty-nine-year-old white male who had undergone two previous plastic procedures for severe burns of the hands. No Demerol was used during these procedures. Following morphine and scopolamine premedication he was induced for a third procedure with Pentothal at 11:55 A.M. Nitrous oxide was added and 25 mg. of

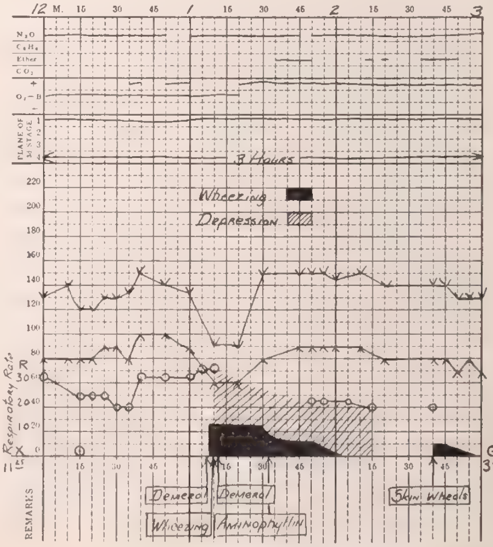

Fig. 7. Depression of breathing and asthma were caused by Demerol during Pentothal-nitrous oxide anesthesia. There was an exacerbation of asthma at the end of the procedure with the production of skin wheals with Demerol. (See Fig. 5 for code.)

intravenous Demerol given at 12:40 P.M. At 12:50 the patient began to wheeze, and ten minutes later there were still loud rhonchi present on both inspiration and expiration. At 1:50 P.M. intravenous aminophylline gave some relief, and a change to ether and oxygen anesthesia further improved the patient (Fig. 6). At 2:40 P.M. there was return of wheezing respirations, ameliorated by deepening ether anesthesia. He was maintained with an infusion of dextrose in water with added aminophylline, and surgery terminated uneventfully at 4:50 P.M. His postoperative course was uncomplicated. He did not receive any more Demerol. A subsequent plastic procedure has been done uneventfully during Pentothal-nitrous oxide anesthesia without the use of Demerol.

Case 6.—A fifty-two-year-old white female had developed signs of spinal cord compression seven months prior to operation. Her past history included only obesity and an ill-documented history of sensitivity to penicillin. She was medicated with 10 mg. of morphine and 0.4 mg. scopolamine and a laminectomy was performed during Pentothal-nitrous oxide anesthesia with an endotracheal airway. Due to increasing dosage of Pentothal, 75 mg. of Demerol were given intravenously in divided doses at 1:15 P.M. Almost immediately the patient began to exhibit respiratory wheezing, together with a moderate degree of cyanosis (Fig. 7). This was refractory to aminophylline, and the endotracheal tube was withdrawn slightly with relief of the cyanosis but not of the bronchospasm. A change to ether anesthesia offered some improvement, but this condition persisted in some degree to the end of the procedure. There was some exacerbation of asthmatic breathing near the termination of the surgery when skin tests were made. These revealed a severe reaction to Demerol with the formation of an extensive wheal with pseudopodia, while intradermal penicillin and saline gave no such reaction. Her postoperative course, which did not include any analgesia with Demerol, was uneventful except for a troublesome ankle edema, thought to be postural in nature.

Comment

The concept that Demerol is not depressant to respiration and has no adverse effects upon breathing patterns cannot be accepted in all circumstances of its use. Experiments in anesthetized animals can be cited to demonstrate its depressant action which appears benign only in contrast with the more important effects of morphine. The clinical experience of an insignificant alteration of respiratory function in unanesthetized man cannot be applied to the circumstances of clinical anesthesia with Pentothal and nitrous oxide without modification. Unfortunately adequate quantitative measurements of the changes in pulmonary ventilation are still not available to elucidate objectively the nature of the changes described. It appears probable that the combined circumstances of general anesthesia and the intravenous injection of Demerol can account for much of the respiratory depression.

The bronchospasm during general anesthesia which can be produced by Demerol is of considerable interest. The mechanism is not understood at present. Further study is necessary to clarify this phenomenon.

Summary

1. The effect of Demerol upon respiration in man and laboratory animals is reviewed.
2. Demerol appears to exert a more pronounced depression of respiration during clinical Pentothal and nitrous oxide anesthesia than has been observed in unanesthetized persons.
3. Demerol has been shown to precipitate an asthmatic state during Pentothal-nitrous oxide anesthesia occasionally. This finding is not in agreement with the bronchodilating properties commonly attributed to the drug and exploited in the therapy of asthma in unanesthetized patients.

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FREQUENCY OF DIVORCE

About 1,200,000 persons were involved in divorces granted in the United States in 1948. The total includes 313,000 children of broken marriages who were under twenty-one years of age when their parents were divorced, according to a report on divorces and annulments by Metropolitan Life Insurance Company statisticians.

Divorce in families where there are children is more common than is generally realized. Of the 421,000 absolute decrees granted, 42 per cent were to couples with children. The more children there are in a family, the less likelihood there is of divorce, the study shows.

In homes where there were no children under age eighteen, the divorce rate for the United States in 1948 was 15.3 per 1,000 married couples. In homes with one child, the rate was 11.6; with two children, 7.6 with three children, 6.5, and with four or more children, 4.6 per 1,000—less than one third of the rate in the homes where there were no children.

Altogether, the relative frequency of divorce for couples with children was shown to be only about one half of that for couples without dependent children at the time of divorce. The difference in divorce frequency between couples with and without children is greatest during the early years, and diminishes as the length of married life increases. Even after the twentieth year of marriage, however, the ratio is twice as high for couples without children. After the thirtieth year the rates for the two groups are practically identical.

While some unsuccessful marriages may not be broken until the children have grown up, their number is less than is popularly believed. This is borne out by the small difference in the rate between the two groups at the later years of marriage.

"DOCTOR JONES" SAYS—

"How Harmful Are Cigarettes?" Did you read that article in the January *Reader's Digest?* Folks that, like myself, have been smoking cigarettes more or less for years, have asked me about it: whether I thought the case against cigarettes was really as bad as the author made it appear. Before that came out I'd been reading a summarized discussion, along the same line, in my A.M.A. *Journal:* an answer to a doctor's questions.

Well, so far as they run parallel the two discussions check. Nicotine, the active principle of tobacco, is a poison so powerful, according to the *Digest* article, that if the amount in two or three cigarettes was injected, in one dose, into the blood stream, it'd be fatal. Most of it, of course, goes into the air but, if that's true, even a little of it, regularly, couldn't be any help to our systems. Smoking raises blood pressure, at least temporarily, and contracts surface blood vessels.

Smoke is smoke, whether it's from wood, tobacco, or some other organic material. The brownish tars that accumulate on the inside of chimneys and pipe bowls and show up on a handerchief if you blow tobacco smoke through it—they're bound to be irritating to delicate mucous membranes. There's evidence suggesting that they may be an important cause of lung cancer. That's smoker's, mainly, and it's been increasing in about the same time and proportion as cigarette smoking. And, personally, notwithstanding familiar advertising claims to the contrary, I've never found a brand of cigarettes that wouldn't irritate my throat.

The vast increase in cigarette smoking the article dwells on (along with various other details I haven't mentioned) is the result of clever and extensive advertising and unusual combinations of circumstances. The first World War gave it a big boost. And, speaking of burning up cigarettes, some of the advertising sort of burns me up. For one thing, I hate to see doctors, including "eminent physicians," dragged into it when practically every one of 'em if young people asked for his advice, would advise 'em not to start smoking. They know its promises of benefits are none, of possible harm, numerous.—

Paul B. Brooks, M.D., April 3, 1950

HAY FEVER, HUMIDITY, AND SINUSITIS

Max Unger, M.D., New York City

HAY fever, rose cold, vasomotor rhinitis, estival catarrh, summer catarrh, autumnal catarrh, pollen catarrh are all names used to designate the same combination of symptoms, namely, the frequent, severe attacks of sneezing, the running nose, the watery eyes, and often the cough and asthma that appear repeatedly and regularly in many individuals during the summer and early fall months.

The multiplicity of names is due to the attempts of various writers to label this combination of symptoms with some phrase that will describe the characteristic features of the condition, such as the time of occurrence, its periodicity, its exciting cause, its predisposing cause, or some other feature that appeared prominent in the eyes of the writer who described it. However, the very multiplicity of the names indicates how unsatisfactory any one of them is. "Hay fever" is probably the least logical of all because, in this country at least, most of the cases occur long after the hay season is over, but the term is so widely known and used by both the laity and the medical profession that, for purposes of convenience, it will be the term used in this article.

All writers agree on the symptoms and the seasonal appearance of the syndrome, but there is a marked difference of opinion on the cause. Some have held that hay fever is due to the irritation of sensitive spots in the nose and have, therefore, stressed the importance of local desensitization.[1] Others claim that it is the result of some neurologic condition and advise the building up of the nervous system. Others hold that it is the result of some structural defect in the nose and practice the resection of deviations and spurs of the septum and the removal or shrinking of hypertrophied turbinates. Still others hold that it is caused by the irritation of allergens or various kinds of pollens that are inhaled during the season of the attack. The pollen theory is the one that has prevailed the longest and has been so widely accepted that many weather bureau stations make and publish pollen counts during the hay fever season and many local legislative bodies have made it a criminal offense for a landowner to permit the presence of ragweed and other weeds on his property, legislation that has caused no apparent reduction in the number and severity of hay fever cases.

It is undoubtedly true that many hay fever sufferers have sensitive spots in the nose, that others have deviations and spurs of the septum and hypertrophied turbinates, that many are neurasthenic, and that many live in regions that contain pollen in the atmosphere. On the other hand, there are many more people with sensitive spots in the nose, spurs and deviations of the septum, hypertrophied turbinates, and neurasthenia who do not suffer from hay fever. In my belief, the designation of pollens as the cause of hay fever is the most fallacious of all, because many of the resorts to which hay fever patients go for relief have much higher pollen counts than their home localities, and the people who live in the resort areas do not suffer from the disease, so that the relief that hay fever patients get at the resorts cannot be attributed to escape from pollens.

It is my purpose to show the logical association of hay fever, humidity, and sinusitis. This association will become apparent after a brief review of the physiology of respiration and the manner in which the temperature and humidity of the air affects it.[2]

The average human being breaths in 350 cu. ft. of air during the twenty-four hours, most of it during the waking hours. However low the outside temperature or humidity of the air may be, the temperature of the air is raised to 86 F. by the time it reaches the pharynx, and the humidity has been raised almost to the saturation point. The rest of the rise to body temperature takes place in the pharynx and trachea. Nature is accommodating and generous. This automatic warming and moistening of the air does not occur only under normally placid conditions. When, as a result of muscular exertion, respiration becomes rapid, the nasal mucosa still gives off enough and more than enough heat and moisture to raise the inspired air to a temperature of 86 F. and a saturated humidity. Almost everybody has seen the phenomenon of a dripping nose in a dog or a horse after a sharp run. Athletes can be seen to blow the nose frequently after severe muscular exertion like a sprint, a boxing bout, or a wrestling match.

The amount of moisture that the normal nasal mucous membrane gives off depends automatically on the humidity of the atmosphere. The humidity of the air is the amount of water vapor in it.[3] Two kinds of humidity are spoken of, absolute and relative. Absolute humidity is the amount of water that the air actually can hold, and the relative humidity is the percentage of the water present in the air in proportion to the amount of water that the air can hold when

TABLE 1.—Grains of Water Vapor per Cubic Foot of Air at Various Temperatures Fahrenheit When 100 Per Cent Saturated (Absolute Humidity)[3]

Temperature (Fahrenheit)	Grains Water Per Cubic Foot
100	19.8
90	14.8
80	10.9
70	8.0
60	5.7
50	4.1
40	2.8
30	1.9
20	1.2
10	0.8
0	0.5
−10	0.3
−20	0.2

TABLE 2.—Average Temperature and Humidity in New York City for Forty-six Years*

Month	Temperature (Fahrenheit)	Relative Humidity (Per Cent)	Absolute Humidity (Grains Per Cubic Foot)
January	30.9	63.7	1.2
February	31.3	66.3	1.3
March	37.7	63.3	1.6
April	49.4	61.6	2.5
May	60.6	63.3	3.6
June	68.8	66.3	5.1
July	73.8	67.6	7.1
August	73.1	69.6	8.6
September	66.8	70.0	6.7
October	56.3	67.0	4.7
November	44.2	67.6	3.6
December	35.0	67.6	1.5

* U.S. Weather Bureau, Annual Summaries for Cities, 1948.

saturated at the temperature of the time of the observation. Every climate has its own characteristic temperature and humidity. If the humidity is low, the air can absorb more moisture, and the nasal mucosa gives off more secretion; if the humidity is high, the air can absorb less moisture, and the nasal mucosa gives off less.

Table 1 gives the absolute humidity of the air at various temperatures when it is 100 per cent saturated. Table 2 shows the average monthly temperature, absolute humidity, and relative humidity prevailing in New York City over a period of forty-six years. The relative humidity is what is published in newspapers and radio broadcasts. The relative humidities shown in Table 2 show only small apparent differences during the course of the year, the lowest being 61.6 per cent and the highest 70 per cent; however, if an analysis is made of what actually happens during respiration at different times of the year, the results are illuminating. Let us take a few examples.

Normal body temperature being 98.6 F., we see from Table 1 that it will require almost 19.8 grains of water vapor per cu. ft. to 100 per cent saturation, actually 19.1 grains. On an average day in January, it is seen in Table 2 that the temperature is 30.9 F., the relative humidity 63.7 per cent, and the absolute humidity 1.2 grains. The body then must raise the temperature to 98.6 F. and the humidity to 100 per cent. We know from physics that gases increase their volume by $^{1}/_{491}$ part for each Fahrenheit degree rise in temperature. The rise from 30.9 to 98.6 F. is 67.7 F. Multiplying $^{1}/_{491}$ by 67.7, even without adjusting for progressions, we get an increase in volume of about 13.8 per cent. The water vapor it contains will thin out proportionately, and the air in the nose will then have a relative humidity of about 55.0 per cent and an absolute humidity of 1.0 grain per cu. ft. The nose must provide, then, 18.1 grains of water, the difference between 1.0 grain and 19.1 grains, the saturation point at 98.6 F. During the twenty-four hours, therefore, the nose must provide 350 × 18.1 grains of water, or about 14.4 ounces (nearly a pint). If this were all the moisture that the nasal mucous membrane provided, it would be left completely dry after the air absorbed it, but the normal mucous membrane is never dry. Nature probably provides two or three times as much moisture.

Let us see what happens on a day in July when, according to Table 2, the average temperature is 73.8 F., the average relative humidity 67.6 per cent, and the absolute humidity 7.1 grains. Here, the temperature needs to be raised only 24.8 F. This increases the air volume by only 5 per cent and diminishes the relative humidity to 64.3 per cent and the absolute humidity to 5.7 grains. The nose must, therefore, provide 350 × 13.4 grains of water or 10.7 ounces (nearly two thirds of a pint).

This response of the nasal mucosa to the normal stimuli of humidity and temperature proceeds without the individual being aware of it, but let there be an abnormal, irritating stimulus and there is an immediate feeling of acute discomfort. Dust, smoke, a whiff of ammonia result in an immediate attack of sneezing, stuffiness, and profuse flow of nasal secretion. When the irritation is removed, these symptoms subside. When there is a continuous irritation, like a chronic sinusitis, then the symptoms last as long as the sinusitis lasts and are in proportion to the severity of the sinusitis. The amount of fluid given off under such circumstances may be three or four times the normal. Let us see what happens in a case of chronic sinusitis on a hot summer day when the temperature is 90 F. and the humidity is 90 per cent, a not infrequent combination.

Under such circumstances, the temperature has to be raised only 8.6 F., the relative humidity is diminished to 89.1 per cent and the absolute humidity by only 0.1 grain. The nose, therefore, must provide only 350 × 4.3 grains of water or about 3.4 ounces (less than one fourth of a pint). A normal nose can adjust itself to this diminished requirement, but here we have the abnormal stimulation of the sinus infection. The bacteria and discharges from the sinuses are irritating to the nasal mucous membrane and stimulate adtional discharge, and so we have the typical profuse flow and sneezing attacks of "hay fever" on a hot summer day. If the bronchial mucosa is involved, there are the typical asthmatic symptoms that often accompany hay fever attacks.

Between the 14.4 ounces of mucus that has to be secreted to humidify the air at 30.9 F. and 63.7 per cent humidity and the 3.4 ounces required to humidify at 90 F. temperature and 90 per cent humidity, there is a difference of 11 ounces or about two thirds of a pint. This amount of evaporation from the mucous membrane of a patient with a moderate sinusitis can make him feel quite comfortable during the drier seasons of the year. This furnishes a clue to the reason for the relief that hay fever sufferers obtain when they go to hay fever resorts.[4] During July in the Appalachian, Adirondack, Catskill, and White Mountains, the temperature averages 65 to 70 F. and the humidity 55 to 60 per cent. With increased altitude, the temperature and humidity fall. This contrasts with 70 to 80 F. and 75 per cent humidity along the eastern seaboard. The humidity of the western and southwestern plateaus east of the Rocky Mountains furnishes a still greater contrast to the humidity of the Mississippi valley, the Gulf coast, and the western seaboard. Throughout the western plateau, the humidity in July may range from 20 to 40 per cent. These are popular regions for hay fever patients. An atmospheric humidity of 30 per cent can evaporate a lot of mucous secretion; in fact, some mild cases of hay fever find some regions too dry.

An apparent contradiction to the argument that low humidity is the cause of the relief in hay fever is furnished by the fact that many cases find similar relief in some island or seaboard resorts, but this is explained by the fact that these resorts have the benefit of continuous or almost continuous mild breezes. A moderate wind, even with a somewhat higher humidity, has as good a drying effect as still air with a considerably lower humidity.

It must not be inferred from the above that low humidity cures hay fever; it only alleviates the symptoms. If a patient returns to his home climate during an attack, the symptoms recur at once.

The contrast of the hay fever patient's misery during the summer and the comparative comfort he enjoys during the fall, winter, and spring often causes him to disregard symptoms of colds or nasosinusitis that he may have during the latter seasons, yet careful questioning will show that hay fever sufferers do have nasal symptoms during the cooler and drier months. In all hay fever cases that I have had the opportunity of examining outside the hay fever season, I have found evidence of chronic sinus infection. Careful histories revealed that the sinusitis symptoms preceded the hay fever. A search of medical literature disclosed many assertions that pollens caused hay fever, but I found no report of any case where pollens were found in the nasal secretions. I have myself examined microscopically many slides with nasal secretions during acute hay fever attacks, but I have never found any pollens in them.[5] I have, however, found in all cases, both during the hay fever attack and at other times, pathogenic bacteria, pus cells, and desquamated sinus cells. There are many hay fever cases in New York, but the city is so vast that many of these patients may go for weeks without seeing a blade of grass, much less coming in contact with weeds in an unkempt garden. Furthermore, as I stated earlier in this article, many patients find relief in climates with vastly greater pollen counts.

Two illustrative cases are cited.

Case Reports

Case 1.—A male, age sixty-two, had had hay fever regularly for forty years, the attacks beginning about the end of July and ending early in September. They were of such severity that he was almost prostrated and had to leave the city for relief, usu-

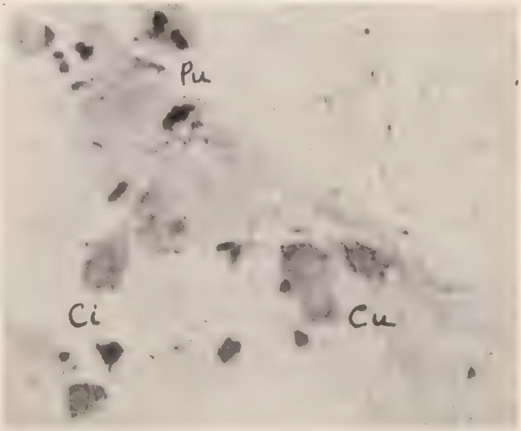

Fig. 1. Microscopic examination of nasal discharge in winter (Case 1): Ci, ciliated cells; Pu, pus cells; Cu, cuboidal cells.

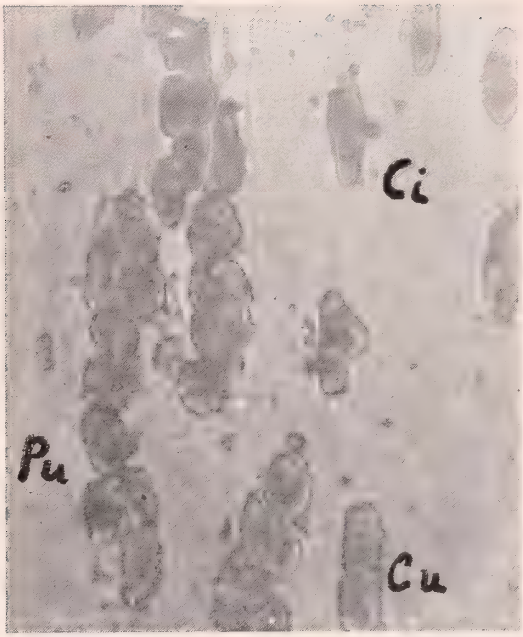

Fig. 2. Microscopic examination of nasal mucus (Case 2): Ci, ciliated cells; Pu, pus cells; Cu, cuboidal cells.

ally going to the Berkshire Mountains. He had tried every known remedy during the attacks and every course of injections for aborting an attack prior to its appearance for many years, without avail. During the months that intervene between attacks, he had done nothing else. A careful review of his history disclosed that from the age of sixteen to twenty-two, when the hay fever began, he had had numerous head colds. It was also disclosed that during the nine or ten months that intervened between hay fever attacks he had a profuse mucopurulent discharge, especially on arising in the morning. He felt so much better than during his hay fever, however, that he paid no attention to this. Microscopic examination of the nasal discharge during the winter, when he did not complain of hay fever symptoms, showed numerous gram-negative cocci, pus cells, and desquamated, ciliated, cuboidal and polyhedral cells that were typical of paranasal sinusitis (Fig. 1).[5]

Case 2.—A male, age forty-eight, appeared in July, complaining of hay fever. He stated that, for about five years, July and August were almost unendurable. He found relief only when he went to Fire Island but felt just as bad when he returned. Further questioning revealed that for fifteen years prior to the appearance of the hay fever, he suffered from frequent, progressively severe colds all year and also during the past five years during the intervals between the hay fever. Microscopic examination of the nasal mucus showed numerous gram-negative cocci, pus cells, and ciliated, cuboidal and polyhedral cells (Fig. 2).

Conclusions

In view of the reasons delineated above, I am of the opinion that hay fever is not a separate disease but is an acute exacerbation of a chronic nasosinusitis that is induced by the excessive humidity of the season, aided by the other predisposing factors that may exist at the same time. It is important, therefore, that hay fever patients be treated effectively for sinusitis, even long before their attacks, in order to put the nasal mucosa in shape to resist the effect of the high humidity of the summer.

36 West 40th Street

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"TEN COMMANDMENTS" FOR INSOMNIA SUFFERERS

Dr. P. H. Fluck advises the following "ten commandments for good sleeping" in an article in the April issue of *Today's Health:*

1. Go to bed at the same hour every night.
2. Try to get at least one hour of sleep before midnight.
3. Drink no more than a glass of milk or eat no more than a small bowl of cereal before retiring.
4. Never eat or drink ice-cold foods before retiring. Ice cream is the worst kind of midnight snack.
5. Never listen to the radio in bed.
6. Never, positively never, read in bed.
7. Provide a regular schedule for the hobby, dog, or wife or husband who interferes with your rest.
8. When you go to bed, close your eyes and go to sleep.
9. If that doesn't happen, try to remember what position you awake in the next morning. Then take that position when you go to bed that night.
10. Relax every nerve, muscle, and thought. Patience won't kill you; sleeping pills may.

THE MANAGEMENT OF ACUTE PANCREATITIS

George M. Saypol, M.D., New York City

(From the Surgical Services of Fourth Division, Bellevue Hospital, and the University Hospital of New York-Bellevue Medical Center)

THE results of immediate surgery in acute pancreatitis are notoriously poor. Early medical management of the disorder, followed by surgery at a later period for concomitant biliary tract disease, has proved far more satisfactory. Yet the latter has not had general acceptance.

Serum amylase determinations provide a means of diagnosing the condition, yet they are not employed routinely for differentiating acute abdominal disorders. Failure to perform this simple laboratory procedure has resulted in unnecessary explorations of the abdomen, even by those who agree with early medical treatment.

Having made a clinical diagnosis, it is often difficult to say which case will progress from edema to suppuration or be associated with hemorrhage or peritonitis. Excluding localized abscess formation, it is doubtful that early surgery is indicated during any pathologic stage. Hence, one must be content to treat all cases under a common heading of acute pancreatitis, and, initially, that treatment should be medical.

This paper is illustrated by seven cases, including one which ended fatally following early surgery. They represent patients with acute pancreatitis treated from November, 1948, to October, 1949, on the surgical services of Fourth Division, Bellevue Hospital, and University Hospital, both of New York University-Bellevue Medical Center.

Bockus and Raffensberger, quoting studies by Schmieden and Sebening, De Takats and MacKenzie, and Mikkelson, stressed the lower mortality in the conservative treatment of acute pancreatitis.[1] Paxton and Payne, in a review of 307 cases of acute pancreatitis, noted a 44.7 per cent mortality in 103 patients operated upon as emergencies compared with a mortality of 27.5 per cent in 204 patients (including 16 moribund patients) treated conservatively.[2]

The value of serum amylase determinations in the diagnosis of acute pancreatitis has been discussed by Lagerloef, Pratt, Heifitz, Probstein, and Gray, and Bauman.[3-6] While serum amylase may be elevated in peptic ulcer involving the pancreas, in salivary gland inflammation, in advanced kidney dysfunction, and in carcinoma of the pancreas, it is almost invariably elevated in the early stages of acute pancreatitis.

Diagnosis and Management

All patients with a so-called acute abdomen in whom diagnosis is questionable, in addition to a scout film of the abdomen and an electrocardiogram, are examined for serum amylase. This has been done by a modification of the Somogyi method (upper limit of normal = 100 units per cc.) and more recently by the Myers-Free-Rosinsky method (normal = 1 to 2.5 mg. per cc.). In the presence of an elevated serum amylase, perforated ulcer being excluded, medical treatment aimed at suppressing pancreatic function is employed. This consists of: (1) nothing by mouth; (2) gastric intubation with continuous suction; (3) 1,000 cc. of 5 per cent glucose in normal saline and 1,000 cc. of 5 per cent amigen intravenously daily; (4) atropine sulfate, $^1/_{150}$ grain subcutaneously every four to six hours; (5) Demerol hydrochloride, 50 to 100 mg. every four hours as required, and (6) sodium iodide, $15^1/_2$ grains.

Continuous suction prevents hydrochloric acid from entering the duodenum, reducing secretin formation and thereby diminishing the volume of pancreatic juice secreted. Atropine sulfate, by depressing vagus activity, has a twofold action. It further diminishes secretion of hydrochloric acid by the stomach and reduces the enzyme concentration of the pancreatic juice. Sodium iodide intravenously is used on a hypothetical basis, since inorganic iodine inhibits proteolytic activity. The shock manifestations often seen in acute pancreatitis may be due to split-protein products resulting from increased serum protease concentration, which may occur concomitantly with the known rise in serum amylase and lipase. Other measures may include (7) blood transfusions when indicated; (8) antibiotics—penicillin, dihydrostreptomycin, aureomycin, and chloromycetin; (9) insulin subcutaneously in the presence of hyperglycemia in doses small enough to prevent hypoglycemia with its possible vagotonic stimulation, and (10) calcium gluconate in the presence of hypocalcemia.

With improvement in the acute symptoms and signs of pancreatitis and with a normal serum amylase, often occurring within three to five days, cholecystography is performed. If this reveals a normal functioning gallbladder without stones, no surgery on the biliary tract is indicated at this time. A gastrointestinal x-ray series is then performed to rule out peptic ulcer. If there is nonvisualization of the gallbladder, it is well to repeat the x-rays in two to four weeks. This is done because early in acute pancreatitis there will be a large incidence of nonvisualization, even though there is no mechanical obstructive factor in the biliary tract. With two cholecystograms showing nonvisualization of the gallbladder or in the presence of stones, surgery is performed.

Operation includes immediate cholangiography, cholecystectomy for stones or diseased gallbladder, exploration of the bile ducts and removal of stones, dilatation of the sphincter of Oddi with graduated probes, and routine use of a T tube in the common duct. Occasionally, drainage of an abscess of the pancreas is required. Routine pancreatic biopsy may help in clarifying the pathology in acute pancreatitis, but we are not prepared to recommend it because of the possibility of causing fistulas.

Postoperatively (in six to ten days), cholangiography is repeated, and often the pancreatic duct is visualized. The patient is discharged with the T tube clamped, and after a period of one to four months, if there has been no recurrence of abdominal pain or digestive symptoms, it is removed.

Recurrent Pancreatitis

The significance of pancreatic and biliary reflux due to obstruction at the sphincter, in the presence of a pancreatic duct entering the common bile duct above the sphincter of Oddi, has been discussed by Colp and Doubilet and by Doubilet and Mulholland.[8,7] The latter have performed endocholedochal sphincterotomy in order to prevent reflux. We have performed sphincterotomy rarely and then under direct vision through a duodenotomy. It has been our policy to perform cholecystoduodenostomy or, preferably, choledochoduodenostomy for recurrent pancreatitis.

I have been interested in employing a long-arm T tube, the inferior long limb of the T being inserted into the duodenum and thus serving as an obturator for the papilla of Vater. By leaving this tube in situ for three to six months, it is hoped that permanent loss of sphincter action will result, thus preventing reflux. This type of tube has been used in surgery for common duct stones and strictures without any apparent harmful effect. At present, we are conducting experiments on dogs to determine changes in the sphincter of Oddi resulting from a catheter lying in the common duct and extending into the duodenum.

Case Reports

Case 1.—J. S., a forty-one-year-old white male, was admitted to Bellevue Hospital on June 17, 1949, with a chief complaint of severe epigastric pain radiating to the back and left upper extremity of four hours duration. There was a past history of flatulence and occasional epigastric discomfort associated with a bloated feeling unrelated to meals, during the previous eight years. There was no history of alcoholism.

Physical examination revealed an acutely ill patient with cold and clammy skin. Temperature was 100.8 F., pulse 52, blood pressure 140/80. The abdomen was tense but not distended. There was no tenderness and no borborygmi.

Laboratory findings were as follows: urine negative for glucose and bile; red blood cells 5,560,000; hemoglobin 19.5 Gm.; white count 14,000 with 80 per cent polymorphonuclear cells; serum amylase 256 units (upper limit of normal 100 units); scout film of the abdomen was negative for air under the diaphragm and for intestinal obstruction. Electrocardiogram was normal.

A diagnosis of acute pancreatitis was made, and the following regime instituted: (1) nothing by mouth; (2) daily intravenous administration of 1,000 cc. of 5 per cent glucose in normal saline and 1,000 cc. of 5 per cent amigen; (3) intravenous sodium iodide, $15^1/_2$ grains daily; (4) Levine tube in the stomach with continuous suction; (5) atropine sulfate, $^1/_{150}$ grains subcutaneously every six hours; (6) Demerol, 50 mg. subcutaneously, every four hours as required.

On June 18 the serum amylase was 6.53 mg. per cc. (normal 1 to 2.5 mg. per cc.); on June 20 serum amylase was 1.53 mg. per cc. The patient's temperature ranged between 99.4 and 102.8 F. for five days, after which it dropped to 99 F. where it remained until discharge. On the fourth hospital day gastric suction and sodium iodide were discontinued. On the fifth day atropine sulfate was discontinued, and the patient was started on a bland diet. On the sixth day cholecystogram revealed a normally functioning gallbladder without stones. Patient was discharged on the seventh day.

Follow-up four months later revealed the patient doing well on a regular diet.

Comment.—This patient had acute pancreatitis unassociated with biliary tract disease and responded well to medical treatment.

Case 2.—M. K., a sixty-five-year-old white male, was admitted to University Hospital on November 3, 1948, complaining of epigastric and right upper quadrant pain, radiating to the back, of five hours duration. It was associated with nausea and vomiting. On October 9, 1948, patient had been operated upon at University Hospital because of pain, jaundice, and nonvisualization of the gallbladder after two cholecystograms. Findings were as follows: The biliary tract and pancreas were apparently normal; the small intestines were matted together by a white, thin exudate. A cholangiogram was not done.

Physical examination revealed an acutely ill patient, with tenderness in the right upper quadrant of the abdomen. Temperature was 103. F.

Laboratory findings on admission were as follows: icterus index 22 and five days later 42; total serum

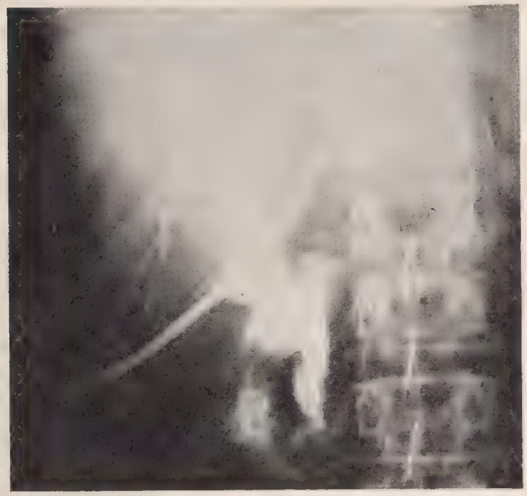

Fig. 1. Pancreatic duct faintly visualized (Case 3).

cholesterol 160 mg. per cent; serum cholesterol esters 85 mg. per cent; cephalin cholesterol flocculation 2 plus; serum amylase 11 mg. per cc.; serum lipase 4.9 cc. (normal—less than 0.5 cc.); scout film of the abdomen was negative.

A medical regime was instituted. After eight days, patient improved. Serum amylase was 1.1 mg. per cc.; serum lipase 1.5 cc. Surgery was deferred because of the heart condition and the previous exploration of the biliary tract with negative findings. The patient was discharged on the tenth day.

A follow-up eight months later revealed the patient free of symptoms referable to the biliary tract. Economy and function were limited because of heart disease.

Comment.—This patient had been operated upon for suspected biliary tract disease at a time when there was no suspicion of acute pancreatitis. The findings were negative except for a thin, white exudate which matted part of the small intestines. Cholangiogram was not done at the time; hence, one cannot say whether there was a pancreatic duct which entered the bile duct above the sphincter. On readmission, within a few weeks, acute pancreatitis was diagnosed, and this responded well to medical treatment.

Case 3.—S. S., a sixty-two-year-old white female, was admitted to University Hospital on October 8, 1948, because of recurrent epigastric pain radiating to the back, nausea and vomiting, jaundice, and fever of one week duration. On August 16, 1948, she had been operated upon at University Hospital for extrahepatic obstructive jaundice. Findings were as follows: chronic cholecystitis and cholelithiasis; the common bile duct was dilated, and there were areas of fat necrosis over the pancreas, mesentery, and omentum. Cholecystectomy and choledochostomy were performed. A cholangiogram on August 26, 1948, showed a possible retained stone in the common duct. The T tube was inadvertently removed before evaluation of the cholangiogram.

Physical examination revealed an acutely ill, jaundiced patient. The liver was felt two fingers below the right subcostal margin. Temperature was 104 F., blood pressure 150/90.

Laboratory findings were as follows: icterus index 40; total serum cholesterol 175 mg. per cent; alkaline phosphatase 7.8 Bodansky units; cephalin cholesterol flocculation plus 1; serum amylase 23.8 mg. per cc.; red blood cells 3,970,000; hemoglobin 12.9 Gm.; white count 10,000 with 76 per cent polymorphonuclear cells. Blood and bile cultures revealed Escherichia coli. Electrocardiogram showed premature ventricular contractions. On October 15, 1949, serum amylase was 3.1 mg. per cc., serum lipase 0.85 cc.

The patient was reoperated upon October 21, 1948. The head of the pancreas was found to be enlarged. There were no stones in the bile duct, and the sphincter of Oddi was patent. A T tube was inserted into the common bile duct. A cholangiogram on November 8, 1948, revealed the common bile duct to be patent. The pancreatic duct was visualized (Fig. 1).

Patient was discharged November 7, 1948. The T tube was removed one month postoperatively.

Follow-up ten months later revealed the patient doing well.

Comment.—This patient had her first operation for extrahepatic obstructive jaundice. Evidence of previous acute pancreatitis was found in addition to stones in the gallbladder. Delayed cholangiography suggested a retained common duct stone, but her T tube was removed inadvertently. Within two months she was readmitted, and a diagnosis of acute pancreatitis was made. At the time she had a blood culture positive for E. coli. She received medical treatment, and when the acute stage had subsided, she was reoperated upon, primarily for retained stone. This was not found, an enlargement of the head of the pancreas only being present. One may speculate that a stone passed spontaneously. Repeat cholangiograms following the second operation demonstrated a patent bile duct and a portion of the pancreatic duct.

Case 4.—A. S., a fifty-five-year-old white male, was admitted to Bellevue Hospital on August 9, 1949, with a chief complaint of sudden epigastric pain of four hours duration, no radiation, and associated vomiting. He gave a past history of an abdominal exploration eight years previously at Bellevue Hospital for similar pain with negative findings.

Physical examination revealed an acutely ill patient writhing in pain with tenderness in the epigastrium. Temperature was 101.5 F., blood pressure 128/78.

Laboratory findings were as follows: Serum amylase on August 10, 1949, was 8.6 mg. per cc.; white count 10,000 with 70 per cent polymorphonuclear cells; scout film of the abdomen was negative. Chest x-ray disclosed chronic bronchitis and emphysema. Cholecystogram revealed nonvisualization; bile culture showed E. coli.

Patient was operated upon September 16, 1949. Dense adhesions were encountered which precluded exploration of the common bile duct. The gallbladder was opened, and stones were removed; in view of a patent cystic duct, cholecystogastrostomy was performed.

His postoperative course was complicated by a wound abscess which resolved spontaneously. He was discharged from the hospital October 6, 1949.

Follow-up one month later revealed the patient doing well.

Comment.—This patient responded well to medical treatment and was operated upon later for concomitant biliary tract disease. Because of technical difficulties and the surgical risk due to associated pulmonary disease, the common duct was not explored. Gallstones were removed, and cholecystogastrostomy was performed. The possibility of common duct stones exists; however, barring occlusion of the cystic duct, he should continue to do well.

Case 5.—M. F., a fifty-year-old white male, was first seen on June 1, 1949, at another hospital, at which time he gave a ten-day history of epigastric pain radiating to both sides of the anterior chest and to his back in the region of the twelfth thoracic and first lumbar vertebrae. He was acutely ill and jaundiced, and his abdomen was markedly distended with moderate deep tenderness in both upper quadrants. Temperature was 104 F., blood pressure 110/70. Laboratory findings were as follows: June 2, 1949—serum amylase 242 units; icterus index 34; bile was present in the urine and in gastric contents obtained by means of a Levine tube. Further serum amylase tests on June 3 revealed 280 units; June 4, 311 units; June 5, 330 units. The medical regime outlined for the treatment of acute pancreatitis was employed. The temperature range was between 104 and 101 F. during the week of the patient's stay in this hospital.

On June 9 he was admitted to University Hospital considerably improved with a temperature of 102 F., mild distention of his abdomen but no pain and no tenderness. Laboratory data on June 10 revealed the following: urine negative for bile and sugar; nonprotein nitrogen 35; icterus index 8.3; serum bilirubin, trace; total serum cholesterol 267 mg. per cent; serum cholesterol esters 160 mg. per cent; cephalin-cholesterol flocculation 2 plus; thymol turbidity 4 to 5 units; alkaline phosphatase 6.3 Bodansky units; total serum protein 6.4 Gm. per cent; serum calcium 11.2 mg. per cent; serum amylase 1.9 mg. per cc.; serum lipase 0.2 cc.; red blood cells 3,950,000; hemoglobin 11.3 Gm.; white blood cells 22,750 with 89 per cent polymorphonuclear cells. On June 11, 1949, a cholecystogram revealed nonvisualization.

A diagnosis of subsiding pancreatitis associated with chronic cholecystitis and cholelithiasis was made and operation performed on June 13, 1949, twelve days after his first hospitalization. Findings were as follows: The gallbladder was markedly thickened, undilated, and contained concentrated bile; in the cystic duct there were two stones each measuring 4 by 5 mm. The common duct was not dilated and contained concentrated bile. The pancreas was markedly swollen, and, because of a sensation of softening in the body, aspiration was performed which revealed abscess formation. Cholecystectomy, choledochostomy with insertion of a T tube, and incision and drainage of the abscess of the pancreas were performed. A cholangiogram taken in the operating room revealed patency of the common duct. The pathologic report revealed chronic cholecystitis, cholesterolosis, cholelithiasis, and necrosis of pancreatic tissue. Cultures of common duct bile and pancreatic abscess were negative. The postoperative course was satisfactory, temperature ranging between 102 and 99 F. for the first ten days. Further laboratory tests were as follows: June 17 and June 23—urine negative for sugar but showed a trace of bile; June 20—examination of bile for pancreatic ferments showed no amylase and traces of lipase and protease. A delayed cholangiogram on June 23 revealed patency of the common duct. The pancreatic duct was visualized (Fig. 2). On June 24, 1949, eleven days after operation, he was discharged from the hospital. Three months later, the T tube, which had been clamped continuously, was removed. Five months postoperatively the patient is well.

Comment.—This patient improved on medical treatment and was operated upon later for associated biliary tract disease. In addition to gallstones and cholesterolosis, he had an abscess of the pancreas which was drained. Clinically, one might have suspected suppuration because of the sustained

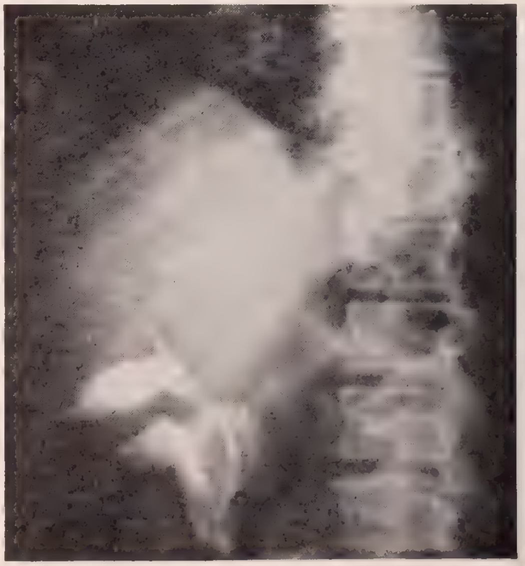

Fig. 2. Pancreatic duct entering common bile duct well above the sphincter of Oddi (Case 5).

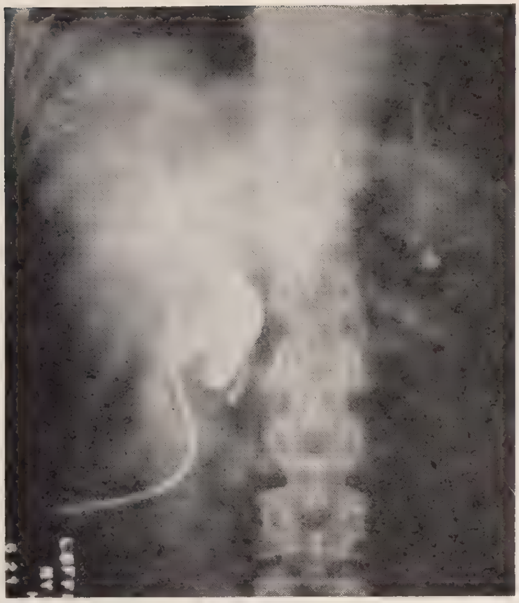

Fig. 3. Pancreatic duct visualized. Bile ducts still markedly dilated following removal of common duct stone (Case 6).

fever. The question arises, would earlier operation have prevented the abscess? The difficulty in determining clinically what pathologic stage is present in the pancreas and the satisfactory outcome seem to justify the treatment employed in this patient. Cholangiography demonstrated the pancreatic duct.

Case 6.—M. L., a fifty-eight-year-old white female, was admitted to University Hospital on June 8, 1949, with a chief complaint of pain in the right upper quadrant of the abdomen radiating to the interscapular region and associated with vomiting during the past year. For the first six months she had had occasional attacks of pain. During the last six months they had become more frequent, occurring one-half hour after meals. The present episode began two days ago. There was no history of jaundice or clay-colored stools. In 1920, a cholecystectomy for stones was performed at another hospital.

Physical examination revealed an acutely ill patient. There was a healed vertical scar in the right upper quadrant of the abdomen, no masses, and slight deep tenderness in the epigastric region. Otherwise the examination was negative. Temperature was 104 F.; pulse 110; blood pressure 140/90. Laboratory findings on admission were as follows: red blood cells 4,360,000; hemoglobin 14 Gm.; white blood cells 20,000 with 91 per cent polymorphonuclear cells; icterus index 24.6; serum cholesterol esters 150 mg. per cent; thymol turbidity 3 units alkaline phosphatase 8.8 Bodansky units; total serum proteins 7.0 Gm. per cent; serum amylase 8.0 mg. per cc.; serum lipase 1.3 cc.; duodenal drainage revealed E. coli and a nonhemolytic streptococcus. Bile for pancreatic ferments revealed normal amounts of amylase, lipase, and protease. A scout film of the abdomen revealed an irregular calcified mass in the right upper quadrant. Five days later serum amylase was 3.0 mg. per cc. Patient's temperature fell to 101.5 F. on the second day and ranged between this and 99 F. for the next five days. The medical regime outlined for acute pancreatitis was employed.

A diagnosis of subsiding pancreatitis associated with choledocholithiasis was made and operation performed on June 14, 1949. Findings were as follows: The right lobe of the liver, the hepatic flexure of the colon, and the distal portion of the stomach were enmeshed in dense adhesions. Following dissection, the common duct was visualized and found to be distended to at least 2 cm. in diameter. It contained a mixed stone which measured 1.4 by 0.8 cm. The pancreas was slightly enlarged. Choledochostomy was performed with removal of the stone and a T tube inserted. Culture of the bile from the common duct revealed E. coli. A cholangiogram taken in the operating room revealed patency of the common duct. Delayed cholangiography on June 22 again revealed a patent, dilated common duct. The pancreatic duct was visualized (Fig. 3). On June 16, 1949, urine was negative for bile and sugar. On June 23, nine days following operation, patient was discharged from the hospital.

Four months later the T tube which had been clamped continuously was removed. Five months postoperatively the patient is well.

Comment.—This patient had a cholecystectomy for stones twenty-nine years previously. On the present admission she was treated medically for acute pancreatitis. With improvement, operation was performed for suspected common duct stone and a single calculus removed. Cholangiography demonstrated the pancreatic duct.

Case 7.—M. G., a fifty-three-year-old white female, was admitted to Bellevue Hospital on May 12, 1949, because of severe pain in the right upper and lower quadrants of the abdomen and vomiting of fourteen hours duration. Her past history was negative.

Physical examination revealed an acutely ill patient with marked direct and rebound tenderness of the entire abdomen. Temperature was 102.8 F., pulse 100, blood pressure 95/60.

Laboratory findings were as follows: serum amylase 22.3 mg. per cc. (reported postoperatively); white count 7,000 with 78 per cent polymorphonuclear cells; scout film of the abdomen was negative.

Because of a suspicion of perforated gallbladder, operation was performed May 13, 1949. Findings were as follows: There were about 3,000 cc. of broth-colored fluid in the abdominal cavity; the gallbladder was thickened and contained stones; fat necrosis was found only in the pancreas. Cholecystostomy with removal of stones and drainage of the abdomen was performed.

Postoperatively her temperature ranged from

102.8 to 104 F. Death occurred on the fifth day after operation.

Postmortem findings revealed lobular pneumonia and a diverticulum of the duodenum near the common bile duct.

Comment.—This patient, our only mortality, was operated upon within twenty-four hours of admission because of a diagnosis of perforated acute cholecystitis. A serum amylase, taken preoperatively and reported postoperatively, revealed the true diagnosis of acute pancreatitis. Cholecystostomy with removal of gallstones and drainage of the abdomen was of no avail.

Discussion

While this series is small, it represents a variety of cases of acute pancreatitis and methods of treating them.

Alcoholism preceding the onset was absent in all cases. Pain may be simulated by acute cholecystitis, perforated peptic ulcer, acute appendicitis, and coronary occlusion. Abdominal distention may resemble intestinal obstruction.

Jaundice was present in four cases.

The pancreatic duct was visualized in all three patients who had cholangiograms, suggesting reflux as a causative factor.

No patients were in true shock.

Without serum amylase determinations acute pancreatitis could only be suspected. With these determinations, diagnosis became possible.

Desperately ill patients with shock, vasomotor changes in the skin, and bleeding into the intestinal tract suggest pancreatitis of the hemorrhagic type. Their prognosis is poor following early surgery, whether it be cholecystostomy or choledochostomy, drainage of the pancreas, or simple drainage of the peritoneal cavity. Better results may come with improvement in medical treatment.

Summary

1. Seven cases of acute pancreatitis are presented. They include one fatality, a patient operated upon early without benefit of a serum amylase determination.
2. The routine use of serum amylase determinations in all doubtful "acute abdomens" is urged.
3. The superiority of medical management over surgery early in acute pancreatitis is repeated.
4. A plan of management is outlined.

103 East 86th Street

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ARMY MEDICAL LIBRARY TO CHANGE PUBLICATION

A new format for the Army Medical Library's *Current List of Medical Literature* has been announced by Major General R. W. Bliss, the Army Surgeon General.

Beginning with the July, 1950, issue, the *Current List* will be enlarged and published in two parts, a register, listing all contributions, and an index, listing multiple author and subject headings in dictionary form. The monthly indexes will cumulate into annual volumes comprising entries for approximately 80,000 articles.

The new format is the result of a recommendation of the Surgeon General's Consultant Committee on Indexing, appointed in 1948 to study the problem of medical indexing. Substitution of a new publication program for the Library, which would emphasize coverage of current medical literature, was recommended by the Committee earlier this year with the announcement of the closing out of the *Index-Catalogue of the Library of the Surgeon General's Office.* Chairman of the Committee is Dr. Chauncey D. Leake of the University of Texas.

ANTICOAGULANTS IN TREATMENT OF CORONARY OCCLUSION WITH MYOCARDIAL INFARCTION: A STUDY OF EIGHTY CASES

George W. Zeluff, M.D., and William W. Field, M.D., New York City

(From the Department of Medicine, Columbia University, College of Physicians and Surgeons, and the First Medical Division, Bellevue Hospital)

THE important role of thromboembolic complications has long been recognized in coronary occlusion with myocardial infarction.[1-3] The incidence of thromboembolic phenomena following infarction has been described recently as occurring in from 9.9 to 37 per cent of the cases.[4,5] Hellerstein and Martin reported that thromboembolic phenomena were the chief cause of death in 15 per cent of the cases dying of acute myocardial infarction and studied at autopsy.[6] Master, Dack, and Jaffe reported 6 per cent mortality due to clinical embolism in 500 cases of myocardial infarction.[7]

The presence of mural thrombi over the intracardiac portion of the infarcted area in coronary occlusion was found by Blumer in over one half of the patients, with subsequent embolic complications in 14 per cent.[8] Garvin found mural thrombi in hearts of 67 per cent of the patients dying of acute myocardial infarction.[9] Solandt's experiments are well known, in which gradual occlusion of the coronary artery by thrombus formation was produced in experimental animals by introducing sodium ricinoleate into the lumen of the coronary artery.[10] He demonstrated that the formation of thrombi and the subsequent cardiac infarct could be prevented by adequate amounts of heparin. In addition, Dicumarol was shown by Dale to prevent venous thrombosis in experimental animals.[11] In experimental acute coronary occlusion in dogs treated with Dicumarol, Blumgart demonstrated that the incidence and magnitude of hemorrhagic extravasations, miliary hemorrhages, size, and rate of healing of the infarcts showed no significant difference in the treated and control groups.[12] He concluded that Dicumarol produces no adverse effects on the myocardium of dogs which would retard the healing process or development of collateral circulation in experimental myocardial infarction.

A number of clinical reports have tended to confirm these observations concerning the use of anticoagulants in myocardial infarction.[13-16] In 1946, Nichol and Page reported the use of Dicumarol in 50 cases of myocardial infarction.[17] One case of clinical embolism was observed; there were no fatalities in the patients suffering a first closure. Among the remaining patients there were eight deaths; at postmortem six of these failed to reveal either mural thrombi or peripheral and pulmonary emboli. Peters, Guyther, and Brambel described a series of 60 controls and 50 cases of infarction treated with Dicumarol.[18] In the control series there were 13 deaths, as contrasted to two deaths in the treated group. In the control group evidence of thromboembolic phenomena was observed in 16 per cent, as opposed to 2 per cent in the treated group. Wright selected 43 cases with a poor prognosis because of repeated coronary occlusions or thromboembolic phenomena and treated them with Dicumarol.[19] A mortality of 25 per cent was observed, as against an anticipated 60 to 70 per cent. Parker and Barker reported a series of 50 treated and 100 control cases.[20] The mortality in the treated cases was 10 per cent and in the control 13 per cent.

Greisman and Marcus in 1948 reported a detailed study of the use of Dicumarol in 75 consecutive cases of acute myocardial infarction.[21] In 100 untreated patients there were 35 deaths and 21 cases of thromboembolic phenomena. In the Dicumarol group of 75 patients, seven died and three had embolic episodes. In their control group, 17 required digitalis for congestive heart failure; nine of these patients died, five demonstrating clinical embolization. In the treated group 15 required digitalis, three died, and none had emboli.

The largest group reported to date is in the study by Wright, Marple, and Beck, undertaken by the American Heart Association in various hospitals throughout the country.[22] Four hundred thirty-two patients received Dicumarol under a prearranged schedule, and 368 patients admitted alternately served as controls. The over-all mortality in the control group was 24 per cent and in the treated group 14.9 per cent. Thromboembolic phenomena were reduced from 25 per cent in the control group to 6 per cent in the treated group. Wright believes that adequate Dicumarol therapy requires the prothrombin level to be in the therapeutic range for three days before the patient may be said to be "Dicumarolized." If cases of thromboembolism occurring when the patient did not have three days of satisfactory levels are excluded, only four cases in the whole series had thromboembolism on Dicumarol. More recently, reports by Foley, Clough, and Burch have confirmed the favorable results obtained by Wright with anticoagulant therapy.[23-25]

Plan of the Study

Beginning in August, 1947, all patients admitted to the First Medical Division, Bellevue Hospital, with proved clinical and electrocardiographic evidence of acute myocardial infarction were given anticoagulants. To date there have been 80 cases in this group. For the control series there were 100 consecutive cases of proved coronary occlusion admitted from January, 1945, to August, 1947. Both groups received comparable treatment including bedrest, opiates, oxygen, diet, vasodilators, digitalis, and quinidine.

In most cases heparin in aqueous solution was administered for the first forty-eight hours after admission or until such time as a satisfactory prolongation of the prothrombin time had been achieved by Dicumarol. Heparin was given in dosages of 75 to 125 mg. intravenously every six hours or 50 to 75 mg. intramuscularly every three hours. Clotting times were estimated by the Lee-White method, and an attempt was made to maintain the clotting time at levels three to four times that of normal.

Dicumarol was administered as early as possible after a definite diagnosis of myocardial infarction had been made. Efforts were made to rule out the contraindications to Dicumarol therapy as stated by Barker, including renal and hepatic insufficiency, hepatogenous icterus, deficient prothrombin, subacute bacterial endocarditis, hemorrhagic tendencies, purpura, recent brain and spinal cord injury, and hemorrhage.[26] The prothrombin time was determined before the drug was started, and, if normal, 300 mg. were given. This initial amount was followed by daily doses of 100 to 200 mg. until the prothrombin time reached the safe and effective therapeutic level of thirty to fifty seconds.

Prothrombin times were determined daily by the one-stage Link-Shapiro modification of the Quick method.[27] No anticoagulant drug was given without the daily prothrombin time being available. Undiluted whole plasma was used in the determinations, and prothrombin levels were reported in both seconds and percentage of activity. Percentage of activity in our own laboratory had been predetermined by drawing logarithmic curves based on prothrombin times of diluted normal plasma. The therapeutic range of thirty to fifty seconds represented 10 to 30 per cent prothrombin activity when compared with average control times.

Dicumarol therapy was continued until several days after the patients became ambulatory; this usually meant four to six weeks. If the prothrombin activity dropped below 10 per cent, Dicumarol was withheld and the patient observed carefully for evidence of hemorrhagic tendencies. Vitamin K and whole blood transfusions were not to be given unless hemorrhage occurred. In our study of 80 patients on Dicumarol some microscopic hematuria occurred, but no case of frank hemorrhage was encountered.

Control Group

In the control series of 100 cases, there were 40 deaths (40 per cent) and 60 survivors (60 per cent). The average age of the coronary patient was 60.2 years, with females averaging 61.3 years and males 59.7 years. In the survival group of 60 patients, the average age was 58.1 years as against an average of 63.2 years in those patients dying of the disease. This finding is consistent with the increase in mortality from coronary thrombosis in the older age groups.

The sex distribution disclosed 76 per cent males and 24 per cent females in the total group, with no significant change in percentages between the fatal and surviving cases.

The site of infarction was found on electrocardiographic evidence to be anterior in 46 per cent, posterior in 45 per cent, and undetermined in 9 per cent. Among the fatal cases 52.5 per cent of the infarctions were located in the posterior wall.

The average length of hospitalization for those patients surviving myocardial infarction was fifty-one days. In the fatal group, the average length of hospitalization was eight hospital days, with 17, or 42.5 per cent, dying within the first forty-eight hours.

Complications in the control group were as follows:

Thromboembolism.—One or more thromboembolic phenomena occurred in 20 cases (20 per cent), of which 14 were noted in the fatal group. In the fatal group the complications included fresh infarction or extension in ten cases, pulmonary infarction in four cases, cerebral embolism in four cases, and thrombophlebitis in one case. In the survival group there were six episodes: cerebral embolism in three, pulmonary infarction in two, and extension of the myocardial infarction in one. Of the 20 patients exhibiting evidences of thromboembolism, six had multiple complications, only one surviving.

The time of the thromboembolic incidents varied from the second day after admission to the one hundred sixteenth day. The majority occurred in the first three weeks; only one was found before the third day. Of the 20 cases, eight received digitalis for congestive heart failure; five of these eight died of thromboembolic complications.

Shock.—Moderate to severe degrees of shock occurred in 16 cases (16 per cent), all of which terminated fatally. Shock existed for varying periods of one to ninety-six hours with an average of twenty-one hours. These findings concur with the general clinical teaching that severe shock persisting for twenty-four hours in myocardial infarction is a grave prognostic sign. Of the 16 cases noted, congestive heart failure played a secondary role in three.

Congestive Heart Failure.—Congestive heart failure occurred in a total of 30 cases (30 per cent), and five deaths were considered to be due primarily to this cause. Twenty-one (70 per cent) of the congestive failure cases received digitalis. In the survival group of 60 patients, 15 patients went into congestive heart failure, and ten of these were given digitalis. In the fatal group of 40, 15 showed signs of failure, and 11 received digitalis.

Pneumonia.—Pneumonia was recognized in seven cases (7 per cent) with one death ascribed to this cause. Four other patients in the fatal group developed pneumonia as a contributing factor.

Arrhythmias.—Arrhythmias were recorded only when considered to be of marked significance in the clinical course of the patient. Occasional premature contractions and slight degrees of heart block or bundle branch block were not included. Six patients developed severe arrhythmias, four of them dying. Both surviving patients went into auricular flutter; one received digitalis, the other digitalis and quinidine. The four fatal arrhythmias exhibited varying types of patterns, all ending in complete heart block. These patients died on the second, third, fifth, and eighth hospital days, respectively.

Miscellaneous.—A total of eight cases (8 per cent) were found to have diabetes with three in the fatal group. Additional complications included an ischiorectal abscess, chronic glomerulonephritis, urinary tract infection, tonsillitis, dissecting aneurysm of the right femoral artery, and an unsuspected bronchogenic carcinoma found at autopsy.

Anticoagulant Group

In the treated group of 80 patients there were 60 survivors (75 per cent) and 20 deaths (25 per cent). The average age was 58.8 years with females averaging 60.7 years and males 58.2 years. In the survival group of 60 patients, the average age was 59.1; the fatal group averaged 58.0 years.

The sex distribution revealed 62 males (77.5 per cent) and 18 females (22.5 per cent); 45 males and 15 females survived, while 17 males and three females died.

The site of infarction was in the anterior wall in 48.8 per cent, posterior wall in 35 per cent, and in an undetermined site in 16.2 per cent. In the fatal group, 50 per cent of the infarctions were anterior, and only 25 per cent were posterior.

The average length of hospitalization for the survival group was forty-eight and six-tenths days. For the fatal group, hospitalization averaged four and eight-tenths days with 50 per cent dying within forty-eight hours.

Complications in the anticoagulant group were as follows:

Thromboembolism.—Thromboembolic complications occurred in four cases (5 per cent) with three ending fatally and one surviving. The fatal cases included one patient who developed a pulmonary embolism on the twelfth day, one with multiple pulmonary infarctions from the seventh to the eighteenth day, and one with an extension of the myocardial infarct on the twenty-first day. The surviving patient showed evidence of an extension of his myocardial infarct on the fourteenth day with subsequent development of a pericardial friction rub and marked electrocardiographic changes. Of the thromboembolic group, one patient died who was receiving digitalis.

Shock.—Moderate to severe degrees of shock occurred in ten cases (12.5 per cent), all of which terminated fatally. Shock persisted for a period of one to ninety-six hours with an average of approximately thirty-five hours. Cardiac failure as a secondary complication was noted in four instances.

Congestive Heart Failure.—Congestive heart failure occurred in a total of 26 cases (32.5 per cent), with four deaths considered due to this factor. Twenty-two (84.6 per cent) of all patients in congestive failure in this treated group received digitalis. In the survival group of 60 patients, 15 went into congestive heart failure and 12 received digitalis. In the fatal group, congestive failure was present in 11 cases. A total of ten of these 11 patients received digitalis.

Pneumonia.—Pneumonia was found in five cases and treated with penicillin in all. Three patients survived, while the two patients that died were considered to have had pneumonia as a secondary complication.

Arrhythmias.—There were five examples of arrhythmias with three deaths. Among the survivors, one patient had auricular flutter treated with digitalis; the second had multiple

TABLE 1.—Comparison of Average Age, Sex, and Site of Infarction in Control and Treated Cases

	Age (Years)	Sex		Site			Thromboembolism
		Male	Female	Anterior	Posterior	Undetermined	
Control	60.2	76	24	46	45	9	20 (20%)
Anticoagulant	58.8	62	18	39	28	13	4 (5%)

consecutive runs of premature ventricular contractions treated successfully with quinidine. In the fatal group, one case developed a complete heart block and died on the third day. He had been receiving digitalis for congestive heart failure. The second case developed a supraventricular tachycardia followed by auricular flutter and death within twenty-four hours. The third patient, who was receiving digitalis for congestive failure, developed a ventricular tachycardia for which he was given quinidine; he died on the seventh day.

Miscellaneous.—A total of three cases of diabetes mellitus was found with one in the fatal group. Of the survivors, one had also a diagnosis of intercapillary glomerulosclerosis. Additional complications included an incarcerated femoral hernia requiring surgery, chronic lymphatic leukemia, pulmonary tuberculosis, prostatitis with acute urinary retention, and gout.

Discussion

In the control series, the mortality rate of 40 per cent appears rather high in view of some recent publications.[4,18] However, mortality statistics have varied in the literature from 8 to 53 per cent as found by Levine.[7,1] The general groupings of age, sex, and location of infarction are quite comparable in the present control and anticoagulant groups (Table 1). The greater average age in the mortality group among the controls conforms to the general acceptance of the increased hazard of myocardial infarction in the older age groups.[4] The failure to conform to this concept in the anticoagulant group can be explained by statistical variation in a series of this size. The average hospitalization of 50.8 days in the control group, as opposed to 48.6 days in the anticoagulant group, was not thought to be significant. This is in contrast to the findings of Carmichael, who reported an average reduction in hospitalization of seven days in patients receiving anticoagulants.[28]

TABLE 2.—Comparison of Mortality Rates and Incidence of Thromboembolism with Other Reported Series, Control (C) Versus Treated (T) Cases

	Number of Cases		Mortality (Per Cent)		Thromboembolism	
	C	T	C	T	C	T
Peters, Guyther, Brambel[18]	60	50	20	4	16	2
Wright, Marple, Beck[22]	368	432	24	15	25	6
Parker, Barker[20]	100	50	13	10	37	4
Nichol, Page[17]	0	44	0	16	0	2.2
Greisman, Marcus[21]	100	75	35	9	21	4
Freston, Taylor*	54	45	22.5	20	25	10.6
Present series	100	80	40	25	20	5

* Unpublished data from Roosevelt Hospital, New York City.

In comparing the deaths and complications in the two present groups, it was decided to include all deaths as long as the diagnostic criteria had been fulfilled. While it is appreciated that deaths occurring in the first forty-eight hours are, for the most part, uninfluenced by anticoagulant therapy, it was felt that any plan of presentation excluding these deaths would be misleading. A large percentage of deaths occurred in the first two days, with 42.5 per cent in the control group and 50 per cent in the anticoagulant series falling within this period. In order to give an over-all picture of the previous mortality rates as compared to the present anticoagulant statistics, it was decided to include them. In the control group 27.5 per cent autopsies were obtained as opposed to 20 per cent of the anticoagulant group.

In this series, severe shock was found to be responsible for a large percentage of the deaths, with 16 per cent in the control group and 12.5 per cent in the anticoagulant cases. All patients succumbed who persisted in deep shock for a prolonged period. A number of them had varying degrees of cardiac failure, the role of which in the fatal outcome was often difficult to assay clinically. Congestive failure as the primary cause of death was another important factor in both groups. It is of interest to notice the significant increase in the use of digitalis in congestive failure on this medical service. In the control group, 70 per cent of the patients with cardiac decompensation received digitalis as opposed to 84.6 per cent in the anticoagulant group. This fact reveals an increasing tendency to consider the indications for the drug in congestive failure with myocardial infarction not dissimilar to those of other causes. No significant difference in mortality in the two groups could be correlated with this variation in the use of digitalis.

In both series, the patients with arrhythmias appeared to be comparable in number and type. This was also true of the pneumonia cases and the various miscellaneous groups of totally unrelated complications. Needless to say, anticoagulants had no effect on either the control or treated

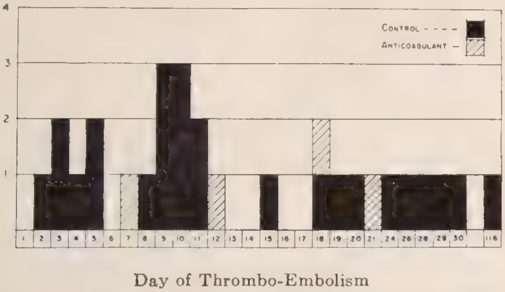

FIG. 1. Time of occurrence of thromboembolism. (Figures on left indicate number of cases.)

group in terms of shock, congestive heart failure, arrhythmias, pneumonia, or miscellaneous unrelated complications.

Of prime interest, however, was the comparison between the thromboembolic group in both series. Included in this general category were extension of the myocardial infarct, pulmonary embolism and infarction, cerebral embolism and thrombosis, thrombophlebitis, and thrombosis or embolization of a peripheral artery. In the control group, complications of this type were found in 20 per cent, which is comparable to the figures found in other series (Table 2).[21,22] Thromboembolic phenomena accounted for 35 per cent of the deaths in the control group, with almost one third of the thromboembolic cases having multiple complications. As has been previously noted by others, almost all of these accidents occurred within the first four weeks, with the majority in the first three weeks (Fig. 1).[18,22] Only one thromboembolic complication occurred within the first two days, or the theoretic period, where Dicumarol, if used, would be at inadequate levels.

In the treated group, thromboembolic complications accounted for 15 per cent of the deaths as compared with 35 per cent in the control series. This is considered to be a significant figure and accounts for the over-all reduction in mortality from 40 to 25 per cent in the treated group (Figs. 2 and 3). The actual reduction in thromboembolic phenomena was from 20 to 5 per cent.

Wright has stated that in a group of 38 thromboembolic complications, only four occurred in patients whose prothrombin time was known to have been maintained at levels of thirty seconds or more for at least three days preceding the appearance of the complication.[22] In our four cases of thromboembolic complications, however, all of the patients had satisfactory therapeutic levels of prothrombin activity for at least three days prior to the accident. These cases appeared to represent clear-cut Dicumarol failures.

Work by de Takats with clinical studies and animal experiments indicated that digitalis favors the tendency towards thrombosis, and it was thought that digitalis opposed the action of Dicumarol.[29] Macht also found that the coagulation time of whole blood, as measured by Howell's method, was shortened by digitalis and ouabain in anesthetized cats.[30] Heparinization of cats prior to intravenous injection of ouabain and digitalis solutions was thought to lower sig-

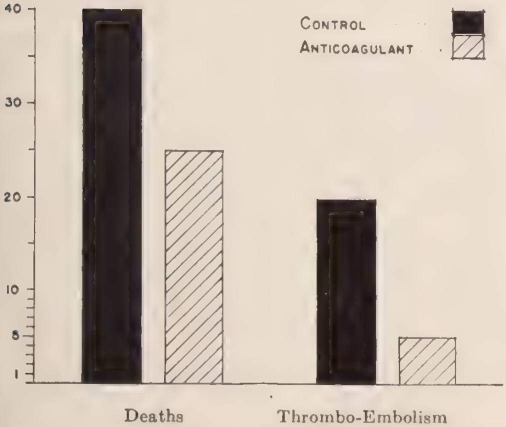

FIG. 2. Reduction of mortality from 40 per cent to 25 per cent and thromboembolism from 20 per cent to 5 per cent following anticoagulant therapy. (Figures on left indicate percentage of cases.)

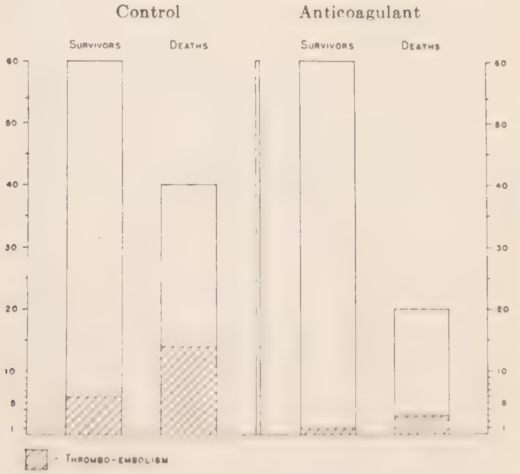

FIG. 3. Relation between mortality and thromboembolism in control and treated cases. (Figures on left indicate number of cases.)

nificantly the toxicity of these drugs. This difference in toxicity was correlated with a thromboplastic effect of digitaloid glucosides observed in vitro. Unpublished work by Cathcart and Blood has failed to confirm the findings of an increase in blood coagulability in humans receiving digitalis.[31] In our series no clinical evidence could be demonstrated that digitalis had any relationship to the occurrence of thromboembolic phenomena. In addition, no increased difficulty could be shown in the Dicumarolization of patients receiving digitalis, as opposed to those not receiving the drug.

Although only one patient in the two groups was found to have a thromboembolic complication within two days when theoretically Dicumarol would be ineffective, it is felt that heparin should be given initially in acute myocardial infarction. In a larger series, Wright reported 2.5 per cent of thromboembolic complications developing during the first three days of anticoagulant therapy.[22] In addition, clinical experience shows that the response of certain individuals to Dicumarol is quite unpredictable for reasons not entirely clear, and satisfactory prothrombin levels may not be reached in the usual time with conventional dosages. A further theoretic advantage is suggested by Loewe's experimental work in animals where it was shown that both anticoagulants caused resumption of patency in veins that had been occluded for four days or longer but that heparin offered the additional advantage of causing solution of all clots in the sludge stage.[32] In addition, laboratory facilities for the determination of prothrombin times are often not immediately available for patients hospitalized at night or over weekends. Finally, the relative simplicity and safety in the administration of heparin in our experience has been gratifying.

In the entire treated group of 80 patients, no serious bleeding complications were encountered. Several patients had microscopic hematuria which ceased with reduction in Dicumarol dosages, and in a few patients whose prothombin percentages fell well below 10 per cent of activity no hemorrhage was encountered.

Summary

1. Clinical and statistical data of a group of 100 control cases of myocardial infarction are compared with a group of 80 patients receiving anticoagulant therapy.

2. The routine use of heparin in addition to Dicumarol is suggested.

3. There is no clinical evidence that digitalis contributes to the incidence of thromboembolic complications or increases the difficulty of Dicumarolization.

4. Thromboembolic complications were reduced from 20 per cent in the control group to 5 per cent in the anticoagulant group, with a corresponding decrease in mortality from 40 to 25 per cent. It is concluded that the use of anticoagulant therapy significantly reduced the percentage of thromboembolic complications and mortality in acute myocardial infarction in this series.

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Teach a man to be industrious, and you will soon make him rich.—Anonymous

EVALUATION OF A POTENTIATED ANTIHISTAMINIC OINTMENT

Irwin I. Lubowe, M.D., New York City

THE most frequent subjective complaint of dermatologic patients is pruritus. This symptom has been treated for many decades with established antipruritic agents, with various degrees of relief. More recently, the use of topical antihistaminic ointments for the management of pruritic skin manifestations and their application in the treatment of the allergic dermatoses have been described.[1-7]

The present investigation sought to determine the clinical effectiveness of a potentiated antihistaminic ointment in the relief of the pruritus and to compare its effectiveness with an ordinary antihistaminic ointment which was used as a control.* The purpose of the study was to determine whether the antipruritic effects of an antihistaminic ointment can be potentiated by established antipruritic agents; the clinical antipruritic effectiveness of such a potentiated ointment for the pruritis of such common clinical conditions as dermatitis venenata (rhus tox, reaction to penicillin, solare erythema, and contact and occupational dermatoses) as well as insect bites, neurodermatitis, and pruritus ani and vulvae; to determine the efficacy of the potentiated ointment as a specific therapy for allergic dermatoses and as an antipruritic; whether such a potentiated antihistaminic would be free from primary irritation or sensitization, and whether the use of the potentiated antihistaminic contraindicates other modalities of therapy such as superficial filtered x-ray or other local physiotherapeutic agents.

Procedure

The potentiated antihistaminic ointment was compounded of the following elements:

1. A potentiating formula containing in each fluid ounce hyoscyamine oleate 0.006 grain (equivalent to 0.003 grain hyoscyamine alkaloid), chloral hydrate 1.29 Gm., menthol 1.73 Gm., camphor 1.64 Gm., alcohol 14.3 cc., ether 5.1 cc., and chloroform 1.9 cc.**
2. An antihistaminic, 2 per cent thenylpyramine hydrochloride.
3. A special vehicle, a water miscible ointment base consisting of carbowax, stearyl alcohol, sodium lauryl sulfate, and water.

Thus, the potentiated antihistaminic ointment contained 10 per cent calmitol liquid and 2 per cent thenylpyramine hydrochloride in the special vehicle described above. The control antipruritic ointment contained only 2 per cent thenylpyramine hydrochloride in the special vehicle described above.

The potentiated antihistaminic ointment was used in a series of 58 cases with pruritus of varied etiology. Twenty patients with lesions bilaterally distributed were treated with the potentiated antihistaminic ointment on the right side and the control antihistaminic ointment on the left side. Patch tests were conducted for a period of ten days for each patient so studied. The potentiated antihistaminic ointment was rubbed daily into an area of 3 by 3 inches on the anterior surface of the skin of the left forearm. Patients with allergic dermatoses received no therapy other than the potentiated antihistaminic ointment. Pruritic lesions other than the allergic were treated for the underlying dermatologic condition.

Results

In 80 per cent of a series of 58 patients, control of pruritus was achieved with the potentiated antihistaminic ointment, Calthenamine Cream. The pruritic conditions treated consisted of pruritus ani and vulvae, neurodermatitis, penicillin reaction, rhus tox, solare erythema, contact and occupational dermatoses, insect bites, and urticaria (both acute and chronic). In some categories relief was attained in 100 per cent of the cases treated (Table 1).

In a series of patients studied for speed of effect, 40 per cent reported unquestionably quicker relief with the potentiated antipruritic ointment. The high percentage of patients thus reporting a more rapid control of pruritus with Calthenamine Cream appears particularly significant. Subjective distortion of results was ruled out by the fact that not a single patient noted better results with the control antihistaminic ointment and that patients experienced and reported quicker relief only on the side treated with Calthenamine Cream, never on the side treated with the unpotentiated control.

In the patch test studies of the potentiated ointment, no primary irritation or sensitivity was observed. This is important, considering the high incidence of irritation, sensitization, and even severe eczematous dermatitis so frequently

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The cases were observed and studied in office practice and at the Lower West Side Social Hygiene Clinic, Bureau of Social Hygiene, New York City Department of Health. The penicillin reaction cases were observed at the above Clinic.

* Calthenamine Cream was supplied through the courtesy of Thos. Leeming & Co., Inc.

** As in Calmitol Liquid, Calthenamine Cream contains 10 per cent Calmitol Liquid. Calmitol was preferred because of its freedom from phenol, cocaine, cocaine derivatives, and other known sensitizing agents.

TABLE 1.—Results in 58 Cases of Pruritis Treated with a Potentiated Antihistaminic Ointment

Diagnosis	Number of Cases	Results			Number of Cases Improved	Percentage of Cases Improved
		Excellent to Good	Good to Fair	Poor to Negative		
Dermatitis venenata						
Reaction to penicillin	8	1	5	2	6	75
Rhus tox	6	3	1	2	4	66
Solare erythema	5	5	. .	. .	5	100
Contact—occupational	9	1	7	1	8	88
Other causes	5	2	1	2	3	60
Insect bites	6	4	2	0	6	100
Neurodermatitis	8	. .	6	2	6	75
Urticaria—acute and chronic	5	3	1	1	4	80
Pruritus ani and vulvae	6	. .	4	2	4	75

associated with common agents unwisely used for antipruritic effects.[8-12] Patients with allergic dermatoses were rapidly and substantially relieved with Calthenamine Cream from the torment of pruritus.

Those patients who were not relieved with the ointment were subsequently treated by x-ray or other physiotherapeutic modalities. We believe that the use of a potentiated antihistaminic cream gives no evidence contraindicating the combined use.

Case Report

A typical case demonstrating the successful control of symptoms was A. J. This patient presented an eczematoid, erythematous dermatitis involving the dorsum of the fingers and the hands, the anterior surface of the fingers, and the thenar and hypothenar surfaces of the palms. The anterior surfaces of the fingers and palms were also studded with minute vesicles and excoriations. The pruritus was promptly controlled with Calthenamine. Since the diagnosis was dermatitis venenata, eczematoid, occupational due to soap and alkali, prophylactic and protective measures were followed. After thirty days of treatment all evidence of excoriation had cleared; there was complete subsidence of the vesicles and only slight scaling and residual erythema on the anterior surface of the fingers and palms.

Conclusions

1. A potentiated antihistaminic ointment (supplied as Calthenamine Cream), consisting of 10 per cent Calmitol liquid and 2 per cent thenylpyramine hydrochloride in a special water miscible ointment base, was found to be rapidly effective in relieving pruritus and in modifying lesions associated with certain allergic dermatoses, particularly insect bites, dermatitis venenata, neurodermatitis, urticaria, and erythema solare.

2. As compared with the control (consisting of an ordinary antihistaminic ointment), the potentiated antihistaminic ointment, namely Calthenamine Cream, gave more rapid relief in the dermatoses for which it was employed.

3. When applied to excoriated or denuded surfaces, the potentiated antihistaminic ointment was occasionally found to cause a transitory, slight burning or stinging just prior to the relief of the pruritus. In only two cases of 58 was the medication discontinued because of an exacerbation of the original condition.

4. Patch tests revealed the potentiated ointment to be free from irritating and sensitizing effects in the series studied.

5. Other therapeutic modalities may be safely used with the potentiated ointment where treatment directed at etiologic factors is required as well as control of pruritus.

6. In the allergic dermatoses, Calthenamine Cream is valuable both for the relief of pruritus and for the treatment of the underlying allergic causation.

241 Central Park West

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Case Reports

MASCULINIZING LIPID CELL TUMOR OF THE OVARY

Erwin T. Michaelson, M.D., Rockville Centre, New York

(From the South Nassau Communities Hospital)

MASCULINIZATION in the female can occur from pituitary, adrenal, or ovarian growths. The case to be reported here is one of an ovarian tumor of a type which has gone under numerous names: adrenal tumor of the ovary, hypernephroma of the ovary, luteoma, luteinoma, and masculinovoblastoma. I have designated this case a masculinizing lipid cell tumor of the ovary.

The literature to date reports a total of 22 cases of this type, of which six are doubtful. There are, therefore, only 16 authentic cases of this type reported. The present case thus becomes the seventeenth case to be reported. In contrast to this there have been reported a total of 94 cases of arrhenoblastoma, the more common masculinizing tumor of the ovary.

All authentic adrenal-like tumors of the ovary present symptoms of masculinization. Iverson, in a recent comprehensive article, attempts to differentiate clinically between these tumors and the arrhenoblastomas.[1] According to him, amenorrhea occurs in about 100 per cent of both tumors. Hirsutism occurs in 100 per cent of the lipid cell tumors and in only 85 per cent of the arrhenoblastoma. Hypertrophy of the clitoris occurs in about 70 to 75 per cent of both types. Curtis, on the other hand, states that hypertrophy of the clitoris always occurs in both types of tumors.[2] Voice change occurs in about 90 per cent of the lipid cell tumors and breast atrophy in about 50 per cent.

In lipid cell tumors, adrenal tumors, and basophilic adenoma of the pituitary one may find glycosuria, polycythemia, and hypertension. These symptoms do not usually occur in arrhenoblastoma.

Case Report

Mrs. K. N., a twenty-five-year-old, gravida O, Para O, was admitted to the hospital with the following history: Menstrual periods began at the age of eleven and were regular, occurring every twenty-eight days with a moderate flow lasting three days. At the age of seventeen, she had a period of amenorrhea for six months, during which time she received thyroid and estrogenic therapy. Following this treatment, her periods returned to normal and remained so up until the age of twenty. At that time and for two years thereafter, she had a three-day menstrual period, occurring every two weeks. At the age of twenty-two, i.e., three years ago, her periods suddenly stopped. Despite hormone therapy given by her family physician, her periods have not recurred. The patient has always been obese, but during the past year she has gained 60 pounds in weight, and when first seen at the office in February, 1947, she weighed 224 pounds. During the past three years she had noted increasing hirsutism and a deepening of her voice. For the past year, she had

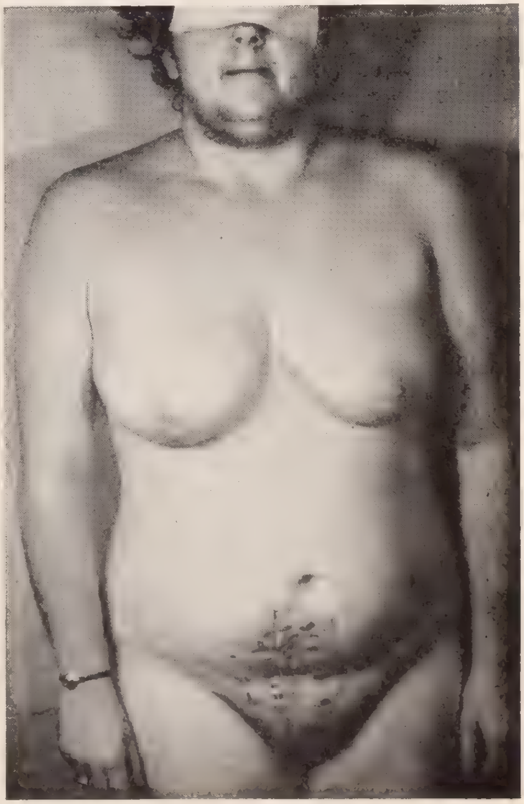

Fig. 1. Photograph taken four days postoperatively to show four-day growth of beard and general body configuration.

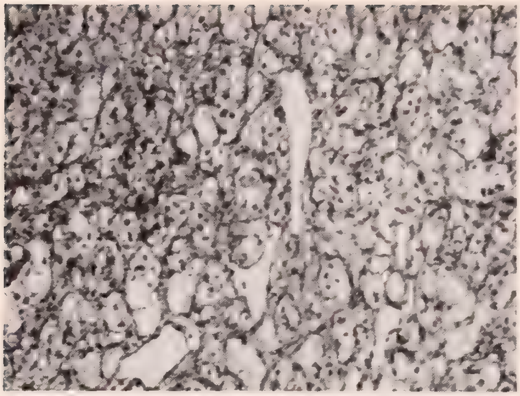

FIG. 2. Section of tumor showing adrenal-like, clear, vacuolated cells.

shaved daily. She had been married for four years, and despite lack of contraception she never conceived. Prior to present illness, patient had no serious medical or surgical condition.

Examination revealed an obese white female with a somewhat masculine figure. The beard and mustache areas showed evidence of constant shaving (Fig. 1). There was increased hair on the arms and legs with the abdomen showing the male type of hair distribution. Blood pressure was 130/80. Abdomen was obese and pendulous; there were no masses or tenderness. The labia were normal, the clitoris enlarged, measuring about $1^1/_2$ inches in length and $^1/_2$ inch in diameter. There was marital introitus with firm perineum. The cervix was of normal size and was felt in the axis of the vagina. The fundus was anteflexed, of normal size and shape, firm and freely movable without pain. The right adnexa were normal. The left ovary was enlarged to about the size of a tangerine, measuring about 7 to 8 cm. in diameter. This ovary felt soft and cystic and was not tender. Vaginal smear resembled that found in a menopausal patient, indicating lack of estrogenic hormone. Rectal examination confirmed the vaginal findings.

Laboratory data prior to admission to hospital were as follows: basal metabolic rate minus 7; skull x-rays showed a normal sella turcica indicating a probably normal pituitary gland. Seventeen ketosteroid determination was normal. Intravenous pyelograms showed a left kidney which was lower than the right but otherwise normal. In the hospital laboratory tests showed red blood cells 4,400,000; hemoglobin 84 per cent; white blood cells 5,200 with 77 per cent polymorphonuclears; and urine negative.

Hospital Course.—Because of the findings of a low left kidney and in order to eliminate an adrenal tumor as the cause of the patient's masculinizing syndrome, it was decided that she be hospitalized for perirenal air injection and x-ray studies. These were done and showed normal adrenals on both sides.

A preoperative diagnosis of masculinizing tumor of the left ovary was made, and the patient was operated upon on March 27, 1947. At operation the left ovary was found to be a cystic mass measuring about 9 by 7 cm. In one area of this mass was felt a firmer tumor about $4^1/_2$ cm. in diameter. The uterus, the right ovary, both tubes, and the appendix were all normal. A left salphingo-oöphorectomy and appendectomy were done.

The postoperative course was uneventful, the wound healing by primary union, and patient was discharged on the seventh postoperative day.

Pathologic Report.—*Gross Description:* The ovary is enlarged and measures 7 cm. in its widest diameter. On transection, the central portion of the specimen is occupied by an irregularly shaped, firm, golden yellow tumor mass which is 4.5 cm. in its widest diameter. Surrounding this are multiple small and larger cystic spaces varying in size up to 1.5 cm. These contain clear light yellow fluid.

Microscopic Description.—The tumor mass is made up of large polyhedral cells arranged in pavement-like structure. The cytoplasm of these cells is clear and vacuolated. The nuclei are small, vesicular, and eccentrically placed. The tumor mass appears encapsulated (Fig. 2).

Pathologic Diagnosis.—Masculinizing lipid cell tumor of the ovary.

Follow-up.—Thirty-two days following the operation, patient had a normal menstrual period for the first time in over three years. One month postoperatively, she had already noted a difference in facial hirsutism, being able to go four days without shaving, whereas prior to operation she had shaved daily. Patient was last seen by me seven months postoperatively, at which time there was noted practically a complete disappearance of the beard with only a slight fuzz present on the neck. Patient had continued to menstruate regularly every twenty-six days with a normal three-day flow. The clitoris had shrunken slightly, although it was still larger than normal. She had practiced contraception since her operation.

Subsequently, I was informed by the patient's physician that immediately upon discontinuing contraception in November, 1947, she had become pregnant. Her antepartum course was uneventful until sometime in April, 1948. At that time, she was seen by her family physician who noted the presence of a marked anemia, the red blood cells being 1,500,000 with 28 per cent hemoglobin. She was admitted to Meadowbrook Hospital on April 23, 1948, and despite transfusions and supportive therapy died on May 2, 1948.

Autopsy report attributed the cause of death to hemolytic anemia of pregnancy. The pelvis at autopsy showed a normal right ovary and tube and absent left ovary and tube. The uterus reached to the level of the umbilicus. On opening the uterus a premature male infant was found.

2 ROXBURY ROAD

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AMENORRHEA AND SPONTANEOUS INTRAPERITONEAL HEMORRHAGE IN ASSOCIATION WITH GRANULOSA-CELL CARCINOMA OF THE OVARY

John J. Keenan, M.D., Troy, New York

(From the Department of Gynecology, St. Mary's Hospital)

AMERICAN interest in granulosa-cell tumors of the ovary was sharply focused by Meyer in 1931 when he discussed 33 collected cases, including two of his.[1] Previously, only a few scattered case histories describing this uncommon disease had been published in the United States.[2] Although, fourteen years after Meyer's report, Dockerty stated that about 600 cases had by then been reported, a comparative estimate of the day-to-day occurrence of this tumor may be had from Wharton who writes that only 20 examples were found among 40,000 gynecologic cases.[3,4]

In addition to the question of malignancy in ovarian tumors the potential biologic activity of granulosa-cell tumors attracts attention. While it is frequently referred to as a "feminizing" tumor, amenorrhea may occasionally be present, which is usually explained on the basis that the amenorrhea mirrors the excessive amount of estrogen in the body fluids elaborated by the tumor. This conclusion is based on the finding that some patients, following surgical removal of the offending growth but with retention of the uterus, have "menstruated" within a few days.[3,5] The bleeding is interpreted as being withdrawal in nature.

Spontaneous rupture of granulosa-cell tumors with intraperitoneal hemorrhage has been infrequently reported in this country. Taussig appears to have priority.[6] French has recently reported two cases, noting that this symptom-complex has previously been described in the American literature in six instances.[7]

In regard to malignancy, pathologists are generally agreed that as a group the granulosa-cell tumors are less malignant than the usual primary carcinoma of the ovary. Histologic evaluation is not always a reliable guide but must be closely correlated with the clinical findings and course. Some of these granulosa-cell tumors are intensely malignant with fatal termination within a few months after surgery. Novak, discussing the paper of Falls *et al.*, states that he has studied about 165 cases, many of them consisting of reports and tissues sent in for study, and that he places the malignancy rate between 20 and 25 per cent.[8]

Case Report

Mrs. R., age forty-six, gravida 4, Para 3, was admitted to St. Mary's Hospital in mild shock and complaining of severe pain in the lower abdomen and pelvis. Her past history was noncontributory, aside from an uncomplicated miscarriage in 1933 and an appendectomy in 1920. She had not menstruated in ten years. When seen in the emergency room at the hospital, in addition to the usual evidence of mild shock, the only finding of significance was the presence of an abdominal mass low in the midline and associated with tenderness and muscle spasm. Pelvic examination indicated that the mass arose in the pelvis, but it did not appear to be attached to the uterus. Muscle guarding precluded any but the most gentle palpation. Ovarian cyst with complication, probably twisting, was diagnosed and the patient prepared for immediate surgery.

The abdomen was entered through a low midline incision. A large amount of blood was found upon entering the peritoneal cavity. With suction clearing the field, a gangrenous, bleeding, cystic right ovarian tumor, the size and contour of a grapefruit, was evident. It was not twisted but could not be delivered into the wound. Bleeding was brisk deep in the pelvis along the right lateral wall. A supracervical hysterectomy and left salpingo-oöphorectomy were done first. The right ovarian mass had to be scooped out piecemeal because of necrosis and adhesions. With freeing and removal of most of the mass, it appeared grossly to be a carcinoma of the right ovary with invasion of the pelvic wall in the region of the right external iliac vessels. Further exploration showed nodules in the anterior wall of the rectum. There were no nodules palpated in the liver. With removal as complete as conditions permitted, reperitonealization of the area was accomplished and the abdomen closed in layers without drainage.

During and shortly after the conclusion of surgery the patient received a total of 1,500 cc. of freshly drawn citrated blood. Her postoperative course was smooth; she was out of bed in a few

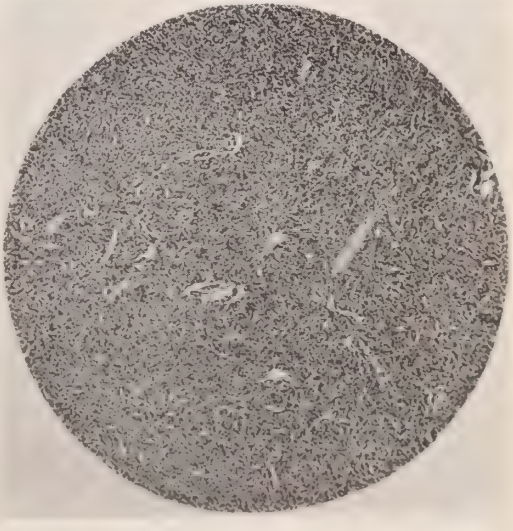

Fig. 1. Widespread folliculoid pattern of the tumor is clearly evident. The cells form delicate cords and spaces giving the moiré silk pattern described by Barzilai.[9] (60×)

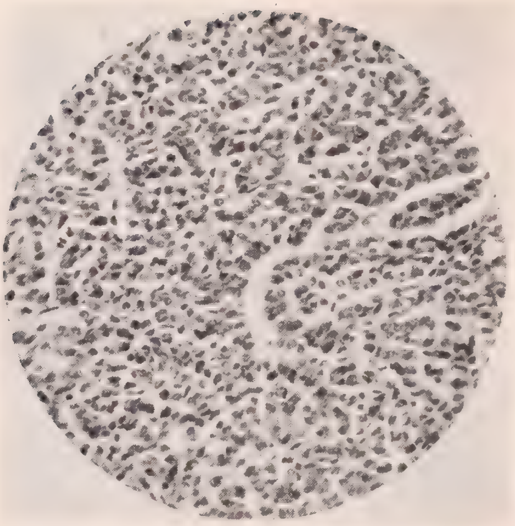

Fig. 2. The neoplasm is composed of small polyhedral basophilic cells with relatively large vesicular nuclei and scanty cytoplasm. The cells are fairly compact but exhibit a microfolliculoid pattern. (300×)

days and discharged home on the tenth day. The wound healed by primary union and she received irradiation subsequently. Six months after surgery, follow-up showed the patient to be symptom-free, and pelvic examination indicated no palpable masses.

The pathologic report stated that the specimen consisted of a uterus, amputated at the cervix, the left tube and ovary, and the right adnexal mass. This mass included the right tube which was tortuous and not too clearly defined, together with a mass of jagged, irregular tissue. The left tube and ovary showed nothing of note grossly. The myometrium was not grossly noteworthy. The endometrium was approximately 0.25 cm. in thickness and showed one large endometrial polyp hanging from the posterior wall on a small stalk. It was flattened and measured approximately 0.7 by 0.7 by 0.2 cm. The right adnexal tumor consisted of several large and irregular pieces of tissue; on the outer surface of one piece was a necrotic fibrous-like capsule. This tissue had the same color and consistency as brain tissue, being elastic and friable. The sections of the left tube and ovary were not remarkable. Sections of the uterus showed normal myometrium, the endometrium being in the moderately proliferative phase, composed of small, well-formed acini. The endometrial polyp was histologically benign. Sections of the right ovarian tumor showed small irregular cells with very little supporting stroma. The tumor is of the moderately anaplastic type; the pattern is that of the microfolliculoid type of granulosa-cell carcinoma of the right ovary (Figs. 1 and 2).

Summary

The case report of granulosa-cell carcinoma of the right ovary herewith presented is unusual in two respects: The patient was seen as a surgical emergency due to rupture of the carcinomatous cyst with intraperitoneal hemorrhage and resultant shock and, second, amenorrhea had been present for ten years, having begun when the patient was thirty-six.

1826 Fifth Avenue

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AUREOMYCIN YIELDS GOOD RESULTS AGAINST PARASITIC INFESTATION

Chronic infestation by the parasite that causes amebic dysentery is relieved by aureomycin, the new antibiotic drug, according to an article in the April 8 *Journal of the American Medical Association.* Twenty-seven of a group of 38 patients treated with aureomycin were cured, according to Dr. John Davis Hughes of the University of Tennessee College of Medicine, Memphis. Practically all others of the group had great relief from symptoms of the disease. All 38 patients had been treated repeatedly for the disease with other drugs which failed to achieve satisfactory results.

Numerous persons in this country are infested with the parasite. Although some carriers have fatigue, nervousness, and recurring diarrhea, others show no symptoms. However, carriers of the parasite are a considerable source of danger to other persons because of possible spread of amebic dysentery.

HEMIPLEGIA ASSOCIATED WITH ROSEOLA INFANTUM (EXANTHUM SUBITUM)

Jacob H. Friedman, M.D., Joseph Golomb, M.D., and Lawrence Aronson, M.D.,
Bronx, New York

(From the Pediatric and Neuropsychiatric Services of Fordham Hospital)

ENCEPHALITIC and meningeal signs have been noted to occur in the course of or to follow many acute infectious diseases, such as measles, German measles, scarlet fever, influenza, mumps, chickenpox, whooping cough, vaccination, and diphtheria, and also in high fevers of infancy. However, such occurrence in roseola infantum is rare. Wallfield reported a case of exanthum subitum with encephalitic onset in a boy, aged twelve years.[1] It was not until recently that Posson reported three cases of exanthum subitum in which the patient developed hemiplegia and weakness following prolonged convulsive seizures.[2] Rosenblum reported a case in which a hemiplegia occurred in a nineteen-month-old girl on the fourth day during the course of roseola infantum, which he regarded as a complication of the disease rather than a part of the illness.[3] Since only four cases of roseola infantum with hemiplegia have been reported previously (three cases as part of the initial onset of the disease and one as a complication of the disease), we report herewith an additional case of hemiplegia as part of the onset of roseola infantum.

Case Report

J. C., a nine-month-old male infant, was admitted to the hospital in a state of coma. He was a first-born child with a history of normal delivery. He had his first tooth and sat up at six months. He was bottle fed. He presented no problem to the family until the present illness. On October 7, 1949, at approximately 8:00 P.M., the mother noted that the infant had fever but otherwise appeared well. At 7:00 P.M., October 8, 1949, the fever rose to 104 F. The child became unconscious, and the eyes were deviated to the left. He was then taken to Fordham Hospital. On arrival at the emergency ward he had a generalized convulsion.

On admission, examination revealed a well-nourished, well-developed, comatose infant, with normal anterior fontanelle. The temperature was 103 F. The pulse rate was 180. The respirations were irregular, shallow, and obstructed, as if laryngeal spasm was present. The jaws were tightly clenched. The pupils were moderately dilated but reacted to light. The fundi were normal. The superficial reflexes were absent, but the deep reflexes were present and equal. Auscultation over the trachea revealed severe harsh spasmodic breathing.

The impression at the time of admission was a convulsive state secondary to acute laryngotracheal bronchitis or a laryngeal spasm. He was placed in an oxygen tent. Phenobarbital, $^1/_2$ grain, penicillin, 50,000 units every three hours, and $^1/_4$ Gm. of streptomycin every six hours were given intramuscularly. Tracheal suction had to be applied. A few minutes after admission his respiration failed, and he had to be given artificial respiration. His respiration then appeared easier. At 10:50 P.M., the child, although comatose, appeared better. The roughened sounds over the trachea were not heard. At 2:15 A.M., October 9, 1949, he had a right-sided convulsive seizure. He was given sodium phenobarbital, $^1/_2$ grain hypodermically. Since the Jacksonian convulsive attacks on the right side continued, he was given ether by the drop method, but he immediately had laryngeal spasm and this method had to be discontinued. He was given sodium amytal, $^1/_2$ grain intravenously, and in a few minutes the twitchings on the right side ceased. A lumbar puncture was performed which revealed clear fluid under normal pressure. Sugar was present and globulin test negative. The spinal fluid cell count revealed 56 red blood cells with five lymphocytes per cu. mm. The child remained comatose and showed a positive Brudzinski sign, but there was no neck rigidity or Kernig sign. The temperature was 103 F. Hypodermocylsis with 5 per cent glucose was started. That noon the child regained consciousness. He now had a slight nuchal rigidity.

A diagnosis of meningoencephalitis, perhaps tuberculous, was made. His temperature continued to remain at 103 F. The white blood count on October 9, 1949, was 5,000 white blood cells, predominately lymphocytes, per cu. mm. The following day, October 10, 1949, it was noted that the pupils were still in mid-dilatation and reacted to light sluggishly. The retinal veins were slightly engorged. The patient could not move the right upper and lower extremities. The upper deep reflexes were unobtainable. The right knee and ankle jerks were greater than the left. Neck rigidity was present, and the patient was somewhat drowsy. On October 11, 1949, the third day after admission, the child was mentally alert but irritable. No fever was present for the first time since admission. A pinkish, discrete macular rubelliform rash on the trunk, neck, shoulders, forehead, and behind the ears was observed. A diagnosis of roseola infantum was made. By the following day, October 12, 1949, the infant began to move the right extremities. The temperature then rose to 101 F. and became normal by lysis in forty-eight hours. The rash faded from the neck and was more confluent on the abdomen. Forty-eight hours after onset, the rash disappeared entirely. Another lumbar puncture revealed 1,100 red cells and 25 white cells per cu. mm., principally polymorphonuclear leukocytes. At this time the white blood count was 9,500 cells per cu. mm. with 76 per cent lymphocytes.

On the sixth day after admission lumbar puncture revealed no red blood cells, but 20 white blood cells per cu. mm., principally polymorphonuclear leukocytes, were present. On the ninth day after admission the spinal fluid revealed no cells. Spinal fluid chemistries and cultures were within normal limits. The heterophil antibody test five days after admission was negative. Skull and chest x-rays were negative. The blood sugar was normal. Streptomycin and penicillin were discontinued nine days after admission. The neck rigidity disappeared by the thirteenth of October, 1949, and on discharge from the hospital, October 25, 1949, seventeen days after admission, neurologic examination was practically negative except for slight weakness of the right upper and lower extremities.

Comment

Fevers and acute infections of all types, especially those in which the onset is abrupt, may cause convulsions in apparently healthy infants and are said to occur to the ages of eight to ten years. The mechanism by which these convulsions are produced is not clear, being attributed to fever, disturbances of the calcium-phosphorus balance or hypoglycemia, or to a direct effect of the bacterial toxin on the nervous system.[4] This patient had a temperature of 104 F. The original description of roseola infantum by Zahorsky is a disease characterized by high fever, frequent convulsions at onset, sudden fall of temperature on the fourth day, followed by the appearance of a macular rash.[5] Berenberg states that the incidence of convulsions in this disease has been reported from 0.7 to 50 per cent, depending on whether the cases are seen in the home or in the hospital.[6]

We cannot definitely state that the central nervous system findings in this case was due to meningoencephalitis. The findings of coma, neck rigidity, the probable laryngeal spasm, the hemiplegia, and the unusual course of the temperature falling by lysis after the appearance of the rash, along with the spinal fluid findings, make for a diagnosis of meningoencephalitis. However, this patient had intermittent convulsions for four hours with great respiratory distress. This could have caused cerebral anoxemia giving rise to the central nervous system findings. Zimmerman showed that in a group of children coming to autopsy, in whom severe convulsions dominated the clinical picture and in whom there was never evidence of encephalitis or inflammatory cerebral lesion, extensive necrobiotic changes of the ganglion cells were found in the cerebral cortex, the cornu ammonis of the temporal lobe, basal ganglia, and the cerebellar cortex.[7] Thus it is only speculative whether the central nervous system findings in this case are due to a meningoencephalitis or due to cerebral anoxemia secondary to prolonged convulsive seizures with respiratory distress.

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PREVENTION AND TREATMENT OF ANURIA AND OLIGURIA DUE TO SULFONAMIDES

On the basis of the thesis that renal complications due to sulfonamides are largely preventable, the various involvements are differentiated, and the effective measures for prevention and correction are outlined. Oliguria and anuria may be caused either by mechanical obstruction or by destruction and necrosis of the epithelial cells of the distal convoluted tubules. It is a known fact that the solubility in the urine of each of two sulfonamides given simultaneously is the same as if it were given alone. Clinical application of this principle has demonstrated that administration of a combination of sulfonamides minimizes crystalluria and virtually eliminates the risk of obstruction, although the value of mixtures in preventing nephrotoxic reactions has not been established clinically. Since the approach to the two types, both for prevention and treatment, are entirely different, the importance of differentiating between obstructive and nephrotoxic anuria is underscored. This can be done by cystoscopy and ureteral catheterization.

Impacted crystals in the lower part of the urinary tract imply obstruction; absence of urine or a small amount of free crystals signifies toxic nephrosis. Prevention of the latter relies on a history of sulfonamide sensistivity, while treatment of its acute manifestations is primarily the rigid restriction of fluid intake to 500 cc. in twenty-four hours and, in the same period, limitation of the salt intake to 5 Gm. Vomitus, diarrhea, and duodenal drainage must be carefully measured and replaced with isotonic sodium chloride solution. In order to try bringing about a decrease of protein breakdown and restrain development of ketosis, only carbohydrate is given.

Obstructive anuria is treated by dislodgment of the impacted crystals by catheterization after which measures are taken which attempt to create and maintain a rapid flow of dilute alkaline urine, since solubility of sulfonamides and their acetyl derivatives is greatly enhanced in alkaline solution.—*Arthur J. Butt, M.D., and Robert Birchall, M.D., Journal of the Florida Medical Association, December, 1949*

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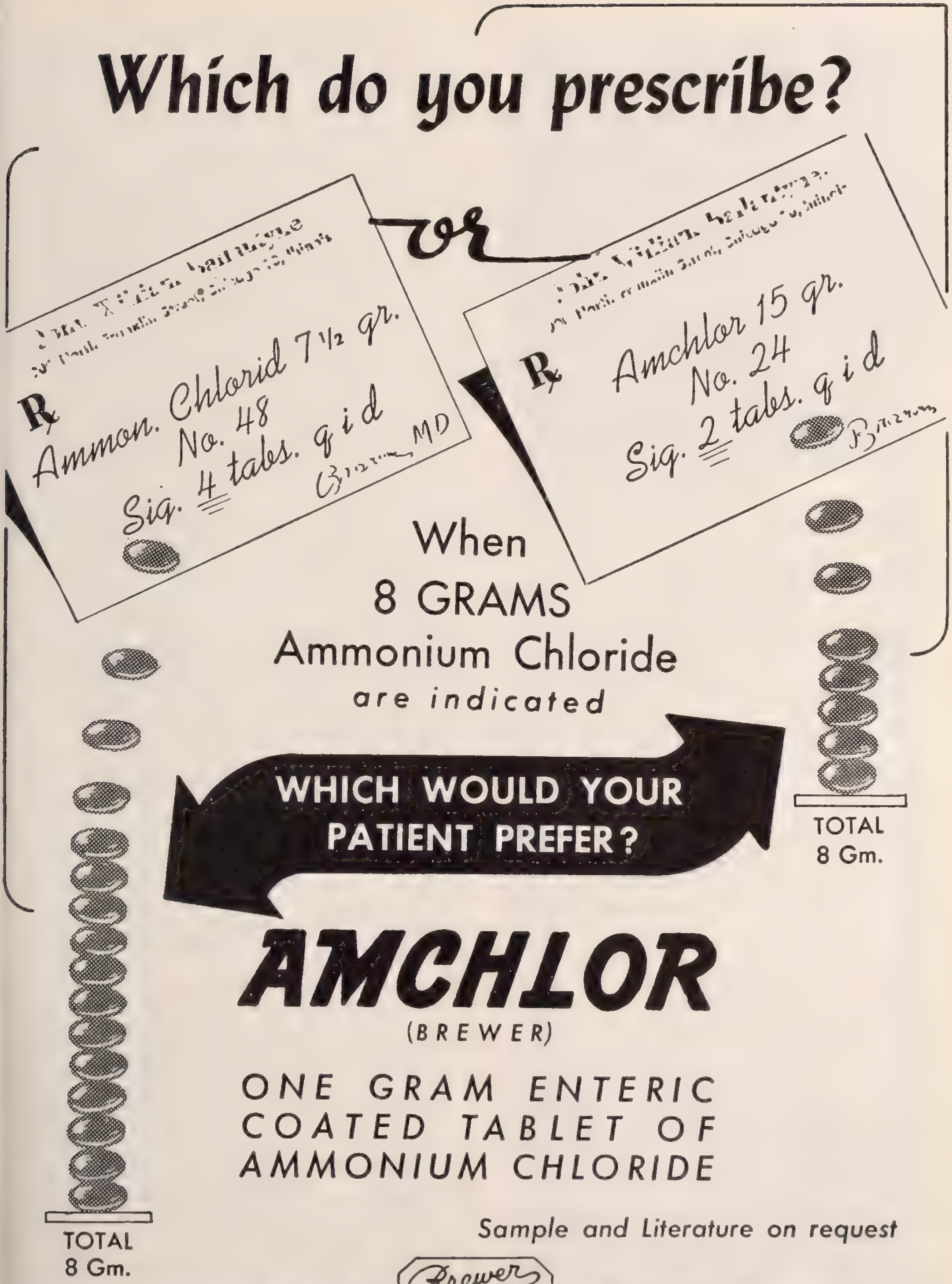
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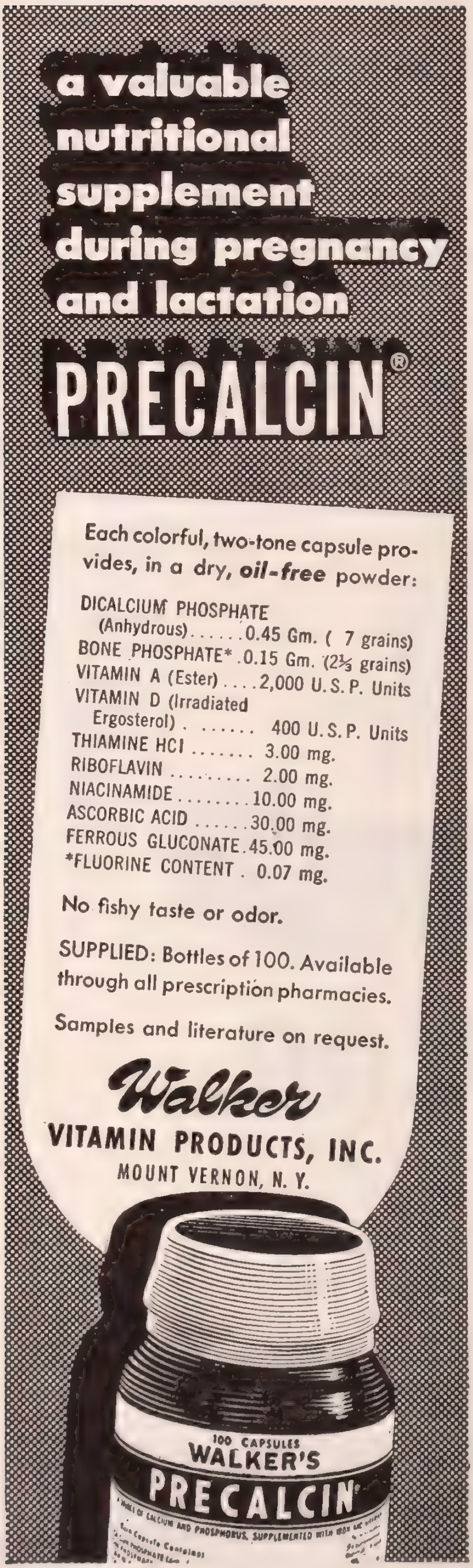
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BOOKS

BOOKS REVIEWED

Acute Laryngotracheobronchitis. By A. Harry Neffson, M.D. Octavo of 197 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $5.00.

In this handy volume, Dr. Neffson has written a comprehensive description of acute laryngotracheobronchitis, based in part on his own experience at the Willard Parker Hospital and an analysis of the records of this Hospital and those of the Kingston Avenue Hospital for Communicable Diseases, and, as such, the book represents an important contribution.

The author's special interest in mechanical therapy, such as suction, bronchoscopy, etc., is particularly evident in his attempt to "talk down" the importance of sulfa drugs and antibiotics. This is perhaps due to the fact that the material which forms the basis of this book was collected before 1940, and the paragraphs on chemotherapy and antibiotics were merely an afterthought, since, until 1940, several of the better sulfa drugs had not yet been described and antibiotics were either not generally available or had not yet been discovered.

A careful reading of the book suggests strongly the need of a well-controlled study in a large series of carefully selected cases studied by a single individual or group. There is need for greater accuracy in diagnosis so that the effects of therapy can be more satisfactorily evaluated. This is not the fault of the author but may be blamed upon the nature of his material.

A second edition, based on more recent experience, should avoid these pitfalls and serve to demonstrate more clearly not only the value of surgical procedures, but also the additional benefit to be derived from the more recently developed antibiotics.

Benjamin Kramer

The Cry and the Covenant. By Morton Thompson. Octavo of 469 pages. New York, Doubleday & Co., 1949. Cloth, $3.50.

Morton Thompson's extraordinary novel has been universally acclaimed in the lay press. It will be read with special interest by doctors since it is the fictionalized account of the life of Semmelweis who contributed so much to the progress of modern medicine. It is told with great historical accuracy, consummate literary skill, and the greatest compassion. No doctor will be able to read without humility how difficult it was for Semmelweis to convince his contemporaries of the truth of his ideas regarding the contagiousness of childbed fever; no feeling human being will read the chapters containing the story of the last tragic days of Semmelweis without being deeply moved. Every physician should read this excellent novel; after doing so, he will want to see it read by every thinking person.

Milton Plotz

Recent Advances in Oto-Laryngology. By R. Scott Stevenson. Second edition. Large duodecimo of 395 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $6.00.

The author performs his task well by bringing the various subjects comprising the field of otolaryngology up to date in their scientific advances. The book is well written, concise, containing many illustrations. The bibliography is complete.

The book is of value to all those doing work in otolaryngology and can be recommended as a text- and yearbook in this field. SYDNEY SHAPIN

Clinical Case-Taking. Guides for the Study of Patients. History-Taking and Physical Examination or Semiology of Disease in the Various Systems. By George R. Herrmann, M.D. Fourth edition. Octavo of 240 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $3.50.

This is a very scholarly, almost painfully meticulous, treatise and guide to aid the practitioner in more accurate and intelligent history-taking. It stresses the importance of the individual as an individual and not merely as a "case number." The previous personal history is seen as a valuable prodrome to the present reason as to why the patient is there seeking medical aid.

Orderliness in arranging pertinent data results in the history and the subsequent complete physical examination, preferably stripped, dovetailing into one another to complete a pattern which will be chronologically accurate and aid in the building of the symptom complex or the patient's disease. Such data also are useful in making the final diagnosis and spearhead the treatment into the most effective channels. Keen observation and the jotting down of copious notes as the examination proceeds assist in the assembly of the scattered pieces to make the mosaic complete and intelligible when the final vote is in. In other words, "snap diagnoses" are out.

The pertinency of the psyche as it affects the soma is merely stressing what most of us oldtimers have learned the hard way. You have to know your patient before you can hope to treat his real or alleged disease. The unhappy home can and does produce the disturbed patient.

The role of the vitamins as they affect the symptom complex is well handled and enlightening when the habits of food, beverages, etc., are considered. On the whole, a handy little book to have.

THOMAS F. NEVINS

Fundamental Considerations in Anesthesia. By Charles L. Burstein, M.D. Octavo of 153 pages, illustrated. New York, Macmillan Co., 1949. Cloth, $4.00.

This volume, by one of the younger pioneers in anesthesia, has brought between covers a vast amount of erudition and research in a concise and readable manner. It brings forth in an interesting way the keystone of the arch of anesthesia. To the older practitioner in the specialty, it offers an excellent review and to the younger men and the residents a concise elucidation of the processes through which the patient under anesthesia travels. The short exposition of the autonomic nervous system is classic in its grasp of a complicated problem. Doctor Burstein's work in the laboratory is reflected throughout the book. Chapters on shock and respiratory disturbances are particularly well done.

The reviewer feels that this small volume is destined to become a classic. F. PAUL ANSBRO

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1. Cooke, R. A.: in Textbook of Medicine (Cecil). Philadelphia, W. B. Saunders Company, 1947; seventh edition, p. 528.
2. Nevius, W. B.: J. M. Soc. New Jersey 46: 17 (1949).
3. Rosen, F. L.: ibid. 45: 389 (1948).

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NECROLOGY

Joseph Collins, M.D., of New York City, died on June 11 at his home at the age of eighty-four. Dr. Collins received his medical degree from the New York University Medical School in 1888 and did postgraduate work in Germany, at the University of Heidelberg and at Frankfurt. From 1899 to 1909 Dr. Collins was professor of neurology at the New York Post-Graduate Medical School. In 1909 he was one of the founders of the Neurological Institute of New York, now a part of the Columbia-Presbyterian Medical Center.

The author of books for physicians and laymen, Dr. Collins wrote and published many scientific books and articles, including *The Doctor Looks at Literature*, *The Doctor Looks at Biography*, *The Doctor Looks at Love and Life*, and *The Doctor Looks at Marriage and Medicine.*

A former president of the American Neurological Association and the New York Neurological Society, Dr. Collins was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Aloysius A. Daly, M.D., of the Bronx, died on February 17 at the age of sixty-three. Dr. Daly received his medical degree from the Fordham University Medical School in 1917. He was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Way Denton, M.D., of New Rochelle, died on June 16 at his home at the age of sixty-one. Dr. Denton was graduated from the St. Louis University College of Medicine in 1914. During World War I he served with the British Medical Service and after the war worked in the Belgian Congo as a medical officer for the Belgian government. He also served with the U.S. Public Health Service in Panama for two years. In 1919 he was with the Harvard Medical School's research expedition to Warsaw.

In 1922, Dr. Denton became associated with Bellevue Hospital, New York City, as a pathologist, and from 1927 to 1930 he was assistant professor of pathology at Cornell University Medical College. Dr. Denton was director of pathology at the New Rochelle Hospital and at Lawrence Hospital in Bronxville. For several years he had been pathologist at Sing Sing Prison in Ossining.

A Diplomate of the American Board of Pathology, Dr. Denton was a member of the New York Pathological Society, the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Frederick Dick, M.D., of Flushing, died on June 18 at his home at the age of seventy-one. Dr. Dick received his medical degree from the Long Island College Hospital Medical School in 1900 after having served in the Spanish-American War. He had recently observed the fiftieth anniversary of his practice of medicine. Dr. Dick was physician emeritus at the Flushing Hospital and a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Duane Edwin Ensign, M.D., of McGraw, died on June 15 at the age of ninety. Dr. Ensign received his medical degree from the Eclectic Medical College in Cincinnati, Ohio, in 1888, and had practiced in McGraw ever since, for more than sixty years. Dr. Ensign was a member of the Cortland County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Horace Greeley, M.D., of Brooklyn, died on June 10 at his home at the age of seventy-three. Dr. Greeley, a grandson of Horace Greeley, the founder of the *New York Tribune*, received his medical degree from the Long Island College Hospital Medical School in 1903. The author of many technical papers on allergy and bacteriology, Dr. Greeley had served for many years as director of the department of publications of the New York City Health Department. Several years ago he served on the staffs of the Lutheran and Bay Ridge Hospitals in Brooklyn.

Walter E. Halfman, M.D., of New York City, died on June 10 at his home at the age of sixty-four. Dr. Halfman received his medical degree from the New York Homeopathic Medical School in 1909. He retired in 1940 after having served as professor of anatomy at the New York Medical College and as a member of the staff of the Flower and Fifth Avenue Hospitals. Dr. Halfman was a Fellow of the American College of Surgeons.

Allen Arthur Jones, M.D., of Buffalo, died on June 19 at the age of eighty-six. Dr. Jones was graduated from the University of Buffalo School of Medicine in 1889 and had taught at the School of Medicine for thirty-one years until his retirement in 1929. In 1897–1898, Dr. Jones was secretary of the American Medical Association, and from 1929 to 1932 he was president of the American Gastro-Enterological Association. In 1939 he served as first vice-president of the American College of Physicians.

Dr. Jones was consulting physician at the Buffalo General, Millard Fillmore, and Meyer Memorial Hospitals, all in Buffalo. A Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, Dr. Jones was a member of the American Gastro-Enterological Association, the Buffalo Academy of Medicine, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

John Salem Lockwood, M.D., of New York City, died on June 16 in Harkness Pavilion, Columbia-Presbyterian Medical Center, at the age of forty-

[Continued on page 1756]

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[Continued from page 1754]

two. Dr. Lockwood received his medical degree from Harvard University Medical School in 1931 and did postgraduate work at Columbia. Professor of surgery at the College of Physicians and Surgeons, Columbia University, at the time of his death, Dr. Lockwood had been an instructor at the University of Pennsylvania Medical School, from 1937 to 1942, and associate professor of surgery at Yale University Medical School, from 1942 to 1946, when he returned to Columbia.

During World War II, Dr. Lockwood was a member of the committee on chemotherapeutic and other agents and of the subcommittee on infected wounds and burns of the National Research Council. He was consultant to the Secretary of War, beginning in 1942, and was named chief of the division of surgery of the Committee on Medical Research of the Office of Scientific Research and Development in 1944.

Dr. Lockwood was the author of several scientific papers on the use of sulfa drugs, chemotherapy of surgical infections, gelatin as a plasma substitute, and problems of metabolism in surgical patients. He was to have become director and chief of surgical services at the Memorial Hospital for Cancer and Allied Diseases on July 1.

A Diplomate of the American Board of Surgery, Dr. Lockwood had been president of the Society of University Surgeons in 1948 and was a member of the American Surgical Association, the American Society for Clinical Investigation, the New York Surgical Society, the Society for Clinical Surgery, the American Cancer Research Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Floyd David Lohr, M.D., of New York City, died on March 16 at the age of sixty-two. Dr. Lohr received his medical degree from the University of Pennsylvania Medical School in 1911. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Maxwell Donnell Ryan, M.D., of New York City, died on June 11 at his home at the age of forty-eight. Dr. Ryan received his medical degree from McGill University Medical School in 1927 and practiced in Canada until 1931, when he joined the staff of Bellevue Hospital. He was attending bronchoscopist and surgeon at the New York Eye and Ear Infirmary, consulting bronchoscopist at Kings Park State Hospital and Pilgrim State Hospital, both on Long Island, and consulting otolaryngologist and bronchoscopist at the Hackensack, New Jersey, and Greenwich, Connecticut, Hospitals.

A Diplomate of the American Board of Otolaryngology, a Fellow of the American College of Surgeons, and a Fellow of the American College of Chest Physicians, Dr. Ryan was a member of the American Academy of Ophthalmology and Otolaryngology, the American Laryngological, Rhinological, and Otological Society, the New York Otological Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry V. Walsh, M.D., of New York City, died on June 8 at the age of fifty-five. Dr. Walsh was graduated from the College of Physicians and Surgeons, Columbia University, in 1919 and interned at St. Vincent's Hospital, where he was a member of the staff for several years.

Henry De Witt Watson, M.D., of Binghamton, died on June 20 at the age of seventy-nine. Dr. Watson received his medical degree from the New York University College of Medicine in 1896. His first practice was in Cincinnatus, and he also studied in Europe for several years. Dr. Watson was a member of the American Academy of Ophthalmology and Otolaryngology, the Binghamton Academy of Medicine, the Broome County Medical Society, which he had served many years as secretary, the Medical Society of the State of New York, and the American Medical Association.

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Spend and Spend—it could be worse,
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Just to show your good intention.
If the voters like it, shucks,
It's worth a hundred million bucks.

Tax my pay and tax my vittles,
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What care I if taxes rocket?
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Erie County Medical Society

—*Public Relations Reporter, Medical Society of the State of Pennsylvania, June 6, 1950*

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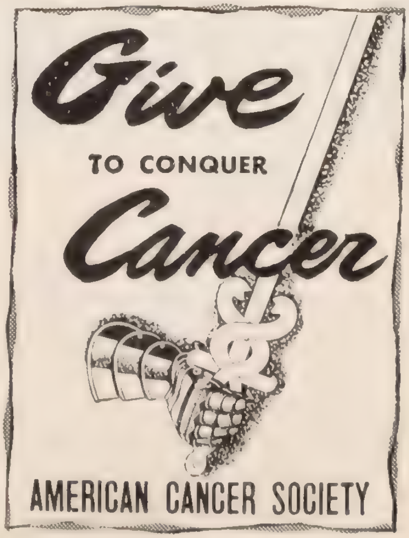

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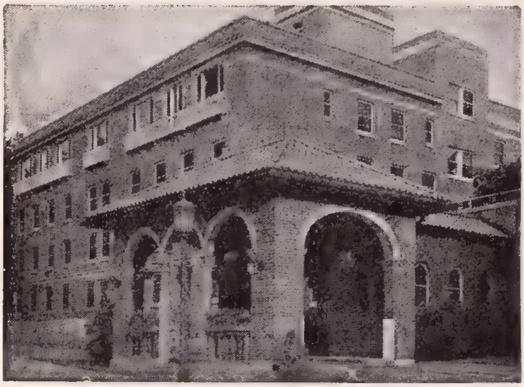

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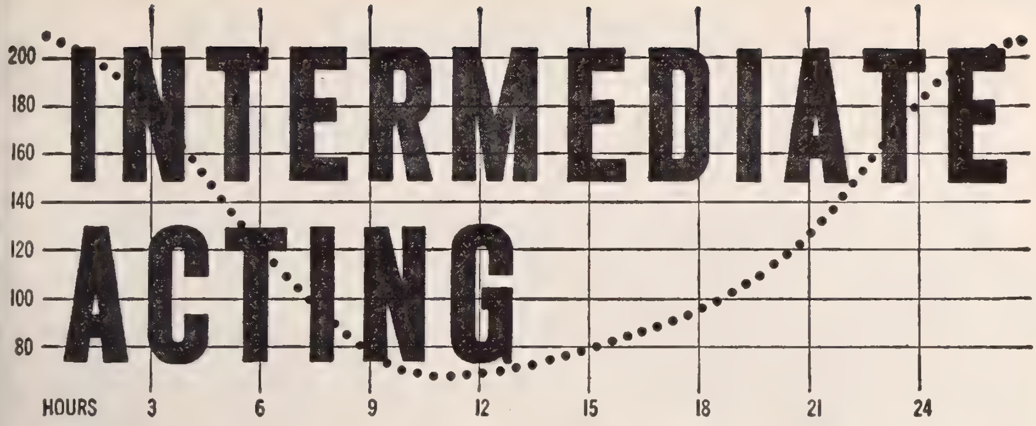

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1. Rohr, J.H., and Colwell, A.R.: Arch. Int. Med. 82:54, 1948.
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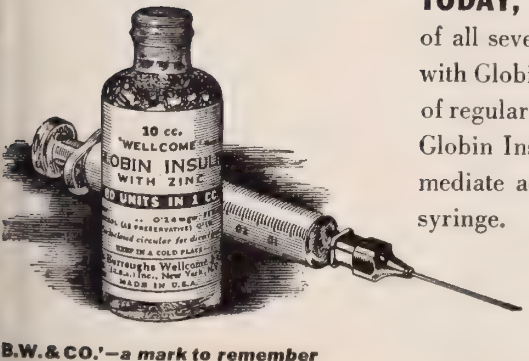
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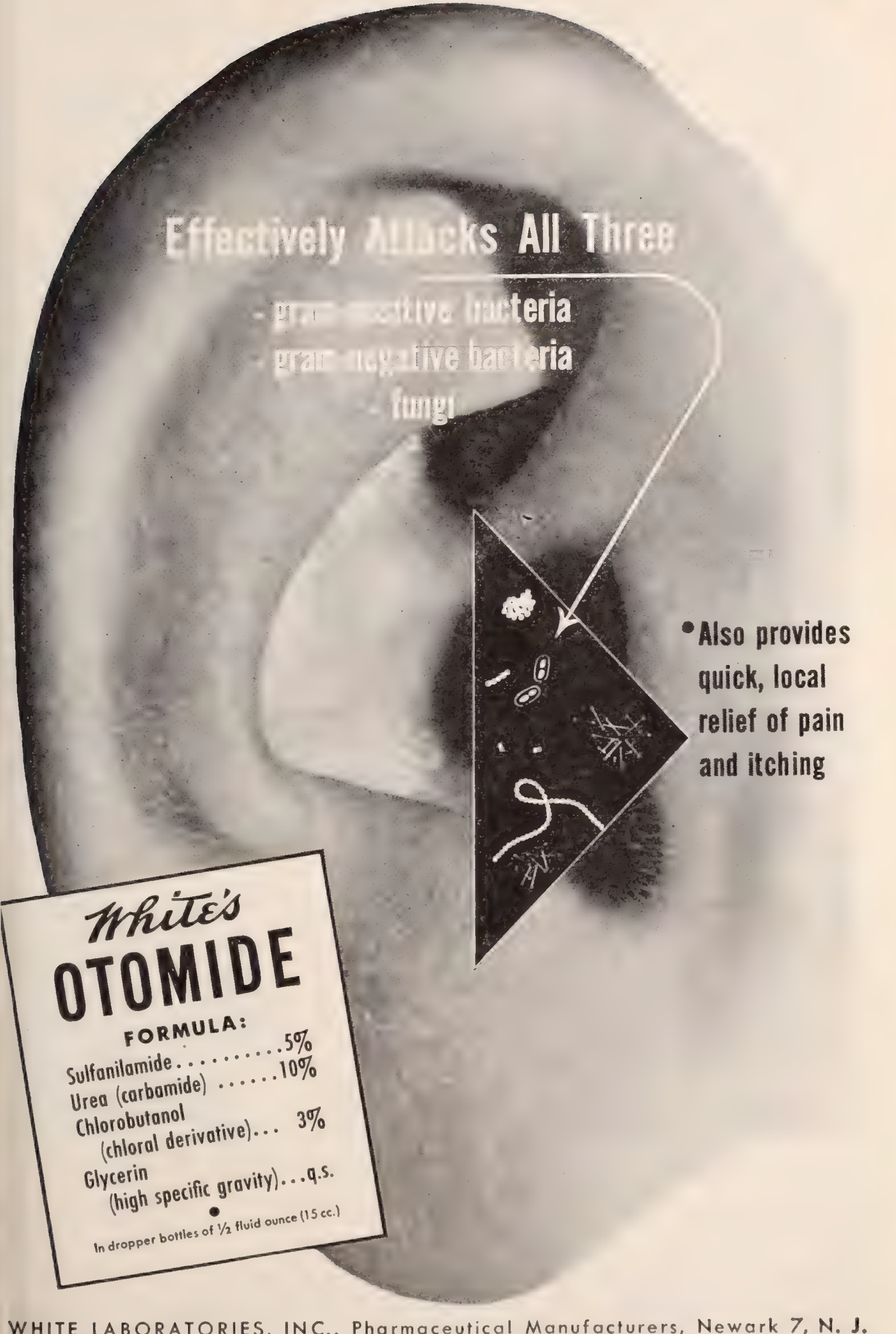

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(1) Missal, M. E.: New York St. J. Med. 50: 173-178, 1950; (2) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (3) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (4) Freis, E. D., et al.: J. Clin. Investig. 28: 353-368, 1949; (5) Wilkins, R. W., et al.: J.A.M.A. 140: 261-265, 1949.

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*Dexter, H.: Studies in Acne, J.A.M.A. 142:715 (March 11) 1950

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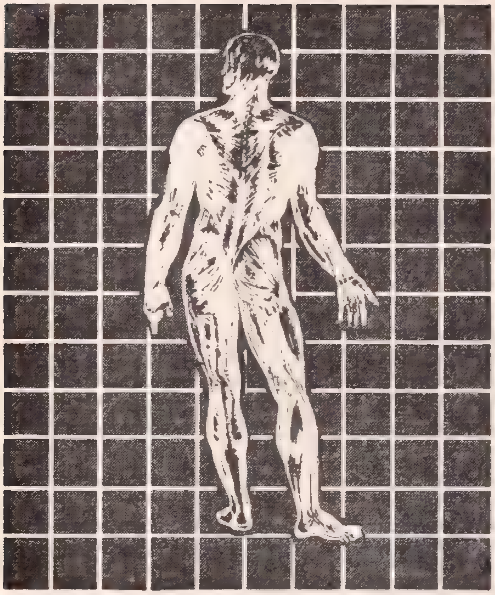

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**Lowenfish, F.P., N.Y. State J. Med., 50:922 (Apr. 1) 1950.*

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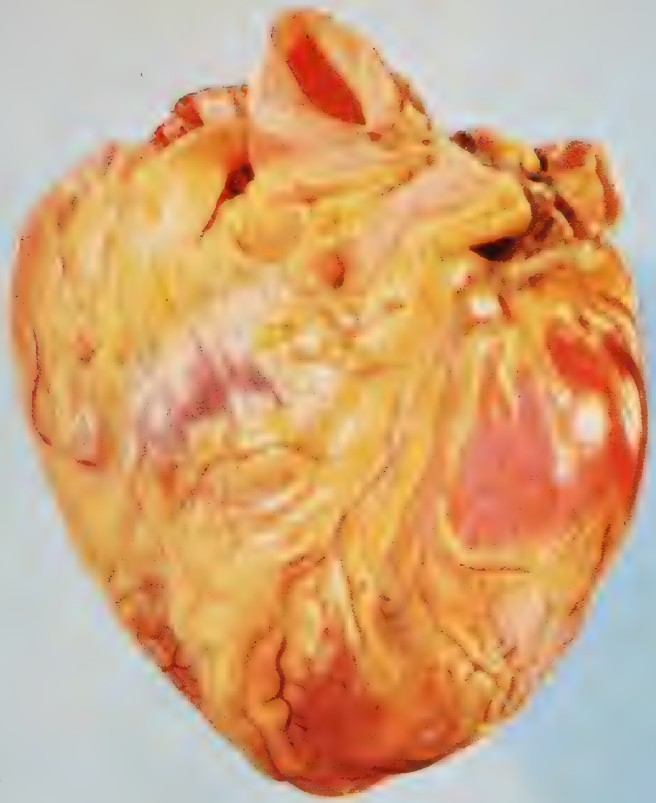

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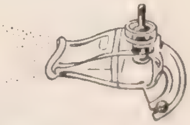

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1. Krasno, L. R., Grossman, M. I., and Ivy, A. C. (1949), The Inhalation of 1-(3′,4′-Dihydroxyphenyl)-2-Isopropylaminoethanol (Norisodrine Sulfate Dust), J. Allergy, 20:111, March. **2.** Krasno, L. R., Grossman, M., and Ivy, A. C. (1948), The Inhalation of Norisodrine Sulfate Dust, Science, 108:476, October 29.

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[1] Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2] Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3] Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, p. 342.
[4] Reid, R. D., Felton, L. C. and Pitroff, M. A. Pro. Soc. for Exp. Biol. and Med., Vol. 63, p. 438.

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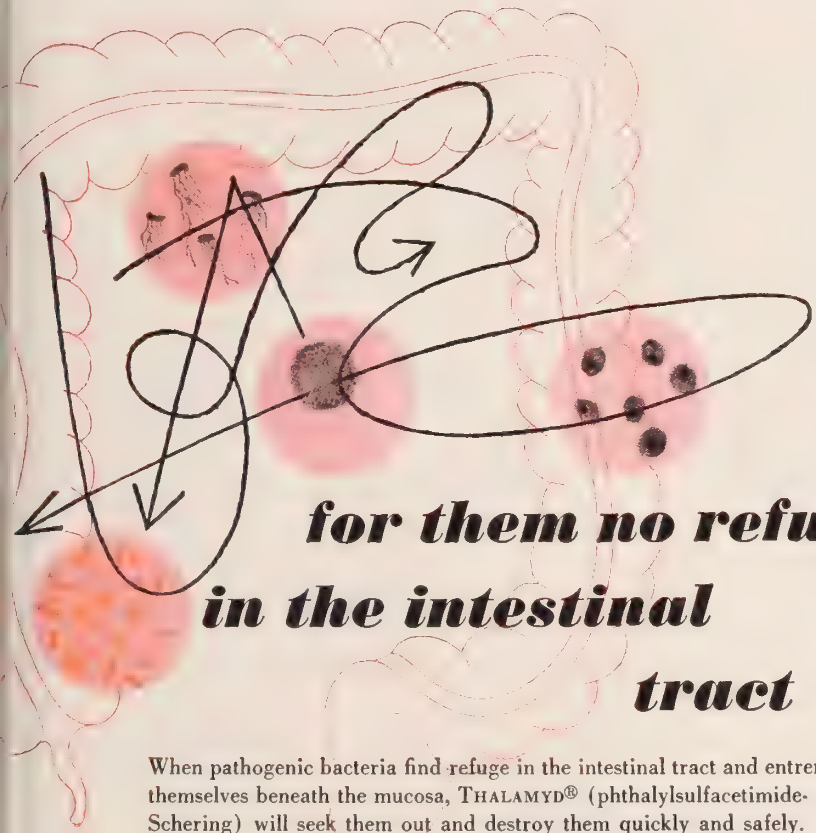

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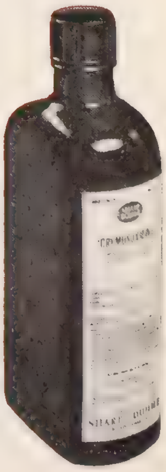

*Gray, A. L.: Southern Med. J., 43:320, April, 1950.

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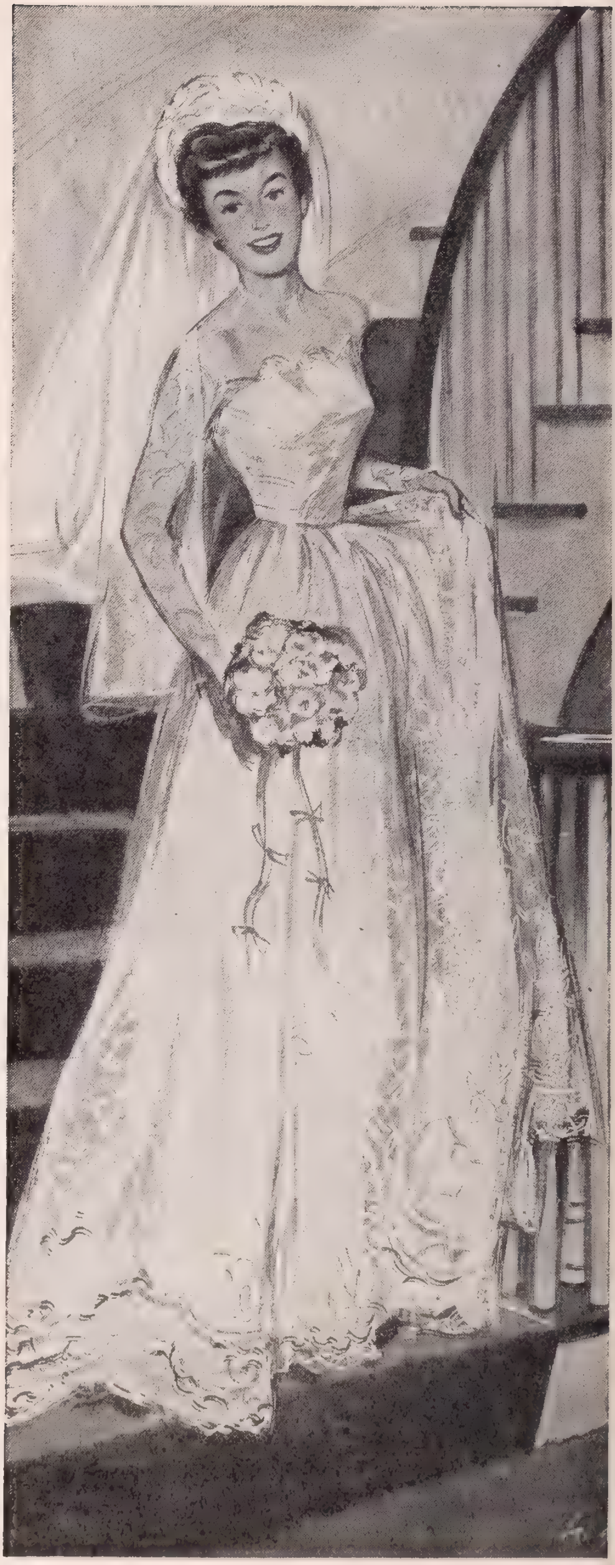

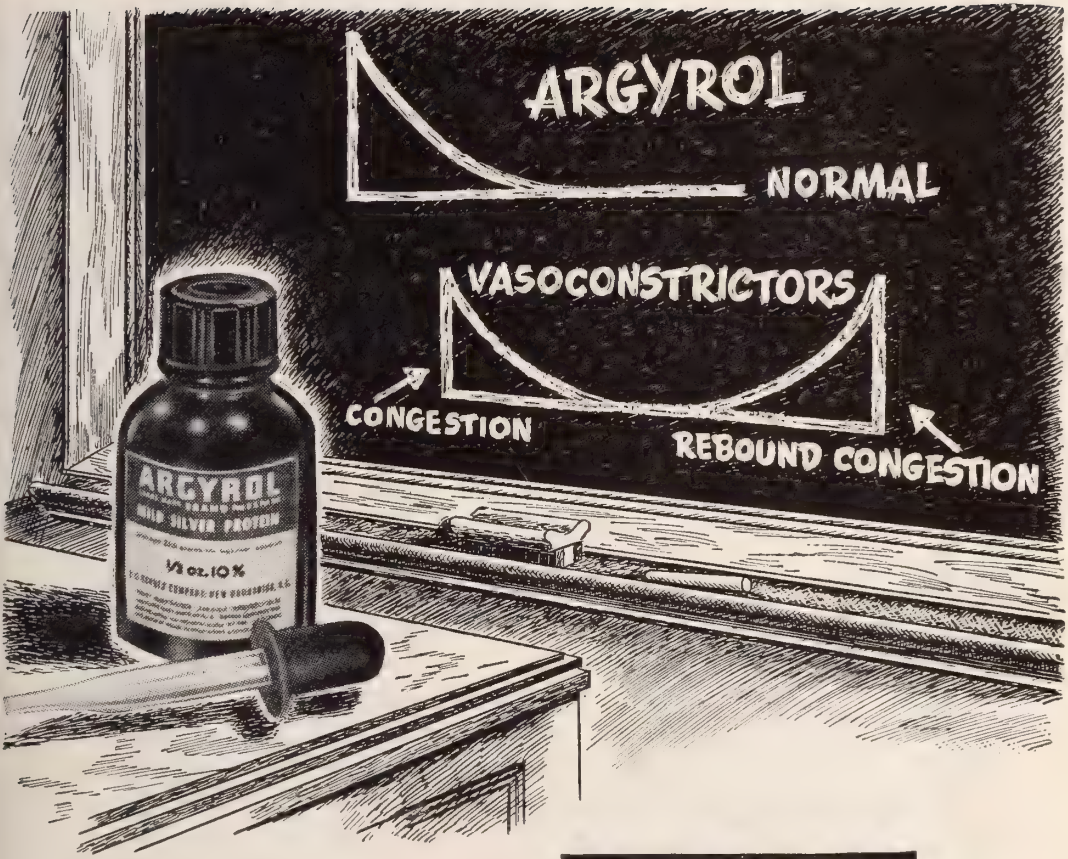

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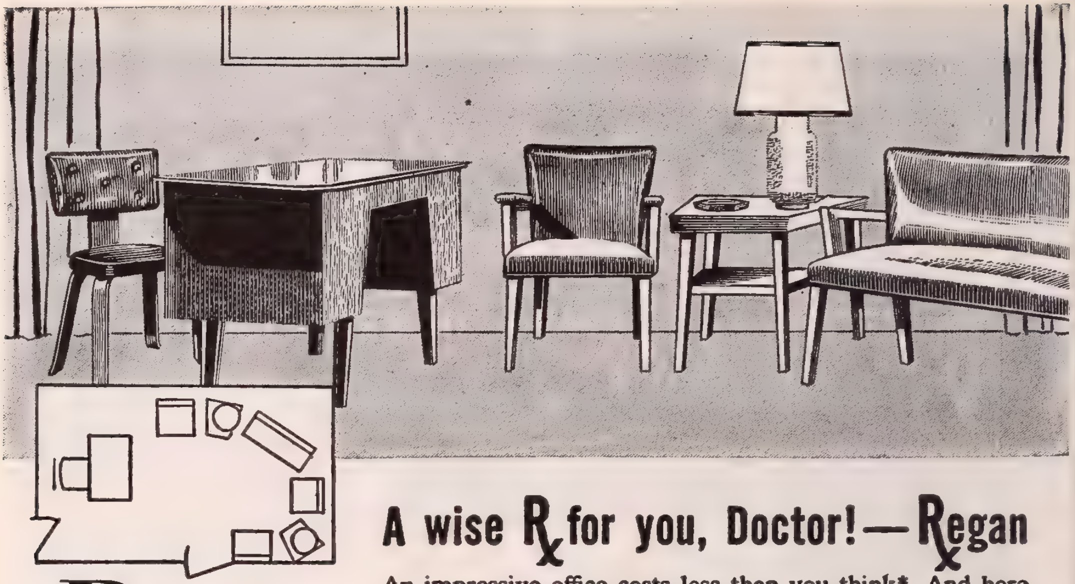

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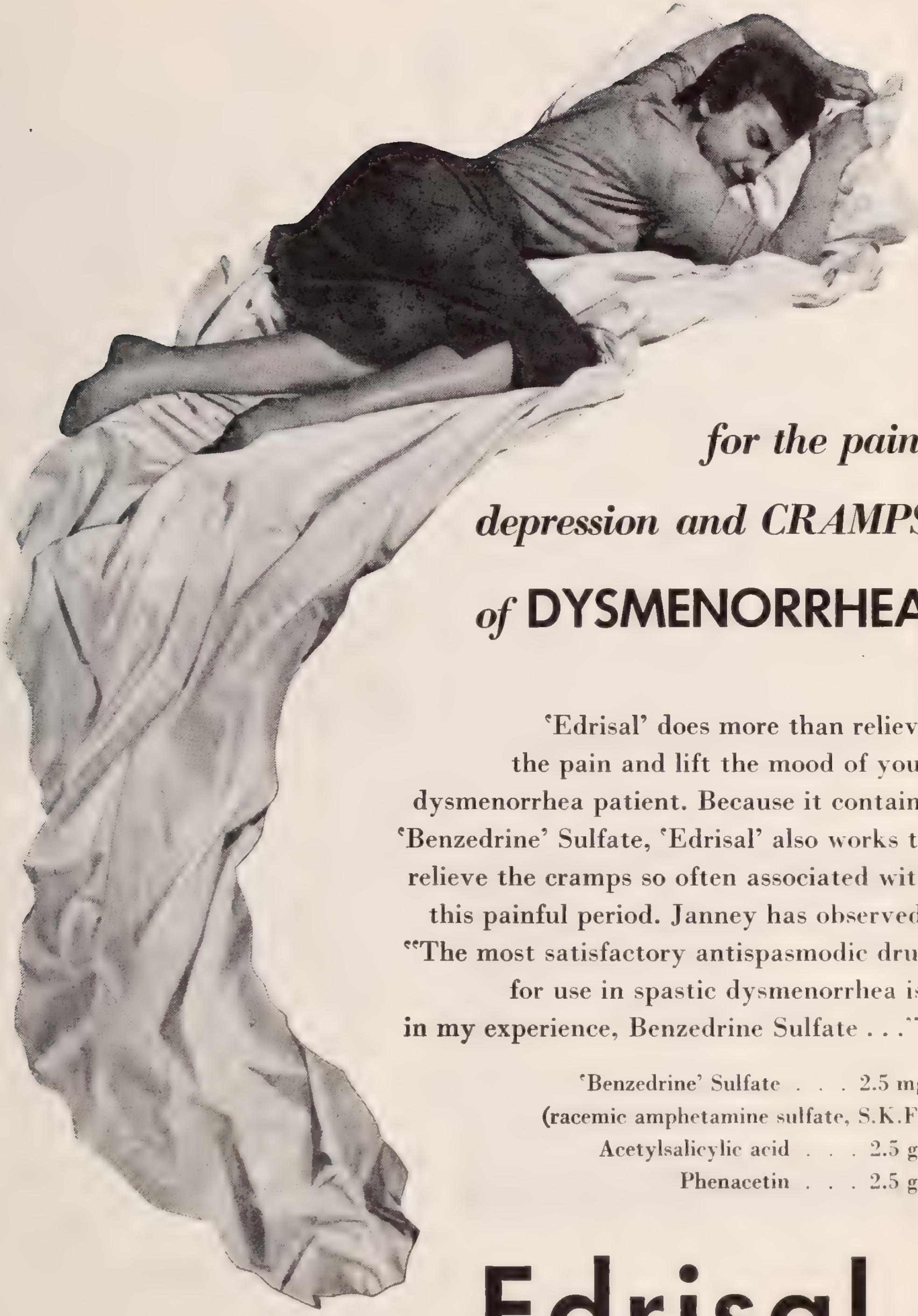

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*Janney, J.C.: Dysmenorrhea, Medical Gynecology, Philadelphia, W.B. Saunders, 1945.

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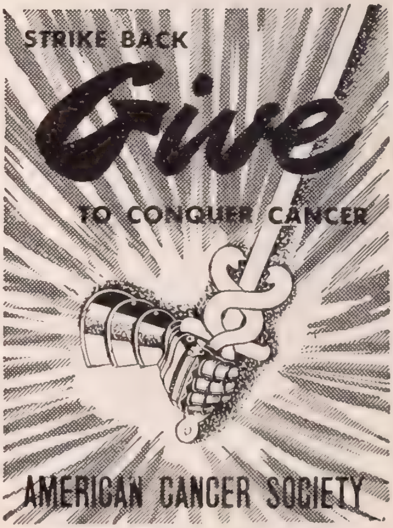

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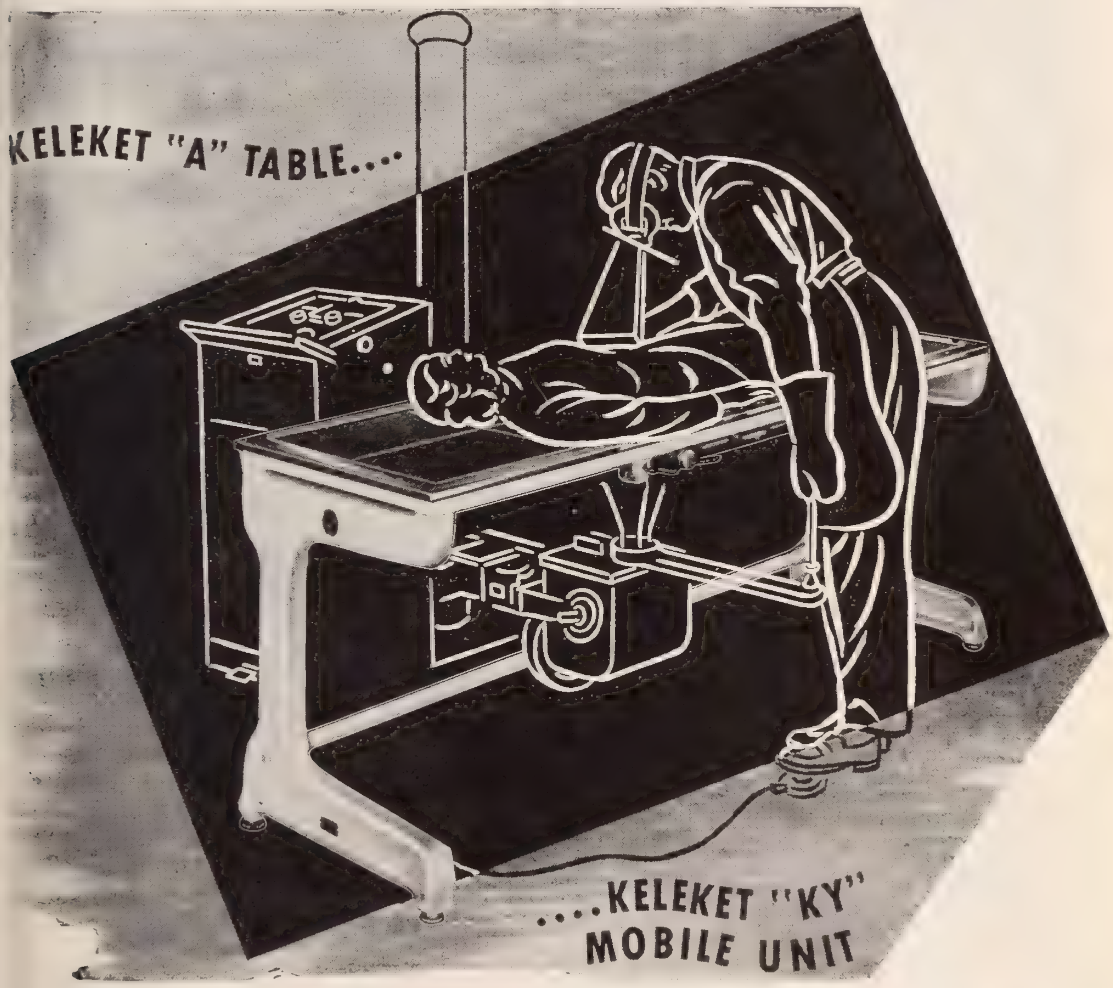

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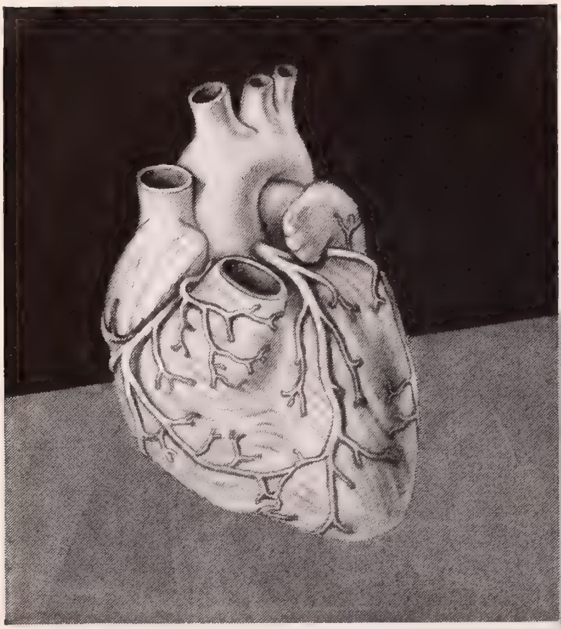

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1. Killam, K.R., and Fellows, E.J.: Federation Proc. 9:291 (March) 1950.
2. Rosenman, R.H., et al.: J.A.M.A. 143:160 (May 13) 1950.
3. Osher, H.L., and Katz, K.H.: Boston M. Quart. 1:11 (March) 1950.
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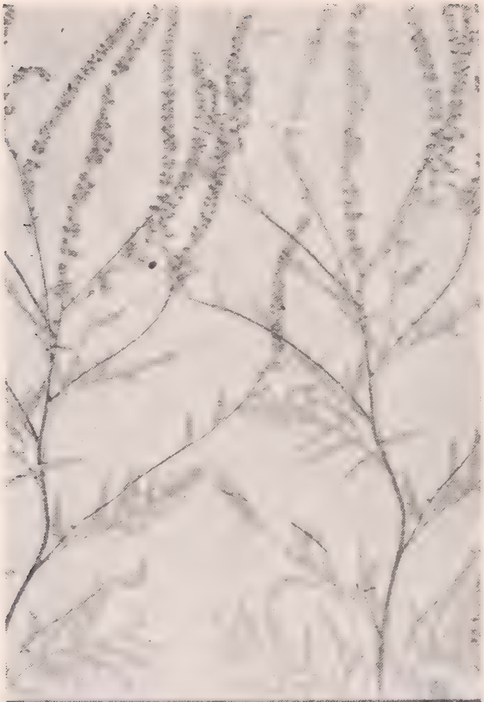

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VOLUME 50 AUGUST 1, 1950 NUMBER 15

Editorials

Economics of Inflation

More and more, in recent years, doctors have striven to understand the economics of their profession. It has been and still is an uphill job. Every new scientific advance poses a problem of applying the new knowledge in private and hospital practice. This, in turn, raises questions of costs to the patient. These costs have been multiplying, not only because of considerations of a purely medical nature, but also because of larger factors in the whole economy of the nation related to a changing political philosophy.

One of these larger considerations formed the subject of Mr. Bernard Baruch's recent address before the School of Business and Civic Administration of City College. Holding up the dangers of present trends in government, he does not see an evil inspiration behind every attempt to change the status quo, but looks inquiringly, as is proper, at all aspects of government action. Particularly he regrets the road we seem to be traveling by continuous deficit financing, living beyond our means. Doctors will do well to heed Mr. Baruch's words, since they affect their patients as well as themselves.

Today's question, according to Mr. Baruch, is not whether or not the government should take action. That question has been answered definitively by historical processes beyond the power of man to deflect or repel. The problem today is, "How can government's action be made fair and just to all?" The facile assumptions of earlier reformers that government action, allegedly directed toward the common welfare, must necessarily be good, that change must be for the better, is simply not true. Society can, and does, retrogress through radical experiments intended to increase the power of the government to aid the people. The "point of diminishing returns," at which the community takes on burdens which it is unable to carry, at which the individual becomes dependent upon government, insecure through the very means taken to insure his security, has too often been ignored.

Mr. Baruch was specific. He pointed to the debts which American society had incurred in the name of social improvement and which have resulted in a tremendous loss, through inflation, to the individual's ability to care for himself. He drew an analogy between this process and that which, in the Soviet Union, is consciously used to keep the citizen in subjection to the state—"near-feudal slavery through inflation." He recalled the vain efforts he had made to enable the United States to achieve its objectives in war and peace without invoking the deceptively easy, ruinously costly method of deficit financing.

Doctors, perhaps more than any other professional men, have the opportunity to observe the ill effects of inflation, for it bears hardest on the poor. Attempts of government agencies to relieve the distress do nothing to ameliorate the cause. Rather, such agencies add their bureaucratic costs to the general misery of rising taxes, higher prices, and debased quality of goods and services.

Taking the large role of government in human affairs for granted, Mr. Baruch makes his main points:

> To consciously regulate ourselves poses enormously greater problems than when taking things for granted, trusting to the automatic workings of competition. Government does not solve economic and social problems; it creates them. It does not eliminate more problems but makes them more acute. It does not abolish the curse of Adam, but demands that to earning his daily bread man must add the task of controlling a complex society with self-discipline, wisdom, and restraint.[1]

---

[1] New York Herald Tribune, May 13, 1950.

Look to the End

Speaking recently at a discussion panel on "An Expanding Economy for a Growing Nation," Mr. Leon Keyserling, one of the President's economic advisers, made some significant remarks. Since he is now chief of the Council of Economic Advisers, his thoughts are undoubtedly paramount in directing the course of action the Administration will take. Because of this, doctors will do well to note their significance and their possible effect on medical practice.

Mr. Keyserling recalled in his speech that in 1929 the Federal Government was spending a mere 3 per cent of the total national production of goods and services. It was not enough to prevent the bad slump which then occurred. By 1939, he said, Federal spending had risen to 10 per cent of everything we produced, and we were doing better in the matter of unemployment. No mention of World War II as an assist.

Currently, as Mr. Keyserling remarked, the Government is spending 15 per cent of the national production with happy results in the way of high wages and salaries, high farm income, corporation profits, and the like. The obvious deduction seems to be that the more of the national product the Government spends, the better things are. This is the happy road to inflation, artificially stimulated employment, and, lacking another war, the eventual bust.

On his heels comes Mr. Ewing, F.S.A. chief, speaking to a hosiery workers' union in New York and advocating a nation-wide system of compulsory health insurance, tax-supported from workers' pay.[1] Says the *Daily News:*

> He (Ewing) said that commercial health insurance systems cost 50 cents out of each premium dollar to operate, and that in the case of nonprofit plans overhead gobbles up 18 to 19 cents of each dollar paid in by the policyholders. With Uncle Sam running or supervising one all-embracing, nationwide health insurance monster, Ewing said overhead would cost only 5 to 7 cents on the premium dollar—and added that in Socialist England it costs less than 3 cents.
>
> We don't know where Oscar got his 5 to 7 cents estimate for the United States, but we do know how he got that under 3 cents claim about British health insurance. He went over to England several months ago, conferred briefly with politicians in charge of and sold on Socialist medicine there, and ignored the formidable opposition heading up in Lord Horder, the King's personal physician.
>
> So, while Oscar may honestly believe the less-than-3 cents story, the rest of us don't have to.
>
> As for Ewing's claim that U.S. Government bureaucrats would hold the overhead to no more than 5 to 7 cents on the premium dollar that is nothing short of priceless.

---

[1] May 17, 1950.

Mr. Keyserling and Mr. Ewing should get ogether. Mr. Keyserling advises spending urselves into prosperity, but Mr. Ewing alks of economy in operating a governmental ureaucracy. Does he do so with tongue in heek? Since when has the Government perated any project economically? In the right lexicon of bureaucracy there seems to e no such word as economy.

The plan of the foreign ministers of the welve North Atlantic Treaty nations, if nplemented, will add about three and one alf billions a year to all our other foreign id operations with consequent effect on our tandards of living. This seems to fit in ith Mr. Keyserling's plan of spending ourelves into a kind of prosperity with dollars e haven't got to attain a dubious security, rief, impermanent, and fragile, a will-o'-the-isp leading to war or bankruptcy.

Mr. Ewing is a clever salesman. Do not nderestimate his talents. It takes genius f a sort to sell a something-for-nothing proram to the American people. Note his tatement that "commercial health inurance systems cost 50 cents out of each premium dollar to operate." Also note his dictum that, in the case of nonprofit plans, "overhead gobbles up 18 to 19 cents of each dollar paid in by the policy holders." He does not mention the item of taxes on commercial systems in free competition with each other, for instance, but does credit the nonprofit plans with lower operating costs, eliminating all profit and taxes presumably, but making no comment whatever upon the extent or quality of the coverage purchased. That is clever salesmanship because it avoids the issue of what you get for your money.

Then when Mr. Ewing states that the government can operate a national health insurance scheme for 5 to 7 cents without any previous experience, and with tax revenues substituted for premium dollars, he hopes the "fall guys," the "suckers" will crowd into the big tent in droves.

It is clever oversimplification with overemphasis on low costs, condemnation by inference of the commercial health insurance companies and the nonprofit plans now so successfully expanding. He still offers nothing save promises.

Current Editorial Comment

Postgraduate Medical Education. The 950–1951 *Course Outline Book* of the Council Committee on Public Health and Education has recently come off the press n a new and attractive cover. The Committee continues to arrange for postgraduate instruction in a wide variety of subjects from alcoholism through vascular disorders, to which has recently been added nformation and instruction on the medical aspects of radioactive materials.

This program is made available through the combined efforts of the members of the Medical Society of the State of New York, the faculties of medical schools and research institutions, the New York State Department of Health, the Dental Society of the State of New York, the Division of Industrial Hygiene and Safety Standards of the New York State Department of Labor, and several other institutions and associations.

The Subcommittee on Medical Film Review of the Council Committee on Public Health and Education in cooperation with the New York State Department of Public Health is in the process of reviewing a collection of films for distribution to county medical societies, if they are desired. Many films are listed, together with their sources and brief descriptions, in the current issue of the book.

In its new, attractive three-color cover of exceptional layout, the *Course Book* is a distinct departure from that of previous years. Clear, readable type and excellent arrangement of the subject matter facilitate for the reader the finding of desired information. The Committee is to be congratulated on this new book which reflects much careful planning.

Unless your pretensions be very good, avoid being the principal speaker in a large company.—Anonymous

Australia Discards Plans for National Medical Service. According to the *J.A.M.A.*'s regular Australian correspondent,[1]

> As a result of the change of government last December, the previous plans for a national medical service have been discarded. The Minister for Health is now Sir Earle Page, a physician. He is said to be anxious for a minimum of governmental control of medical service.
>
> The present plan is a system of voluntary insurance. An approved health insurance organization will have its funds so subsidized by the government that 80 per cent of medical and hospital costs will be met. The plan is designed to give patients a sense of personal and social responsibility through payment of sickness insurance premium and 20 per cent of the fees. The government proposes to leave as much as possible of the control and administration of the scheme to doctors, pharmacists, hospital managements, insurance societies, and voluntary organizations. .....

Note that the Minister of Health is now a physician and that he favors a minimum of government control of medical service. This is of interest to physicians here.

It would be of value if the Senators and members of Congress who considered Reorganization Plan No. 27 should note the trend "down under." It seems to us to be in the right direction. It embodies principles—a doctor of medicine of cabinet rank, and less government control—which the American medical profession has long advocated and may be fortunate enough some day to observe in operation in this politically backward area.

---

[1] 143: 569 (June 10) 1950.

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District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
September 12	Fifth	Syracuse University College of Medicine and Hotel Syracuse	Morning and afternoon (buffet luncheon and dinner)
September 14	Seventh	Clifton Springs Sanitarium	Afternoon and evening (dinner)
September 27	Fourth	Cambridge	Afternoon and evening (dinner)
September 28	Third	Hudson or Troy	Morning and afternoon (luncheon)
October 4	Sixth	Hotel Statler, Ithaca	Afternoon and evening (dinner)
October 5	Eighth	Hotel Statler, Buffalo	Afternoon and evening (dinner)
October 18	Ninth	Rockland Country Club, Piermont	Afternoon and evening (dinner)
November 1	Second	Huntington or Garden City	Afternoon and evening (dinner)

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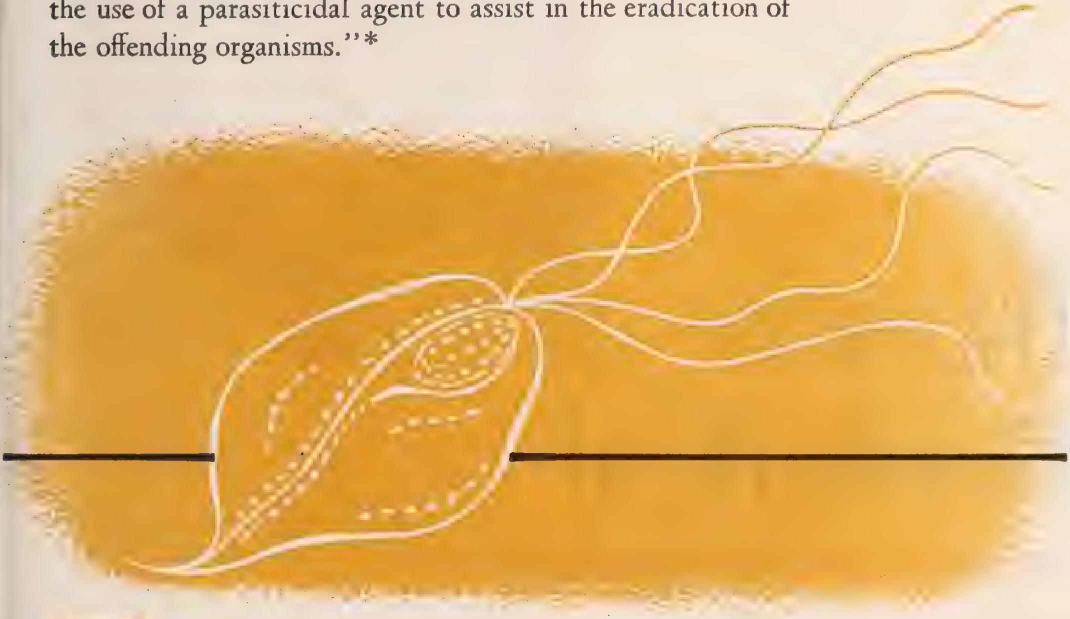

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*Hardy, J. W.: Office Gynecology, J. Missouri St. M. A. 45:811 (Nov.) 1948.

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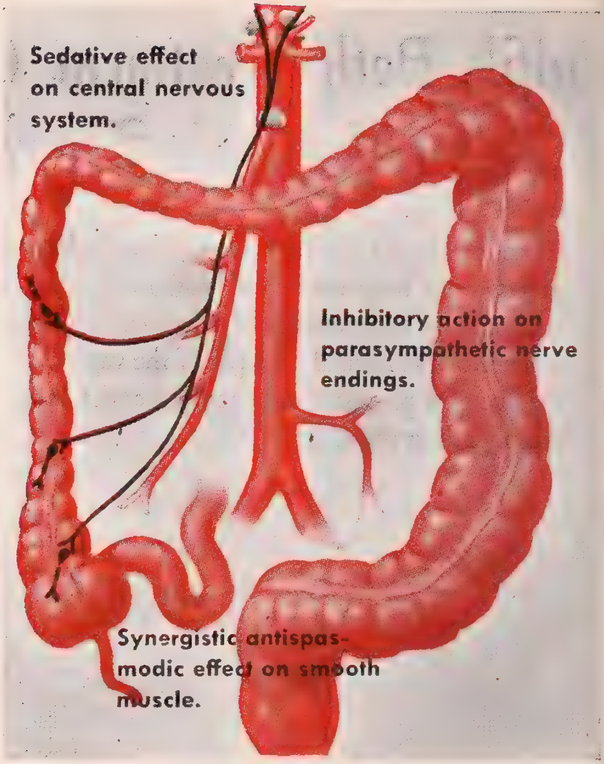
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Symposium

THE AUTONOMIC NERVOUS SYSTEM

FUNDAMENTAL CONCEPTS OF AUTONOMIC FUNCTION

L. Corsan Reid, M.D., New York City

(From the New York University Post-Graduate Medical School)

THE fundamental concepts of autonomic function have to do with the mechanism by which the transmission of a stimulus is conducted across the break in protoplasmic continuity between nerve and muscle, nerve and gland, and the synapse. The functional integration of the autonomic nervous system is determined in large part, indeed if not exclusively, by the fixed structural relationships existing within itself as well as with all other organs and tissues with which it has connections and, in particular, with the somatic nervous system.

The classification of the autonomic nervous system into sympathetic, parasympathetic, and enteric divisions is still very useful from a physiologic point of view, regardless of any anatomic deviations it may show, because the fluidity of its morphologic expression does not alter significantly the broad general principle of function with which we are concerned, namely, "How is the stimulus transmitted from nerve to effector organ?"

One of the many ways by which this question might be answered is to summarize briefly the historical background of those concepts now occupying the center of the stage. This approach should be particularly pertinent to this subject because of the perspective it should give one to sift critically the enormous amount of experimental evidence presently available. Indeed, in no other way does it seem possible to evaluate the sometimes conflicting, frequently controversial claims of a large number of workers, using a wide variety of methods and technics. As James Harvey Robinson has well said, "Intellectual maturity depends on a sound historical knowledge." This remark is most appropriate to our present discussion.

There are two main theories, the electrical and the chemical, presently being utilized to explain the passage of an impulse or stimulus from nerve to effector organ, and, regardless of many overlapping similarities, there is a vast difference between them.

The group favoring the electrical hypothesis considers the transmission from nerve to effector organ essentially and primarily an electrical phenomenon with the passage of an electrical discharge, sort of an attenuated spark from the nerve to the muscle and comparable to touching the muscle directly with an electrode. They look upon any chemical substance produced in the course of this activity as being of secondary importance and acting merely as a depolarizing agent. The first beginnings of this idea took place in Bologna in 1792, when Galvani, a physician, announced that a frog's leg twitched when touched by two dissimilar metals. The story behind this discovery is very interesting and of course is known to most of you but bears repeating. Madame Galvani is supposed to have hung some frogs' legs on a wire attached to a balcony off her kitchen, and, going out to collect

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them for cooking, she noticed that when the frog legs were attached to one wire and blown with the wind against another wire they contracted vigorously. She drew this matter to the attention of her husband with the above described result. Galvani thought that the electricity was produced in the frogs' legs and so evolved the concept of animal electricity. This concept was overthrown by Volta in 1800, when he showed that any two dissimilar metals when connected by wet paper would produce an electrical current, and, as is well known, this became the Voltaic cell, then the Voltaic pile, and subsequently the modern battery.

Galvani had shown that nerves gave rise to electrical currents. Subsequently, much work was done on so-called action currents, but it was not until 1879 that Hermann first suggested that the action currents at nerve endings was the trigger stimulus which excited the muscle. Since that time a really stupendous amount of work has been done to substantiate this idea. The principal workers in this field have been and are Lillie, Erlanger, Lapicque, Eccles, Gasser, Lorente de No, Nachmansohn, and others. In spite of these well-known and impressive names and their excellent contributions, the essential electrical nature of the process has failed to gain any general acceptance, and, while an astounding array of experimental evidence is against it, this idea, nevertheless, shows more persistence and vigor than appeared possible ten years ago. It would demonstrate a calamitous absence of ordinary prudence to attempt a prediction as to its future status, particularly if one were to depreciate it.

The chemical concept is supported by a powerful and convincing array of evidence, and the validity of this explanation would seem to gain more and more general acceptance. Certainly the chemical transmission of nerve impulses is the best and most satisfactory hypothesis to explain present observations and experimental findings.

As long ago as 1877, Du Bois Raymond suggested upon the basis of teleologic reasoning that the transmission from nerve to muscle was accomplished through the intermediation of a chemical substance. Brucke, an associate of Du Bois Raymond, did some experimental work with the idea of justifying this concept, but nothing very definite evolved, and it was his grandson who made the witty remark, "Teleology is a lady of doubtful virtue and dubious distinction, without whom no biologist could get along, and yet he is ashamed to appear with her in public."

The first clear experimental basis for this idea came from Elliott in 1904 at Cambridge. Elliott noticed that, long after sympathetic nerves were cut and allowed to degenerate, the structures previously enervated responded in a quite characteristic fashion to adrenaline, and he made the bold and, as now appears, astute suggestion that the action of sympathetic nerves was due to the liberation of adrenaline. This suggestion met with some opposition but failed to make an impression, probably because of the inconspicuousness of its publication in the *Journal of Physiology* the following year. In 1905, Dale, who was working with Elliott at this time, discovered that these adrenaline effects of the sympathetic were reversed or annulled by crude ergot extracts, the active principal of which was subsequently shown to be ergotamine and ergotoxine.

In 1906, three very interesting things happened. First, Dixon stimulated the vagus nerve to the heart and then made an extract from the heart. If he applied this to another heart, he observed the same effect as if he had stimulated the vagus, and, in addition, he was aware that this action was abolished by atropine. Dixon thought this action was related to muscarine and spoke of it as a muscarine-like action. His idea met with such skepticism from his close colleagues that he published the work in a small county medical magazine.

The same year Reid Hunt, while working with the esters of choline, described the pharmacologic action of acetylcholine. At a meeting of the British Medical Association at Toronto the same year, Dixon reported his findings and Reid Hunt his. Now it is quite obvious that they were describing the same effects, but no one in that convention connected the two reports. An interesting paper the same year by Howell showed that with vagal stimulation there is an escape of potassium ions into the perfusion fluid, and he suggested the slowing of the heart was due to this release of potassium ions. It is true that potassium ions escape, but, as is now known, this does not explain the action of vagal stimulation. In 1914, Dale discovered the presence of acetylcholine in ergot and described its pharmacology in detail and also that its action was abolished by atropine. No suggestion up to this time that acetylcholine occurred in animals had been made.

In 1921, Otto Loewi made the now justly famous experiment which still constitutes the keystone of the arch supporting the chemical transmission of nerve impulses. Loewi took two frog hearts, the first with connecting nerves and the second without. The vagus nerve to the first was stimulated, and the perfusion fluid was passed into the second, producing the same action in the second heart that the vagal stimulation had produced in the first preparation. When the accelerator nerve was stimulated, the same action occurred in the second heart when it received the fluid from the first. This was indeed very convincing proof that the nerves do not act directly on the heart but through the formation of a chemical substance which is susceptible of transfer to another preparation without nerves. This vagus stuff was something very real, and its being a choline ester was very early suspected. Only much later was the accelerator substance shown to be adrenaline.

This discovery of Loewi's becomes even more important when one knows something of the psychologic processes involved. They bear careful and leisurely contemplation, and the realization of their existence could be enormously profitable even to the most humble and least gifted of us.

During the evening of Easter Saturday, 1921, Loewi was in bed, comfortably reading a novel with his thoughts far away from medicine. He fell asleep, and some time later, he awakened from a dream, turned on the light, and jotted down on flimsy bits of paper some notes about his dream. He then went off to sleep and on awakening in the morning, he was aware that he had made some notes about a dream he had had, but try as he might, he was unable to decipher the scrawl, eventually gave up, and proceeded to forget all about it. The next night he had the same dream all over again, and on awakening, he remembered both episodes. He got up immediately (at 3:00 A.M.), went to his laboratory, and set up the experiments as described above. At 5:00 A.M. they were completed, and the humoral transmission of nerve impulses was on an indisputable basis. This probably represents about as profitable a two hours in the laboratory as one can recall and again demonstrates the incomparable and priceless advantage of having a good idea. When one considers the large number of pebbles being polished, it is particularly salutary that, once in awhile, a real diamond is found which requires no polishing.

When Loewi was asked at the International Congress in Boston in 1929 how he happened to make the discovery, he gave the above account. A former coworker of his, Walter Morley Fletcher, reminded him that, in 1903, while they were taking an afternoon stroll together at Marburg, he had expressed the following view: as certain drugs act exactly like stimulation of nerves, it may be that these nerves in their turn may act by liberating such substances. He had entirely forgotten this but, as a result of this reminder, recalled the episode very clearly. One might suggest that the idea took eighteen years to get from his subconscious where the synthesis took place to his consciousness which allowed him to bring it to the experimental test and verification. In a sense this individual experience was repeated with his colleagues because it was singularly slow in gaining acceptance, in spite of its simplicity and clarity. However, it was subsequently confirmed in many different laboratories. Three only will be mentioned as a sample of the type of confirmatory experiment.

Brinkmann and Van Dam connected the aorta of a frog to the gastric artery of a second frog, and when the vagus of frog number 1 was stimulated, cardiac slowing and gastric movements were the same in both frogs. Von Beznak, in a cross circulation set up in two dogs, showed that stimulation of the chorda tympani in one dog gave a salivary secretion in the other dog. Babkin showed that in an esterinized cat stimulation of the right chorda tympani gave a secretion in the denervated left salivary gland. If he placed a clamp on the vein leading from the right side, nothing happened, but the moment the clamp was released, there was a secretion on the opposite left side. These and many others have solidly established the whole concept.

In 1929, Dale recovered acetylcholine from the spleen of the horse. This was the first demonstration that acetylcholine, as such, existed in animal forms. Later, a distinguished German professor reported that he had found 40 mg. per cent in ox blood. Two English workers attempted to confirm this and failed, and on communicating this to the German professor, they were invited to his laboratory and there found the 40 mg. per cent of acetylcholine in ox blood. On their return to England they again failed to find it, and just as they were about to give up and decide that English oxen were different from German oxen, it developed that one of the German technicians had with great precision and persistence put exactly 40 mg. per cent of acetylcholine in all the preparations, because the professor had fired her boy friend. The poor old fellow has been in the scientific wilderness ever since.

In 1933, Gaddum and Feldberg showed that transmission at the synapse was also intermediated through acetylcholine. In 1934, Dale published some work from which he drew two far-reaching conclusions: first, that all preganglionic fibers in the sympathetic and parasympathetic nervous systems were cholinergic, all post ganglionic parasympathetic fibers were cholinergic, and all postganglionic sympathetic fibers were adrenergic; second, that the transmission from motor nerve to the muscle end-plate was also through the intermediation of acetylcholine. In the next few years the relationship of the salivary and gastric glands to the sympathetic and parasympathetic were worked out in a series of brilliant contributions from Babkin's laboratory. In

1939, there was a symposium on transmission at the synapse in Toronto at a meeting of the Federated Societies, in which Erlanger and Lorente de No presented the electrical concept, while Bronk and Forbes supported the chemical view. Late in 1939, Dale published in *Science* a summary of the evidence that synaptic transmission is chemical and not susceptible of explanation by the electrical concept. Here the work of MacIntosh is of major importance and is summarized in the following:

> 1. Nicotine and curarine annual response of ganglion cells to preganglionic impulses and to acetylcholine without affecting their response to potassium ions in the case of curarine and without interfering with the release of acetylcholine by preganglionic impulses. These statements are equally applicable to the action of curarine on voluntary muscle. Curarine directly applied to the motor end-plate of a lizard's muscle fiber becomes insensitive simultaneously to motor nerve impulses and to acetylcholine, while potassium ions, similarly applied, and direct electrical stimulation of the end-plate are still effective in causing contractions of the fiber.
>
> 2. After section of a preganglionic nerve, release of acetylcholine by preganglionic impulses and synaptic transmission disappear together at a time when conduction in the preganglionic fiber is still unimpaired.
>
> 3. When Locke's solution containing no glucose is perfused through a ganglion, continued stimulation of the preganglionic nerve rather rapidly exhausts the mechanism of synaptic transmission, and the output of acetylcholine fails with it, both being promptly restored when glucose lactate or pyruvate is added to the perfusion.
>
> 4. Perfusion of a ganglion with Locke's solution lacking calcium, while it renders nerve fibers and ganglion cells abnormally excitable, in particular by potassium ions, stops the release of acetylcholine by preganglionic impulses and therewith synaptic transmission, both being again promptly and simultaneously restored by addition of calcium to the perfusion.

Some recent work of MacIntosh and Feldberg has done much to substantiate the chemical view. MacIntosh has some very convincing work in press, and Feldberg is reported to have an important summary in preparation. The foregoing is a sample of the evidence upon which the chemical concept is based.

That the nervous system functions in this fashion should not be particularly surprising, because, as you will recall, Sherrington lists three mechanisms for organ integration: (1) mechanical—skin, bones, etc.; (2) hormonal—carbon dioxide, adrenaline, estrins, oxytoxic factor, etc.; and (3) the nervous system. As Thomson states, adrenaline is present in worms, estrins in insects, and the oxytoxic factor of the postpituitary in fish, without there being any structure to be affected by them. In other words the development of a chemical substance and a structure upon which it acts has not been a parallel phylogenetic development.

The nervous system represents the most recent addition to organ integration; it has speeded up the process, as witnessed by the following figures:

Circulation time—about 28 seconds
Wave of muscle contraction—3 to 5 meters a second
Pulse wave—8 to 10 meters a second
Nerve impulse frog—28 meters a seond
Nerve impulse, warm-blooded animals—60 to 120 meters a second

When one considers that evolution has proceeded by the taking on of more and more specialized functions by larger and larger groups of cells rather than by any radical alteration in the potential capacities of the individual cell, it is not particularly surprising, therefore, to find that in the increasing complexity of organization the nervous system retains certain, phylogenetically older, biologic mechanisms in some of its fundamental functional activities which one can now recognize as the chemical phase of nervous activity.

In recent years, workers in Baltimore, Copenhagen, and Australia have succeeded in making preparations of single muscle fibers and have actually visualized the microsecretory bulbs in their terminations in the muscle end-plate. If acetylcholine is applied anywhere but the end-plate, no contraction occurs, and if too large an amount is applied, paralysis results.

An evolutionary adaptation which has been incredibly advantageous to man in this connection is the absence of vagal fibers in the mammalian ventricle. Goltz in 1868 showed that, by flicking the frog's abdomen, a reflex was set up which caused a cardiac standstill. This does not occur in humans, and the ventricular independence of function depends upon the fact that there are no vagal fibers in the ventricle which is thereby not at the mercy of reflexes from the vagal system. A similar adaptation occurs with adrenaline. In dogs and cats adrenaline causes vasoconstriction, while the rise in blood pressure seen in humans is due to cardiac augmentation, the drug being essentially a vasodilator.

Summary

There are two general theories to explain the mechanism by which a stimulus is carried across the break in protoplasmic continuity between nerve and muscle, nerve and gland, or at the synapse:

1. The electrical concept, which to a protagonist of the chemical view, shows surprising vigor and unexpected persistence after receiving so many of what appeared to be knockout blows.
2. The chemical view which, as has been apparent has the most abundant diversified and convincing body of experimental evidence to support it.

The most fundamental concept of autonomic function appears to be that it acts as an accelerator of organ integration and retains in its basic functional expression (producing chemical substances, such as acetylcholine, adrenaline, and histamine) certain phylogenetically older, biologic mechanisms which in more primitive forms were carried out by tissue metabolites or hormones. These nervous tissue-produced chemical substances appear to be the mechanism by which the gap in protoplasmic continuity is bridged, and a stimulus travels from nerve to effector organ.

477 First Avenue

THE CLINICAL MANIFESTATIONS OF AUTONOMIC DYSFUNCTION

Richard H. Lyons, M.D., and Francis S. Caliva, M.D., Syracuse, New York

(*From the Syracuse University College of Medicine*)

THE autonomic nervous system is the protective mechanism of the human organism, since it serves to coordinate body activity to meet changing environmental conditions.[1,2] To do this, it must have a complex relationship between various elements of the central nervous system and the chemical and endocrine balance of the body.[3]

These relationships are oversimplified in Fig. 1, but it illustrates the potential complexity. In the last analysis, the autonomic nervous system acts on effector cells in all of the organs and the blood vessels of the body with the possible exception of those beyond the circle of Willis. These effector cells are generally acted upon by autonomic stimuli coming from ganglionic synapses which transmit impulses from higher centers.

The ganglia of the parasympathetic system are generally in very close proximity to the effector cells, while the ganglia of the sympathetic portion may be quite far removed and connected to the effector cells by nonmedullated nerve trunks.[4] The stimulus to the autonomic ganglia may arise from many sources within the central nervous system but generally is considered to come directly from the hypothalamus, the medulla, and from the cord.

From the point of view of frequency, the hypothalamus is probably the most important station for the initiation and exchange of autonomic impulses, since it is believed that most of the modifications exerted on the vegetative nervous system arising from cerebration must pass to this center and then be transferred. Thus, the effects of emotion, cortical activity, or injury probably pass through the hypothalamus to produce changes via the autonomic nervous system. There is still no precise knowledge of how certain cortical stimuli may predominately stimulate the parasympathetic in one instance and the sympathetic in another.[5,6]

The medulla is the seat of many automatic controls of the body as well as a way station for transmission of impulses from higher centers, but it also serves in the transmission of a reflex arc within the autonomic nervous system from visceral afferents to the effector cells.

The cord serves as a similar way station, since it functions in visceral reflexes just as it does in somatic reflexes. We have used the general term, "peripheral afferent," to refer to the neurons carrying the initial stimulus of the reflex arc since they may be either visceral or somatic sensory.

A consideration of the clinical manifestation of dysfunctions of the autonomic nervous system to be complete would be like a report on the ail-

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TABLE 1.—A Clinical Classification of Dysfunctions of the Autonomic Nervous System

Central Dysfunctions

- I. Organic
  - A. Hypothalamic
    - 1. Disturbed temperature regulation
    - 2. Hypersomnia
    - 3. Autonomic epilepsy (Penfield)
    - 4. Diabetes insipidus (?)
    - 5. Adiposogenital syndrome (?)
    - 6. Diencephalic syndrome (Page)
  - B. General
    - 1. Vasospasm after brain injuries
    - 2. Vasodilatation after brain injuries
- II. Emotional
  - A. Cardiovascular
    - 1. Neurocirculatory asthenia
    - 2. Arrhythmias
    - 3. Tachycardia
    - 4. Bradycardia
    - 5. Syncope
    - 6. Blush
    - 7. Hypertension
    - 8. Emotional vasoconstriction
  - B. Genitourinary
    - 1. Polyuria
    - 2. Emotional albuminuria
    - 3. Amenorrhea
  - C. Gastrointestinal
    - 1. Pylorospasm
    - 2. Peptic ulcer
    - 3. Ulcerative colitis
    - 4. Nausea, vomiting, diarrhea
  - D. Metabolic
    - 1. Emotional hyperglycemia
    - 2. Functional hypoglycemia
    - 3. Hyperventilation syndrome
    - 4. Diabetic acidosis

Peripheral Efferent Dysfunctions

- I. Sympathetic Hypertonia
  - A. Skin—Hyperhidrosis (sudomotor)
  - B. Eye and Ear
    - 1. Lid lag
    - 2. Vasospastic syndrome of inner ear
  - C. Gastrointestinal
    - 1. Ileus
    - 2. Megacolon
    - 3. Postvagotomy atony
  - D. Cardiovascular
    - 1. Sinus tachycardia
    - 2. Raynaud's phenomenon
    - 3. Raynaud's disease
    - 4. Scleroderma, sclerodactyly
    - 5. Livedo reticularis
    - 6. Hypertension
    - 7. "Reflex" peripheral vasoconstriction
      - (*a*) Thromboangiitis obliterans
      - (*b*) Arteriosclerosis obliterans
      - (*c*) Trench foot, frostbite
      - (*d*) Thrombophlebitis
      - (*e*) Peripheral emboli and thrombosis
      - (*f*) Cervical rib, scalenus anticus syndrome
      - (*g*) Shoulder-hand syndrome (myocardial infarction)
      - (*h*) Poliomyelitis
- II. Sympathetic Hypotonia
  - A. Eye—Horner's syndrome
  - B. Cardiovascular
    - 1. Postural hypotension
    - 2. Diabetic neuropathy
  - C. Gastrointestinal
    - 1. Diabetic neuropathy
    - 2. Pernicious anemia
  - D. Skin
    - 1. Anhidrosis
    - 2. Lipodystrophy (?)
    - 3. Facial hemiatrophy (?)
  - E. Genitourinary—Sterility (male)
- III. Parasympathetic Hypertonia
  - A. Cardiovascular
    - 1. Sinus bradycardia
    - 2. Heart block
  - B. Respiratory—Bronchoconstriction
  - C. Gastrointestinal
    - 1. Postsympathectomy ulcers
    - 2. Pylorospasm
    - 3. Spastic constipation
    - 4. Peptic ulcer
- IV. Autonomic Dystonia
  - A. Skin
    - 1. Erythromelalgia
    - 2. Acrocyanosis (venopressor)
  - B. Gastrointestinal—Cardiospasm (absence of intrinsic ganglia)
  - C. Genitourinary—Neurogenic bladder

Peripheral Afferent Dysfunctions

- I. Syndromes characterized by pain:
  - A. Causalgia and Sudeck's atrophy
  - B. Angina pectoris
  - C. Herpes zoster
  - D. Acroparesthesia
  - E. Amputation stump neuralgia
  - F. Shoulder-hand syndrome
  - G. Back pain
  - H. Dysmenorrhea (?)
  - I. Vesicle pain (?)
- II. Reflex dysfunctions
  - A. Carotid sinus syndrome
  - B. Vagovagal syndromes
  - C. Pulmonary edema
  - D. Other viscerovisceral dysfunctions

ments of the world by a United Nations' reporter. It is obvious that the autonomic nervous system is protean in its manifestation, and a complete listing of its diseases would be voluminous.

We have arranged a classification based principally on the clinical manifestations as they are poorly understood today. There must be overlapping due to the absence of specific information.

We have arbitrarily divided these clinical manifestations into three main groups: (1) central, to describe syndromes arising within the cortex and higher centers from organic changes or emotional origin, (2) peripheral efferent in which the effects, modified or not by central and/or endocrine influences, predominate on specific organs, and (3) afferent autonomic dysfunctions

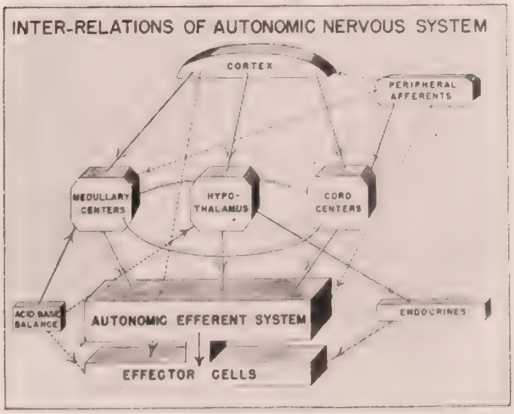

Fig. 1.

in which afferent stimuli initiate the syndrome. In each group there are many syndromes necessarily omitted. Table 1 gives a complete outline of these manifestations and their effects.

Central Dysfunctions

Organic

Hypothalamic.—Since the hypothalamus is in close functional association with the vegetative nervous system, it may become the seat of autonomic dysfunction. Fulton recognizes five syndromes as being characteristic of local hypothalamic disease: (1) disturbed temperature regulation, (2) hypersomnia, (3) autonomic epilepsy, (4) diabetes insipidus, and (5) the adiposogenital syndrome.[7] The last two are mainly endocrine in nature and will be omitted from discussion in this paper. In addition, the hypertensive diencephalic syndrome of Page must be included, because signs identical with it can be brought on by diffuse stimulation of the diencephalon in humans.[8]

Disturbed temperature regulation may result in either hypothermia or hyperthermia. Rectal temperatures as low as 90 to 95 F. have been recorded as the result of large lesions in the region of the posterior group of hypothalamic nuclei.[7] Such temperatures are usually due to failure of the mechanisms of heat production (shivering, body metabolism, etc.). In like manner, a lesion in the hypothalamus may impair the mechanism of heat loss (sweating, vasodilatation, etc.), and hyperthermia may result.

Lesions in the region of the posterior group of hypothalamic nuclei may give rise to another clinical state, this one characterized by abnormal somnolence. It is known as hypersomnia or narcolepsy. The clinical picture is that of an individual who has an irresistible desire for sleep during the daytime. The attacks usually last only a few minutes and occur even when the patient is intently occupied.[9]

Ball valve tumors of the diencephalon may give rise to a certain train of symptoms first described by Penfield.[10] These symptoms result from an acute distention of the third ventricle. The pressure produced presumably causes stimulation of nuclei in the ventricular wall. The patient experiences attacks of cutaneous vasodilatation of the face and arm, profuse sweating, dilatation of the pupils, blood pressure rise, sphincter spasm, etc. Because of the periodic nature of the symptoms, the condition has been called "diencephalic autonomic epilepsy."

The hypertensive diencephalic syndrome occurs especially in young and middle-aged women who exhibit a labile hypertension.[8] There is a periodic blotchy blush of the face and upper chest; tachycardia, lacrimation, and hyperperistalsis are common associated findings.[11] While there may be no definite brain lesion demonstrable, similar symptoms can be reproduced by direct stimulation of the diencephalon.

General.—Victims of brain injury often show either cutaneous vasodilatation or vasoconstriction.[12] The mechanism is not clear in either case, but Bucy believes that the vasoconstriction is due to the interruption of inhibitory impulses going from the cortex to the vasoconstrictor centers of the hypothalamus and medulla.[6]

Emotional

Here may be classified that large and expanding group of diseases of emotional origin. Their manifestations are at first mediated through the vegetative nervous system, and later, pathologic changes can occur and may account for new symptoms or perpetuation of the old ones.[7,13] This is by no means a complete classification of all of the emotional disorders affecting the autonomic nervous system but only a few of the more common ones found regularly in clinical practice.

Cardiovascular.—Neurocirculatory asthenia is best considered as a functional cardiovascular disorder occurring in psychoneurotic individuals.[14] It is said to be more common in young adult women and to occur particularly in times of stress. The chief complaints are dyspnea, palpitation, vague precordial discomfort, and easy and excessive fatiguability.[15] There is neither clinical nor pathologic evidence for heart disease. The prognosis for life is excellent, but the percentage of cures, even under adequate psychotherapy, is small.[16]

In response to the stress and strains of modern living, many people develop transient cardiac arrhythmias.[17] These are more common in persons with already damaged myocardia but are not unknown in people with normal cardiovascular systems. The arrhythmias which may occur include extrasystoles, auricular fibrillation, and paroxysmal auricular and nodal tachycardias.

That sinus tachycardia and less frequently sinus bradycardia may result from emotional changes is a well-known fact and needs no further elaboration here.

Although syncope may result from many causes, one of the most common is the so-called "emotional fainting."[18,19] This state can be precipitated by various stimuli such as the sight of blood, tragic news, etc. The cause of the unconsciousness may be cerebral anoxia due to (1) inadequate venous return and to (2) a decreased cardiac output. Blood return to the heart is apparently reduced because of a sudden disproportionate increase in the capacity of the vascular bed.[19]

Cutaneous vasodilatation of the face and neck, blushing, in response to embarrassment, serves to emphasize the control which the cortex exerts over the vasomotor centers.

A large part of the increased arteriolar resistance present early in hypertension is probably on a neurogenic basis. It is now commonly believed that this neurogenic stimulation stems from an emotional disturbance.[20–22] Repeated reactions of this sort may lead to persistent blood pressure elevation. The neurogenic element reaches its zenith in the early phase of hypertension and may be re-enforced or supplanted later by the humoral mechanism. Recently, there has been gathered circumstantial evidence which would seem to implicate the hypothalamic-hypophyseal outflow tract in the production of high blood pressure.[23] Whatever the case, it remains probable that corticohypothalamic imbalance, through increased vasomotor tone, plays an aggravating role, even though the elevated blood pressure of essential hypertension may be primarily on other than a neurogenic basis.[24]

Emotional vasoconstriction may occur in the extremities or in such organs as the nose or stomach.[6,25] In the éxtremities it is seen most frequently in hyper-reactive women, who complain that in response to emotional upsets their hands and feet become cold and moist and take on a cyanotic hue or a Raynaud's phenomena.

Vasomotor rhinitis is the result of prolonged nasal vasoconstriction. It is characterized by stuffiness of the nose and a thin, watery secretion and is clearly related to emotional influences.

GENITOURINARY.—Since the lower centers of micturition are under cerebral control, emotional states can influence bladder activity. Thus, under conditions of acute anxiety, polyuria, or frequent micturition of small amounts of urine, results.

Similarly, a disturbed state of mind can cause the appearance of albumin in the urine. It is presumably due to some disorder of the renal circulation leading to venous stasis.[9]

That amenorrhea can occur on an emotional basis is a well-known fact. Unknown, however, is the mechanism behind the cessation of flow. The present explanation is one that is used for so many other autonomic dysfunctions, i.e., a corticohypothalamic-endocrine imbalance.

GASTROINTESTINAL.—Pylorospasm may occur as the result of a neurosis. It is indistinguishable from that on a reflex basis, and the two will be discussed together.

Peptic ulcer, in many instances at least, occurs as a sequel to disturbed gastric function in relation to significant stresses in the life situation.[26,27] The disturbed gastric functions result from overactivity of the vagus nerve and consist of hypermotility, increased acid secretion, and mucosal engorgement.[28–32] This apparently may lead to mucosal ulceration and the severe pain which accompanies the disease.

A somewhat similar process is believed to go on farther down in the gastrointestinal tract and to result in ulcerative colitis, a condition characterized by bloody diarrhea and minute ulcerations in the colon. It seems to occur more commonly in persons with other manifestations of autonomic instability.[33] The colonic musculature is highly irritable under these circumstances, and sacral parasympathetic hypertonia is believed to be present. Recent studies relate the etiology of this condition to such mental disturbances as anxiety, guilt, and resentment.[34–36]

Nausea, vomiting, and diarrhea may all be present with an anxiety state.[37] Such symptoms are frequently seen in clinical practice and sometimes are easily removed by resolution of the patient's immediate conflicts.

METABOLIC.—Hyperglycemia is part of the physiologic response to an emergency and may result from adrenaline secretion. In an individual with a continued sympathicoadrenal response, an elevated blood sugar and glycosuria may be found. Such a state has come to be known as "emotional hyperglycemia."[38]

Hypoglycemia may be etiologically related to a number of factors.[39] There is experimental and clinical evidence to show that prolonged stimulation of the right vagus nerve may be one of these factors. The process is believed to be originally emotional, or cortical, from which it is relayed to the hypothalamus, and then via the parasympathetics to the pancreas.

The hyperventilation syndrome is seen in psychoneurotic individuals who voluntarily breathe heavily and rapidly. Such respiration results in an excessive loss of carbon dioxide from the blood stream and a subsequent period of apnea. Other effects may be giddiness, actual fainting, and transient tetany.

It has been shown that in some diabetics a state of acidosis may be precipitated by psychic trauma.[38] These patients all seem to be of a peculiar personality type but do fairly well with their diabetes until for some reason a state of mental unrest supervenes.

Peripheral Efferent Dysfunctions

Sympathetic Hypertonia

SKIN.—Hyperhidrosis usually consists of excessive sweating of the palmar and plantar surfaces of the fingers and toes, although the condition may be widespread. Sometimes there are seen localized areas of hyperhidrosis, with absence of sweating elsewhere over the body. Although the etiology is not definitely established, it is presumed to be a disorder of the sudomotor fibers.

EYE AND EAR.—Lid lag is seen in thyrotoxicosis. This sign is possibly caused by the stimulation of the smooth muscle component of the levator palpebrae superioris, the lid muscle which is enervated by the sympathetics.[9]

Because the inner ear is enclosed in a relatively rigid box, that organ is disturbed by even minute pressure changes, and since the blood supply to the inner ear is from end arteries (arising from branches of the vertebrals), alterations in blood vessel tone may be responsible for such pressure changes. These may be sufficient to produce symptoms of acute labyrinthitis, cochlearitis, or vestibulitis.[40] This picture might be called the "vasomotor syndrome of the inner ear."

GASTROINTESTINAL.—The term ileus is usually used to refer to an adynamic condition of the bowel in which that organ is dilated with the accumulation of gas and fluid.[41] This may be due to a generalized peritonitis, or, on a reflex basis, it is seen following strangulation of the omentum, pancreatitis, with renal or gallbladder colic, or with trauma to the abdomen, etc.[42] Actually, the intestinal wall is in no sense paralyzed; its activity is merely inhibited by an overactive sympathetic nervous system.[43]

Megacolon is a relatively rare condition appearing in childhood and characterized by obstinate constipation, tremendous dilatation of the colon, and hypertrophy of its wall. The etiology is at present debated, although it is thought that there exists an imbalance of the sympathetic and parasympathetic nerves leading to adrenergic predominance.[44-47] Alvarez, citing pathologic evidence, believes that the condition results from a loss of the ganglion cells in the myenteric plexus.[48,49] Whatever the true cause, cholinergic drugs and/or sympathectomy have, to date, offered the greatest measure of relief, although some surgeons prefer colectomy.[50,51]

One of the earliest complications of bilateral vagotomy is gastric atony. The viscus is dilated, and its contractions are arrhythmic and ineffective. Unopposed sympathetic inhibitory activity is believed responsible for this condition.[52,53]

CARDIOVASCULAR.—The effect of the sympathicoadrenal system on the heart is one of stimulation. In response to exertion and other varied stimuli—some emotional and some "toxic"—these nerves are stimulated, and tachycardia results.[54,55] There is no abnormality of conduction, but the pacemaker is stimulated.

Raynaud's phenomenon is a term used to describe the symmetric, phasic color changes (described below) which occur in the extremities in disease states other than the classic Raynaud's disease. Such changes may occur after trauma, with neurogenic lesions, with occlusive arterial diseases, or with heavy metal or ergot intoxication.[56]

The term, Raynaud's disease, is applied only to those cases in which Raynaud's phenomenon is present and in which it is impossible, even after a lapse of several years, to demonstrate any occlusive vascular disease or, in fact, any cause for the functional vascular changes.

It is seen almost entirely in women and is recognized by the phasic color changes in response to cold or emotions. Each case has a critical temperature, below which the patient's hands and feet behave like the extremities of a cold-blooded animal.

First noted is a cyanosis which is due to circulatory stasis. This is followed by blanching which in severe cases may persist. Such chronic ischemia may ultimately result in terminal phalangeal ulcerations with fibrosis of the skin and subcutaneous tissues. Pulses are easily palpable, and, at first, there are no pathologic changes in the vessels. Sympathectomy and sympatholytic drugs offer some degree of relief and give strength to the prevalent theory of etiology, i.e., one that is predicated on excessive vasoconstrictor activity.

A condition of the fingers and toes sometimes associated with Raynaud's disease is sclerodactyly (sclerodactylia). In it the involved areas of the skin become tightly stretched, the superficial layers atrophy, and there is marked fibrosis of the deeper subcutaneous tissues.

Similar processes may go on in other parts of the body as well as in the internal organs and result in scleroderma. This more generalized disease might also be a complication of vascular disease (a trophoneurosis[57]), or it might be metabolic in origin. At any rate, in both conditions the role of ischemia is prominent, and microscopically the arteries are found to be surrounded by dense fibrous tissue.

Livedo reticularis is another poorly understood vasospastic condition of the extremities. The feet and legs are mainly involved, and in mild cases they develop a cyanotic bluish color on exposure to cold. In more severe cases, the color change persists in spite of environmental temperature, and the affected parts are cold and moist.

Hypertension is again mentioned in this separate grouping since an emotional etiology for it is by no means proved. The bulk of evidence today is in favor of neurogenic peripheral vasoconstriction as the cause, in part at least, for early hypertension. This fact makes the condition classifiable as a sympathetic hypertonia whatever the original stimulus for sympathetic overactivity might be.

In the next group of illnesses, those listed under "reflex peripheral vasoconstriction," a common underlying mechanism is present in each. All are relieved by sympathetic blocking agents. The process begins with an initial irritation of or injury to an artery, more commonly, or a vein. It is known that a blood vessel responds to irritation by immediate local contraction and that a sympathetic reflex is initiated whereby the collaterals of the affected part are put into spasm.[3,58] These conditions all show vasospasm early, and much of the subsequent pathologic picture seems to stem from the subsequent ischemia.

Thromboangiitis obliterans and arteriosclerosis obliterans should properly be discussed together. In both, arterial spasm may be a prominent early finding. This is particularly true of Buerger's disease which in its early stages may be indistinguishable from a primary vasomotor disorder. The stage for the complications of these diseases —infection, ulcers, gangrene—is set by the tissue anoxemia caused by the organic vascular changes aided and abetted by the spasm of the collaterals. It is for this reason that, early in both illnesses, sympathectomy may be of definite value.[59-61]

Frostbite and trench (immersion) foot are very similar conditions, differing only that in the latter the precipitating environmental condition is wet and cold but not necessarily freezing. Vasoconstriction is seen early in both maladies. As it persists, the resistance to the trauma of cold is decreased, and sublethal injury to tissue cells results. There is next a transient period of hyperemia which is due presumably to the chemical effects of the products of tissue injury.[62] Subsequently, there is a return of marked sympathetic tonus, and severe hyperhidrosis may be present. Vasoconstriction is, therefore, one of the fundamental factors in the pathogenesis of these states and also one of the most common sequelae.[63]

Vasospasm also plays a significant role in the clinical manifestations of thrombophlebitis.[31,64-66] The development of a thrombus is associated with an overstimulation of sympathetic pathways which produces spasm in the veins and arteries throughout the extremity.[67] This in turn causes a stasis of the circulation, stagnation of the lymph, and venous congestion.[68] Much of the pain and edema of the thrombophlebitic leg is thereby explained. In about 20 per cent of the patients with thrombophlebitis, the vasospastic factor is of major clinical significance.

Spasm of collateral vessels following an arterial embolus or with a thrombosis in situ is frequently seen, due to the accompanying increase in sympathetic tone. Blockage of the sympathetics may improve the collateral circulation sufficiently to prevent gangrene in spite of the occlusion of a major artery.

The syndromes of the scalenus anticus and cervical rib may be characterized by vasoconstrictive changes in the affected extremity. Both are due to irritation of and/or pressure on the subclavian artery and brachial plexus. There is pain and paresthesia. The hand may be cold and cyanotic. External rotation may obliterate the radial pulse in the scalenus anticus syndrome. Persistent vascular spasm may lead to thrombosis and ultimate gangrene of the fingers.[69]

The shoulder-hand syndrome consists of vasomotor alterations in the extremities with pain and subsequent fibrosis.[70,71] It is not infrequently a sequela of myocardial infarction but may also be seen in association with fibrositis of the shoulder joint. It may be modified by alterations in sympathetic tone induced by blocking agents.

A certain number of patients with paralyzed limbs from anterior poliomyelitis will exhibit coldness and cyanosis of the affected extremities. It has been rather convincingly shown that these symptoms are on the basis of vasospasm due to a hyper-reactivity to cold and that sympathectomy is of definite value.[69,6]

Sympathetic Hypotonia

Eye.—Paralysis of the sympathetic fibers from the stellate ganglia to the eyelids and orbits results in a condition known as Horner's syndrome. There is pupillary constriction, ptosis, and relative enophthalmos. The affected side is red and hot (vasodilatation) and dry (absence of sudomotor activity). Causes of the syndrome are spinal cord tumor, syringomyelia, cervical rib or tumor, aortic aneurysm, etc.

Cardiovascular.—Postural hypotension is seen in a number of bizarre syndromes associated with evidence of absence of sympathetic tone. It is most common in diabetics who have developed a pseudotabes.[72,73] It may also be seen as a complication of tabes dorsalis and occasionally arises rather acutely without recognizable antecedent disease. There is apparently a failure of the normal vasoconstrictor mechanisms necessary to maintain blood pressure in the upright position due to a loss of vasoconstrictor tone. There may or may not be an associated loss of the cardiac acceleration which occurs on assuming the upright position. Postural hypotension after bilateral lumbar sympathectomy is well-known and easily understood.

GASTROINTESTINAL.—Both diabetic neuropathy and pernicious anemia (possibly tabes dorsalis and sprue also) may give rise to gastrointestinal abnormalities due to a loss of sympathetic tone. Patients with these conditions have been studied by x-ray and have been found to demonstrate some degree of gastric retention, prolonged barium transit into the intestinal tract, and segmentation of the barium column.[74] Such abnormal alimentary tract movement is undoubtedly responsible for the vague stomach and bowel symptoms of which these patients complain.

SKIN.—Anhidrosis can occur as a complication of many neurologic lesions. It may be seen in cases of tabes dorsalis, diabetic neuropathy, or in other lesions affecting the spinal cord. The anhidrosis is usually patchy in distribution and is only very rarely generalized.

Lipodystrophy, a disease which predominates in females, is characterized by a slowly progressive wasting of the fatty subcutaneous tissues on the upper part of the body. The etiology is not known, but it is felt by some that the condition may be associated with congenital or acquired defects in the trophic centers of the spinal cord.[75]

Progressive facial hemiatrophy is a rare condition in which there is atrophy of all the structures of one side of the face.[76] The etiology is unknown, but Archambault and Fromm stress the fact that lesions compressing or injuring the cervical sympathetic trunk have determined the presence of hemiatrophy on that side.[77]

GENITOURINARY.—The involuntary nerves play the double role of engorging the penis with blood and causing ejaculation by contracting the smooth muscle of the vaso differentia, seminal vesicles, and prostate. After removal of the first lumbar ganglia, the power of ejaculation is lost, and sterility results.[6]

Parasympathetic Hypertonia

CARDIOVASCULAR.—The normal pacemaker of the heart, the sinoauricular node, is under control of the vagus nerve. With vagotonia, sinus bradycardia or sinoauricular heart block, either partial or complete, may occur.[78]

RESPIRATORY.—Bronchoconstriction is present in bronchial and in cardiac asthma.[79] Both are apparently the results of noxious reflexes, the efferent limb of which is the vagus nerve.[80] In bronchial asthma there occurs spasm of the bronchial musculature, edema of the bronchial mucosa, and hypersecretion of the bronchial glands. All three of these are tenth nerve effects.

GASTROINTESTINAL.—As another complication of sympathectomy, peptic ulcers are sometimes seen. These are presumably due to the unopposed action of the vagus and the consequent hypersecretion and increased motility.

Pylorospasm is thought to be a manifestation of parasympathetic hyperactivity, since it can be relieved by atropine. It occasionally occurs as a simple neurosis (*see* Central Dysfunctions, Emotional), but it may be reflexly initiated by gastric ulcer, appendicitis, renal calculus, pyelitis, and, less frequently, disease of the gallbladder and genitals.

Spastic constipation is a rather indefinite condition which is characterized by constriction of the lumen of the colon. For this reason, propulsion of the intestinal contents is prevented, and constipation results. Anticholinergic drugs may be of some value in these cases.

Autonomic Dystonia

This group is included because there are certain autonomic dysfunctions which defy accurate classification. Because of their etiology or because they may exhibit both sympathetic and parasympathetic effects, they do not belong in other categories.

SKIN.—Erythromelalgia is a syndrome which consists of attacks of redness and burning pain of the extremities brought on by heat, exercise, or dependent position. There are easily palpable arterial pulsations, and at first glance the condition would seem to be due to sympathetic vasodilator overactivity. However, the greatest benefit that patients receive is from epinephrine.

In acrocyanosis the hands and feet are constantly blue. There is frequently severe accompanying hyperhidrosis. Spasm of arterioles plus obstruction to venous drainage are believed to be responsible for the clinical picture.

GASTROINTESTINAL.—Cardiospasm is described as a condition in which there is more or less permanent spasm of the lower end of the esophagus. Although many possible causes have been suggested, the etiology is probably most easily explained by an absence of the ganglion cells in the intrinsic nerve plexuses.[48]

GENITOURINARY.—The term, neurogenic bladder, is an inclusive one used to refer to bladder dysfunction resulting from cerebral, spinal cord, or peripheral nerve lesions. Since there are various types and many causes, the condition has been listed as a dystonia.[81,82]

Peripheral Afferent Dysfunctions

Syndromes Characterized by Pain

CAUSALGIA AND SUDECK'S ATROPHY.—These are post-traumatic painful states, usually in the distal portion of the extremities, which are associated with vasomotor disturbances and hyperhidrosis.[83-86] When there is associated osteoporosis, the condition is called Sudeck's atrophy. There may be either vasoconstriction or vasodilatation of the skin vessels. Both the pain and vasomotor changes may be abolished by blocking the sympathetic pathways. It seems that this condition represents a sympathetic reflex arc which may be self-perpetuating.[87-90]

Angina Pectoris.—This painful cardiac disorder is included, because it has been demonstrated that impulses of cardiac pain are conducted through visceral afferent spinal nerve components associated with the sympathetic cardiac nerves.[6] Blocking of sympathetic pathways may abolish the pain.

Herpes Zoster.—Present evidence indicates that herpes zoster is a posterior poliomyelitis due to the virus of chickenpox.[91] However, sympathetic block will frequently but not always relieve the pain. This suggests that sympathetic fibers or ganglia may be involved in the lesion of the sensory nerve.

Acroparesthesia.—This is a term given to a condition that is characterized by prickling, tickling, burning, and sometimes painful sensations of the extremities. It occurs chiefly in women after the menopause and may accompany vascular disease.[57]

Amputation Stump Neuralgia.—Certain amputation stumps, besides being painful, are cold, discolored, and moist.[92] In these cases, sympathetic overactivity may be suspected, and sympathectomy will frequently provide relief of all symptoms, including the pain.

Shoulder-Hand Syndrome.—*See* shoulder-hand syndrome under Peripheral Efferent Dysfunctions, Sympathetic Hypertonia.

Back Pain.—Sympathetic autonomic block frequently relieves the pain associated with a ruptured intervertebral disk and that accompanying spondylolisthesis. Such evidence is strongly suggestive that visceral afferent nerves carry the painful sensations originating in the back.

Dysmenorrhea.—The exact etiology of essential dysmenorrhea is not known.[93] It is believed, however, that vascular congestion may significantly contribute to the pain. Presacral sympathectomy severs the paths of the painful uterine stimuli and thereby affords relief.[94-96]

Vesicle Pain.—The bladder may be the seat of excruciating pain, the pathways being over the visceral afferents (sympathetic) from that organ. Such pain is seen with tabetic crises or with chronic cystitis (Hunner's ulcer).

Reflex Dysfunctions

Carotid sinus syndrome is characterized by recurrent attacks of syncope due to an overactive carotid sinus reflex.[97-99] There are three general types: cerebral, cardiac, and vasomotor.[100] Attacks are five times more frequent in males and occur mostly in middle-aged and elderly patients.[3] This sensitivity may become further increased in the presence of digitalis or local disease in or near the carotid sinus.[101]

In the group of vagovagal syndromes belong a number of conditions in which stimuli arising in vagus afferents lead to tenth nerve efferent stimulation and consequent cardiovascular, respiratory, or gastrointestinal disorder.[102-104] Sudden deaths during bronchoscopy belong in this category, as do attacks of cardiac or respiratory standstill from visceral manipulations.[105] Still other examples are the "pleural shock," seen during thoracentesis, or pulmonary edema, discussed below.

Pulmonary edema is the result of vasodilatation and congestion of the pulmonary vessels with transudation into the alveoli. The vasodilator nerves may be reflexly stimulated via irritation of sensory endings in the larynx, trachea, and bronchi as occurs on exposure to war gases or in drowning victims. A somewhat similar reflex occurs in hypertension and in acute coronary occlusion where the afferents are in the aortic arch, carotid sinus, and heart wall.[106,107] Pulmonary edema is also seen in brain injuries where the efferent vasodilator nerves are stimulated centrally.

Other viscerovisceral dysfunctions are as follows: Ayers *et al.* have recently suggested the use of sympathectomy as a treatment for pancreatic fibrocystic disease and its accompanying respiratory complications.[108] They postulate that the pancreas acts as a source of afferent impulses of abnormal degree to the spinal and diencephalic centers. These impulses are then said to be diffusely disseminated, and efferent stimuli are sent to all viscera, including the respiratory tract. A similar set of conditions may operate to cause gastrointestinal symptoms in otitic infections in children, angina pectoris with gallbladder disease, and reflex bronchospasm following manipulation of abdominal viscera.[109]

Summary

Clinically, autonomic dysfunctions may be classified into three groups: (1) those which arise centrally, (2) those which are initiated and carried by visceral afferents, and (3) the better known efferent dystonias. Some of these are manifested by symptoms of cholinergic predominance, while in others there are evidences of adrenergic overstimulation or endocrine disorders. Certain syndromes may be classified with considerable accuracy, while others are expressions of dysfunction of both aspects of the vegetative nervous system. In almost all of them, however, the interactions of cerebrospinal pathways, endocrine glands, and autonomic nerves are seen to contribute to the clinical picture. It is necessary, then, to recognize the concept of a single functionally unified nervous and secretory system and to consider autonomic disease entities in that light.

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SURGERY OF THE AUTONOMIC NERVOUS SYSTEM: INDICATIONS AND RESULTS

Bronson S. Ray, M.D., New York City

(*From the Cornell University Medical College and the New York Hospital*)

THE autonomic nervous system is composed of the craniosacral outflow (the parasympathetic system), the thoracolumbar outflow (the sympathetic system), and the visceral afferent nerves that traverse these systems. Surgical procedures designed for interruption of the autonomic system have become recognized as useful measures in the treatment of numerous diseases. There are but few indications for surgery of the parasympathetic system, and vagotomy for treatment of peptic ulcer is virtually the only operation on this system of practical importance. Sympathetic denervation on the other hand has a much wider application and is employed chiefly for its effect on the peripheral blood vessels and sweat glands and for interruption of afferent nerves in the relief of certain painful visceral disorders.

Fundamental Principles

The history of the developments in surgery of the sympathetic system emphasizes some of the difficulties that still exist. For the most part, the diseases for which sympathectomy has been employed have an unknown etiology or are assumed to originate from a disease process other than of the sympathetic nervous system. It is still unsettled whether Raynaud's disease is primarily a vascular or neurogenic disorder, and much of the evidence bearing on the matter, whether it be obtained before or after sympathectomy, can be used in support of either theory of origin. Regardless of the origin of the disease, however, interruption of the sympathetic nerve supply to the involved extremity will often prove beneficial. Also, the mechanism by which sympathectomy may be beneficial is not always evident, i.e., whether interruption of the effector or the afferent nerve pathways is the more important. For example, the relief of cardiac pain by sympathectomy was thought by Raney to result from interruption of constrictor nerves to the coronary arteries, whereas the usual explanation for the relief of pain is the interruption of visceral pain fibers from the heart.[1,2] Similarly, a more recent difference of opinion has developed in regard to the explanation for relief of pain by sympathectomy in pancreatitis. Mallet-Guy believes the chief benefit lies in vasomotor relaxation in the pancreas, whereas others are of the opinion that the relief of pain in such cases is dependent on interruption of the afferent pain pathways.[3,4]

Thus, the operations on the sympathetic system have, for the most part, always been empiric. Among the earliest sympathetic operations performed were those for the relief of epilepsy, migraine, glaucoma, exophthalmic goiter, and birth palsies—all operations which proved worthless and are now discarded. We should like to think that most of the sympathectomies in present-day use exist on a more rational anatomic and physiologic basis and that the results justify their continuation. But we need to take stock periodically and give particular attention to the causes for failure of sympathectomy with the purpose of improving, if possible, the criteria and technic for operation or, if necessary, discarding the operation entirely.

A threefold dictum that has commonly been employed in evaluating sympathectomy is that the operation to be successful should be (1) preganglionic in type, (2) anatomically complete, and (3) extensive enough to prevent regeneration of interrupted fibers. In the light of more recent evidence the interpretation of the value of each of these has changed considerably.

Hypersensitivity of small arteries to circulating adrenaline following sympathetic ganglionectomy or interruption of postganglionic fibers, based largely on animal experimentation, has been thought by many to account for poor clinical results, particularly in vasospastic diseases after sympathectomy.[5] As a result, a variety of operations, all designed to preserve the stellate ganglion (and thus the postganglionic neurons), has been employed for sympathectomizing the upper extremity. There are good reasons for questioning the benefits of preganglionic operations, however. First, the unsatisfactory clinical results obtained following stellate and upper thoracic ganglionectomy in sympathectomizing upper extremities have not been materially improved by any preganglionic sympathectomy.[6] Secondly, ganglionectomy in man does not produce nearly as great a sensitization of smooth muscle as in the monkey, and whatever increased sensitivity that does exist temporarily becomes inconsequential with the passage of time following

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operation.[7] Lastly, the preservation of the first thoracic rami, which is usually a part of the preganglionic operation, probably leaves intact vasomotor fibers formerly thought not to exist or to have any importance.[8] Thus, it appears that preganglionic sympathectomy of the upper extremity may be based on false premises and be actually inferior to ganglionectomy.

The desirability for anatomic completeness in a sympathectomy employed for any part of the body is evident but lends itself to a variety of individual opinion due to our lack of absolute knowledge of the anatomy. It has been assumed that the sympathetic nerves (preganglionic fibers) arose from the first thoracic to the second or third lumbar segmental levels in the cord and that all traversed the corresponding anterior spinal nerve roots and white rami to synapse with postganglionic nerves in the paravertebral ganglionated chain. Sympathectomy has been based on the belief that the division of sympathetic rami or of paravertebral ganglia if extensive enough could be counted on to be anatomically complete. But there is increasing evidence, clinical, experimental, and anatomic, to indicate that many parts of the body are supplied not only by nerves which traverse the ganglionated chains but also by sympathetic nerves which leave the spinal canal by the usual route but synapse with postganglionic neurons whose cell bodies are in or near the spinal nerves and thus do not traverse the ganglionated chain.[9, 10] Following lumbar sympathectomy (including the third lumbar) or even total paravertebral sympathectomy (stellate to third lumbar), there is complete and permanent interruption of sympathetic function below the knee but not in the thighs. To attain the complete sympathectomized effect in the thighs, the anterior nerve roots (intraspinal) of the twelfth thoracic and first and second lumbars must also be sectioned. This evidence also indicates that we can feel sure the lowest segmental level of sympathetic outflow is the third lumbar, but we cannot yet be sure of the uppermost level, heretofore thought to be the first thoracic. For example, my colleagues and I have found that, even after upper thoracic ganglionectomy of the first, second, and third thoracics combined with division of anterior nerve roots (intraspinal) of these, there is measurable sympathetic activity of central control in the hand which suggests the possibility of the presence of sympathetic nerves arising from higher spinal levels joining the brachial plexus without traversing the ganglionated chain. Thus, it appears that complete anatomic sympathectomy is not synonymous with extensive or even total paravertebral sympathectomy, at least as it pertains to certain parts of the body.

The concern over regeneration of divided sympathetic nerves following sympathectomy is not without some justification, based on the experimental evidence that divided white rami can regenerate and resynapse with postganglionic ganglion cells and that postganglionic axons (providing their ganglion cells are intact) can regenerate over relatively long distances. But postganglionic axons cannot regenerate if their cells of origin are destroyed by excision of paravertebral ganglia, and preganglionic nerves do not generate terminal effector structures. In view of the concern expressed over regeneration after sympathectomy there has been distressingly little conclusive evidence of its occurrence in sympathectomized patients. In at least two patients in our experience the performance of a thoracic sympathectomy several years after a subdiaphragmatic sympathectomy (Adson operation) had been performed for hypertension failed to show that there had been any growth of nerve fibers from the end of the greater splanchnic nerve which had been previously divided at the diaphragm.

In brief, there need be relatively little concern over regeneration and sensitization following the skillful performance of resection of an appropriate portion of the paravertebral ganglionated chain, but the existence of residual or accessory sympathetic pathways which do not traverse the ganglionated chain must be considered as a common cause for partial success of the best planned and executed operation. On this basis one can assume an attitude of futility about all sympathectomies; however, there are no accessory fibers to the legs and feet, there may be none to the viscera, and even in the upper extremities an anatomically and physiologically incomplete sympathectomy may still be useful.

There are other circumstances which may detract from hoped for results from sympathectomy, the chief of which are the irreversible structural changes of tissues in patients with progressive vascular disease. This factor more than any other has made the prediction of the results of sympathectomy difficult. The numerous tests devised to demonstrate the state of the blood vessels in vascular diseases and the various temporary sympathetic blocking maneuvers, performed in the hope of duplicating in preview what will follow surgical sympathectomy, leave much to be desired. With temporary sympathetic block one can never be sure he is duplicating the effect of an operation, and often the circumstances under which the block is performed are not at all the same as those to which the patient will be exposed after sympathectomy. These remarks are not meant to nihilify careful examinations or any test which may be helpful in evaluation of a patient to be considered for sympathectomy but rather to indicate that there are distinct limitations to the usefulness of any specific test designed to determine the efficacy of sympathectomy. There are certain diseases which through rationale and experience may be expected to be benefited by appropriate sympathectomy, and there are points pertinent to each disease that may not pertain to the others which are useful in deciding on the indication for sympathectomy. In the last analysis sympathectomy itself may often be employed with justification as a therapeutic test, much as any nonsurgical measure might be. While operations on the sympathetic system require specialized knowledge and training, they are accompanied for the most part by minimal risks to the patient, relatively short periods of disability, and no serious untoward effects.

Circulatory Disorders of the Extremities

Sympathectomy is most widely used in the treatment of circulatory disorders of the extremities, and some of the diseases in which the operation has been found to be helpful will be discussed.

For sympathectomy of the lower extremity resection of the second and third lumbar ganglia with the intervening trunk is usually adequate. The operation may be performed transperitoneally but is more appropriately carried out extraperitoneally, either through a lateral abdominal or a flank incision; the author prefers the latter. Only if it is desirable to sympathectomize the thigh is it necessary to divide anterior nerve roots (twelfth thoracic, first and second lumbar) intraspinally in addition to the lumbar sympathectomy. The only untoward result of lumbar sympathectomy is that, when performed bilaterally, infertility, i.e., loss of ejaculation of semen, may occur. Other sexual functions are unaffected.

For sympathectomy of the upper extremity either the preganglionic operation of Smithwick or some variation, such as excision of the second thoracic ganglion or stellate (preferably combined with second thoracic) ganglionectomy, is adequate.[11] The preganglionic operations are performed extrapleurally through the exposure provided by resection of the second or third rib posteriorly. Stellate ganglionectomy may be performed through the same operative approach or through an anterior supraclavicular approach. The preganglionic operation does not produce miosis and ptosis of the upper eyelid and is presumed to prevent increased sensitivity of the blood vessels that is reputed to attend stellate ganglionectomy. It is a more difficult operation than ganglionectomy if performed as Smithwick prescribes it. Stellate ganglionectomy is probably a more complete sympathectomy, and the eye changes are not significant, particularly if the operation is bilateral.

Raynaud's Disease.—Raynaud's disease is a vasospastic disorder of the extremities characterized by successive blanching, cyanosis, and redness of the digits when the patients are exposed to cold or emotional stress. The diagnosis is made on this three-color phase, but the same syndrome may be found accompanying other diseases such as scleroderma, Buerger's disease, and cervical rib. Raynaud's disease, which is more common in women and more intense in the upper extremities, occurs in all degrees of severity and rapidity of progress. Mild and nonprogressive forms do not require sympathectomy, but the others all stand to be benefited by the operation. The earlier in the course of the disease it is performed, the better the results. The results of the operation are least successful when it is employed after fibrosis, sclerosis, and gangrene of the digits have taken place. In general, the late results of sympathectomy have been found to be as follows: cured in one third, improved in one third, and unimproved in one third.[6] The results are always better in the lower than in the upper extremities because of the difference in severity of the disease and difference in efficiency of the operations in producing an adequate and lasting sympathectomy in the upper and lower extremities.

Occlusive Vascular Diseases.—Occlusive vascular diseases refer principally to Buerger's disease (thromboangiitis obliterans) and arteriosclerotic obliterans. These diseases, in contradistinction to Raynaud's, are more common in men and more intense in the lower extremities. While the etiology of these two diseases is different, the manifestations are much alike. The chief point of clinical difference is in the age, Buerger's disease occurring before the age of fifty and arteriosclerosis usually after fifty. Other points may be established in differential diagnosis, but there is no specific treatment for either disease. The important thing to recognize is that the safety of the limb depends on the development of collateral circulation, the prevention of vascular spasm, and the protection of the limb against trauma. Hygienic measures and total abstinence from smoking are prerequisite to any form of treatment. Sympathectomy has been found particularly useful in those patients who show evidence of abnormal vasoconstriction by clinical signs such as pain, coldness, cyanosis, blanching, and increased sweating. Contraindications to sympathectomy include extensive arterial occlusion, rapid blanching on elevation, and atrophy of skin and subcutaneous tissues.[12] Even though preoperative tests fail to show significant rise in surface temperature after vasomotor release, sympathectomy may produce a lasting and progressive benefit. It is likely that as much or more can be accomplished by sympathectomy in patients with obliterative arterial disease of the extremities as can be hoped for than from any form of so-called conservative treatment, and from the standpoint of the saving of time and money sympathectomy has the advantage.

Occasionally, in advanced arterial disease sympathectomy has been reported to be followed by gangrene of the foot. The explanation for this presumably lies in the opening up of a small arteriovenous "shunt" which prevents arterial blood going to the capillary network. If this complication does occur, it must be exceedingly rare.

Amputation.—When it becomes necessary to amputate part of an extremity because of obliterative arterial disease, or of embolism, or of whatever genesis, sympathectomy may by improvement of the peripheral circulation permit a lower amputation than might otherwise be required and facilitate healing of the stump.[13] Impressive evidence in this regard appears in the report by McKittrick and his associates on the success of transmetatarsal amputation for gangrene of the toes and foot in diabetic patients.[14]

Aneurysms.—In aneurysms of the extremities, particularly in those which result from penetrating wounds of the principal arteries, the circulation can often be effectively benefited by sympathectomy.[15,16] Traumatic arteriovenous fistula usually provides adequate stimulus itself for the production of collateral circulation, but as a preliminary to surgical repair of either an aneurysm or an arteriovenous fistula, sympathectomy has been found to be a valuable aid in the prevention of ischemia and gangrene. If the policy is followed of always employing sympathectomy before such operations, doubtless the sympathectomy will sometimes be performed needlessly, but the narrow margin of safety in these cases favors the utilization of all precautionary measures.

Other Diseases of the Extremities.—There are a number of less common conditions of derangement in circulation or sweating in the extremities in which sympathectomy promises benefit. These include livedo recticularis, erythromelalgia, indolent trophic ulcer, hyperhidrosis, postpoliomyelitis, vasospastic ischemia resulting from trauma to the limb, chronic vascular deficiency following immersion or frostbite, scalenus anticus syndrome, and post-thrombotic syndromes. The results of sympathectomy in these diseases is proportionate to the care and reason employed in the selection of each case for operation.

Visceral and Other Pain Syndromes

Causalgia.—Causalgia is characterized by burning pain, usually in a hand or foot following a wound which produces incomplete interruption of a peripheral nerve. In most cases the pain begins immediately or within a few days after the injury, while in others it begins in one to several weeks. The syndrome develops in from 2 to 5 per cent of patients with peripheral nerve injuries from penetrating wounds. The explanation of the syndrome is entirely speculative. An essential feature of the pain is its intensification by emotional stimuli, loud noises, jarring, and extremes of temperature. The pain results in voluntary immobilization of the affected limb which complicates rehabilitation. In some cases one or several sympathetic blocks may cure the pain, but if the effect is not lasting, no time should be lost in performing a sympathectomy. The results are often dramatic. While the reason for the relief is speculative, the evidence suggests that the relief is due to the interruption of sympathetic motor impulses rather than to interruption of afferent pain fibers.[17]

Other Post-traumatic Syndromes.—In this category are included the syndromes of pain, edema, atrophy, stiffness, vasomotor, and sudomotor changes that occur in traumatized extremities in which there is usually no obvious peripheral nerve lesion. The degree of disability varies greatly, and the response to therapy of all kinds is often disappointing. Sympathetic blocks may be helpful and should be employed early. If sympathectomy appears to be indicated, it should not be delayed, for, when resorted to in longstanding cases, it usually fails.

Angina Pectoris.—While most patients with angina pectoris can be kept fairly comfortable with medical treatment, there are some whose lives are dominated by the pain and made utterly useless. In some of these, particularly if there is relatively good cardiac reserve, surgical interruption of the visceral pain afferent fibers of the heart promises relief.[2] Of the several procedures which may be employed, upper thoracic sympathectomy, removing the paravertebral chain from the stellate to the fourth or fifth thoracic ganglia, is perhaps the best. It is unusual that a unilateral operation will suffice because substernal pain requires bilateral nerve interruption and, in the majority of patients who originally have radiation of pain into just one arm, pain appears in the opposite arm after

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unilateral sympathectomy. The results of bilateral sympathectomy in my series of 30 patients with angina pectoris indicate that pectoral and extremity pain is always wholly or greatly relieved. However, a few will develop or persist in having neck pain, all will have a feeling of substernal fullness or pressure on overexertion, and occasionally pectoral pain will return if severe coronary occlusion occurs. The operative mortality was 6 per cent. In the report of Lindgren and Olivecrona on unilateral and bilateral sympathectomy in 71 cases there was complete relief in 44 per cent, improvement in 41 per cent; there were six operative and postoperative deaths.[18]

Chronic Pancreatitis and Other Painful Abdominal Diseases.—The demonstration that the abdominal viscera are rendered insensitive to painful stimuli after thoracolumbar sympathectomy has led to the use of sympathectomy for the relief of intractable pain in certain abdominal diseases.[19] Chronic pancreatitis which is usually accompanied by a progressively severe pain is an abdominal disease which lends itself admirably to interruption of afferent pain fibers by sympathectomy.[4] In those cases in which various corrective operations on thē biliary and pancreatic ducts fail to give relief, the choice may then lie between sympathectomy and pancreatectomy. Of these two, sympathectomy is the procedure of choice in the majority. A bilateral sympathectomy from the eleventh thoracic to the first lumbar with resection of the lower end of the greater splanchnic nerves has been found adequate and reliable for relief of this type of pain. The operation is not suitable for the relief of pain from neoplasms of the pancreas, however, and there is no evidence that it will stop any progress of the disease or improve the pancreatic function.

A similar type of sympathectomy might be resorted to for chronic biliary pain not correctable by direct surgery, but no cases of this kind that seemed suitable have come to my attention. However, two patients with chronic renal pain have been relieved by homolateral sympathectomy (eleventh thoracic to first lumbar), and two patients with painful abdominal aortic aneurysms have been benefited by bilateral sympathectomy of similar extent.

Essential Hypertension

Sympathectomy of one form or another has been performed for the relief of essential hypertension for the past twenty years. It has been postulated that the denervation of large vascular areas would decrease the peripheral resistance to blood flow and lessen the severity of fluctuations of blood pressure which result from reflex vasoconstriction in the normally innervated hypertensive patient. There may be other beneficial physiologic effects which have not been demonstrated, but there is now abundant evidence that sympathectomy can lower the blood pressure, lessen hypertensive "overshoots," and favorably affect the retina, heart, brain, and kidneys, as well as relieve symptoms for varying periods of time in a majority of patients.

The most important evaluation of sympathectomy in the treatment of hypertension is the effect on survival. By relatively short-term follow-up studies it is already possible to demonstrate an advantage of sympathectomy in the severe forms of hypertension in which retinal hemorrhages and papilledema indicate the advanced stage of the disease.[20] Two reports (Peet and Smithwick) have now dealt with adequate numbers of cases followed five to ten years after sympathectomy.[21,22] By comparison with existing statistics on the survival of hypertensive patients treated by nonsurgical methods the results of both reports clearly indicate that the prognosis for many hypertensive patients has been significantly improved by sympathectomy.

Disagreements still exist about the extent of the sympathectomy to be employed. Smithwick recommends a thoracolumbar resection from the eighth thoracic to the first lumbar bilaterally with resection of the splanchnic nerves.[22] I have felt there was some advantage to removing all the lumbar chain, since this added sympathectomy of the lower extremities to the splanchnic denervation. Poppen and Hinton and Lord have advised a higher thoracic resection, but it appears unlikely that there is much advantage to a higher thoracic resection unless it is desirable to denervate the heart and upper extremities, in which case the entire upper thoracic chains must be removed.[23,24] Total paravertebral sympathectomy, although occasionally indicated for the relief of angina pectoris, tachycardia, or Raynaud's disease in a hypertensive patient, has little if any advantage over the less extensive lower thoracic and lumbar type of sympathectomy in its effect on the levels of blood pressure.[25]

Summary

Surgery of the autonomic system with the exception of vagotomy is concerned chiefly with the sympathetic nerves and ganglia. Although the operations are widely employed, the periodic individual and collective evaluation of results is necessary. Overenthusiasm for what may be accomplished by sympathectomy is as deplorable as an attitude which unreasonably rejects any advantage to sympathectomy.

It may not be justifiable to look upon sympathectomy as a direct attack on the etiology of any of the diseases in which it proves beneficial, but there are distinct advantages to sympathectomy that cannot be attained by any other treatment. The limitations of the various operations are clearly recognized and are dependent on many factors inherent both in the intricate anatomy and physiology of the sympathetic system and in the nature and stage of the disease to be treated.

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ROENTGEN THERAPY OF THROMBOPHLEBITIS

Successful treatment of 85 cases out of a total of 100 patients with thrombophlebitis of the extremities by means of a short course of roentgen rays is reported, and the authors wish to stress the fact that in itself the thrombus requires other forms of therapy—anticoagulants, division of veins, or sympathetic block. By coordinated effort of roentgenologists and surgeons, favorable results can usually be obtained in properly selected cases. Proper dosage of roentgen rays, well planned and timed, hastens absorption of inflammatory exudate, overcoming the blockade of lymph at isthmic points, such as the popliteal fossa, the groin, or the axilla.

There are six diagnostic groups: (1) acute superficial phlebitis in pre-existing varicosities, (2) acute superficial phlebitis in veins collateral to deep venous obstruction, (3) migrating phlebitis of thromboangiitis obliterans (Buerger's disease), (4) deep venous thrombosis of the calf, (5) iliofemoral venous thrombosis, and (6) subacute thrombophlebitic indurations.

Most patients receive a dosage of 80 r (in air) for a short course varying between one and six treatments. The authors use 200 kilovolts and 20 ma. at a focal skin distance of 50 cm. with a medium Thoraeous filter. Half-value layer is 1.9 cu. mm. Intervals between treatments are two to seven days. Not more than 400 sq. cm. are treated at a time, the extent of the disease determining the number and extent of the fields. The total number of treatments is determined by the response to this and supportive therapy; usually one to three treatments on each of the areas is sufficient. Reaction in one area is allowed to subside before the next dose is given. In this series there were no skin reactions, tissue damage, or radiation sickness.

Relief of pain was often dramatic, and patients previously confined to bed were able to walk comfortably. A number of patients had follow-up records of ten years.—*Claude R. Snead, M.D., Jack Lasner, M.D., E. L. Jenkins, M.D., and Geza de Takats, M.D., J.A.M.A., December 3, 1949*

TRANSIENT CARDIAC ARRHYTHMIA FOLLOWING THYROIDECTOMY

BERNARD J. FICARRA, M.D., Brooklyn, New York

(From the Department of Surgery, St. Peter's Hospital)

IN A previous publication a survey was made of 100 consecutive thyroid procedures.[1] Sixty of these patients had primary hyperthyroidism (toxic goiter), of which only nine had true hyperthyroid heart disease determined preoperatively. Thus 51 patients with severe hyperthyroidism did not have any disturbance which was demonstrable prior to operation. Following thyroidectomy, however, 11 of these patients developed cardiac irregularities which were determined by clinical auscultation and corroborated by electrocardiogram. The arrhythmia encountered was auricular fibrillation.

Disturbance of the rhythm of the heart is a common occurrence in patients with hyperthryoid heart disease. However, to find auricular fibrillation developing after thyroidectomy in patients without a pre-existing arrhythmia is not the usual pattern of events. The postoperative presence of auricular fibrillation could not be interpreted as a cyclopropane arrhythmia since this drug was not employed for anesthesia.

Although auricular fibrillation may occur in young people as a purely functional disorder, it is usually associated with organic heart disease. Especially is this true in hypertensive and hyperthyroid heart disease. Auricular fibrillation is characterized by an absolute irregularity of the heart and the entire absence of an underlying basic rhythm. This was the situation in 11 patients following thyroidectomy.

The exact time of onset of this irregularity postoperatively could not be determined. However, it was noted within six and nine hours following the patient's return from the operating room. In all instances the arrhythmia was discovered during evening rounds (about 5:00 or 6:00 P.M.) on the same day of operation, which usually commenced at 8:30 A.M.

The presence of auricular fibrillation has been an indication for administering some drug to control the irregularity. Digitalis does not possess the property of re-establishing normal rhythm in patients who have auricular fibrillation. In the 11 patients mentioned, quinidine lactate or quinidine sulfate was employed with excellent results. If a patient has had an embolic accident, quinidine should not be administered. When quinidine lactate is given, the same precautions should be taken as when quinidine sulfate is employed for this cardiac arrhythmia. The patient must be observed closely and should remain in bed for two hours after the last dose of quinidine. As soon as the fibrillation is discovered the patient is given quinidine.

The best results seemed to be obtained when the drug was given at an interval of two hours between doses. On the first day, two doses of 0.2 Gm. were given as a test for hypersensitivity. If no symptoms developed, five doses of 0.4 Gm. were given on each of the following days.

Since the completion of the previously mentioned survey of 100 thyroid procedures, six patients have been seen with auricular fibrillation following thyroidectomy. These six patients did not receive quinidine or any other drug aimed at arresting the arrhythmia. All six patients had a disappearance of the auricular fibrillation from two to four days after thyroidectomy. It seems, therefore, that this type of auricular fibrillation is transient in type, functional in origin, and does not necessitate specific drug therapy.

Summary and Conclusions

1. In a survey of 100 thyroid operations, 11 patients (without hyperthyroid heart disease) were found who developed postoperative auricular fibrillation.
2. This arrhythmia was controlled by administering quinidine sulfate orally.
3. More recently six more patients of the same type had a disappearance of the arrhythmia without quinidine.
4. It appears that auricular fibrillation following thyroidectomy is transient in type, functional in origin, and may not demand specific drug therapy.

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NEWER CONCEPTS OF CHRONIC COR PULMONALE*

M. Irené Ferrer, M.D., New York City

(From the Department of Medicine, Columbia University, College of Physicians and Surgeons, and the Cardiopulmonary Laboratory of the First Medical and Chest Services, Bellevue Hospital)

THE diagnosis and treatment of chronic cor pulmonale or heart disease secondary to chronic lung disease frequently afford considerable difficulty to the physician. There are at least two major reasons for this difficulty: (1) Until recently the natural developmental history of chronic cor pulmonale was very imperfectly known, and (2) the two main characteristics of the condition, pulmonary hypertension and right heart enlargement, frequently defy clinical detection in the early phases of cor pulmonale and may also be difficult to define even in its late stage.

In an effort, therefore, to shed some light on these problems, extensive investigations of the effects of chronic pulmonary disease upon the circulation have been carried out in the Cardiopulmonary Laboratory at Bellevue Hospital, and it is the results of this work, carried out in association with Drs. Harvey, Cathcart, and Webster under the direction of Dr. Cournand and Dr. Richards, which are reported in this paper.

It may be said from the outset that to date we have been unable to discover any direct effect by chronic lung disease upon the left ventricle and peripheral arterial system. As expected, lung abnormalities induce alterations primarily upon the lesser circulation, and in outlining the influence of certain lung diseases upon the pulmonary circulation we are, in effect, attempting to chart the entire development of chronic cor pulmonale.

Using the method of cardiac catheterization, the effects of lung disease on the lesser circulation have been defined by measurements of cardiac output, pulmonary artery and right ventricular pressures, and blood volume. Our experience is largest in patients with chronic pulmonary emphysema, and we shall present this material first.

In chronic pulmonary emphysema one must consider not only the structural changes induced by the disease but also, what is even more important, the physiologic disturbances. Anatomic pulmonary lesions reduce the capacity of the pulmonary vascular bed, while the two main physiologic disturbances which stem from poor alveolar ventilation are anoxia and carbon dioxide retention. It should be recalled that anoxia may directly elevate pulmonary artery pressure as well as increase the cardiac output. It stimulates formation of red blood cells, thus favoring the development of polycythemia and hypervolemia. The influence of carbon dioxide retention upon pulmonary circulation is not as yet defined.

In Fig. 1 data in a series of 21 patients with emphysema are presented schematically. The

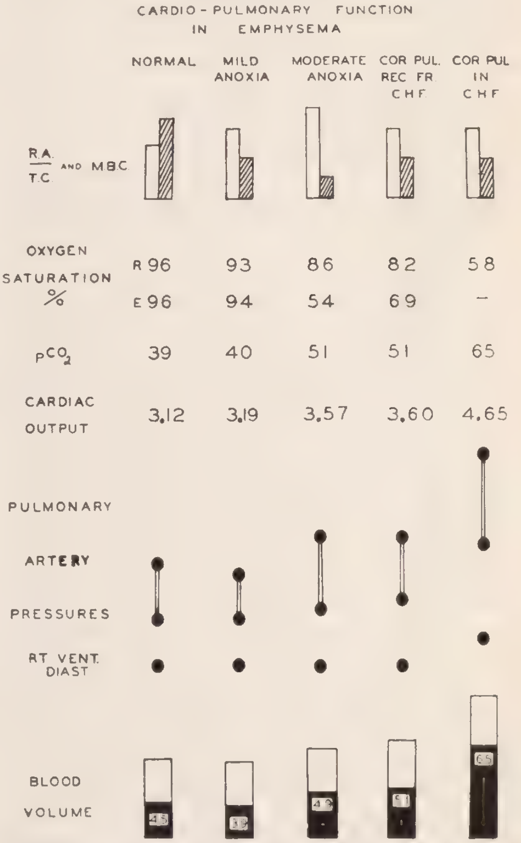

Fig. 1. Schematic presentation of cardiopulmonary function measurements in a series of 21 patients with chronic pulmonary emphysema. (RA/TC = ratio of residual air to total lung capacity, here represented by the open column; M.B.C. = maximum breathing capacity, here represented by the shaded column. Oxygen saturation is expressed as per cent at rest (R) and after exercise (E); pCO_2 = carbon dioxide tension in mm. Hg. Total blood volume is indicated by the height of the divided column in the last line of the schema, and the plasma volume is shown in the upper half, while the red cell volume is shown in the lower half blackened with the hematocrit framed within it.)

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normal values are listed in the first column. The patients are grouped according to the severity of the disease and, therefore, show gradually increasing degrees of arterial anoxia.

It can be seen that in those with mild emphysema and only mild anoxia, listed in the second column, there is no demonstrable alteration of the circulation. These patients have only a moderate increase in residual air, here expressed as per cent of the total capacity, and moderate decrease in maximum breathing capacity. The cardiac output, pressures, and blood volume are normal.

In patients with emphysema severe enough to cause either arterial unsaturation of less than 90 per cent at rest or who unsaturate markedly after exercise, listed in the third column under "Moderate Anoxia," it is obvious that, in addition to a high residual air, a low maximum breathing capacity, slight elevation of the resting cardiac output, blood volume, and hematocrit, there is moderate pulmonary artery hypertension. This pulmonary hypertension exists without altering heart or pulmonary artery size or the electrocardiogram. It appears safe to predict then that a large percentage of patients with chronic emphysema have pulmonary hypertension. However, since we know that not all patients with emphysema and pulmonary hypertension develop clinically significant right heart hypertrophy or cardiac failure, one must search for the key mechanism which produces cardiac involvement in this form of pulmonary hypertension. It is interesting to note in this regard that, as shown in the fourth column of Fig. 1, the observations of cardiopulmonary function in nine patients with cor pulmonale completely recovered from a recent bout of cardiac failure differed very little from those made in patients with severe emphysema and anoxia who never had evidence of heart failure. In fact, these patients had smaller residual air to total capacity ratios and larger maximum breathing capacities than the patients without cardiac involvement, suggesting that it is not always those with the most advanced emphysema who develop cor pulmonale.

When we examine the findings in a group of patients with cor pulmonale in frank congestive failure, however, a very marked change in the values is noted, as seen in the last column of Fig. 1. In addition to severe anoxia, there is marked polycythemia and hypervolemia and severe pulmonary hypertension. The filling pressure in the right ventricle is markedly elevated—the earmark of right-sided failure—and the cardiac output is high. It should be especially noted that in this form of polycythemia, although the red cells are increased in number, they are hypochromic and, therefore, hematocrit readings are abnormally high, while hemoglobin determinations are normal or low.

From these data it can be seen that, as anoxia increases in patients with emphysema, the pulmonary artery pressure, cardiac output, and blood volume also increase.

It is obvious then that a number of interrelated mechanisms are involved in the production of cor pulmonale. In particular, the relation of anoxia, increased blood volume, cardiac output, and pulmonary hypertension can perhaps be clarified by analysis of data obtained in two patients with emphysema and cor pulmonale first studied in profound failure and then after recovery.

In the first vertical column of Fig. 2 are indicated, from top to bottom, the normal average

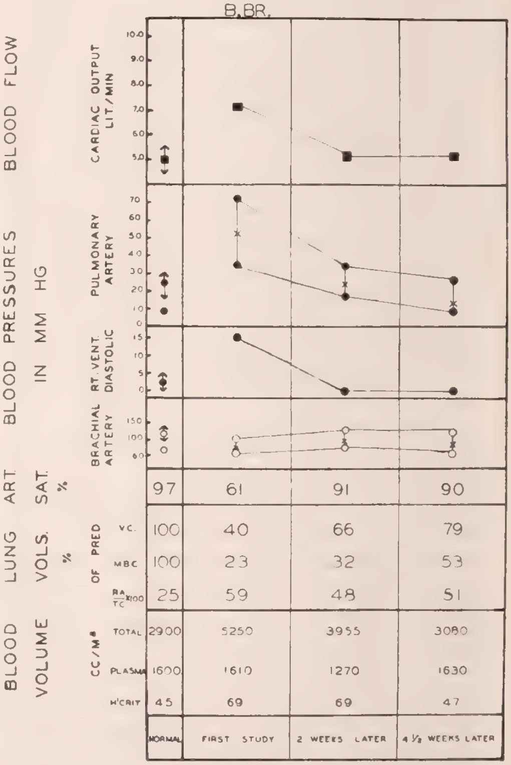

Fig. 2. Comparison of serial measurements of cardiopulmonary function in a patient with chronic cor pulmonale. (Closed squares = cardiac output; closed circles = pulmonary artery, systolic and diastolic, and right ventricular end diastolic pressures; open circles = brachial artery, systolic and diastolic pressures; cross marks = mean pressures. Art. Sat. % = per cent of arterial blood oxygen saturation; Lung Vols. = lung volumes; V.C. = vital capacity in per cent of predicted value; M.B.C. = maximum breathing capacity in per cent of predicted value; RA/TC × 100 = ratio of residual air to total lung capacity.)

values and the range of the following measurements: (1) cardiac output, (2) pulmonary artery pressures, systolic and diastolic, (3) diastolic or filling pressure in the right ventricle, (4) brachial artery pressures, (5) the arterial blood saturation, (6) vital capacity and maximum breathing capacity, as well as the ratio of residual air to total lung volume, (7) total blood volume, plasma volume, and hematocrit. At the time of the first study, the patient presented the typical clinical picture of cor pulmonale with signs of right ventricular failure, intense cyanosis, cardiac enlargement, and sinus tachycardia. As seen in the second column of Fig. 2, there was considerable reduction in arterial blood oxygen saturation, vital capacity, and maximum breathing capacity and a high ratio of residual air to total lung volume indicative of severe emphysema. The circulatory data are characteristic of the physiologic changes in most cases of cor pulmonale with failure observed in the course of chronic pulmonary emphysema: (1) a high cardiac output, (2) a considerable degree of pulmonary hypertension, (3) a high diastolic pressure in the right ventricle which is the earmark of right ventricular failure, and, finally, (4) hypervolemia with polycythemia. Initial digitalization with digoxin caused an increase in cardiac output and a reduction in right ventricular diastolic pressure. After two weeks of treatment by maintenance digitalis and bed rest, the clinical signs of cardiac failure had disappeared, the cardiac silhouette diminished in size, and the respiratory studies revealed a considerable improvement of the pulmonary function, in particular a return of the arterial oxygen saturation toward normal. The total blood volume was still somewhat elevated, and the red cell volume in particular was still very high. With the return of normal right ventricular function the diastolic pressure in the right ventricle had reached a normal level, and with a reduction of the hypervolemia and less anoxia the cardiac output had returned to a normal level. The decrease of the pulmonary arterial pressures stands out as the most striking and unexpected change. To this change, several factors may have contributed: (1) the relief of anoxia, (2) reduction in pulmonary blood volume, and (3) lower cardiac output and, hence, lower pulmonary blood flow. Since between the first and second study the structural alterations in the lungs were probably unchanged, the physiologic factors must have been of considerable importance in promoting pulmonary hypertension while the patient was in failure. Between the second and third series of studies, separated by two and a half weeks, four phlebotomies of 500 cc. each were performed. Concomitantly, the pulmonary arterial pressures and the size of the heart became normal. This further change points to the possible role played by an increased pulmonary blood volume, superimposed on a restricted vascular bed, in causing pulmonary hypertension.

Figure 3 demonstrates in a second patient the complete reversibility of the major abnormalities associated with cor pulmonale after recovery from failure. The first vertical column gives, as before, the normal values; the study in cardiac failure shows in addition to emphysema, anoxia, and polycythemia the increased cardiac output, marked pulmonary hypertension, and high diastolic right ventricular pressure characteristic of these patients. The second study, after recovery, shows restoration to normal of the circulatory abnormalities. Several other patients

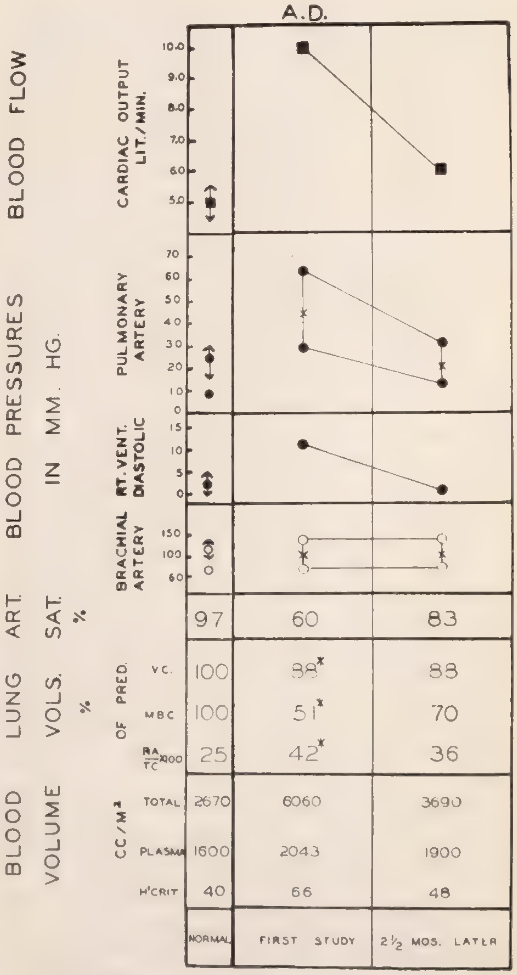

Fig. 3. Comparison of serial measurements of cardiopulmonary function in a patient with chronic cor pulmonale. (See Fig. 2 for key to symbols.)

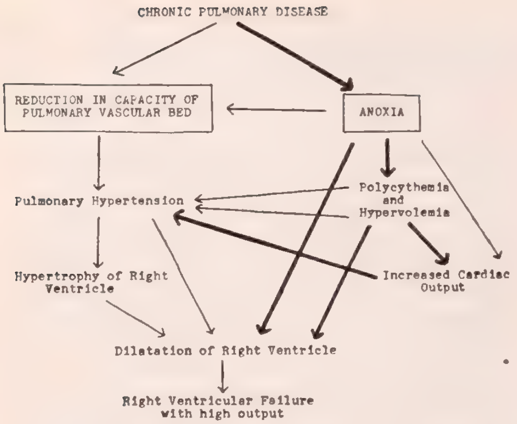
CHRONIC PULMONARY DISEASE
REDUCTION IN CAPACITY OF PULMONARY VASCULAR BED
ANOXIA
Pulmonary Hypertension
Polycythemia and Hypervolemia
Hypertrophy of Right Ventricle
Increased Cardiac Output
Dilatation of Right Ventricle
Right Ventricular Failure with high output

FIG. 4. Comprehensive schema of interrelated factors in the production of chronic cor pulmonale in chronic pulmonary emphysema.

also have shown the reversibility of many of the physiologic abnormalities. Thus it is apparent, contrary to prevailing concepts, that besides the basic anatomic alterations of the pulmonary vascular bed other physiologic factors must be considered as of paramount importance in the development of cor pulmonale in failure.

We have pictured diagramatically in Fig. 4 the interplay of the various mechanisms which promote pulmonary hypertension in the course of chronic pulmonary emphysema and lead to the development of cor pulmonale. As can be seen in this figure, alteration of the pulmonary vascular bed, the restriction of which may not be extensive enough to produce pulmonary hypertension at rest, is the first important result of the pathologic process in the lung. In this restricted bed, any temporary increase in blood flow, as during daily activities or following an infection, for example, will favor pulmonary artery pressure rise. In general, these changes alone are probably not large enough to cause clinically detectable hypertrophy of the right ventricle. The situation is analogous to that observed in systemic hypertension with concentric hypertrophy of the left ventricle.

Turning to the role of anoxia, the second major effect of chronic lung disease, we find its influence exerted in several directions. Chronic anoxia directly causes polycythemia and hypervolemia and increase in cardiac output, and, presumably, it reduces the vascular bed by direct action on the tone of the pulmonary arterioles. Hypervolemia, by increasing the volume of blood in the venous system, effects an increase in stroke volume and cardiac output. Increased blood viscosity may also be an enhancing factor in the production of pulmonary hypertension and right ventricular hypertrophy. Thus the stage is set for the appearance of right heart failure, although many patients with chronic pulmonary emphysema never go beyond this phase. We do not know, in all instances, what is the precipitating factor in the break of compensation, but often a bout of acute anoxia is the trigger mechanism. This may accompany attacks of bronchiolar obstruction or a severe pulmonary infection. Acute anoxia superimposed on chronic anoxia further stimulates the rapid formation of red blood cells, thus increasing blood volume.

Under the combined assaults of these separate factors—high cardiac output, marked pulmonary hypertension, direct action of anoxia on the strained right ventricular myocardium, and increased blood volume—the ventricular failure follows.

Intrinsic myocardial damage, as a rule, being limited and not comparable to what is found in coronary disease, rheumatic myocarditis, etc., this type of failure is reversible if proper therapy is instituted. This consists essentially in the treatment of pulmonary infection by antibiotics, the relief of bronchiolar obstruction, and reduction of bronchial secretions by the liberal use of atomized bronchodilators. This aspect of therapy is directed at the relief of anoxia, and its importance cannot be overemphasized. Improvement of the function of the right ventricle is achieved by digitalization, and, finally, reduction of the polycythemia and hypervolemia is accomplished by phlebotomies. Oxygen therapy is beneficial also, but it should be used intermittently to avoid the development of carbon dioxide narcosis. If these cases are left untreated or are treated improperly, deterioration of the myocardial fibers may result and lead to further reduction in cardiac output which in irreversible cases becomes lower than normal.

The scheme that we have presented accounts for most of the observations that we have made in the study of chronic pulmonary emphysema and stresses the paramount role of anoxia. In some rare instances of emphysema and, as a rule, in chronic pulmonary fibrosis of all types, in primary pulmonary vascular disease, and in chronic multiple embolization of the pulmonary vascular tree, the reduction of the capacity of the pulmonary vascular bed eventually becomes the predominant and irreversible factor as indicated in Fig. 5. Hence, in these cases pulmonary vascular resistance is very high, pulmonary hypertension extreme, and the situation is comparable to that seen in malignant systemic hypertension. In these cases, too, failure is sometimes precipitated by acute anoxia but is often irreversible and is characterized by a low cardiac output. Since, in the earlier stage of this form of cor pulmonale, the factors of anoxia and hypervolemia

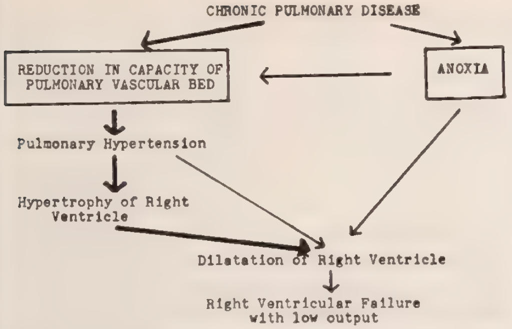
CHRONIC PULMONARY DISEASE
REDUCTION IN CAPACITY OF PULMONARY VASCULAR BED
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FIG. 5. Comprehensive schema of interrelated factors in the production of chronic cor pulmonale in other types of chronic disease.

play only a limited role, no stage of high cardiac output precedes the failure. The irreversibility of cardiac failure in these cases is dependent on the fact that the pulmonary hypertension is largely due to anatomic abnormalities which cannot be altered therapeutically. In addition, the integrity of the myocardial fibers may suffer from the extreme severity of the pulmonary hypertension.

Summary

Two fundamental mechanisms operate in the development of cor pulmonale, anoxia and reduction of the pulmonary vascular bed. When anoxia plays the major role, as in cor pulmonale due mainly to emphysema, most of the circulatory abnormalities produced, including pulmonary hypertension, are reversible and amenable to proper therapy. Therefore, it is now entirely possible that this type of cor pulmonale can be rendered compatible with longevity, or perhaps prevented entirely. When anatomic reduction of the vascular bed predominates, as in fibrosis, the outlook is less favorable.

10 EAST 66TH STREET

Discussion

Charles W. Lester, M.D., *New York City.*—It seems presumptuous for a surgeon to discuss a scientific paper on a medical subject, but I am impressed with the importance of cor pulmonale as related to patients with emphysema who must undergo operation, especially if the operation is in the field of thoracic surgery. Dr. Ferrer has shown most clearly that it is the anoxia produced by the emphysematous lung that causes the increased resistance in the pulmonary circuit, the increased blood volume, and the increased cardiac output leading to cor pulmonale. In the medical case this process may be reversible somewhere along its course, but in the surgical case the prognosis is much less encouraging.

When pneumonectomy is performed, two major changes are produced simultaneously and abruptly. First, the lung volume is reduced by the amount represented by the resected lung. This is probably impaired but may represent as much as 50 per cent of the total lung volume. Second, the entire output of the right heart, which was divided between two lungs before operation, must be circulated through the remaining lung after operation. If the remaining lung is normal, this increased work can be handled without undue difficulty. If, however, it is emphysematous and, hence, inefficient, the situation is drastically altered.

Under the latter circumstances an inefficient lung is suddenly required to oxygenate a greatly increased amount of blood, and anoxia may easily result, bringing in its train the factors that lead to cor pulmonale. The judicious use of oxygen and cardiac stimulants may tide the patient over the critical period of adjustment, but unfortunately, this is not always so. The patient then becomes a pulmonary cripple.

Two patients upon whom I have performed pneumonectomy for carcinoma in the past six months had emphysema before operation and are now pulmonary cripples, although the preoperative studies indicated that they might avoid that distressing condition and everything possible was done to that end. With resectable pulmonary carcinoma pneumonectomy becomes almost mandatory, but it must be remembered that what appears to be clinically advisable and technically possible may be physiologically lethal. When the uninvolved lung is functionally impaired, perhaps the patient can live longer and in greater comfort with his disease than he can with the cor pulmonale resulting from the operation designed to relieve it. In this day of high-powered cancer propaganda this sounds like heresy, but to me it seems reasonable.

When the lesion requiring pneumonectomy is benign or inflammatory, the urge to resect is not as great, and in this respect it is well to remember that chronic pulmonary infection may produce fibrosis and emphysema at an earlier age than one would suspect. I have seen it in a ten-year-old boy.

Following pneumonectomy, when there is any suggestion of emphysema, it is imperative to perform a thoracoplasty at the time of operation, or soon thereafter, to prevent overdistention in the remaining lung and increase in the emphysema.

Many surgical procedures in the past have been accompanied by considerable loss of blood, and replacement of this blood loss is necessary. However, technics are improving, and many operations that once were particularly sanguinary are no longer attended with great blood loss. For this reason, especially when there is emphysema, great care should be exerted to replace only the amount of blood lost. The surgeon should supervise this himself and not trust to the preconceived ideas of anesthetist or resident lest a transfusion, designed to be lifesaving, should, in the hands of an overenthusiastic assistant, prove to be fatal.

Cor pulmonale is generally considered to be a medical disturbance, but it has very serious implications for the surgeon and should always be considered when any surgical procedure is contemplated on a person with emphysema, especially if that procedure involves the thorax.

THE RESULTS OF SURGICAL THERAPY OF CONGENITAL CARDIOVASCULAR ANOMALIES

George H. Humphreys II, M.D., and Ralph A. Deterling, Jr., M.D., New York City

(*From the Surgical Service of Presbyterian Hospital*)

In the twelve years which have passed since Gross and Hubbard's first case of successful closure of a patent ductus arteriosus, a whole new field of surgical experience has developed. Much experimental work and reports on many operations have been published. As a result it is now generally known that not only patent ductus arteriosus but also coarctation of the aorta are congenital anomalies which can be surgically corrected and that certain cases of congenital heart disease with cyanosis are much improved by appropriate surgical procedures. Experimental work continues in many centers, and knowledge gained in treating the more common anomalies is being used to develop technics for handling those of greater rarity. As yet, however, operations for these three anomalies are those most widely accepted and most nearly standardized. Procedures to release constricting rings formed by anomalous vessels around the trachea and esophagus in infants are sometimes effective but cannot be standardized because the anomalies are so varied. The Brock procedure for pulmonic stenosis, the Blalock operation for transposition of the great vessels, and a variety of procedures suggested for closing septal defects are still in the experimental stage.

Notwithstanding all that has been written, there are few reports on the results of the generally accepted procedures beyond the immediate recovery period. For this reason, it seems worth while to summarize our experience in the Presbyterian and Babies Hospitals over the past ten years. Our experience is not as voluminous as that of institutions which have centered their activities around this field of endeavor, but it covers the whole formative period during which the technical problems have been explored. The results bring out, therefore, some of the errors to be avoided and illustrate how we have reached our present methods and criteria for handling these problems.

Material

Since our first operation for patent ductus in the fall of 1939, a total of 355 patients have been referred for consideration of surgical correction of cardiovascular anomalies (Table 1). Of these, 140, or just under 40 per cent, have been operated upon. As might be expected, since this report covers the whole ten-year period, the largest number of operations is in the patent ductus group. However, although our first operation for cyanotic heart disease was performed five years later, we have already examined more of these patients than we have in the patent ductus group. The varied anomalies resulting in cyanosis have presented difficulties which have caused us to defer or refuse operation in over half of the entire group, while about 60 per cent of the patent ductus cases have come to surgery. In coarctation the percentage of operation is also about 60 per cent, although the total number, covering a period of three years, is much less. Seventy-eight patients, about 20 per cent of the entire group, have not been operated upon because they have been considered to have anomalies not now amenable to surgery or because the diagnosis has not been sufficiently clear to warrant it. It is possible that some of these will come to operation as their diagnosis is clarified or new procedures are developed. We will consider, then, each of the three main groups in turn.

Patent Ductus Arteriosus

Eighty-eight operations have been performed for patent ductus arteriosus on 85 patients, 12

TABLE 1.—Total Patients

	Operations	Patients	Operative Mortality (Per Cent)	Not Operated	Total
Patent ductus	75	72	2.7	47	119
Coarctation	22	21	4.8	12	33
Cyanotic heart disease	51	47	37	78	125
Other anomalies without cyanosis	..	..	...	78	78
Total	148	140		215	355

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TABLE 2.—OPERATIONS FOR PATENT DUCTUS ARTERIOSUS

Operation	Recovery				Deaths			Total
		Complicated						
	Uncomplicated	Persistent Murmur	Recurrent Patency	Others	Operative	Postoperative	Late*	
Ligation in continuity	44	5	5	..	..	2	2	58
Division of ductus	10	2	..	2	1	..	..	15
Others	..	..	..	..	2	..	..	2
Total ductus	54	7	5	2	3	2	2	75
Exploratory—No ductus found	8	..	..	..	2	..	3	13
Total	62	7	5	2	5	2	5	88

* Died later of persistent subacute bacterial endocarditis.

of whom have died following operation; 13 of these patients did not have a patent ductus (Table 2). These represent an evolutionary phase in our thinking, eight having been done over five years ago and the most recent two years ago. Six were operated on because they were suffering from subacute bacterial endocarditis, in spite of the fact that the diagnosis of patent ductus was doubtful. One died on the operating table, and three died of their disease two, four, and seven months later in the period before penicillin was available. The remaining two were cured by penicillin and are living and well except for a persistent murmur three and six years after operation. Of the seven uninfected cases on whom the clinical diagnosis was made but in whom no ductus was found, one died through an anesthetic accident as the chest was opened, and the remaining six are living and well two to five years after operation. This experience has led us to feel that the diagnosis should be checked by cardiac catheterization in all cases in which it is at all doubtful. The philosophy of operating upon a doubtful case in the hope of curing subacute bacterial endocarditis is now obsolete, since intensive antibiotic therapy can usually be relied upon to sterilize the blood stream, after which the diagnosis can be checked by catheterization.

Seventy-two patients with patent ductus arteriosus have been operated upon, and three have required a second operation for recurrent patency, a total of 75 operations. Seven of these patients are now dead. Two of these died of persistent blood stream infection at one year and two months after ligation because of secondary foci of infection in the period before the advent of penicillin. Both had carried positive blood cultures many months before operation. A third patient also had advanced sepsis with a mycotic aneurysm of the ductus which involved the greater part of the left upper lobe. She was operated upon as a desperate measure and died on the operating table. These three patients then represent deaths from complications of the anomaly rather than from operation.

Each of the other four died of a different cause. One died of acute tamponade due to an attempt to wire an aneurysm which developed one year after a technically inadequate ligation performed nine years ago. The second, a patient fifty-four years of age (the oldest in the series), had suffered several episodes of decompensation before operation and died in decompensation three weeks after operation. The third, an infant of nine months (the youngest in the series), had a complicating vascular ring anomaly of which the ductus formed a part and had suffered repeated attacks of aspiration pneumonia. He died the day after operation of pulmonary complications. The fourth was the only clear-cut operative death in an uncomplicated case. Death occurred from uncontrollable hemorrhage on the operating table when the aortic clamp slipped off during suture of a divided ductus. This single operative mortality has tempered our enthusiasm for division and suture of the ductus except under optimal conditions.

The ductus has been ligated in 58 patients, and 44 of these made immediate and complete recoveries with obliteration of the murmur up to ten years following ligation. In five others, murmurs have persisted without other evidence of recurrent patency. In five, definite evidence of recurrent patency developed within a few months of operation. One, in a woman of forty-one with aneurysmal dilatation of the pulmonary artery, was closed with a single ligature ten years ago. Although evidence of recurrence was soon observed, her symptoms have been much relieved; she has refused further surgery and ten years later has no severe handicap. The second is in a severely handicapped girl of twelve with probable intracardiac anomalies as well. The other three were operated upon a second time. The first of these may have been suffering from an unrecognized subacute bacterial endarteritis at the time of the first ligation.

TABLE 3.—Operations for Coarctation of Aorta

Operation	Recoveries						Death at Operation	Total
	Uncomplicated			Complicated				
	0–10 Years	11–20 Years	21–30 Years	0–10 Years	11–20 Years	21–30 Years		
Aortic anastomosis	2	5	2	..	..	1	1	11
Aortoplasty	..	..	1	..	..	..	..	1
Aortic graft	..	1	..	..	..	..	..	1
Subclavian to aorta anastomosis	1	1	2	2	..	2	..	8
Total	3	7	5	2	0	3	1	21

His ductus reopened with definite blood stream infection and was reoperated five months later with recovery. After nine years he is still well with no murmur. The other two developed aneurysms. One of these died following an attempt to wire the aneurysm as already mentioned. The other, who was ligated immediately after sterilization of a subacute bacterial endarteritis, developed a recurrence of infection and a mycotic aneurysm and was operated upon again six months later. The aneurysm was excised with plication of its aortic orifice and ligation of the left pulmonary artery. She is well five years later.

The ductus has been divided and closed by suture or purse-string ligature in 14 patients, and in a fifteenth an attempt to do so resulted in fatal hemorrhage as already described. Ten are well and free of murmurs, but in two, persistent murmurs are present, similar to those which occasionally follow ligation. In two others, complications occurred. In one instance the recurrent laryngeal nerve was pinched in the clamp; in the other an inadequate aortic cuff made it necessary to clamp the aorta temporarily while the ductus origin was sutured; there has resulted a paresis of leg muscles bilaterally which has improved over a year but forced a change in occupation. Although it is recognized that this record may represent the developmental hazards of a new technic, it also appears that the results in comparison with those of adequate double ligation do not warrant its use as a routine procedure.

Subacute bacterial endarteritis has been the indication for operation in nine cases. In six, operated upon five to nine years ago, the disease was active at the time of operation: Two advanced cases died of their disease, and four have remained well. The three more recent cases were first cured of their infection by intensive penicillin therapy, then operated upon six to nine months later. This is now our preferred method.

In an additional group of 47 patients the presumptive diagnosis of patent ductus arteriosus has been made. In 23 of these, symptoms are negligible, and operation has not been advised. Fifteen have refused operation, and nine have been temporarily deferred for various reasons.

This experience has led us to the following conclusions. Careful double ligation in continuity is an effective method of closing the patent ductus arteriosus in the majority of cases. While it may result in a somewhat higher incidence of persistent murmur than division and suture, the latter procedure does not invariably obliterate the murmur and is attended with greater risks of complication or death due to its greater technical difficulty. In experienced hands, however, and when the ductus is not unusually short or thin-walled, division and suture is a more certain method of permanent closure. Cutting through the ligatures with re-establishment of a shunt was directly related to inadequate technical closure in two of the five instances. In two others it was related to closure in the face of blood stream infection. Therefore, we believe that it is safer to treat blood stream infection intensively with penicillin or other appropriate antibiotic and to wait a period of several months before closing the ductus. Ligation in the face of active infection should be reserved for cases resistant to antibiotic therapy, and in these it may result in permanent cure. There have been no relapses of blood stream infection up to ten years after operation in the untreated group and up to four years in the treated group. We have seen no serious complications develop in those patients with minimal symptoms for whom operation has not been recommended. While the risk of blood stream infection is unquestionably present in this group, the effectiveness of antibiotic therapy makes it seem justifiable to continue to defer operation. Several patients in this group are now adults, living normal lives, working, and bearing children without handicap.

Coarctation

Twenty-one patients with coarctation of the aorta have been operated upon in the past three years with one death (Table 3). The death occurred on the operating table from irreversible shock on opening the aortic clamps after performing a technically adequate end-to-end anastomosis of the aorta in a twelve-year-old girl. This was our first operative case. Since that time we have used intra-arterial transfusion as a protection against this catastrophe and believe it has been of lifesaving value in several cases. Including this first fatal case the coarctation has been excised and the ends of the aorta have been brought together by everting mattress sutures in 11 cases. In two of these a complicating patent ductus arteriosus was divided and ligated. In eight cases the end of the dilated subclavian artery was anastomosed to the end of the lower aortic segment. In one of these the aortic arch crossed behind the esophagus. In another, an aortic end-to-end anastomosis was first performed under considerable tension and tore out on release of the clamps: The proximal end was, therefore, sutured and the subclavian turned down. In the six others the aortic segment excised left a gap too great for direct anastomosis. In one additional case such a gap was bridged by a homologous aortic graft, a procedure which is probably preferable if suitable aortic grafts are available. In one case in which the coarctation took the form of a diaphragm, a plastic operation was performed without division of the aorta.

In seven of the ten surviving cases of aortic anastomosis complete restoration to normal, as judged by return of arm pressure to normal and relief of symptoms, has occurred. Two cases are too recent to evaluate. The remaining case developed serious postoperative complications. Rupture of the aorta through an atheromatous area of degeneration occurred in the immediate postoperative period and was immediately repaired under desperate conditions. Cerebral anoxic damage followed a period of cardiac arrest and restoration by massage during the second procedure. After recovery from this, subacute bacterial infection supervened and became implanted on the aortic valve. Six months after the infection was apparently controlled by penicillin it recurred and again yielded to intensive penicillin therapy. The patient is now well, with good circulation in his legs, but incapacitated by severe aortic regurgitation due to valvular damage.

Three of the eight cases of subclavian to aorta anastomosis have made complete recoveries symptomatically. One is too recent to evaluate. In one the pressures are normal two years after operation, but a residual homonomous hemianopsia persists following development of an acute localized area of brain softening which required craniotomy in the postoperative period. In three, there is evidence of some residual narrowing at the site of anastomosis, although only one of these has any residual symptoms and these seem largely of neurotic origin. The patient in whom the plastic operation was done also has evidence of persistent mild obstruction. Therefore, it appears that anastomosis of the subclavian to the aorta is effective but less satisfactory than the aortic anastomosis. Presumably the use of aortic grafts will be a more satisfactory solution in these cases, although the end results of this procedure are still uncertain. Our one case is too recent to evaluate but is making a satisfactory recovery three weeks after operation.

Our patients have varied in age from eight to twenty-eight years. Five were in the first, eight in the second, and eight in the third decade of life. It was found possible to perform end-to-end aortic anastomosis in two of the five children, six of the eight adolescents, and three of the eight adults. Thus, the determining factor appears to be the anatomy of the anomaly rather than the age of the patient. Although the death occurred in a twelve-year-old, three complications occurred in the adult group, with the aortic rupture in the oldest patient. This experience has led us to refuse operation in patients over thirty, four of whom we are following. Three patients have refused operation, and five have been deferred for various reasons. Subacute bacterial infection has occurred in three instances. In one case the patient was admitted in childhood with the disease which remitted without specific therapy. He has remained well for eight years and up to the present has refused operation. The other two occurred in the postoperative period, in mild form in one and severe in the other. Both resolved on penicillin therapy. Both of these were adults with complicating atheroma of the aortic arch.

Our experience confirms that of Gross in this country and Crafoord in Sweden that direct anastomosis of the aorta, when performed in late childhood or adolescence, is an operation which restores the circulation to normal without great risk. When performed in adult life, the results are equally good, but the risks are substantially greater. Subclavian to aorta anastomosis is also effective and safe but often does not restore the circulation to normal. The use of aortic grafts may replace this procedure.

Tetralogy of Fallot

Fifty-one operations have been performed on 47 patients in attempts to relieve the effects of cardiac anomalies with cyanosis (Table 4). Twenty of these patients are now dead. This appalling mortality is related to a number of factors

TABLE 4.—Operations for Cyanotic Heart Anomalies

	Recovery with Symptomatic Relief			Death			
Operation	Uncomplicated	Cerebral Complications	(Per Cent)	Operative	Postoperative	Per Cent	Total
Innominate to pulmonary, end-to-side	1	1	67	..	Vein graft, 1	33	3
Right subclavian to pulmonary, end-to-side	15	3	78	..	5	22	23
Right subclavian to pulmonary, end-to-end	2	0	100	..	..	0	2
Total right	18	4	79	0	6	21	28
Left subclavian to pulmonary, end-to-side	4	1	83	..	1	17	6
Left subclavian to pulmonary, end-to-end	1	..	100	..	..	..	1
Total left	5	1	86	0	1	14	7
Total completed Blalock procedures	23	5	80	..	7	20	35
Potts procedure	1	..	33	..	2	67	3
Anastomosis not completed	2	1	24	7	3	76	13
Total	26	6	63	7	12	37	51

which are not evident at first glance. Unquestionably, when we first undertook these operations five years ago our lack of experience both in the finer points of diagnosis and in choice of procedure in a then almost unexplored field played its part. More important, we believe, has been the nature of the problem itself and our philosophy in approaching it.

We have deliberately chosen to operate upon patients so severely handicapped that it appeared unlikely they would survive long as they were. At first we did not appreciate the technical difficulties of performing in infants adequate shunts of the types described by Blalock. Taussig and Blalock within recent years have emphasized that operation should be deferred if possible until the age of four or older. This is confirmed by our experience. Six of our first twelve cases, operated upon in 1945 and 1946, were under four, and four of these are now dead. Although we emphasized from the first the necessity of proving inadequate pulmonary flow by cardiac catheterization before operation, we have not restricted operation to Fallot's tetrad but have operated upon five desperately sick children who proved to have other anomalies at autopsy—in two cases tricuspid atresia and in three valvular pulmonary stenosis. It is possible that other fatal cases in which autopsy was not obtainable also were suffering from these or other anomalies.

We have been inclined to defer operation in the less severely handicapped group in the hope that a more satisfactory physiologic solution to the problem might be developed. The Brock procedure now appears to offer hope of such a solution for some of these. Our experience with the Pott's operation is too small to justify an opinion, but we have avoided it on theoretic grounds, because, unlike the Blalock operation, it is one which cannot easily be revised if necessary.

Six variations of the Blalock operation, which has as its purpose the establishment of an artificial ductus arteriosus, have been used on 35 patients. Of these, anastomosis of the end of the right subclavian to the side of the right pulmonary artery has been performed most often (23) and other right-sided procedures five times. The mortality of 21 per cent in this group is weighted by the fact that most of the early operations, including the three in which the innominate was used, fall into it. The apparently much smaller mortality of 14 per cent in the left-sided procedures reflects the somewhat greater technical ease of this procedure, but the series is too small (seven cases) to have much validity. Thus our operative mortality for the entire group in which anastomosis had been completed is 20 per cent. Undoubtedly this will be reduced, since we have discarded the less successful procedures, and it could be reduced even further by refusing to operate on infants or in cases in which the diagnosis is not clear, as well as by accepting more patients in the less severely handicapped group. It seems likely, however, that the operation will always remain one of considerable risk.

In the patients in whom the anastomosis could not be completed, the mortality is very high. Three quarters of these patients died, about half on the operating table from cardiac arrest. This catastrophe is presumably related to anoxia which always presents a difficult problem for the anesthetist. That it is particularly dangerous in infants is attested by the fact that the ages of the seven patients who died on the table averaged somewhat less than three years, but it must also be remembered that the reason that operation was attempted on these infants was that they were so ill it seemed unlikely they would survive to a more favorable age. A large majority had suffered from major attacks of cerebral anoxia before operation. Age alone was not, therefore, the whole story. The three patients who survived one unsuccessful attempt, two of whom were revived by cardiac massage after an arrest and one of whom suffered a transient hemiplegia postoperatively, all were subsequently operated upon through the opposite chest, and successful shunts were established. One other child was operated upon a second time three years after it became apparent that an end-to-end anastomosis successfully established in infancy had subsequently thrombosed. This child died on the table. In another similar case death occurred five months after operation, and autopsy disclosed thrombosis at the site of the subclavian clamp, although the anastomosis had remained patent.

Cerebral anoxia or thrombosis also accounts for the postoperative deaths of three patients, in whom cardiac arrest occurred and was corrected before the anastomosis was done, and of four of the seven in whom anastomosis was completed but who died postoperatively. Two of the others died of hemorrhage related to the use of heparin immediately after operation, a practice we discarded after the first year. The third died of shock, apparently related to inability to compensate for the sudden opening of the shunt.

All of the nonfatal postoperative complications were also related to cerebral damage. Three had hemiplegia of the side opposite to that of the operation. In one, an infant of two done early in the series, the innominate artery was used, and the carotid was ligated and divided. We no longer use this procedure. The other two both had temporary occlusion of the carotid during the anastomosis, a procedure which has also been discarded. All three now walk and use their affected hand fairly well, but some residual weakness remains. One child was totally blind for the first week after operation but regained her vision completely within three months. Another, who had suffered a hemiplegia following a previous unsuccessful attempt, had total speech aphasia for two weeks, but a year later is talking with a vocabulary still somewhat limited for a child of six. The third, an adult of twenty-seven, developed hallucinations a week after operation, then passed into a coma for a period of several weeks. From this she gradually recovered and now is apparently normal mentally, although with complete amnesia for all events for several weeks before operation.

It is evident from these experiences that operation in these patients is fraught with many hazards. The ultimate effects in terms of circulatory dynamics are still unknown, yet the immediate results for those who recover are so dramatic they seem almost miraculous to the parents of these unfortunate children. The overwhelming burden of their care is lifted almost completely. Helpless tots who had to be carried everywhere, and older children who were housebound are able to play and attend school with relatively few restrictions. Indeed, it is sometimes necessary to warn against overexertion, since the cardiac load is still abnormally high. We have seen only one acute dilation, and this followed indulgence in football. In two others, in one of which the innominate artery was used, there has been significant increase in cardiac size. In general, the heart has not increased in size, and its roentgen contour remains surprisingly little altered. Some faint cyanosis often persists, but it is usually barely perceptible at rest, becoming evident only on exertion or emotional upset. In this there is considerable variability, as might be expected if we remember that the anomaly is not a standardized one and that the size of the ventricular defect and degree of aortic over-riding are factors in the production of cyanosis through intracardiac mixup which are not directly affected by the procedure.

Knowledge of the possibility of apparent cure for these cyanotic children has been well publicized, and parents and sometimes physicians find it hard to accept the fact that many anomalies which produce cyanosis cannot be helped. We have examined 78 other cyanotic children in the past five years. Half of these have been proved to have anomalies not amenable at present to surgery. Thirteen died before they have been completely evaluated, many of them in infancy. The parents of four, who were considered suitable, have as yet refused operation when its risks were explained. The remaining 27 are in process of evaluation and have been deferred because their handicap is not great or are awaiting operation. We do not urge operation upon any patient but present the facts as we see them in the belief that, if the hazards are known, the disappointments will be fewer.

Satisfactory as these results often are, it is to be hoped that a still better procedure, which will have as its aim a more nearly complete restoration to a normal circulatory physiology, may be developed. In the meantime, it seems probable that the high risks brought out in this series have already been considerably reduced and that the operations now in use are fully justified, especially for the more severely handicapped patients in this group.

Conclusions

1. Surgical closure of the patent ductus arteriosus has proved a safe and effective method of restoring patients suffering from this lesion not only to an immediate normal circulatory status but also presumably to an ultimate normal life expectancy. The method of closure will depend on the surgeon. Double ligation in continuity appears to be a safer method and one less likely to complication, but recurrence may occur if the technic is imperfect. The desirability of closing a small ductus with minimal circulatory disability is still open to question.

2. Surgical repair of aortic coarctation is effective and relatively safe in childhood and adolescence but increases in risk beyond the age of twenty. Direct aortic anastomosis is the most effective procedure, but anatomic variations do not always permit it to be done. It seems probable that the use of aortic grafts will permit a more satisfactory result in those patients in whom direct anastomosis is not feasible than the use of the dilated left subclavian artery.

3. Surgical treatment of cyanotic heart disease, although it results in remarkable improvement in disability due to arterial unsaturation in a signficant proportion of patients, still carries a high over-all risk, and the ultimate results of the operations now in general use are still uncertain. It is to be hoped that new procedures will be developed which will expand the scope and effectiveness of surgery in this field.

PENICILLIN SENSITIVITY

The urticarial reaction to penicillin is the most common type and is characterized by urticaria and erythema with joint pains and occasionally joint fever. Sometimes these appear within a few days, sometimes after the passage of several weeks. Usually they follow intramuscular injection but may follow also oral administration.

In the trichophytid type of reaction the latent stages are characterized by positive reaction to test, although penicillin has not previously been given. The active stage, therefore, is the consequence of a pre-existing latent sensitivity. The reaction is typically erythematovesicular, tending to localize on the hands, feet, and groins and may progress to a generalized exfoliative dermatitis.

Of the various tests for sensitivity the delayed (forty-eight-hour) cutaneous test, using 0.1 cc. intradermal, 2,000 units, or 1.2 mg. in 0.1 cc. isotonic sodium chloride, is a reliable index of penicillin sensitivity. This is read after forty-eight hours and is similar to the trichophytin test.

Reactions may occur either in the use of commercial preparations or the pure crystalline type, but apparently they are more frequent in the former. Some of these reactions may be due to impurities rather than the penicillin itself.

Reaction of the individual patient to any type of preparation is unpredictable. Sensitivity may rapidly disappear or may gradually decrease over a period of six months to a year so that a second course produces no reaction. Conversely, sensitivity may heighten with each subsequent attack, and these patients should be given small trial doses.

—*French K. Hansel, M.D., Annals of Allergy, September-October, 1949*

THE PROBLEM OF BILATERAL MULTILOBAR BRONCHIECTASIS

JOHN D. STEWART, M.D., and PAUL A. KENNEDY, M.D., Buffalo, New York

(From the University of Buffalo Medical School and the Edward J. Meyer Memorial Hospital)

WITH the rapid progress in chest surgery and the increasingly effective operative treatment of chest diseases, it becomes necessary to revise indications for surgical operation. As the simpler, more favorable lesions respond to standardized methods, the possibility of success with the more advanced and complicated lesions has to be considered. Chronic bilateral multilobar bronchiectasis is a disease which illustrates this point. Furthermore, although it is true that the range of applicability of surgical treatment in such problems is expanding, it must be remembered that the effectiveness of nonsurgical measures may also be increasing. Periodic appraisal of therapy and sharpening of criteria in selecting cases for operation, therefore, is a recurrent necessity if the patient is to receive the best management. What was best, even five years ago, may not be the best today.

When confronted with a case of bilateral multilobar bronchiectasis, the surgeon must ask himself several searching questions, such as:

1. What is the extent of the patient's disability?
2. What is the danger of complications, and what is the patient's life expectancy?
3. What has medical therapy to offer the patient?
4. What associated diseases are present which may influence operability?
5. What is the exact distribution of the bronchiectasis?
6. What is the risk of excisional therapy?
7. How effective will extirpation be in eliminating symptoms and improving life expectancy?

It is clear that statistical data on which to base answers to some of these questions are lacking. It becomes all the more necessary, therefore, for those interested in the problem to analyze their clinical experience carefully and by a free interchange of opinion to promote orthodoxy.

It was generally agreed ten years ago that the outlook for the patient with bronchiectasis not treated surgically was gloomy. Perry and King, in a careful study of 400 cases of bronchiectasis, found that the nonsurgically treated cases over a twelve-year period showed a mortality rate of 26 per cent, the causes of death being pneumonia, brain abscess, right heart failure, hemorrhage, pyopneumothorax, and suicide.[1] Of the deaths, 41 per cent occurred within five years of the time of hospitalization and study. The working and living capacity of the patients not treated by excisional therapy could be classified as excellent in only 38 per cent. Bradshaw, Putney, and Clerf, in a report on 171 patients with bronchiectasis treated by nonsurgical measures between 1925 and 1935 found that 34.5 per cent of the patients had died of bronchiectasis or its complications by 1941.[2] These careful and authoritative studies were based on clinical material in which general medical care included bronchoscopic drainage and was probably as good as that now available, except in one very important respect, namely, the use of antibiotic drugs.

It is common experience now to find that sufferers from bronchiectasis are greatly benefited by taking the antibiotic drugs, particularly penicillin, either parenterally or by inhalation. The severity of exacerbations of acute respiratory infection is diminished, sputum is less voluminous and less odorous, and the patient feels better in general. It is not possible to say, however, whether the patient's life expectancy has correspondingly improved, and only a longer experience will give us the answer. Such factors as development of resistant bacterial flora and increase in untoward side actions of the drugs with prolonged use may limit the value of these agents. On the other hand, discovery of new and more effective antibiotics and adjuvant drugs is a constant possibility. Despite the value of antibacterial therapy, however, it must be kept in mind that bronchiectasis has a mechanical component which is irreversible in the chronic state. Dilatation and weakening of the bronchial wall, epithelial metaplasia, and peribronchial fibrosis are permanent changes. The so-called "dry" or hemorrhagic bronchiectasis illustrates the lesion which produces serious symptoms with minimal infection. It would seem, therefore, that the role of the antibiotics at present should still lie in extending the applicability of excisional therapy by their value in preoperative and postoperative control of infection. Their palliative use should be reserved for patients who are not candidates for definitive surgical treatment.

Bronchiectasis shows a bilateral distribution in approximately one third of the cases. In their study of 400 cases of bronchiectasis, Perry and

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King found that the disease involved parts of both lungs in 28 per cent. The left lung alone was affected in 45 per cent, the right in 27 per cent. The left lower lobe, or left lower lobe and lingula considered together, was diseased in 42 per cent and constituted by far the most common unilateral involvement. The commonest bilateral distribution, however, was in the right lower and left lower lobes, found in 55 of the 113 bilateral cases.

Next most common in the bilateral group was the right middle, right lower, and left lower lobe combination, occurring in 24 cases, followed in frequency by the right middle and left lower lobe combination (20 patients). Segmental distribution was not analyzed in this study. It is notable that the upper lobes, exclusive of the lingula, were affected in only three instances in the 113 cases of bilateral involvement. The rarity of upper lobe involvement when bronchiectasis is bilateral is a significant point to the surgeon, for it has been shown repeatedly that individuals may live in good health with only the two upper lobes remaining. In fact, Graham, as well as others, has shown that parts of the two upper lobes may alone provide adequate oxygenation.[3] One of our cases was a young woman, thirty-two years of age, who went through pregnancy uneventfully after excision of the left lower lobe and the right lower and right middle lobes, the second operation being performed when she was in the fourth month of pregnancy. Her health subsequently has been good.

What, then, are the contraindications to excisional therapy in bilateral bronchiectasis? In the rare case the distribution of the disease may be so widespread as to render surgical treatment unwise. However, we believe that some patients with extensive bilateral disease but with preponderant involvement of one lobe may receive sufficient benefit from the removal of such a lobe to make the operation worth while. Practically speaking, both upper lobes should be free of disease if a program of bilateral excisional therapy is to be recommended. Advancing age may be looked upon as contraindicating surgery owing to limited life expectancy, but it is unwise to lay down a hard and fast rule. The oldest patient we have operated upon for unilateral bronchiectasis was sixty-five years old, and the oldest with bilateral bronchiectasis was forty-four years of age.

Associated disease of such nature as to preclude survival for more than five years should constitute a bar to surgery, and here should be listed the degenerative cardiovascular and renal diseases and malignant disease of doubtful outcome. Actually, of course, the younger the patient, the stronger the indications for extirpative surgery, not so much because of the better tolerance of the operation, but because of the readier cardiac and respiratory adjustment to reduced lung volume. We have had one death in a patient thirty-five years of age with extensive bronchiectasis of both lower lobes and with known severe amyloidosis. Renal function was seriously reduced, and we feel in retrospect we should have advised against surgical treatment.

In considering the question of what excisional surgery has to offer the patient with bilateral bronchiectasis, it is possible to take an optimistic attitude. In the patient with infection and much sputum the results of excisional surgery are roughly quantitative, the amelioration being proportional to the amount of diseased tissue removed. As a matter of fact, in our experience, it is sometimes difficult to persuade the patient to undergo the operation on the less diseased side, so great is his relief from ablation of the lesions on the more affected side. Since Eloesser reported the first case of bilateral lobectomy in 1933, steady improvement in the technic of excisional surgery of the lung has occurred, and perhaps of greater importance have been the advances in preoperative and postoperative care.[4] The risk of such surgery has been brought to a point where the operations can be recommended without hesitation, and the incidence of postoperative empyema, pneumonitis, and delayed re-expansion has been satisfactorily reduced.[5,6] Kergin recently reported a series of 31 bilateral operations on patients with bronchiectasis, with an operative mortality of 6.4 per cent and a patient mortality of 12.8 per cent.[7] The four deaths all followed the second side of a bilateral operation. This probably represents a figure higher than average for busy thoracic surgical clinics in this country. The operative risk in bilateral excisional therapy is, of course, definitely higher than in unilateral operation, not only because the same patient undergoes two operations rather than one, but also because infection is more widespread, oxygenation is harder to maintain, and less functioning lung tissue is present.

With respect to the operative management of bilateral bronchiectasis, the following principles are worthy of emphasis:

1. The exact distribution of the disease must be precisely determined by bronchography and bronchoscopy.
2. The preoperative use of penicillin and streptomycin is continued until maximal reduction in sputum occurs.
3. Preoperative bronchoscopic aspiration is practiced in the "wetter" cases.
4. The worse side is operated on first.
5. The maintenance of a clear airway and the

avoidance of anoxia is the prime concern of surgeon and anesthetist during the operation.

6. Blood transfusion is freely used, on the basis of measuring blood loss during operation and replacing it concurrently.

7. Ether anesthesia is preferred.

8. Early re-expansion of the lung is encouraged by double catheter drainage of the pleural cavity, aspiration of secretions, minimizing the use of narcotics, and urging early ambulation.

9. Postoperative oxygen therapy is routinely used.

10. The second side is operated upon only after an interval of six months to a year. The bronchoscopic mapping with lipiodol is repeated before the second operation is done.

With regard to surgical technic, interest centers chiefly on the assessment of segmental resection, as compared with lobectomy and lingulectomy. In our opinion, segmental resection is as yet on trial in bilateral bronchiectasis, and much more experience must be acquired in different clinics before the advantages of the operation may be properly weighed against its disadvantages. On the basis of our somewhat limited experience with segmental resection, we feel that the following questions must be raised:

1. Can the distribution of the disease be accurately localized to bronchopulmonary segments by means of the combined evidence of bronchography and gross pathologic findings at the operating table?[8]

2. What is the fate of the remaining neighboring segments in terms of susceptibility to infection and in terms of functional capacity?

3. Will the increased incidence of pleural infection, delayed re-expansion, and air leaks lead to fibrosis which neutralizes the possible gain in ventilatory function ascribable to segmental resection as compared with lobectomy?

4. Do the incidence of anatomic variations and the frequency of intersegmental spread of infection preclude the surgical precision implicit in segmental resection for bronchiectasis?

5. Is a single bronchopulmonary segment, which may itself become overdistended and angulated in its role as a space-filler, a liability or an asset to the patient?

6. Can the venous drainage of remaining segments be preserved with sufficient assurance so that the occasional necessity to perform secondary removal will not arise?

It is obvious that segmental resection offers tempting theoretic advantages over lobectomy, but it seems to us proper to regard the concept as still in its testing phase as far as bilateral bronchiectasis is concerned.

In conclusion, it seems fair to state that, although extirpative therapy in bilateral bronchiectasis requires discrimination in the selection of cases, surgical skill, and close attention to preoperative and postoperative care, it is, nevertheless, the therapy which has most to offer the patient. Further refinements in surgical technic may reasonably be expected to enhance the efficiency of such surgery.

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Discussion

Paul A. Kennedy, M.D., *Buffalo.*—I would like to lay further stress on several important aspects of this subject which have been referred to in this paper.

Since gross recognition of diseased tissue at operation is frequently difficult, precise bronchographic mapping is probably the most important point in the accurate diagnosis of bronchiectasis. Gross recognition of the involved segments often may be difficult at the time of operation, and the surgeon must depend to a great extent on bronchographic studies. As Pilcher has stated, correlation of the two may be extremely difficult.

There are two important points that require considerable care in making good bronchograms. First, instillation of the oil must be done with as little cough disturbance as is possible, and, second, the bronchi must be positioned properly so that adequate filling will follow. The first implies good topical anesthesia, and the latter demands an accurate knowledge of segmental anatomy of the lobes. We use a 5 per cent cocaine and 1 per cent pontocaine solution as a topical anesthetic; about 10 cc. are used. Careful positioning of the patient with the segment to be filled in a dependent position is, of course, essential. Since the entire surgical program is dependent on good recent bronchographic studies, the need for care and attention to details is obvious.

As we have indicated, we have some doubts at the present time about the usefulness of segmental resection in the treatment of bilateral bronchiectasis, for several reasons.

If it is to have a place, there must be actual conservation of functioning tissue, or the inflated preserved tissue must, by its presence, aid in preserving function in the remaining adjacent lobe or lobes. The complications of the procedure, such as the increased incidence of empyema, persistent atelectasis of the segment, delayed re-expansion, and pneumothorax, must not nullify the possible good intended.

The incidence of empyema following lobectomy is now as low as 1 per cent. Varying figures are available as far as empyema following segmental resection is concerned. Overholt, in the August, 1948, issue of the *Journal of Thoracic Surgery*, reported an incidence of empyema in 23.7 per cent of 59 segmental resections. He suggested that complications will be less frequent with an increase in skill in carrying out the dissection. The hospital stay was longer in their patients.

Samson, discussing Chamberlain's paper on segmental resection in the February, 1950, issue of the *Journal of Thoracic Surgery*, stated that their complications have been approximately three times greater in segmental resections than in lobectomies. Their empyema rate in 30 segmental resections was 23 per cent. Shaw, in a discussion of the same paper, quoted an empyema rate of 13 per cent in 60 segmental resections. Kergin in the same issue added that they had abandoned the resection of the basal segments with preservation of the dorsal segment because of the high incidence of pleural complications and because of a tendency to the development of bronchiectasis in the previously healthy segment.

In a recent case in which we resected the basal segments of the left lower lobe, we had difficulty with re-expansion of the dorsal segment, and a small empyema resulted without evidence of fistula. Convalescence was prolonged. We feel that we preserved little or no function by retaining the dorsal segment of that lobe. Whether or not ventilation in the upper lobe was impaired is uncertain.

In a recent report in the April, 1949, issue of *Surgery*, Ochsner and DeBakey stated that because of the frequency of complications they felt segmental resection had a limited field of usefulness. They resected the basal segments only twice in the series reported.

Extensive lobar resections are compatible with normal activity. There are sufficient reports in the literature to this effect. Recently, Adams, discussing Kergin's paper, described a case he did in the early 1930's, in which both lower lobes, the right middle lobe, lingula, and a portion of one upper lobe were resected. Notwithstanding marked emphysema, this patient had a vital capacity of 3,700 cc.

Certainly, we must strike a note of caution before we unreservedly recommend segmental resection in cases of bilateral bronchiectasis. All will admit that extensive bronchiectasis theoretically is one of the prime indications for segmental resection. As yet, we cannot fully agree that functioning pulmonary tissue is preserved in sufficient amounts to outweigh the reported increase in the number of complications. Perhaps after further clinical trial and with improvements in technic, it will prove to be the method of choice.

RHEUMATIC BRAIN DISEASE AS A CAUSE OF CONVULSIONS

Since it appears that rheumatic fever is fundamentally an inflammatory condition of the fibrous connective tissue, the brain cannot be excluded as a possible site. In convulsions, therefore, it should be considered along with other potential causes. The brain pathology is basically an obliterating proliferative endarteritis most common in small meningeal and cortical vessels with subsequent softening of the cortex. The difficulties of diagnosis and differentiation of rheumatic brain disease should not be minimized, inflammatory activity of which is even more difficult to evaluate in the central nervous system than in the heart. Statistics from Breutsch show that the incidence of rheumatic heart disease in a mental hospital was high above the national average, and 29 of 30 successive necropsies on patients with rheumatic heart disease revealed rheumatic lesions of the brain. The nature of rheumatic processes, which are often insidious and asymptomatic, may make them the cause of more psychiatric and neurogenic illness than suspected.

However, we should guard against taking advantage of the admittedly vague aspect of the diagnosis in the attempt to classify disease beyond our science and our art. Five cases with histories of recurrent convulsive seizures, all of whom had rheumatic heart diseases, are reported. Average age of patients was forty-five and six-tenths years, and the average age of onset was thirty-eight and six-tenths years, whereas statistical studies indicate that the onset of convulsive seizures in idiopathic epilepsy rarely occurs after twenty years of age. If the patient is over twenty years of age when the seizures first appear, the diagnosis of idiopathic epilepsy should be made only after full consideration of other possible factors.—*J. F. Whitman, M.D., and Louis J. Karnosh, M.D., Cleveland Clinic Quarterly, July, 1949*

THE QUANTITATIVE REPLACEMENT OF BLOOD VOLUME DEFICITS IN THE SURGICAL PATIENT

Carl Reich, M.D., and Edward J. Wagner, M.D., New York City

(*From the St. Clare's Hospital*)

DURING the last decade the mortality rates of patients undergoing major surgery have been progressively reduced. This is due not only to further improvements in technical method but also to the many new chemical and physiologic agents now available to the surgeon. Sulfa drugs, penicillin, streptomycin, and aureomycin have controlled infection to a remarkable degree. Anticoagulants, namely, Dicumarol and heparin, have minimized the danger of postoperative thrombosis and pulmonary embolism. Whole blood, plasma, protein solutions, and saline are now readily available to combat hemorrhage, shock, and dehydration.

Unfortunately, however, the replacement therapy by blood and its derivatives is administered in a rather haphazard manner in most hospitals. The general appearance of the patient and the condition of the tongue are used as guides for the administration of saline and glucose solutions. The peripheral blood counts and hematocrit are done at regular intervals and whole blood or plasma administered depending upon the readings.

Concentration measurements of these constituents as an index of their total amount may be reasonably accurate for the normal subjects. However, as Nelson *et al.* have shown, it often leads to erroneous conclusions when applied to sick patients.[1] In a series of 85 patients with diminished blood volume these investigators found that the average hemoglobin and hematocrit values were 75 and 85 per cent of standard, respectively. The average total circulating hemoglobin, however, was 55 per cent, and the average total red cell volume was 66 per cent of standard. These figures demonstrate the much greater decrease in total as compared with hemoglobin concentration values in this series. Many of these patients suffered considerable weight loss which, with an increase in interstitial fluid, is a factor in making the concentration readings inaccurate.

The chronically ill patient with weight loss and debilitation is a poor surgical risk. He is unable to tolerate a minimum of hemorrhage and is more susceptible to surgical shock. The weight depletion, however, is not associated with an actual reduction of the potential vascular bed.

For these reasons empiric judgment alone is not dependable in evaluating the level of a patient's circulating blood and plasma volume. Therefore, exact studies must be done as a guide to quantitative replacement of blood volume deficits.

Scudder and his associates have further stressed the concept of protein and hemoglobin masses in contradistinction to concentrations.[2] The low protein and hemoglobin mass explains the debilitated patient's inability to tolerate surgery. This type of case does not tolerate isotonic sodium chloride solution and frequently suffers from fluid and salt retention after such infusions. Overzealous and uncontrolled administration of such solutions can occasionally contribute to the death of the patient.

With these considerations in mind it seems important that volumetric blood studies be included as part of the preoperative and postoperative care of surgical patients. The most practical method embodies the use of the dye T-1824. The fundamental principles outlined by Gregersen are simplest for routine hospital use.[3] The technic of Gibson and Evans is slightly more accurate but requires seven samples of blood, while that of Gregersen calls for but two, which is an important consideration from the standpoint of the patient and the laboratory.[4]

Criticism has been leveled at the dye technic of blood volume determinations, but recent work of Mayerson shows that, by the use of a correction factor to be described later, the dye method and the radioactive phosphorous methods agree within less than 5 per cent.[5] The above authors prove this by concomitant measurements of red cell mass and plasma volumes with the P-32 technic and T-1824 method, respectively, in ten normal and 35 hospitalized patients.

During the past year we have studied the blood volumes on a selected group of surgical patients. The various diseases of the patients and number of cases of each type are as follows:

Diseases of the gastrointestinal tract........	46
Gynecologic pelvic conditions............	19
Hepatitis............................	3
Splenectomy..........................	2
Esophageal varices....................	3
Burns................................	1

Technic

Volumetric blood studies should be done in the fasting state, but if this is not convenient, the patient is allowed tea with dry toast. The reason for these restrictions is to avoid lipemia in the serum which interferes with accurate readings.

Hemolysis can also produce erroneous results, and for this reason syringes and needles must be clean and dry. We use all glass 10-cc. syringes and 20-gauge needles. These are carefully washed with water and then defatted with acetone and autoclaved.

The Evans blue is furnished in accurate 5-cc. ampules (Warner). These are accompanied by an ampule of saline.

In doing the test the entire contents of an ampule of dye is drawn into a 10-cc. syringe through a 20-gauge needle, and a little saline is then drawn in from the saline ampule in order to add the dye in the needle and get the full 5-cc. The needle is then disconnected and the syringe placed in a readily available position.

With another sterile 10-cc. syringe with a 20-gauge needle attached, venapuncture is performed in the best available arm vein. The tourniquet may be applied for a moment until the vein is entered but is then removed as the blood should be taken without stasis. After waiting a few minutes 10-cc. of blood is withdrawn, the syringe is disconnected with the needle remaining in place, the dye-filled syringe connected, and the dye injected. The dye syringe is then washed once or twice with drawing back on the plunger and reinjecting and the syringe and needle are then withdrawn. The time is taken accurately. Five cubic centimeters of the blood are placed in a dry tube and allowed to clot; the other 5 cc. are put into a tube, prepared by evaporating 0.5 cc. of 1.2 per cent ammonium oxalate and 0.8 per cent potassium oxalate to dryness, and shaken to prevent clotting.

Exactly ten minutes after the dye injection, 5 cc. of blood are taken without stasis from a vein in the other arm and placed in a dry tube and allowed to clot. After the blood has clotted in the plain tubes they are carefully rimmed and centrifuged. The serum is pipetted off into two 10 by 75 mm. Coleman cuvettes. The oxalated blood is used for hemoglobin determination, which is conveniently done with the spectrophotometer at 540 μ, and for the hematocrit reading. The hematocrit used is the Wintrobe tube which is centrifuged at 3,000 revolutions per minute for one-half hour and the reading corrected by multiplying by the factor 0.915.

The serums in the Coleman cuvettes which represent the blood specimens before and after the injection of T-1824 are placed in the Coleman spectrophotometer, and the optical densities are read at 615 μ.

Any other type of photoelectric colorimeter can be used, but the Coleman junior is recommended for accuracy and simplicity.

Calculations

The plasma volume is calculated from the relation $C_1 \times V_1 = C_2 \times V_2$ where C_1 is concentration of dye solution injected, V_1 is cubic centimeters of dye injected, C_2 is concentration of dye in plasma obtained ten minutes after injection, and V_2 is plasma volume.

Total blood volume in cubic centimeters is found by dividing the plasma volume by 1 minus the hematocrit reading. The difference between the total blood volume and the total plasma volume is the red cell mass in cubic centimeters. Total hemoglobin in grams is the total blood volume multiplied by grams hemoglobin and divided by 100.

The expected total blood volume is weight in Kg. times 85. The expected total plasma volume is weight in Kg. times 45, and the expected total red cell mass is weight in Kg. times 40.

Plasma proteins are determined by the copper sulfate method, using the serum from the before cuvette. Total plasma protein is calculated by multiplying cubic centimeters of total plasma by grams of protein and dividing by 100. Grams total plasma protein multiplied by 30 gives grams total tissue protein.

A few cases will be described in detail to illustrate special points and clarify the calculations of deficits.

Case Reports

Case 1.—A man, aged sixty years, with a normal weight of 68 Kg. and present weight of 61 Kg., had a diagnosis of carcinoma of large bowel. Hemoglobin was 10 Gm., hematocrit 38 per cent, and plasma protein 5 Gm.

Expected total plasma volume	3,060 cc.
Determined total plasma volume	3,158 cc.
Excess	98 cc.
Expected total blood volume	5,780 cc.
Determined total blood volume	5,093 cc.
Deficit	687 cc.
Expected total red cell mass	2,720 cc.
Determined total red cell mass	1,935 cc.
Deficit	785 cc.
Expected total hemoglobin	867 Gm.
Determined total hemoglobin	509 Gm.
Deficit	358 Gm.
Expected total plasma protein	214 Gm.
Determined total plasma protein	157 Gm.
Deficit	57 Gm.
Total tissue protein deficit	1,710 Gm.

It is important to note that in this case there is a marked weight loss. The expected volumes are, therefore, calculated from the normal weight. This patient is anemic as seen by the hemoglobin of 10 Gm., but this figure does not indicate the marked hidden deficit of 785 cc. of red cells. In terms of whole blood this means about 2,000 cc. Therefore, replacement therapy in this case should consist of 2,000 cc. of whole blood, which not only corrects the red cell deficit but adds about 80 Gm. of protein. The rest of the protein deficit has to be made up by food protein and/or intravenous amino acids.

Case 2.—A man, aged fifty-four years, with normal weight of 82 Kg. and present weight of 74 Kg., had a diagnosis of bleeding peptic ulcer. Hemoglobin was 6 Gm., hematocrit 21 per cent, and plasma protein 4.3 Gm.

Expected total plasma volume	3,690 cc.
Determined total plasma volume	3,846 cc.
Excess	156 cc.
Expected total blood volume	6,970 cc.
Determined total blood volume	4,870 cc.
Deficit	2,100 cc.
Expected total red cell mass	3,280 cc.
Determined total red cell mass	1,024 cc.
Deficit	2,256 cc.
Expected total hemoglobin	1,045 Gm.
Determined total hemoglobin	292 Gm.
Deficit	753 Gm.
Expected total plasma protein	258 Gm.
Determined total plasma protein	164 Gm.
Deficit	94 Gm.
Total tissue protein deficit	2,820 Gm.

In this case the total blood volume deficit is 2,100 cc. However, the red cell deficit of 2,256 cc. indicates the importance of this technic in uncovering hidden deficits. To replace this deficit 4,000 cc. of whole blood are necessary. This would supply about 150 Gm. of protein, but, since the tissue protein deficit is 2,820 Gm., a high protein diet or intravenous amino acids are also necessary.

Case 3.—A woman, aged sixty-two years, with a normal weight of 70 Kg. and present weight of 67 Kg., had a diagnosis of carcinoma of the cervix. Hemoglobin was 9.6 Gm., hematocrit 35 per cent, and plasma protein 7.0 Gm.

Expected total plasma volume	3,150 cc.
Determined total plasma volume	2,777 cc.
Deficit	373 cc.
Expected total blood volume	5,950 cc.
Determined total blood volume	4,272 cc.
Deficit	1,678 cc.
Expected total red cell mass	2,800 cc.
Determined total red cell mass	1,495 cc.
Deficit	1,405 cc.
Expected total hemoglobin	892 Gm.
Determined total hemoglobin	410 Gm.
Deficit	482 Gm.
Expected total plasma protein	220 Gm.
Determined total plasma protein	194 Gm.
Deficit	26 Gm.
Total tissue protein deficit	780 Gm.

Deficit to be supplied is 1,405 cc. red cells and 780 Gm. protein. This case needs 1,405 cc. of red cells or about 2,500 cc. of whole blood, which again would supply about 100 Gm. of protein.

Case 4.—A man, aged forty-two years, with normal weight of 61 Kg. and present weight of 55 Kg., had a diagnosis of portal hypertension. Hemoglobin was 10.2 Gm., hematocrit 30 per cent, and plasma protein 7.5 Gm.

Expected total plasma volume	2,745 cc.
Determined total plasma volume	3,130 cc.
Excess	385 cc.
Expected total blood volume	5,185 cc.
Determined total blood volume	4,470 cc.
Deficit	715 cc.
Expected total red cell mass	2,240 cc.
Determined total red cell mass	1,340 cc.
Deficit	900 cc.
Expected total hemoglobin	777 Gm.
Determined total hemoglobin	447 Gm.
Deficit	330 Gm.
Expected total plasma protein	191 Gm.
Determined total plasma protein	234 Gm.
Excess	43 Gm.

Deficit to be replaced is 900 cc. red cells. This patient does not require any protein; 900 cc. of red cells are necessary which are supplied by about 2,000 cc. of whole blood.

Case 5.—A woman, aged thirty-nine years, with a normal weight of 61 Kg. and present weight of 55 Kg., had a diagnosis of intestinal perforation and peritonitis. Hemoglobin was 16 Gm., hematocrit 45 per cent, and plasma protein 5.0 Gm.

Expected total plasma volume	2,745 cc.
Determined total plasma volume	2,380 cc.
Deficit	365 cc.
Expected total blood volume	5,185 cc.
Determined total blood volume	5,300 cc.
Excess	115 cc.
Expected total red cell mass	2,440 cc.
Determined total red cell mass	2,920 cc.
Excess	480 cc.
Expected total hemoglobin	777 Gm.
Determined total hemoglobin	848 Gm.
Excess	71 Gm.
Expected total plasma protein	192 Gm.
Determined total plasma protein	119 Gm.
Deficit	73 Gm.
Total tissue protein deficit	2,190 Gm.

In this case there is no deficit of red cells, and whole blood is contraindicated. There is a marked protein deficit which has to be made up by food, plasma, albumin, or amino acids.

Case 6.—This patient with normal weight of 66 Kg. had a diagnosis of gastric ulcer. Hemoglobin was 8.4 Gm., hematocrit 29 per cent, and plasma protein 7.0 Gm.

Expected total plasma volume	2,970 cc.
Determined total plasma volume	4,280 cc.
Excess	1,310 cc.
Expected total blood volume	5,610 cc.
Determined total blood volume	6,020 cc.
Excess	410 cc.
Expected total red cell mass	2,640 cc.
Determined total red cell mass	1,740 cc.
Deficit	900 cc.

In this case 1,800 cc. of whole blood are needed, or, if red cells alone are used, about 1,000 cc. of red cells. If there is any danger of overloading the circulation, red cell suspensions will supply the necessary deficits in this case.

Comment

Most of our cases were similar to those illustrated. There was usually some weight loss and a certain degree of anemia. The ordinary concentration determinations of hemoglobin, red cells, and hematocrit did not clearly indicate the degree of reduction of circulating hemoglobin, circulating plasma protein, and total red cell mass. These facts are well illustrated in Cases 1 and 2 in which a marked hidden red cell deficit was uncovered by volumetric studies.

In addition, it is possible to determine by these technics exactly which element is lacking and to supply it quantitatively. Whole blood is given when there is a deficit in the total blood volume or if the deficits are in the red cells and proteins. If the deficit is mainly in red cell mass without a total blood volume deficit, red cells alone can be given. This condition is seen frequently in those cases in which blood loss has been very slow and plasma has come into the circulation to make up the total blood volume. In such patients, total blood volume would be normal, while the plasma volume would be increased with a decrease of red cell mass (Case 6).

Red cell suspensions are obtained by allowing whole blood to sediment in the cold overnight and withdrawing the supernatant plasma. The suspension, which has a hematocrit of about 65 per cent, can be used without dilution. Red cell suspensions are of value in that they supply more hemoglobin with less of the osmotic activity of the plasma proteins and with less sodium, thus increasing the dose that can be safely given without overloading the circulation.

There are other instances, as in Case 5, in which protein alone is lacking.

Another important factor observed with depleted patients was that their general health improved under this regime, and to all appearances it seemed that their operative sites healed more quickly.

Whenever possible, these volumetric studies should be done preoperatively and the various deficits corrected before surgery is undertaken. It is permissible to repeat the dye injection within a few days so that another evaluation can be done postoperatively and replacement therapy be instituted accordingly.

In our experience the methods described above have been eminently satisfactory. There have been no untoward results or harmful effects so far as the patients were concerned. The dye produces no reactions, and the amounts advised caused no staining of the tissues. With a little practice the whole procedure can be done very quickly, and the results give the surgeon a sense of definite orientation in regard to the replacement of blood deficits.

Conclusions

1. Volumetric blood studies are necessary in order to replace blood deficits quantitatively.
2. The technic is accurate and adapted to routine hospital use.
3. In surgical cases hidden deficits were easily uncovered by this method.
4. Surgical patients prepared preoperatively by these technics are less liable to shock and show good postoperative recovery and wound healing.

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If you are a medical man, take a warm interest in the recovery of your patients; it is your duty in a moral sense, and your interest in a political one.

FETAL AND NEONATAL MORTALITY

Sigismund Peller, M.D., S. Edlin, and B. Schulman, New York City

(From the Maternity Home, Lake View, of the Jewish Board of Guardians)

DURING the last fifty years, mortality of infants who survived the first postnatal week has shrunk considerably, while perinatal mortality, i.e., the sum of stillbirth and neonatal death rates (including the first postnatal week only) remained unchanged until about the late 1930's and since then has been diminishing slightly. In hospitals during the 1930's perinatal mortality ranged between 4.3 and 6.2 per cent. The same applies to the 1940's, although there are some exceptions with either higher or lower values. The latter, called corrected values, were obtained by eliminating from calculation some groups of fetuses which are usually counted.

The recent improvements are more clearly reflected in hospital reports on fatality in comparable weight groups and in the official mortality statistics.[1] Here and abroad, in the 1930's as before, the general population in cities had a perinatal mortality of about 6 per cent, while the rate for the underprivileged groups (nonwhites, illegitimate) was 8 to 11 per cent. The corresponding values for New York City in 1946 were 4.7 per cent for the entire population, 4.4 per cent for whites, and 8.5 per cent for the nonwhites. From these figures are excluded (1) all fetal deaths which occurred before the end of the twentieth week of gestation and (2) all deaths that occurred after the end of the first postnatal week. The small reduction observed in recent years is due to a combination of measures taken prior to, during, and following delivery.

In view of the limited results of these endeavors, the impression might be gained that we are close to the lowest achievable death rates. This is not so. In the ruling families of Europe, perinatal mortality as defined above has been continuously dropping for more than a century, the values for 1800 to 1849, 1850 to 1899, and 1900 to 1935 having been 6.3, 2.3, and 0.8 per cent (!), respectively.[2] What the ruling families have achieved since 1850 should be possible now for the general population.

Material

The material for this investigation was drawn from Lake View, a maternity home of the Jewish Board of Guardians. All women who find shelter there have conceived out of wedlock. In the years 1939 to 1948, a total of 711 pregnant women were admitted and remained in Lake View up to the onset of labor whereupon they were transferred for delivery to the Staten Island Hospital.

Compared with legitimate offspring, illegitimate newborn are of a low average size and weight, have a less favorable size-weight ratio, and a much higher perinatal mortality. This is true in every European country, regardless of whether the mother is delivered at home or in a hospital, the implication being that at the time of admission to the hospital it is too late for leveling off the effects of illegitimacy upon the viability of the fetus. These effects, however, are not inevitable.

In the maternity home, Lake View, 558 women were thirteen to twenty-four years of age, and 153 were older. Approximately 97 per cent were unmarried, the rest being divorced or separated. More than nine-tenths were pregnant for the first time. They had a wide range of educational and vocational backgrounds; some were feebleminded, others had a high I.Q. Many had grave emotional disturbances, severe conflicts with their families, a home disrupted by divorce, by mental disease, or by disorderly conduct of a parent. In the case histories were mentioned suicidal attempts, cerebral concussion, encephalitis, infantile paralysis, chorea, valvular heart disease, diabetes, dysthyroidism, hypertension, clubfoot, amputated arm, etc. The attitude toward the fetus differed from affection or indifference to outright rejection with continued attempts to destroy the fetus.

The women were, on the average, 63.3 inches tall and at the time of admission weighed an average of 145.7 pounds. As many as 15 per cent had a weight of 170 or over, and 4 per cent weighed 200 to 296 pounds. The average age at menarche, calculated for 536 women, was thirteen and seven-tenths years which is low compared to the values compiled by Pearl.[3] Almost 20 per cent of the Lake View residents reported the first menstruation to have occurred at an age less than twelve years.

Prior to the onset of labor the 711 women spent an average of seventy days in the maternity home. Table 1 shows the duration of residency in the maternity home.

Of the 711 women, 701 delivered singletons and ten became mother of twins. On the basis of statistical experience only eight sets of twins were to be expected.

TABLE 1.—DURATION OF RESIDENCY IN MATERNITY HOME

Days	Percentage of Women
0 to 7	3.6
8 to 28	13.2
29 to 84	51.0
85 to 140	29.5
141 to 187	2.5

Perinatal Mortality

Altogether 3.1 per cent of all women terminated pregnancy either by miscarriage or stillbirth or by delivery of a baby who died within seven days. Thus, of the 721 fetuses, 24 (3.33 per cent) were lost; of them 18 were singletons (2.56 per cent of all singletons), and six belonged to the small group of twenty twin individuals (Table 2). These figures include all deaths regardless of the duration of gestation. Of the 697 infants who survived the first week, four, or 0.57 per cent, died before the end of the first month.

TABLE 2.—FETAL AND NEONATAL DEATHS UP TO THE END OF THE FIRST MONTH

	Singletons	Twins
Born dead		
Miscarriages (to twentieth week)	0	2
Borderline cases	0	3**
Premature and mature stillbirths	10	0
Died first week postnatal		
Previable	3*	0
Premature and mature	5	1
Died from second week postnatal to end of first month	4	0
Total	22	6

* Gestation periods of 22 weeks, 6 months, 6 months +; birth weights known in two cases—850 and 900 Gm.

** 1 pair of twins (27 weeks gestation) and one dead fetus in another set of twins.

If the miscarried pair of twins is discounted, the perinatal mortality was only 3.0 per cent, of which 1.8 per cent were stillbirths and 1.2 per cent were neonatal deaths. These are favorable values as compared with those for all whites in New York City, among whom only 1.3 per cent were illegitimate in 1946. On the other hand, mortality of Lake View infants who survived the first week is high and approaches the value for Negroes in New York City (Table 3).

Most favorable was perinatal mortality in the group of 558 children whose mothers were thirteen to twenty-four years of age: 1.8 per cent for singletons and 1.97 per cent for singletons and twins together. For the 113 children of twenty-five to twenty-nine-year-old mothers perinatal mortality was 5.3 ± 2.1 per cent, and for the 48 children of the oldest group it rose to 10.4 ± 4.3 per cent. For all singletons whose mothers were under thirty years of age, the stillbirths plus neonatal deaths amounted to not more than 1.96 per cent.

TABLE 3.—COMPARISON OF FETAL, NEONATAL, AND INFANT MORTALITY BETWEEN LAKE VIEW PATIENTS FROM 1939 TO 1948 AND NEW YORK CITY STATISTICS FOR 1946

	Lake View Patients,* 1939–1948	—New York City, 1946**—		
		Whites	Negroes	Total
Rate of miscarriage and perinatal mortality				
Total fetal deaths	2.08	7.47	11.15	7.83
Deaths during first week postnatal	1.25	1.71	3.07	1.84
Total	3.33	9.18	14.22	9.67
Corrected perinatal mortality (without those under 20 weeks)				
Total fetal deaths	1.80	2.72	5.77	3.02
Deaths during first postnatal week	1.25	1.71	3.07	1.84
Total	3.05	4.43	8.84	4.86
Infant mortality from second week to end of first month	0.57	0.28	0.61	0.31
Total perinatal mortality to end of first month	3.62	4.71	9.41	5.17

* All Lake View patients were white, but there were some Negro fathers.

** Vital statistics, New York City, 1946.

For the whole group, regardless of the mother's age, perinatal mortality of babies who weighed at least 1,000 Gm. at birth was only as high as 2.3 per cent. Among these babies 8.8 per cent had a weight of 1,000 to 2,499 Gm. which, in view of the fact that all were illegitimate, compares favorably with the 8.1 per cent for all whites of New York City in 1946.

Coincident with the low death rate in the group of children whose mothers were thirteen to twenty-four years of age is the smaller percentage of underdeveloped children and a higher percentage of children of 3,500 Gm. or more. The average weight of this group was 3,141 Gm., while the average weight of those whose mothers were twenty-five to forty-one years old was 2,993 Gm. (Tables 4 and 5).

The longer the pregnant women resided in the maternity home, the smaller became the peri-

TABLE 4.—COMPARISON OF BIRTH WEIGHT AND AGE OF MOTHERS AT LAKE VIEW HOME*

Weight (Gm.)	13 to 24 Years (Per Cent)	25 to 41 Years (Per Cent)	Total (Per Cent)
850 to 999	0.4	...	0.3
1,000 to 1,999	1.5	6.4	2.5
2,000 to 2,499	5.4	9.6	6.3
2,500 to 3,499	68.2	67.2	68.0
3,500 to 3 999	20.9	15.2	19.6
4,000 or more	3.5	1.6	3.1
Total number of cases	460	125	585

* At Lake View, for purely administrative reasons, the weight at birth was not recorded for some time.

TABLE 5.—COMPARISON OF BIRTH WEIGHTS OF INFANTS BORN AT LAKE VIEW FROM 1939 TO 1948 AND IN NEW YORK CITY IN 1946

Weight (Gm.)	Lake View (Per Cent)	New York City Whites	New York City Negroes
850 to 999	0.3	...	...
1,000 to 1,999	2.5	2.2	4.2
2,000 to 2,499	6.3	5.9	8.3
2,500 to 3,499	68.0	62.7	66.1
3,500 to 3,999	19.6	22.4	17.1
4,000 or more	3.1	6.7	4.2

NOTE: In a considerable portion of the previable fetuses, no weight at birth has been recorded in the New York City statistics.

TABLE 6.—COMPARISON OF PERINATAL DEATH RATES AND LENGTH OF MOTHER'S RESIDENCE IN LAKE VIEW MATERNITY HOME

Length of Residence (Days)	Number of Deliveries	Number of Deaths*	Per Cent
0 to 7	25	1	4.0
8 to 28	94	3	3.2
29 to 84	369	12	3.2
85 to 187	231	6	2.6

* In these figures are included all deaths (also previable and malformations) except for one pair of miscarried twins.

natal mortality rate (Table 6). On account of the small group of babies born to mothers who resided in Lake View for a period of only seven days or less, the value of 4 per cent must be considered haphazardly low (4.0 ±3.9 per cent), and the decline of death rates due to prolongation of residency appears less pronounced than it ought to be.

TABLE 7.—COMPARISON OF PERINATAL MORTALITY AND DURATION OF STAY OF MOTHERS OF 719 ILLEGITIMATE CHILDREN BORN AT LAKE VIEW AND OF 1,282 ILLEGITIMATE AND 1,457 LEGITIMATE CHILDREN BORN AT A VIENNA MATERNITY HOME

Duration of Stay (Days)	Rate of Perinatal Mortality (Per Cent)		
	Lake View, 1939 to 1948	Vienna, 1927 to 1929 Illegitimate	Vienna, 1927 to 1929 Legitimate
0 to 7	4.0	10.2	8.8
8 to 28	3.2	4.3	3.0
29 to 84	3.2	3.2	1.6
85 to 187	2.6	...	...

Table 7 gives a comparison of the rates of perinatal mortality and duration of stay of mothers of 719 illegitimate children born at Lake View from 1939 to 1948 and of 1,282 illegitimate and 1,457 legitimate children born at a Vienna maternity home from 1927 to 1929. In comparing these figures, however, one should bear in mind the following: (1) the difference in the time of the deliveries (1939 to 1948 versus 1927 to 1929), (2) the unequal duration of residency within each subgroup, and (3) the absence of organized prenatal care (except for the Wassermann test) in Vienna and a more outspoken differential between the maternity home and the family than is the case at present in New York City.

The information about the causes of death in our 24 cases is not satisfactory. Besides the miscarried set of twins there were two macerated fetuses and one fetus papyraceous. Ten others died shortly before or during delivery and nine during the first two days. In nine of the twenty-four deaths the cause was well defined pathologically. The mothers of these children spent an average of eighty-nine days in the maternity home. Nine other deaths were regarded as either previable (less than 999 Gm. in weight) or semiviable newborn (1,000 to 1,499 Gm. in weight); their mothers spent an average of forty-eight days at Lake View. In two other cases death was associated with malformation, while in the remaining four cases (the miscarried set of twins and two macerated fetuses) nothing is known.

Comment

Although, as a rule, perinatal mortality of illegitimate children surpasses that of legitimate offspring, Lake View has a perinatal death rate only two thirds that of the white children of New York City in 1946. This result is not surprising, for, according to studies carried on after World War I, maternity home children have lower fetal and neonatal death rates than children of comparable groups of mothers who resided not longer than seven days in such a home.[4,5] This is true regardless of whether legitimate or illegitimate babies are scrutinized, in peace and in wartime, in periods of normal nutritional status as well as in those of semistarvation, in Vienna or Palestine. Residency in a maternity home was shown to be apt to prolong pregnancy, to curtail the incidence of prematures and small babies, and to increase the average birth weight and the weight to length ratio for each fetus at birth.

For an explanation of these effects one must consider the following factors: (1) adequate physical rest, (2) combating of worries, elimination of conflicts, and restoration of a state of mind conducive to a normal course of pregnancy, and (3) improvement of the nutritional status of the pregnant women. The higher weight and weight-length ratio of maternity home children has two reasons; namely, more rapid growth within comparable gestation periods and additional growth due to prolongation of pregnancy. Since, within a biologically or socially well-defined group of pregnant women, survivors of the neonatal period were heavier at birth for each length class than were those who succumbed, maternity home children must have diminished perinatal death rates. In other words, residency in a maternity home influences the fetal and neonatal mortality of the children by influencing the physiology of pregnancy as well as the physiology of fetal growth. How much of this influence is due to physical rest, how much to psychosomatic reactions caused by the special atmosphere of the maternity home, and how much to the dietary regime cannot be stated.

For many decades it was believed that the fetus behaved like an autonomous malignant tumor or parasite, taking from the mother according to its own needs, regardless of the nutritional status of the mother. This hypothesis was considered in agreement with the experience gained during and shortly after World War I and with many an experimental study on nitrogen, sodium, calcium, and fat balance. Many of these studies were inconclusive, others were equivocal, and some showed a definite dependence of the fetus on the nutritional level of the mother.[6,7] According to our own estimate, the diet is responsible for weight differences at birth averaging up to 380 Gm. which is up to 11 per cent of the newborn's weight. During World War II similar studies left the matter unsettled.[8,9] In the course of studies aimed at the reduction of perinatal mortality here, as well as in Canada and England, the formerly prevalent theory of the fetus-mother relationship has been almost completely reversed.[10-16] Nowadays, the equation, fetus equals parasite or equals malignancy, is rejected, and the deficient diet during pregnancy is considered an important factor in maternal and fetal pathology. Occasionally its importance is exaggerated, and other factors are overlooked.

Compared with the diet in Vienna's maternity home from 1910 to 1913 and from 1917 to 1922, when the daily intake fell to 1,800 calories and the residents received little of meat, eggs, milk, fresh vegetables, or fruit, the diet at Lake View is highly superior. Nevertheless, the Lake View children born from 1939 to 1948 weighed less at birth than did the illegitimate offspring of maternity home primiparas in Vienna from 1917 to 1922. Furthermore, maternity home babies of comparable social groups born in Vienna from 1917 to 1922 were better developed than non-maternity home babies born just prior to World War I when the nutritional status of the population was not far from satisfactory. This was true whether primiparas or multiparas or whether single or married women were compared with one another. And, in spite of the poor diet in the maternity home during 1919 to 1922, the children born to these mothers had a much lower perinatal mortality than babies born in 1912 and 1913 to women who were better nourished but failed to become residents of the maternity home.

The data in Table 8 enhance our contention that the effect of maternity homes upon the fetus is due to factors which, besides and regardless of the dietary situation, influence fetal development and resistance.[17] Thus, the suggestion to adopt residency in a maternity home as a means of combating perinatal mortality in economically lower strata is justified.

It would be advisable to check the contents of the preceding pages by an experiment on a large scale. Not much adaptation would be necessary to transform many summer camps into primitive maternity homes during the off season, for instance. The experience gained there with regard to factors of psychosomatic nature could then be transplanted into the family home and become instrumental in combating mortality for the whole population.

TABLE 8.—WEIGHT DISTRIBUTION AND PERINATAL MORTALITY IN VARIOUS GROUPS OF NEWBORN

			Weight Distribution			
Groups of Mothers	Number of Cases	Average Weight (Gm.)	Below 2,500 Gm. (Per Cent)	2,500 to 2,999 Gm. (Per Cent)	Over 3,000 Gm. (Per Cent)	Perinatal Mortality Rate (Per Cent)
Maternity Home, Lake View, 1939 to 1948	585*	3,109	9.1	28.2	62.7	3.0
0 to 7 days residency	25	...	...	...	...	4.0
8 or more days of residency	694	...	...	...	...	2.9
General Hospital, Vienna						
Unmarried primiparas, 1912 to 1913						
Nonresidents of maternity home	1,663	3,049	10.8	28.0	61.2	7.3
Residents	596	3,249	2.15	22.6	75.2	2.7
Unmarried primparas, 1917 to 1922						
Nonresidents of maternity home	1,206	2,909	14.5	36.0	49.5	6.9
Residents	626	3,157	5.0	27.1	67.9	2.3
All primi- and multiparas, 1927 to 1929						
Nonresidents of maternity home	2,137	?	12.8	21.7	65.5	9.7
Residents	630	?	6.0	17.8	76.2	3.5

* See footnote to Table 4.

Conclusions

1. Illegitimate pregnancies of 711 inmates of the maternity home Lake View from 1939 to 1948 have been surveyed.

2. Of 719 singletons and twins, 1.8 per cent died prior to and during delivery and 1.25 per cent during the first postnatal week, making a total of 3.05 per cent. For the white population of New York City in 1946, the corresponding values are higher, 2.72 plus 1.71 giving a percentage of 4.43, although over 98 per cent of the newborn were legitimate.

3. Without the deaths of previable fetuses (minus 999 Gm.), the sum of stillbirths and neonatal deaths was not higher than 2.3 per cent.

4. In children of thirteen- to twenty-four-year-old mothers, total perinatal mortality, including the previable, amounted to 1.97 per cent, and in the singletons of this group to 1.80 per cent only.

5. Perinatal mortality changed inversely with the duration of residency in Lake View.

6. The factors instrumental in the reduction of perinatal mortality are as follows: (1) prenatal and postnatal care, (2) obstetric skill, and (3) sufficiently long residency in a maternity home.

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THE OTOLARYNGOLOGIST LOOKS AT THE TONSIL AND ADENOID PROBLEM

Striking a conservative note in the approach to the tonsil and adenoid problem, the authors wish to point out that it is now definitely established that tonsils have important functions, especially in younger children. These functions are of a protective nature; early removal of tonsils means loss of their autovaccinating and immunization powers. Wherever possible, even in the presence of "infected" tonsils, this organ should be preserved until the seventh or possibly the tenth year. The introduction of antibiotics to control both primary and secondary infections has strengthened the elective element in this procedure. Tonsillectomy is a major operation, not without danger.

Indications for tonsillectomy are valid when an infection is producing local discomfort, general disease, or interference with a patient's development. On the other hand, indiscriminate use of this procedure is condemned, and removal of uninfected tonsils simply because they are enlarged is not only valueless but detrimental to the patient. In this connection the focal infection theory should be reevaluated, since at present there is no certain evidence that any other disease is prevented or cured by tonsillectomy. As for allergy, we are most reluctant to recommend tonsil surgery in allergic persons, as we have not found our results sufficiently encouraging. Concerning the controversial interpretations of statistics on poliomyelitis incidence in relation to tonsillectomy, it is pointed out that, since the operation is elective, its postponement during an epidemic would seem to be in the best interest of both physician and public. However, in addition, during the season of colds a real risk is present, and such a time should not be chosen in preference to the possible risk of poliomyelitis. Indications for the use of radium for adenoid tissue are discussed, and a conservative approach is recommended.—*Francis L. Lederer, M.D., and Arnold A. Grossman, M.D., The EENT Monthly, December, 1949*

Case Reports

THE ASSOCIATION OF MEIGS'S SYNDROME WITH KRUKENBERG TUMORS

HERMAN J. DICK, M.D., LYMAN J. SPIRE, M.D., and CARL S. WORBOYS, M.D.,
Syracuse, New York

(From the Crouse-Irving Hospital)

THE association of ascites and hydrothorax with clinical evidence of solid abdominal tumor was generally considered as evidence of inoperable malignant tumors until Meigs described his syndrome.[1] The tumors described in connection with this syndrome are generally benign, by far the greatest number being ovarian fibromas. Other ovarian tumors described with the syndrome have been granulosa cell tumor, theca cell tumor, Brenner tumor, multilocular cystadenoma of the ovary, and complex teratomas of the ovary.[1-9] Leiomyofibromas of the uterus have also been described, in conjunction with this syndrome.[6,10] With the exception of the cystadenomas, all of these have been solid tumors. It is our purpose to report another case of solid tumor of the ovaries, the Krukenberg tumor, associated with Meigs's syndrome.

Case Report

Mrs. E. P., age fifty, was admitted to the hospital on April 12, 1949, with complaints of increase in girth of the abdomen, feeling of constriction in the epigastrium, dyspnea, and ankle edema of three and one-half months duration. Past history and review of systems was essentially negative except for the presence of a mass in the right breast four years previously which had returned and disappeared twice. Family history was noncontributory. Pertinent physical findings on admission were flatness to percussion, absent breath sounds, decreased tactile and vocal fremitus over the left side of the chest, and an abdominal mass just above the brim of the pelvis and apparently continuous with a mass which filled the pelvis. No fluid wave could be elicited. There was 2 plus edema of both ankles. Temperature, pulse, respiration, blood pressure, and examination of the heart and right side of the chest were within normal limits.

Laboratory data were as follows: hemoglobin 15.4 Gm.; red blood cells 4,930,000; white blood cells, 9,000; neutrophils 66 per cent; lymphocytes 33 per cent, and eosinophils 1 per cent. Blood sugar was 123 mg. per cent and nonprotein nitrogen 35 mg. per cent. Urine was yellow, cloudy, and acid in reaction with a 1 plus albumin, specific gravity of 1.022, no sugar, and a few red blood cells and pus cells.

X-ray study on the day following admission showed a large soft tissue tumor of the abdomen and an effusion in the left chest with heart displaced to the right. A thoracentesis was done, and about 800 cc. of fluid were removed. This was examined in the laboratory for the presence of malignant cells, and none were found. The preoperative diagnosis was Meigs's syndrome with a benign fibroma or fibromas of the ovary.

Laparotomy was performed on April 19, 1949, and clear yellow ascitic fluid (about 800 cc.) was found and removed. The uterus was grossly normal. There was a large solid tumor of the left ovary (12 by 10 by 8 cm.) which was pedunculated but adherent to the left wall of the lower abdomen. There was a similar larger tumor of the right ovary (16 by 13 by 8 cm.) on a pedicle which was wedged into the pelvis. Both tumors were resected, and both had the appearance of giant ovaries, the typical appearance of metastatic carcinoma (Fig. 1). They were somewhat soft, grayish-white in color, and on section had a similar grayish-white color. Further examination revealed nothing unusual in the abdominal cavity. Microscopic examination confirmed the gross impression of Krukenberg tumors. The mucus-producing carcinoma cells were easily

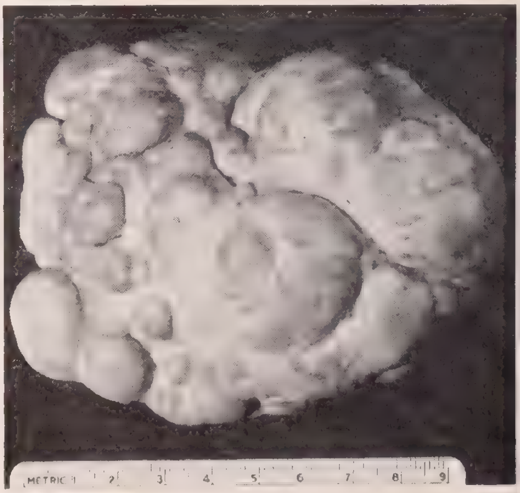

FIG. 1. Gross appearance of Krukenberg tumor.

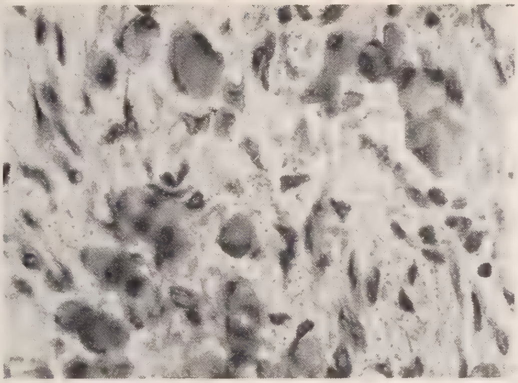

FIG. 2. Photomicrograph of tumor.

seen in routine hematoxylin-eosin sections and stained brightly with mucicarmine (Fig. 2).

Subsequent x-ray study of the gastrointestinal tract on May 3, 1949, was only partially successful because of vomiting but did reveal an irregularity at the junction of the cardia and esophagus, probably a carcinoma. Some fluid was still present in the left chest.

Summary

This case is reported because of the production of Meigs's syndrome by a hitherto unreported type of solid ovarian tumor.

Metastatic carcinoma should be considered in the differential diagnosis of every solid ovarian tumor.

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MEDIASTINAL GANGLIONEUROMA IN CHILDREN

MILTON M. GREENBERG, M.D, Brooklyn, New York

(*From the Bureau of Tuberculosis, New York City Department of Health*)

MEDIASTINAL ganglioneuroma is an infrequent occurrence. Up to 1943, Skinner *et al.* could only find 37 reported cases of intrathoracic ganglioneuroma.[1] To this number they added one case. Of those reported, about one third have been in children under twelve years of age. Bohrer and Lincoln in 1934 found only ten reported cases in children from two and a half to twelve years of age.[2] Since these papers appeared, several other reports have appeared. Representative of these are the cases described by Allison and Carmichael and by Rabin.[3,4] It is because of the paucity of reports of mediastinal ganglioneuroma in children and because of the unusual location and origin of the tumor in the following case that it is being reported at this time.

Case Report

Joan M. was first seen in our clinic on October 28, 1948. She was born on April 4, 1939. Her early developmental history was entirely normal. Her medical history included a mild attack of scarlet fever, a mild attack of pertussis, and a severe attack of rubeola. However, there had been no sequelae of consequence. Prior to admission to the clinic she had had a slight cough, nonproductive, for three weeks. Pyrexia had been of low grade. There were no other complaints.

On physical examination, the child appeared to be entirely normal. However, fluoroscopy in the right lateral position gave the impression of a density situated behind the heart. The presence of such a mass was confirmed by radiographs taken at that time. A definite double contour in the cardiac area was noted in the posteroanterior film (Fig. 1). Further examinations were made during the ingestion of a thick barium mixture. These revealed the mass to have no relationship to the gastrointestinal tract. In addition, studies of the spine revealed no bony abnormalities. The lung fields were normal. No evidence of carcinomatous metastases or bony erosion were found in the pelvis or long bones. The psoas shadows were clearly defined, and the kidneys were reported as being of normal size, shape, and position. Peripheral blood studies and blood chemistry studies were within normal limits.

The clinical diagnosis at this time was that the child had a paravertebral mass, probably of neurogenic origin. Open exploration with a view toward resection was decided upon. For this reason, the patient was admitted to the Memorial Hospital in New York City, and operation was performed on January 4, 1949. At operation a typical ganglioneuroma was found. This was subsequently confirmed pathologically by biopsy studies. The mass found at the time of surgery extended from the seventh thoracic vertebra to the second lumbar vertebra. The tumor measured about 12 cm. in its transverse diameter. It extended along the spinal column through the diaphragm. It was felt by the surgeon that the whole mass could not be removed

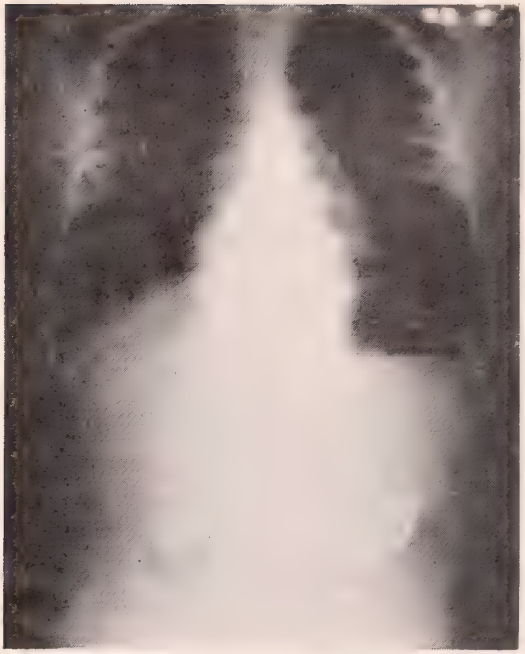

FIG. I. Double silhouette in cardiac region on overpenetrated radiograph.

successfully, and the incision was accordingly closed. The child made an uneventful postoperative recovery.

The patient has been seen several times since the operation, and up to the time of this report no new or untoward symptoms have developed.

Comment

The interesting features in this case can be enumerated as follows:

1. The fact that the tumor arose in the lower portions of the mediastinum rather than in the upper portions where previously reported neoplasms of this type have arisen.
2. The fact that at operation the tumor was found to have taken origin from both the right and the left sympathetic chains.
3. The fact that the tumor in this case extended both above and below the diaphragm.

Just as in the case under discussion here, the finding of a mediastinal ganglioneuroma is usually somewhat accidental. Although no symptoms are pathognomonic, some may appear and give a clue to the underlying condition. Among these may be listed those which are characteristic of intrathoracic pressure, whatever the cause: hoarseness, laryngeal stridor, dyspnea, dysphagia, vomiting, and Horner's syndrome. The degree of symptomatology is dependent not so much on the size of the tumor as on its relationship to the various component parts of the thorax.

Roentgenologically, the tumors are usually very characteristic. The edges are sharply delimited with a rounded edge which pushes laterally and anteriorly from the spine to encroach upon the neighboring pulmonary tissues. A lateral view will localize the tumor mass posteriorly, while artificial pneumothorax will reveal it to be extrapulmonary. Although the adjacent rib structure may be thinned and may even show erosion, no actual bony invasion is demonstrable in the usual case.

Ganglioneuromata take their origin, as the name implies, from neurogenic tissue. They are held to be the most differentiated form of neurogenic tumor. In this respect they stand at the opposite end of the developmental cycle from the sympathicoblastomas which are undifferentiated and often malignant. Being of neurogenic origin, they may arise from the central nervous system, the sympathetic or parasympathetic chain, or from the medullary portion of the suprarenal gland. According to Gray *et al.*, ganglioneuromas arise most frequently from the sympathetic nervous system.[5] The majority are slow-growing and benign. They do not invade either the vascular or lympathic channels. They do not metastasize and are insensitive to radiation.

It should be pointed out that the exact relationship of the malignant tumor of neurogenic origin to the benign ganglioneuroma has not as yet been established. Thus, Cushing and Wolbach described a case where removal of a malignant sympathicoblastoma was followed by the occurrence of a benign ganglioneuroma at the same site.[6]

It has been mentioned above that mediastinal ganglioneuroma is relatively benign. However, inasmuch as its relationships to the more malignant neurogenic tumors are not too clear and since some symptoms are often produced, definitive therapy would always seem to be indicated. In this regard, complete surgical extirpation of the tumor should be considered the treatment of choice at the present time.

Summary

1. A case of inoperable mediastinal ganglioneuroma in a child is presented.

2. The unique features of bilateral origin above and below the diaphragm are described.

3. The clinical, roentgenologic, and pathologic considerations are discussed briefly.

4. Surgical removal is presented as the treatment of choice.

4910 FIFTEENTH AVENUE

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SUFFOCATIVE GOITER IN NEWBORN INFANT

BERNARD SELIGMAN, M.D., F.A.C.P., and HAROLD PESCOVITZ, M.D., Brooklyn, New York

(From the Departments of Medicine and Pathology, Jewish Hospital of Brooklyn)

SUFFOCATIVE goiters were described before the advent of antithyroid drugs.[1-3] These rare goiters are of a hyperplastic nature and frequently cause sudden death.[2] Their size usually approximates the size of the thyroid gland found in the patient herein reported, but even larger glands have been reported.[4]

Case Report

A male child, 18 inches long, weighing 5 pounds, 4 ounces, was born with a large suffocative goiter on November 15, 1948. H. H., the thirty-seven-year-old mother, was delivered under local pudendal block, nitrous oxide and oxygen anesthesia after a thirty-one-week gestation. A polyhydramnios had ruptured one week previously. The premature infant, in a left occipitoanterior position, was extracted by Elliot forceps. The first stage of labor lasted two hours, the second stage thirty minutes, and the third stage five minutes.

The mother had had three spontaneous abortions: a two and one-half-month fetus in 1937, a two-month fetus in 1938, and a two-month fetus in 1943. In 1940, a normal female child was delivered after an eight and one-half month pregnancy which was complicated by a placenta previa.

The mother had symptoms suggestive of thyroid imbalance for twenty years. She preferred the cold weather, had tremors of the upper extremities, and episodes of diarrhea and headaches. When first seen in the outpatient department of our hospital on February 26, 1948, she had a large appetite but no recent weight change. At this time she was 5 feet 4 inches tall and weighed 134 pounds. She was nervous, had prominent eyes with slight exophthalmos, warm, moist, silky skin with a fine tremor of her hands. Her basal metabolic rate was plus 67 per cent, pulse 113, and blood pressure 140/90. The thyroid gland was soft and diffusely enlarged to three to four times the normal size. Its size did not fluctuate significantly while she was under observation. The blood cholesterol was 174 mg. per cent. She excreted 320 mg. of creatinine in the twenty-four-hour urine specimen (normal up to 125 mg.). She refused surgical intervention for her thyrotoxicosis.

The mother took 50 mg. of propylthiouracil every eight hours starting March 18, 1948. On April 10, she had her last menstrual period preceding this pregnancy. At this time, her basal metabolic rate was plus 38 per cent. By April 29, she had gained seven pounds, and her pulse rate was 106 per minute. The dosage of propylthiouracil was increased to 50 mg. four times daily. On May 13, when she was less tired, had fewer headaches, and her pulse rate was 98 per minute, she took 50 mg. three times daily. Her basal metabolic rate was plus 24 per cent on June 1. On July 22, the pulse rate was 89, and she was given 50 mg. of propylthiouracil twice daily. On October 21, her general condition was good, the blood count was normal, and the drug was discontinued. She was given ten drops of Lugol's solution three times daily. The only disturbing symptoms were dizziness, headache, lower abdominal pain, and visual difficulties on November 4. At this time the media and fundus oculi were normal; the urine was negative. After the child was delivered, the mother continued to gain weight, felt well, and on January 10, 1949, her basal metabolic rate was plus 22 per cent.

The infant, immediately after birth, was in fair condition. Within ten minutes after delivery, however, it developed irregular respirations, a weak cry, and cyanotic color. A receding chin was markedly accentuated by a symmetric, large thyroid mass which stood out prominently. Synchronous with the marked respiratory efforts, the thyroid gland made wide excursions. Hyperextension of the neck lessened the cyanosis of the child slightly. The anterior chest was ballooned out and the abdomen markedly depressed. The lung fields were resonant. The heart beats were strong but distant. The stomach then became visibly dilated. An immediate tracheotomy was performed. After approximately twenty minutes, a number 0 tracheotomy tube was introduced. Most of the time was spent in attempting to expose and hold the delicate, slippery trachea. Although the infant made several feeble respiratory movements with the tube in situ, cessation of respiration and heart beats soon occurred. On roentgen examination (postmortem),

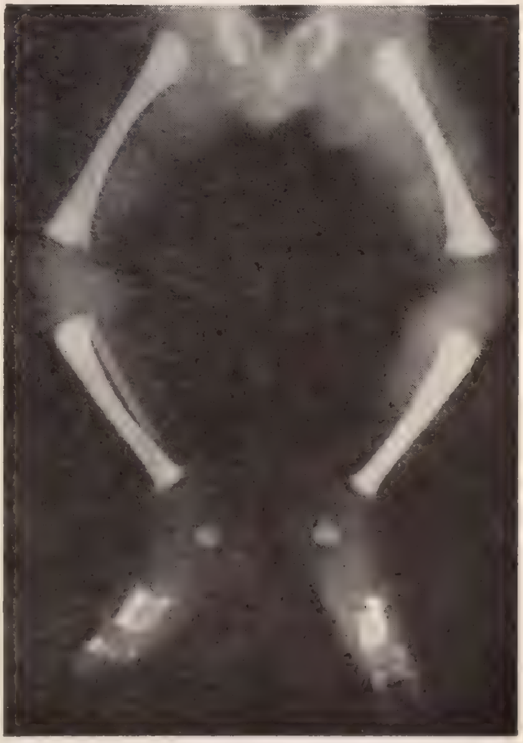

FIG. 1. Small distal epiphysis of right femur and calcaneous centers.

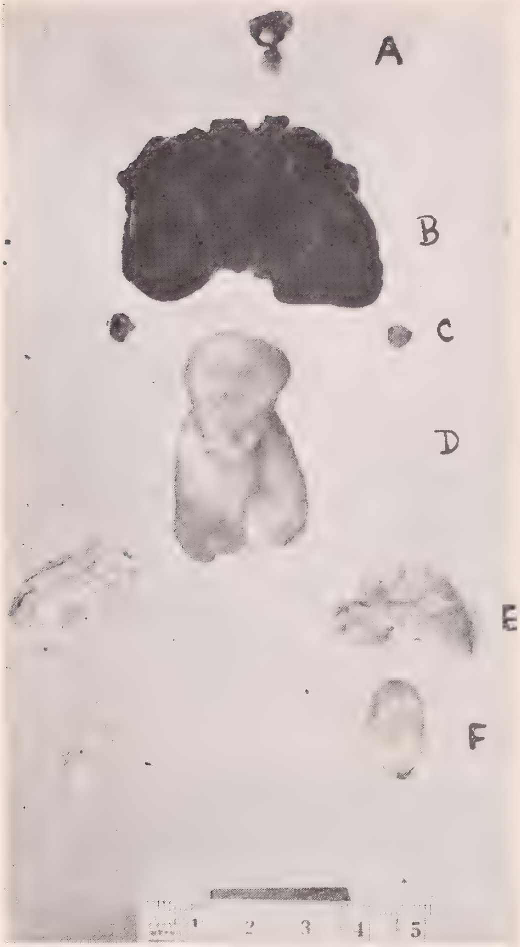

FIG. 2. Comparative size of endocrine glands: (A) pituitary, (B) cyanotic goiter, (C) two lymph glands originally considered parathyroid glands, (D) thymus, (E) suprarenals, and (F) gonads.

centers of ossification for the calcaneous bones and the distal epiphysis of the right femur could be identified (Fig. 1).

Autopsy revealed marked cyanosis of the head and neck due probably to pressure stasis. The thyroid gland measured 5.6 by 3.8 by 2 cm. and weighed 16 Gm., the average weight of the newborn thyroid gland being 0.7 Gm. (Fig. 2). It was red-brown in color and almost completely surrounded the trachea. The tips of the lateral lobes were buried in the tracheal grooves indicative of suffocative goiter. The cut section of the thyroid gland was homogeneous. On microscopic examination, the gland was found to be divided into lobules by broad connective tissue septa. In a few areas a tendency toward acinar formation with the usual minimal colloid was seen. The cells lining the acini were columnar with a granular, eosinophilic cytoplasm and nuclei that were mainly central and vesicular. The nuclei showed varying degrees of size, shape, and density. The capillaries were numerous, dilated, and markedly congested (Figs. 3 and 4). No other congenital anomaly or pathology was found except bilateral complete atelectasis. No propylthiouracil was found on chemical analysis of the thyroid gland. Because of a laboratory accident the amount of iodine in the gland was not determined.

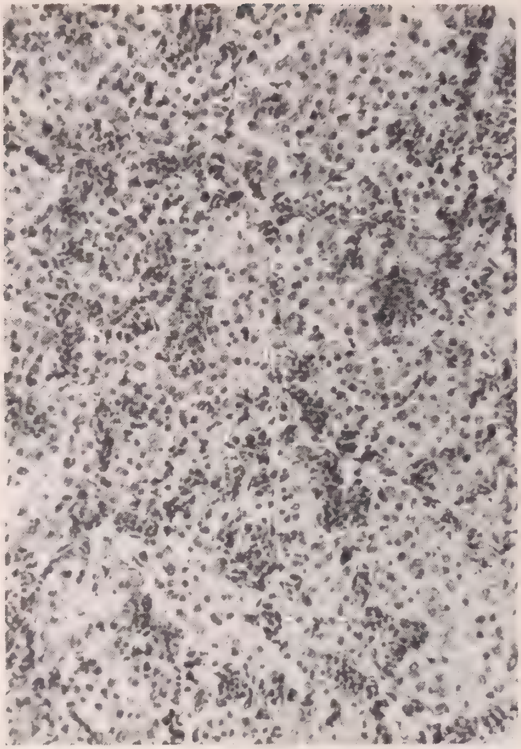

FIG. 3. Marked congestion and hyperplasia. (165 ×)

Comment

In the fetus, goiters are dependent on genetic and even environmental factors to which the mother is exposed. The latter might apply to placental accidents, infections, and even to the intake of goitrogens in her food. Local or vascular changes in the fetal gland by pressure from umbilical cord strangulation also cause goiter.[5] The interrelationships of the thyropituitary axes of the fetal and maternal systems can only be conjectured. Usually, thyrotropin is not increased sufficiently to cause marked enlargement of the thyroid gland unless a hypothyroid state ensues. In this individual the maternal metabolic rate was always above plus 20 per cent, and, as expected, no significant increase in the size of her goiter was found. From this we postulate that propylthiouracil was not the sole provoking factor in the development of the suffocative goiter in this infant. Then too, White states that the size of the fetal thyroid gland and the

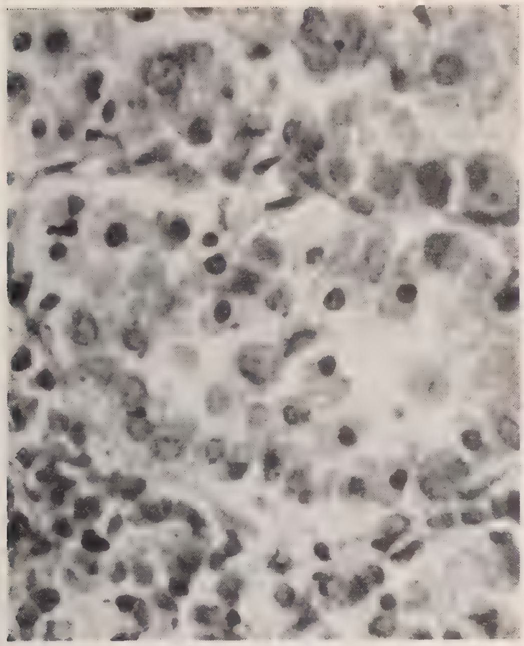

FIG. 4. Tendency to acinar formation with columnar cells, marked variations in nuclei. (675 ×)

severity of an existent "fetal thyrotoxicosis" usually parallel those of the mother.[5] The size of the infant under consideration and the skeletal age were more advanced than that expected from the date of the last menstrual period. This suggests a fetal hyperthyroid state of a degree consistent with that of its mother.

When a newborn infant shows evidence of a large goiter and tracheal stridor, grasping of the thyroid gland and bringing it forwards and upwards may improve respiration. In this child hyperextension of the head, one form of relief employed, improved the cyanosis slightly. If the condition of the infant is critical, a transverse incision should be made through the isthmus of the thyroid gland. If this is unavailing, the goiter can be resected. Tracheotomy is much more dangerous than thyroidectomy as a rule, because the trachea is small, slimy, soft, and easily eludes the knife, making tracheotomy difficult. The possibility of serious bronchopneumonia after tracheotomy also exists. Iodine and thyroid are employed, if the infant survives, to depress the thyrotropic influence and cause the goiter to recede.

Summary

A male fetus was born, after thirty-one weeks of gestation, with a suffocative goiter. An immediate tracheotomy was performed, but the child expired. The mother had hyperthyroidism and received propylthiouracil and iodine therapy with no toxic reactions from the drugs. The infant showed evidence of advanced skeletal and physical development suggesting an intrauterine hyperthyroid state. Propylthiouracil and iodine are not considered the major factors in the etiology of this goiter.

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CANCER OF THE RESPIRATORY ORGANS

Mortality from cancer of the respiratory system has been increasing more rapidly for men than women, with the result that the death rate is almost six times as high for males as for females, according to the statisticians of the Metropolitan Life Insurance Company. This is based upon the experience among millions of the company's policy-holders.

Both sexes have shown a marked upward trend in respiratory cancer mortality, with the death rate among these policyholders rising from 5.6 per 100,000 in 1936 to 1938 to 10.0 per 100,000 in 1946 to 1948.

Although the increase in mortality has been very marked for cancers of the bronchus and trachea and for cancers of the lung and pleura, no increase at all was recorded during the past decade for cancer of the larynx. This is considered noteworthy by the statisticians because, of these three principal respiratory sites, the larynx is the most readily accessible to diagnosis and treatment.

As is the case with all cancers, early recognition and treatment are of extreme importance. The greater accessibility of cancer of the larynx has contributed to its more favorable record, as compared with internal cancers.

Greater public alertness to the danger signals of cancer is seen as a result of the organized campaign against the disease. Evidence of progress is found in the increased effectiveness of surgery for lung cancer.

SOLITARY PULMONARY METASTASIS WITH DETECTABLE BRONCHIAL INVOLVEMENT APPEARING NINE AND A HALF YEARS AFTER RESECTION OF COLON CARCINOMA

ABRAHAM G. COHEN, M.D., F.A.C.P., New York City

(*From the Medical Service of Beth Israel Hospital*)

THE appearance of pulmonary metastases in cases of malignant neoplasm is an everyday occurrence. Turner and Jaffe analyzed 1,303 fatal cases of carcinoma arising in all parts of the body and found metastases to the lungs in 26.6 per cent.[1] In most instances they are multiple, and often there are also metastases to other organs. They generally are demonstrable roentgenographically during the lifetime of the patient.

Patients with extensive, discrete pulmonary metastases rarely develop conspicuous pulmonary symptoms for the reasons that they do not live long enough and that lesser complaints generally are submerged by the serious general picture. When symptoms are present, they are generally the result of involvement of a bronchus, either by direct extension from a parenchymal or mediastinal tumor nodule or by direct metastasis. King and Castleman reviewed 109 necropsied cases of primary malignancy with pulmonary metastases.[2] In 20 cases (18.3 per cent) there was definite infiltration of the bronchial wall or mucosa. In nine cases (40 per cent) there had been no symptoms. It was noted that no thorough search for bronchial involvement was made, so that the incidence may well have been higher.

Solitary pulmonary metastases attract greater clinical attention, particularly when detected radiographically, either prior to recognition of a primary extrapulmonary lesion or subsequent to a successful resection for such a lesion. In a small number of reported cases of this type, endoscopic examination revealed involvement of a bronchus, which, in a considerable proportion, had caused symptoms suggestive of bronchogenic carcinoma.

The following is a case of solitary pulmonary metastasis which invaded the bronchus. The primary lesion was a gelatinous adenocarcinoma of the colon which had been resected nine and a half years previously.

Case Report

L. F., a white woman aged sixty-nine, was admitted to the Beth Israel Hospital in March, 1948. She had undergone a resection of the colon for carcinoma at the Mount Sinai Hospital nine and a half years previously. Her present illness began eight months prior to admission with cough. For five weeks the sputum had been bloody. She had noted wheezing in the right chest for several weeks. On examination, her general condition was good. She was coughing up bloody sputum. A persistent rhonchus was heard in the right parasternal region. There was slight clubbing of the fingers. Roentgenographic examination of the chest showed a dense homogeneous mass about the size of a large apple in the right lung field in the vicinity of the horizontal fissure (Fig. 1). Its borders appeared slightly lobulated. Oblique view showed it to be situated mostly posteriorly (Fig. 2). The diaphragms moved normally by fluoroscopic examination. Bronchoscopic examination showed a bleeding, fungating mass arising from the apical division of the right lower lobe bronchus and protruding into the main bronchus. This was removed. The region behind

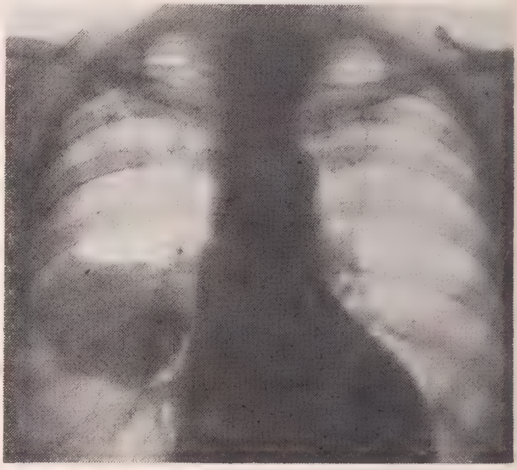

FIG. 1. Posteroanterior film of chest showing a large mass in the right lower lobe.

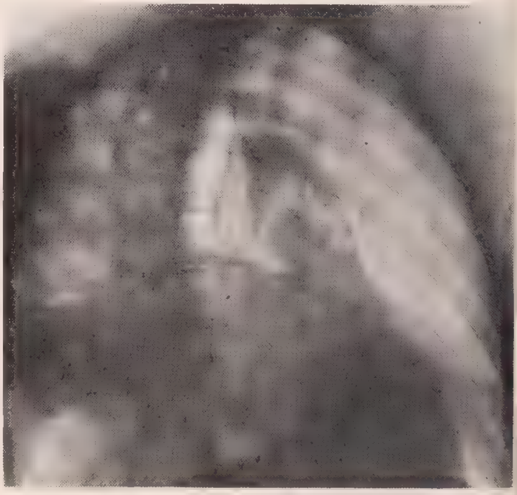

FIG. 2. Right anterior oblique view taken on the same day showing posterior position of the mass.

it contained a peculiar gelatinous material. Histologically, the lesion was a gelatinous adenocarcinoma. At this point, it was learned from the Mount Sinai Hospital that the resected colon specimen also showed this histologic type.

Surgical intervention was felt to be indicated. Preliminary studies showed no evidence of other metastases. A roentgenogram of the colon showed it to fill close to the hepatic flexure where there was evidence of an anastomosis to a loop of ileum. A routine electrocardiogram surprisingly showed typical changes of a recent myocardial infarction, despite the absence of symptoms. Subsequent tracings showed serial changes. Because of this, operation was deferred for four weeks and was then undertaken with full realization of the risks involved. During the waiting period, roentgenograms showed the mass to have grown a little larger.

A right pneumonectomy was performed very easily. The hilar nodes were not involved. The patient was returned to the ward in good condition. About three hours later, she suddenly gasped and expired. The death was attributed to cardiac causes. Permission for necropsy was not granted.

Pathologic examination of the resected lung showed the upper half of the lower lobe, but not quite its apex, to be occupied by a firm tumor mass, 6.0 cm. in diameter. The portions of the lower lobe inferior to the tumor were largely atelectatic, as were the middle lobe and partially the upper lobe. The bronchi of the upper and middle lobes were unobstructed. The mouth of the apical branch of the lower lobe bronchus was occluded by a dirty gray-brown gelatinous mass. A longitudinal section of the lower lobe in a frontal plane showed a carcinoma 7.5 by 6.0 cm. which extended from the hilus to the pleura. Medially, it was glistening greenish-gray with a few areas of softening. The tumor impinged upon the intrapulmonary nodes but did not invade them. The bronchial nodes were uninvolved. Microscopically, the tumor was a gelatinous adenocarcinoma.

Comment

A review of the literature discloses only 13 cases in which bronchial invasion by a pulmonary metastasis was demonstrated endoscopically. These are summarized in Table 1. The primary lesions were distributed as follows: hypernephroma five, melanoma two, and sigmoid, rectum, pancreas, thyroid, breast, and ovary one each. In nine cases, the primary tumor had been resected nine months to nine years previously. In four cases, existence of an extrapulmonary primary lesion was not suspected at first. The clues were either histologic evidence from a bronchus biopsy, or from resection specimen, or from further clinical developments.

The case reported herein is the fourteenth in which a pulmonary metastasis had invaded a bronchus and so could be detected endoscopically. As in the previous cases, the tumor corresponded histologically to the primary lesion, in this case a gelatinous adenocarcinoma of the colon for which resection had been performed nine and a half years previously. The possibility that the pulmonary lesion was an independent primary neoplasm cannot be dismissed entirely. However, among the histologic types of bronchogenic carcinoma, gelatinous adenocarcinoma is unusual. It is much more likely, therefore, that the lesion was metastatic.

The long interval is unusual and suggests the desirability of lengthy follow-up periods after resection for malignant neoplasms. The value of chest roentgenograms as part of the follow-up routine is evident. From both technical and pathologic viewpoints, the tumor was operable. But for the regrettable demise of the patient from probable cardiac causes, the case might have been an addition to the growing list of successful resections for solitary pulmonary metastasis.[12,13]

Summary

A case is reported of a solitary pulmonary metastasis with bronchial involvement demonstrable endoscopically. This was histologically identical with

TABLE 1.—SUMMARY OF PREVIOUSLY REPORTED CASES

Author	Primary Lesion	Previous Resection	Interval after Resection	Remarks
Weiss[3]	Pancreas	No	...	Death one month later; necropsy.
Vinson and Marten[4]	Hypernephroma	Yes	3 years	
Clerf[5]	Melanoma	Yes	1½ years	
Maytum and Vinson[6]	Hypernephroma	No	...	Hypernephroma tissue detected by bronchoscopic biopsy. Renal enlargement detected simultaneously.
Raine[7]	Sigmoid	Yes	9 months	Successful pneumonectomy.
Betts[8]	Melanoma of eyelid	Yes	4 years	
Freedlander and Greenfield[9]	Ovary (granulosa-cell)	No	...	Pneumonectomy first. Then ovarian enlargement and resection. Re-examination of lung showed identical tissue.
	Thyroid	No	...	Pneumonectomy. Resected lung showed carcinoma to be from thyroid. Confirmed by necropsy.
Tinney and McDonald[10]	Breast	Yes	3 years	
	Hypernephroma	Yes	2 years	Pneumonectomy. Patient well after four years.
Barriéty and Paillas[11]	Hypernephroma	Yes	9 years	
	Hypernephroma	Yes	2 years	Multiple metastases.
	Rectum	Yes	3 years	

a gelatinous adenocarcinoma of the colon which had been resected nine and a half years previously.

266 West End Avenue

The bronchoscopic examination was performed by Dr. Max L. Som, the pneumonectomy by Dr. Irving A. Sarot, and the pathologic studies by Dr. Henry Brody.

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COMPLETE RECOVERY OF A CASE OF SPINDLE CELL AND OVAL CELL SARCOMA WITH A FIVE-YEAR FOLLOW-UP

Louis Marton, M.D., and A. Warren Jones, M.D., New York City

(From the Knickerbocker Hospital)

The following case of spindle cell and oval cell sarcoma is reported because of the unusually slow growth of the tumor without metastases and because of the complete recovery of the patient as manifested by a five-year follow-up without recurrence.

Case Report

Mrs. M. T., a forty-one-year-old white married woman, was admitted to the Knickerbocker Hospital on September 11, 1945. At that time the patient was complaining of a large mass in the right shoulder and right pectoral region which had been growing for approximately seven years, although it had been removed once previously by surgery at another hospital in 1940. The pathology report at this time was as follows:

Gross Examination.—The specimen is irregular, globular, encapsulated piece of tissue, measuring $5^1/_2$ cm. by 4 mm. It was previously opened. It is yellow in color, rubbery in consistency, bulging above the cutaneous surface.

Microscopic Examination.—There are numerous, spindle-like cells. They are uniform in size and shape; the nuclei are oval in shape. There are fine, thin fibrils extending from the protoplasm of the cells. It is well supplied with numerous capillaries.

Diagnosis.—Benign fibroma.

The patient complained of this mass giving symptoms of numbness of the right arm, forearm, and hand in the morning and sometimes after working hard and using the arm extensively. The patient entered the hospital for the present illness having had two biopsies by punch and surgical methods at Memorial Hospital with a diagnosis of spindle cell sarcoma. She had refused disarticulation of the right shoulder girdle and entered the hospital at this time for surgical excision of as much of the tumor as possible for symptomatic relief to the arm.

Clinically the patient presented a picture of health, being fairly obese (185 pounds) with moderate blood pressure of 150/70. The only evidence of disease was the aforementioned mass which was moderately hard and fixed, particularly the posterior portion attached to the shoulder and running up to the neck.

Urinalyses were normal, as were repeated blood counts, the patient having 14 Gm. or 98 per cent hemoglobin; a red blood count of 5,400,000; a white blood count of 9,200 with a normal differential. X-rays revealed no evidence of chest involvement.

At operation there was found an encapsulated, cystlike neoplasm about the size of a grapefruit, of varied content and occupying the entire supraclavicular portion of the neck and projecting above the right clavicle. It extended in continuity along the chest wall anteriorly to the fifth intercostal interspace beneath both pectoral muscles and laterally in this area into the axilla underneath the costocoracoid fascia. A small accessory lobe extended between the trachea and esophagus in a substernal direction. The cords of the brachial plexus and the sheaths of the axillary vein and subclavian vein were attached to the capsule on the posterior surface of the tumor. This tumor was removed by making an extended excision over the shoulder posteriorly and carried anteriorly toward the sternum and beyond the palpable border of the tumor. The capsule of the tumor was removed without rupture, although it was found necessary to sever the axillary vein. The pectoral muscles were temporarily dissected away from their origin for better exposure and the tumor freed anteriorly. It was found necessary to divide the clavicle to extricate the tumor which had previously been completely mobilized. The muscle and fascial layers were re-established, leaving only one drain of a Penrose type in the substernal area of the neck incision.

Postoperatively, the patient did develop a mild

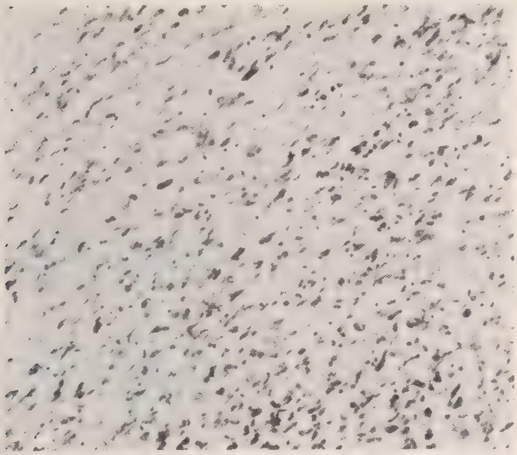

FIG. 1. Spindle cell sarcoma. (150 ×)

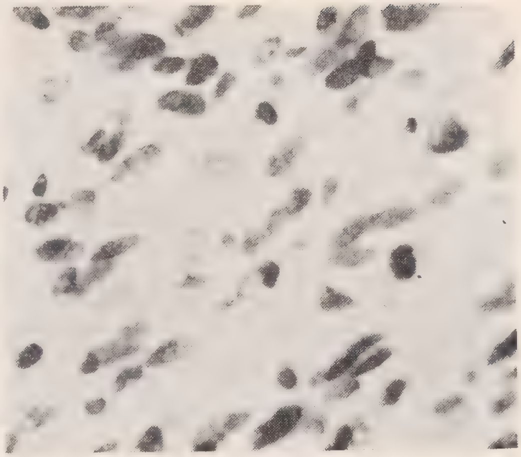

FIG. 2. Spindle cell in mitotic division. (600 ×)

transitory edema of the right arm, probably due to the severance of the axillary vein and interference with the lymphatic drainage, but at no time was there any interference of the nerve function of the brachial plexus either from a motor or sensory viewpoint. After the removal of the drain the wound healed satisfactorily and rapidly.

The patient has been seen at frequent intervals over the past five years without any evidence of recurrence of this tumor, either at the original site or through metastases elsewhere, and she has been able to lead a perfectly normal life during this time.

Pathology Report.—*Gross Examination:* The specimen consists of a somewhat triangular shaped mass of semicystic material measuring 20 by 10 by 6 cm. The mass is everywhere covered by fibrous capsule measuring up to 2 mm. in thickness. Several thin fibrous adhesions to the external surface are noted. A thin elliptic segment of skin measuring 9 by 5 cm. is attached to one side of the specimen. The external surface is pinkish-tan with focal discoloration by fresh bloody material. The mass has the consistency of jelly and through it can be felt several small firmer areas. On section the entire specimen is composed of glistening pinkish, tannish, and yellowish green material through which there are several focal areas of liquefaction and degeneration. In some of these latter areas a thin bloody fluid is found. The basic structure of the mass is gelatinous, brownish-tan material which resembles raw fish in appearance.

Microscopic Examination: Tissue consists of an abundant, loose, faintly eosinophilic matrix in which are found many spindle and oval-shaped cells and fewer round cells (Figs. 1 and 2). These cells have a conspicuously large hyperchromatic nucleus and a relatively scant amount of cytoplasm. The round cells have more cytoplasm. A few multinucleated giant cells are evident as well. For the most part, however, the cells are widely separated from each other. A large number of small vascular channels permeate the tissue in addition to several larger channels. Several sections show larger areas of degeneration and liquefaction. The blood vessels leading to these degenerated areas show marked sclerotic and degenerative changes with perivascular fibrosis and plasma cell infiltration. The fibrous tissue capsule is included in one section.

Impression: Spindle and oval cell sarcoma.

Comment

It is unusual for a sarcoma of this type to be so slow in growth as to have taken from approximately 1940 to 1945 to attain this size without evidence of metastases elsewhere in the body and with a subsequent complete recovery as manifested by a five-year follow-up without recurrence. The complete encapsulation of the tumor is also noteworthy.

While the treatment of surgical choice of a tumor of this type in this particular location is considered to be disarticulation of the shoulder girdle after a final diagnosis has been established by biopsy, this case shows that in rare instances it may be advisable to attempt resection of the tumor rather than perform such a disfiguring or disabling operation, thereby restoring a functional and useful person to normal life.

What maintains one vice would maintain two children.—Anonymous

The itch for writing is a disease for which there is no remedy.—Anonymous

CORRESPONDENCE

CORTICOTHERAPEUTIC EQUIVALENCE OF TERRAMYCIN

To the Editor:

The publication of an article on corticotherapy in amyotrophic lateral sclerosis [New York State J. Med. **50:** 1365 (June 1) 1950] has led to a barrage of inquiries and comments. The former ask about dosage schedules and possible applicability to multiple sclerosis; the latter have informed me of two deaths in amyotrophic patients during this therapy, but for the most part they deal with the current difficulties in obtaining adequate amounts of even those preparations that were easily available before the current popularization of corticotherapy for the "rheumatoid" diseases.

The probable applicability of corticotherapy to any atopic disease would seem to mandate the allocation of potent extracts to those whose lives are threatened in preference to those who are not dangerously ill. It is, nevertheless, understandable that the practical direction of allocation will be that of proved effect. There is an upper limit to the present availability of cortical extracts, fixed by the supply of glands from which to make it. Perhaps the pressing needs of the patient with an irreversible atopic condition can be met in another manner.

While the adrenal cortex extracts were being studied, B_{12} was given parenterally to some patients. It did no good as far as I could see but was continued for forensic reasons. To minimize expense to the patients, some were given orally, instead, a crude antibiotic fermentation byproduct rich in B_{12} or "animal protein factor," sold as a hog and poultry feed supplement. It appeared to produce exactly the same effects as adrenal cortex extract. The search for an active fraction led to the discovery that the results, not only in amyotrophic lateral sclerosis but multiple sclerosis as well and in a variety of atopic diseases (acute leukemia, scleroderma, neurodermatitis, and rheumatoid arthritis), which were certainly equal to, and in many instances better than, those obtained with corticotropic and/or corticosteroid therapy, could be attributed to the residual antibiotic content of the supplement, which antibiotic appears to be a potent depressor of the gram-negative bacillary intestinal flora. Finally, all results have been duplicated by the oral administration of a pure antibiotic, terramycin.

A large series of cases in the atopic category, where comparable effects to those reported by corticotherapy have been obtained, is the subject of a set of reports now in the process of publication. It appears advisable at this time to inform those who are to direct inquiries on the basis of the amyotrophic lateral sclerosis article, or who are unable to procure adrenal cortex extracts for the treatment of atopic diseases, that terramycin, in my hands, has proved equally efficacious in the intrinsic allergies, the demyelinating neuropathies, the malignant leukoblastoses (leukemias), and radiation myelopathy.

In currently treated cases, terramycin in daily doses of 100 to 250 mg. (divided or single dosage seems to make little difference) is given preferably in milk. The stools are examined periodically, simply by gram-staining an ordinary, heat-fixed smear. The induction and maintenance of a predominantly gram-positive bacillary ("acidophilus") stool is the adjudication of the amount of terramycin to be given. In some instances it appears that 5 mg. daily is sufficient. A lactobacillus flora maintenance may be fortified by occasional oral administration of B_{12} and a liberal lactose intake, but, in the main, the terramycin has been found to be solely essential.

That terramycin reveals itself as an effective treatment for most of the intrinsic hypersensitivity states does not imply that the latter are specifically "infectious" or that terramycin is an adrenal cortex hormone or alarm agent. But that there is a common denominator among all effective modes of antiatopic therapy will become increasingly apparent with progress of current studies.

Robert D. Barnard, M.D.

138-48 231st Street
Laurelton, New York
June 21, 1950

NECROLOGY

Albert Ashton Berg, M.D., of New York City, died on July 1 at the age of seventy-seven. Dr. Berg received his medical degree from the College of Physicians and Surgeons, Columbia University, in 1894 and upon his graduation was made house surgeon at Mount Sinai Hospital. He was promoted to associate surgeon in 1899 and in 1912 became attending surgeon, which post he held until his retirement in 1932 when he became a consulting surgeon. He also served as surgeon-in-chief at Beth Moses Hospital, Brooklyn; Beth David Hospital, Bronx Hospital, Montefiore Hospital for Chronic Diseases, and Syndenham Hospital. In addition, he was consulting surgeon to the Hebrew Orphan Asylum, the Hebrew Sheltering Orphan Asylum, the Miriam Barnet Hospital, Paterson, New Jersey; the Monmouth Memorial Hospital, Long Branch, New Jersey; and St. Joseph's Hospital, Far Rockaway.

A pioneer in the field of abdominal surgery, Dr. Berg was one of the surgeons who contributed to the development of operative technics for the treatment of stomach and duodenal ulcers. Dr. Berg was a founder of the International College of Surgeons of which he was president from 1946 to 1948 and in 1947 was presented with its degree of master of surgery. He also served as a National Regent in Surgery of the College.

Dr. Berg was also noted for his philanthropic and bibliophile interests, having presented the Howe collection of rare books, manuscripts, and other literary material, valued at more than $2,000,000, to the New York Public Library, of which he had been a trustee since 1941. In 1944, he provided funds for the construction of a research laboratory at Mount Sinai Hospital and contributed largely to the soon-to-be-built House of Living Judaism in New York City.

On his graduation from medical school Dr. Berg received the first Hansen Clinical Prize. In 1941, he received the Townsend Harris medal from the Associated Alumni of City College for notable postgraduate achievement. The Venezuelan government decorated him with the third order of Bolivar, and he was made a Fellow of the Surgical Society of Rome and the Surgical Society of Piedmont, both in Italy. He was also a member of the American Medical Association, the American Gastro-Enterological Association, the New York Academy of Medicine, the Medical Society of the State of New York, and the Medical Society of the County of New York.

Jacob Bower, M.D., of the Bronx, died on June 27 at the age of sixty-three. Dr. Bower was graduated from the Cornell University Medical College in 1909 and served his internship at Lebanon Hospital. Since 1921 he had been an associate radiologist at Montefiore Hospital and was also chief roentgenologist at Lebanon Hospital. A Fellow of the American Society of Radiologists, Dr. Bower was a member of the American Medical Association and the Medical Societies of the State of New York and Bronx County.

J. Arthur Buchanan, M.D., of Brooklyn, died on April 17 at the age of sixty-three. Dr. Buchanan, was graduated from the University of Pennsylvania Medical School in 1915. Retired because of ill health, Dr. Buchanan was director of medicine emeritus at Wyckoff Heights Hospital, Brooklyn. He was also a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association and was a Fellow of the American College of Physicians.

George Spaulding Comstock, M.D., of Baldwin, Long Island, died on June 24 at the age of seventy-four. Dr. Comstock received his medical degree from New York University and Bellevue Hospital Medical School in 1901 and interned at Bellevue Hospital. He served in the Hospital Corps in the Spanish-American War and was a captain in the Army Medical Corps in World War I, commanding the 119th Field Hospital, 30th Division, of the American Expeditionary Force. He remained in the Medical Reserve until 1929, when he retired with the rank of lieutenant colonel.

Dr. Comstock was a member of the staffs of Jamaica and St. Anthony's Hospitals, physician for the New York Parental School for twenty-eight years, and an attending surgeon at Riverside Hospital. He was also an instructor of internal medicine at New York University College of Medicine. As division chairman of the Civilian Protective Council at Rockville Centre in World War II, he directed the setting up of a model emergency hospital in 1942.

A police surgeon in Rockville Centre, Dr. Comstock was a member of the New York City Police Honor Legion.

Alice Divine, M.D., of Ellenville, died on June 28. Dr. Divine, who had practiced in Ellenville for forty years until her retirement, was graduated from the Cornell University Medical College in 1900. She was a member of the New York Academy of Medicine, the Medical Societies of the County of Ulster and the State of New York, and the American Medical Association.

Judson Bennett Gilbert, M.D., of Schenectady, died on May 31 at the age of fifty-two. Dr. Gilbert was graduated from Syracuse University College of Medicine, in 1926 and interned at Albany Hospital. In 1928, he was a surgical resident at Memorial Hospital, New York City, and from 1930 to 1932 he was a resident in urology at Bellevue Hospital. A Fellow of the American College of Surgeons and a Diplomate of the American Board of Urology, Dr. Gilbert was a urologist on the staffs of Ellis Hospital and Schenectady City Hospital. He was a member of the American Urological Association, the American Medical Association, the Medical Society of the State of New York, the Schenectady County Medical Society, and the Charaka Club of New York City.

Westley Marshall Hunt, M.D., of New York City, died of a heart ailment on June 28 at the age of sixty-one. Dr. Hunt received his medical degree from Dartmouth Medical School in 1913 and interned at St. Luke's Hospital. After a period of graduate study in Vienna, Dr. Hunt became an instructor at New York University and Bellevue Medical College in 1920, was named lecturer in otolaryngology in 1922, and from 1925 to 1930 served as professor of otology at the College.

In 1924 he was named director of the Department of Otolaryngology at Fifth Avenue Hospital, a post he held until 1935. He was also, at the time of his death, director of surgery at Manhattan Eye, Ear and Throat Hospital, attending otolaryngologist and bronchoscopist at St. Luke's Hospital, bronchoscopist at the Hospital of Special Surgery, and he was a consulting rhinologist and otolaryngologist to Staten Island and Huntington Hospitals and consulting otolaryngologist to Women's Hospital and the National Hospital for Speech Disorders.

Dr. Hunt was a major in the Marine Corps during World War I, serving in France as a commander of a surgery operating team. A Diplomate of the American Board of Otolaryngology and a Fellow of the American College of Surgeons, Dr. Hunt was a past president of the New York League for Hard of Hearing, a past chairman of the Section on Otolaryngology of the New York Academy of Medicine, and a Fellow of the latter organization. He was a member of the American Medical Association, the American Laryngological, Rhinological and Otological Association, the American Academy of Ophthalmology and Otolaryngology, the American Broncho-Esophagological Association, the American Laryngological Association, the American Otological Society, the Medical Society of the State of New York, the New York Otological Society, the New York Laryngology Society, the Clinical Research Society, the New York Bronchoscopic Club, and the Medical Society of the County of New York.

Irving Korowitz, M.D., of Brooklyn, died on June 12 at the age of fifty-seven. Dr. Korowitz was graduated from Long Island College Hospital Medical School in 1915 and had been in general practice in the Bay Ridge section of Brooklyn for the last thirty years. He had been a clinical assistant physician in the Outpatient Department of Israel Zion Hospital and a member of the associate staff of Beth-El Hospital. Dr. Korowitz was a member of the American Medical Association and the Medical Societies of Kings County and the State of New York.

Hans J. Lowenstein, M.D., of Chestertown, died on February 13 at the age of seventy-two. Dr. Lowenstein was graduated from the University of Breslau in 1901 and was a member of the Medical Society of the State of New York, the Warren County Medical Society, and the American Medical Association.

John M. Mesmer, M.D., of Buffalo, died on June 12 at the age of sixty-five. Dr. Mesmer was graduated from the University of Buffalo School of Medicine in 1896. He was a consulting physician to Millard Fillmore Hospital and was a member of the Buffalo Academy of Medicine, the Medical Society of the State of New York, the Erie County Medical Society, and the American Medical Association. Dr. Mesmer was a Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians.

Walter Schoendorff, M.D., of Yonkers, died on June 27 at the age of fifty-four. Dr. Schoendorff was graduated from the University of Cologne in 1923 and was a member of the New York Academy of Medicine, the Medical Societies of the State of New York and the County of Westchester, and the American Medical Association.

Mandell Shimberg, M.D., of Tarrytown, died on June 26 at the age of fifty-six. Dr. Shimberg was graduated from the Medical School of the University of London and from Syracuse University College of Medicine in 1920. He was in England at the outbreak of World War I and joined the British Army as an American citizen. As one of the first 100,000 British troops to land in France, he received the Mons Medal. When the United States entered the war, Dr. Shimberg returned to this country and was commissioned as a first lieutenant in the Army Medical Corps. In World War II he held a reserve commission as a lieutenant colonel.

Before his appointment as chief of medical rehabilitation at the recently opened Franklin Delano Roosevelt Veterans Administration Hospital in Montrose, he was chief and first head of the Ray Clinic, New York Regional Office, Veterans Administration, and also was chief of the Medical Rehabilitation Service of the Veterans Administration in New York City. Before joining the VA he had practiced medicine in Syracuse where he taught at Syracuse University.

Dr. Shimberg was a Diplomate of the American Board of Physical Medicine and a member of the American Congress of Physical Medicine, the American Medical Association, the Medical Society of the State of New York, and the Westchester County Medical Society.

Morris Kellogg Smith, M.D., of Richmond, died on July 1 at the age of sixty-four. Dr. Smith was graduated from the Dartmouth Medical School in 1911. During World War I he was a captain in the Medical Corps, assigned at first to service with British forces and later to the American Hospital in Paris. During World War II he started his service with a medical unit from St. Luke's Hospital and later acted as consulting surgeon with the Third Army in France and Germany. A consulting surgeon to St. Luke's Hospital and chief surgeon at Halloran Veterans Administration Hospital, Dr. Smith was a Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons. He was also a member of the American Surgical Association, the American Medical Association, the Society of Clinical Surgery, the New York Surgical Society, the New York Academy of Medicine, and the Medical Societies of the State of New York and the County of Richmond.

Harry D. Sonnenschein, M.D., of New York City, died on June 27 at the age of fifty-nine. Dr. Sonnenschein was graduated from the New York University and Bellevue Hospital Medical College in 1911 and since 1922 had been associated with the Hospital for Joint Diseases in the Department of Orthopedic Surgery. He was a member of the American Academy of Orthopedics, the American Medical Association, the New York Academy of Medicine, and the Medical Societies of the State and County of New York. Dr. Sonnenschein was a Fellow of the American College of Surgeons and a Diplomate of the American Board of Orthopedic Surgery.

Alec Nicol Thomson, M.D., of Cutchogue, died on July 4 at the age of sixty-eight. Dr. Thomson was graduated from the Long Island College Hospital in 1905 and served his internship at Bushwick Hospital, Brooklyn. He had at one time been an assistant attending surgeon at Swedish Hospital and an associate surgeon at Brooklyn Hospital, where, as director of the clinic, he developed the Hospital's venereal disease service. In World War I Dr. Thomson served as chief surgical officer of the Venereal Disease Sections of the American Expeditionary Force and was discharged with the rank of major. From 1919 to 1923 he was medical director of the American Social Hygiene Association and from 1923 to 1926 medical secretary of the Committee on Dispensary Development. In 1926, he became secretary of the public health committee of the Kings County Medical Society, a post which he held until 1940. A former secretary of the Brooklyn Cancer Committee of the American Society for the Control of Cancer, Dr. Thomson had been chairman of the committee on outpatient work of the American Hospital Association, was chairman for Brooklyn of a city-wide public health campaign conducted in 1929, and in 1930 was secretary of a committee to promote greater professional cooperation between medical and dental fields.

In World War II Dr. Thomson was Civilian Defense Medical Officer for Eastern Long Island, and since 1947 he had been administrator of the Eastern Long Island Hospital, Greenport. He was a member of the American Medical Association, the American Urological Association, the Brooklyn and New York Urological Societies, the Medical Societies of the State of New York and the County of Kings and had been executive secretary and director of medical activities for the latter society. He was also a Fellow of the American Public Health Association.

Max Weitzen, M.D., of New York City, died on February 26 at the age of seventy. Dr. Weitzen was graduated from the Long Island College Hospital in 1910 and was a member of the American Medical Association and the Medical Societies of the State of New York and the County of New York, the Eastern Medical Society, the East Side Clinical Society, and the Medical Alliance Society.

Frederick Barton Wood, M.D., of Queens, died on June 4. Dr. Wood received his medical degree from the Baltimore Medical College in 1910 and had practiced in Queens for more than forty years. He was a physician emeritus at Flushing Hospital and had been an industrial physician for American Airlines, Inc. He was a member of the American Medical Association and the Medical Societies of New York State and Queens County.

George Woolsey, M.D., of New Haven, Connecticut, formerly of New York City, died on July 1 at the age of eighty-nine. Dr. Woolsey, who retired from active practice in 1935, was graduated from the College of Physicians and Surgeons, Columbia University, in 1885 and interned at Bellevue Hospital. Upon completion of two years of postgraduate study in France and Germany, Dr. Woolsey became professor of anatomy and clinical surgery at the New York University College of Medicine and later taught anatomy at Cornell University Medical College, where he was named a professor emeritus in 1926. A Fellow of the American College of Surgeons, Dr. Woolsey had been a surgeon on the staff of Bellevue Hospital and was a consulting surgeon to the Bellevue Hospital, Memorial Hospital, and Presbyterian Hospital, the New York Infirmary for Women and Children, all in New York City, Peekskill Hospital, Peekskill, and St. John's Hospital, Yonkers. During World War I he served in the Officer Reserve Corps with the rank of major.

Dr. Woolsey was a member of the American Medical Association, the American Surgical Association, the Society of Clinical Surgery, the New York Surgical Society, the New York Academy of Medicine, and the Medical Societies of the State of New York and New York County.

TV FOR LATIN AMERICAN PHYSICIANS

Latin American surgeons and physicians will have an opportunity, most of them for the first time, to witness the latest demonstrations of surgical procedures by television during the coming summer months, for the E. R. Squibb & Sons International Corporation is sponsoring a scientific project called "Video Medico" which it will put on in five of the more important countries in Latin America. Easily the most ambitious project of its kind ever attempted, Squibb International will work in conjunction with International General Electric.

The joint team will travel by air, carefully timing each stopover of about ten days to coincide with special meetings of local doctors.

MEDICAL NEWS

Cooperative Program for Postgraduate Training in Cancer Announced

CORNELL University, the Sloan-Kettering Institute for Cancer Research, Memorial Center for Cancer and Allied Diseases, and the Society of New York Hospital are participating in a joint program designed to provide postgraduate training in the fields of cancer and allied diseases. Under the program Cornell University will establish a new division of its medical college devoted primarily to investigative work in cancer and allied diseases. This new division, to be known as the Sloan-Kettering Division of Cornell University Medical College, will be located in special facilities constructed, equipped, and owned by Memorial Center.

Dr. Cornelius P. Rhoads, director of Memorial Center and of Sloan-Kettering, also will direct the new division. Through Dr. Joseph C. Hinsey, dean of Cornell University Medical College, the work of this special graduate division will be integrated with that of the Cornell Graduate School and University. Students from other universities may receive training under the new program, in accordance with Cornell University's usual policies with respect to the granting and transferring of academic credits.

The participating institutions will each appoint members to a coordinating board that will act as a clearing house for information and will make recommendations as to the joint program.

The new division will use the staff and facilities of Sloan-Kettering for the training and education of candidates for advanced degrees in recognized divisions of the physical and biologic sciences, primarily through investigative work in the field of cancer and related ills.

Cornell University and the New York Hospital have agreed to make available to the new division such educational and other facilities as in their judgment may be required to complement the instruction.

National Cancer Institute Research and Teaching Grants

RECENT announcements made by the National Cancer Institute of the U.S. Public Health Service include three renewals of teaching grants to institutions in New York State and a number of renewals and new grants for cancer research in the State. Also announced was the fact that all of the nation's 79 medical schools are now participating in the Public Health Service's program to improve the cancer training of future physicians.

Allocations to the amount of $640,541 for teaching grants were approved, and in New York State the following recipients were named: Dr. L. Whittington Gorham, Albany Medical College; Dr. J. A. Curran, State University Medical Center at New York; and Dr. Thomas P. Almy, Cornell Medical College.

New research grants and renewals totalled $1,160,818, $155,750 of this amount being awarded to the following New York State physicians:

Dr. Robert Stone Grinnell, Columbia University, $3,456, for a study of the local spread of carcinoma of the rectum (new grant).

Dr. Edward Lee Howes, Columbia University, College of Physicians and Surgeons, $5,500, for studies in the evolution of stomach cancer produced by carcinogenic chemicals.

Dr. William Von E. Doering, Hickrill Chemical Research Foundation, Inc., $10,000, for synthesis of tropolone and other compounds related to colchicine.

Dr. Oscar Bodansky, Memorial Cancer Center, $6,000, for study of enzymes present in human blood with attempted applications to the diagnosis of cancer (new grant).

Drs. Alice Moore and C. Chester Stock, Memorial Cancer Center, $20,000, for study of relationship of virus infection to tumor growth (new grant).

Drs. C. P. Rhoads and Robert C. Mellors, Memorial Cancer Center, $10,000, for the study of cancer cells with the reflecting microscope and newer optical methods (new grant).

Drs. C. C. Stock, John J. Biesele, and Chi-hsuir Ulric Chu, Memorial Hospital, $3,888, for the study of the possibility of tumor induction by cellular fractions (new grant).

Dr. S. M. Seidlin, Montefiore Hospital, $10,000, for study of tumor metabolism (thyroid carcinoma).

Dr. H. M. Zimmerman, Montefiore Hospital, $10,000, for study on experimental brain tumors.

Dr. Franklin Hollander, Mount Sinai Hospital, $11,556, for chemicophysiologic studies of gastric mucous secretions in dogs and patients with gastric cancer and peptic ulcer.

Dr. I. Snapper, Mount Sinai Hospital, $4,300, for study of the deposition of diamidines in cytoplasm and nuclei of different tumors (new grant).

Dr. M. J. Kopac, New York University, $9,579, for study of mechanisms of protoplasmic growth.

Dr. Douglas Marsland, New York University, $2,592, for study of the mechanisms of cell division, a pressure-temperature study.

Dr. W. R. Bloor, University of Rochester, $10,622, for study of lipid metabolism of tumor-bearing animals.

Dr. Samuel M. Caplin, University of Rochester, $3,662, for experimental studies of plant tissue cultures and their relation to the behavior of plant tumors.

Dr. Alexander L. Dounce, University of Rochester, $4,995, for biochemical studies of cell nuclei isolated from normal and neoplastic tissue with particular regard to their enzyme systems.

Dr. G. B. Mider, University of Rochester, $3,696, for study of the measurement of oxygen consumption of organs and tissues of intact tumor-bearing rats (new grant).

Dr. D. S. Tarbell, University of Rochester, $9,828, for study of the structure and activity of colchicine, podophyllotoxin, and related compounds in inhibiting cell division.

Drs. Allan Bass and Jay Tepperman, $5,076, for a study to compare the hormonal responses of certain tumors with those elicited in normal tissues (new grant).

Italian and Swiss Medical Schools to Be Indorsed

A COMMITTEE appointed by the New York State Board of Regents to inspect Italian and Swiss medical schools is preparing a report that will indorse the curricula of twelve of the schools visited, according to a recent announcement by Dr. Dominick F. Maurillo, of Brooklyn, who headed the group.

Approval means that American students can get their medical education at these schools and after a year's internship here in the United States can take the State license examination. The three-man committee, which also includes Dr. Donal Sheehan of the New York University-Bellevue Medical Center and Dr. Irwin A. Conroe, Assistant Commissioner of Education in charge of professional education and licensure, returned from a six-week tour on May 14, during which time they examined the schools at the invitation of the two governments.

In Switzerland the committee approved the medical schools of the Universities of Geneva, Lausanne, Berne, Basel, and Zurich, and in Italy the schools of the Universities of Milan, Bologna, Pavia, Turin, Florence, Rome, and Padua. The University of Palermo will be indorsed for 1951 when the war-destroyed facilities will be functioning again.

Before World War II, Italian medical degrees were recognized in New York State, and after the signing of the friendship treaty between the United States and Italy in 1948, moves were made to re-establish this recognition. Swiss degrees had also been approved, but lack of inspection during the war precluded indorsement.

MEDICALLY SPEAKING—

Research Grants in Nutrition Announced—The National Vitamin Foundation has announced the awarding of 12 research grants in the field of nutrition. The new grants, which became effective on July 1, 1950, and totalled $78,150, included the following to New York State physicians:

Dr. L. Emmett Holt, Jr., New York University College of Medicine, $5,000, for study of the thiamine requirement of the breast-fed infant.

Dr. Karl E. Mason, University of Rochester School of Medicine and Dentistry, $4,800, for a two-year study of the distribution of tocopherols in human tissues and organs during fetal life and early infancy and the implications to dysfunctions of pregnancy and early childhood.

Dr. Elaine P. Ralli, New York University College of Medicine, $3,500, for study of vitamin-hormone relationships, using the rat as experimental animal.

Dr. Theodore F. Zucker, Columbia University, $4,000, for study of the effects of pantothenic acid on acetylation rates in man, with special reference to a possible role in doudenal ulcer.

Dr. Beeckman J. Delatour to Direct American Hospital of Paris—On July 1 Dr. Beeckman J. Delatour, associate professor of medicine at New York University since 1944, assumed his duties as clinical director and director of medical service at the American Hospital of Paris. The Hospital, which at various times has been taken over by the American, French, and German armies, is now fully restored to the meeting of civilian needs.

The American Hospital of Paris, located in suburban Neuilly-sur-Seine, now occupies a million-dollar plant completed in 1926 as a memorial to men and women who served in World War I and at present has 153 beds, 20 bassinets, and an outpatient service. The services of the Hospital are available to any American citizen requiring care, regardless of ability to pay. Foreign paying patients are cared for when private-room facilities permit.

Examinations for Medical Officers in the Federal Service—Medical Officer positions in the Federal Service paying $5,400, $6,400, and $7,600 per year will be filled from an examination recently announced by the Director, Eighth U.S. Civil Service Region, Saint Paul, Minnesota. Positions paying the above cited salaries are now vacant, and there is an immediate need to fill these positions. Medical doctors who have just completed their internship are eligible for the positions paying $5,400. Medical doctors with one or two years experience performing responsible medical doctor duties are eligible for the positions paying $6,400 and $7,600 per year, respectively.

Applications for these positions will be accepted until further notice. Application forms may be obtained at any first- or second-class post office. A copy of the examination announcement may be obtained by writing the Director, Eighth U.S. Civil Service Region, Saint Paul Post Office and Customhouse Building, Saint Paul 1, Minnesota.

Schering Establishes Another Endocrine Research Fellowship—Another research fellowship in endocrinology has been established recently at Rutgers University by Schering Corporation, Bloomfield, New Jersey. According to Dr. James H. Leathem, endocrinologist and staff member of the New Jersey University's Bureau of Biological Research, the grant, valued at $2,300, is intended for the support of fundamental research by graduate students in the field of steroid hormones. The Bureau of Biological Research is a research agency of the State University. It was established in 1936 to facilitate cooperative research in the several fields of biology.

Six Medical Specialists on Blind Aid Committee—Six medical specialists have been elected to a grants-in-aid committee by the National Council to Combat Blindness, it was announced recently. The committee will make decisions on the allocation of funds by the council to medical schools in the United States and Great Britain for research in the field of blinding eye diseases.

Committee members are Dr. Alson E. Braley, head of the Department of Ophthalmology at New York University; Dr. Dan M. Gordon, assistant professor of ophthalmology at Cornell University Medical College; Dr. Stuart Mudd, professor of ophthalmology at University of Pennsylvania School of Medicine; Dr. Charles A. Perera, professor of ophthalmology at Columbia University, College of Physicians and Surgeons; Dr. Samuel L. Saltzman, professor of ophthalmology at New York Medical College, and Dr. Phillips Thygeson, professor of ophthalmology at the University of California Medical College.

ILGWU Gift to N.Y.U.-Bellevue Medical Center Announced—A gift of $10,000 from the International Ladies' Garment Workers' Union to the New York University-Bellevue Medical Center has been announced. The gift from the ILGWU was divided into two parts with $2,500 earmarked to be devoted to the Center's Institute of Physical Medicine and Rehabilitation, now under construction, and $7,500 to be used to help construct the Main Building for the Center's two medical schools, which will be the next unit to be built.

The facilities for the Institute of Physical Medicine and Rehabilitation will be completed this Fall, thus putting into operation the first new building unit in the Center's $32,000,000 development program.

Arthritis and Rheumatism Foundation Fellowship—The Arthritis and Rheumatism Foundation, initiating a new step in its research program, is now offering fellowships for research in the basic sciences related to the study of arthritis. The fellowships will be selected by the Foundation's Medical and Scientific Committee, it has been announced.

The Foundation is anxious to back a candidate rather than a project, an institution, or a hospital, the Committee said. It hopes to arouse interest in arthritis in a wider circle of medical investigators and to encourage able, inquiring minds into the whole problem of the rheumatoid diseases which are causing the crippling and unnecessary suffering of seven and a half million men, women, and children throughout the country. The fellowships will carry a stipend of from $4,000 to $6,000, depending upon the needs and ability of the workers, and will run for a period of one year.

Applications should be sent to the Arthritis and Rheumatism Foundation, 535 Fifth Avenue, New York 17. Applications received by September 15 of this year will be acted upon at that time and notification of fellowships made immediately. All applications must be received by January 1, 1951.

Buffalo Ordinance Approves Use of Strays for Medical Investigation—Some of the unwanted, unclaimed dogs and cats, formerly destroyed by the S.P.C.A. in Buffalo, will be saved to help scientists at the University of Buffalo School of Medicine and other medical institutions in that city to investigate such health problems as cancer, heart disease, and blindness under the terms of an ordinance approved by the Buffalo City Council by a vote of 11 to 4 recently.

Buffalo thus became the twenty-ninth city to assure its health investigators of a dependable supply of necessary animals from its stray dog population. Prior to the passage of the ordinance, medical scientists were forced to pay exorbitant prices for an undependable supply of animals from out-of-state dealers.

Other major cities which have recently acted to save stray animals to assist medical teaching and research are Omaha, Cleveland, and Baltimore, and the Los Angeles Animal Regulation Commission has recommended to the City Council there that unclaimed animals held at the municipal pound, instead of being destroyed, be used to speed up both military and civilian medical research being conducted in that city's medical institution.

Clifton Springs Sanitarium and Clinic Will Mark 100th Anniversary The Clifton Springs Sanitarium and Clinic will mark its 100th anniversary on September 13, opening a five-day program which will include the annual meeting of the Seventh District Branch of the Medical Society of the State of New York on Thursday afternoon and evening, September 14.

On Wednesday, September 13, and Thursday, September 14, the Sanitarium and the Seventh District will sponsor two days of a medical program with clinical conferences, round table discussions, and formal medical papers. Among the speakers who will be heard are: Dr. Thomas Francis, University of Michigan Medical School; Dr. Hobart Reiman, professor of medicine, Jefferson Medical College, Philadelphia; Dr. Grover C. Penberthy, clinical professor of surgery, Wayne University College of Medicine, Detroit; and Dr. Philip Thorek, assistant professor of surgery, University of Illinois.

Dr. Carlton E. Wertz, Buffalo, president of the Medical Society of the State of New York, will be among the speakers at the Seventh District Branch meeting which opens at 2:00 P.M., September 14. Dr. George Gage, Rochester, heads the district. An innovation this year will be that all meetings will be held during the afternoon and evening. A banquet is scheduled for 7:00 P.M., September 14.

American Board of Obstetrics and Gynecology Examination—The annual meeting of the Board was held in Atlantic City, New Jersey, from May 21 to 27, inclusive, 1950, at which time 259 candidates were certified.

New bulletins, incorporating changes made at the recent meeting, are now ready for distribution. These changes include adoption of a special form to be designated as the "Appraisal of Incomplete Training Form" which will be forwarded to prospective applicants upon request. Numerous changes concerning graduate training in obstetrics and/or gynecology have also been adopted and will be of special interest to hospitals conducting residency programs as well as to prospective applicants to this Board.

The next scheduled examination (Part I), written examination and review of case histories, for all candidates will be held in various cities of the United States and Canada on February 2, 1951. Application may be made until November 5, 1950. Application forms and bulletins are sent upon request made to Paul Titus, M.D., Secretary, American Board of Obstetrics and Gynecology, 1015 Highland Building, Pittsburgh 6, Pennsylvania.

Medico-Military Symposium for Reserve Medical Officers of Fourth Naval District—To keep military Reserve Medical Officers of the Armed Forces, Army, Navy, and Air Force, posted on the latest developments in the field of medical science, a Medico-Military Symposium for officers of the Fourth Naval District will be held at the U.S. Naval Hospital, Philadelphia, from October 23 to 28.

Speeches and panel discussions are scheduled in aviation medicine, national defense in case of disaster or attack, national preparedness, psychiatry, submarine medicine, surgery, and orthopedics. Physicians selected to head the panels include Brig. Gen. James P. Cooney, Chief, Radiology Branch, Division of Military Application, Atomic Energy Commission; Dr. Perrin Long, professor of medicine, Johns Hopkins University; Captain John Poppen, (MC), USN; Captain George Lyons, (MC), USN; Rear Admiral C. J. Broan, (MC), USN; Captain C. W. Shilling, (MC), USN; Dr. Frank Braceland; Dr. Joseph Hughes; Dr. Edward Strecker, and Dr. Christian J. Lamberton.

It is urged that officers make hotel reservations well in advance, since no government housing facilities will be available. The final session of the symposium will be held October 28, leaving the afternoon free for officers to attend the Penn-Navy football game.

The attendance to this symposium is not restricted to medical officers of the Armed Forces. All members of the medical profession are cordially invited to attend.

Medical Board for James Ewing Cancer Hospital Appointed—The appointment of a ten-man medical board for New York City's new James Ewing Hospital for Cancer, First Avenue between Sixty-seventh and Sixty-eighth Street, was announced recently by Dr. Marcus D. Kogel, Commissioner of Hospitals. The new hospital, ten stories high and holding 300 beds, was opened late in July. Costing $5,580,000 to build, its maintenance is expected to cost $930,000 annually.

The newly appointed board includes Dr. C. P. Rhoads, director, Memorial Cancer Center; Dr. John S. Lockwood, chief of surgical services; Dr. Allen C. Whipple, educational director; Dr. Lloyd F. Craver and Dr. Rulon W. Rawson, visiting physicians in medical service; Dr. James J. Nickson, visiting radiation therapist; Dr. Fred W. Stewart, visiting pathologist; Dr. Robert S. Sherman, visiting roentgenologist; Dr. Samuel Steinholtz, medical superintendent, ex-officio, and Dr. John M. Walke, administrator, Memorial Center, ex-officio.

Duplication of Quarantine Health Inspection Eliminated—In a move to facilitate international maritime and air traffic, the United States and Canada have eliminated duplication of public health quarantine inspection requirements for ships and aircraft arriving from other countries, effective July 1. This action follows an extended period of negotiation between Canadian and United States health authorities.

Public health quarantine inspections are performed routinely at ports of entry to prevent introduction of communicable diseases by persons or by ships, aircraft, or other things arriving from infected countries. Of chief concern to health authorities are the "quarantinable diseases." These, with their means of transmission, are: smallpox, personal contact; cholera, infected food, or water, or contact; plague, the rat, flea, or contact; typhus, lice; and yellow fever, the Aedes aegypti and certain other mosquitoes.

In the past, ships and aircraft receiving quarantine inspection in Canada had to undergo another inspection on arrival in the United States, and vice versa; exception was made only for ships stopping at ports on the international waters between United States and Canada. The new procedure provides that a ship or aircraft arriving at any port in either of the two countries will be exempt from inspection if it presents a duplicate certificate of inspection issued at any port in the other country. The procedure does not apply to carriers arriving in Canada by way of a United States insular possession.

Medical Officer, California State Personnel Board, Examination Announced—The State Personnel Board of California has announced a nation-wide examination for the position of Medical Officer, State Personnel Board. Requirements include possession of a valid license to practice as a physician or surgeon in the applicant's home state and eligibility for such license in California, four years' experience in the field of preventive medicine, adult health, industrial health, or public health administration (other professional medical experience may be substituted for two years of the required experience on a year-for-year basis), and all applicants must be United States citizens. Applications and further information are obtainable from the California State Personnel Board, Sacramento, California, or from a local department of employment office. Applications must be filed not later than September 2, 1950, and the examination will be held on September 23.

Announcement of Regular Corps Examination for Medical Officers—A competitive examination for appointment of Medical Officers in the Regular Corps of the United States Public Health Service will be held on October 9, 10, and 11, 1950. Examinations will be held at a number of points throughout the United States, located as centrally as possible in relation to the homes of candidates. Applications must be received no later than September 11, 1950.

The Regular Corps is a commissioned officer corps composed of members of various medical and scientific professions, appointed in appropriate categories such as medicine, dentistry, nursing, engineering, pharmacy, etc.

Appointments will be made in the grades of Assistant Surgeon (equivalent to Army rank of first lieutenant) and Senior Assistant Surgeon (equivalent to captain).

Atomic Laboratory for Health Opened—The government has unveiled one of the few laboratories in the world designed solely for using radioisotopes in medical studies. It was constructed at a cost of $336,800 as a part of the National Institutes of Health of the Public Service, at Bethesda, Maryland.

The laboratory was specially set up to handle the radioactive byproducts of the nation's atomic energy plants. These elements are being put to increasing use in the study of diseases throughout the country, but government officials said the Bethesda laboratory is one of the first of its kind designed solely for such studies.

The Public Health Service announcement said a number of projects are being undertaken, among them several related to cancer and to methods by which the body assimilates various compounds. A study also will be made of radon, a gaseous element from radium, and its effect upon living things.

PERSONALITIES

Honored

Dr. J. B. Congdon, Albany physician, by the Exchange Club of Albany on May 25 at a testimonial dinner dance . . . Dr. Lewi Donhauser, professor of surgery at Albany Medical College and senior surgeon at Albany Hospital, received the honorary doctor of science degree on June 11 from Union College, Albany . . . Dr. J. A. W. Hetrick, dean of New York Medical College, Flower and Fifth Avenue Hospitals, was presented with the honorary doctor of science degree by the New York Medical College on

June 14 . . . The honorary doctor of science degree was conferred on Dr. Currier McEwen, dean of New York University College of Medicine, on June 11 by Wesleyan University . . . Dr. Karl M. Wilson, professor of obstetrics and gynecology, University of Rochester School of Medicine and Dentistry, at a gathering of 19 of his former students, now physicians throughout the United States and Canada, on June 17 on the occasion of Dr. Wilson's twenty-fifth anniversary of teaching at the University.

Awarded

Dr. Paul W. Beaven, former chairman of the New York State district of the American Academy of Pediatrics and past president of the Rochester Academy of Medicine and the Rochester Pathological Society, the Albert D. Kaiser Medal of the Rochester Academy of Medicine for his work in the field of childhood tuberculosis and with the Council of Social Agencies . . . Dr. Walter Levy, pediatrician of New York City, the New York University Alumni Meritorious Service Award for 1950 . . . Dr. Oswald Swinney Lowsley, director of the Oswald Swinney Lowsley Foundation, Inc. of St. Clare's Hospital, the decoration of the Southern Cross with the grade of Commendadore by the Ambassador of Brazil on June 9 as a mark of distinction for Dr. Lowsley's interest in promoting good relationships with Brazil and other Latin American countries . . . Dr. John Henry McClement, associate in medicine at the College of Physicians and Surgeons, Columbia University, the recently established James Alexander Miller Fellowship for research in tuberculosis, by the New York Tuberculosis and Health Association.

Retired

Dr. William Howard, from his duties as professor of radiology, at Albany Medical College and as radiologist-in-chief at Albany Hospital, on July 1 . . . Dr. Dorothea M. Tolle, on July 1, after thirty-one years of New York City service, from her post as medical superintendent of Willard Parker Hospital for communicable diseases . . . Dr. George D. Winchell of Rose, after forty-two years as Wayne County coroner.

Appointed

Dr. Edward C. Brandow, Jr., of Albany, as exchange resident in otolaryngology at Guys Hospital, London, for six months. He was selected by the Department of Otolaryngology, Columbia-Presbyterian Medical Center, and is sponsored by the Josiah Macy, Jr., Foundation . . . Dr. Frank P. Guidotti, as medical director of the health center to be opened at 501 West 50th Street . . . Dr. Louis M. Hellman, formerly codirector of the obstetric anesthesia program at Johns Hopkins Hospital, Baltimore, as professor of obstetrics and gynecology on the faculty of the College of Medicine of the State University Medical Center at New York City, effective August 1 . . . Dr. Elliott S. Hurwitt, former adjunct surgeon for pediatric surgery at the Mount Sinai, Beth Israel, Polyclinic, and Lebanon Hospitals in New York City, as full-time chief of the surgical division of Montefiore Hospital, effective July 1 . . . Dr. George James, formerly associate public health physician in the Communicable Diseases Division of the New York State Department of Health, as temporary principal public health physician, medical administration.

Dr. Gordon M. Meade has been appointed to succeed Dr. Edward N. Packard as medical director of Trudeau Sanatorium, the latter resigning to enter private practice. Dr. Roger S. Mitchell will assume the post of associate medical director which was formerly held by Dr. Meade. All changes are effective September 30 . . . Dr. Herbert R. Morgan, formerly associate professor of epidemiology in charge of public health laboratory practice at the University of Michigan School of Public Health and assistant professor of medicine at the University of Michigan School of Medicine, was appointed professor of bacteriology and chairman of the Department of Bacteriology and Preventive Medicine at the University of Rochester School of Medicine and Dentistry, effective July 1.

Dr. Elaine P. Ralli, since 1928 in charge of the metabolism clinics of the Third Medical Division of Bellevue Hospital, became director of outpatient services of the Department of Hospitals of New York City on July 1 . . . Dr. L. Corsan Reid, who has served as associate professor of physiology at New York University College of Medicine, has been named professor of experimental surgery of the New York University Post-Graduate Medical School of the New York University-Bellevue Medical Center . . . Dr. Thomas A. C. Rennie, attending psychiatrist of the Payne Whitney Psychiatric Clinic, as professor of psychiatry (social psychiatry) at the Cornell University Medical College . . . Dr. John Faunce Roach, formerly associated with the radiology departments of the Johns Hopkins University School of Medicine and Johns Hopkins Hospital, in Baltimore, was named professor of the Department of Radiology of the Albany Medical College and radiologist-in-chief to the Albany Hospital. The appointment was effective July 1 . . . Dr. Alexander N. Selman of Spring Valley as head of a committee of doctors to work with the Rockland County Civilian Defense Unit. Appointment was made by the Rockland County Medical Society.

Elected

Dr. Maurice J. Dattelbaum, treasurer of the Medical Society of the State of New York, was reelected vice-president of the Brooklyn Tuberculosis and Health Association on May 4 . . . Dr. Adolph G. DeSanctis, director of the Department of Pediatrics of the University Hospital of the New York University-Bellevue Medical Center, as chairman of the Medical Board of the Center . . . Dr. Anthony J. Lanza, chairman of the Institute of Industrial Medicine of the New York University-Bellevue Medical Center, as secretary of the New York Tuberculosis and Health Association, Inc., and of the board of directors of that organization on June 6 . . . Dr. Luther B. MacKenzie, a member of the faculty of the New York University College of Medicine, to the New York University Council on June 4 . . . Dr. Howard A. Rusk, professor and chairman of the Department of Physical Medicine and Rehabilitation of New York University College of Medicine, as a member of the board of directors of the New York Tuberculosis and Health Association.

Dr. Sydney D. Weston, of Brooklyn, as president of the Alumni Association, New York University College of Medicine. Also elected were the following: Dr. Walter Levy, president-elect; Dr. Anthony S. Bogatko, vice-president; Dr. Richard M. Hyman, secretary; Dr. Harold Brandaleone, treasurer; Drs. Samuel Standard and S. Aubrey Gittens, members of the Executive Committee, and Dr. James W. Smith, director of the Alumni Federation.

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HOSPITAL NEWS

President Appoints Veterans Hospital Study Committee

TWO New York physicians are members of a three-man committee appointed in June by President Truman to study and review certain veterans problems, "especially those of the paraplegics and amputees." On the committee, which will report directly to President Truman, are Dr. Howard A. Rusk, chairman of the department of physical medicine and rehabilitation, New York University-Bellevue Medical Center; Dr. Arthur Abramson, head of the department of physical medicine and rehabilitation at the Veterans Administration Hospital, the Bronx, who is a paraplegic, and Rear Admiral Robert L. Dennison, naval aide to the President.

The President's announcement said that the special committee, which is headed by Dr. Rusk, is authorized to call in such consultants and specialists as it may deem necessary. "A broad general study of the whole problem" will be made, with the possibility that some of the specialized care needed can be "spread on down into smaller hospitals."

There are concentrations of paraplegics at Long Beach and San Francisco, California; Richmond, Virginia; the Bronx; Framingham, Massachusetts; Chicago, Illinois, and Minneapolis, Minnesota In all, there are about 2,200 paraplegic cases among World War II veterans, but very few from World War I.

New York City to Have Board of Hospitals

AN eleven-member Board of Hospitals as a top policy-making body within the New York City Department of Hospitals to supervise development of the City's $150,000,000 hospital expansion and improvement program will be appointed by Mayor William O'Dwyer. Announcement of this was made by Mayor O'Dwyer at a meeting of an interim committee of eleven appointed by the Mayor to consider a proposed Board of Hospitals.

The new unsalaried board, of which Dr. Marcus D. Kogel, Commissioner of Hospitals, will be chairman, will consist of five physicians with a broad medical and public health background and five laymen with distinguished records in handling large business affairs. In his meeting with the interim committee, Mayor O'Dwyer said that he and Dr. Kogel had concluded that responsibility for the development of the City's huge hospitals program "should be shared with public health leaders and outstanding business men."

Dr. Kogel outlined the proposed functions of the Board of Hospitals as follows:

1. To develop long-range programs for the care of the aged, sick, and infirm of the City and maintain their continuity.
2. To promote the highest possible standards of medical care and quality of service for the sick.
3. To develop methods leading to the most efficient operation, maintenance, and management of facilities under the jurisdiction of the Department of Hospitals.
4. To exercise broad legislative functions substantially similar to those now exercised by the Board of Health, not inconsistent with the City Charter and State laws.
5. To ratify the budget (capital and expense) of the Department of Hospitals for submission to the appropriate City agencies.
6. To review the action of the Commissioner in matters relating to licensing.

Hospital Construction, Additions Completed in State

CONTINUING their programs of improvements and construction, many hospitals in New York State have completed new additions, built new buildings, or laid the cornerstones for work now being completed. Among recent changes are the following:

New York University-Bellevue Medical Center—Announcement was made in May of an estimated $8,500,000 building program to be initiated this year, calling for the completion of three additional units of the University section of the New York University-Bellevue Medical Center within an eighteen-month period. The units to be constructed include the Main Building for the Medical Schools, comprising classrooms, the central library and the laboratories; the Alumni Hall Auditorium, and the Hall of Residence. These new buildings, together with the Institute of Physical Medicine and Rehabilitation, for which the cornerstone was laid on May 24, will comprise four of the five principal units of the Center. New facilities for the Center's University Hospital will be the last building to be constructed.

Speakers at the laying of the cornerstone of the Institute of Physical Medicine and Rehabilitation building included Mr. Bernard Baruch, Chancellor Harry Woodburn Chase, General William J. Donovan, and Dr. Howard A. Rusk, director of the Institute.

Hospital for Joint Diseases, New York City—Work is now being completed on the Lila Motley Memorial annex for the Hospital for Joint Diseases, for which the cornerstone was laid in April. The Hospital's cancer treatment, prevention, and research program, its training courses for practical nurses, and its refresher program to further physicians' medical education and experience will benefit from the new facilities. Also to be housed in the building is a new two million volt x-ray therapy machine, one of the most powerful for the treatment of cancer in a general hospital. The machine, made by the General Electric X-ray Corporation, will substantially increase the present treatment, research, prevention, and training phases of the hospital's cancer program.

Franklin Delano Roosevelt Hospital, Montrose—Dedication of the $25,000,000 Veterans Administration Franklin Delano Roosevelt Hospital in Montrose was held on May 21 in the auditorium at the Hospital, with Mr. Carl R. Gray, Jr., VA Administrator, as guest speaker. Mr. Gray said that the 1,965 neuropsychiatric beds at the Hospital, which is for mental cases, are part of the 131,000 hospital beds authorized to the VA. The thirty-two-building Hospital, of which Dr. Richard L. Harris, is manager, stands on a 383-acre site overlooking the Hudson River south of Peekskill. Along with the general neuropsychiatric facilities, the institution also has 89 beds reserved for mentally ill service women and 149 for veterans who suffer from tuberculosis as well as mental ailments.

MEDICAL NEWS

[Continued from page 1860]

Speakers

Dr. Michael M. Dacso, assistant clinical professor of clinical medicine and rehabilitation of the New York University-Bellevue Medical Center, at the Academy of Medicine of the Raritan Bay (New Jersey) Area on April 21 on the topic, "The Chronic Arthritides—Rehabilitation and Physical Medicine.". . . Drs. Rehmi Denton, Cutland Brown, Benedict Mastrianni, and Harold Wiggers, of the Albany Medical College, on the subject of plastic valves for bad hearts at a meeting of the Federation of American Societies for Experimental Biology on April 18 . . . Dr. Lester J. Evans, executive director of the Commonwealth Fund of New York, at a meeting of the Syracuse Dispensary Auxiliary on April 18 . . . Dr. Margaret E. Fries, of New York City, at an all-day conference of the Child Research Clinic, The Woods Schools, Langhorne, Pennsylvania, on May 12 on the subject of "Integrated Development of Children". . . Dr. James F. Hart, of New York City, on April 10 at a meeting of the New York and Bronx County divisions of the Practical Nurses of New York, on the subject of diabetes.

Dr. Herbert Kent, chief of physical medicine rehabilitation of the Veterans Administration Hospital, Indianapolis, Indiana, was on temporary detail in Hines, Illinois, for the purpose of monitoring and to assist in teaching a ten-week course in physical medicine rehabilitation . . . Dr. Richard Kovacs, professor of physical medicine at the New York Polyclinic Medical School and Hospital, at the Clinical Day of the Kent County Medical Society at Grand Rapids, Michigan, on "Physical Therapy in the Practice of Medicine" . . . Dr. Kenneth Stewart Landauer, director of medical care of the National Foundation for Infantile Paralysis, was principal speaker at the spring meeting of the Syracuse Memorial Hospital Auxiliary on April 27. Also on the program were Dr. O. D. Chapman, professor of bacteriology at the Syracuse University College of Medicine, and Dr. A. Clement Silverman, director of the Bureau of Communicable Diseases of the Syracuse Health Department . . . Dr. Eli Levin, of Rochester, spoke on "New Advances in the Treatment of Heart Disease" at the meeting of the Rochester Regional Society of Medical Technologists on April 11 . . . Dr. N. M. Levine, director of the Utica City laboratory, on "The Tests Used in Diagnosing Liver Diseases and Their Interpretations" before the New York State Society of Medical Technologists on May 20.

Also Dr. John McClintock, Albany Hospital, spoke on socialized medicine before the Philalthea Class of the Baptist Church on April 19 . . . Dr. Arthur W. Pense, deputy commissioner of the State Department of Mental Hygiene, on "Mental Hygiene Today" before the members of the Albany City Club on April 29 . . . Dr. William Trevor, New York City, on "The Truman Administration Program—What It Means to You" at a meeting of the First Assembly District Republican Club, New York City, on April 30 . . . Dr. Arthur J. Wallingford, professor of gynecology at Albany Medical College, gave the commencement address at the Cranwell Preparatory School, Lenox, Massachusetts, on June 8 . . . Dr. Marie Pichel Warner recently completed a series of three talks on "Medical Problems of Marriage, Fertility, and Sterility" to the intern and resident staffs of the Beth David Hospital, New York City.

New Offices

Dr. John A. Beyer, of North Bergen, New Jersey, joined the staff of the East Hampton Medical Group on June 24 . . . Dr. William A. Burke, practice of obstetrics and gynecology in Elmira . . . Dr. William J. Cosgrove, formerly an x-ray physician in Detroit, Michigan, in Watertown in association with Dr. Thomas N. Sickels, roentgenologist . . . Dr. Warren G. Cross, formerly assistant radiologist at Albany Hospital, to join the office of Dr. F. W. Dodge, orthopedist, in Albany . . . Dr. George H. Hanlon, formerly of Hazleton, Pennsylvania, the practice of general surgery in Gouverneur . . . Dr. Warren Heller, formerly of Syracuse, general practice in Watertown . . . Dr. Edward A. Kearny, for practice of surgery in Newburgh . . . Dr. Thomas H. Mason, formerly affiliated with Lahey Clinic, Boston, for the practice of neurologic surgery in Schenectady . . . Dr. Stanley B. Potter, formerly of Queens Village, general practice in Fort Plain . . . Dr. William St. John, general practice in Tannersville . . . Dr. Charles J. Tanner, formerly of Hornell, for the practice of surgery in Buffalo and Lackawanna . . . Dr. Robert H. Weise, general practice in East Glenville.

WOMAN'S AUXILIARY

TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

State Auxiliary Holds Fourteenth Annual Convention

THE fourteenth annual convention of the Women's Auxiliary to the Medical Society of the State of New York was held May 7 through 10 at the Hotel Statler, New York City, in conjunction with the 144th Annual Meeting of the State Society. Three hundred and thirty-five officers, board members, delegates, and guests attended.

The program for the convention included the following:

Sunday, May 7—Reception in honor of Mrs. William J. Lavelle, retiring president, and Mrs. Hugh G. Henry, incoming president.

Monday, May 8—Preconvention meeting of the Executive Board.

Luncheon for delegates and guests, with Mrs. Lavelle presiding. Guests of honor were Dr. Louis H. Bauer, chairman of the Board of Trustees of the American Medical Association and secretary of the World Medical Association; Dr. Fenwick Beekman, chairman of the Advisory Council to the Woman's Auxiliary; Dr. Nathan B. Van Etten, a member of the Advisory Council, and the presidents of the State Auxiliaries of Connecticut and New Jersey.

House of Delegates session, with Mrs. Lavelle presiding. Invocation was given by the Reverend E. Paul Amy, and a welcome by Mrs. Daniel J. Swan, to which Mrs. Alfred L. Madden responded. Mrs. Michael M. Schultz, convention chairman, presented the program, and Mrs. John L. Mason, parliamentarian, read the rules. A memorial service for deceased members was conducted, and the Thelma E. Neptune scroll was presented by Mrs. Lavelle to Onondaga County Auxiliary and accepted by Mrs. Neil M. Paul. Reports were then given by officers and directors.

Tuesday, May 9—House of Delegates session, with Mrs. Lavelle presiding. Mrs. David B. Allman, president of the Woman's Auxiliary to the American Medical Association, was introduced. Delegates to the 1951 convention of the Woman's Auxiliary to the A.M.A. were elected, and reports of the chairmen of standing committees were given.

The remainder of the sessions were given over to the reports of the county auxiliary presidents, which showed the scope and variety of the Auxiliary's work. The activities reported included programs devoted to nurses' scholarships; recruitment of nurses; study of and aid to voluntary health organizations including Red Cross, rheumatic heart, mental hygiene, tuberculosis, cerebral palsy clinics, cancer detection clinics, eye bank, and infantile paralysis; assistance to camp children; work in legislation, women's organizations, and community chests; voluntary health insurance, distribution of literature; collection of medicine and instruments; essay contests; supplying of speakers; radio programs, and contributions to Physicians' Home, United Hospital campaign, local hospitals, and Girl Scouts.

Guests at the afternoon session were Dr. John J. Masterson, retiring president of the Medical Society of the State of New York, and Dr. James R. Reuling, former treasurer of the State Society and now a member of its Board of Trustees and vice-speaker of the A.M.A. House of Delegates.

Election of officers was held.

Wednesday, May 10—Postconvention meeting of the Executive Board and conference of county auxiliary presidents.

Taking office as president was Mrs. Hugh G. Henry, of Germantown. Officers elected to serve for 1950–1951 are as follows:

President-elect: Mrs. Harold B. Johnson, Buffalo.

First Vice-President: Mrs. Arthur F. Gaffney, Clinton.

Second Vice-President: Mrs. Michael Schultz, Hollis, Long Island.

Recording Secretary: Mrs. Thomas M. d'Angelo, Flushing, Long Island.

Corresponding Secretary: Mrs. Rosewell D. Shaw, Stottville.

Treasurer: Mrs. Arthur F. Holding, Albany.

Directors: for three years—Mrs. William J. Lavelle, Astoria, Long Island, and Mrs. Alfred L. Madden, Albany; for two years—Mrs. John Buettner, Syracuse.

Councillors: District 1—Mrs. Clifton L. Dance, Brooklyn; District 2—Mrs. J. Emerson Noll, Port Jervis; District 4—Mrs. E. MacD. Stanton, Duanesburg; District 6—Mrs. Windsor Smith, Binghamton, and District 8—Mrs. Arthur Bennett, Buffalo.

Honorary Life Director: Mrs. Luther H. Kice, Garden City, Long Island.

Committee chairmen are as follows: Mrs. William Bartels, Garden City, Long Island, archives; Mrs. Adolph H. Emerson, Brooklyn, *Distaff;* Mrs. John Goller, Staten Island, finance; Mrs. Louis Ferraro, Poughkeepsie, historian; Mrs. John B. Horner, Albany, legislation; Mrs. Milton W. Kogan, Oswego, national *Bulletin;* Mrs. Michael Schultz, Hollis, Long Island, organization; Mrs. Harry F. Pohlmann, Middletown, parliamentarian; Mrs. George Bergmann, Greenport, Long Island, Physicians' Home; Mrs. Albert M. Biglan, Central Islip, Long Island, press and publicity; Mrs. Walter A. Schmitz, Middletown, printing and supplies; Mrs. Reginald Higgons, Greenwich, program; Mrs. Harry I. Norton, Rochester, public relations; Mrs. Luther H. Kice, Garden City, Long Island, revisions, and Mrs. Edwin A. Griffin, Brooklyn, *Today's Health.*

Chairmen of special committees are: Mrs. Thomas E. Bullard, Schuylerville, clippings, and Mrs. Alfred L. Madden, Albany, voluntary medical plans.

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting following adjournment of the House of Delegates on May 10, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of service with the armed forces for two members for 1950; on account of illness for two members for 1950; also War Memorial assessment on account of illness for one member.

Dr. Anderton reported that, as a result of a letter and correspondence from a member who had requested a hearing before the Council in regard to the proposed cancellation of his malpractice defense insurance, the President had empowered him to notify the member that a hearing would be scheduled at 10:00 A.M. on the day of the next Council meeting.

He also reported that the lease on a storage room on the eleventh floor of 292 Madison Avenue expired last month. Mr. Anderson notified him about it and was requested to obtain a covering letter from Cross & Brown until the lease could be renewed. That they had agreed to do. It was, therefore, suggested that the Council recommend to the Board of Trustees that the lease on this storage room be renewed at the same rental as at present exists.

It was voted that this recommendation be transmitted to the Board of Trustees.

Communications.—1. Letter dated May 11, 1950, to Dr. John J. Masterson, President, from Jacob Russner, Counselor at Law, 220 Broadway, New York 7, New York, requesting an opinion as to good practice in the use of trade names in writing prescriptions.

After discussion, *it was voted* that the Secretary and Counsel draft a reply to be sent by the Secretary.

2. Letter dated April 18, 1950, from Dr. Denver M. Vickers, secretary of the Medical Society of the County of Washington, requesting remission of dues for 1950 for Dr. Walter A. Leonard of Cambridge, New York, due to illness.

It was voted to grant the request.

3. After the last Council meeting the Secretary wrote Dr. Charles F. McCarty, director of the Medical Society of the County of Kings, as follows:

> "Your letter of March 15, 1950, requesting remission of the War Memorial Assessment of hospital residents who were active members of the Society at the time the assessment was levied, was presented to the Council of the Medical Society of the State of New York at its meeting on April 13, 1950. I was instructed to ask you to send a list of the members for whom these remissions are requested."

Dr. McCarty replied that the only one in question was Dr. Clarence G. Robinson, Jr., Coney Island Hospital, Brooklyn.

Dr. Anderton stated that Dr. Robinson had not paid his 1949 State assessment and had been dropped from membership as of December 31, 1949.

After discussion, *it was voted* to refer this matter to the Secretary and Treasurer for report at the next meeting.

4. Communication from Mr. Marc Rosenblum, Director, Office of Community Activities, Treasury Department, U.S. Savings Bonds Division, requesting that the Society's addressograph be used to address franked envelopes for the Treasury Department in its drive for the sale of United States Savings Bonds.

It was voted to grant this request.

5. Correspondence with Dr. B. Wallace Hamilton, secretary of the Medical Society of the County of New York, containing a resolution regarding the practice of certain hospitals allowing physicians to send bills and requiring them to turn over the whole fee to the hospital.

It was voted to table the matter until further word was received from the Medical Society of the County of New York.

6. Letter dated April 12, 1950, to Dr. Anderton from Dr. Paul S. Wyne, American Medical Golfing Association, 2020 Olds Tower, Lansing 8, Michigan, requesting contribution of a prize or of cash for the Annual Golf Tournament sponsored by the American Medical Association.

It was voted to refer this to the Board of Trustees and leave the matter to their judgment.

7. Requests for nomination to Associate Fellowship in the American Medical Association from Dr. W. Morgan Hartshorn, 115 East 61st Street, New York City; Dr. Howard B. Snell, 538 West Broadway, Granville, Ohio (Medical Society of the County of Kings member), and Dr. W. Seaman, 131 Fulton Avenue, Hempstead, New York.

It was voted to grant these requests.

The Treasurer's report was accepted.

Report of the Counsel

Mr. William F. Martin, Counsel, reported on Mr. Thomas Clearwater's death and stated that Mr. Robert J. Bell, who had been with the firm since 1932, would assist him in his work for the Society and suggested that Mr. Bell be put in as attorney in Mr. Clearwater's place.

Mr. Martin also reported that Mr. Gordon Marshall had brought suit against the Society and Mr. Dwight Anderson.

New Business

1. Dr. Andrew A. Eggston was designated as official representative of the Medical Society of the State of New York to the Hawaiian Medical Society meeting, at which he was scheduled to present a paper before their Scientific Section.

2. Dr. Wertz stated, "Under the new and amended Bylaws our Secretary is given authority over the office as far as administration is concerned. I think we ought to give the Secretary permission or power to delegate some of his work to the Executive Secretary."

It was voted that the Secretary be empowered to delegate such of his duties as he sees fit to the Executive Secretary.

BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and interest to our readers.

BOOKS RECEIVED

Primer of Allergy. A Guidebook for Those Who Must Find Their Way Through the Mazes of This Strange and Tantalizing State. By Warren T. Vaughan, M.D. Third edition. Revised by J. Harvey Black, M.D. Illustrated by John P. Tillery. Duodecimo of 175 pages, illustrated. St. Louis, C. V. Mosby Co., 1950. Cloth, $3.50.

Endodontia. By Bernhard Gottlieb, D.M.D., Seth Lee Barron, D.D.S., and J. Hobson Crook, D.D.S. Octavo of 177 pages, illustrated. St. Louis, C. V. Mosby Co., 1950. Cloth, $6.00.

A Story of Nutritional Research. The Effect of Some Dietary Factors on Bones and the Nervous System. By Sir Edward Mellanby, M.D. Octavo of 454 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $5.00. (The Abraham Flexner Lectures. Series Number 9.)

The Sexual Perversions and Abnormalities. A Study in the Psychology of Paraphilia. By Clifford Allen, M.D. Second edition. Octavo of 346 pages, New York, Oxford University Pr., 1949. Cloth, $5.00.

Quinidine in Disorders of the Heart. By Harry Gold, M.D. Octavo of 115 pages. New York, Paul B. Hoeber, 1950. Cloth, $2.00.

Brucellosis (Undulant Fever). Clinical and Subclinical. By Harold J. Harris, M.D., with the assistance of Blanche L. Stevenson, R.N. Second edition. Octavo of 617 pages, illustrated. New York, Paul B. Hoeber, 1950. Cloth, $10.

Das intrakranielle subdurale Hämatom. By Hugo Krayenbühl, M.D., and Gaetano G. Noto, M.D. Octavo of 175 pages, illustrated. Bern, Switzerland, Medizinischer Verlag Hans Huber, 1949. Paper, 18.50 Sw. fr.

The Administration of Alcoholism Rehabilitation Programs. By Selden D. Bacon, Ph.D. Octavo of 47 pages. New Haven, Conn., Hillhouse Pr., 1949. Paper, $.50.

The Salt-Free Diet Cook Book. By Emil G. Conason, M.D., and Ella Metz. Octavo of 137 pages. New York, Lear Publishers, 1949. Cloth, $3.00.

BOOKS REVIEWED

Advances in Pediatrics. Editorial Board, S. Z. Levine, M.D., Allan M. Butler, M.D., L. Emmett Holt, Jr., M.D., and A. Ashley Weech, M.D. Volume IV. Octavo of 316 pages, illustrated. New York, Interscience Publishers, 1949. Cloth, $6.50.

Pediatricians have learned to look forward with pleasant anticipation to the appearance of each succeeding volume of this series, issued annually under the editorial sponsorship of Dr. S. Z. Levine and an editorial board, including such well-known pediatricians as Allan M. Butler, L. Emmett Holt, Jr., and A. Ashley Weech. This publication does not present complete reviews of specific subjects of pediatric interest but rather a critical analysis of a single segment of each of several controversial subjects or an evaluation of some new method of therapy. The articles are written, for the most part, by men who have spent many years in the study of their particular field of interest and are, therefore, informative, critical, and comprehensive. Although most of the material has appeared in previous publications, it is a great help to have reviews available in this convenient form.

Hitherto, because of war and later of postwar conditions, the articles have been contributed almost exclusively by American authors. However, in the present volume, several contributions by foreign pediatricians have been included.

The volume contains a wealth of new information to delight the student as well as the practitioner and will stimulate the research worker.

Benjamin Kramer

Progress in Neurology and Psychiatry. An Annual Review. Volume 4. Edited by E. A. Spiegel, M.D. Octavo of 592 pages. New York, Grune & Stratton, 1949. Cloth, $10.00.

This is the fourth volume of what has now become a standard review of neuropsychiatric literature, covering the basic sciences, neurology, neurosurgery, and psychiatry, the whole broken down into 34 subdivisions.

Some of the chapters are simply aggregates of summaries of various articles published, while others are synthesized into informative essays.

As a whole, it is a valuable reference work for the neuropsychiatrist who needs a quick survey of recent work in this ever-expanding specialty.

Arthur J. Lapovsky

Neoplasms of Bone and Related Conditions. Their Etiology, Pathogenesis, Diagnosis, and Treatment. By Bradley L. Coley, M.D. Quarto of 765 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $17.50.

This book, most appropriately dedicated to the author's father, the late Dr. William B. Coley, represents a valuable contribution to our knowledge of bone tumors and related pathologic conditions. Primarily clinical in scope, profusely and clearly illustrated with many roentgenograms, it is conveniently arranged in 11 separate sections with extensive bibliographies for each. Emphasis is placed on diagnosis, treatment, and prognosis which should make it particularly valuable for ready reference by the practitioner and general and orthopedic surgeon. An extraordinary wealth of clinical material was made available to the writer through his long association with the Memorial Hospital, and the publisher has succeeded in producing a beautiful edition of this material.

Max. S. Rabinowitz

Rehabilitation of the Handicapped. A Survey of Means and Methods. Edited by William H. Soden. Octavo of 399 pages. New York, Ronald Press, 1949. Cloth, $5.00.

The editor of this volume deserves considerable commendation in his method of organizing the contents. He has very interestingly placed under one cover, many articles written and scattered among that unnumerable mass of medical journals and literature. There are 48 different contributors with articles covering the social, physiologic, and psychologic aspects of the handicapped. The last part of the book is especially devoted to detailed accounts of rehabilitation programs currently under way in many localities.

Rehabilitation is the attempt to restore the handicapped to the fullest physical, mental, social, vocational, and economic usefulness of which they are capable. Medical and surgical procedures alone are not sufficient but must be integrated with all other services to enable the handicapped to achieve the maximum amount of restoration of usefulness. Chief among these other services are welfare, educational, vocational, and corrective guidance.

It can be highly recommended as a reference book. There is incorporated in the 400 pages of this volume a mass of detailed information which could be put to good use by any practitioner, whether general or specialist.

B. Koven

The Physiology of the Eye. By Hugh Davson, D.Sc. Octavo of 451 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $7.50.

This book on physiology of the eye was not written only for postgraduate students but for the average general practitioner and medical student.

Although there is an assumption of a basic knowledge and acquaintance with the physiology of the body and the eye, a detailed explanation of physiologic processes of the eye is constantly being made.

It is an invaluable addition to the library of the clinical ophthalmologist.

Norris C. Elvin

Explorer of the Human Brain. The Life of Sartiago Râmon Cajal (1852–1934). By Dorothy F. Cannon. With a Memoir of Dr. Cajal by Sir Charles Sherrington. Octavo of 303 pages, illustrated. New York, Henry Schuman, 1949. Cloth, $4.00.

The name Cajal, as one goes through these pages, takes on new meaning to those unfamiliar with this master's work. Many remember it simply associated with dull, histologic, and neurologic studies. However, here we find the brilliant story of Cajal, a genius flowering in a backward country, who clarified both the structure and function of the nervous system. His adventures in literature and art, along with an eventful personal life from childhood through old age, make this book both informative and interesting reading.

Arthur J. Lapovsky

Skin Diseases in General Practice. By F. Ray Bettley, M.D. Octavo of 260 pages, illustrated. London, Eyre & Spottiswoode, Ltd., 1949. Cloth, 21/-. ("The Practitioner" Handbooks.)

This handbook of only slightly more than 200 pages is excellently written and should be valuable to every general practitioner.

The author has not attempted to give a smattering of all the skin diseases that human flesh is heir to but has rather confined himself to a definite, clear description of only a few common dermatoses and their treatment. There are first the eczema group—contact, constitutional, infantile and flexural—occupational dermatoses, acne and seborrhea, and bacterial, fungus, and parasitic diseases.

Perineal pruritus of the male and female are separately and succinctly considered.

Suggested therapy is all of the proved and accepted type.

E. Almore Gauvain

Psychosexual Development in Health and Disease. Edited by Paul H. Hoch, M.D., and Joseph Zubin, Ph.D. The Proceedings of the Thirty-Eighth Annual Meeting of the American Psychopathological Association, held in New York City, June 1948. Octavo of 283 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $4.50.

The book is a compilation of papers read at the thirty-eighth annual meeting of the American Psychopathological Association, held in New York City in June, 1948. The subject of the scientific discussion is the title of the book.

Psychosexual development is a subject of tremendous interest not only to doctors of medicine, but also to anthropologists, psychologists, and sociologists. Hence the men who appeared on the program are eminent psychiatrists, psychologists, anthropologists, and sociologists, and their scientific presentations form a collection of papers that are undoubtedly the finest and the most authoritative factual data on the subject. It is the sort of book that may well be used as a text for a brief course on sex to fourth year medical students as they are embarking on their clinical medical and surgical training experiences, for it contains so much of factual knowledge and information that it tends to correct some of the popular misconceptions about sex based upon prejudice, superstition, fear, and guilt. No medical man should fail to read this book.

Irving J. Sands

Clinical Orthoptics. Diagnosis and Treatment. By Mary Everist Kramer. Edited by Ernest A. W. Sheppard, M.D., and Louisa Wells-Kramer. Octavo of 475 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.00.

One finds this a delightful book to read. In the earlier chapters the anatomy and physiology of the ocular muscles are simply portrayed with appropriate illustrations, as befits a work intended for many a nonmedical reader. From these to the later chapters on diagnosis and orthoptic treatment of muscle anomalies the transition is naturally and easily made.

This book makes pleasant and easy reading and should readily be comprehended by the student of orthoptics and is complete enough to furnish much valuable information to the ophthalmologist. It is highly recommended.

E. Clifford Place

The Medical Clinics of North America. Philadelphia Number. November, 1949. Index 1947–1949. Octavo. Philadelphia, W. B. Saunders Company, 1949. Published Bimonthly (six numbers a year). Cloth, $18 net; paper, $15 net.

The Philadelphia number of the *Medical Clinics* contains two symposia: one on acute medical emergencies and another on nutritional disorders. There are also clinics on heart disease and pregnancy and some kinds of hypertension which demand surgery. Much information, useful to general practitioners, will be found in this volume.

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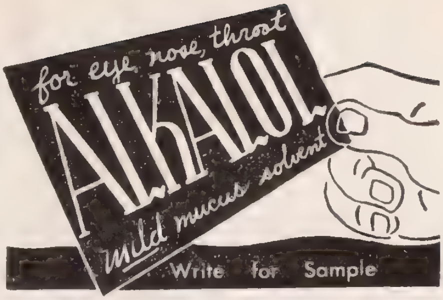
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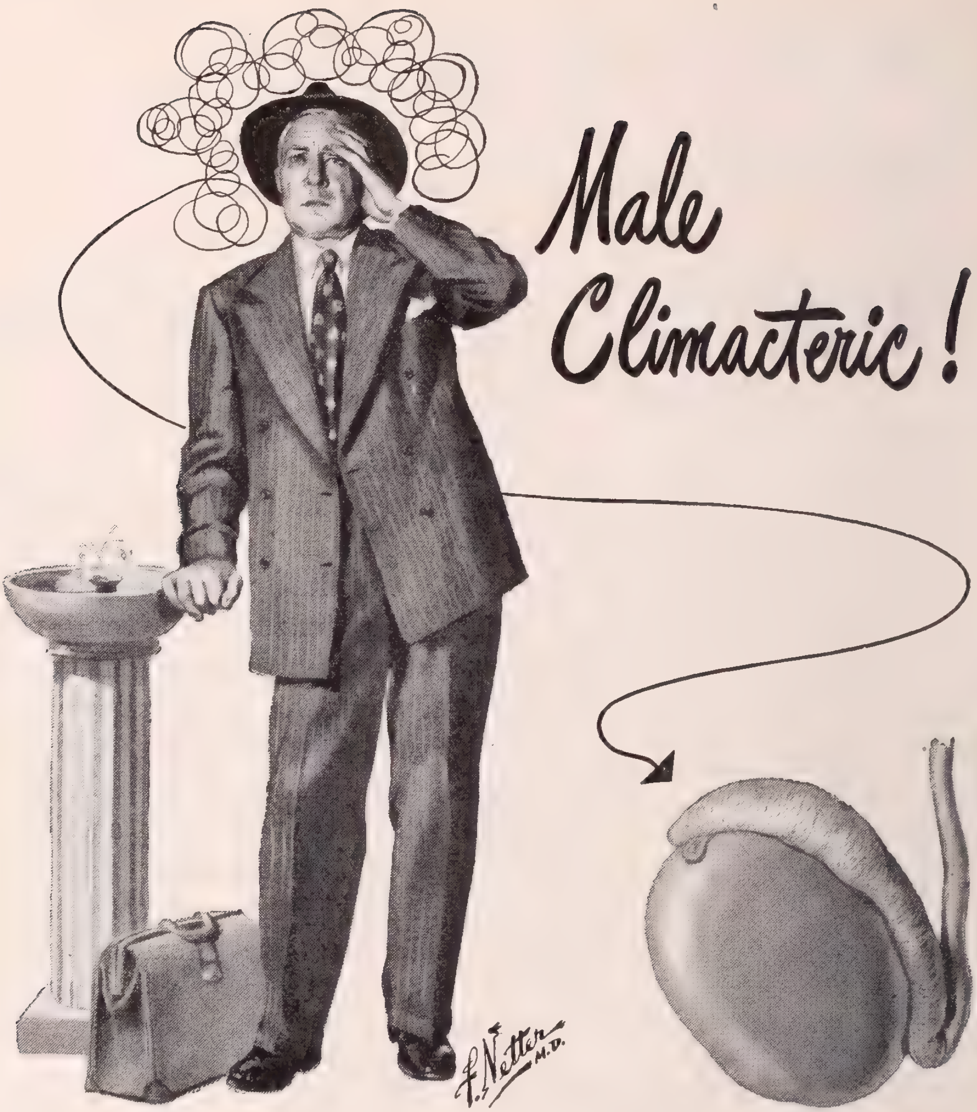
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2. KARNOSH, L. J. and ZUCKER, E. N.: A Handbook of Psychiatry, St. Louis, Mosby, 1945.

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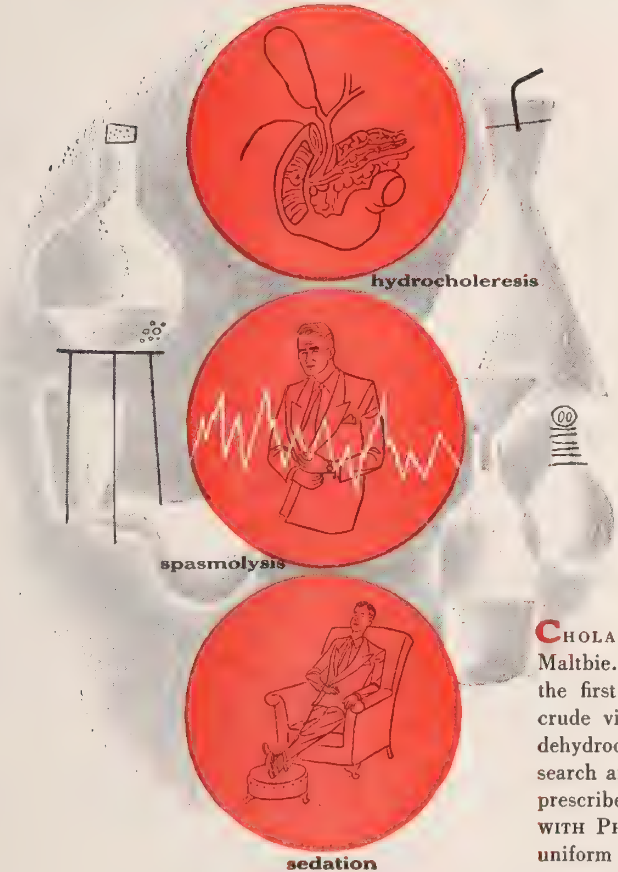

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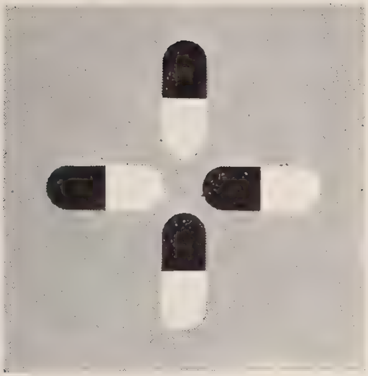

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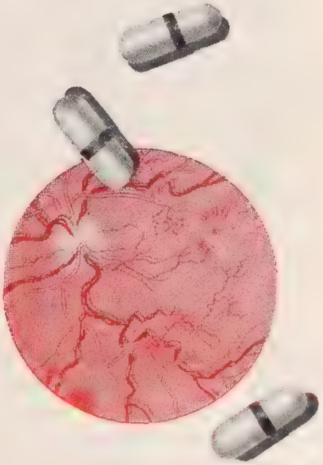

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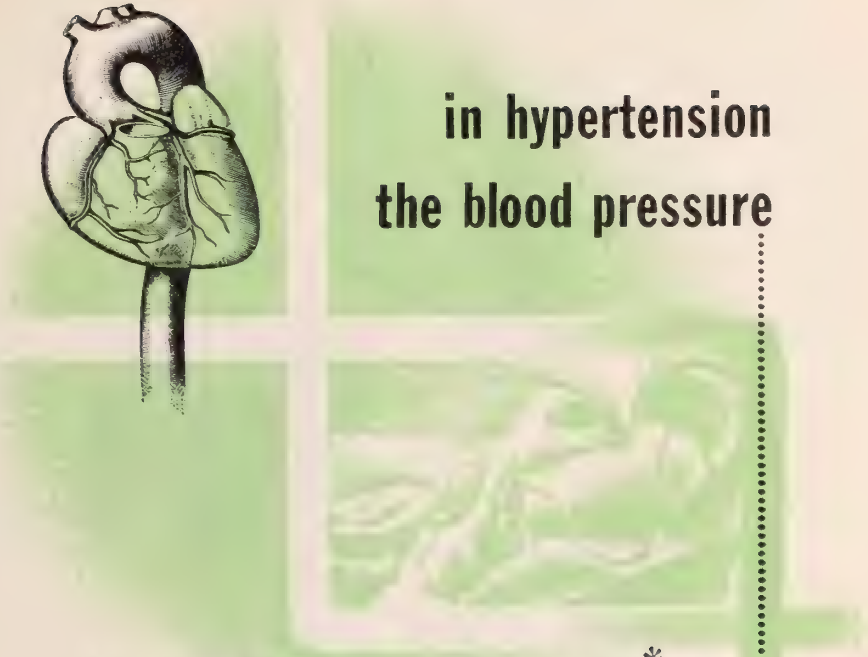

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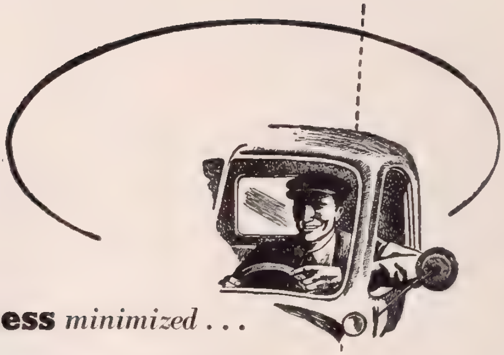

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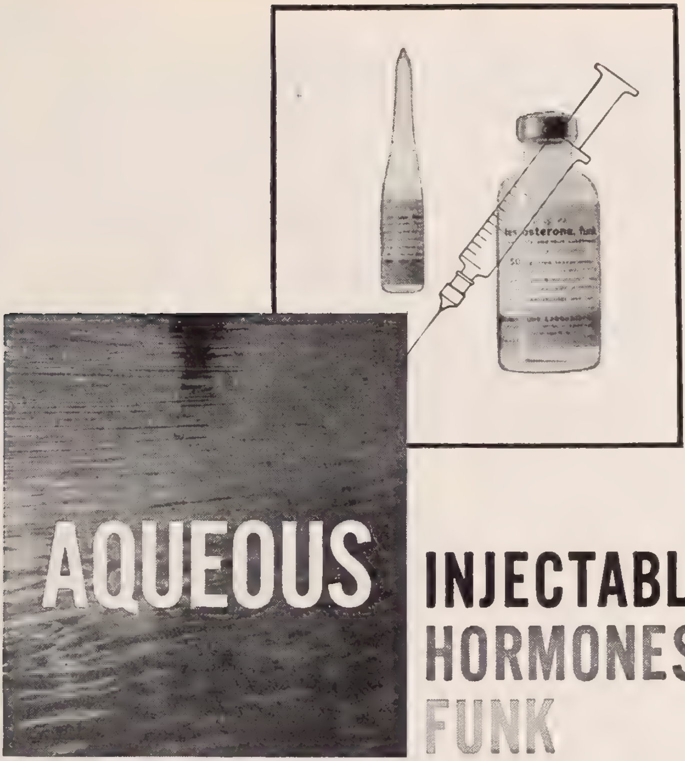

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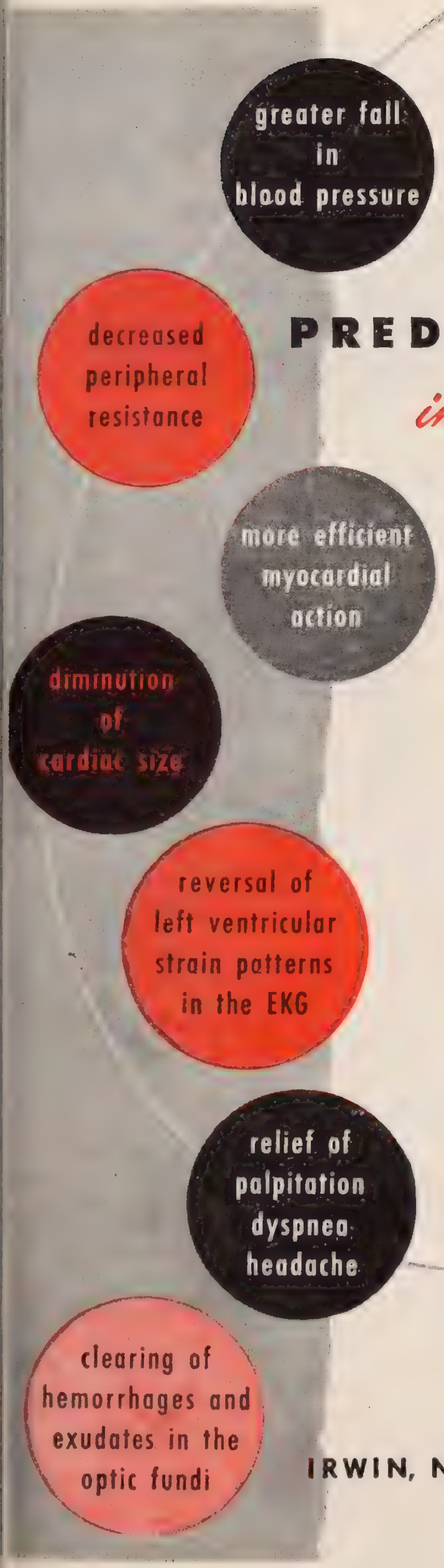
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relief of palpitation dyspnea headache
clearing of hemorrhages and exudates in the optic fundi

PREDICTING RESPONSE

in essential hypertension

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In mild and moderate hypertension (Grades I and II), which accounts for more than 70 per cent of all hypertensive cases, VERATRITE is the choice of therapy and may be used routinely in everyday practice without undesirable side-effects. VERATRITE contains, in each tabule, veratrum viride (3 Craw Units) with sodium nitrite and phenobarbital.

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for mild and moderate hypertension

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for severe, resistant hypertension

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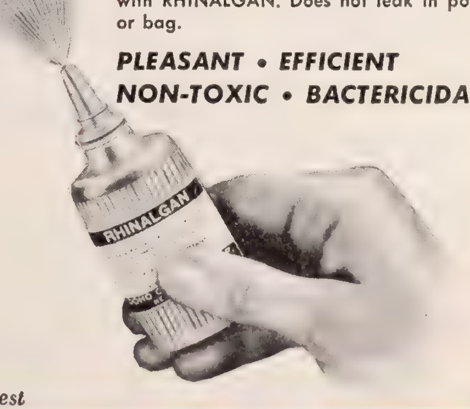

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Symptomatic Change According to Age Groups

Age group	No. Cases	Improvement Moderate	Marked	None
40-50	11	10	0	1
50-60	41	32	5	4
60-70	34	22	8	4
70-80	18	16	0	2
80-	3	3	0	0
	107	83	13	11

As reprinted from the New York State Journal of Medicine, 35:715, (July 15) 1935

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3 weeks at The Saratoga Spa will benefit, refresh, relax your patients with such chronic conditions as Heart and Digestive disorders, Arthritis and related ailments, and Hypertension. At your request, we will send list of local, private practicing physicians who will cooperate with you as to treatment, rest and diet. Address Medical Director, The Saratoga Spa, 155 Saratoga Springs, N.Y.

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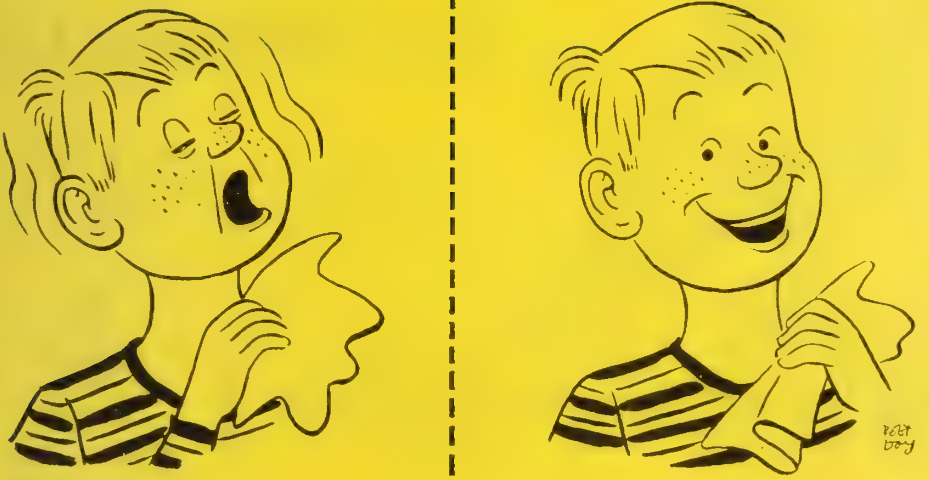

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but keeps
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real POTENCY *and* STABILITY

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Each cc. of Ol-Vitum Drops contains:

Vitamin A ester	10,000 USP Units
Vitamin D	2,000 USP Units
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Thiamine hydrochloride	3 mg.
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Pyridoxine hydrochloride	1.6 mg.
Ascorbic acid	100 mg.

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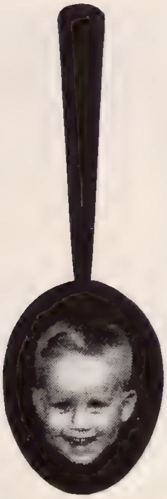
1. Kasdon, S. C., and Cornell, E. L.: Am. J. Obstet. & Gynec. 56:853 (Nov.) 1948.

*Equivalent (by biological assay) to 1.5 mg. d, Alpha Tocopherol



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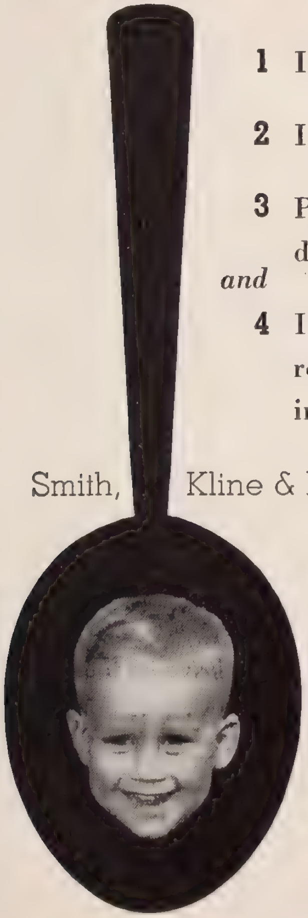

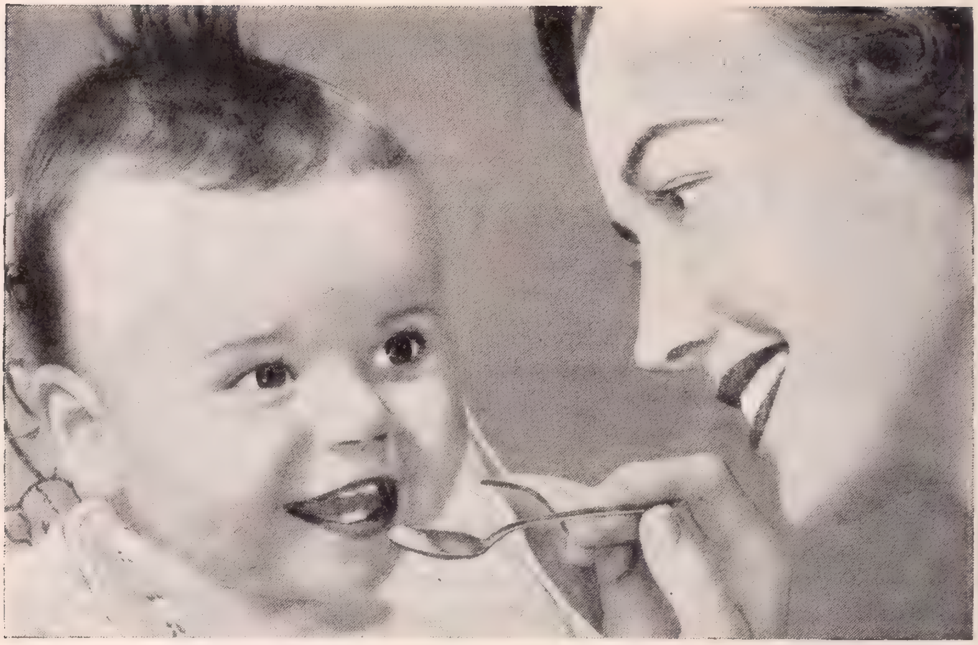

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Triple treatment for DIARRHEA

(specific and nonspecific)

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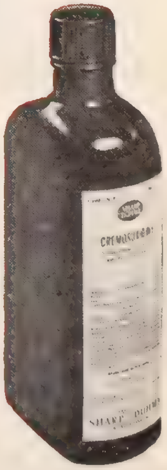

*Gray, A. L.: Southern Med. J., 43:320, April, 1950.

to ameliorate mood... to relieve inner tension

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The 'Dexedrine', because of its "smooth" and profound antidepressant action, restores mental alertness and optimism and dispels psychogenic fatigue.

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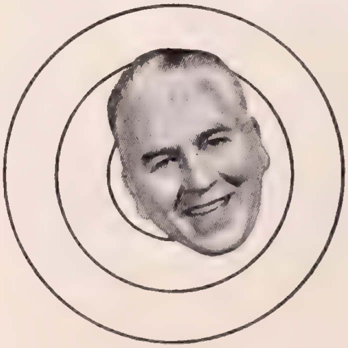

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For years, relief in bronchial asthma has carried unwelcome side effects with it—nervousness, palpitation, increased blood pressure, insomnia. But now, NETHAPRIN makes prompt symptomatic relief possible — *essentially free from the undesirable side actions of ephedrine.*

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[1] Hansel, F. K.: Ann. Allergy, 1:199-207, 1943

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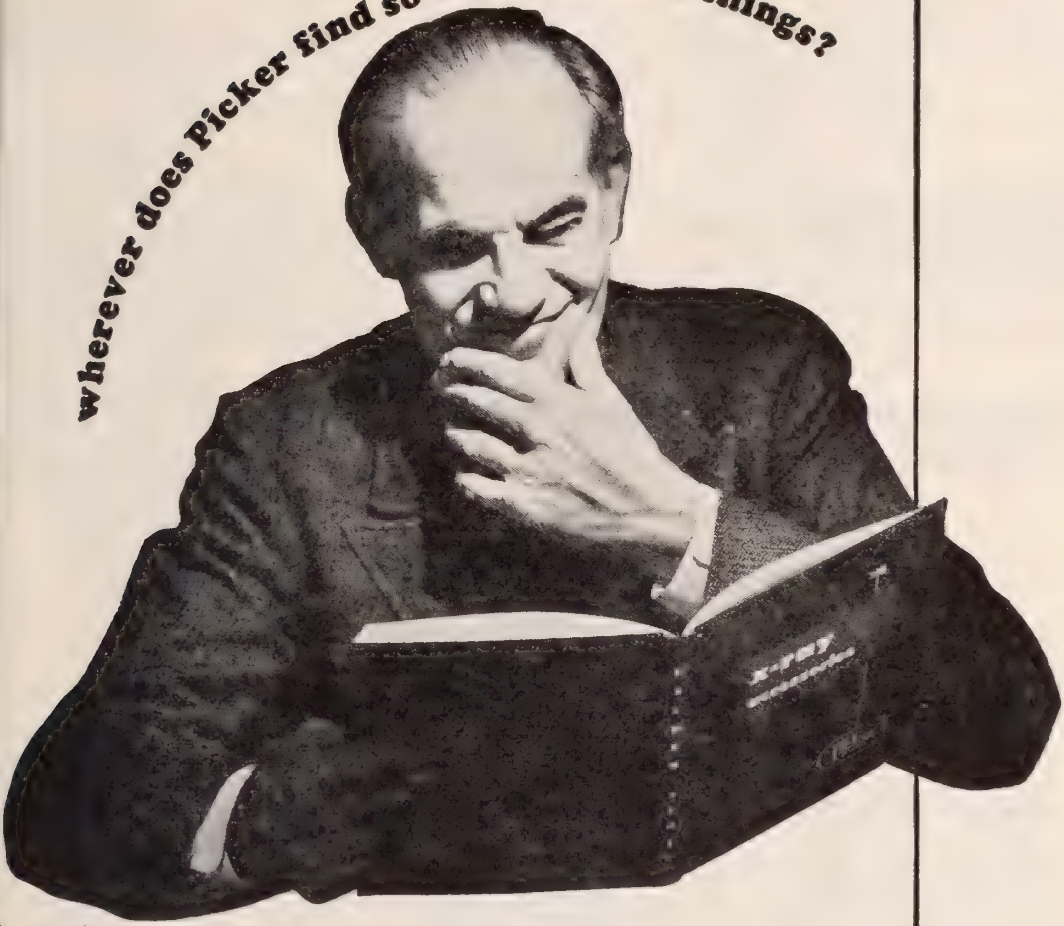

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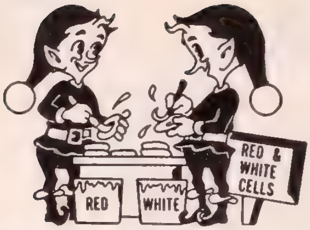
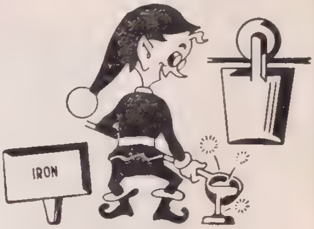
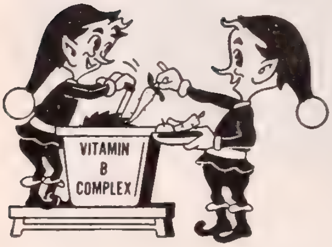


QUESTION: *How many red blood cells are replaced due to "wear and tear"?*

ANSWER: *Approximately 25 million a day in normal people*





When abnormal demands overtax the blood forming capacity of the body producing easy fatigability, sub-clinical anemia too often does not receive corrective treatment until more serious symptoms urgently demand attention.

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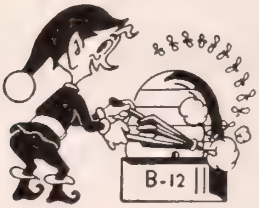

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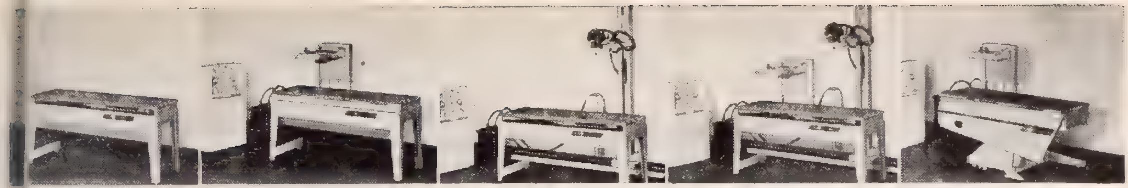

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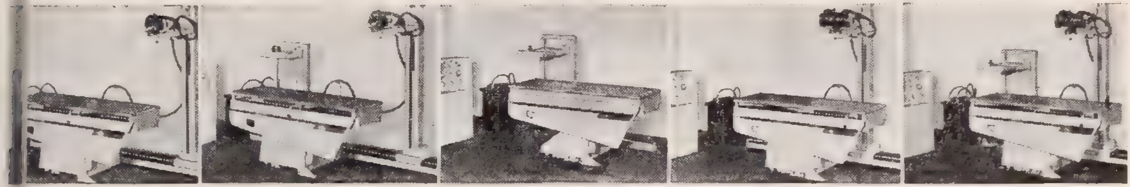

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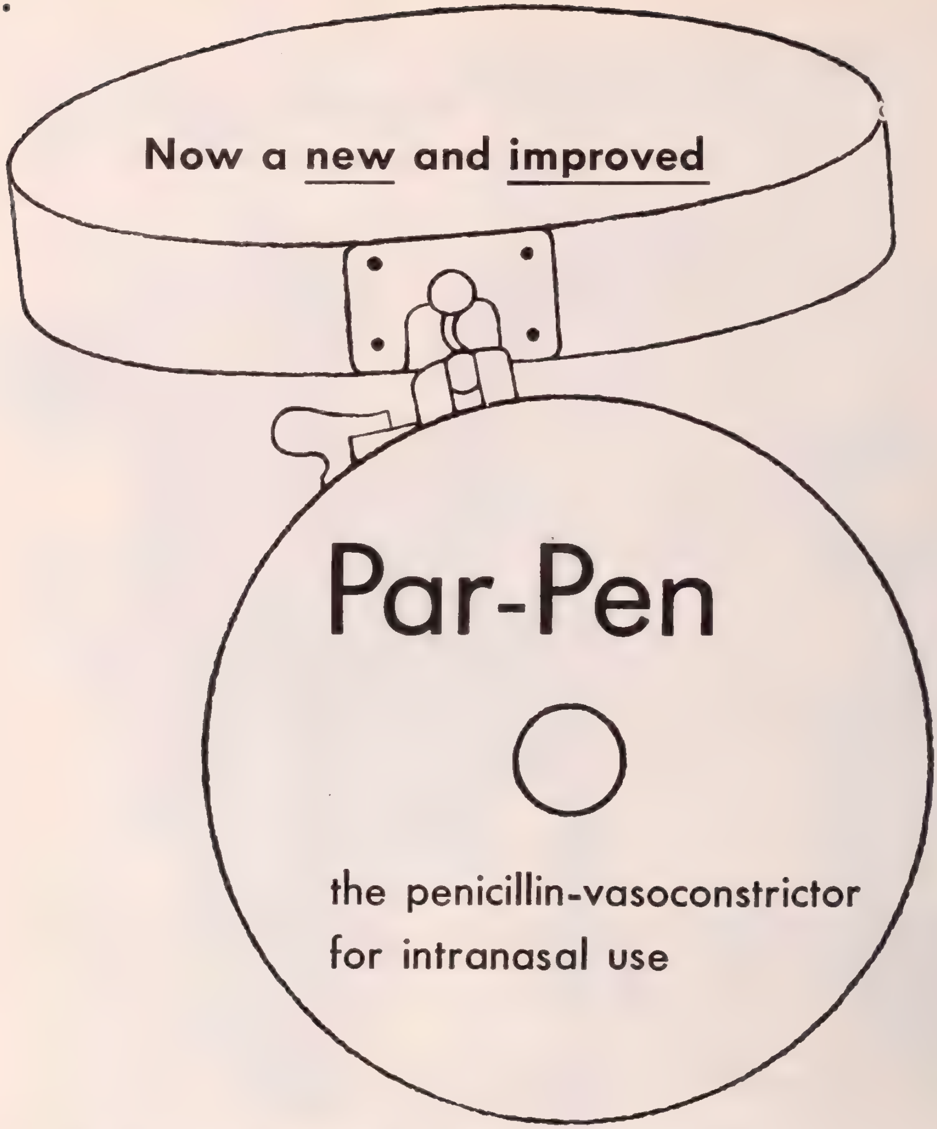
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For Potency—WYCHOL is made with *tricholine citrate;* provides twice as much choline as preparations made from dihydrogen citrate. *Plus* substantial dose of inositol.

For Taste-Appeal—pleasant fruity flavor.

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For Economy—Lowest in cost on basis of lipotropic content.

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Wyeth Incorporated, Philadelphia 3, Pa. Wyeth ®

twice as effective

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Ideal for daytime use, Pulvules 'Hista-Clopane' offer greater therapeutic effect with virtually no sedation or stimulation. The average adult dose of Pulvules 'Hista-Clopane' is one or two pulvules after each meal and at bedtime. When indicated, a fifth dose may be taken nocturnally.

*'Hista-Clopane' (Thenylpyramine and Cyclopentamine, Lilly)

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Complete literature on Pulvules 'Hista-Clopane' is available from your Lilly medical service representative or will be forwarded upon request.

NEW YORK STATE JOURNAL OF MEDICINE

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VOLUME 50 AUGUST 15, 1950 NUMBER 16

Defeat of Reorganization Plan 27

By a vote of 249 to 71, the House of Representatives on July 10 defeated the Administration's plan to give departmental status to the Federal Security Agency. A vote of 218 in the House or 49 in the Senate was required. Last year the Senate defeated a similar proposal that would have transformed the Federal Security Agency into a Department of Welfare. The opposition at the time was on identical grounds, and then, as now, Oscar R. Ewing, the Federal Security Administrator, was repeatedly attacked. He is an outspoken advocate of compulsory health insurance.

The outcome of the vote was influenced by a belief, strongly expressed in debate, that the case for compulsory health insurance would be advanced if the Agency, which operates the Public Health Service, received a voice in the Government at the cabinet level.

The drive against the reorganization plan was spearheaded by Republicans. However, 106 Democrats joined 143 Republicans to doom the proposal to create a Department of Health, Education, and Security. Among the Democrats were a number of normally staunch Administration supporters as well as 11 committee chairmen.

Seventy Democrats and one Republican, Representative Jacob K. Javits of New York, supported the plan.

In vain, Representative John W. McCormack of Massachusetts, the Democratic leader, and other Administration stalwarts argued that health insurance was not involved in the plan. They asserted that it was an extraneous issue and a "smokescreen" put out to "befog the situation."

Health insurance, they said, could not be put into effect without substantive legislation, acted on independently by Congress. The only purpose of the plan, they insisted, would be to give health, education, and security, affecting all of the population, representation in the cabinet.

However, Republicans, who freely quoted the American Medical Association's opposition arguments to the plan, derided this assertion. The Republican point of view was perhaps best expressed by Representative Charles A. Halleck of Indiana, who said, "Your vote on this plan will put you definitely on one side or the other of this great issue of socialized medicine."

The Republicans also argued that the President's plan did not conform to the recommendations of the Commission on Organization of the Executive Branch of the Government, an official nonpartisan agency headed by former President Herbert Hoover that studied Federal operations.

Unquestionably, the campaign of public education conducted by the American Medical Association was a principal factor in this defeat of a plan to place Mr. Oscar Ewing, F.S.A. Chief, in an important cabinet post combining health, education, and security.

The defeat of the plan should be regarded as a temporary victory only and no grounds whatever for complacency. It is merely a skirmish in a developing action, but it does demonstrate the firepower available to the physicians of this country as a united group acting sincerely in the public interest. More of the same is needed if socialized medicine, by whatever alias politicans think up for it, is to be permanently avoided.

The A.M.A. Advertising Campaign

For those physicians who have awaited patiently news of further steps to be taken in the National Education Campaign of the A.M.A., it will be a pleasure to learn that an advertising program will be undertaken to bring directly to the people of the United States the advantages of voluntary health insurance plans.

Says the *J.A.M.A.*:[1]

> The advertising campaign will be launched in October. The total advertising budget is $1,110,000, of which $560,000 has been allocated to newspapers, $300,000 to radio, and $250,000 to national magazines. Every bona fide daily and weekly newspaper, approximately 11,000, will carry copy *during the week of October 8*. Approximately 70 inches will be reserved in each paper. About 30 of the leading national magazines and many advertising trade publications will be included in the magazine advertising, and some 300 radio stations, covering every state, Hawaii, and Alaska, will offer "spot announcements."

An announcement from the office of the A.M.A.'s National Education Campaign reads:

> The American Medical Association is embarking on a nation-wide advertising program for two reasons. First, it is determined to aid in every way possible in increasing the availability of good medical care to the American people through the medium of voluntary health insurance. In that respect, the advertising copy will be designed to make the American people "health insurance conscious" and to encourage the extension and development of prepaid medical and hospital care as a means of taking the economic shock out of illness. Second, American medicine is determined to alert the American people to the danger of socialized medicine and to the threatening trend toward state socialism in this country.
>
> The ad copy, in part, will be designed to sell a commodity, voluntary health insurance, but not any particular brand or plan. The individual will be encouraged to secure sound coverage in the plan which he feels best suits his individual needs. In its second aspect, the ad copy will be used to mobilize public opinion in support of a basic American ideal—the principle of individual freedom, as opposed to the alien philosophy of a government-regimented economy.

The insurance principle is well established. Voluntary purchase of insurance coverage is a well-known procedure. Medicine has well-organized plans to sell to the citizens of this country. Advertising is the time-tested method of selling products, new ideas, new procedures. Daily and weekly newspapers, trade publications, magazines, the radio—all are media of proved effectiveness in reaching the public, including the doctors who are after all mostly plain hardworking people.

Such advertisements will inform the doctors who will see them or hear them of the indisputable fact that the national association is doing effectively what it says it will.

> Briefly, says the A.M.A., the campaign is intended to relieve the medical profession of the need for a continuing exhaustive campaign and to find a way to bring the issue of government-controlled medicine to a public conclusion, to crystallize general public sentiment into

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[1] Editorial: J.A.M.A. 143: 744 (June 24) 1950.

concrete public certainty, and to solidify the confidence of the public in what the medical profession has done and can do without government domination.

We feel that the majority of our members will heartily endorse this campaign and lend their willing support in carrying it through to a successful conclusion.

Night and Emergency Calls

The House of Delegates of the Medical Society of the State of New York, at its 1950 session, referred to the Council, which discussed it on June 8, the following resolution: "That adequate coverage of night and emergency calls is of paramount importance and should receive wholehearted support of all county societies and communities."

The Council, having considered the resolution, directed that the JOURNAL give the matter immediate editorial mention as a follow-up to a letter urging prompt action by all county medical societies. Since many county medical societies do not meet during the summer, this editorial will reach individual members more quickly than could otherwise be done.

Adequate coverage of night and emergency calls is not only a necessary part of the program for improved public relations of the medical profession; it is also, in the light of recent civilian defense preparations, an essential part of any emergency medical care program, the necessary machinery for which is now in process of speed-up due to deteriorating international relations.

Every member of the Society is urged to cooperate in this important aspect of service.

Current Editorial Comment

Who Is Hardest Hit? Doctors should be aware of the fact that the families under their care who earn under $5,000 a year pay most of the tax bills. Family physicians in many instances could bring this realization to those in that bracket whom they attend. Curiously, many people do not comprehend this simple truth. Why do these families pay most of the tax bills? Because there are so many of them. The Federal Reserve reports that 8,250,000 families receive more than $5,000 a year, that 29,250,000 families get less.

But these 29,250,000 families pay most of the taxes because they consume the most products. For products pay taxes! There is a hidden tax on every product that moves from mine or farm or forest or fishery, or from factory to wholesaler, from wholesaler to retailer, from retailer to consumer—and transportation taxes every time the product moves. By sheer force of numbers, the smaller income group pays most of these taxes.

The 38 per cent of net income that a corporation is taxed is paid by consumers who buy the corporation's products. Families with incomes of less than $5,000 buy 72 per cent of the nation's automobiles, wear most of the clothes sold, use most of the electricity, and eat most of the food. Every time they buy a new automobile, the $400 which taxes represent give them less automobile and more tax burden than they think. They smoke 70 per cent of all tobacco; about 50 per cent of what they pay for tobacco and gasoline is in taxes.

Families of under $5,000 income bought 64 per cent of the food in Denver, 69 per cent in Detroit, and 71 per cent in Houston, according to a Labor Department study of these typical cities. Of course, they must have paid about that proportion of corporation taxes levied on food companies in those cities. What is true of these products holds true for almost all family consumption. And since taxes can be paid only out of products, it is the total family spending of these 29,250,000 families that pays the bulk of our taxes.

In an article, "Consumers Are Tax Suckers," Congressman Ralph W. Gwinn says of these low-income families: "Since they consume about 70 per cent of production, these families must pay about 70 per cent of all taxes. But to be conservative, let's say that these families pay two thirds of the total tax bill. This is an average of $1,106 for each family of $5,000 a year or less. It includes the alarm clocks that awaken them, all their meals, and the bed covers at night. Suckers! This is the ball and chain that holds you back. What do you get in return? When are you going to rebel against deficit spending and confiscatory taxes?"[1]

Many young physicians and their families are in this income bracket as they start out. Do they realize what deficit spending is doing to them? Would it not be well to think about that? Especially in view of coming Congressional and Presidential elections.

Mr. Gwinn remarks further: "A Senate Finance Committee report shows that, if the government took every dollar of every American family income above $10,000, Mr. Truman would have only 22¢ for every dollar he wants to spend. According to the Joint Committee on Internal Revenue, if the Treasury took every cent of family income above $5,000 a year, the Fair Deal would have but 35¢ of every dollar it would spend during the next fiscal year. This means that two thirds of all Mr. Truman says he needs must come from families getting under $5,000 a year."

No matter what party achieves power, the principle holds good that deficit spending and high taxation bear most heavily on those who can least afford these luxuries, until finally ruin brings despair to all alike.

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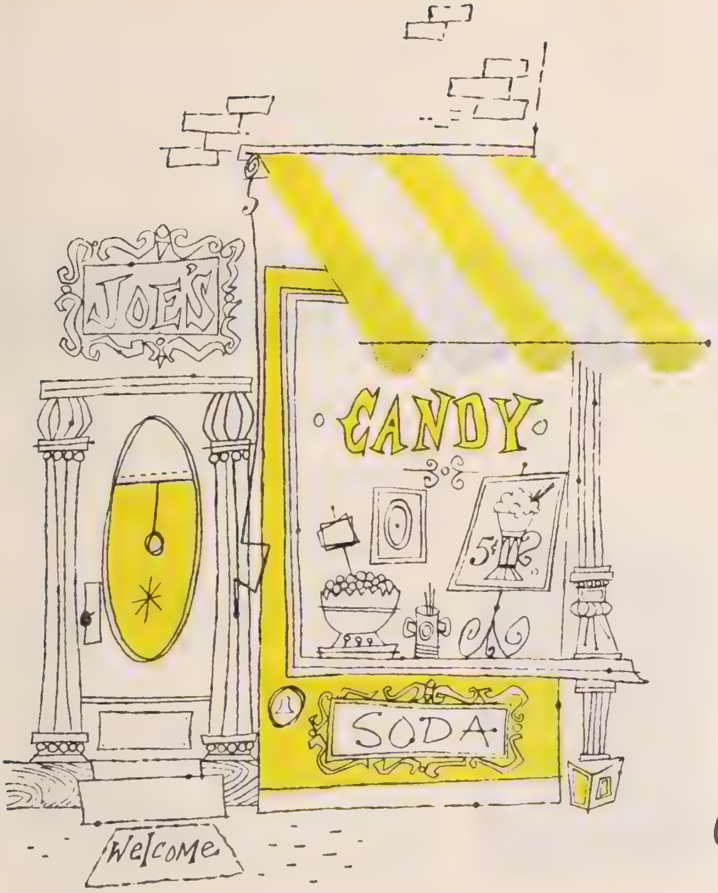
[1] Release No. 120, Committee for Constitutional Government, April, 1950.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
September 12	Fifth	Syracuse University College of Medicine and Hotel Syracuse	Morning and afternoon (buffet luncheon and dinner)
September 14	Seventh	Clifton Springs Sanitarium	Afternoon and evening (dinner)
September 27	Fourth	Cambridge	Afternoon and evening (dinner)
September 28	Third	Hudson	Morning and afternoon (luncheon)
October 4	Sixth	Hotel Statler, Ithaca	Afternoon and evening (dinner)
October 5	Eighth	Hotel Statler, Buffalo	Afternoon and evening (dinner)
October 18	Ninth	Rockland Country Club, Piermont	Afternoon and evening (dinner)
November 1	Second	Huntington or Garden City	Afternoon and evening (dinner)



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prolonged anticoagulant action in thromboembolic disorders

Ever widening recognition and steady increase in the application of anticoagulation therapy have emphasized the need for an economical, safe, and reliable anticoagulant preparation.

Heparin/Pitkin Menstruum* *'Warner'*

provides the means for prolonged anticoagulation action which affords "... consistently satisfactory results."(1) HEPARIN/PITKIN MENSTRUUM* 'Warner' inaugurated a new era in the preventive and therapeutic use of heparin in thromboembolic disorders, venous and arterial.

Evans and Dee(2) comment that "... the advent of heparin in Pitkin menstruum will popularize anticoagulant therapy as a safe and reliable method of treatment."

PACKAGE INFORMATION:

Heparin/Pitkin Menstruum 'Warner' (plain)*
without Vasoconstrictors
Cartons, 1 and 6 ampuls each
2-cc ampuls, each containing 200 mg heparin sodium salt
3-cc ampuls, each containing 300 mg heparin sodium salt

Heparin/Pitkin Menstruum 'Warner'*
with Vasoconstrictors
Cartons, 1 and 6 ampuls each
2-cc ampuls, each containing 200 mg heparin sodium salt with vasoconstrictors**
3-cc ampuls, each containing 300 mg heparin sodium salt with vasoconstrictors***

**Each cc of the Menstruum contains 12.5 mg of ephedrine sulfate and 0.5 mg. of epinephrine hydrochloride

***Each cc of the Menstruum contains 8.3 mg of ephedrine sulfate and 0.33 mg of epinephrine hydrochloride

References: (1) Loewe, L., Hirsch, E., Grayzel, D.M., and Kashdan, F.: Experimental Study of the Comparative Action of Heparin and Dicumarol on the *In Vivo* Clot, *J. Lab. Clin. Med.*, *33*:721, 1948.

(2) Evans, J.A., and Dee, J.F.: Anticoagulant Treatment of Postoperative Venous Thrombosis and Pulmonary Embolism, *New Eng. J. M.*, *238*:1- 1948.

William R. Warner & Co., Inc.
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*T. M. REG. U.S. PAT. OFF.

Scientific Articles

THE TREATMENT OF ACNE VULGARIS

Herbert H. Bauckus, M.D., Buffalo, New York

(From the Departments of Dermatology, Millard Fillmore, Children's, Sisters of Charity, and Deaconess Hospitals)

IN THIS brief article on the treatment of acne vulgaris, I do not proclaim a specific formula for success. I merely report observations most revealing to me that have been gained by some thirty active years experience trying to dissipate this most unwelcome scourge. Sometimes I think the word "fencing" is a better term when we come to sum up our activities in the cure of acne vulgaris. The weary patient with recurrent lesions and sequelae has not always been my own, nor only from my city or my state. So I am encouraged to proceed with rather dogmatic statements on the subject.

The acne vulgaris of the face, chest, and back is not well called a skin disorder of the age of puberty or of adolescence. The child of six or eight years will often show stopped up sebaceous ducts, keratinization of the sebaceous follicles, and sealing of the pores at the surface—the so-called "comedone." The skin of the forehead and temple at the hair margins is often studded at this early age with such lesions. Many little children have small white cystic lesions in which the skin seems to have grown over the duct opening. It is true that the oil gland activity or seborrhea is most stimulated in the puberty stage and for some years beyond, but an oily skin, of course, does not necessarily have acne.

It is the plugging of the sebaceous ducts that starts the trouble, and one of the causes of this obstruction is heavy sebum such as we may see in very oily skin. Granted that endocrines, hormones, and many other factors appear reasonably prominent in the etiology of acne vulgaris, it is yet the lack of drainage of the sebaceous duct that leads to secondary infection, cyst formation, and later, scarring as a result of the infection. The keratinization of the duct opening has mainly to do with plugging the drainage through the sebaceous duct. It is seldom that little children are treated at this age, even when it is recognized that the skin is not normal. This is a great error, and I make the plea for attention to the skin, not with x-ray or hormones or vitamin A but cleansing the skin regularly and frequently with soap and water with the use of some mild sulfur lotion at bedtime. This will often save a great deal of later trouble. The child in school wipes his perspiring hands into his face, smudging and filling the sebaceous pores. I have an idea it would help in the prevention of much infectious disease in children if the child would wash his hands and face in the middle of the school day. The public usually doesn't know, but certainly physicians should know that the time to "outgrow" the trouble at this early stage is indeed far away. Cleanliness and a simple lotion—but they won't be used very much unless the parents are given a little practical education on the subject.

Now is the time to draw the little picture of the sebaceous gland and its duct opening as the pore on the skin surface. Even though we ourselves really do not understand all about the etiology of acne vulgaris, the laymen can visualize the sebaceous structures and their orifices plugged with hardened oil, foreign material, and keratinized epithelial cells. We can demonstrate these structures and the early lesions. We can show that this plugging or irritation leads to infection with the ordinary pus germ on the skin and that this infection causes the little abscess or boil they call the "pimple." At this time we may tell that picking and squeezing the lesions in-

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Dermatology and Syphilology, May 12, 1950.

creases the infection and drives it deeper where it may later form a disfiguring deep cystic abscess, that the scarring of acne from the fine pits to the large scars becomes generally, at least in part, a permanent defect, and that the scarring is a result of the pustule destruction and manipulation and is not aggravated by judicious treatment. Parents and the older patients can usually understand this information.

If you do not wish to take the time and trouble to outline this much, you do not have the wisdom to care for any patient with acne vulgaris properly.

All this may seem elementary, and yet we find so many patients reaching the stage of disappointment in therapy who state the most bizarre reasons for their trouble. How a physician can expect to take an acne vulgaris patient satisfactorily through a plan of care and observation that will take a few years without having the patient understand something about the process is difficult to understand, for the acne that is called cured today may be here next year with an even greater resistance to treatment. These young growing people have a certain etiology that may be expected to last for a long time.

The later sequelae of deep abscesses and the scars which so deeply clcse up drainage of the sebaceous ducts are again a problem not quickly terminated. A lack of intelligent information secured from the proper sources gives rise to the layman's interpretation of the cause of acne vulgaris as that due to heredity, constipation, chocolate, oily foods, and the single state. I do not object to the omission of chocolate from the diet if it so pleases the attending doctor, but I do not like to see patients with disfiguring acne come in to say they wonder how they still have the trouble when they have not eaten chocolate or "sweets" for several years. The medical profession is somewhat guilty of this fastening of the problem of acne on a single process. Many times its members have adopted a single phase treatment, largely to the exclusion of other measures.

At this point, it may be well to discuss briefly the use of x-ray. We need not discuss here the more serious sequelae in this therapy. It is a method now getting out of vogue, but for a time there was considerable acne vulgaris treated with x-ray alone. Most of these patients, and in my opinion all of them, required more than the use of x-ray. Many of them did not require it at all. A patient was treated at intervals of one to two or three weeks and after a few months usually there was a marked improvement. After a certain number of treatments, the physician might triumphantly say that now all the x-ray permissible without harm has been given and not to have any further treatment by any other physician with x-ray. It is my belief, from observations of this kind of case, that very seldom was the cure permanent. The result may have been good during the period of definite sebaceous gland atrophy, but I do not believe that x-ray should be used to this degree of action. A very small dosage of x-ray, such as 75 r unfiltered, will often stimulate the absorption of the keratinization in the sebaceous orifices and even combat excessive oiliness. It may help acute pustules, but great danger lurks in pursuing persistent pustule formation with the x-ray. In my opinion, the unfortunate part of treating all acne with x-ray alone is that other measures used with much milder x-ray would have effected a more permanent result and removed some of the pathology that x-ray could not be expected to affect. This kind of case, when it recurs (and it usually does recur), presents increasing difficulties in cure. In an article presented before this group and published in the NEW YORK STATE JOURNAL OF MEDICINE on August 1, 1927, I called attention at that early date to the fact that it was unnecessary to use x-ray in many cases of acne vulgaris. Today I use x-ray very selectively and with the feeling that it is the least important in the long run. I note in a recent statement by Andrews that he has greatly decreased his use of x-ray in this condition. If anyone thinks of x-ray therapy as a routine measure, he should give some attention to the many expressions of doubt and criticism that have come from the general practitioner and the public. It has not been helpful to the dermatologist, but there are times when x-ray therapy is very helpful in the management of acne vulgaris. The keloidal scars of the chest and back require its use.

In the days when the use of vaccines in the treatment of infection was popular, this method frequently became the sole method of care with lengthy courses of injection. Although a temporary adjuvant, it could not take care of the physiologic and pathologic conditions presented. Now that we have had sulfathiazole and penicillin with us for a time, we have learned of their decided limitations in dermatology and their capacity for harm as well.

In the case of acne vulgaris, it is the duty of the physician to prevent pustule formation and to subdue it as quickly as possible when it occurs, for it is the pustular process that leads to permanent scarring and chronic cystic abscess formation. Recurrent pustules are distressing to patient and doctor, to say nothing of the loss of confidence entailed.

If we take stock of the procedures that are thus valuable in this regard, we may enumerate the use of soap and water (irritating scrubbing may increase pustules), general cleanliness, wet dressings including sometimes plain glycerine, sulfur lotions, Fowler's solution in small doses, aureomycin internally, sometimes the application of bacitracin, the use of sulfathiazole powder in the pustule if drained, and the use of sulfathiazole powder in the deep canalized and cystic structures that have developed indurated walls. I do not like to drain these deep structures without some gentle curettage and the introduction of the sulfathiazole powder into the infected canal. This method often results in elimination of the tract the first time. Certainly, the cosmetic healing is much better. Lately I have used aureomycin powder or solution introduced with gentle pressure and also bacitracin, but I prefer the sulfa powder in the infected tissue and the aureomycin in dosage of 250 mg. three times a day internally for a week or two.

I would like to mention that for many years I have employed Fowler's solution in 3-drop daily doses for periods of two months or so in the care of early pustular acne vulgaris. I am grateful for its help. The idea is an old one, and I first learned it from reports on the use of Fowler's solution in combating the pustules of iodine and bromine. Arsenicals have also been recommended in the treatment of fluid-forming and infected cavities, such as bursitis. I have never employed other forms of arsenic.

In the past year I have assembled 50 new cases of early pustular acne previously untreated, some mild and some severe but not the deeper conglobata type. Most of them were given 50 mg., some 250 mg., of aureomycin three times a day for ten days. This treatment in almost every case evidenced a favorable action in reducing pustule activity and was a happy factor in stimulating the patient's confidence. I am much impressed by it. I did not use the aureomycin as the sole treatment, and I would not at all look forward to this limited therapy. I have had enough experience in following these cases to feel now that the original improvement continued to make the case a much simpler one to handle. In some instances, after a month or two, I introduced the aureomycin period again. The recent reduction in the price of aureomycin makes this adjuvant treatment practical, and I like aureomycin in the deep cystic infections.

There have been some excellent articles describing benefits from the use of large doses of vitamin A in acne vulgaris. I may not have given the material a fair trial, but, from my experience and the observation of cases treated by others more enthusiastic, I cannot evaluate this medication as a "must." The cost of large dosage vitamin A, especially by injection, is a deterrent to be considered.

We are now in the era of the endocrines in our studies of acne vulgaris. It is here that we really become cognizant of the fact that this commonplace disease still has a great deal of mystery in its etiology.

I subscribe fully to the theory relating to the relationship of endocrines and hormones to certain types and to certain stages of acne, but, as in the other endocrine problems, we have only scratched the surface of cause and effect. We should not hastily report "cures." I think it would be regrettable if physicians generally became enthusiastic over the routine treatment of acne vulgaris solely with estrogen and androgen substances. If this occurs, much harm will result. Already we know some of the danger lying in this medication. In acne vulgaris any stimulant or irritant excreted into the sebaceous ducts may cause an exacerbation of pustule formation. The pustule once having developed, there is a likelihood that some organisms remain in a dormant state in the duct or gland. These again may become active on stimulation. For the present, I believe endocrine therapy should be limited to carefully selected and closely controlled subjects. I have found some help from estrogen creams applied locally. There is a marked difference between rosacea and acne vulgaris.

I believe that I have achieved some good results from the use of small doses of thyroid in certain cases. If I had to limit my armamentarium to a single form of therapy, I would select the local use of sulfur lotions, some of them containing resorcin. They are astringent to the seborrhea, cause absorption and peeling off of the keratinized epithelium at the pores, and are mildly germicidal. There are many efficient lotions and more of late that are cosmetically acceptable. Their selection calls for discrimination and experience. A change of lotion from time to time may be indicated. Sometimes preparations of salicyclic acid and resorcin carefully applied to certain heavily keratinized and plugged pores will be helpful. Some of the adolescent and older patients have a very oily scalp, and sometimes they increase this by greasy applications. This tends to increase acne vulgaris of the frontal and upper facial areas, and I think increases infection as well. We should keep the scalp reasonably dry in treating acne vulgaris of the face, chest, and back. This is of special importance in the so-called keloid acne of the postcervical area.

I would like to call attention to the difficulty in properly evaluating reports on statistics of improvement and cure in acne vulgaris. This nebulous state, in my opinion, tends to increase where the proponent analyzes a favored single method of care. Acne is a most capricious disease. It often clears rapidly and remains under control

Its permanent cure cannot usually be established until after a few years have elapsed, sometimes longer than twenty. Recurrence is frequent, and there are many patients who develop really serious lesions for the first time between the ages of twenty and thirty. Temporary pustule disappearance is a great improvement but does not mean complete cure.

I have often been curious about the time of year and the climate in which the experiment of therapeutic evaluation has been conducted. In New York State I would prefer to see the new acne patient in the spring. For this patient may be expected to go through the summer sunshine and improve greatly sans all other medication. The sun softens the sebum so it flows out more easily, it desquamates, it absorbs keratinization (greatly by sweat gland activity, I believe), it is superficially germicidal, often to the extent of clearing pustules, and it stimulates the mind and probably the endocrine systems.

However, the difficulty is that the patient neglects his other care. He will discontinue his lotions until in late fall and winter when the pustules appear again. We can do much to educate the patient on this phase of the acne struggle. Ultraviolet ray from the bulb will not do nearly as much for acne as outdoor sunshine, for several good reasons. I have seen pustules stimulated by irritation from ultraviolet lamp, and this form of therapy requires as much skill as other therapy.

I have not gone into the question of foods and diet because that is a large subject and, in general, the benefits claimed for it do not meet with substantiation in my experience. One of the main difficulties is that patients pay too much attention to the food question to the neglect of more important measures. It constitutes the main verbiage emanating from the endless lay forum on acne vulgaris. As indicated before, this is largely our own fault, ours and many generations of physicians before us. I do discuss the diet with the patient, partially as a means of establishing confidence.

There is, no doubt, overemphasis on the harm from iodized salt in cooking and seasoning food, but if it so happens that the patient is a really sensitized individual, I would prefer iodine out of the diet. The use of iodized salt seems to me a crude way of measuring out iodine in conditions where it is really needed. I think young patients with beginning acne vulgaris sometimes enter an active pustular stage from it. When iodine or bromides are to be given as medicine for other conditions, ask physicians and parents to avoid this medication in these cases if at all possible. I do think complete and well-balanced diets of the last twenty years have given children a better complexion and a greater resistance to acne. In the 1949 edition of *Dermatology and Syphilology* by Sulzberger and Baer is a most excellent and comprehensive article on acne vulgaris and its management.

I do not wish to suggest that acne vulgaris is an unsatisfactory disease to treat—far from it, if the attitude and efforts of the physician have won the patient's confidence. There must be a planned outline of specific action for each individual. Obviously a group of patients ranging in age from five to thirty years cannot be properly cared for under a routine regime.

In this profession of ours and in these United States, no patient of any kind should ever be routine material.

89 Bryant Street

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Discussion

F. R. Hall, M.D., *Batavia.*—Dr. Bauckus is to be commended for this excellent paper dealing with so many approaches in the treatment of acne vulgaris. His remarks on discovering and treating the mild acne in the young child, long before the adolescent period, are timely. This is probably not done nearly often enough by the busy practitioner.

I agree with Dr. Bauckus' emphasis on taking the time and trouble to explain something about acne to the patient and the patient's family. Obtaining patient cooperation in this condition, I believe, is one of the most important of our many forms of treatment.

The gentle curettage of the deep acne cyst followed by sulfathiazole powder sounds quite practical.

One of the forms of acne therapy which Dr. Bauckus mentioned should be emphasized. That is the use of small doses of stilbestrol for the female acne patient. I have used the very small dose of 0.1 mg. of stilbestrol daily for ten days before the menstrual period and in a few cases have used this dose daily except at the menstrual period. It seems to me that I have had better results with this than the other forms of glandular therapy.

Guard yourself against too much prosperity.—Anonymous

SEBORRHEIC DERMATITIS: SUPPLEMENTAL TREATMENT WITH VITAMIN B_{12}

George C. Andrews, M.D., Charles F. Post, M.D., and Anthony N. Domonkos, M.D., New York City

(From the Departments of Dermatology, Presbyterian Hospital and College of Physicians and Surgeons, Columbia University)

IT REQUIRES courage to attempt to analyze the causes and types of seborrheic dermatitis.* Evidence is strong that the Pityrosporon ovale and other cryptococci are present in most, if not all, cases of pityriasis simplex (dandruff). Benham, in a study of the cultural characteristics of Pityrosporon ovale, found it to be a lipophylic fungus which could be cultured with difficulty on wort agar enriched by oleic acid and other fatty substances.[1] She obtained it in specimens of dandruff scales from 28 out of 30 individuals. In addition, she found a number of other cryptococci in these scales. Benham says, "One must admit that the statements of MacLeod and Dowling and of Moore *et al.* that they produced lesions resembling seborrheic dermatitis by inoculation of humans with their cultures seems prima facie evidence that they recovered the causative micro-organisms.[2,3] The cultures obtained by these two groups of workers were, however, admittedly unlike, and if one accepts this evidence it would prove that seborrheic dermatitis is caused by two quite different fungi. The alternative conclusion is that the lesions which one or both of these groups of investigators produced were not really seborrheic dermatitis. This seems not improbable because this disease has no characteristics that present an absolute clinical diagnosis."

Barber doubts that any of the cultured organisms are identical with the Pityrosporon but agrees with Sabouraud that the Pityrosporon is almost certainly the cause of pityriasis simplex, which may spread from the scalp to other parts of the skin as dry furfuraceous flakes with no underlying inflammatory reaction.[4,5] This is often well seen, for example, at the openings of the external auditory meatuses, in the retroauricular areas, on the forehead, sides of the neck, and posterior parts of the cheeks.

MacKee and Lewis found Pityrosporon ovale on 70 per cent of normal scalps and on 66 per cent of scalps on which there was concomitant skin disease. However, in the majority of examinations, it was found that the concentration of the organism was higher on scalps with dandruff than on normal scalps. They also noted that the Pityrosporon ovale was a common inhabitant of the skin of the nose[6,7]

Moore, Kile, Engman, and Engman proved that inoculation of the cultures of an organism which they believed to be Pityrosporon ovale in human subjects and in animals frequently resulted in the development of a "dermatitis of erythema or brown scaliness."[3] The histologic picture of this dermatitis resembled that of seborrheic dermatitis. Later, Kile and Engman inoculated Pityrosporon ovale and produced a scaly condition on human scalps from which Pityrosporon ovale was again recovered.[8] The reproduction of a dermatitis, as previously reported by MacLeod and Dowling, was evidence of the etiologic importance of a cryptococcus, although to identify this organism with Pityrosporon ovale is a debatable question.[2]

We are inclined to interpret all these experiments and arguments as supporting the hypothesis that Pityrosporon ovale and other cryptococci find the greasy scales of pityriasis simplex favorable soil.

Barber believes that transition from pityriasis simplex into the common and simpler forms of seborrheic dermatitis is due to secondary invasion of the stratum corneum by the micrococcus cutis communis, whereas the more inflammatory varieties of seborrheic dermatitis come from added infection by staphylococci, which may simultaneously cause furuncles on the nape of the neck and pustular folliculitis elsewhere.[4] Frequently, this type is associated with pustular forms of acne, hordeolum, or chalazion. Streptococci, particularly on the scalp, in the ears, nose, and buccal commissures, may grow on this seborrheic soil, causing fissures and intertriginous eruptions that are complicated at times by erysipelas and lymphangitis.[4]

The reactivity of seborrheic patients to staphylococcus toxoid was noted by Pollitzer. More recently, the specific action of penicillin injections and the benefits from penicillin ointment

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* The nomenclature is unfortunate for there is a multiplicity of terms. Seborrhea literally means a flow of sebum. This term is loosely applied to greasy or oily skin on the face. It is a constitutional trait, and although often seen in patients afflicted by seborrheic dermatitis or pityriasis simplex (dandruff), it is not of itself seborrheic dermatitis. The authors use only the terms seborrheic dermatitis and pityriasis simplex in accordance with the *Standard Nomenclature of Disease.*

and the remarkable results of treatment by the sulfonamides internally and locally leave little room for doubt that the staphylococcus which can be cultured readily from the scalp and other areas of these patients is a factor in the inflammatory process.

These patients, as a rule, have fine scaling dermatitis in the nasolabial groove often accompanied by a yellowish or brownish-red discoloration of the affected parts. Fissures and similar scaly reddish patches appear under the ear lobes or in the retroauricular folds, auditory canals, supraorbital regions, nasolabial folds, or at the corners of the mouth. Finely scaling patches occur in the creases of the neck, on the sternal region, in the axillae, inframammary folds, umbilicus, and groins. It is difficult sometimes to differentiate this type of seborrheic dermatitis from flexural dermatitis due to focal infection. We have all encountered older people with widespread so-called seborrheic dermatitis associated with badly infected teeth or chronic prostatitis or cystitis. Leukocytosis of 12,000 to 25,000 may be present with practically normal differential count. After the focal infections are cured, the dermatitis subsides, especially if penicillin or sulfonamides are also given.

Hormonal Factors

It is well established that androgens and estrogens have definite effects upon the health of the skin in general. Local effects upon the oiliness and texture of the skin of the face have been proved of great importance in acne vulgaris and in seborrhea.[1] Seborrhea must be regarded as a constitutional state. It is natural to certain races and at certain periods of development such as the prenatal, pubertal, menopausal, and senile periods. Excessive amounts of fat in the diet and psychologic and endocrine causes may augment the flow of sebum. However, seborrhea is not seborrheic dermatitis. It may or may not be present in patients who have seborrheic dermatitis. It may be called a part of the seborrheic diathesis, but it really is not a symptom or a type of seborrheic dermatitis.

Although the influence of endocrine factors is suggested by the onset of seborrheic dermatitis in obese persons who are subthyroid or of the Froehlich type, there is no proof that hormones exert more than an indirect chemical action on the disease. We know that the Pityrosporon is lipophylic, as are other cryptococci, and that thyroid extract and the sex hormones tend to reduce adiposity. Our premises are different in seborrheic dermatitis than in acne vulgaris, in which the influences of testosterone, estrogens, and gonadotropic hormones are well defined and most important.

The Seborrheic Diathesis

Certain constitutional peculiarities have traditionally been encountered in the patients who develop seborrheic dermatitis.[10] This group of patients frequently suffers from gastrointestinal upsets, nervous instability, obesity, constipation, and nasal catarrh. They frequently eat excessive amounts of fats and sweets, especially chocolate, egg yolks, and milk. On examination, the gastric contents may show hypoacidity or anacidity. There may be indicanuria.

Nutritional Factors

Just where along the line nutritional factors enter, it is difficult to say. Gross, in 1941, called attention to nonpellagrous eruptions due to deficiency of vitamin B complex.[11] Many of the cases he reported were clinically diagnosed seborrheic dermatitis. Constitutional background, gastrointestinal dysfunction, and malnutrition were frequently present. The eruptions occurred on the seborrheic areas and were associated with dandruff and scurf on the scalp. Some resembled moniliasis. Gross explained that the so-called seborrheic diathesis, associated with digestive disorders such as hypoacidity, interferes with the proper utilization of vitamins. Although the intake usually is adequate, a secondary deficiency develops due to the underlying digestive disorder. This secondary deficiency can be corrected by vitamin B complex and crude liver extract therapy. More recently, folic acid has been similarly employed but less successfully than crude liver extract. As stated before, many patients afflicted by seborrheic dermatitis are infected by the Pityrosporon or staphylococci. We may assume that the resistance to infection of these patients has been lowered by nutritional or metabolic disturbances. Such disturbances are apparently overcome by therapy with crude liver extract, vitamin B complex, folic acid, or vitamin B_{12}.

Vitamin B_{12}

Vitamin B_{12} and vitamin B_{12} concentrate were used parenterally in the treatment of 101 dermatologic patients during the past year.* We were prompted to use this new preparation because of the widely known beneficial effects obtained with crude liver extract and vitamin B complex in metabolic and nutritional deficiency states. While it is true that many patients with seborrheic dermatitis have a mild, usually normocytic or hypochromic anemia, the response of the skin disease could not be judged from the red blood cell count, hemoglobin, hematocrit studies, or reticulocyte count. These

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* Rubramin, Vitamin B_{12} Concentrate and Crystalline Vitamin B_{12}—E. R. Squibb & Sons.

TABLE 1.—RESULTS OF TREATMENT OF 66 CASES WITH VITAMIN B_{12}

	Number of Patients	Greatly Improved	Improved	Slightly Improved	Not Improved
Seborrheic dermatitis	37	16 (43.5%)	16 (43.5%)	3	2
Psoriasis	6	..	1	..	5
Nutritional eczema	3	..	3	..	..
Neurodermatitis	3	..	3	..	..
Premature alopecia	3	..	..	1	2
Dermatitis venenata	2	..	..	..	2
Lupus erythematosus	2	..	..	..	2
Chronic lichenoid and diskoid exudative dermatosis of Sulzberger and Garbe	2	..	..	..	2
Acrodermatitis atrophicans chronica	1	..	1	..	..
Chronic radiodermatitis	1	..	..	1	..
Psoriasiform dermatitis	1	1	..	..	..
Atrophic vaginitis	1	1	..	..	..
Xerotic eczema	1	..	1	..	..
Rosacea	1	..	1	..	..
Moniliasis	1	..	..	..	1
Glossitis	1	..	1	..	..
Totals	66	18	27	5	16

tests were done on many patients and proved to be of little prognostic value. The response does depend, however, on objective observation and the statement of the patient regarding his well-being. The dose of vitamin B_{12} in both the concentrate and crystalline preparations was 10 to 30 micrograms once a week or in some cases once every two to three weeks. The vitamin was administered intramuscularly in all cases. There was no noticeable difference whether the concentrate or crystalline preparation was employed. We have had no experience with oral preparations of vitamin B_{12}. That vitamin B_{12} is not entirely specific for seborrheic states in the sense that it is specific for pernicious anemia can readily be seen because apparently much larger doses are required to elicit a response in the former than in the latter. In most cases vitamin B_{12} was employed as the only supportive measure, although early in the series, while the supply of vitamin B_{12} was limited, some cases received injections of crude liver extract at intervals between vitamin B_{12} injections. Local treatment was not neglected and was limited where possible in order to judge the effects of the injections. Patients exhibiting secondary infection of seborrheic areas were treated with the sulfonamides or penicillin. Standard antiseborrheic preparations, such as Vioform, Tarstill, and ammoniated mercury ointments, were employed in some cases, although many patients received only bland nonirritating local preparations.*

As anticipated, the results with vitamin B_{12} are outstanding in most cases of seborrheic dermatitis. Improvement usually manifests itself after two or three injections. Many of these patients have cleared entirely and are free of recurrences. A mild recurrence usually can be treated satisfactorily with a few additional vitamin B_{12} injections, and recurrences have been prevented entirely by a maintenance dose of 15 or 30 micrograms of vitamin B_{12} intramuscularly every two or three weeks. Where other metabolic, endocrine, and nutritional factors are implicated and appropriately treated, recurrences will not appear. Furthermore, recurrences will not supervene where a focus of infection is eliminated or a low basal metabolic rate is corrected with thyroid extract.

Of the 101 cases treated, sufficient data were obtained for this report by regular weekly observation over a period of at least several weeks on 66 cases (Table 1). Thirty-seven cases of seborrheic dermatitis were studied thoroughly (Fig. 1). Sixteen, or 43.5 per cent, of these cases were greatly improved or apparently cured; 16, or 43.5 per cent, were improved; three were but slightly improved, and two patients were not improved or worse. These results are superior to those that can be obtained by local treatment alone. In two reports on the use of Vioform ointment in seborrheic dermatitis by Sulzberger and Baer and Overton, the results were not as good as those reported here in which vitamin B_{12} injections were used as a treatment adjunct.[12,13] Four representative case histories follow.

Case 1.—H. L., a twenty-four-year-old, white single woman, had excessive oiliness of the scalp, seborrheic dermatitis of the nasolabial folds, and severe chronic blepharitis since adolescence. She was treated symptomatically with x-ray and penicillin and Vioform ointments for one month before vitamin B_{12} was available. There had been little improvement. Following the first injection of vitamin B_{12} the eyelids were improved. She then received 15 micrograms of vitamin B_{12} weekly for six weeks. At the end of this time she was entirely clear. At present she uses no local preparations at all and takes a maintenance dose of vitamin B_{12} once every three to four weeks.

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* Vioform—Ciba Pharmaceutical Products, Inc.; Tarstill—A. & A. Gorga.

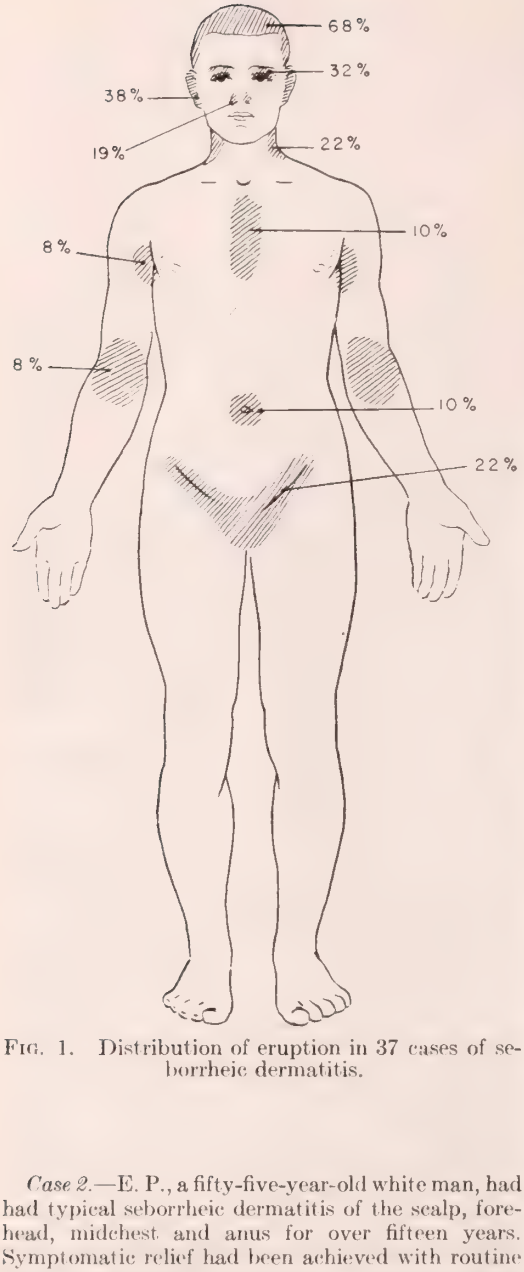

Fig. 1. Distribution of eruption in 37 cases of seborrheic dermatitis.

Case 2.—E. P., a fifty-five-year-old white man, had had typical seborrheic dermatitis of the scalp, forehead, midchest and anus for over fifteen years. Symptomatic relief had been achieved with routine local treatment and x-ray therapy, but he was never free from the disease. He received and was benefited by crude liver extract injections given weekly for about two years. Even when cleared, he still had bad flaky dandruff and persistent patches in the eyebrows and midchest. This patient has remained entirely well on weekly injections of 15 micrograms of vitamin B_{12}. During two upper respiratory infections this winter this patient experienced some flare-up of the dermatitis when he missed the injections for a few weeks. At present he is maintained in excellent condition on 15 micrograms of vitamin B_{12} every other week.

Case 3.—Mrs. P. H., a fifty-three-year-old white woman, had a persistent eruption resembling nail polish dermatitis on the sides of the neck and eyelids for two years. Removal of nail polish brought about no change in the condition. The diagnosis of Stryker-Halbeisen syndrome was considered. Hematocrit readings were normal. All ointments, including petrolatum alba, aggravated the eruption. Before vitamin B_{12} was available, improvement was obtained with injections of thiamine and crude liver extract. Thus, when vitamin B_{12} was obtained, weekly injections of 15 micrograms were given with complete clearing of the eruption. No local treatment was used. At present the patient feels, and we agree, that recurrences are prevented by an injection of 15 or 30 micrograms of vitamin B_{12} every three to four weeks.

Case 4.—Mrs. J. S. R., age seventy-six, consulted us in September, 1947, because of pruritus vulvae and eczema of twenty years duration. During the last year it had been so severe she was invalided. She had received x-ray and other treatments. Examination revealed widespread seborrheic dermatitis involving the scalp, forehead, eyelids, axillae, groins, vulva, and anus. Treatment was started with local remedies and injections of crude liver extract, 2 cc. twice weekly, and four fractional x-ray treatments. The initial improvement continued after the x-ray was stopped. The patient became comfortable except for a tendency to develop dandruff, scaling on forehead, an annoying blepharitis, and pruritus of the vulva. These symptoms persisted for months until vitamin B_{12} injections were started. The symptoms have completely disappeared so that the patient finds it no longer necessary to have medical attention. She stopped the injections three months ago but is continuing oral administration.

In six cases of psoriasis in which an adequate trial of vitamin B_{12} was made, one case was improved, and this improvement was attributable to the local application of Thorium-X-alpha in alcohol solution.* The other five patients were not improved.

The improvement obtained in three cases of nutritional eczema was on the basis of weight gain and increased appetite under the stimulation of vitamin B_{12} administration.

Of the three cases of neurodermatitis, two were of the disseminated variety, and one was localized to the occiput. Improvement occurred in all three cases. The two widespread cases exhibited a seborrheic habitus in addition to the common atopic features. The localized case showed a concomitant seborrhea oleosa of the scalp that cleared under treatment with vitamin B_{12}.

Further beneficial results obtained in single cases of acrodermatitis atrophicans chronica, psoriasiform dermatitis, atrophic vaginitis, xerotic eczema, and rosacea constitute insufficient evidence to draw conclusions but are worth noting, and vitamin B_{12} deserves further trial in these conditions. There was no improvement in patients with diskoid lupus erythematosus, premature alopecia, dermatitis venenata, chronic lichenoid and diskoid exudative dermatosis of Sulzberger and Garbe, or moniliasis.

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* Thorium-X-alpha—Fleischman-Burd & Co.

Summary

1. The etiology of pityriasis simplex, seborrheic dermatitis, and the seborrheic diathesis is discussed.

2. Seborrheic dermatitis is essentially a nutritional disease. Pityrosporon ovale, other cryptococci, staphylococci, and streptococci found in cases of seborrheic dermatitis are probably saprophytes or secondary invaders. They account for many of the inflammatory features of the disease.

3. The results of supplementary treatment with vitamin B_{12} are given.

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Discussion

Paul Gross, M.D., *New York City.*—Dr. Andrews says that it requires courage to analyze the causes and types of seborrheic dermatitis. I go further by saying that it requires even more courage to report on vitamin therapy of skin diseases. He and his coworkers have done well in doing both and have presented us with some interesting and encouraging results.

One can fully agree with the presenters on the factors which play a role in the causation of seborrheic dermatitis, and, although some of these factors seem rather far apart, in reality they are closely interrelated.

Like psoriasis, seborrheic dermatitis belongs in the group of dermatoses in which the clinical manifestations are the result of a metabolic disturbance of the skin in contradistinction to food and contact allergy or infection and infectious allergy. Even the character of the lesions and, particularly, their behavior and therapeutic response suggest such a mechanism.

It will be readily understood that hormonal and nutritional factors are exerting an influence on this metabolic disturbance, and the interaction of hormones and vitamins is too well known to be discussed here.

Less obvious is the interrelation of metabolic disturbance and infection. Diabetes is the best example of a disease of metabolism which makes the skin more susceptible to fungus and staphylococcus infections.

It has been pointed out by several workers, including myself, that some of the skin manifestations in diabetes are the result of the vitamin deficiency produced by diabetes, and it is a well-known fact that a widespread moniliasis in a diabetic who is fully controlled by insulin requires parenteral liver therapy and oral vitamins to become amenable to topical remedies.

Similar conditions prevail in seborrheic dermatitis, except that we do not know the exact nature of the metabolic disturbance underlying the skin changes.

I am glad that the essayists stressed the fact that the effectiveness of vitamin B_{12} in seborrheic dermatitis is not related to the reticulocyte response. I found a similar lack of anemia or reticulocyte effect in cases which responded well to treatment with folic acid.

Dr. Andrews and his associates have gone a step further in analyzing the effect of crude liver extract on skin diseases. The rapid development in vitamin research has made this possible, culminating in the synthesis of the pernicious anemia factor B_{12}.

The relationship of vitamin B_{12} and folic acid to the intrinsic and extrinsic factors of pernicious anemia is still being investigated, and the final conclusions may throw an interesting light on the mechanism of seborrheic dermatitis. From my experience folic acid and vitamin B_{12}, or the combination of both, are the most effective remedies in the treatment of extensive seborrheic dermatitis, including the generalized erythroderma type. It is in these conditions where help is most needed. The more localized forms will require further study regarding their response to therapy, and a better understanding of the various skin eruptions which used to be thrown into the melting pot of seborrheic dermatitis will be reached by the type of clinical investigation which was presented here.

Dr. Andrews said the action of B_{12} on seborrheic dermatitis is not as "specific" as its action on pernicious anemia. I fully subscribe to that statement, since it puts the correct perspective on the vitamin therapy of diseases which are not primary nutritional deficiencies. It is the oversimplification of vitamin therapy which has made many dermatologists skeptic of this form of treatment.

THE IMPACT OF PSYCHIATRY ON THERAPY IN DERMATOLOGY

Herman Sharlit, M.D., New York City

PSYCHIATRY may not be the sacred cow of medicine but, at the moment, it appears to this essayist that the psychiatrists are its high priests. Historically, priestcraft sought to maintain its authority and reputation for omniscience by the establishment of barriers between the craft and those it professed to serve—barriers of language, mysterious symbolisms, etc. Cultural progress served to penetrate these barriers, to make common knowledge by way of common language the antidote to false prophesy and false prophets. It would seem to me that the priestcraft of psychiatry has itself taken the initiative to tear down the fences of misunderstanding and mystery that have thus far been extremely limiting factors to the kind of service they allegedly can give to the sick and to their colleagues in medicine.

The psychiatrists have come among their medical colleagues to preach their gospel through psychosomatics. While the medical implications in this linguistic marriage of the psyche and the soma are at least as old as modern medicine itself, it has taken on new meaning now, a meaning translated into action by psychiatrist participation in the clinical care and study of cases generally considered as belonging to other special fields in medicine.

This invasion by the psychiatrists, if invasion is the proper word, has been embraced, and perhaps prematurely, with greatest enthusiasm by that segment of the consumers of medical care who are most articulate and can readily reach the masses by way of their literature, theatre, and cinema. As illustrative of this latter point, I am reminded of a current motion picture in which one of the characters apropos of nothing in particular poses the rhetoric question, "How can I go to my psychiatrist if all I can complain of is aching feet?" The script writer knew his public; the reaction to this remark was immediate and general.

I am not aware of the character and extent of the interest psychosomaticists are currently taking in the several medical specialties other than our specialty of dermatology. I assume that dermatology has not been selected for special attention, although I personally would favor such choice, provided their participation in our problems was completely cooperative and was carried on with dermatologists as the senior members of these cooperative efforts. The last world war period afforded psychiatrists a unique opportunity to study and establish the importance of psychodynamics in clinical investigations. A review of the literature since 1945 reveals that psychiatry is earnestly applying its experience and its philosophy to dermatologic cases and that dermatologists as individuals and dermatologic clinics as units are beginning to study their case material in the light of psychiatric revelation. This is splendid; but this is also the time—at the very outset—to discipline our medical thinking as it meets the full impact of the psychiatrist's laws of psychodynamics. This impact, as it disturbs the dermatologist's conception of "cause," of "effect," and of "cure," can profoundly influence our therapy and, what is more important, can seriously disturb our orthodox approaches in clinical research in dermatology.

Obviously, time for this presentation does not permit an extended elaboration of this subject matter. My sole purpose here is to arouse your interest in the psychodynamic approach to dermatologic problems and to give, by way of illustration, the difference in the kind of medical thinking that flows from this newer approach.

The psychosomaticists say that to accept poison ivy as the "cause" of a dermatitis simply because contact with the leaf resulted in the dermatitis is "fallacious reasoning," even though such acceptance may have "practical value."[1] I analyze this thought to mean that, since contact with poison ivy does not lead to dermatitis in all persons and further does not invariably lead to it in the same individual, there are other essential factors in the causation of each episode, beyond the mere contact with poison ivy. This is sound logic and good medical thinking. To the extent that it points up the gap in our complete understanding of causation it is wholesome and helpful. To the extent that it emphasizes the psychodynamics in the "contactee," here in a specific clinical picture so helpfully studied somatically these many years by dermatologists, it offers, and will continue to offer, only irritation to our complacency until such time as the psychodynamic approach to this problem (studied under research controls that in some slight measure at least approximate the conditions under which dermatologists studied and worked) shall disclose "practical values" for understanding the mechanism of causation and therapy.

I realize that the psychosomatic challenge as hurled at the dermatologists' understanding of rhus dermatitis is issued in a spirit of bravado and

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provocation. But the point is well taken, since we all can readily conjure up more vulnerable categories where our understanding is meager and treatment disappointing.

The art of practice has always played a conspicuous part in dermatology. This art carries the implication that patients are complaints plus personalities. This art carries the implication that patients are worried and, in dermatology, worried beyond all other causes by what they see of their disability and by what others can see of it. This art carries the implication that the persistence of a dermatologic disability tends to destroy confidence in the offered therapy and tends to introduce the element of costs and financial losses as disturbing factors. This art implies a taking into consideration of the very evident emotional conflicts at home or at work that can interfere with the best results from therapy. This art of practice I interpret as the application of psychosomatic theories in the over-all therapeutic approaches to all relationships between doctor and patient. In the field of psychosomatics, I imagine, this feature of the practice is comparable to minor surgery by the general practitioner. Similarly, the practitioner of the minor features of any specialty has the responsibility of remaining aware of the need for and the use of the specialist in the field.

A practical awareness of the specialty of psychosomatics, however, does not currently prevail among dermatologists, and the reasons therefor I believe to be these: first, the failure of psychiatrists to work in close cooperation with dermatologists to demonstrate the usefulness of the psychosomatic approach; second, the failure of psychiatrists to reveal a technic for the recognition and treatment of the many types of cases that they must surely believe can be satisfactorily handled by the dermatologists themselves, and last, the apparent difficulty of conditioning dermatologic patients for the transfer from the orthodox dermatologic handling of their disability to the yet strange and often inexplicable approach via the study of emotional crises and personality impacts.

Sufficiently convincing reports are already available in the literature to justify the conclusion that research clinics in dermatology must include a psychiatrist among their personnel. Psychosomatic studies are trying and time-consuming, and crucial to an ultimate appraisal of these psychosomatic studies on dermatologic cases will be the ingenuity used in the selection of cases for study and a proper interpretation of the clinical results. The laws of psychodynamics, say the psychiatrists, as implied earlier in this report, find clinical application, not alone to the obvious cases involving self-mutilation, admitted or denied, or cases of unknown etiology characterized by chronicity, but supposedly to such cases that involve known etiology but present persistence or repeated recurrences in spite of apparently adequate somatic therapy.

I have accepted for this presentation the validity of the laws of psychodynamics as given by psychiatrists, which laws, I understand, stem from the early discoveries by Freud, using first the technic of hypnosis, then that of "free association." As a dermatologist, I am less concerned with the validity of these laws than with the clinical value of an approach in the treatment of dermatologic complaints in individuals as groups that do badly by our present modes of therapeutic procedure.

I am keenly aware of one serious danger inherent in an enthusiastic acceptance of the use of a psychosomatic technic in our difficult cases, namely, the establishment of a habit of prematurely abandoning the purely somatic investigations, tedious and painstaking as they sometimes necessarily are in our puzzling cases. Contact dermatitis is exceedingly common. All too often negative patch tests are deceiving and the effects of elimination tests slow to reveal themselves. Failure to act the detective in ferreting out noxious contactants may futilely throw the patient into the "neuropsychogenic group."

In this connection, I am reminded of an experience of twenty years ago. The patient, a maiden aged sixty-five, a bank clerk, lived alone in a two-room apartment. For three months she had found no relief from a burning and itching and simple dermatitis of her upper eyelids. Her difficulty had obviously completely unnerved her. She came to me not just to seek help but virtually to implore it. The emotional content of her disability was out of all proportion to the skin trouble evident. I gave her my judgment that her lids were being irritated by contact with some volatile substance. I very carefully enumerated the types of substances she might be using that could be responsible for her dermatitis, with the admonition that all these things be promptly removed from her apartment. Subsequent disclosures proved that she carried out this order to the best of her ability. She returned to my office several times during the next two months. Nothing had been accomplished. Her mental state was now frankly deplorable. I was moved to make one final effort to help seek out an exposure to a noxious volatile. I went to her small apartment to rummage through everything. And I found it. At the bottom of a small cigar box in which she kept small dainty handkerchiefs was an unopened guest-size fragrant piece of toilet soap. This I literally tossed out of the window and ordered the handkerchiefs rewashed. In two weeks she was all well. The implications in this case recital are obvious; how easily could one surrender to the psychosomatic approach in a patient of this type.

There is further danger in dermatology of being too sharply aware of the emotional content involved in a skin disability. In the course of preparing this paper, I was consulted by a young man of twenty-seven who stated that the erruption on his face was the first skin difficulty he ever had and that he was to be married in two weeks. An examination of his face revealed a nondescript dermatitis probably worsened by the use of home remedies. Before I was truly aware of it, I had blurted out, "Are you sure you want to get married?" I am certain this remark could have led to embarrassment, if not difficulties, if the young man had done other than laugh this off as a facetious remark.

In the past thirty years, the allied basic sciences (chemistry, bacteriology, mycology, and physiology) have all contributed much to clinical dermatology, as did the special fields of endocrinology, allergy, and nutrition. Most of the contribution from each field was elaborated and evaluated by the dermatologic specialist. There is no reason to suspect that, whatever psychosomatics has to offer dermatology, we need follow in its application and study any pattern other than that historically used in the adoption of facts from these other fields. The contribution from psychosomatics, whatever its ultimate importance, will be achieved with minimum of lost motion if this newest approach in our clinical studies in dermatology will be guided in its application by minds clearly aware through experience and practice of all the pitfalls extant in reaching conclusions as to cause and effect relationships in dermatology.

32 East 64th Street

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Discussion

Montague Ullman, M.D., *New York City.*—Dr. Sharlit in a rather frank and open presentation of the problem has raised questions of growing concern to all dermatologists. How will the expanding horizons of psychosomatic study affect dermatology and what should be the nature of the collaborative effort between the dermatologist and the psychiatrist? Will the psychiatrists, acting as high priests, insist that in those cases where the skin lesion seems to be closely related to a personality disorder the skin condition can be minimized or even ignored? Will they maintain that these skin changes are simply somatic correlates of a basic inner conflict? Or will this twofold attack by psychiatrists and dermatologists remain rooted in the sounder principle that pathology, wherever encountered in the human organism, can best be understood in its own terms at its own level. Although evidences of the "high priest" attitude are not entirely lacking from the literature, I think some assurance can be given that all principles of causality will not be abandoned at one and the same time. Dr. Sharlit's word of caution in this regard, however, should be well taken.

We consider disease not as a static isolate but as an active process occurring in a living matrix, and it stands to reason that, where our understanding of any given disease is limited, our efforts have to be directed both to the disease process and to the soil in which it flourishes. Psychiatry, despite flowery allusions to such expressions as total personality, response of the total organism, etc., actually concerns itself with but a small part of this soil, namely, the psychologic makeup of the individual. How pathology at this level alters the physiologic and anatomic balance of the organism is still largely unexplored. We are just as much in the dark in evaluating the disappearance of skin pathology in relation to psychologic intervention.

When a patient with an intractable skin lesion is treated by a psychiatrist and changes in the skin, seemingly related to the process of therapy, occur, are we to infer that this specific lesion is amenable to psychotherapy, that it is psychogenic in origin, and that future cases should be earmarked for the psychiatrist? Despite appearances to the contrary such an interpretation would not lead very far. Whatever the nature of the chain of events set up, the plain fact seems to be that an alteration occurs which upsets the hitherto existing balance of forces between the pathogenic processes and the recuperative processes, tipping the scale in favor of the latter. It would seem to me, then, that, whether or not the psychiatrist is successful, the area of dermatologic inquiry is constantly broadened rather than encroached upon.

From the practical standpoint I think the problems are quite familiar. Dr. Sharlit indicated the importance of evaluating the patient's personality, background, and present circumstances. You are aware of the difficulties encountered in attempting to modify these factors when they adversely affect the therapeutic program. The decision as to when and how to use psychiatric help can only follow from the dermatologist's appraisal of the entire situation and his knowledge of the particular disease under consideration.

I wish to endorse wholeheartedly Dr. Sharlit's plea for greater collaborative effort between dermatologists and psychiatrists. I would suggest, however, that, since our differences are ones of focus and technic and not of goal, we make the partnership an equal one.

FURTHER EXPERIMENTS ON PROLONGING LOCAL ANESTHESIA WITH INSOLUBLE ANESTHETIC BASES

SAMUEL MONASH, M.D., and ALVO GUIDUCCI, M.D.,* New York City

(From the Departments of Dermatology, New York Medical College, Flower and Fifth Avenue Hospitals, and the Metropolitan Hospital)

IN A preliminary report one of us showed that it was possible to produce a very marked prolongation of local anesthesia by the subcutaneous injection of substantially insoluble and slowly absorbable procaine base.[1] The latter was used either in the form of a suspension in water or in solution in 50 per cent alcohol. In 5 and 10 per cent concentrations, the aqueous suspensions produced local anesthesia lasting two to three weeks. The 5 per cent alcoholic solution gave a similar result. We have extended these studies and can now report on the duration of local anesthesia with varying concentrations of procaine base and another anesthetic base, namely, Nupercaine.

We have discontinued the use of the alcoholic solution because of the pain attending its injection and have confined our attention solely to the aqueous suspensions.

There are three ways in which an aqueous suspension of procaine base can be prepared: (1) by mixing finely ground procaine base with a dispersant such as Aerosol O.T. and then suspending it in distilled water or saline. (2) By mixing procaine hydrochloride powder with its molar equivalent of anhydrous sodium carbonate to neutrality. Water or saline is added to the above mixture before using, resulting in a suspension of procaine base. (3) By dissolving procaine hydrochloride in water, adding a drop of indicator such as phenolphthalein and then dilute sodium hydroxide to neutrality. The procaine base is precipitated in finely divided form and can be immediately injected.

Since the product is not yet on the market, we have been compelled to make it in a syringe immediately before injection. To prepare a 1 per cent suspension of procaine base, for example, 1 cc. of a 2 per cent solution of procaine hydrochloride is placed in a 2-cc. or a 5-cc. syringe. A drop of phenolphthalein solution is added as indicator and then drop by drop 0.1 per cent sodium hydroxide solution until the mixture is just neutral. Distilled water is added to the 2-cc. mark; the mixture is shaken and injected.

Our results with 0.5, 1, 2, 5, and 7.5 per cent concentrations of procaine base are shown in Table 1. It is evident that the subcutaneous injection of 1 cc. of a procaine base suspension, even in dilutions as low as 0.5 per cent, can produce local anesthesia lasting four to eight days and that the duration of the anesthesia can be lengthened somewhat by increasing the volume of anesthetic injected and its concentration. The most consistent results were obtained with concentrations of 1 and 2 per cent. The only untoward result was the formation of a slough in one case where a concentration of 7.5 per cent was used.

TABLE 1.—COMPARISON OF RESULTS WITH VARIOUS CONCENTRATIONS OF PROCAINE BASE

Concentration (Per Cent)	Volume Injected (Cc.)	Duration of Anesthesia* (Days)
0·5	1	8
0·5	1	6
0·5	1	4
1	1	10
1	1	5
1	2	12
1	2	8
1	3	10
1	4	10
1	4	7
2	1	7
2	2	7
2	2	8
2	3	6
5	1	11
5	1	8
5	2	9
5	3	6
7·5	1	13
7·5	1	slough

* Control anesthesia with 1, 2, 5, and 7.5 per cent procaine hydrochloride solution lasted two to four hours.

A similar prolongation of anesthesia was obtained with suspensions of Nupercaine base in concentrations of 1:1,000 and 1:200. As shown in Table 2, local anesthesia lasting six to eight days was obtained as compared with controls of four to six hours.

TABLE 2.—COMPARISON OF DURATION OF ANESTHESIA WITH NUPERCAINE BASE

Concentration (Per Cent)	Volume Injected (Cc.)	Duration of Anesthesia* (Days)
0·1	1	7
0·1	1	7
0·5	1	6
0·5	1	8

* Control anesthesia with 0.1 and 0.5 per cent Nupercaine Hydrochloride solution lasted four to six hours.

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* By invitation.

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Applications

The following uses are suggested for prolonged local anesthesia:

1. Treatment of localized pruritic conditions such as pruritus ani, pruritus vulvae, localized neurodermatitis, etc.
2. Treatment of sprains, fractures, and other orthopedic conditions where prolonged relief from pain is advisable.
3. Treatment of sciatica and other nerve pains.
4. Treatment of pain in poliomyelitis.
5. Treatment of hay fever by injections intranasally.

Summary

The subcutaneous injection of 0.5, 1, 2, and 5 per cent aqueous suspensions of procaine base produces local anesthesia lasting from four to twelve days. Similar injections of 0.1 and 0.5 per cent Nupercaine base suspensions produce anesthesia lasting six to eight days.

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Discussion

Frank C. Combes, M.D., *New York City.*—Procaine, since its introduction in 1905, has been generally accepted, on the basis of equivalent weights, as the safest and most effective substance for production of local and regional anesthesia. Its safety is attested by the fact that, although a total dosage of more than 1 Gm. of the hydrochloride salt should not be injected, as much as 3 Gm. have been given at one sitting without deleterious effects. Many efforts have been made to prolong its anesthetic effects. The addition of epinephrine is the most popular, its vasoconstrictive action in the anesthetized area retarding the absorption of the procaine hydrochloride into the general circulation. Nevertheless, reactions do occur. For their prevention barbiturates are frequently given previous to injection of the procaine. Pharmacologists claim that many reactions, especially those in the nature of cardiovascular collapse with tremors and muscular twitchings, are actually due to the epinephrine rather than the procaine.

Dr. Monash has certainly made another valuable contribution to the art of local anesthesia, one which should find many uses in dermatology.

I think the next procedure is to determine the limit of safety of the suspension of the procaine base. Naturally, this must be much greater than the hydrochloride in solution. Apparently, the length of anesthesia bears little relationship to the amount of procaine base injected. This alone is a definite safety factor. The possibility of allergic sensitization from repeated injections must also be explored. I would hesitate to use Nupercaine by this method, not only because of its high sensitizing properties but because of its inherent toxicity, arbitrarily estimated at thirty times that of procaine.

TUBERCULOSIS RATE AMONG NAVY EMPLOYES DROPS 33 PER CENT IN ONE YEAR

A 33 per cent decrease in the incidence of tuberculosis among Navy civilian employes was reported recently by Rear Admiral C. A. Swanson, Surgeon General of the Navy, as a result of the Navy Medical Department's continuing chest x-ray program.

Reports from Naval activities in the United States and overseas show that of a total of 213,442 civilian employes who were given x-ray examinations in 1949, four of every 1,000 employes had evidence of tuberculosis which required immediate treatment. In 1948, the incidence rate was six in every 1,000. During each of the two years, three of every 1,000 Navy employes were found to have evidence of other chest diseases such as lung tumors and heart disease.

Under the Navy's tuberculosis control program, earlier and more effective treatment is provided for those affected than would be possible after noticeable symptoms had developed. Chest x-rays are made annually on all civilian employes and at the time of their entering and leaving Naval employment.

The examinations, closely integrated with the examining of service personnel, are accomplished by means of 60 stationary photofluorogram units in the larger Navy and Marine Corps establishments, eight mobile x-ray units, to which two more are soon to be added, and portable units for use in overseas bases. The examinations are conducted with Navy x-ray equipment operated by Navy Medical Department personnel.

CONTROL OF TINEA CAPITIS

Anthony C. Cipollaro, M.D., and Adrian Brodey, M.D., New York City

(*From the New York Polyclinic Medical School and Hospital*)

OUR impression, gained from hospital and private practice, that tinea capitis due to Microsporon audouini was again on the increase and information that foci of epidemic proportion still existed within New York City prompted us to restudy the problem of control. Inasmuch as tinea capitis has never been made a reportable disease, as previously recommended, attempts to discover its city-wide extent were futile.[1] It was learned, however, that over 100 cases of the disease have been discovered recently in one school and that the segregation of these ringworm-infected students into special classes was effected. From the many other cases being treated by physicians and clinics throughout the city it is evident that other foci exist and constitute potentially dangerous sources for the widespread dissemination of the disease. Since the onset of this epidemic was noted in this city in 1943, dermatologists have been keenly interested in its arrest and have devoted their energies to acquiring knowledge of the best methods of treating and controlling the disease.[2]

In 1944, a special committee composed of Drs. Lewis, Silvers, Cipollaro, Muskatblit, and Mitchell detailed measures to control the epidemic in New York City.[1] Their recommendations included (1) tinea capitis be declared a reportable disease, (2) periodic case-finding surveys be conducted of school children and preschool siblings of infected cases, and (3) infections caused by M. audouini receive promptly the benefit of x-ray therapy. It was stated that active cooperation between the Department of Health, dermatologists, dermatologic clinics, and school authorities was essential to the control of the epidemic.

We are of the opinion that the recent rise in the number of cases can be attributed to the fact that periodic case-finding surveys are not being conducted and that the most effective method of therapy and the services of dermatologists are not being fully utilized. It should be evident that early detection of cases by survey, report, and the employment of the best method of treatment are greatest insurance against the spread of epidemic ringworm of the scalp. Prolonged methods of treatment with topical remedies have increased contacts between infected and non-infected children which segregation during school hours cannot adequately overcome. Intermingling is unavoidable after school hours. Moreover, failure to make the disease reportable has delayed the detection of local outbreaks and the early isolation and treatment of cases.

It has come to our attention that many cases of tinea capitis due to M. audouini are now being treated in New York City with topical medicaments and by others than dermatologists. A review of the ample literature which has appeared in the past five years on the local therapy of this disease demonstrates that the results are inconsistent, comparatively poor, and grossly unpredictable. Cure rates of M. audouini infections of scalp hair have varied from 10 per cent in the cases studied by Miller, Lowenfish, and Beattie to 100 per cent in the Hagerstown experiment conducted by Schwartz, Peck, Botvinik, Liebovitz, and Frasier.[3,4] Others report cure rates between these extremes. The following are representative of the diverse reports: Steves and Lynch, 25 per cent; Shapiro and Rothman, 27 per cent; Combes, Zuckerman, and Bobroff, 38 per cent; Carrick, 40 per cent; MacKee, Herrmann, and Karp, 54 per cent; Scully, Livingood, and Pillsbury, 55 per cent; Dobes, 64 per cent; Strickler, 64 per cent, and Felsher, 70 per cent.[5-13]

A great variety of the older and "newer" fungicides, including the fatty acids and surface active agents, were employed. No correlation can be made between the medicament used and the cure rate, as the latter differed widely with the investigator. The average time required to effect these cure rates was at least three months. Some cases required fourteen and even twenty-seven months for complete cure. Some were not cured even after three years of painstaking consistent treatment with many types of topical agents in different bases. Not even the onset of puberty nor the administration of hormones effected a cure. The fully-developed seventeen-year-old girl we have reference to had to be epilated with x-rays for a quick and complete cure.

At best, treatment was prolonged, even with the use of the preparation considered by Schwartz Scully *et al.*, Behling and Markel, and others to be one of the most effective of the "modern" therapeutic agents for this disease, namely, 5 per cent salicylanilide in "Carbowax 1500."[4,14,10,15,11,13] Felsher was unable to cure a single case in less than three months and took fourteen months to effect his cure rate of 70 per cent with an average treatment time of six and a quarter months in

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his series of 150 cases.[13] Of the 70 patients with the severe form of the disease (involving more than one-fourth of the scalp) only 25 recovered fully in an average period of eight and one-half months. Felsher used and considered salicylanilide superior to all other topical applications available.

These studies, for the most part, had been undertaken in an effort to provide a relatively simple method of therapy when roentgen epilation for tinea capitis was not available or was refused or when the child was too young or uncooperative to permit the procedure. The outstanding conclusion by the authors themselves from these studies is that the treatment of choice is still x-ray epilation when available, although a few believe that a trial of two to three months of local therapy should be undertaken before submitting the patient to roentgen epilation.[10,11]

Robinson has cast doubt on the effectiveness of local medicaments by demonstrating the resistance in vitro of M. audouini infection of the hair to the action of various fungicides.[16] He noted growth of M. audouini on Sabouraud's medium after treatment of infected hairs with the newer fungicides and the older remedies. Mitchell has made similar observations.[17] Robinson also concluded that none of the more recently discovered fungicides studied had any greater fungicidal power than preparations which have been in use for many years.

An explanation for the high failure rate of local therapy has also been offered by Rothman *et al.* who stated that "the reason that up to the present time we are unable to cure tinea capitis without preceding x-ray epilation is that none of our fungicidal preparations penetrate the hair."[18] We observed a group of cases treated with x-ray epilation in which the cure rate was the same, regardless of whether or not a fungicidal preparation was employed. Therefore, it seems that fungicidal preparations are not necessary if epilation following x-ray therapy is adequate.

Lydon, Stephanides, and Robb have recently reviewed a series of 103 cases of tinea capitis treated solely by x-ray epilation and conclude that local application of fungicides is unnecessary, at least in cases of M. audouini infection.[19]

The reported results of the local therapy of tinea capitis due to M. audouini do not merit its current use in New York City for the control of epidemic areas. The treatment of choice which has stood the test of time is complete epilation of the scalp with roentgen rays by the 5-point method of Kienboeck-Adamson. We have had adequate experience with other technics of epilation, including the 4-point method, but prefer that of Kienboeck-Adamson.[20] The technic of irradiating each of the focal points has been simplified by the use of an open cone bisected by piano wires (Fig. 1). This new device, which was made by the General Electric Company for the senior author upon his recommendations, serves to measure quickly and accurately the skin-focal distance, determine the center of the field being irradiated, and obtain the correct angulation of the tube in relation to the scalp. It is a time-saving device.

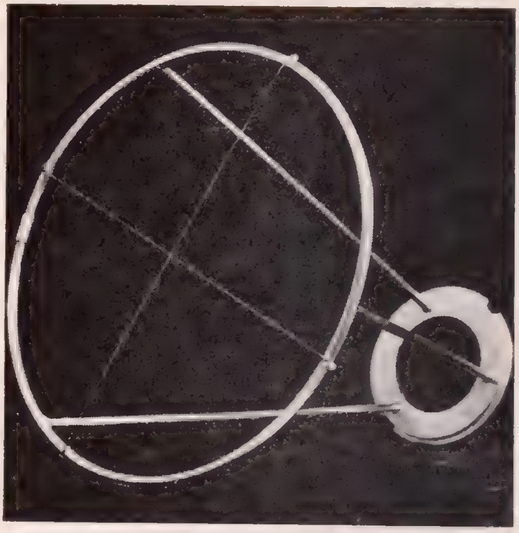

FIG. 1. Open x-ray cone. This type of open cone can be used on any x-ray apparatus. The area to be irradiated is visualized, the skin focal distance is carefully measured, and the irradiated area is accurately bisected by the crossed piano wires. The width of the flange which fits into the slot of the tube head limits the field of exposure.

Cure is effected by x-ray epilation with greater dispatch and consistency and less irksomeness than any other measure. Lewis cured 90 per cent of his cases.[21] We obtained a cure rate of 98 per cent in an average of six weeks. Felsher reported a similar cure rate of 98 per cent in 925 cases.[22] Reports by others are uniformly good.[3,5,8,23] Most children treated by this method are granted permission to return to school in four to eight weeks. The desirability of this rapid treatment method to the patient, parent, school authorities, and epidemiologist is unquestionable.

Objections to skillfully performed x-ray epilation of the scalp are poorly founded. Roentgen epilation necessitates the use of exact, painstaking technic, but it is essentially a simple procedure which can be learned and performed by any intelligent technician. It has been employed by us in over 1,000 cases. Neither partial nor complete permanent depilation were observed in any of these patients. Others have made equally favorable observations. It is our opinion that, when permanent epilations have resulted, the cause has been faulty apparatus, faulty manipulation, improperly calibrated apparatus, or failure to correlate physical and biologic measurements.

Notwithstanding, the fear of permanent epilation has been a deterrent to the use of x-rays in the treatment of this disease by some competent radiologists and dermatologists. Fortunately, in New York City, there are many qualified and willing specialists, and many clinics where roentgen epilation is ably performed, so that every child infected with M. audouini has the opportunity to be treated by this method with safety. We have also learned that there are physicians in New York City responsible for the control of epidemic tinea capitis who discourage the use of roentgen epilation as a dangerous method of therapy and prefer less certain and prolonged methods.

We are in accord with a statement in an editorial in the *Journal of the American Medical Association* of September 18, 1948, on "The Hazards of X-rays": "Today many radiologists and many dermatologists who do have adequate equipment nevertheless refuse to do therapeutic epilations. They feel that the chances that permanent alopecia will result are not negligible and that the blame for such an accident is beyond their willingness to face. This attitude seems less than worthy of our profession. If any patients with ringworm of the scalp need irradiation, then duty demands that one do it if technically equipped, or if not so equipped that one know whither to refer the patient to get it done."[24]

A word of caution must be interjected. The requisite physical equipment is hardly indication for doing roentgen epilation. The procedure is safe when performed by one eminently qualified by training and experience under competent supervision.

There are some who will consider that we have magnified the seriousness of tinea capitis in this city. Some nondermatologists believe that it has already received more than its share of attention. Some even deem it unworthy of treatment as it presumably clears with the onset of puberty. However, physicians who have personally treated tinea capitis are fully aware of the anxiety of the parents and the misery of the child bereft of his normal education, playmates, and his hair. They know that prepubertal spontaneous cure is exceptional and even dubious. It was estimated to be about 10 per cent by Lewis.[21] Bereston and Livingood and Pillsbury considered some of their "cures" with local therapy of spontaneous origin.[25,26] Shaffer stated that in 70 per cent of a group of cases reviewed by him the disease had gone on to what he assumed to be largely a spontaneous cure.[27] On the other hand, MacKee *et al.* observed no spontaneous cures in a large number of children who had the disease for as long as two years.[9] Spontaneous cure with the onset of puberty due to the presumed increased elaboration of pelargonic and tridecanoic acids in the sebum is admittedly a slow process according to Rothman *et al.*[18] Combes and Behrman reported that they had to epilate with x-rays patients who had progressed to the ages of sixteen and seventeen.[23]

We do not share the hopes of those who would depend on prepubertal spontaneous cures. We have had to treat all cases under our care and several who had advanced well into adolescence without spontaneous cure.

Conclusions

1. Epidemic ringworm of the scalp due to M. audouini is still a prevalent disease in New York City.

2. Failure to conduct periodic case surveys with the Wood's light and to make the disease reportable has delayed the early detection of local outbreaks.

3. Many cases are being treated by local medicaments and are not receiving the benefit of x-ray epilation.

4. Tardy detection and isolation of cases and the use of prolonged and uncertain methods of treatment enhance the spread of the epidemic.

5. It is recommended that periodic case surveys be conducted in all primary schools at the beginning of each term, that the disease be declared reportable, and that all cases receive complete roentgen epilation.

6. The measures advocated by Lewis *et al.* in 1944 are as timely today and are heartily endorsed.[1]

7. Finally, laxity in the control of this disease should not be countenanced. The most energetic measures available should be directed toward it with leadership delegated to dermatologists.

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N-ETHYL-O-CROTONO-TOLUIDE (EURAX) AS AN ANTIPRURITIC

SAMUEL M. PECK, M.D., and THEODORE J. MICHELFELDER, M.D.,* New York City

THE original interest in N-ethyl-o-crotonotoluide ointment was aroused when we used this new scabicidal agent and noted its marked antipruritic properties. This led us to its use for the symptomatic relief of itching.

The value of a reliable routine for the relief of pruritus is readily appreciated when we consider that this complaint is one of the chief reasons why many patients consult a doctor. The popularity of any newly suggested antipruritic therapy substantiates the above statement.

To the practicing dermatologist who is continuously dealing with the problem of pruritus, it is obvious that the best approach to its solution is a correct diagnosis with elimination of the cause if possible. However, too often, all of us are faced with the necessity for immediate relief of the patient's pruritus when the cause is obscure, or even when it is known.

The mechanism of pruritus is not yet clearly understood. It was demonstrated by Von Frey and Bishop that rapidly repeated stimulation of pain spots results in itching. Konigstein in his experiments showed that sympathetic fibers play a part in the conduction of the itch-scratch reflex. He concluded that an itch center is located in the lower portion of the medulla oblongata which is not identical with the pain center.

There is no doubt that some of the causes are central, while peripheral nerve endings play the major role in many conditions. The ideal control of itching is well represented by the removal of the cause such as is presented in scabies or urticaria. In the former, an effective scabicide will quickly ameliorate symptoms, even though they be of long standing. The same relief results in the allergic diseases once the allergen is found and removed from the patient's environment. However, there is a host of dermatologic manifestations of known and unknown etiology in which pruritus is an important part of the dermatologic picture. One can well see that it is the most important symptom as far as the patient is concerned in many cases. Even in usually nonpruritic conditions, such as psoriasis or pityriasis rosea, intense pruritus is not infrequently encountered.

In reviewing the dermatologic armamentarium in these conditions, many topical, oral, and parenteral measures have been suggested for relief of itching. From the practical viewpoint, topical application of an antipruritic remedy is still the most desirable method.

Because there is this need for an efficacious antipruritic, we find that the antihistaminics are being used more and more for this purpose, both internally and externally, and rightly so since in many instances they are effective. However, in the application of any remedy which we are using for symptomatic relief, there must be taken into consideration the question of side-effects which

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may occur during its use. These side-effects as far as topical treatment is concerned usually consist of sensitization phenomena. Much more serious complications sometimes develop when they are used internally. The ideal topical remedy should relieve pruritus in a fairly good percentage of cases, should not be irritating, and should have a low index of sensitization. Toxicity from absorption following use over large areas of the body should be nonexistent.

We are interested in the use of N-ethyl-o-crotono-toluide ointment as an antipruritic, because we feel that there is still a great need for an ideal effective topical remedy for this purpose. The chief drawback to many of the antipruritics suggested and which we are using constantly is that they are often effective for only a short period; also, when they have been long enough in use, the question of sensitization is a practical one, and many have a high index of sensitization.

Clinical Material

Approximately 200 patients with normal skin had been previously tested for primary irritation and sensitization by a usage test. In this procedure, they were instructed to rub in the ointment in a 10 per cent concentration in a washable base (Eurax*) over the complete surface of an arm or leg once daily for a period of two weeks or more. There was no evidence of sensitization. Two patients developed transitory redness which was proved to be due to the base.

This report includes 80 patients observed in private practice. The use of the ointment is not indicated when acute dermatitis with vesiculation is present. Under such circumstances, the patients often complained of unbearable burning following its use. For this reason, cases of contact dermatitis were not treated until other measures had relieved the acute manifestations. No case that had been treated with the ointment for less than two weeks was included. Many of our patients had been under our care for a number of years so that we were well acquainted with their response to antipruritic measures including antihistaminic ointments.

Results

Fifteen dermatologic entities were treated. In Table 1, we have summarized our results. It is our impression, as can be seen from the table, that pruritus was effectively controlled in many instances in this well-represented group of dermatologic conditions. The antipruritic effect lasted approximately six hours after application in some instances and as long as twelve hours in others. The important feature is that in some instances the relief was continuous as long as the ointment was applied; unlike many other antipruritic measures which we have tried, it seldom lost its effect after an initial amelioration of the itching.

In most instances, unless the precipitating factor was affected along with the relief of the pruritus, the course of the dermatitis itself was not influenced to any degree. This is not unexpected, unless the act of scratching tended either to cause secondary eczematization or lichenification or by means of a mechanism such as the Koebner phenomenon actually to precipitate an eruption.

Neurodermatitis disseminata was the condition represented by the largest group treated. Some relief of itching was obtained in all instances. In certain cases, the relief was greater than that experienced with internal and topical antihistaminic therapy. Many of the patients have been under our observation for a long period. In only one case did we believe that the disappearance of itching contributed to complete freedom from the skin eruption. This patient is still under observation, and occasional recurrences are easily controlled by reapplication of the ointment.

The 17 cases of psoriasis in this study were included because of the pruritus. The response varied. Relief of the itching was pronounced in some and only moderate in others. It was in this group that pruritus with scratching seemed to precipitate a Koebner phenomenon, and when itching was relieved, there was some beneficial effect on the lesions themselves, never, however, to the point where there was complete disappearance of the lesions. Here, too, there were instances where initially the antipruritic effect was more marked at some stages than at others.

There were ten cases of pruritus ani et vulvae and scrotal pruritus. These cases had had this condition for a relatively long period. The pruritus was beneficially influenced to some degree in all of the cases. In some, the relief was not complete, and in several cases it was felt that antihistaminic ointments were more effective. In a number of our patients, antihistaminic ointments had been discontinued because they had ceased to relieve itching or because sensitization to the antihistaminic had developed. When Eurax relieved the pruritus, its effects compared favorably with local anesthetics used previously. In a number of cases, the relief was more complete than that of any therapy previously tried. It was in this group especially that there were a number of cases where, after initial relief of the itching, Eurax also became ineffective. Such an experience is common in this group of dermatoses with any purely symptomatic therapy.

Side-Effects

In subacute dermatitis and in some of the

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* Eurax is a product of Geigy Company, Inc.

TABLE 1.—SUMMARY OF RESULTS OF TREATMENT WITH EURAX

Diagnosis	Number of Cases Treated	Duration of Treatment	Index of Relief of Itching*	Average Age	Effect on Lesions and Course of Disease
Senile pruritus	5	2 months	3 to 4	69	Little effect
Varicose eczema	4	3 months	3	58	No effect
Mycosis fungoides	6	2 months	2½	66	No effect
Neurodermatitis disseminata	14	2 months	2¼	28	No effect on most; some improvement on few; one case cleared
Drug eruptions	3	3 weeks	2	58	No effect
Pruritus ani, vulvae, and scroti	10	2 months	3	46	Little effect
Psoriasis	17	2 months	2⅓	46	No effect on most
Lichen planus	3	2 weeks	2	46	No effect
Pityriasis rosea	2	2 weeks	4	32	Cleared spontaneously
Vaginal moniliasis	2	2 weeks	0	43	No effect
Dermatophytosis with dermatophytids	2	2 weeks	3	42	Lesions cleared, one case
Seborrheic and chronic contact dermatitis	7	3 weeks	2½	51	No effect
Seborrheic dermatitis, chest	2	3 weeks	4	47	No effect
Duhring's disease	2	1 month	3	55	No effect
Lichenoid and diskoid exudative dermatitis	1	3 months	3	55	No effect

* Key to index of relief of itching:
0 = no effect
1 = slight
2 = fair
3 = good
4 = complete relief

chronic conditions, there was an initial burning sensation when the ointment was applied which disappeared after a few minutes. This was not objectionable to any of the patients because of the relief of the pruritus which resulted. We learned quickly that the ointment caused some irritation in relatively acute dermatitis, and for this reason such cases, especially when vesiculation was present, were not included in this series. In five such cases, the burning persisted for some time after the ointment was applied, and redness developed. This occurred within five days after beginning treatment and was interpreted as primary irritation due to the base. When the ointment was rubbed on normal skin of such patients and allowed to remain on for forty-eight to seventy-two hours, no dermatitis developed. We have observed one patient who had had repeated attacks of allergic contact dermatitis due to various allergens who initially obtained marked relief of her pruritus from Eurax. When she reapplied the ointment three weeks after it was first tried, a dermatitis developed which was shown to be due to the N-ethyl-o-crotonotoluide.

Comment

Couperus treated a series of 124 cases with Eurax for the relief of pruritus in a variety of dermatoses, the larger number of which comprised neurodermatitis, pruritus ani et vulvae, and dermatitis venenata.[1] Complete relief of pruritus lasting usually six to eight hours was obtained by 66.2 per cent of the cases, considerable relief by 27.4 per cent of the cases, while 6.4 per cent found little or no relief. The effect of the medication on the course of the disease was not evaluated in this report. Three cases developed mild erythema following use of Eurax cream which were proved to be due to the base and not the active principle. In addition, Couperus treated 70 cases of scabies with Eurax cream with 100 per cent cures, only a small percentage of which required more than two applications of the cream. Both Goldman and Peck have had results comparable to those of Couperus in treating a number of cases of scabies.[2] Tronstein treated 109 scabietic patients with excellent results.[3] He also noted almost immediate cessation of itching following application of the ointment.

One of the points which we have indicated concerning the action of N-ethyl-o-crotonotoluide ointment is that, while it allayed the pruritus satisfactorily in most instances, it did not seem to influence the course of the skin disease itself to any extent; thus, one has to consider the value of such purely symptomatic relief as against a topical remedy which not only relieves itching but may have a definite effect on the dermatitis itself.

The most valuable single therapeutic agent in chronic dermatoses in which pruritus is an important factor has been some form of tar. However, there are many instances in which its use has definite limitations. On the plus side as far as tar is concerned is the fact that in chronic eczematoid processes the course of the disease itself is often favorably influenced by its use. On the negative side, it is inadvisable to use tar preparations, especially ointments, when considerable areas of the body are to be treated. Also, in the hairy areas, such preparations may cause folliculitis. It is not unusual, furthermore, to have the factor of light sensitization become evident in the more exposed areas following the use of an active tar preparation. In a disease such as psoriasis, this is an advantage. The antipruritic effects of the tars are not as good as that following the use of Eurax. The N-ethyl-o-crotono-toluide ointment can be used over large areas of the body without fear of toxicity, and folliculitis following its use in hairy areas has not been observed. In addition, the fact that the Eurax is odorless and nonstaining renders it an elegant addition to our dermatologic therapy.

Because of the low sensitizing index of N-ethyl-o-crotono-toluide and because it is a newly introduced drug with no chemical relationship to other popular antipruritics, it can be safely substituted when sensitization to a preparation like a local anesthetic of the benzocaine group is encountered. It is, perhaps, even advisable that the Eurax be used where there is a potential tendency to sensitization from the patient's history. Certainly, its local antipruritic properties compare favorably with drugs of the benzocaine group, and it is far less sensitizing.

We have used Eurax in approximately 400 cases. In at least 300 of these, it was applied for two weeks or more. There was only one instance of sensitization to the N-ethyl-o-crotono-toluide. As we have pointed out previously, it is not advisable to use the ointment for the relief of pruritus in acute vesicular dermatitis. In such cases, a primary irritation may result which has been shown to be due to the base. It is obvious that the same base is not suitable for all stages and types of a dermatologic condition.

In previous publications, it has been shown that topical applications of the antihistaminic drugs penetrated very little through the unbroken epidermis.[4] Penetration of the antihistaminics readily takes place through damaged skin. Once such penetration takes place, there is not only an antipruritic effect but also a direct antagonism to histamine-like factors and other processes which are responsible for the allergic manifestations. From this viewpoint, one would certainly prefer an antihistaminic ointment to one such as we are reporting. There are, however, other considerations. Recent reports have emphasized that irritation and/or sensitization following the use of antihistaminic ointments will occur in approximately 4.5 per cent of the patients.[4] For this reason alone, it may be advisable to substitute an ointment such as N-ethyl-o-crotono-toluide in those cases where symptomatic relief of the itching is a primary objective. Once sensitivity to an antihistaminic develops, it is not infrequent to find cross-sensitization to drugs with related immunochemical structure. Among these are the antihistaminics themselves, as well as such apparently unrelated substances as novocaine, paraphenylenediamine, and even some of the sulfa drugs.[6]

Summary

Ten per cent N-ethyl-o-crotono-toluide in a water-soluble ointment base was found to be of value in the control of the pruritus in various dermatologic conditions. Sensitization to the N-ethyl-o-crotono-toluide was encountered once among 400 individuals on whom it was used. The antipruritic effect after application of the ointment lasted approximately six hours or more in some instances and as long as twelve hours in others. Because of its low sensitizing index and the absence of toxicity, the ointment seems to be particularly suitable for those cases where long-continued use is expected.

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Discussion

Albert A. Soifer, M.D., *Flushing.*—This is a clinical impression of the effect of Eurax cream used in a similar variety of dermatoses; 122 patients were treated, of which 97 returned so that the effect could be evaluated. These cases were obtained from the Inpatient and Outpatient Dermatologic Service of Queens General Hospital, the Outpatient Dermatologic Service of Flushing Hospital, and from private practice. A few cases were obtained from staff members of Queens General Hospital.

The entities treated were, for the most part, the same as those in Dr. Peck's paper. Several cases were observed for one week, but most of them were observed from three to ten weeks:

1. Neurodermatitis circumscripta—Of 20 cases, the response was good in 13, fair in three, no effect in two, and two cases could not tolerate the preparation. When the drug was effective, the relief from pruritus lasted from four to eight hours day or night.

2. Pruritus ani, scroti, and vulvae—Of 13 cases treated the drug was effective in 12 cases and had no effect in one case.

3. Chronic recurrent eczematous dermatitis—Of 15 cases treated the results were good in 11, there was no effect in four, and one patient found the preparation uncomfortable and could not use it.

4. Varicose-venous statis eczema—Of six cases treated results in three were good and only fair in the others.

5. Atopic dermatitis—Of four cases treated, two in adults and two in children, results were good in two cases and had no effect in the remainder.

6. Impetigo—All eight cases responded promptly but were not cured before ten to fourteen days.

7. Senile pruritus—Of five cases treated there

was good response in four and no effect in one. The pruritus in the latter case was due to disease of the liver, the etiology of which remains undetermined.

It did not take long to learn that patients with acute contact dermatitis or any other dermatosis in the acute stage could not tolerate the cream. These cases were treated with wet dressings until the acute phase subsided, after which the cream was acceptable. Cases of chronic, recurrent, lichenified eczematous dermatitis were particularly benefited, and the preparation was most welcome, while a search was made for the offending allergen. Four cases of local irritation with or without oozing were noted in this group of 97 cases, and all responded promptly to either wet dressings or soothing ointment or paste. One case was patch tested with the active principle and the base and was negative to both; the other three failed to return. It is our impression that the local reaction was due to primary irritation because the cream could be used in other areas without discomfort.

One case each of mycosis fungoides, pemphigus vulgaris with pruritus, and erythroderma applied the cream over the entire body surface continuously for one month with sufficient relief to allow rest and sleep. Previous topical therapy had been ineffective. Relief was continuous as long as the preparation was applied. There were no toxic effects noted in any of the cases. Almost all of the patients stated they noted a sensation of warmth when Eurax was first applied. This lasted for a few minutes and was immediately replaced by complete relief from the itching. This immediate reaction of warmth is being used for its possible psychic effect on one case of vitiligo of unknown cause on the face of a Negro boy. Some of the pigment shows evidence of returning. Of course, this could be a spontaneous result, but the patient likes the cream and thinks it is helping him.

Several of the cases of genital pruritus were treated with other routine measures. Frequently, these were messy and could not be used during the day. Here the cream was especially useful, since the base is quickly absorbed and does not stain the clothing. In other patients the cream had to be applied during the night as well, because all other measures failed to relieve the itching and interfered with sleep. One case of persistent pruritus ani in a physician, which occurred during and following oral aureomycin therapy for another condition and which could not be controlled with many remedies, promptly responded when Eurax cream was used. The mechanism of this antipruritic effect is unknown. Eurax is known to be miticidal, and its bacteriostatic effect is suggested by the rapidity with which impetiginized scabies and other secondarily infected dermatoses respond. Impetigo was noted to respond promptly but somewhat slower than to other available preparations.

The suggestion is offered that perhaps the effectiveness in cases of anal and vulval itching might be due to the bacteriostatic and fungistatic properties of the drug. Otherwise, no claim is made that the substance has any specific effect on the dermatosis other than relief of pruritus, stopping scratching and rubbing, and allowing the skin to recover.

An ideal characteristic for a topical remedy for pruritus, in addition to effectiveness, lack of irritation, and low index of sensitization, should also be that it is esthetically and cosmetically acceptable to the patient, low in cost, easy to apply and remove, and should not stain the clothing or linen. We appreciate that our observation has been limited both in time and number of cases. We have seen other antipruritics first hailed with enthusiasm and subsequently discarded for objectionable features. It is hoped that the good promise revealed here will be continued and corroborated by other observers.

SURVEY OF THE HOME RELIEF POPULATION

Of 130,000 home relief cases opened in upstate New York during the last four years, more than 107,000 cases, or 83 per cent, were closed in the same period, the New York State Department of Social Welfare has reported. Releasing the major findings of a survey of the home relief population of the State outside of New York City, the Department explained that the findings are based chiefly on data submitted by 66 county and city public welfare departments from home relief cases on the rolls as of November, 1949.

"This 83 per cent turnover of the upstate home relief population demonstrates that, contrary to a widely-held belief, the majority of families do not remain on the rolls year after year," State Social Welfare Commissioner Robert T. Lansdale stated. "In fact, the opposite is true: more than two thirds of the cases become self-supporting within one hundred eighty days; among the employable cases, 54 of every 100 leave the rolls in ninty days or less."

Pointing out that the four-year period ending November, 1949, was a period in which unemployment in the nation increased from less than one million to nearly five million, the national civilian labor force expanded by 9,737,000, the population rose by 10,000,000, and living costs increased by 30 per cent, he said: "These postwar conditions are primarily responsible for more than 90 per cent of our current home relief caseload, 75 per cent of all the cases having come on the rolls within the last twenty-four months. Less than 10 per cent of the cases had received relief for the entire four years; these were cases of chronic illness and permanent disability."

THE TREATMENT OF LOCALIZED (PRETIBIAL) MYXEDEMA WITH HYALURONIDASE

Donald Rosman, M.D., New York City

(From the Department of Dermatology, Columbia-Presbyterian Medical Center)

LOCALIZED myxedema is a relatively uncommon complication of toxic diffuse goiter which most often becomes manifest after thyroidectomy. It is probably unrelated etiologically to constitutional myxedema and, unlike the latter, is not affected by the administration of thyroid preparations or variations in the basal metabolic rate.[1] Localized myxedema usually occurs in the form of bilateral swellings or plaques in the pretibial area. Prior to the use of hyaluronidase, there was no satisfactory treatment for this disorder. The semifluid albuminous substance in localized myxedema bears some similarity to hyaluronic acid, which in turn is depolymerized by hyaluronidase. It was on this basis that the treatment of these lesions by hyaluronidase was undertaken.

Hyaluronic acid is a viscous mucopolysaccharide which seems to bind water in the interstitial tissues and ordinarily to act as a physical barrier to invasion by foreign substances.[2] It exhibits no antigenicity when injected into animals.

The enzyme hyaluronidase was first named by Meyer and Palmer in 1934.[3] It is found in testicular extracts, certain pathogenic bacteria, insects, and elsewhere.[2] The action of hyaluronidase is to attack the cementing mucoid substance (hyaluronic acid) of the connective tissue; the enzyme "dissolves" this and opens the way for other materials to penetrate the body. In 1939, Chain and Duthie reported that the action of this enzyme parallels closely the action of the "spreading factor" of Duran-Reynals.[4] This "spreading factor" has been known since 1928 as a substance which, when injected with a suspension of India ink, promotes invasion into the tissues through the hydrolysis of hyaluronic acid. Mayer *et al.* claimed that normal skin contains hyaluronidase and that it requires autolysis for its liberation.[5] However, Glick and Grais were not able to find hyaluronidase in normal skin.[6] Meyer has shown that in inflamed guinea pig skin the amount of hyaluronidase is increased up to forty times.

McClean reported that hyaluronidase prepared from bull, rabbit, and mouse testes was inhibited by various animal and human sera.[7]

Hechter has shown that local interstitial pressure is necessary for the action of hyaluronidase.[8] Grais recently described the production of bullae in a patient in the terminal stage of pemphigus by the intradermal injection of hyaluronidase.[9] He was unable, however, to duplicate this result in four other cases of pemphigus which were in partial remission at the time of the test.

Local injections of a preparation of hyaluronidase were employed by Bloom *et al.* in the treatment of one patient with mucinous infiltrations in the skin and one patient with pretibial myxedema.[10] Hyaluronidase was also employed by Grais in the treatment of one patient with localized pretibial myxedema.[11] These investigators noted great improvement, as evidenced by definite flattening of the lesions.

In the cases to be described, higher concentrations of hyaluronidase were employed than have previously been reported. By persisting with the treatment and using a pressure dressing after each injection, almost complete flattening of the lesions could be produced. Discontinuance of therapy led to a recurrence of the swellings, but resumption of treatment again caused almost complete regression. In order to determine whether the results were due to hyaluronidase or to the effect of fluid injected under pressure, normal saline solution was injected into the lesion on one leg and hyaluronidase into the other. While pronounced improvement was observed in the lesion treated with hyaluronidase, no change was obtained in the control site. An attempt was made to correlate the histologic changes in myxedema before and after treatment with hyaluronidase. A severe emotional shock in one of the patients apparently caused recurrence of the lesions of localized myxedema following therapy with hyaluronidase.

Case Reports

Case 1.—E. Q., a housewife aged forty-six, was first observed at the Vanderbilt Clinic in May, 1949, complaining of pruritic swellings over the lower part of both legs, of one year duration. These lesions had appeared about six months after a subtotal thyroidectomy for toxic goiter. She also complained of dry skin, brittle hair, weakness, and poor appetite. She had been taking desiccated thyroid gland, 1 grain daily for nine months; vitamin E, 150 mg. daily for two months, and dihydrotachysterol, 15 drops daily for six months. These

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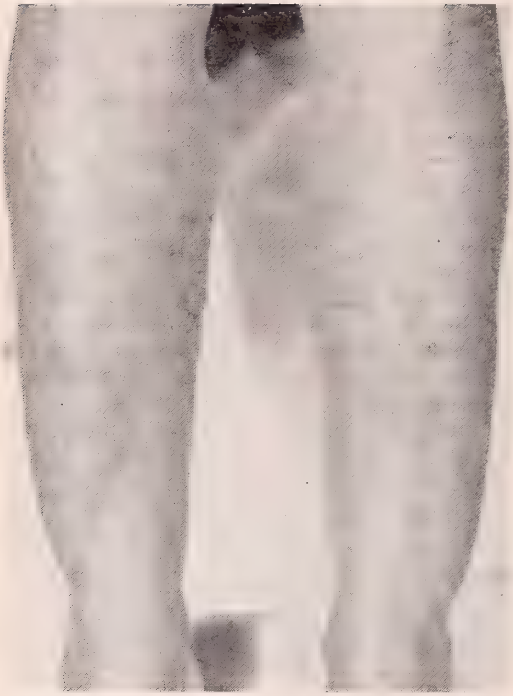

FIG. 1. Case 1—before treatment.

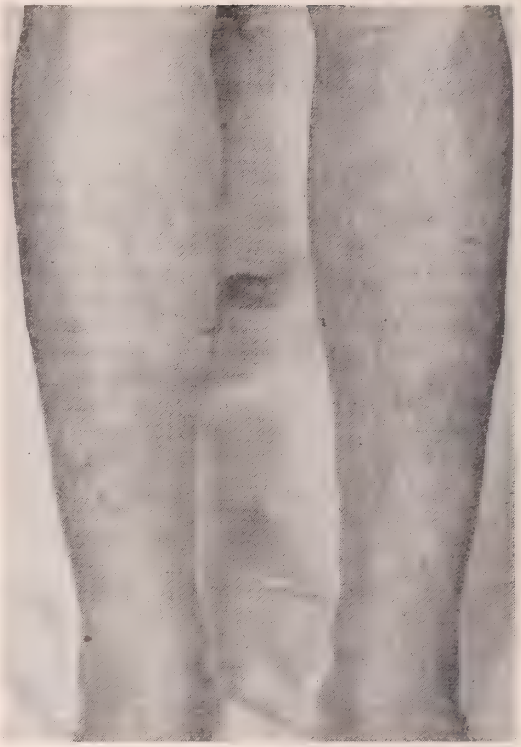

FIG. 2. Case 1— after treatment.

had been prescribed by her local physician but had caused no improvement.

The patient had undergone appendectomy in 1926, unilateral ovariectomy for ovarian cyst in 1942, and subtotal thyroidectomy in September, 1947.

There was no family history of thyroid disease.

Examination showed a small, rather thin, pale white female with periorbital puffiness and a slight degree of exophthalmos. The skin was dry and the scalp hair lusterless. Over the lower half of the anterior surface of the legs were well-defined, firm, nonpitting swellings the color of normal skin, and attached to the skin (Fig. 1).

The basal metabolic rate in May, 1947, before thyroidectomy was plus 63 per cent. In May, 1949, it was ±0. The total cholesterol in June, 1949, was 220 mg. per cent and free cholesterol 55 mg. per cent. The Mazzini reaction of the blood was negative and the urinalysis normal. Roentgenograms of the legs were normal with the exception of the presence of a soft tissue swelling over each tibia, involving the fatty layer primarily.

A biopsy taken from the center of the lesion on the left leg and studied by Dr. G. F. Machacek was reported as follows:

> Sections of cutaneous tissue revealed an atrophic epidermis. There was a moderate, compact, absolute and relative hyperkeratosis which was associated with a thick, dense, keratin layer. The follicular orifices were dilated and filled with compact keratotic plugs. The keratohyalin layer was attenuated. The malpighian and basal layers showed a varying amount of intra- and extracellular edema, and in some places vacuolar degeneration was evident. Throughout the entire cutis there was a marked, diffuse edema, more pronounced in the deeper layers but also prominent in the subepidermal layer of the cutis. This was characterized by a striking separation between the individual collagen fibers, which were thin and attenuated and stained palely basophilic in many areas. Between these widely separated fibers, small amounts of basophilic precipitate and streaks and strands having the appearance of mucin could be seen at some sites. In some areas the collagen fibers had degenerated. The whole of the corium was relatively acellular, although occasional fibroblasts and lymphocytes could be seen scattered throughout the tissue. Blood vessels were scarce. Sweat glands and hair follicles were atrophic and had undergone destruction to a considerable extent. A polychrome methylene blue stain showed these areas of edema to be metachromatic. The pathologic picture was typical of myxedema.

Beginning May 16, 1949, all medications were discontinued except for 1 grain of desiccated thyroid gland daily, and varying amounts and preparations of hyaluronidase, dissolved in normal saline, were ininjected subcutaneously into numerous sites in the lesion on the right leg. Injections were begun with 8 turbidity reducing units (T.R.U.) and gradually increased to 900 T.R.U. dissolved in 3 cc. normal saline,

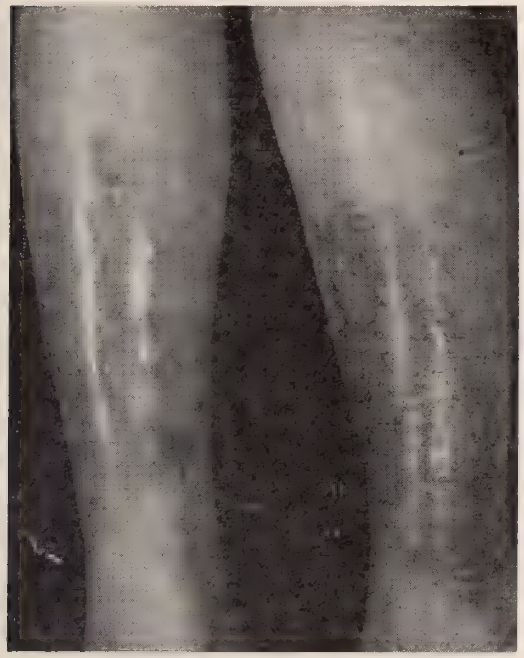

Fig. 3. Case 2—before treatment.

given twice weekly. A total of 5,600 units were given in eight weeks. Beginning June 16 the only preparation used was Hydase.* At the end of two months the lesion had undergone great improvement and was practically level with the surrounding skin. When a pressure dressing was applied after the treatment, it was noted that improvement was more rapid. Coincident with the injection of Hydase into the lesion on the right leg, normal saline was injected into the lesion on the left leg as a control. At the end of the two-month period, there was no change in the size of the lesion on the left leg.

Beginning in July, 1949, the lesion on the left leg was treated with injections of hyaluronidase dissolved in normal saline. An average of 900 T.R.U. dissolved in 3 cc. of saline were injected twice weekly and a pressure dressing applied following each treatment. At the end of two months treatment this lesion was also practically level with the adjacent skin.

During treatment of the lesion on the left leg, after considerable flattening had been produced, the patient experienced a severe emotional shock caused by an accident to her husband. She claimed she could feel the lesions on both legs puff up almost immediately. When she was seen four days later, the swellings had increased almost to their original size. These responded well to further injections of Hydase (Fig. 2).

About one and a half months after treatment was discontinued, the swellings recurred. They were not quite as deep as they had been originally, but in every other respect they were identical. The patient was again treated with Hydase and received during this course 1,800 T.R.U. dissolved in 6 cc. of normal saline, injected subcutaneously twice weekly into the swellings on both legs. A pressure dressing was applied after each treatment. After one month the lesions had again practically disappeared.

A biopsy taken from the center of the lesion on the right leg during hyaluronidase treatment was reported by Dr. G. F. Machacek as follows:

> Sections of skin revealed the same basic histologic picture as in the previous section except that throughout the region of edema and mucin deposition there was now a widely and uniformly distributed deposit of fine, basophilic staining granules. Considerable metachromasia of collagen was still present. There was an impression that in the hyaluronidase-treated biopsy specimen the amount of mucoid material had decreased, giving rise to a residual granular detritus.

Case 2.—C. B., a fifty-two-year-old housewife, was first seen in January, 1950, complaining of nodular lesions on both legs of one and one-half years duration. These lesions had appeared four months after a subtotal thyroidectomy for toxic nodular goiter. Her family physician had administered seven x-ray exposures of 85 r each to both legs without benefit. He then applied plaster casts for three months, but this was likewise of no avail.

Examination showed a well-developed woman with pronounced tremor of the extremities and definite exophthalmos. Over the lower half of both tibias were several firm, nontender, movable, darkly erythematous nodules, varying in size from 1 to 3 cm. and attached to the overlying skin (Fig. 3).

The basal metabolic rate shortly prior to operation was plus 38 per cent. On January 9, 1950, it was plus 37 per cent.

Beginning January 9, 750 T.R.U. of Hydase, dissolved in 3 cc. of normal saline, were injected subcutaneously into the nodules. By January 26, the lesions had decreased greatly in size.

Comment

After the first few injections both patients developed a localized erythema in the myxedematous skin immediately following each injection. This was most likely a secondary erythema due to the pressure of the injected fluid. Occasionally, they complained of severe pain during the injection, but this quickly disappeared. There were no other reactions.

From the results produced, it appears that the hyaluronidase by some action was able to "dissolve" the substance in the myxedematous tissue and thus to effect its disappearance. It is interesting to postulate that the sudden recurrence of the swellings in Case 1, following an emotional shock, might have been due to increased secretion of thyroid-stimulating hormone by the anterior pituitary gland caused by nervous stimulation.

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* Hydase (Wyeth) is a preparation of hyaluronidase from bull testes. One turbidity reducing unit is defined as the amount of hyaluronidase that reduces the turbidity caused by 0.2 mg. of hyaluronic acid in horse serum to that caused by 0.1 mg.

Much higher concentrations of hyaluronidase were employed in the treatment of these two cases than had been previously used by either Bloom *et al.* or by Grais.[10,11]

Hyaluronidase did not evidence any antigenic properties in these two patients, as skin tests were negative, and neither patient developed any obvious allergic manifestations following its use. Hechter has made the similar observation.[12]

The best results were obtained when the hyaluronidase solution was injected as superficially as possible into the subcutaneous tissue and a pressure dressing applied following the treatment. This is in accordance with Hechter's observation that pressure is necessary for hyaluronidase action.[8] The recurrence of the lesions of localized myxedema on discontinuance of the hyaluronidase injections was not surprising when it is considered that this treatment is directed only toward a manifestation of the disease and not toward the disease itself or its cause.

Summary

A review of the literature suggests that hyaluronidase removes the tissue barrier to fluid diffusion and so is temporarily effective in the treatment of localized myxedema.

Multiple subcutaneous injections of Hydase caused a temporary disappearance of pretibial myxedema in two patients.

Injections of hyaluronidase at semiweekly intervals, followed by application of pressure bandages, are suggested as a palliative treatment of localized myxedema.

617 West 168th Street

I wish to express my indebtedness to Dr. George C. Andrews for suggesting the use of hyaluronidase.

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LARGE FAMILIES ARE DECLINING

Although large families are becoming very rare in the United States, there were 164,000 children born in 1947 who were at least the seventh in their family, Metropolitan Life Insurance Company statisticians report. This is about 5 per cent of all births during the year.

The rate at which births of seventh or higher order occur has dropped by nearly 60 per cent in the past thirty years, with the decline continuing through the war and postwar years when the birth rate rocketed.

Large families are most frequent in the South, according to computations by the statisticians based on data from the National Office of Vital Statistics. Ranking first as to the proportion of large families was the East South Central section—Kentucky, Tennessee, Alabama, and Mississippi—where births of seventh or higher order constituted 7.4 per cent of all births among white women in the area, and births of tenth and higher order comprised 2.1 per cent of the total.

The percentage of large families was next highest in the South Atlantic and Mountain sections, and lowest in the Middle Atlantic and Pacific states. The geographic pattern shows that large families are more common in the agricultural than in the industrial areas.

FAILURE OF UNDECYLENIC ACID TO CURE PSORIASIS

Sam C. Atkinson, Jr., M.D.,* and George M. Lewis, M.D., New York City

(*From the Department of Medicine* (*Dermatology*), *New York Hospital and Cornell University Medical College*)

SEVERAL articles by Perlman have advocated the oral administration of undecylenic acid in the treatment of psoriasis and have attempted to explain the rationale of its reported favorable effect. This chemical is an unsaturated fatty acid which for several years has been employed by local application in the treatment of certain fungus infections.

Perlman and Perlman and Milberg treated a total of 40 patients with psoriasis and reported that following the ingestion of undecylenic acid 12 were "improved," 15 were "somewhat improved," 10 were "unchanged," and 3 were "worse."[1-4] In two patients relapse of the disease occurred when treatment was stopped, but they improved with resumption of the drug, suggesting a direct relationship of the treatment to the course of the disease, independent of the unpredictably erratic course that psoriasis often exhibits under ordinary circumstances.

The effects of undecylenic acid by mouth in the treatment of psoriasis were studied by Warshaw.[5] Five cases showed good improvement (marked decrease of abnormal skin findings), four were made worse, and nine were improved moderately (less symptoms and slight decrease in intensity of the eruption). Eight cases were unchanged, and four could not be rated for therapeutic effect. Apparently none of the patients were completely free of psoriasis at the end of therapy.

Ereaux and Craig treated 17 patients with psoriasis using undecylenic acid orally.[6] Three patients responded satisfactorily to therapy, and all but a few minor patches disappeared within two months. In the other 14 patients, the results were equivocal.

Behrman administered undecylenic acid by mouth to a few patients with psoriasis and failed to see improvement in any.[7] Goldberg gave undecylenic acid to 17 patients with psoriasis and found no definite improvement in any of the patients as compared to control groups.[8]

Review of Reported Toxicity

In his original clinical report, Perlman reported on the side-effects and toxicity of the drug to the recipients, many of whom experienced nausea, vomiting, diarrhea, and belching, as well as bad taste.

Of the 17 patients treated by Ereaux and Craig, all but two tolerated the drug except for belching. One of the two had diarrhea and gastric upset and the other anorexia and diarrhea. One of Behrman's patients with a history of healed gastric ulcer developed diarrhea, severe abdominal pain, and, subsequently, a severe intestinal hemorrhage following the oral use of undecylenic acid.[7] Another patient developed exfoliative dermatitis (generalized) following undecylenic acid therapy. Toxicities noted by Goldberg were similar to those previously described, i.e., nausea, belching, flatulence, and diarrhea.[8]

In a personal communication from Rattner of Chicago, we were informed that a large number of disturbing side-reactions have been observed by several investigators.[9] In addition to the gastrointestinal symptoms, severe toxic reactions affecting other organs have been observed. The drug has recently been suspected as the cause of toxic labyrinthitis.[10] Nelson reported a case of dermatitis medicamentosa caused by the oral use of undecylenic acid.[11] This eruption consisted of erythema of the face and exudative dermatitis over the elbows and on the bearded region and hands which disappeared when the drug was discontinued but recurred to a lesser extent following the administration of only one (0.44 Gm.) capsule. Patch tests were negative.

Toxicity studies performed on animals at the New York Skin and Cancer Unit, as reported by Perlman, revealed that no significant pathologic alterations were found in the internal organs or in the skin following several months of orally administered undecylenic acid. However, Newell *et al.* showed that undecylenic acid was definitely toxic to mice.[12] The LD_{50} was calculated to be 8.15 Gm. per Kg. when administered orally and 0.960 Gm. per Kg. when administered intraperitoneally. Oral doses of undecylenic acid in amounts varying from 0.136 to 0.290 Gm. resulted in shock and death of the mice in from one to two hours. Autopsy findings revealed engorgement of the stomach and proximal portion of the small intestine with occasional petechial hemorrhages and apparent liquefaction necrosis of the mucosa. In rats fed smaller doses of the drug there was noted an inhibition in growth.

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* By invitation.

Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Dermatology and Syphilology, May 12, 1950.

TABLE 1.—Results of Treatment with Sevinon

Patient	Age	Duration of Psoriasis (Years)	Dosage Schedule and Total	Reactions	Results
F. H.	54	25	5 capsules t.i.d. 1 month 10 capsules t.i.d. 2 weeks 15 capsules t.i.d. 2 weeks Total: 1,815 capsules	Upset stomach, gastric burning	Unimproved
M. M.	19	10	5 capsules t.i.d. increased to 15 capsules t.i.d. 4 months Total: 2,475 capsules	None	Legs improved, only after tar and sunshine were added
E. A.	46	25	5 to 7 capsules t.i.d. 52 days Total: 888 capsules	Bad taste	Unimproved
G. W. D.	39	9	5 to 7 capsules t.i.d. 6 months Total: 2,500 capsules	Bad taste	Unimproved
A. O'S.	49	6	5 capsules t.i.d. 3 weeks Total: 100 capsules	Nausea, upset stomach Refused additional medication	Unchanged
J. V.	30	13	5 to 15 capsules t.i.d. 8 weeks Total: 1,350 capsules	None	Unchanged
W. C.	79	10	5 capsules t.i.d. 8 weeks Total: 840 capsules	Nausea, dyspepsia, and gastric pain	Lesions appeared more inflamed and more pruritic
F. L.	45	10	5 capsules t.i.d. 5 weeks Total: 525 capsules	Nausea and vomiting	Unchanged
E. R.	31	10	5 capsules t.i.d. 8 weeks Total: 450 capsules	None	Unchanged
E. P.	56	20	5 capsules t.i.d. 8 weeks Total: 900 capsules	Bad taste	Unchanged
D. B.	50	2	5 capsules t.i.d. 14 weeks Total: 1,470 capsules	Chronic nausea, one attack of acute vomiting, and abdominal pain requiring hospitalization and stoppage of the drug	New lesions developed during therapy
E. N.	69	2	5 capsules t.i.d. 6 weeks Total: 660 capsules	Nausea, vomiting on several occasions, chronic dyspepsia	Unchanged
C. G.	42	20	5 capsules t.i.d. 4 weeks Total: 450 capsules	None	Unchanged
E. K.	58	7	3 to 5 capsules t.i.d. 4 weeks Total: 450 capsules	Nausea and loose stools	Unchanged
K. G.	54	1$^1/_2$	3 capsules t.i.d. 2 weeks Total: 126 capsules	Nausea and upset stomach Refused additional medication	Unchanged

Personal Observations

In our experience, the medication has proved to be a primary irritant. When small amounts of the contents of one of the commercial capsules is placed in contact with the human oral mucosa, a burning, irritating sensation is quite intense. Even when fed to mice in dilutions of one part of acid to three parts of corn oil, the irritation was sufficient to be decidedly uncomfortable. It is not difficult to envision that the ingestion of five to fifteen of these capsules at one time would cause a similar irritation to the gastrointestinal tract, and it is amazing that complaints from patients have not been more numerous.

In view of the promising results reported by Perlman, several patients were treated with the drug. However, in our initial clinical trial we did not obtain the expected improvement. Consequently, it was planned to limit the number of patients by careful selection and to watch especially for any poisonous side-effects. In addition, animal studies were undertaken in order to determine any possible harmful toxicity.

Clinical Trial

Patients were selected who had well-developed, chronic, and generalized psoriasis, who had had the disease for a long period, and who had failed to respond adequately to previous therapy. Only 15 patients were included in this study, but it was considered desirable to exclude a larger number of patients with insignificantly minor involvement (one or several small psoriatic patches). The dosage of undecylenic acid (Sevinon) was variable.* We found it expedient to begin with not over five capsules at one time, but in all cases we attempted to increase the dose to a maximum daily administration of 15 capsules (0.44 Gm. each) three times daily as recommended by Perlman. Unfortunately, because of intolerance we were forced in many instances to limit the dose to not over 15 capsules or less daily. Fifteen patients were observed as controls. They were patients with psoriasis of comparable severity, and they were treated with salve alone or the combination of a tar ointment and ultraviolet rays.

Results

None of the patients was cured, and none was observed to improve from the undecylenic acid alone. Addition of tar salve and sunshine to the treatment routine in one patient improved the lesions on the legs; one patient was made worse; and in one case, new lesions developed during the course of therapy (Table 1.)

All of the patients disliked the treatment. Not all the patients voluntarily complained, but on questioning it was apparent that the irritating qualities of the chemical caused flatulence or heartburn in all but four patients. Gastrointestinal symptoms were sufficiently severe in three instances to terminate the clinical trial, and several other patients, not included in the series, lapsed from observation probably because of the unpleasant or distressing gastric symptoms.

Experimental Administration to Animals

Materials and Methods.—Rockland Farms albino mice, averaging 34 Gm. in weight, were employed, and a total of 16 animals was used. Minimum dosage of 0.05 cc. of undecylenic acid in dilutions of one part of the drug to three parts of corn oil was found to be fairly well tolerated, and two to four administrations were possible before death supervened. Technical difficulties were encountered when amounts of 0.5 cc. or more of liquid were administered, because of the tendency to regurgitation and aspiration, regardless of dilution. A blunt, curved needle was used to deliver the drug directly into the esophagus. The medication was given at daily intervals in some mice and twice weekly in others; longer rest intervals were allowed mice who appeared sick and could not tolerate the drug.

Results.—Administration of the drug to mice revealed that undecylenic acid was notably irritating to the mucous membranes of all the mice, regardless of dilution. This was manifested by violent gagging, agitation, and regurgitation. Even minute quantities of the medication which were aspirated caused an immediate and violent shocklike collapse and death within a few minutes. Animals that apparently did not aspirate the medication, nevertheless, appeared quite ill; they were listless, made vomiting motions, and were much less active during observation. Control experiments with the corn oil alone did not reveal such an unfavorable reaction.

The deaths following medication were of two types.

Immediate Death.—Four mice died after only one injection of undecylenic acid, and two of the four were autopsied. The lungs were hemorrhagic and extremely congested; aspirated undecylenic acid was discovered in the lungs.

Delayed Death.—Twelve of the mice died following from two to four forced feedings. Six of these mice were autopsied. There was moderate to extreme congestion of all the internal organs, especially the liver, the spleen, the kidney, and the lungs. The intestines were bloated. Microscopic examination of the lungs showed congestion as a common feature. In one animal beginning pneumonia was partially contributory to death. The kidney exhibited cloudy swelling of the convoluted tubules together with nuclear pyknosis and fragmentation. Some edema of the interstitial connective tissue and polymorphonuclear infiltration was also seen. In another mouse the kidney showed patchy cloudy swelling of the convoluted tubules with the previously described nuclear changes. In a single mouse there was calcification of the tubules together with the aforementioned changes. In the liver the results were variable, but focal areas of necrosis and excessively foamy cytoplasm of the liver cells was seen. No damage to the stomach was observed.

Comment.—No definite conclusions as to mechanism of death were possible. Proof of specific chemical damage was lacking, but toxic changes were definite and rather extensive in some of the mice.

Summary

We failed to obtain a remission of psoriasis in 15 patients who had widespread and typical manifestations of the disease. Better results were often achieved with local medication together with ultraviolet rays. Evidence of intolerance to the drug in patients was frequent. Discomfort during the administration of the medication from either dyspepsia, nausea, or diarrhea was a prominent feature.

Even if the medication were somewhat helpful, which we have not observed, the discomfort and inconvenience to the patient in its present form precludes the administration of the chemical to most individuals for more than a short time. Furthermore, there is good evidence that the administration of the drug is hazardous, particularly to patients who have had gastric ulcer.

The nature of the toxicity in animals has not been entirely explained. While death of some of our mice was due to shock or asphyxiation or both,

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* The Schering Corporation supplied us with their brand of undecylenic acid (Sevinon) for the experimental treatment of the patients whose records are described in this paper.

COLLEGE OF PHYSICIANS
OF PHILADELPHIA

in others death was preceded by chronic inflammation of many internal organs.

Conclusion

It is our belief that the administration of undecylenic acid to patients with psoriasis should be abandoned as an ineffective and potentially toxic form of therapy.

66 East 66th Street

Dr. Bernard Kalfayan of the Department of Pathology kindly interpreted the histologic preparations.

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Discussion

Samuel M. Peck, M.D., *New York City.*—Since the announcement by Perlman of his therapeutic results in the treatment of psoriasis and neurodermatitis with undecylenic acid, we have treated approximately 30 cases of psoriasis and ten cases of seborrheic eczema and neurodermatitis with this drug.

Our results in neurodermatitis were completely unsatisfactory. In seborrheic eczema there was noted in one case relief of itching when full doses were given. There was a therapeutic failure in this case because gastrointestinal disturbances forced abandonment of this therapy. Our results in psoriasis paralleled to a certain extent those reported by Atkinson and Lewis. In no instance, even when full doses were given as suggested by Perlman in his second report, were we able to obtain complete disappearance of a single lesion when undecylenic acid alone was used. In approximately 5 per cent of the cases it was felt that there was a better response to the same local medication.

I wish to point out here that in no instance was it worth while to continue undecylenic acid therapy because it represented a more effective method of treatment than other types of internal medication, such as arsenic, large doses of vitamin D, or a controlled diet. By and large, the therapy did not approach in effectiveness Fowler's solution or autohemotherapy. I agree with the presenters that, in view of the side-effects and the toxicity which might be encountered from administration of the large doses recommended by Perlman and his associates in order to obtain possible effects in 5 per cent of the cases treated, the therapy is not worth while and should be abandoned. My greatest disappointment was that the original reporters of this therapy failed to use it as a research weapon in attempting to answer some of our questions concerning psoriasis. Once good effects were noted, it seems to me that such factors as changes in intestinal flora and effects on fat metabolism might have been investigated in those cases of psoriasis which did or did not respond to undecylenic acid.

BLUE CROSS PAYMENTS FOR CARE OF MEMBERS

Nearly a hundred million dollars, representing more than 88 per cent of income, was paid to hospitals by the voluntary, nonprofit Blue Cross Plans for care of members during the first quarter of 1950, Richard M. Jones, Chicago, director, Blue Cross Commission of the American Hospital Association, announced recently.

From a total income of $109,801,301, the 90 Blue Cross Plans of the United States and Canada paid $96,989,972 for members' care and used only $9,184,564 (8.37 per cent) for operating expenses.

There are more than 38,000,000 persons enrolled in the Blue Cross Plans in the United States and Canada, representing more than 24 per cent of the United States population and 21 per cent of the Canadian people.

PNEUMOPERITONEUM VERSUS PNEUMOTHORAX

James S. Edlin, M.D., and Sydney Bassin, M.D., New York City

(From the Thoracic Services of the Municipal Tuberculosis Sanatorium of the City of New York; City Hospital, Welfare Island; St. Clare's Hospital; Manhattan General Hospital)

AFTER all the years of experience in the treatment of pulmonary tuberculosis and despite the advent of the era of antibacterial therapy, we have not arrived at any one single successful therapeutic approach to the problem. It has become more and more obvious that many methods, singly and in combination, must be utilized. It is also apparent that, despite our efforts at case-finding and mass x-ray surveys, we must still deal with the moderately and the far-advanced cases that unfortunately predominate.

The procedure of choice in the treatment of these cases has been the therapeutic pneumothorax. Experience has been multiplied a thousandfold, and, although we have all seen most gratifying results, we are all too often sobered in our enthusiasm by the frequency of complications and the unfortunate sequelae that follow even successful pneumothorax therapy. There have been many reports in the literature surveying the results of pneumothorax therapy and the number of complications encountered. At the time of induction there is the ever-present hazard of embolus, and this has occurred even late in the course of treatment. Pleural effusions are extremely common and even the transient effusion, or the so-called benign effusion, accompanying the re-expansion period has a deleterious effect. In former days we paid little attention to these effusions, considering them a necessary evil. We have been made more and more aware of the effect of these effusions in restricting the pleura and reducing the ventilatory function of the underlying lung. Many a patient completes a successful course of pneumothorax therapy with a thickened pleura, a contracted lung, a retracted mediastinum, or all three. He has arrested his disease process, but he has become a pulmonary invalid with lowered pulmonary function greater than that produced by the disease alone. We have become so aware of this distressing end result that we have sought ways and means to overcome that which we have wrought, necessitating pulmonary decortications in some cases.

Empyema has long been the principal complication of pneumothorax therapy, and the number of patients who have developed sinuses, bronchopleural fistulas, and amyloid disease and have undergone multiple thoracenteses, rib resections, thoracoplasties, Schede procedures, and pleuropneumonectomies are legion. A whole literature has been devoted to this complication which has occurred not only in the treatment of far-advanced cases but even in the relatively benign minimal case.

Atelectasis has rendered many a collapse ineffective and dangerous and has occurred, even following the initial induction of pneumothorax. We have all experienced the difficulty attending the re-expansion of these lungs. The usual cause for this atelectasis is, of course, endobronchial tuberculous involvement, and we have come to recognize this as a major hazard and contraindication to pneumothorax therapy. The use of streptomycin and PAS has to a certain extent aided in the alleviation of this problem.

Tuberculous pneumonia has always constituted a difficult situation to handle, since empyema was so frequent following the early induction of pneumothorax. If we were cautious and conservative and waited for the decline of the acute phase, we often found the induction of therapy blocked by multiple adhesions and symphysis of the pleurae.

It would appear then that, despite the numerous successful cases, the hazards and complications of therapeutic pneumothorax call for an inventory of our methods. We are still searching for a treatment that will satisfy these criteria:

1. It must be simple of application.
2. It must have a wide range of application.
3. It must have a minimum of complications and hazards.
4. It must be reversible.

The one method of mechanical therapy that satisfies all these criteria is pneumoperitoneum. It is not a new procedure, having been utilized during the past two decades in rather sporadic fashion. Its use has been greatest in the South and West of our country, and its popularity has waxed and waned. Discouraging reports have matched the more enthusiastic ones, but a review of the more recent literature will reveal an increasing utilization based on a desire to avoid the complications of pneumothorax. These studies report definitely favorable results, and it is our belief that properly managed pneumoperitoneum therapy is capable of producing good results in a

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large number of cases, including the bilateral and far-advanced group. It is our belief that pulmonary tuberculosis is inherently or potentially a disease of bilateral disposition. We have all had experience with the case that demonstrates contralateral involvement even after successful pneumothorax therapy has been established, with the conversion of sputum concentrates and cultures (Case 8). In our experience the majority of cases are bilateral when they come to the attention of the phthisiologist. Pneumoperitoneum provides a treatment for the relaxation of both lungs which can be made more selective, when necessary, by an accessory phrenicotripsy. It is important to realize that pneumoperitoneum achieves its effect by relaxation of the normal intrapleural pull without affecting the intrapleural space itself in any permanent manner. The maintenance of the integrity of the intrapleural space is of paramount importance in the preservation of pulmonary function during and at the end of therapy.

Material

For the purposes of this study we are reporting 392 consecutive cases of pulmonary tuberculosis treated by pneumoperitoneum alone or combined with phrenicotripsy, with and without antibacterial therapy. These represent cases dating from 1944 to the time of this report. As with most treatment in tuberculosis, the procedure was first attempted in very far-advanced cases without much regard to selectivity, but time has brought some restriction to the application of this treatment, although the range remains fairly wide.

Technic

The technic of the induction of pneumoperitoneum has been described often enough in the literature and need not be repeated in detail. We should like, however, to state that we agree that the most satisfactory point for needle entry is approximately 2 inches below the left lower costal margin, lateral to the border of the rectus muscle. Entry on the right is avoided because of the presence of the liver and the danger of puncture. It is extremely difficult with a needle of short bevel to enter a hollow viscus unless there has been previous peritoneal reaction with fixation of the viscus to the anterior abdominal wall. The usual precaution of checking on possible entry into a blood vessel is to be observed.

In many obese patients where abdominal penetration is difficult or awkward or in patients who are neurotic about abdominal needling we have utilized very simple penetration through the tenth intercostal space in the midaxillary line after a good rise of the diaphragm has been established. The skin stretched tautly over the ribs by pneumoperitoneum simplifies the procedure.

It is customary to take a manometric reading before refilling the pneumoperitoneum space, but many physicians pay too much attention to this factor. Except for checking on our entry into the space it has no practical value. Our traditional avoidance of positive pressures in pneumothorax therapy has been carried over to pneumoperitoneum therapy, and readings are carefully taken during and at the end of treatment. These have no real significance, and high positive pressures are not to be avoided nor do they have any detrimental effect. The only factors controlling the amount and frequency of refills are the height of the diaphragm, as visualized during fluoroscopy, and the patient's comfort. It is our custom to give approximately 1,000 cc. of air at the time of induction and to follow this with daily refills of about the same amount for three to five days, gradually then increasing the intervals between refills but never beyond one week. It has been found more satisfactory to decrease the amount if necessary at each refill rather than to prolong the interval.

Phrenicotripsy

The routine use of phrenic crushing has been avoided. The criterion for its use has been evidence of definite improvement of the lesion under pneumoperitoneum therapy. If improvement has taken place and we feel that insufficient rise of the diaphragm has occurred to continue that improvement or if it is desired to render the diaphragmatic rise more selective, then phrenicotripsy is performed. It is felt that it is unwise to use this procedure routinely, since approximately 15 per cent of these phrenic paralyses are permanent and may invalidate some future surgical procedure should pneumoperitoneum be unsuccessful. Phrenicotripsy is avoided in the presence of active endobronchial disease for fear of interfering with drainage. In the presence of phrenic paralysis on the left side without pneumoperitoneum much gastric distress is experienced because of the distortion of the stomach under the elevated diaphragm. In the presence of pneumoperitoneum, however, the stomach, like all the organs, is depressed and does not rise under the elevated diaphragm. As a consequence, phrenicotripsy on the left is as uneventful for the patient as on the right side.

Binder

A specially designed belt or corset has been utilized in all patients with any laxity of the abdominal wall. Marked distention of the abdominal wall increases the patient's discomfort and makes necessary the use of larger and more frequent refills because so much air is wasted in a larger space. Proper support will often decrease the amount of air necessary to effect an adequate rise of the diaphragms. In female patients, especially, proper support will dispose of a psychologic hazard and will help to overcome objections to the procedure. Pads can be built into the corset to control small ventral or umbilical hernias. The binder need be worn only when the patient is out of bed.

Patient Response

The initial induction of pneumoperitoneum and the following few refills will give rise to a pain of varying severity in the shoulder and scapular regions. If the patient is adequately sedated and is informed about this pain beforehand, little difficulty is encountered. The patient must be instructed that sudden changes of position will cause or aggravate this pain. In most patients this pain is no longer present after the first six to ten refills. Some individuals complain of a loss of appetite during the early weeks of pneumoperitoneum, and some will experience frequency of bowel motion. These effects are temporary in the majority of cases.

Most patients will experience increased cough and expectoration during the early days of therapy due to the improved drainage following upon relaxation of the lung.

Complications

The frequency and number of complications are few when compared with those occurring during pneumothorax therapy. Death from embolism has been reported, but there are only seven cases in all the literature and none in our series. Perforation of a hollow viscus can theoretically occur and has been reported but did not occur in our series.

Peritoneal effusions have occurred with relative frequency, but all have been transient except in one instance of tuberculous peritonitis. Decreasing the amount of air at refills but not altering the frequency has resulted in disappearance of all the effusions except in two cases where obliteration of the space took place. Tuberculous peritonitis occurred in one case, and it is difficult to evaluate the role of pneumoperitoneum in this instance in view of the large number of far-advanced cases treated in this series without the development of tuberculous peritonitis.

Acute appendicitis with peritonitis occurred in two cases, necessitating operation and abandonment of pneumoperitoneum. The air space created by the pneumoperitoneum may have mitigated against a natural walling off of the infection and may have made a generalized peritonitis more likely.

Mediastinal emphysema occurred in two cases with temporary discomfort to the patients. In both cases it was possible to continue small refills, gradually increasing in amount, without recurrence.

Hernia is a complication in that an occasional potential hernia may be aggravated and made apparent by pneumoperitoneum. The pneumoperitoneum can be discontinued until operative repair has been performed, or in some cases a truss may be worn.

Pneumatocele, accidental pneumothorax, and subcutaneous emphysema have been reported and are relatively insignificant. Four cases of diaphragmatic rupture have been reported.

Contraindications

Extensive fibrosis will negate any attempts at relaxation of the lung. Most of our failures were due to the presence of this type of disease.

As in the case of fibrosis, bullous emphysema is not amenable to relaxation therapy.

Cardiac decompensation is, of course, a contraindication, since any burden placed on the hemodynamic status should be avoided. However, two cases in our series have compensated mitral stenosis and have not been adversely affected by pneumoperitoneum therapy.

Hernia should be repaired or treated with a truss if necessary before pneumoperitoneum is induced.

Previous abdominal operations are not a contraindication. The possibility of finding an adequate space should not be dismissed without trial. Pain due to multiple adhesions can be a serious factor. We are considering the advisability of severance of such adhesions.

In the case of fixation or immobility of the diaphragm it is not possible to determine whether or not a rise of the diaphragms can be obtained by fluoroscopy or x-ray study. Even apparently immobile or fixed diaphragms have risen satisfactorily.

During pregnancy pneumoperitoneum should be avoided and pneumothorax performed. If the case is discovered near term, then pneumoperitoneum can be instituted immediately following delivery.

Associated Therapeutic Procedures

Patients who have had thoracoplasties with incomplete results can often avoid a hazardous revision. One of our cases with a two-stage thoracoplasty and a revision remained active and was controlled by the addition of pneumoperitoneum. Two of our cases with two-stage thoracoplasties with residual cavitation and positive sputum have been controlled by the institution of pneumoperitoneum.

Cavernostomies have been performed in conjunction with pneumoperitoneum, but our cases are too few to evaluate their results. The Monaldi procedure combined with pneumoperitoneum is also under investigation.

Several of our cases have been combined with unilateral and bilateral pneumothorax. In cases where pneumothorax is being abandoned in favor of pneumoperitoneum it is advisable to begin the latter before the lung re-expands fully and before adhesions can limit the rise of the diaphragm.

Pneumoperitoneum lends itself to combination with many procedures, thus increasing the versatility of attack on difficult problems.

Results

For the purposes of this paper, 462 consecutive cases were analyzed from the thoracic services of City Hospital, the Municipal Tuberculosis Sanatorium of the City of New York, St. Clare's Hospital, Manhattan General Hospital, and from our private practices. Fifty-seven cases were eliminated from consideration because less than three months had elapsed from the induction of pneumoperitoneum to the time of this study. Two cases were not included because psychiatric complications necessitated transfer to a mental institution. Eleven patients discontinued therapy against advice or signed out of hospitals before the basic three-month period for evaluation had been completed. This paper is, then, an analysis of the remaining 392 cases that have been followed for a minimum of three months to a maximum of six years.

At the beginning of our use of pneumoperitoneum our unfamiliarity with the procedure, the lack of clear-cut indications and contraindications, and the natural inclination to use the more familiar pneumothorax led us to apply pneumoperitoneum only in extremely far-advanced and almost hopeless cases. The results were, of course, poor, and these results are reflected in our statistics. In the early years, too, we did not have the assistance of antibacterial therapy, and endobronchial lesions presented a major contraindication and stumbling block. Gradually we enlarged our indications for therapy, and results showed a definite improvement, especially as we realized the extreme importance of giving sufficient air at frequent intervals and found how unimportant manometric readings were in gauging the amount of air to be administered.

Analysis of the 392 cases reveals that our group included 202 white patients (120 males and 82 females) and 190 nonwhite patients (81 males and 109 females), and the ages ranged from fifteen to seventy (Tables 1 and 2). In this group there were four minimal, 183 moderately advanced, and 205 far-advanced cases (Table 3). Of these cases 72 (18.4 per cent) were unilateral, and 320 (81.6 per cent) were bilateral. It will be noted that the far-advanced bilateral cases predominated.

TABLE 1.—RACE AND SEX

	Male	Female	Total
White	120 (30.6%)	82 (20.9%)	202 (51.5%)
Nonwhite (Negro, Oriental)	81 (20.6%)	109 (27.8%)	190 (48.5%)
Total	201	191	392

TABLE 2.—AGE DISTRIBUTION

Age (Years)	Number of Cases
15 to 20	48
20 to 30	130
30 to 40	97
40 to 50	67
50 to 60	46
60 to 70	4

Results were analyzed according to the National Tuberculosis Association standards for arrested and apparently arrested (Table 3). A group of improved cases is listed which includes only those patients whose x-rays revealed marked clearing as a result of pneumoperitoneum, in addition to improvement in symptoms and decline of temperature. Many of these cases were altered from consistently positive sputum to occasional positive on sputum, gastric, or culture examination. Cases demonstrating only symptomatic improvement were included in the unsuccessful group.

TABLE 3.—DISEASE CLASSIFICATION ACCORDING TO EXTENT*

	Number of Cases	Per Cent
Minimal	4	1.0
Moderately advanced	187	47.8
Far advanced	201	51.2
Total	392	

* National Tuberculosis Association standards.

Analysis reveals that of the 392 cases 131 (33.4 per cent) were arrested, 29 (7.4 per cent) were apparently arrested, 120 (30.6 per cent) were improved, and 112 (28.5 per cent) were unsuccessful (Table 4). The latter group includes three cases in which the peritoneal space was obliterated by effusion and adherence, three cases in which hernia became progressive, one case of mediastinal

TABLE 4.—STATUS OF DISEASE ACCORDING TO STAGE

	Minimal	Moderately Advanced	Far Advanced	Total
Arrested	1 (25%)	80 (42.8%)	47 (23.3%)	128 (32.6%)
Apparently arrested	..	12 (6.4%)	13 (6.4%)	25 (6.3%)
Improved	3 (75%)	64 (34.2%)	60 (29.8%)	127 (32.3%)
Unsuccessful	..	31 (34.2%)	81 (40.3%)	112 (28.5%)
Total	4	187	201	392

emphysema, seven cases of death due to progressive disease or hemoptysis, and two psychiatric problems.

Further study of minimal, moderate, and far-advanced cases reveals that of the four minimal cases, one (25 per cent) was arrested, and 3 (75 per cent) were improved; of a total of 187 moderately advanced cases 80 (42.8 per cent) were arrested, 12 (6.4 per cent) were apparently arrested, 64 (34.2 per cent) were improved, and 31 (16.5 per cent) were unsuccessful; the far-advanced cases numbered 201 of which 47 (23.3 per cent) were arrested, 13 (6.4 per cent) were apparently arrested, 60 (29.8 per cent) were improved, and 81 (40.3 per cent) were unsuccessful (Table 4).

One hundred two cases (26 per cent) received phrenicotripsy as an accessory procedure, and 220 cases (56 per cent) were given streptomycin or PAS or both; 101 cases had had previous pneumothorax therapy which had been abandoned because of fluid, empyema, contraselective collapse, atelectasis, or ineffective collapse. Forty-three cases had had unsuccessful attempts at the induction of pneumothorax.

A review of these cases reveals a most satisfactory result, especially when the high percentage of far-advanced cases is taken into account. Unfortunately, we have not had a sufficient number of minimal cases for the application of pneumoperitoneum. As in all forms of treatment, including bed rest, the earlier the treatment is applied the more satisfactory is the result. In this period of acute shortage of hospital beds, pneumoperitoneum offers a relatively simple and harmless treatment which can result in earlier control, earlier ambulation, and earlier discharge from hospitals and sanatoria. In view, too, of the fact that so many patients return to a home environment where adequate rest and care cannot be obtained, pneumoperitoneum offers a method of control which should, in a carefully supervised program, result in fewer hospital readmissions.

Pneumoperitoneum should be maintained a minimum of three to five years for effective results. When the time approaches for considering discontinuation of therapy, it is a great advantage that the lung is more amenable to radiographic study than in the lung collapsed by pneumothorax. Should cessation of therapy result in reactivation of the disease process, the pneumoperitoneum can be reinduced without difficulty in almost all patients.

The following cases are demonstrations of results in various states of disease and illustrate the application of pneumoperitoneum therapy.

Case Reports

Case 1. (*Rise of Diaphragm Obtained in Case with X-ray Evidence of Pleurisy and Fluoroscopic Evidence of Absent Excursion*).—L. J. had a pneumothorax which was abandoned because of fluid. The appearance of the diaphragm on x-ray and fluoroscopic studies indicated fixation (Fig. 1A). Despite this, pneumoperitoneum resulted in an effective rise of the affected right diaphragm (Fig. 1B).

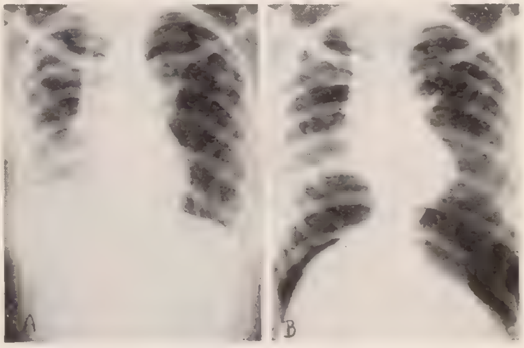

FIG. 1. (A) Apparent fixation of right diaphragm. (B) Establishment of satisfactory pneumoperitoneum.

Case 2. (*Giant Cavities Closed by Pneumoperitoneum and Phrenic Crush*).—M. I. was a twenty-four-year-old white female with onset of disease in 1943 (Fig. 2A). Prolonged bed rest was unsuccessful. Pneumothorax was instituted on the right side in 1944 and abandoned as contraselective. Sputum was consistently positive.

Pneumoperitoneum was induced on September 22, 1944, and a phrenic crush was performed (Fig. 2B). Sputum and gastrics were converted to negative in three months. Pneumoperitoneum has been maintained.

Streptomycin was not utilized in this case.

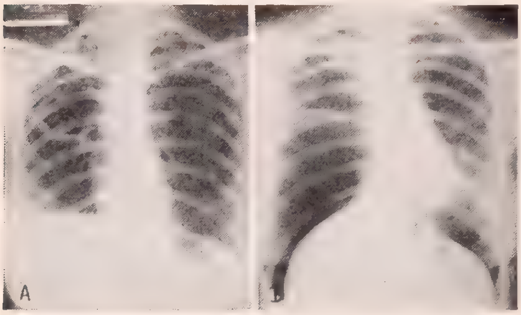

Fig. 2. (A) Giant cavities on right side with bilateral disease. (B) Closure of cavities by pneumoperitoneum and phrenic crush.

Case 3. *(Failure of Pneumothorax Therapy with Arrest by Pneumoperitoneum and Streptomycin).*—J. S., a nineteen-year-old Negro female, had onset of disease in November, 1946. Sputum was positive. She was admitted to sanatorium from the hospital on January 30, 1947. X-rays revealed extensive disease with cavitation (Fig. 3A).

Pneumothorax was induced on left side February 14, 1947, and was ineffective because of adherence. Pneumothorax was abandoned. The patient had frequent streaking, and pneumoperitoneum was induced on April 18, 1947 (Fig. 3B).

Thirty grams of streptomycin were given beginning June 30, 1947. Sputum which had ranged from Gaffky II to X became negative on August 18, 1947; 19 sputa and 11 cultures were negative. The patient was discharged as arrested November 28, 1948, and pneumoperitoneum is being maintained.

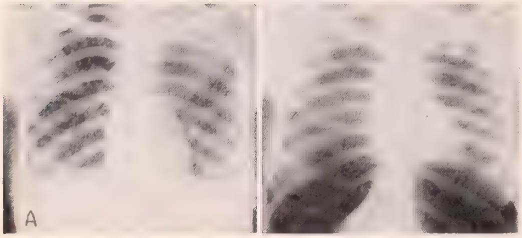

Fig. 3. (A) Extensive bilateral involvement. (B) Combined pneumoperitoneum and streptomycin therapy following failure of pneumothorax.

Case 4. *(Bilateral Disease Uncontrolled by Pneumothorax and Streptomycin Arrested by Pneumoperitoneum).*—P. L. was a Chinese male of twenty-eight years of age whose disease had its onset in May, 1945, with hemoptysis. Left pneumothorax was induced in May, 1945. Pneumothorax was continued on the left, and a right pneumothorax was induced on July 9, 1946, because of progressive disease. He was admitted to the sanatorium on August 7, 1947, where pneumothorax was found ineffective and sputum was positive (Fig. 4A). Pneumothoraces were discontinued, and bed rest and streptomycin were advised. Patient received antibacterial therapy from September 19 to October 27, 1947, with symptomatic improvement. Sputum remained positive ranging from Gaffky III to IX. Patient had blood-streaked sputum during February, 1948.

Pneumoperitoneum was induced March 22, 1948. Sputum was converted to negative on April 19, 1948, and has remained so ever since (25 concentrates), and 11 cultures have remained consistently negative since September 24, 1948. Pneumoperitoneum has been maintained since discharge on July 25, 1949 (Fig. 4B).

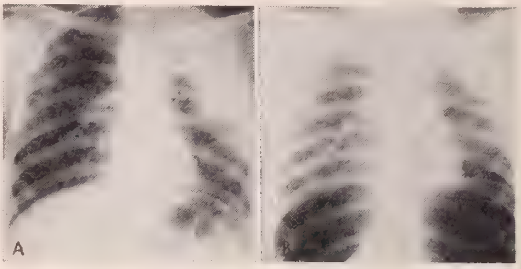

Fig. 4. (A) Extensive bilateral disease treated unsuccessfully by bilateral pneumothorax. (B) Disease controlled after pneumoperitoneum therapy (encapsulated fluid on left) after disease had spread despite streptomycin.

Case 5. *(Far-advanced Bilateral Pulmonary Tuberculosis Treated with Pneumoperitoneum, Phrenic Crush, and Streptomycin).*—J. E. was a twenty-year-old white male. Onset of disease was in September, 1947, with fever, cough, and loss of weight. Sputum was positive. X-rays revealed a far-advanced bilateral disease with pneumonic area and large cavitation (Fig. 5A). Patient was placed on strict bed rest.

Streptomycin was given beginning November 19, 1947, for a total of 27 Gm. Pneumoperitoneum was induced on December 2, 1947. Left phrenic crush was performed on December 20, 1947 (Fig. 5B).

Sputum became negative on March 8, 1948,

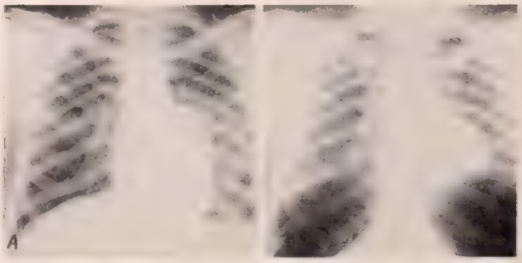

Fig. 5. (A) Far-advanced bilateral disease. (B) Combined therapy with pneumoperitoneum, phrenic crush, and streptomycin.

followed by 12 negative concentrates and eight negative cultures.

Patient was discharged as arrested December 11, 1948. Pneumoperitoneum is being maintained.

Case 6. (*Patient with Laryngeal and Tracheal Tuberculosis and Bilateral Pulmonary Tuberculosis Treated with Pneumoperitoneum, Phrenic Crush, and Streptomycin*).—E. A. was a thirty-eight-year-old Negro female previously hospitalized from April 9 to December 20, 1942. Active disease process was found in right upper lung. Sputum was positive. Attempt at induction of pneumothorax failed, and the patient signed out. In August, 1947, lesion became progressive, and sputum was positive. Patient had severe cough and was admitted to sanatorium on December 4, 1947. X-ray examination revealed a bilateral lesion (Fig. 6A). Bronchoscopy revealed ulceration of right vocal cord extending down into trachea about $^1/_4$ inch. Entire bronchial tree demonstrated moderate inflammatory reaction.

Pneumoperitoneum was induced January 21, 1948. Streptomycin was given from January 20 to March 4, 1948 (27 Gm.).

Right phrenic crush was performed on February 14, 1948 (Fig. 6B). In March of 1948, patient's sputum became negative, her temperature returned to normal, and she had gained 12 pounds in weight. Gastric cultures were reported positive in November, 1948, January, 1949, and February, 1949. Cultures of March, 1949, were negative and have remained persistently negative to date.

Patient left sanatorium on June 26, 1949, and is employed full time at clerical work. Pneumoperitoneum is being maintained.

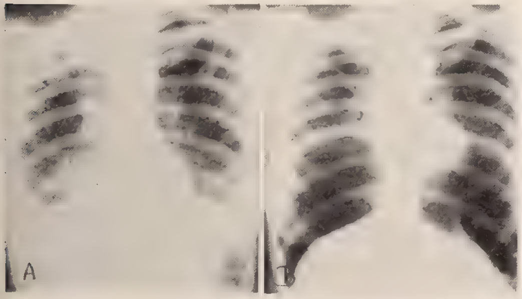

Fig. 6. (A) Far-advanced disease complicated by laryngeal and tracheal involvement. (B) Pneumoperitoneum and right phrenic crush plus streptomycin resulted in control of disease process.

Case 7. (*Basal Cavitation Closed by Pneumoperitoneum and Streptomycin Therapy*).—R. R., a sixteen-year-old Puerto Rican female, was admitted to the hospital on December 14, 1949, with a three-week history of cough, expectoration, and elevation of temperature (Fig. 7A). Sputum was positive and pneumoperitoneum was induced on January 1, 1950. Streptomycin therapy, 1 Gm. daily, was administered from February 12 to March 11, 1950. Sputum was converted to negative two weeks after induction of pneumoperitoneum, and sputum and gastric examinations have remained negative since that time (Fig. 7B).

Pneumoperitoneum is being maintained.

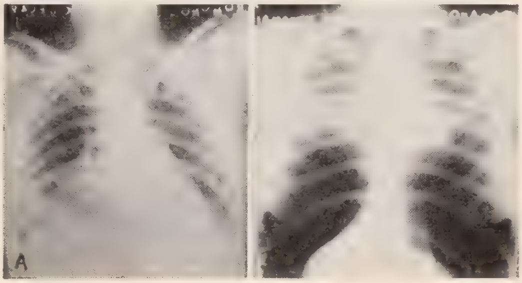

Fig. 7. (A) Basal cavitation. (B) Cavity closed after combined streptomycin and pneumoperitoneum therapy.

Case 8. (*Development of Disease in Contralateral Lung During Successful Pneumothorax Therapy*).—A. W. was a twenty-nine-year-old white female whose disease had its onset in October, 1946, with cough, expectoration, and elevation of temperature. She was placed on bed rest for a period of nine months with progression of the disease process (Fig. 8A). Disease was unilateral, and right pneumothorax was induced in 1948 (Fig. 8B). Adhesions were severed on the right side successfully in July, 1948. Sputum was converted to negative and concentrates, gastric examinations, and cultures were negative until February 1, 1950, when the patient experienced pain in the left chest. X-ray examination revealed development of a disease process in the left upper lobe (Fig. 8C). The patient's temperature was elevated, and the sputum was positive. She was hospitalized on February 11, 1950, and pneumoperitoneum was induced on February 13, 1950. PAS therapy was also begun at that time (Fig. 8D). There was rapid objective and subjective response with conversion of sputum to negative on March 21, 1950, and alternating positive and negative gastric examinations. Period of follow-up, however, was too brief to be included in statistics given in this paper.

Conclusions

It is our belief that pneumoperitoneum as a definitive procedure alone or, when necessary, in association with phrenicotripsy and antibacterial therapy is a method of great value in the treatment of pulmonary tuberculosis of any stage of development. In our opinion it has certain definite advantages over pneumothorax therapy:

1. It can be induced in almost every patient, while pneumothorax is often impossible to initiate because of symphysis of the pleura.
2. It can be reinduced with relative ease in contradistinction to pneumothorax.

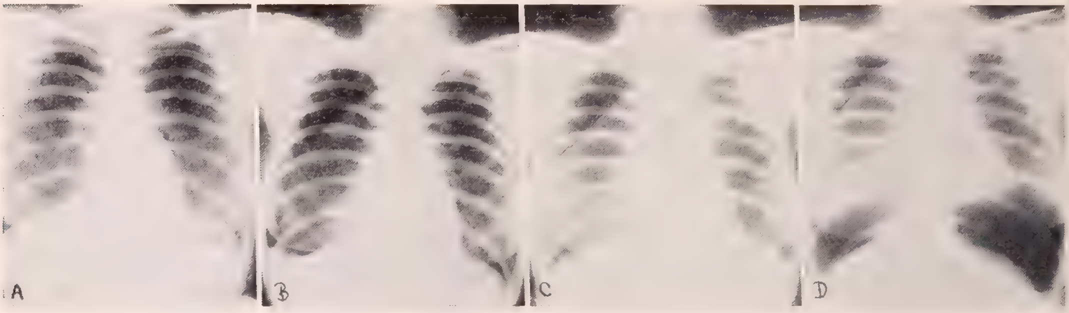

FIG. 8. (A) Progression of disease process with cavitation after nine months of bed rest. (B) Right pneumothorax induced and maintained with conversion of sputa and gastrics. (C) Spread of disease to left lung during collapse therapy. (D) Pneumoperitoneum and PAS therapy with regression of disease.

3. It is reversible without adversely affecting the lung or pleura.

4. The number of serious complications are reduced to a minimum.

5. Its range of application in far-advanced disease is almost unlimited, since almost all patients can be submitted to a trial course of therapy without danger. Pneumothorax, especially bilateral, is extremely hazardous in these cases.

6. The lung is constantly available for x-ray study, while in the collapsed lung of pneumothorax therapy it is almost impossible to evaluate the status of the disease process.

7. Pneumoperitoneum is much the preferable procedure in the presence of endobronchial disease. Its effect in improving bronchial drainage is a definite asset. It is our opinion that pneumothorax is contraindicated in this instance. Pneumoperitoneum plus antibacterial therapy offers a rational approach to a serious problem.

8. The position of the cavity within the lung field is of very little consequence in pneumoperitoneum therapy. Extreme apical cavitation, usually adherent, and basal cavitation are, as a rule, not amenable to pneumothorax therapy. Pneumoperitoneum exerts its relaxing effect and its decrease in pulmonary volume over the entire lung, except in the presence of marked thickening of the pleura (usually an aftermath of pneumothorax therapy), extensive pulmonary fibrosis, and bullous emphysema. These latter conditions are, of course, also barriers to pneumothorax.

The results of the treatment of 392 cases by pneumoperitoneum therapy have been discussed. It is our intention to follow as many of these cases as possible over the years and to present long-term studies so that eventually we may arrive at a final evaluation of this procedure.

Discussion

Roger S. Mitchell, M.D., *Trudeau.*—When first exposed to pneumoperitoneum in 1945, I found it as indigestible as many still do. It not only seemed ineffective but also basically unphysiologic and potentially dangerous.

As has been emphasized, too much is apt to be asked of pneumoperitoneum when a clinic first tries it. As was the experience of the authors, however, after using pneumoperitoneum for a time I became more and more impressed with its safety and its effectiveness in dealing with less extensive lesions.

In 1947 and 1948, I had the opportunity to observe the physiologic effects of pneumoperitoneum in Wright's laboratory at Trudeau Sanatorium. This material has been reported in part in the December, 1949, issue of the *American Review of Tuberculosis.* Briefly, if patients with severe emphysema and extensive old fibroid disease are excluded, the following changes have been found to occur: (1) Pneumoperitoneum alone causes a 25 to 40 per cent reduction in lung volume, i.e., collapse; maximum breathing capacity, on the other hand, is seldom reduced more than 10 per cent, since the lung volume is reduced at the expense of dead space. (2) Pneumoperitoneum plus hemidiaphragmatic paralysis cause a 35 to 50 per cent collapse which is lateralized to a variable degree to the side of the phreniclasis. Marked lateralization is more apt to occur on the right than on the left. Maximum breathing capacity may be reduced from 10 to 35 per cent after the addition of hemidiaphragmatic paralysis.

From the standpoint of both pulmonary volume and function, the changes produced by pneumoperitoneum and hemidiaphragmatic paralysis compare favorably with the changes produced by a 40 to 50 per cent selective unilateral pneumothorax. At the same time, there is no threat of pleural complications and later permanent loss of pulmonary function.

Furthermore, studies at Trudeau Sanatorium have shown that results with pneumoperitoneum and pneumothorax do not vary significantly with the location of cavity. In other words, pneumothorax has been found to be effective in about the same proportion of cases, whether used to treat cavities in the apex, infraclavicular region, midlung, or base. The same has been found to be true of hemidiaphragmatic paralysis alone, pneumoperitoneum alone, and for these two measures in combination. One exception has been observed: Cavities in the apical segment of the lower lobe do respond well to pneumoperitoneum, usually in combination with hemidiaphragmatic paralysis.

Pneumothorax statistics at Trudeau Sanatorium duplicate those from other clinics in regard to initial success, rate of reactivation, and complications. When cases, having, in retrospect, modern selection and management, were studied alone, however, late results were gratifying and matched those obtained with thoracoplasty.

Drs. Edlin and Bassin have given us a clear presentation of a controversial subject. It was easy for me to find areas of agreement, such as the observation that pneumoperitoneum is technically simple and relatively harmless to use, that it is much easier to follow the progress of the disease by x-ray in the pneumoperitoneum patient than in the pneumothorax patient, that it is more logical to start with pneumoperitoneum before phrenic nerve interruption, that diaphragmatic rise is unpredictable, that peritoneal pressures are a poor guide to the frequency and amount of refills, and that pneumoperitoneum is often effective alone without supplementary hemidiaphragmatic paralysis.

NO WONDER

William L. Miller of Albany is parents of a 6 pound 13 ounce hospital. He underwent major surgery this morning.—*J.A.M.A. October 8, 1949*

"DOCTOR JONES" SAYS—

This rabies business—you know, it may have been a fortunate coincidence that we got the vaccine that'd prevent it in dogs before the fox rabies got to going actively in New York State. Otherwise there'd have been at least possibilities of spread from foxes to dogs. That thought struck me as I was looking over some of the figures recently.

For years it was mainly dogs. In 1943 (This Health Department Report I've got here) there were 176 dogs, one fox, nine cows and a bull, a cat and a squirrel. The next year 233 dogs, 15 foxes, 46 bovines—including one bull again—and 18 other animals. There'd been a vaccine on the market, and many dog owners had had their dogs vaccinated. But there was a question how dependable it was, and the Health Department and so on hadn't felt like recommending it for general use. In the meantime the control of rabies had depended on the control of dogs.

Then they'd developed a vaccine that was proved to be effective. The health and agricultural authorities and the Cornell veterinary folks came out for its general use. Vaccination clinics had been started and all that. The recent rabies figures—it's a different story—1949: only 16 dogs but 278 foxes; bovines 172. Vaccination certainly has greatly improved the dog situation.

But a fellow that had a letter in the paper awhile back (he was opposed to vaccination) he said cases of rabies in humans were rare. True—but he overlooked one point. That's the prevention treatment. In 1944, for example, 308 people upstate were given the Pasteur treatment. One man, bitten by a rabid dog, refused the treatment. He developed rabies and, of course, died.

Folks and foxes ordinarily don't mix much. Folks and dogs do. Contacts between foxes and dogs do occur. One way to keep human rabies rare is to make canine rabies rare. That means vaccination of dogs: general and repeated as often as necessary. So—when we're making it safer for our pooches we're making it safer for ourselves.—*Paul B. Brooks, M.D., June 26, 1950*

CHRONIC BILIARY DISEASE IN GENERAL PRACTICE

Joseph A. Porcello, M.D., Pleasantville, New York

(From the St. Agnes Hospital, White Plains)

THE diagnosis and treatment of chronic biliary disease is a common problem to the general practitioner and geriatrician. The incidence of complaints referable to the biliary system as seen in an office practice is very high. Some studies indicate that there is some biliary tract disturbance in about 50 per cent of all adults.[1,2] The symptoms of biliary disease are often prolonged and recurrent. Evaluation of the etiologic factors, which include chemical, physiologic, anatomic, infectious, and psychic elements, is often difficult. Consequently, treatment is, of necessity, complex. Numerous reports cited by Davidson indicate that at least 30 per cent of cholecystectomized patients retain symptoms after surgery.[3] This paper is prompted by the favorable results obtained over a period of many years with a medical regimen, which includes the newer antispasmodics and hydrocholeretics in controlling biliary complaints.

Material

The 100 subjects who form the basis of this report are members of families which have been under the writer's observation for many years. This familiarity permitted an excellent opportunity for evaluating complaints and response to treatment. There were 60 women and 40 men in the group studied. The average age was fifty-two and four-tenths years, and 70 of these individuals were between the ages of thirty and sixty. Since earlier experience revealed that multiple laboratory and x-ray examinations were of limited value in determining ultimate therapy, these were carried out only in those cases where the history and physical examination were not adequate. Subdivision into groups based on an evaluation of each of the multiple etiologic factors responsible for biliary disease seldom influenced the choice of therapy. However, all the known factors were taken into account in deciding on the regimen to be described.

The diagnosis of chronic biliary disease was made on clinical grounds. No case was included in the series unless all of the following findings were present: (1) repeated complaints of "indigestion," (2) eructation, (3) upper abdominal pain or discomfort, and (4) right upper quadrant tenderness.

Other complaints included: asthenia, 83 per cent; poor appetite, 43 per cent; nausea, 78 per cent; vomiting, 43 per cent; constipation, 94 per cent; constipation alternating with diarrhea, 11 per cent. Seven individuals were aware of episodes of clay-colored stools. Obesity was noted in only 21 per cent. Seventeen of the women were in the menopause. Of the remaining 83 subjects, 33 were judged to have a normal psychoemotional status, and the remaining 46 individuals were chronically "nervous" people. Cardiovascular disease was present in 23 patients.

Physical examination revealed right upper quadrant tenderness in all cases. In addition, 77 patients were tender to palpation in the mid-epigastrium, and in 44 subjects the abdomen was distended. Mild icterus was detected in seven patients. No patients with severe, persistent, or increasing jaundice were included in this series, since these patients had to be investigated for malignancy or absolute biliary obstruction. Nineteen cases had moderately severe signs of vitamin deficiency (glossitis, cheilosis, peripheral neuritis), and 69 showed evidences of milder involvement. Only 12 were free from signs of nutritional deficiency. Eleven patients had previous gastrointestinal x-ray series, all of which were reported as negative. Gallbladder x-rays were done in 13 cases. Two of these revealed biliary calculi, and the remaining 11 demonstrated dysfunctions of the gallbladder.

Treatment

The scheme of treatment was based on consideration of the multiple mechanisms which contribute to the symptom complex exhibited by these patients. These mechanisms may be divided into three groups:

1. Direct biliary factors: These factors involve changes which interfere with the proper elaboration and delivery of normal bile to the intestinal tract. Relative biliary stasis is probably the major factor and may be attributed to (*a*) varying degree of obstruction to the biliary tract, (*b*) increased viscosity of bile, and (*c*) decreased volume of bile. These phenomena, in turn, may result from a multitude of etiologic factors.

2. Secondary gastrointestinal factors: The digestive function may be disturbed not only because of inadequate bile but also because of interference with pancreatic secretions. In addition, reflex mechanisms frequently involve both gastric and colonic function. The bile salts have been shown to have a laxative effect.[5] These secondary factors may dominate the clinical picture. They may be responsible for the poor absorption or reduced ingestion of vitamins and other essential elements.

TABLE 1.—Foods Permitted and Prohibited Chronic Biliary Disease Patients

Foods Permitted	Foods Prohibited
Proteins	
Broiled or roasted lean, tender cuts (loin or rib) of beef or lamb. Cut away all fat. Chicken, turkey. *Fresh water* fish, broiled or baked. Cottage cheese (unseasoned). Egg white only—*occasionally* in milk or served as a meringue on a simple dessert.	Meat fats, fat meats. Fried foods. Gravies. Pork, veal, all smoked, salted, spiced, or canned meats or fish. Egg yolk. Seasoned cheese.
Vegetables	
Boiled: celery, carrots, asparagus tips, spinach, string beans, beets, peas, tomatoes, tomato juice. Save the juice of cooked vegetables and serve over the vegetable or use in clear soups.	Gas-forming vegetables such as broad beans, dried vegetables, cabbage, kale, corn, onions, turnips, raw vegetables. Potatoes, sweet potatoes.
Fruits	
In abundance: Fresh oranges or grapefruit. Fresh stewed apples, pears, peaches, cherries, plums, raisins, stewed rhubarb.	Melons, berries, bananas, cocoanut.
Cereals	
Cooked cereals only—with milk (except oatmeal). Whole wheat or rye breads plain or toasted.	Prepared cereals, oatmeal. White breads, noodles. Spaghetti, macaroni. Hot breads, pancakes, or waffles.
Beverages	
Milk, lemonade, orangeade. Buttermilk or the scientifically soured milks. Postum or decaffeinated coffees. Weak tea or coffee—by permission.	All alcoholic, malt, or very sweet drinks. Very *hot* or very *cold* drinks. Cream.
Sundries	
Butter in strict *moderation* only. Soups, clear or vegetable. Small portions of plain desserts such as gelatin, fruits from above list.	All sweets: candies, syrups, rich desserts, pies, cakes, pastries. All thickened or cream soups and sauces. All condiments such as pepper, spices, vinegars, catsup, Worcestershire sauce.

AVOID OVEREATING AT ALL TIMES.

3. Psychic factors: The effects of minimal somatic disturbances may be magnified many times by some individuals. On the other hand, psychic disturbances of either intrinsic or extrinsic origin may be sufficient to upset severely and repeatedly the function and ultimately the structure of the biliary tract and related organs. Evaluation of personality and disturbing personal problems may be difficult, but ignoring these factors does not aid in the treatment of the patient.

In order to cope with the multiple factors listed above, medical treatment was planned to accomplish the following:

1. Gain the confidence and cooperation of the patient.
2. Relieve biliary spasm.
3. Increase bile flow by (*a*) reducing bile viscosity and (*b*) increasing bile volume.
4. Attempt to overcome the deficiency of digestive factors which may result from pancreaticobiliary dysfunction.
5. Avoid those foods which the disturbed digestive pattern are incapable of handling.
6. Guarantee an adequate intake of the essential vitamins in a form available to the body.
7. Attempt to correct gastrocolic disturbances which frequently accompany biliary disease.
8. Relieve pain.

To accomplish these objectives, the following therapeutic regimen was employed:

The acute attack was treated by sedation (Demerol) and bed rest when necessary. A six-week period of intensive therapy was then initiated. No specific diet was prescribed, but the patient was given a list of foods to be avoided and those to be encouraged. The list was designed to avoid spiced, fatty, and gas-producing foods and to encourage the ingestion of high protein, high vitamin nutrients (Table 1).

Mesopin in doses of 2.5 to 5.0 mg. was given before each meal to overcome biliary spasm and possibly reflex gastropyloric hyperactivity.* Following or with meals oxidized, unconjugated bile acids, consisting chiefly of triketocholanic acid, were given to encourage a thinner and more voluminous flow of bile.[6,7]**

A "digestive mixture," containing alkalinizing, mucosa-lining, and enzyme substance, was also given at this time, and multivitamin preparations were prescribed.† A parenteral vitamin B complex preparation, high in riboflavin content and with a ratio of riboflavin to nicotinamide of 1:5, was given parenterally where signs of vitamin deficiency were moderate or marked.††

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* Mesopin, N.N.R., brand of homatropine methyl bromide, Endo.

** The unconjugated, oxidized bile acid preparation used is designated Triketol, Endo.

† The "digestive mixture" consists of the following: cascara evacuant, bismuth subgallate, sodium bicarbonate aa 4 drams, liquid Takadiastase, mixture rhubarb and soda, a.a.q.s. ad oz. IV. Sig.: One teaspoonful 10 minutes after meals in a small quantity of water.

†† The parenteral B complex preparation used is Manibee, Endo. Each cubic centimeter provides riboflavin, 10 mg.; nicotinamide, 50 mg.; thiamine hydrochloride, 25 mg.; pyridoxine hydrochloride, 5 mg., and calcium pantothenate, 10 mg.

After six weeks of treatment, the medications were gradually withdrawn one at a time. Previous experience indicated that earlier withdrawal of therapy frequently resulted in relapse. In most instances the "digestive mixture" was eliminated first. The antispasmodic was then reduced in dose and gradually eliminated, and, finally, the triketocholanic acid was withdrawn in stages. The gradual termination of medication avoids both the physiologic and psychologic disturbances which sometimes follow a sudden alteration in therapy.

In some instances where there was a history of recurrent or persistent symptoms a "maintenance" program of continued triketocholanic acid was continued over longer periods of time. Other factors of the regimen were also included in this maintenance schedule when necessary to control bowel disturbances or symptoms of gastric dysfunction. Diet was maintained until the patient's feeling of well-being was sufficient for him to include other foods not prescribed in the dietary part of the regimen.

Results

All of the patients in this series have been observed for at least one year, the average period of observation being longer than five years. The acute symptoms of biliary disturbance were of sufficient severity to require Demerol in 19 instances. Intensive treatment was carried out for a six-week period in 91 subjects. Longer periods were required by the remaining nine patients to maintain adequate remission. Relief of the most troublesome symptoms was complete within one week in 78 cases. Relief was obtained more gradually in the remaining 22 cases. Eighty-seven patients were retained on the prophylactic regimen outlined above with only mild and infrequent recurrences of symptoms. There were six cases of severe recurrence of symptoms, and in each instance there was good response to retreatment. There was a remarkable reduction in work days lost in the period following treatment as compared to similar episodes which had not been treated by the current regimen. All the patients in this series are still under observation, and none has come to surgery since coming under the present medical regimen.

Discussion

There has been a strong tendency in recent years to attempt to prescribe single, specific medications for a specific purpose. This tendency probably represents a healthy reaction to the previous habits of some practitioners who would write complex "shotgun" prescriptions containing many ingredients of questionable pharmacologic value in homeopathic doses. More recently, however, the synergism of some medications in adequate dosage has again been noted, particularly in relation to those disturbances which involve multiple factors. Thus, it is now clear, for example, that the evidences of "pure" vitamin deficiencies respond better to treatment which includes the entire B complex than to the isolated single vitamin therapy alone. Similarly, antispasmodics plus cholagogues in proper sequence result in clinical response far better than either alone.

Recent demonstrations of the superiority of homatropine methylbromide over other antispasmodics and of triketocholanic acids over the unconjugated saturated unoxidized products may help explain why the regimen reported in this paper has been more successful than previously reported attempts at medical treatment.[8,7] Homatropine methylbromide seldom showed the undesirable side-effects frequently noted with atropine. Tables of data cannot adequately express the clinical observations in the writer's office concerning the adequacy of proper medical treatment in controlling biliary dysfunction. The experience of the writer extending over a five-year period suggests that the rational use of the newer, more effective antispasmodics and hydrocholeretics in proper sequence, with the dietary and other measures described above, will markedly reduce the "misery" of biliary disease and result in more effective relief than current surgical procedures.

Summary

1. An effective program for the medical management of biliary disease is described.
2. An analysis of 100 cases treated by this regimen is presented.
3. The usefulness of homatropine methylbromide and triketocholanic acid is discussed.
4. The importance of an all-inclusive program for the medical management of biliary disease is discussed.

235 Manville Road

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TREATMENT OF BACKACHES BY INFILTRATION OF ANESTHETIC OILS

Paul Lahvis, M.D., Gowanda, New York

BACKACHE is a widely prevalent ailment. If infections and degenerative diseases are eliminated, backache as the primary complaint or as an important symptom of various disorders ranks high as a serious disabling disease.

Frequently, backache persists after the precipitating disease is cured, and the patient feels that his physician has not found the correct solution to his problem. The many and varied approaches to the backache problem indicate better than anything else its uncertainty, and the frequency with which these patients continue to change medical advisors proves the ineffіcacy of the procedures.

The difficulty is aggravated by the fact that objective evidence frequently is lacking and that bony variations are common in symptom-free cases. Thus the therapeutic efforts frequently are misdirected, and much valuable time and expense is wasted.

The purpose of this paper is not to evaluate the various established forms of treatment but rather to describe a method which has been found to be of much value in many years of experience. It will attempt to show that "pain," the common denominator in all cases of various origin, can be successfully controlled in the majority of cases and disability reduced considerably.

Irwig has classified back cases into "x-ray positive," "x-ray variable," and "x-ray negative" groups.[1] The former includes fractures, neoplasms, cord tumors, and dislocations. The x-ray variable group covers anatomic variations of questionable pathologic significance, subluxations of the fifth lumbar vertebra, exaggerated lumbosacral angle, moderate thinning of the disk, sacralization of the fifth lumbar vertebra, spina bifida, and anatomic variations of the posterior articulations of lumbar vertebrae.

The x-ray negative group includes backaches without abnormal x-ray findings. They include strains, sprains, and bruises, inflammatory soft tissue changes, referred back pain from organic disease, and statural and postural conditions.

The x-ray positive group requires surgical or orthopedic treatment first, but it is the x-ray negative which puzzles the physician and which offers a good prognosis if the pain can be eliminated. A frequent history is that of a minor accident, a sudden pain when lifting or stooping and slow recovery after prolonged rest, treatment by immobilization, traction, and physiotherapy. These cases are usually lumped under the term "soft tissue injury."

This convenient expression admits inability to arrive at a scientifically provable diagnosis. The nature of the condition precludes biopsy or direct visual investigation, but the history suggests that the pain is caused by small tears of muscular fibers, the pressure of hematomas, the scar tissue which follows, tears and hematomas in the vicinity of the spinal nerves, and the muscular spasm which usually accompanies trauma. Infections may cause fibrotic changes in the tissue.

The discouraging prognosis of these conditions of minor pathology induced us to use experience gained in proctology to determine the value of infiltration of the painful area with anesthetic oils.

Injection treatment of backaches with various solutions has been successfully performed by Judovich and Bates who used novocaine and an extract from the pitcher plant.[2] Tarsy and Irwig used procaine or eucupine in oil by local or regional injection.[3,1] The use of procaine and Nupercaine in vegetable oils for prolonged rectal anesthesia is closely connected with the beginning of ambulant proctology. Actually, the entire progress of this school of proctologic technic is based on the use of solutions causing partial or complete anesthesia during the period of healing, thus eliminating hospitalization and confinement.

It was noted that the sphincter ani remains in a state of muscular atony for a number of weeks following infiltration with an anesthetic oil, which enforced sphincter inactivity considerably exceeds the period of apparent anesthesia in the adjacent structures. Thus, the sphincter offers a unique opportunity for observation as its function is distinct and not subject to group activity. Indeed, the sphincter ani, as a muscle, can be compared with the retina as a valuable indicator of vascular and nerve condition.

It seemed reasonable that an agent capable of producing muscular atony and analgesia for several weeks might be of immense value to those suffering from muscular pains in any part of the body. Surprising, however, was the observation that the symptoms of disabling pain did not return with the disappearance of the anesthesia and when the infiltration was discontinued. The conclusion was simple: If a rectal fissure heals while the sphincter muscle is temporarily deactivated by oil infiltration (passive movement continues throughout the period), then it seemed equally logical to expect that the existing pathology in the aching back muscle (a tear, hematoma, a small scar) may correct itself by a similar process.

This phenomenon of a muscle at rest—unable to transmit pain impulses to the center and to receive motor impulses from the center—can be produced at will by the infiltration of these oils and maintained until "healing" of the involved area is obtained. Experience indicates that one, and not more than three injections, over a period of six weeks is sufficient. Relief of pain is instantaneous.

If a "muscle at rest" is the goal to be achieved and maintained for a considerable time in order to effect maximum results, it is necessary to time infiltrations so that a second and third treatment are given before the effect of the prior treatment has disappeared. Although somewhat arbitrary, this appears to be about the tenth day after the first and the fourteenth day after the second infiltration. It is also evident that infiltration with aqueous solutions of novocaine in these cases of local pathology cannot be of more help than three hours splinting of a broken bone, the duration of its analgesic effect.

Indications

The treatment is indicated in cases presenting well-localized pain in muscular areas. The area must be easily defined and definitely sensitive to pressure. If a "trigger point" cannot be located, no beneficial results can be expected.

A history suggestive of soft tissue injury preceding the symptoms is common. Cases having only a short history of vague pains, one day here, next day there, are not suitable. Oil infiltration is contraindicated in the proximity of major nerve trunks (sciatic, brachial). The possibility exists of prolonged paralysis in the field supplied by the nerve.

Although direct muscular infiltration and prolonged "muscle at rest" periods were the prime object of this study, it soon became apparent that, frequently, lasting relief of pain in various parts of the body was obtained by infiltration of the superficial and cutaneous nerve branches. This includes the occipitalis major near insertion of the trapezius (causing pain in occiput) and the cutaneous branches of the femoral nerve which at their exit from the pelvis can be approached easily for the relief of pain radiating from the lumbar plexus.

The main value of oil infiltration is the treatment of backaches, and there, according to past experience, the indications are generous. It covers the large field of severe aches in the lower back, the soft tissue pains without x-ray findings, frequently not well-defined and going under such terms as lumbago, sacroiliac, and sacrolumbar sprains. Fortunately, the procedure also has been of much value in conditions associated with other pathology. This refers to muscular spasm, frequently crippling in intensity, which may be the result of spondylitis in the adjacent area.

Typical are the following cases.

Case Reports

Case 1.—A fifty-five-year-old man had a history of recurrent attacks of extremely severe pain in the entire back. Disability period in four former attacks was from six to eight weeks. In the present attack there was a sudden onset four days before examination with tetanic rigidity of entire back. Intensity of pain and spasticity prevented pinpoint localization. X-ray showed spurring of the bodies of the vertebrae and roughening of articular surfaces. A tentative infiltration of 10 cc. of procaine oil in the angle formed by spine and ilium and persistence of severe pain in a narrow field above the injected area permitted localization of the trigger point. Injection of another 10 cc. produced immediate cessation of all spasticity and pain. The patient was out of bed and resumed his occupation within forty-eight hours. A second injection after ten days and a third after three weeks completed treatment. There was no recurrence.

The following case illustrates treatment of backache as a result of chronic infectious disease.

Case 2.—D. G., forty-five-year-old farmer, had had brucellosis with prolonged fever and chills for four years. Penicillin and vaccine were given without apparent results. Recurrent attacks with chills and backache gradually disabled patient. Examination showed agglutination to Brucella abortus in dilution of 1:160. Temperature was 101 F. There was tenderness in the back over entire lumbar section bilaterally. Treatment with aureomycin improved general condition. Fever subsided, but backache continued. On March 3, oil infiltration of area adjacent to the third to fifth lumbar vertebrae on the right and left gave immediate symptomatic relief. A second injection on March 17 and a third on April 2 were given. Patient resumed full activity without further difficulty.

In the upper back soft tissue aches may follow the symptomatic pattern of a fractured posterior process. The pain is intense and well localized at or between the spinous processes. These rather rare cases frequently respond poorly to conservative measures, perhaps because the particular anatomy of the structure does not lend itself to prolonged resting of the affected field. Case 3 portrays this type which was the first case treated by this method.

Case 3.—F. I., a twenty-five-year-old woman, experienced sudden sharp pain in back while playing tennis and had to be helped away from the court. Examination was negative except for a severely painful area between the posterior process of the seventh and eighth thoracic vertebrae. Stooping was impossible. X-ray examination was negative for bone pathology. Treatment by strapping afforded no relief. Diathermy and restriction of activity were tried next. Then for six weeks she was immobilized in a cast. Pain returned in full force with resumption of moderate activities. Infiltration of 10 cc. procaine in oil into painful area given with immediate cessation of all symptoms. No further treatment was necessary. This case was treated in 1935, and the patient has remained well throughout this time.

Because backaches in the lower region (at and below the first lumbar vertebra) are the most suitable field for oil infiltration a more detailed description is in order. They fall roughly into two categories: those in the tissue of the sacrospinalis muscle above the iliac crest (the majority of cases) and those below the iliac around the sacroiliac ligaments. The involvement of the muscular area above the crest predominates in an approximate ratio of 4:1 throughout the investigation. During the attacks the intense pain frequently is described as being of equal severity on both sides, but careful examination usually shows and the result of infiltration proves that the soft tissue injury is on one side only. It became apparent early in this study that a considerable majority of lower backaches present the same "trigger point." It can be established in a line about $1^1/_2$ to 2 inches parallel to the spinous processes and slightly above its intersection with a line drawn across the upper end of the iliac crest. Variations in this area are confined to about 1 to $1^1/_2$ inches above this point. Thorough infiltration of the muscle in the trigger area was the method employed in these cases. The technic proceeded on the basis of experience with infiltration of the sphincter ani which "inactivated" the muscle for a period considerably exceeding the apparent anesthesia of the surrounding field. Reinfiltration of the diseased tissue before the expected return of pain permitted controlled "inactivation" of the muscle for a predetermined time which was considered sufficient to eliminate the pathology. The only, and quite common, difficulty was the absence of pain following the first treatment which is so complete that the need for further injections is not sufficiently apparent to the patient.

If the trigger point is below the crest, it can be located in the same vertical line (2 inches from the center) but at various levels. Case 4 describes the usual findings and the type of treatment.

Case 4.—Mrs. L. L., thirty-two years old, while picking up something from the floor, suddenly felt intense pain in the lower back. She was unable to walk and was confined to bed. Examination was negative except for a severe localized muscular tenderness at a point directly above right posterior iliac crest and 2 inches lateral to the spinous processes. With a 2-inch needle at the point of maximum pain, the muscle was infiltrated with 10 cc. of procaine oil. The solution was carefully dispersed by pressure massage. Cessation of pain was dramatically fast, complete, and permanent. Marking of trigger point was effected with silver nitrate. The second injection was given after ten days and the third two weeks after the second into the symptom-free muscle.

While soft tissue pathologies of recent origin frequently disappear permanently after the first injection, it was seen that many new and most recurrent cases require six weeks of "inactivation" to accomplish maximum therapeutic results.

Technic

A standardized method of treatment has been established. With the patient in prone position on the examination table, the arms hanging over the side, the back is examined by exerting sudden pressure (poking) over the suspected area. The patient is instructed to define the area where the soreness is more pronounced than otherwise. The first check is along the spinous processes, followed by examination of the parallel lines to the right and left $1^1/_2$ to 2 inches from the center. If several are given, the most tender is selected. If the "poking" shows definite pinpoint pain, the field is prepared for treatment. Experience shows that the pathology usually is one-sided (irrespective of the patient's claim that the pain is "across the back" and equally present on both sides). The skin is anesthetized with a small amount of aqueous procaine. Care is taken not to infiltrate the deeper structures with this material because much unnecessary pain can come from oil injection in a field recently anesthetized by aqueous solutions. A 2 to $2^1/_2$-inch, 20-gauge needle with syringe attached is inserted at first vertically and to the bone. Injection is made slowly as the needle is withdrawn. The needle with the point still in the skin now is pushed into a direction 15 to 20 degrees towards the spinal and another deposit made during the withdrawal. This is repeated at various angles until the quadrant is completed by infiltration directly under the skin and towards the spinous process. If a test after five minutes shows that pain still persists in the sector adjacent to the one treated, this area also is similarly treated. Strict attention to slight residual pain is necessary at this stage. Further immediate infiltration will eradicate it, but many therapeutic failures can be traced to omission of this detail.

Before the patient is permitted to get off the table, the point of injection is carefully encircled by a silver nitrate stick for future identification.

The solution found most suitable for the infiltration treatment is the following formula: procaine base, 0.075 Gm.; propyl aminobenzoate, 0.30 mg.; and benzyl alcohol, 0.025 Gm., in a vehicle of sesame oil as much as will suffice to make 5 cc.* Earlier experiments included phenol, 1 to 5 per cent. This was eliminated as unnecessary and because it caused violent tissue reactions. Nupercaine as the anesthetizing agent in place of procaine is efficient. The duration of its anesthetizing effect is longer than that of procaine in aqueous solution. The difference in oily solution is not apparent. As Nupercaine is considered more toxic and procaine has given uniformly good results, this agent has been preferred.

Of the various oil vehicles, a light and free-flowing grade of sesame oil was found to be most suitable. It must flow freely through a small gauge needle, disperse small droplets with maximum tissue contact. Heavy oils cause much painful reaction. Prerequisite for satisfactory oil infiltration is the avoidance of "pooling" of the fluid. The injecting needle has to move during the entire operation, and it is advisable to avoid recrossing the same path during one treatment.

Successful treatment is indicated by complete cessation of all pain within a few minutes after the injections. If a "catch" persists or pain continues in the vicinity, it usually is due to missing of the trigger area (which can be remedied by infiltration of the proper field) or misdiagnosis and unsuitability of the case for infiltration treatment.

Results

About 1,000 individual injections (including rectal) have been given over a period of fifteen years. There have been no serious side-effects. Dizziness (due to procaine absorption) subsides within an hour. Painful reaction following the injection is not entirely avoidable. Careful attention to technical details (avoidance of pooling, avoidance of oil injection into area previously infiltrated with aqueous solutions) reduces this incidence to a small percentage. If the reactive pain is severe—and it may last two to three days—moderate doses of aspirin and phenobarbital usually control it. Sloughs and abscesses have not been seen in the entire series.

As all cases for this study were seen in private ambulant practice, the follow-up was limited to those who returned on account of recurrent back symptoms or for other nonrelated medical problems. Thus, about 75 per cent of the more than 300 cases were questioned. This observation indicated that 80 per cent of those treated during their first attack of soft tissue backache remained well and free of symptoms. Those with a history of repeated attacks of low back pains showed a similar immediate response, but about 30 per cent showed a recurrence of symptoms within a year. In most instances the recurrence was of a distinctly milder nature, and complete freedom of symptoms was obtained by one infiltration.

Failures in results were classified in two categories: (1) partial failures due to insufficient treatment which was observed in patients who obtained satisfactory immediate treatment results but suffered severe tissue pain as a result of the injection and, therefore, did not return for consecutive treatment. Many of these patients obtained considerable symptomatic relief beginning between the fourth to the sixth day following the infiltration. (2) Complete failures are due to inability to locate the trigger point at the first injection or to erroneous diagnosis. Occasionally, the pain is so intense that it radiates not only across the back but also in a vertical direction. Here the degree of experience with the procedure will help the physician, but infiltrations into the wrong area occur nevertheless.

Backaches due to diseases of the bone, severe postural disturbances, or acute infections in adjacent structures are not helped by oil infiltrations. Lack of relief by this procedure is a valuable indication for search for the real cause of the trouble.

Summary

A principle known to proctologists has been utilized for the treatment of backaches of muscular origin and soft tissue pains in other parts of the body. Injection of anesthetizing oil into the sphincter ani produces functional paralysis of the muscle which can be prolonged by repeated injections for an indefinite time. Minor traumata in and near the muscle (fissures) heal during this period of muscular inactivity. The fact that the sphincter continues passive movements during this period does not impede the healing process.

The method has been used with much success in the treatment of aches and pains in the lower back, many presenting a history of many years. The disability in successful cases is reduced to a minimum. A series of infiltrations at stated intervals "inactivates" the diseased muscle for the desired length of time. Disappearance of pain is immediate. Observation for a considerable number of years shows that the pathologic area (the trigger point) for most lower backaches is in the tissue above the iliac crest and lateral to the spinous processes. Infiltration of the area between the spine and the trigger point produces immediate freedom from pain, leading to a high percentage of permanent recoveries. The treatment also is suitable for immediate relief of severe and disabling muscular spasms accompanying spondylitis and chronic infections. Painful injuries (intramural tears, etc.) in other parts of the system also are benefited by infiltration. This supports the concept that infiltration of anesthetic oil constitutes a valuable method to control muscular spasticity and pain for a predetermined time and to return injured tissue to a status of muscular normalcy.

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* Propalcain, Chicago Pharmacal Co.

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APPLICATION OF EPITHELIAL GRAFTS TO ORAL AND OTHER FACIAL CAVITIES

J. Eastman Sheehan, M.D., and Wilson A. Swanker, M.D., New York City

(From the Polyclinic Hospital and Post-Graduate Medical School and the New York Medical College)

In 1916, Esser employed an epidermic skin graft to replace lost membrane within the mouth.[1] Since then such grafts have been used as a mucosal substitute in syphilitic distortions of the nose, hypospadias, congenital absence of the vagina, atresia of the pharynx, trachea, and esophagus, and contractures following tonsillectomy.

Epithelial grafts are, in fact, practicable for the replacement of any loss of mucous membrane or as a lining for any cul-de-sac evaginating from mucous membrane. Their "take" is virtually certain, as they derive their nutriment from the lymph present in the tissues on which they are imposed. Even in the presence of infection they are inclined to unite with the host. Since they do not include the corium, they are free from objectionable secretions and hair.

While these grafts are suitable in all of the conditions enumerated, they are unsurpassed in the repair of malformations within the mouth or involving the facial cavities. This paper will describe the technic of their application in such situations. In all instances it is essential that the transplant be kept in close and continuous contact with the recipient structures and that appropriate measures be taken to counteract a tendency to shrinkage.

Technic in Buccal Inlays

Step 1. *Creation of Pocket.*—This is done by means of an incision through the oral mucosa near the base of the alveolar sulcus. The soft tissues are then undermined to slightly beyond the desired confines of the newly formed cavity (Figs. 1 and 2).

Step 2. *Formation of Mould.*—A mass of dental-impression wax is softened in hot water. After removal of the gauze packing, enough softened wax is inserted in the pocket to confer the desired contour. The wax is permitted to cool and harden in situ.

Step 3. *Elevation of Graft.*—With the nonhairy portion of thighs, inner arms, or abdomen as donor area, a skin graft of epidermic thickness is raised by means of dermatome or free-hand

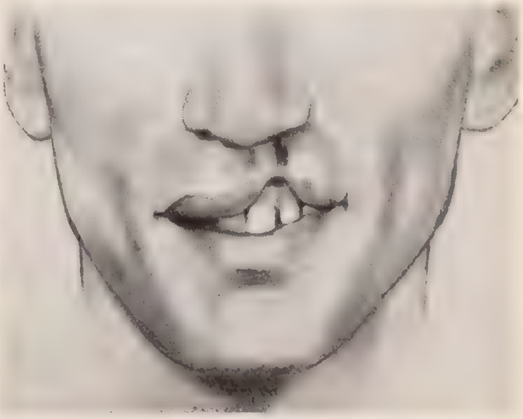

Fig. 1. Type of disfigurement demanding rectification by cavity grafting.

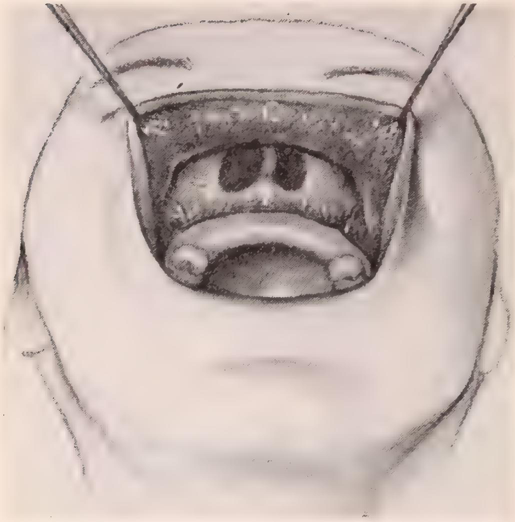

FIG. 2. Tissue from the face and upper lip separated from their attachments producing a cavity.

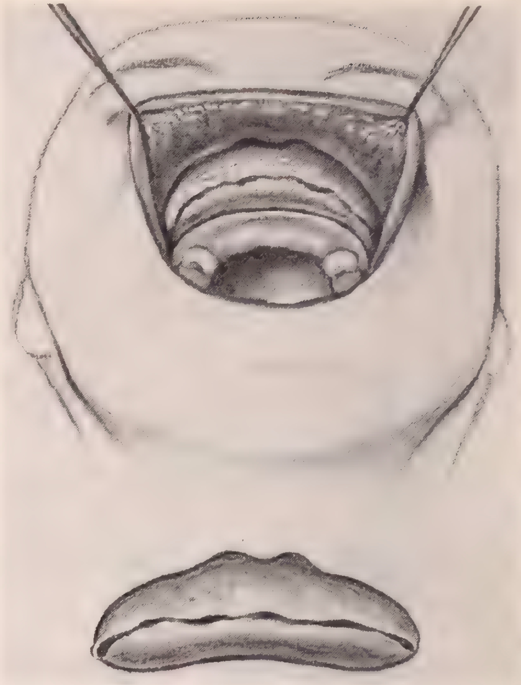

FIG. 3. Mould in situ covered with an epidermic skin graft to replace the missing mucous membrane.

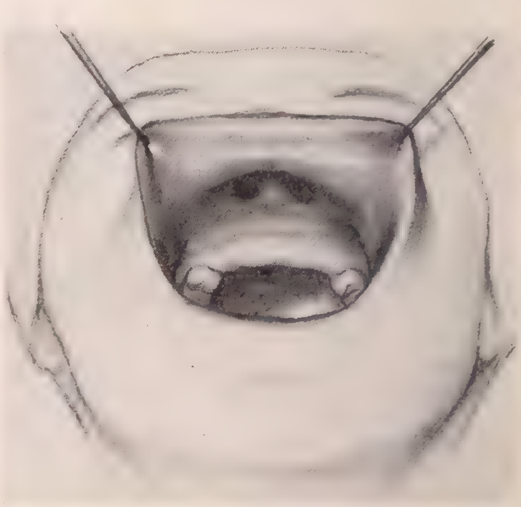

FIG. 4. Successful take of the inlayed skin which is to accept the denture.

knife. It must be of sufficient size to cover the wax mould entirely and afford a slight overlap.

Step 4. *Envelopment of Mould.*—The wax mould is removed from the pocket and the graft draped over it, raw surface outward. The skin edges are then brought together at the part of the mould corresponding to the original mucosal incision. If a dermatome has been used, there will be a sufficient residue of cement on the skin to cause the edges to adhere to each other. If not, they can be stuck together and subsequently caught up in the suture closing the mucosal incision (Fig. 3).

Step 5. *Insertion of Mould.*—The skin-covered mould is then replaced in the pocket and the mucosal incision closed with interrupted black silk (6/0) sutures (Fig. 4). Although it may be removed for cleansing, the mould is kept in the pocket until the organization of the graft is complete and the danger of shrinkage past. As a rule this takes six weeks to two months (Fig. 5).

Special Factors in Other Facial Cavities

An essentially similar technic accomplishes the lining of cavities created elsewhere in the facial structures by accident, disease, or surgical necessity. A mould is always used, the type depending on the character of the cavity. When the walls of the latter are largely osseous, there is likely to be some irregularity of contour; frequently the opening is of smaller diameter than the body. In each case individual requirements dictate the choice of either a solid mould of sectional construction or an inflatable type of apparatus.

If a form of hard substance is employed, it is made in three or more parts with the odd piece

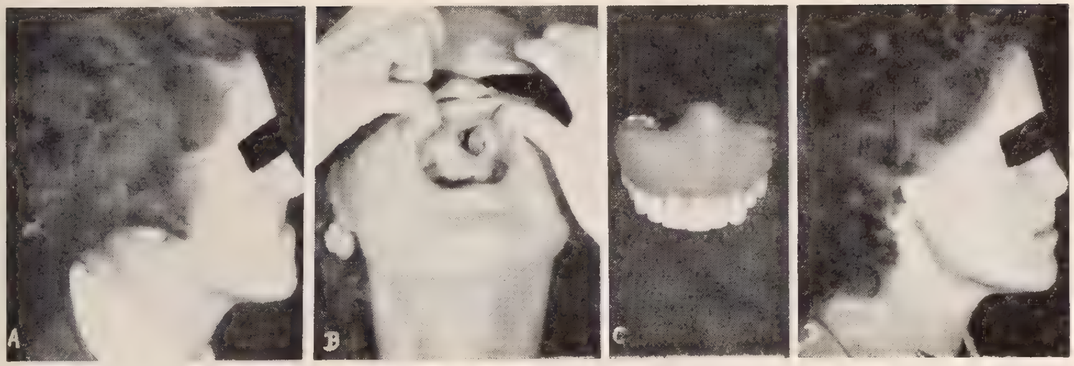

Fig. 5. Illustrative case: (A) Preoperative state—Retraction of upper lip, with its adherence to the upper jaw, resulting from repeated unsuccessful attempts (elsewhere) to repair the hare lip condition. (B) After separation of the lip from the jaw, replacement of the missing mucosa with an epidermic bit of skin. (C) Denture, defining line of teeth and maintaining desired protrusion of lip. (D) Final result with denture in place.

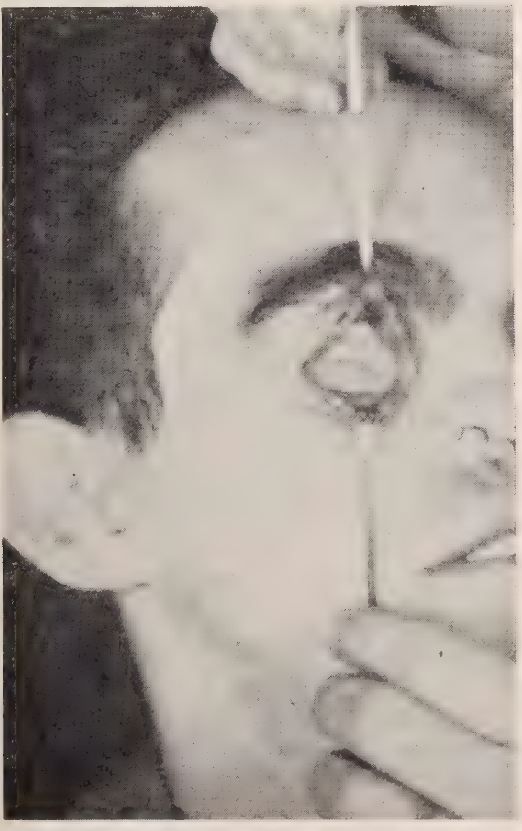

Fig. 6. Lining of ocular cul-de-sac with epithelial graft.

serving as keystone or lock piece. Either dental-impression wax or acrylic resin constitutes a satisfactory material. The former has the advantage of not requiring heat treatment in a special machine; wrapped in wax paper, it can be sterilized in an autoclave.

In a smooth-walled cavity with a very small opening compared to the body or in a cavity with ridged walls, the inflatable type of form is most suitable. Any stout-walled balloon can be used for this purpose. With an inflatable mould, the amount of pressure must be limited to the minimum necessary to maintain close contact between graft and host without ischemia.

Special considerations govern the lining of the orbital fossa after ocular enucleation or severe orbital injury (Fig. 6). Here the mould is not made by packing the orbital space; this would not create a sufficiently deep recess beneath the eyelids to receive an adequate prosthesis. Instead the mould is shaped free hand from dental-impression wax, or a cast may be used to make a mould of predetermined dimensions. After the skin-covered form is in place, the eyelids are pulled down over it and a pressure dressing applied; no suturing is required.

Summary

1. This paper describes a technic for lining oral pockets and other facial cavities with epidermic grafts of skin.

2. The same principle can be applied to the lining of deep cavities, to the reconstruction of the external auditory canal, the congenitally absent vagina and the urethra in hypospadias, and to the repair of mucous membrane defects in general.

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Case Reports

ACUTE PORPHYRIA IN A NEGRO

Victor J. Curtis, M.D., and Joseph J. Giliberti, M.D., New Rochelle, New York

(*From the Medical Service of the New Rochelle Hospital*)

PORPHYRIA is an inborn error of metabolism, of unknown etiology, characterized by excretion in the urine and feces of large amounts of porphyrins. The occurrence of acute porphyria in the Negro race is uncommon. Rothman, in 1926, reported a case in a Negro child.[1] Barnes, in 1945, included five Bantu natives in a report of 11 South African cases of porphyrinuria.[2] None of these, however, had acute porphyria. Schneck reported a case in a Negro soldier.[3] The diagnosis was not confirmed by either chemical or spectroscopic examination of the urine.

No other reports of this disease occurring in a Negro could be found.

Case Report

A thirty-nine-year-old Negro chauffeur was admitted to the New Rochelle Hospital on January 6, 1948, complaining of abdominal pain. On December 27, 1947, after shoveling snow, he was seized with a gnawing periumbilical pain followed shortly by nausea and vomiting. He was treated symptomatically at home and then was admitted to the hospital for further study.

Physical examination showed an oral temperature of 100.8 F. and a blood pressure of 160/120. There were no other positive findings.

Blood count, urine analysis, and a sedimentation rate were normal, and a blood Wassermann was negative. Spinal fluid was normal. An electrocardiogram showed sinus tachycardia. An intravenous pyelogram, chest and lumbosacral x-rays were negative.

His acute symptoms lasted five days, but throughout his hospitalization he complained of tenderness and "pins and needles" in the axillae and thighs.

He was discharged after three weeks with a diagnosis of radiculitis.

Second Admission (*Fourteen Months Later*).—Two days prior to admission, again after shoveling snow, the patient had periumbilical pain, nausea, and vomiting. He had become constipated. He had noticed his urine to be dark on many occasions in the previous year, and on occasion it had been "port wine" in color. He had lost 15 pounds in one year although his appetite had remained good.

His father had died in 1930 with symptoms not unlike his own. A communication from the hospital where his father had been a patient revealed that the latter had had periumbilical pain, weight loss, mental deterioration, and terminally, intercostal paralysis. Necropsy showed "Landry's paralysis."

Admission temperature was 100.2 F., pulse 86, blood pressure 160/95. There was generalized abdominal tenderness on palpation, mostly in the periumbilical and suprapubic regions, but no rigidity, muscle guarding, or rebound tenderness was present. There were no other positive findings. Neurologic examination was negative.

On admission, urinalysis, blood count, blood sugar, blood amylase, and lipase were within normal limits. Sedimentation rate was normal, and Wassermann was negative. On March 19, the thymol turbidity test was reported as 20 units (normal up to 4 units). A bromsulfalein test was done on March 21 which showed retention of 60 per cent of the dye at forty-five minutes and 55 per cent after one hour (5 mg. of dye per Kg. of body weight). The blood cholesterol was 310 mg. per 100 cc.; cholesterol esters were 152 mg. An electrocardiogram was done on March 20 and showed sinus tachycardia with a rate of 125 per minute. A gallbladder series showed nonvisualization at the end of seventeen hours. Chest x-ray and intravenous pyelogram were negative. A urinalysis repeated on March 24 was normal except for a dark amber color to the urine. A repeated bromsulfalein test done on March 29 showed a retention of 40 per cent at the end of one hour. Barium enema was done on March 30 and showed only a redundancy of the distal transverse colon, with thorough examination impossible because of failure of fecal evacuation. X-rays of the lumbosacral region were negative. A bromsulfalein test done on April 18 showed decreased retention of the dye, 20 per cent at the end of forty-five minutes and 16 per cent at the end of one hour. The cephalin flocculation test was negative at forty-eight hours, and thymol turbidity was 8.4 units.

On April 2, a sodium hydroxide precipitate of the urine (redissolved in hydrochloric acid) showed fluorescence in ultraviolet light, indicating the presence of porphyrins. The test for porphobilinogen, by the method of Watson and Schwartz, was also strongly positive. The urine showed the bands of coproporphyrin spectroscopically. A quantitative estimation of the urinary coproporphyrins showed 1,814 micrograms excreted in twenty-four hours (normal range 10 to 100 micrograms).

The temperature throughout the first four weeks of his hospitalization showed a persistent low-grade elevation ranging between 99.4 and 101.8 F. Throughout his hospitalization he showed a persistent tachycardia up to 130 beats per minute, greatly out of proportion to his temperature. Daily blood pressures were taken and varied from high of 168/120 to a low of 112/76, with a gradual reduction as his acute symptoms subsided. The patient's nausea and vomiting continued for the first five days, and then he had no recurrence. He continued to complain of his periumbilical pain, but at no time were any positive findings elicited.

After the first week of hospitalization, the patient became restless and apprehensive. It was noted about this time that his urine had become much darker on voiding in the morning, and a specimen was taken and allowed to stand in the direct sunlight for twenty-four hours, after which time it was found it had turned to a deep red, port wine color. At no time during this hospitalization was the patient's urine red immediately after voiding.

On March 24, he began to have visual and auditory hallucinations and became disoriented. He had the sensation of snakes crawling on his skin and complained bitterly that the weight of the bedclothes caused numbing of his extremities. There were no positive neurologic findings at this time.

He was given large doses of vitamin B complex, ascorbic acid, and calcium gluconate by vein. Crude liver extract was given intramuscularly.

One week after his hallucinations began, his sensorium cleared, but he now complained of a "nagging ache" in the anteromedial aspect of both thighs. Intravenous calcium gluconate gave great relief.

These symptoms gradually subsided, and he was discharged on April 22, complaining of weakness and constipation.

Summary

A case of acute porphyria in a Negro has been presented. This man had gastrointestinal, neurologic, and psychiatric disturbances, and his urine showed abnormally large amounts of coproporphyrin. Both attacks were precipitated by exertion. His father died under strikingly similar circumstances with a Landry's paralysis.

The infrequent occurrence of this disease in the Negro has been stressed.

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CERVICAL LUNG HERNIA ASSOCIATED WITH A SUBSTERNAL THYROID

H. E. Bass, M.D., New York City

(*From the Department of Pulmonary Diseases, Jewish Memorial Hospital*)

HERNIA of the lung is an infrequent condition as judged by the sparse references to it in the medical literature. Until recently not more than 200 cases had been recorded.[1]

A true lung hernia may be defined as a protrusion of the lung and pleura through an abnormal opening in the thoracic cage. By virtue of the thoracic anatomy, herniation thus may theoretically take any of four directions: (1) medially, mediastinal lung hernia; (2) laterally, thoracic lung hernia; (3) downward, diaphragmatic lung hernia, and (4) upward, cervical lung hernia.

Mediastinal lung hernia has been seen in cases of both artificial and spontaneous pneumothorax.[2] Herniation may occur anteriorly between the sternum and heart or posteriorly between the esophagus and aorta below the tracheal bifurcation. Such herniation is not unusual after discontinuance of artificial pneumothorax in cases of pulmonary tuberculosis where extensive contraction of the healed lung has taken place.

Thoracic lung hernia, a frequent variety, is usually seen as an intercostal protrusion. It is generally the result of trauma and frequently requires surgical repair.[3,4] Thoracic lung hernia is also occasionally seen as an aftermath of thoracoplasty procedures for pulmonary tuberculosis.

Diaphragmatic lung hernia is a rare entity. In fact, only one such case has ever been recorded, and Korol considered that case one of prolapse rather than herniation.[5,2] In view of the pressure relationships in the pleural cavity and abdomen, it is evident that any congenital or traumatic weakening of the diaphragm would more likely result in herniation upwards than in the reverse direction.

Cervical lung hernia involves protrusion of the apex of the lung through the superior thoracic aperture. Normally, a layer of fascia (Sibson's fascia) is present over the apex of the lung which strengthens the pleura in this region and limits the cervical excursion of the pulmonary apex. Weakening or tear of this fascial layer may result in upward extension of the lung into the neck between the sternocleidomastoid and scalenus anticus muscles.

The present report deals with a case of cervical lung hernia associated with a substernal thyroid.

Case Report

The patient was a fifty-seven-year-old white man who had worked as a tailor for many years. About thirty years before coming under present medical observation, he had first noted a bulge on the right side of the neck, just above the clavicle. This swelling was brought on only by straining or violent coughing, the protrusion subsiding immediately after cessation of these efforts. In later years, he had developed a chronic severe cough, expectoration of mucoid sputum, occasional wheezing, and some discomfort in the upper chest. More recently, the bulge on the right side of the neck had become more prominent. He complained of choking sensations. There was no dysphagia.

Examination disclosed a barrel-chested individual, slightly cyanotic. The chest was hyper-resonant, and breath sounds were generally diminished Faint expiratory sibilant wheezing was heard over the entire chest. A few medium rales were heard at the bases. On executing the Valsalva maneuver, that is, forced expiration with the glottis closed, a large bulge appeared in the right supraclavicular space to the right of the trachea (Figs. 1 and 2). The swelling was present only while the Valsalva maneuver was maintained and disappeared promptly on

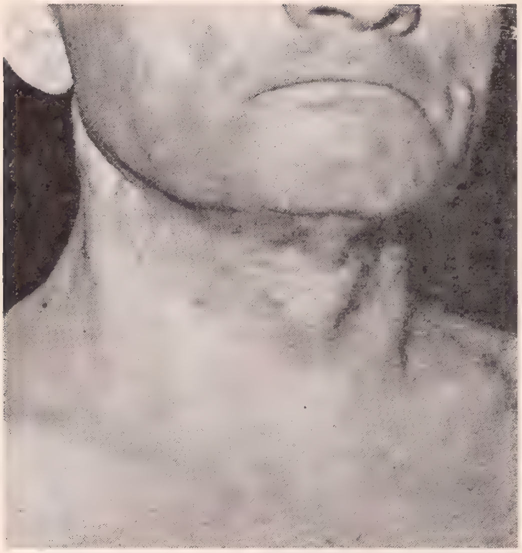

Fig. 1. Right side of neck before Valsalva maneuver.

quiet respiration. The swelling did not pulsate, was boggy to touch, and readily gave way to the examining finger. X-ray of the chest revealed evidence of pulmonary emphysema. There was a substernal thyroid with calcification of its rim (Fig. 3). This mass was more apparent to the right and under fluoroscopy moved upward on swallowing.

Comment

The case herein reported represents one of the rarer types of lung hernia, namely, the cervical variety. In addition, the association of a substernal thyroid is interesting in view of its possible etiologic relationship. Graham reported the only other case of this kind, i.e., a patient with a cervical lung hernia on the right side of the neck associated with an adenoma of the right lobe of the thyroid.[6] In that case, the right lobe of the thyroid gland was resected under local anesthesia. At operation, following removal of the gland, the patient was asked to inflate his neck. It was noted that the apex of the lung came up into the right side of the neck. Repair of the defect in Sibson's fascia was effected by placing a firm iodoform packing against the lung. Presumably, sufficient scar tissue formed and resulted in a permanent cure.

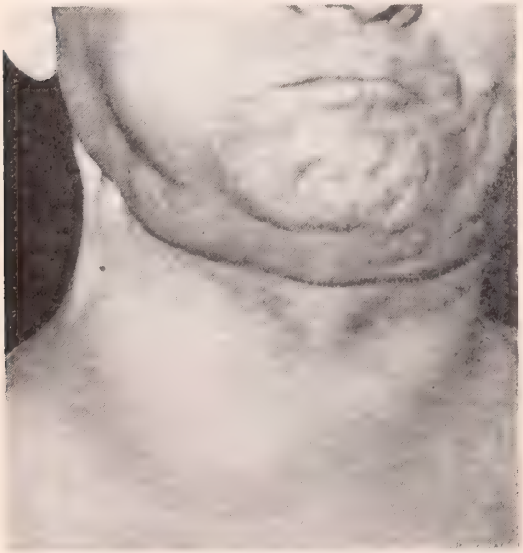

Fig. 2. Right side of neck during Valsalva maneuver, showing herniation of lung through superior aperture of chest.

In summary, cervical lung hernia should be considered in the differential diagnosis of neck tumors. The herniation in this case may have been influenced by an associated substernal thyroid and the condition further induced by severe cough in an individual with marked pulmonary emphysema and possibly bronchiectasis. Surgery was considered inadvisable because of the latter conditions.

Conclusions

1. Various types of pulmonary herniation have been described.
2. A case of cervical lung hernia associated with a substernal thyroid is presented.

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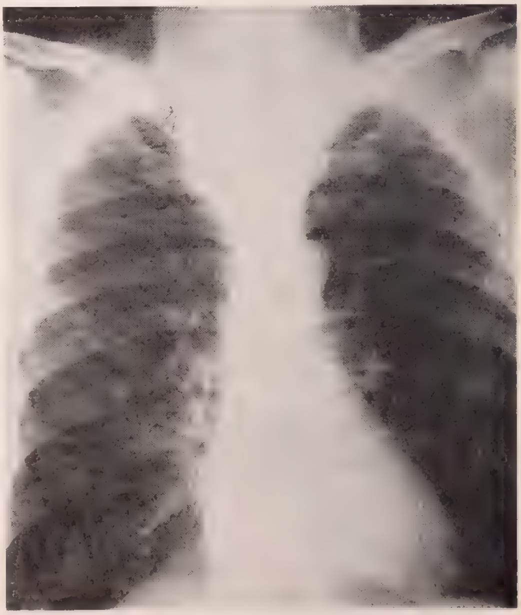

Fig. 3. X-Ray of chest showing substernal thyroid to right of trachea.

RETENTION OF PREGNANCY FOR EIGHTY-SEVEN DAYS AFTER PREMATURE RUPTURE OF MEMBRANES

Allan Putterman, M.D., Jamaica, New York

(From the Department of Obstetrics and Gynecology, Jamaica Hospital)

SPONTANEOUS premature rupture of the membranes usually occurs at term or late in pregnancy. Atkins reported 102 cases of this type of complication.[1] He found that 48 of these cases were at term, 34 of them occurred during the eighth month, 15 appeared in the seventh month, and five during the fifth and sixth months of pregnancy. The time that elapsed from rupture of membranes to the onset of labor varied from one hour to fifty-six days in the aforementioned report.

Rupture of the membranes is nearly always followed by the onset of active labor and a resultant emptying of the uterus within a very short time. Because of this almost universal observation, artificial rupture of the bag of waters has today become not only a frequent method of inducing labor, but it is also considered to be one of the methods that nearly always meets with success. When spontaneous rupture of the membranes occurs, one should always keep in mind the possibility of mechanical maladaptation of the presenting part. It may also be a warning of the existence of possible fetal pathology.

This case is being presented because the pregnancy did not terminate despite early rupture of the membranes but went to term and resulted in a normal, spontaneous delivery of a 7$^1/_2$-pound female baby that showed no abnormalities.

Case Report

K. D., aged twenty-two years, was admitted to Jamaica Hospital on October 15, 1949, because of a sudden loss of a great deal of fluid per vaginum. She was six months pregnant at this time. This occurred spontaneously at about 2:00 A.M. on the aforementioned date while the patient was fast asleep. The patient denied any sexual intercourse or any other excess physical activity prior to the expulsion of this fluid. The amount of water that was expelled came in such volume that the bed was soaked, and then several large towels suffered the same fate while enroute to the hospital. No pains accompanied the break of the bag of waters. Fetal movements persisted but became somewhat weakened, and no bloody discharge was noted.

Her past history revealed the absence of any illness or any surgical procedures. Her menstrual history was essentially normal. On September 20, 1948, she gave birth to her first baby, which weighed 6 pounds, 12 ounces and was delivered uneventfully with the aid of outlet forceps and episiotomy. She had had no abortions nor miscarriages. This present pregnancy was her second. Her last menstrual period was on April 4, 1949. Her estimated date of confinement was January 11, 1950.

Physical examination on admission revealed a well-developed female who did not appear ill or in pain, although she was a bit apprehensive. Amniotic fluid was actively flowing from the vagina. No blood or unusual findings were noted in this fluid. The fundus of the uterus at this time was at the umbilicus. No uterine contractions were seen or felt. The fetal heart was present in the left lower quadrant and was of good quality and normal in rate. A very gentle rectal examination revealed a cervix that was closed, elongated, not negotiable, and had no products of gestation presenting at the external os. The head of the fetus seemed to be at the inlet and was easily palpable. Blood pressure was normal at this time. Previous examination at the office had revealed a good sized gynecoid pelvis, and no pathologic lesions in her genital pelvic organs were found. The pelvic floor was firm, the bladder in good position, and there was no prolapse of the uterus. Laboratory examinations revealed a normal urine, a normal blood count, negative Wassermann, type O blood, and an Rh positive determination. Blood pressure was normal.

It was felt that a course of watchful waiting should be followed. The patient was adequately sedated and kept completely at rest in bed. The fluid flow from the vagina remained rather profuse, especially on movement, for about a day and a half after admission. With this flow of amniotic fluid a drop in the height of the fundus of the uterus from its position at the umbilicus to one fingerbreadth below this point was noted. About two days after the flow of fluid stopped, the fundus of the uterus was noted to be rising. This continued until at the time of discharge on October 25, 1949, at which time the fundus had risen to two fingerbreadths above the umbilicus. The uterus had become less firm, more oval, and was now the size expected of a pregnancy of six months duration. Rectal examination at time of discharge revealed a cervix that was closed, elongated, and not negotiable, and again no products of gestation was found at the external os. The presenting part, which was the vertex, was now above the inlet and floating and not as easily felt as on the initial examination at the time of patient's admission to the hospital. The fetal heart remained normal throughout. The fetal movements became more prominent to the mother as the uterus enlarged. At no time did a rise in temperature develop during her stay, and she was discharged at the end of the tenth day in the hospital.

On January 10, 1950, at Jamaica Hospital, this patient spontaneously gave birth to a normal female child which weighed 7 pounds, 8 ounces. The baby was delivered as a left occipito-anterior. It cried very readily and was normal in every respect at time of delivery and on its discharge from the hospital. After an uneventful six-day stay, the mother was discharged. The membranes during this labor ruptured spontaneously at the end of the first stage, and this was followed soon thereafter by delivery of the baby. The fluid was normal in amount and content.

Comment

This case presents several unusual and rarely occurring features. First, the premature rupture of the membranes occurred during the sixth month of pregnancy. Second, despite this the pregnancy continued on to term in a normal manner, and the onset of active labor came eighty-seven days after the spontaneous rupture of the membranes. Third, it was noted that immediately after the expulsion of amniotic fluid, the physiologic factors that produce the amniotic fluid immediately replaced the loss that this pregnancy had experienced. It is interesting to note that replacement took approximately ten days, as estimated by the change in size of uterus during this period of time.

Hydrorrhea gravidarum was considered but was ruled out because of the great amount of fluid, its one occurrence, and its association with the change in the size of the uterus. With the hydrorrhea the uterus does not change its size at all.

The treatment consisted of sedation and complete bed rest. It was even decided not to use penicillin prophylactically. This was done because it was felt that a parenteral medication at this time would have caused great concern to the patient and possibly would have interfered with the complete and proper rest that was desired.

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TREATMENT OF TULAREMIA WITH AUREOMYCIN

A. E. Dagradi, M.D., N. Sollod, M.D., and J. H. Friedlander, M.D., Northport, New York

(*From the Medical Service, Veterans Administration Hospital, Northport*)

THERE is a paucity of clinical reports on the use of aureomycin for the treatment of tularemia. Since the introduction of aureomycin in 1948, two reports have appeared in the literature relative to its use in tularemia.

Woodward *et al.* reported the successful treatment of three cases of tularemia with aureomycin.[1] He also compared the effects of aureomycin, streptomycin, and chloromycetin in mice experimentally infected with tularemia and concluded that aureomycin was most effective in mice.

Ransmeier *et al.* treated one case of tularemic pneumonia and one of ulceroglandular tularemia with striking success.[2] In another case of ulceroglandular tularemia treated on the twelfth day of the disease there was subjective improvement, but the glands went on to suppuration.

The following is a case of ulceroglandular tularemia treated with aureomycin.

Case Report

A fifty-three-year-old, white male hospital attendant was admitted on November 5, 1949, complaining of severe frontal headache, generalized malaise, cough, and fever of two days duration. Six days prior to admission, he sustained a small superficial laceration at the tip of his right thumb while eating crabs. The following day he went rabbit hunting, killed three rabbits, and skinned them. He later recalled distinctly that the first rabbit killed lacked the usual agility in running which the other rabbits displayed. Forty-eight hours later, he noted unusual fatigability, malaise, and lassitude, followed by fever, chills, sweats, frontal headache, and cough, for which he was admitted to the hospital.

Physical examination on admission revealed the patient to be acutely ill with flushed skin and profuse sweating. The temperature was 104.2 F. and pulse 97. The pharynx showed moderate congestion, and there were a few scattered rhonchi in both lung fields. X-ray of the chest on admission was negative. During the following two days the temperature remained septic in character, and he developed localized tenderness at the tip of his right thumb with two moderately enlarged tender lymph nodes in the right axilla. There was some surrounding edema of the soft tissues of the right axilla. No lymphangitic streaks were noted, nor was there enlargement of the epitrochlear lymph nodes.

Four blood cultures were taken and inoculated on cystine agar and in tryptose phosphate broth but failed to grow Pasteurella tularense. The local tenderness in the right thumb persisted, and an ulcer gradually developed at this site. A skin test with 0.05 cc. of tularemia antigen was strongly positive on the tenth day of his illness. Agglutination test for tularemia, which was negative on the tenth day of his illness, showed a gradually increasing titer to 1:640 on the twenty-second day of his illness.

On the eleventh hospital day, aureomycin in 3-Gm. daily doses was instituted and continued for ten days. There were no toxic effects noted. Within two days of the institution of therapy, patient noted a dramatic improvement of his subjective complaints and there was a progressive decline in his temperature, which reached normal in ninety-six hours and remained normal throughout the remainder of his hospital stay. The ulcer healed six days after onset of treatment, and the axillary adenopathy improved considerably but did not entirely disappear. He was discharged on the twenty-eighth day with no complaints.

Comment

Streptomycin has been used with considerable success in the treatment of tularemia, particularly the pulmonary form. However, should sufficient data accumulate to conclude that the therapeutic effect of aureomycin is comparable to that of streptomycin, a further advantage will accrue in that the former is administered orally and there is little toxic reaction. Definite evaluation of aureomycin in the treatment of tularemia cannot be made on such few clinical reports. The results thus far are encouraging, but further evaluation in additional cases is desirable.

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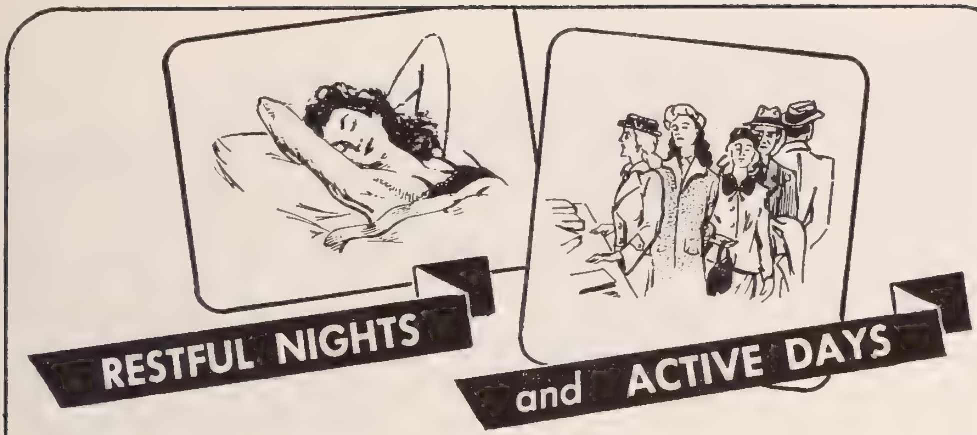

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NECROLOGY

Frederick Bauer, M.D., of Brooklyn, died on May 6 at the age of sixty-one. Dr. Bauer received his medical degree from the University of Bonn in 1912. He was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Nathan Thomas Beers, M.D., of Brooklyn, died on July 7 at Fitkin Memorial Hospital, Neptune, New Jersey, at the age of seventy-six. He had been vacationing at Spring Lake, New Jersey. Dr. Beers received his medical degree from the Long Island College Hospital School of Medicine in 1897 and had practiced for more than fifty years. Dr. Beers was one of the first to use radium treatment for cancer in this country. He also helped develop the use of color photography in medicine and did postgraduate work at the University of Berlin in Germany.

Dr. Beers was consulting dermatologist at the Brooklyn and Methodist Hospitals, senior attending dermatologist at St. Mary's Hospital, an honorary member of the staff of the Peck Memorial Hospital, and dermatologist emeritus at St. John's Hospital, all in Brooklyn.

During the Spanish-American War, Dr. Beers served in the U.S. Army Medical Corps, and during World War I he was an intelligence officer with the American Expeditionary Forces. A Diplomate of the American Board of Dermatology and Syphilology and a Fellow of the American College of Physicians, Dr. Beers was a member of the American Radiology Society, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James Jay Finn, M.D., of Findley Lake, died on April 23 at the age of eighty-eight. Dr. Finn received his medical degree from the New York University School of Medicine in 1890 and had practiced in Chautauqua County from 1896 until his retirement several years ago.

Philip J. Friedman, M.D., of New York City, died in May at the age of sixty-six. Dr. Friedman received his medical degree from the New York University and Bellevue Hospital Medical College in 1910 and had served as assistant gynecologist at St. Clare's Hospital. Dr. Friedman was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry Du Bois Goetchius, M.D., of New York City, died on June 17 at the age of eighty. Dr. Goetchius was graduated from the Albany Medical College in 1895 and interned at St. Luke's Hospital in New York City. He had practiced medicine for more than fifty years until his retirement several years ago. Dr. Goetchius was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles A. Halberstam, M.D., of the Bronx, died on June 10 at the age of fifty-three. Dr. Halberstam received his medical degree from the Tufts Medical School in 1925. He was assistant attending surgeon at the Flower and Fifth Avenue Hospitals, associate surgeon at the Metropolitan Hospital, and adjunct surgeon at the Bronx Hospital. A Fellow of the American College of Surgeons, Dr. Halberstam was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harry Charles Hummell, M.D., of Rochester, died on July 5 at the age of sixty-seven. Dr. Hummell was graduated from the University of Buffalo School of Medicine in 1908 and practiced in Rochester for forty years until his retirement in 1948. In 1922 Dr. Hummell joined the staff of the city health officer, in 1932 he was appointed deputy city health officer, and in 1933 was given a permanent appointment to the post. He was consulting physician at St. Mary's and Highland Hospitals. Dr. Hummell was a member of the American Public Health Association, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Wallace Bruce Large, M.D., of Rochester, died on July 5 at the age of seventy-three. Dr. Large received his medical degree from the University of Toronto Medical College in 1907. During World War I he served in the U.S. Army Medical Corps. In 1939 he won the New York State Left-Handed Golfers championship and had won several other golfing trophies. Dr. Large was a member of the Rochester Academy of Medicine, the Rochester Pathology Society, the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Herbert Losche, M.D., of Jamaica, died on July 7 at the age of forty-seven. Dr. Losche received his medical degree from the New York University and Bellevue Hospital Medical School in 1930. He was clinical assistant physician at the Queens General Hospital and attending physician at the Jamaica Hospital. Dr. Losche was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

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BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selections for review will be based on merit and interest to our readers.

BOOKS RECEIVED

Thomas W. Salmon, Psychiatrist. By Earl D. Bond, M.D. With the collaboration of Paul O. Komora. Octavo of 237 pages, illustrated. New York, W. W. Norton & Co., 1950. Cloth, $3.00.

Urological Surgery. By Austin Ingram Dodson, M.D. With contributions by Randal A. Boyer, M.D., Douglas G. Chapman, M.D., Fred M. Hodges, M.D., *et al.* Second edition. Octavo of 855 pages, illustrated. St. Louis, C. V. Mosby Co., 1950. Cloth, $13.50.

A Synopsis of Obstetrics and Gynaecology. By Aleck W. Bourne, M.B. (Eng.) Tenth edition. Duodecimo of 522 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $4.50.

The 1949 Year Book of Drug Therapy. (November, 1948–October, 1949). Edited by Harry Beckman, M.D. Duodecimo of 718 pages, illustrated. Chicago, Year Book Publishers, 1950. Cloth, $4.75.

Bowery to Bellevue. The Story of New York's First Woman Ambulance Surgeon. By Emily Dunning Barringer. Octavo of 262 pages, illustrated. New York, W. W. Norton & Co., 1950. Cloth, $3.00.

Medical Management of Gastrointestinal Disorders. By Garnett Cheney, M.D. Octavo of 478 pages, illustrated. Chicago, Year Book Publishers, 1950. Cloth, $6.75.

Community Health Organization. By Ira V. Hiscock. Fourth edition. Octavo of 278 pages. New York, Commonwealth Fund, 1950. Cloth, $2.75.

The Envelope. A Study of the Impact of the World upon the Child. By James S. Plant, M.D. Octavo of 299 pages. New York, Commonwealth Fund, 1950. Cloth, $3.00.

The Nose. An Experimental Study of Reactions Within the Nose in Human Subjects During Varying Life Experiences. By Thomas H. Holmes, M.D., Helen Goodell, B.S., Stewart Wolf, M.D., and Harold G. Wolff, M.D. Octavo of 154 pages, illustrated. Springfield, Ill., Charles C Thomas, 1950. Cloth, $4.50.

Doctor and Patient and the Law. By Louis J. Regan, M.D., L.L.B. Second edition. Octavo of 545 pages. St. Louis, C. V. Mosby Co., 1949. Cloth, $10.00.

Progress in Clinical Endocrinology. Edited by Samuel Soskin, M.D. Octavo of 641 pages, illustrated. New York, Grune & Stratton Co., 1950. Cloth, $10.00.

The 1949 Year Book of Neurology, Psychiatry and Neurosurgery. (December, 1948–October, 1949). Neurology edited by Roland P. Mackay, M.D. Psychiatry edited by Nolan D. C. Lewis, M.D. Neurosurgery edited by Percival Bailey, M.D. Duodecimo of 668 pages, illustrated. Chicago, Year Book Publishers, 1950. Cloth, $5.00.

Report of the Department of Health, City of New York, for the Years 1941–1948. Harry S. Mustard, M.D., Commissioner of Health. Octavo of 635 pages, illustrated. New York, Department of Health, (1949).

Publications from the Division of Surgery. Northwestern University Medical School, Vol. XIX, 1948–1949. Octavo. Various pagination, illustrated. Chicago, (Northwestern University Medical School), n.d.

The Control of Communicable Diseases in Man. An Official Report of the American Public Health Association. Seventh edition. Duodecimo of 159 pages. New York, The American Public Health Association, 1950. Paper, $.40.

Physicians' and Nurses' Concise Medical Encyclopaedia. By William H. Kupper, M.D. Octavo of 450 pages, illustrated. Los Angeles, Biblion Pr., 1950. Cloth, $7.50.

Penicillin. Its Practical Application. Under the General Editorship of Professor Sir Alexander Fleming, M.B. Second edition. Octavo of 491 pages, illustrated. St. Louis, C. V. Mosby Co., 1950. Cloth, $7.00.

Doctors Courageous. By Edward H. Hume, M.D. Octavo of 297 pages, illustrated. New York, Harper & Bros., 1950. Cloth, $3.50.

Public Health Is People. An institute on mental health in public health held at Berkeley, California, 1948. Reported by Ethel L. Ginsburg. Octavo of 241 pages. New York, Commonwealth Fund, 1950. Cloth, $1.75.

The Medical Clinics of North America. Nationwide Number. March, 1950. Octavo. Philadelphia, W. B. Saunders Co., 1950. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

Proceedings of the First Clinical ACTH Conference. Edited by John R. Mote, M.D. Octavo of 607 pages, illustrated. Philadelphia, Blakiston Co., 1950. Cloth, $5.50.

Treatment in Psychiatry. By Oskar Diethelm, M.D. Second edition. Octavo of 546 pages. Springfield, Ill., Charles C Thomas, 1950. Cloth, $8.50.

Biological, Medical and Health Effects and Implications of Atomic Energy in New York City. Eighth Exploratory Meeting of the Religious and Welfare Committee of the New York Committee on Atomic Information, Inc., held at the Academy of Medicine . . . New York City, April 26, 1949. Quarto of 40 pages. New York, New York Committee on Atomic Information, Inc., [1949]. Paper, $1.00.

Handbook of Physical Medicine and Rehabilitation. Selections Authorized for Publication by the Council on Physical Medicine and Rehabilitation, American Medical Association. Octavo of 573 pages, illustrated. Philadelphia, Blakiston Co., 1950. Cloth, $4.25.

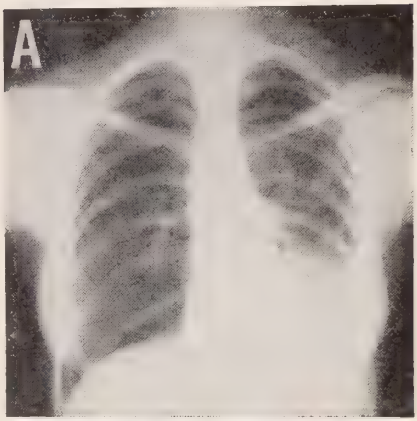
[Continued on page 1976]

Effective Chemotherapy in TUBERCULOSIS

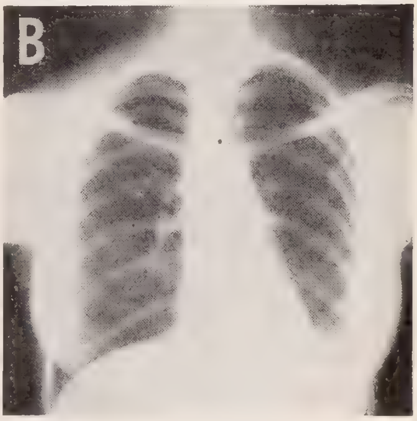
DIHYDROSTREPTOMYCIN or Streptomycin, used alone or in combination with para-aminosalicylic acid, is recognized as a valuable and, in some instances, an essential adjuvant in the treatment of selected types and stages of tuberculosis.

Para-aminosalicylic acid is capable of inhibiting or significantly delaying the emergence of bacterial resistance to dihydrostreptomycin or streptomycin.

These drugs are not to be regarded as substitutes for traditional therapeutic methods. Rather, they serve best when properly integrated with bed rest and, where necessary, collapse measures or other forms of surgery.



A. Before Treatment *(9 days prior to Dihydrostreptomycin therapy) Diffuse lobular tuberculous pneumonia, lower half of left lung; thin-walled cavity above hilus (3 x 3.5 cm.).*



B. After 3 Months' Treatment *(2 days after discontinuance of Dihydrostreptomycin) Considerable clearing of acute exudative process in the diseased lung; cavity smaller and wall thinner.*

Detailed literature on the subject of chemotherapy in tuberculosis will be supplied upon request.

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[Continued from page 1974]

Muskelpharmakologie und ihre Anwendung in der Therapie der Muskelkrankheiten. Edited by Dr. Otto Riesser. Octavo of 232 pages, illustrated. Bern, Switzerland, Medizinischer Verlag Hans Huber, 1949. Paper, 16.80 Sw.fr.

Harvey Cushing. Surgeon, Author, Artist. By Elizabeth H. Thomson. Octavo of 347 pages, illustrated. New York, Henry Schuman, 1950. Cloth, $4.00.

Ecology of Health. The New York Academy of Medicine Institute on Public Health, 1947. Edited by E. H. L. Corwin, Ph.D. Octavo of 196 pages. New York, Commonwealth Fund, 1949. Cloth, $2.50.

Factors Regulating Blood Pressure. Transactions of the Third Conference May 5–6, 1949, New York, New York. Edited by B. W. Zweifach and Ephraim Shorr. Octavo of 280 pages, illustrated. New York, Josiah Macy, Jr., Foundation, 1950. Paper, $2.55.

Liver Injury. Transactions of the Eighth Conference April 28 and 29, 1949. New York, New York. Edited by F. W. Hoffbauer, M.D. Octavo of 164 pages, illustrated. New York, Josiah Macy, Jr., Foundation, 1950. Paper, $1.60.

Conference on Problems of Aging. Transactions of the Tenth and Eleventh Conferences February 9–10, 1948, and April 25–26, 1949. Edited by Nathan W. Shock. Octavo of 258 pages, illustrated. New York, Josiah Macy, Jr., Foundation, 1950. Paper, $3.75.

Report National Conference on Cardiovascular Diseases. By Alexander L. Crosby. Quarto of 28 pages. New York, American Heart Association, 1950.

Clinical Nutrition. Edited by Norman Jolliffe, M.D., F. F. Tisdall, M.D., and Paul R. Cannon, M.D. For the Food and Nutrition Board of the National Research Council. Octavo of 925 pages, illustrated. New York, Paul B. Hoeber, 1950. Cloth, $12.

BOOKS REVIEWED

Source Book of Orthopaedics. By Edgar M. Bick, M.D. Second edition. Octavo of 540 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $8.00.

Dr. Bick, in the second edition of his *Source Book of Orthopaedics*, has given us a history of this subject which is delightful reading and is very informative.

The book should be read by anyone interested in the history of orthopedics.

O. C. Hudson

Advances in Military Medicine. Made by American Investigators Working Under the Sponsorship of the Committee on Medical Research. [Office of Scientific Research and Development.] Edited by E. C. Andrus, M.D., D. W. Bronk, Sc.D., G. A. Carden, Jr., M.D., *et al.* In 2 volumes. Octavo of 900 pages, illustrated. Boston, Little, Brown & Co., 1948. Cloth, $12.50 set.

Advances in Military Medicine represents an almost unheard of achievement in research on the problems of military medicine. The only feasible way to accomplish this on such a broad scale, where the efforts of laboratory and medical men were integrated into a two-volume work, would be through such an agency as the Office of Scientific Research and Development.

The volumes are of particular interest to the public health officer, the sanitary specialist, and the medical officer of the armed forces for the painstaking accumulation of useful information on the study of the agents for use in parasitic therapy, the insecticides, and pest control.

This work is a needed addition to the service and public health libraries, but is not intended to be a part of the equipment of the medical officer serving in the theater of operations.

Carl W. Lupo

Public Health Statistics. By Marguerite F. Hall, Ph.D. Second edition. Octavo of 441 pages, illustrated. New York, Paul B. Hoeber, 1949, Cloth, $7.50.

This book presents in an intensive way the subject of statistics, particularly with its application in the field of public health. As such, it is of definite value as reference material for health departments and similar organizations. It is a good textbook, too, for students preparing for public health work.

A. E. Shipley

Applied Biophysics. Survey of Physical Methods Used in Medicine. A Symposium. Edited by Dr. N. Howard-Jones. Duodecimo of 293 pages, illustrated. Brooklyn, Chemical Pub. Co., 1949. Cloth, $6.75.

Thinking in medicine is rapidly changing. The ponderous and decorative reasoning of the past is rapidly giving way to approaching scientific maturity. The factual basis for medical reasoning has broadened. The sciences of physics, biology, and chemistry, and their offspring, radiation biology, radiation chemistry, and radiation physics, have advanced from their level in the preclinical curriculum to one of constant importance in the thinking of the modern doctor. It is with this marriage of the basic sciences to the practice of medicine that this excellent symposium deals.

The style in which the book is written, the outstanding positions held by the eighteen contributors to the symposium, names such as Howard-Jones, Lea, Ellis, etc., and the careful editing of the volume recommend it to every forward-looking, intelligently inquisitive physician. While the book will have the greatest appeal to those actively engaged in radiation therapy, its presentation is broad enough to have a strong appeal to the general practitioner as well. After all, the rapid growth in the use of radioisotopes in investigational medicine as well as in the treatment of groups of diseases brings this science ever closer to the internist, physiologist, and, in fact, to everyone who wishes to understand more than the mere routine of medical practice.

Asa B. Friedmann

[Continued on page 1978]

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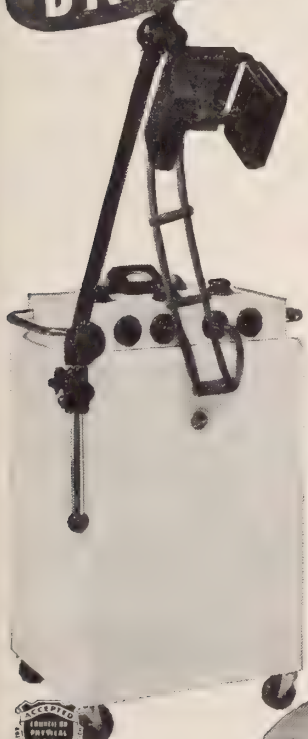

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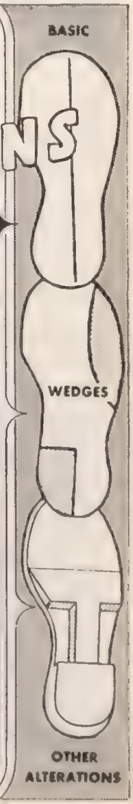

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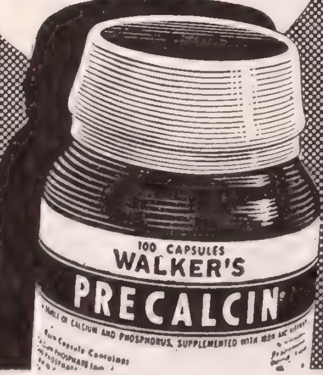

[Continued from page 1976]

Handbook of Materia Medica, Toxicology, and Pharmacology. For Students and Practitioners of Medicine. By Forrest Ramon Davison, M.B. Fourth edition. Octavo of 730 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.50.

The purpose of this book is to present "that information about the drugs essential for the student of medicine and the practicing physician and to present sufficient information about the practical use of drugs to assist the student in the transition from his preclinical years to clinical studies."

New drugs discussed are polymyxin, aureomycin, antihistamines, folic acid, rutin, BAL and antithyroid drugs, new malarial drugs, and many others.

This is an excellent reference book for the use and administration of drugs. There are excellent discussions with numerous figures and tables to illustrate the text. It is highly recommended for the general practitioner so that he may know what drug to use and understand its effects.

Vincent Annunziata

Bensley's Practical Anatomy of the Rabbit. An Elementary Laboratory Text-Book in Mammalian Anatomy. Revised and edited by E. Horne Craigie, Ph.D. Eighth edition. Octavo of 391 pages, illustrated. Philadelphia, Blakiston Co., 1948. Cloth, $4.25.

This book is intended primarily for the use of nonmedical students. It could well be used by nonprofessional students or for students taking nonprofessional courses. The rabbit is chosen for study because of the fact that it is a mammalian type. The book is a condensed anatomy and includes some reference to other biologic facts as well as gross anatomy. There is some reference to physiology and embryology. For its special purpose, this would seem to be a very good book. Walter Schmitt

Interesting and Useful Medical Statistics. Edited by William H. Kupper, M.D. Octavo of 528 pages. Dubuque, Iowa, Wm. C. Brown Co., 1948. Cloth, $6.50.

Any one interested in statistics of all types, ranging from accidents to cancer to heart disease to skull fracture and chemotherapy, will find this book a mine of useful information. Andrew Babey

Rational Medicine. By John W. Todd, M.D. Octavo of 378 pages. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.50.

This book on physical diagnosis, written while the author was in service, is presented in a rather unique manner. The author discusses the types of appreciation and discovery of physical signs, and stresses the findings of physical signs where none exist, along with an incorrect emphasis which has already been given to minute variations from the normal. He goes on to the discovery of physical signs, where sometimes the simple, obvious, physical sign is not noted because of an incomplete physical examination.

The author also discusses respiratory, abdominal, renal, and neurologic signs and symptoms. There is an excellent discussion on regime therapy, bed rest, rest in tuberculosis, rest in the treatment of peptic ulcer, and rest in the treatment of heart disease; also the use of the bedpan versus the old-fashioned commode.

This book is highly recommended for the student as well as for the general practitioner and specialist.

Vincent Annunziata

The Foot and Ankle. Their Injuries, Diseases, Deformities and Disabilities. By Philip Lewin, M.D. Line drawings by Harold Laufman, M.D. Third edition. Octavo of 847 pages illustrated. Philadelphia, Lea & Febiger, 1947. Cloth, $11.

This is the third edition of Lewin on the foot and ankle. Dr. Lewin has enlarged the text and has added some new sections for discussion. The book is excellent reading. The text is sound and well presented.

This is an excellent book for reference or for restudy of some subject about the foot and ankle.

O. C. Hudson

Zinsser's Textbook of Bacteriology. The Application of Bacteriology and Immunology to the Diagnosis, Specific Therapy and Prevention of Infectious Diseases for Students and Practitioners of Medicine and Public Health. Revised by David T. Smith, M.D., Donald S. Martin, M.D., Norman F. Conant, Ph.D., *et al.* Ninth edition. Octavo of 992 pages, illustrated. New York, Appleton-Century-Crofts, 1948. Cloth, $10.00.

Many sections of this "standard" text have been rewritten entirely. Those on medical mycology and viral diseases, both important for the medical student, are presented in a very readable and well-organized fashion. There are a large number of excellent illustrations throughout this reasonably large volume. The bibliography is sufficiently voluminous and recent to help the interested student who wishes a more complete exposition of the subject matter than a book of this kind can present. It is recommended as a good solid text for the medical student.

Morris L. Rakieten

Electrocardiographic Technique. By Kurt Schnitzer, M.D. Oblong sextodecimo of 96 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $3.50.

This is an excellent book for the beginner in electrocardiography and also for the technician. There are many illustrations throughout the text.

There is an excellent presentation on how to take electrocardiograms and how to avoid errors. The author also explains how and why the different leads are taken. Chest leads are covered thoroughly. There is also a discussion on the esophageal and noxemia and exercise test, fetal electrocardiography, and endocardiac electrocardiograms. The author discusses a distortion of the electrocardiogram and its elimination.

The book ends with a discussion on mounting and filing of the records. This book is written in very simple language and can be readily understood, especially so in view of the many illustrations used.

Vincent Annunziata

Diabetes and Its Treatment. By Joseph H. Barach, M.D. Octavo of 326 pages, illustrated. New York, Oxford University Press, 1949. Cloth, $10.00.

This book compares favorably with the volumes of Joslin and Wilde; it is encyclopedic. It is a fine reference book and brings the practicing physician up to date with facts and no fancies. There is an abundance of diets of every variety and for every purpose.

This volume merits place in every library.

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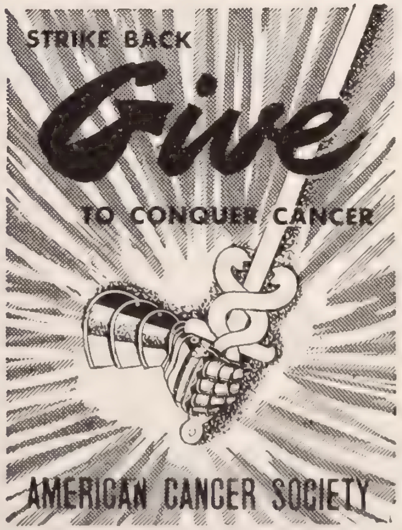

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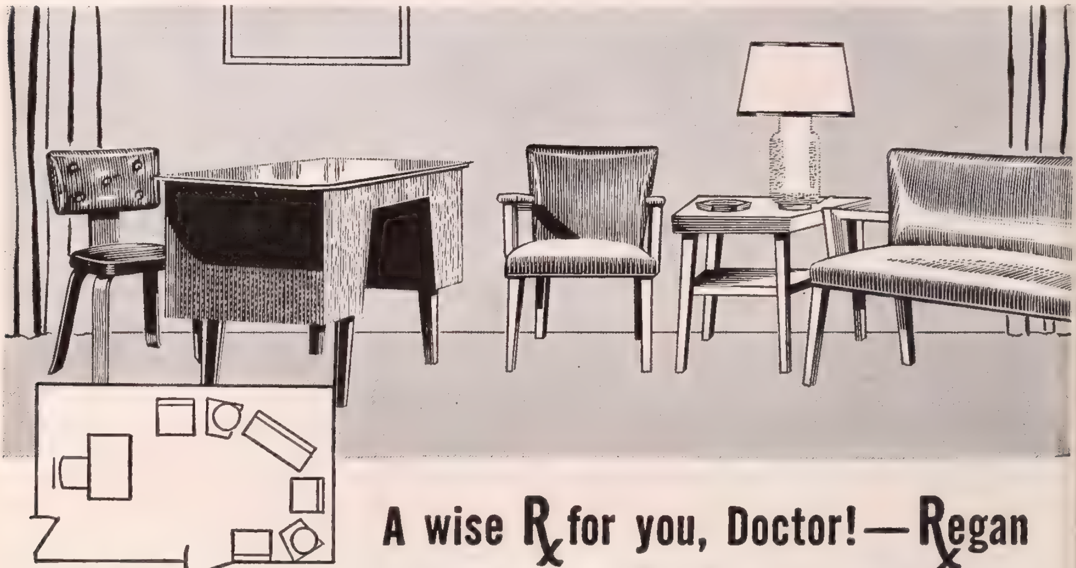

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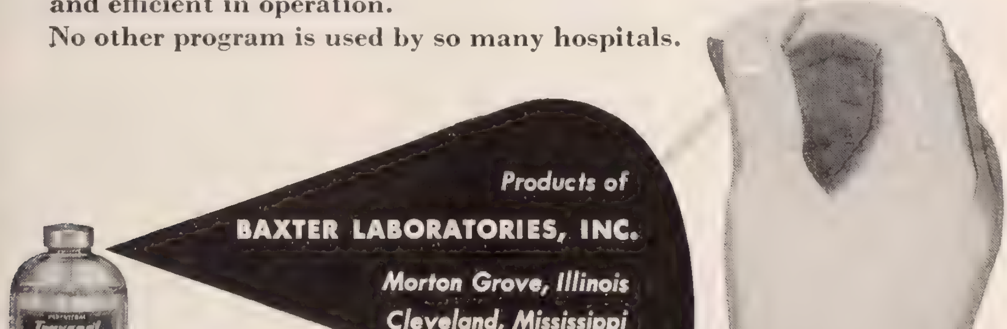
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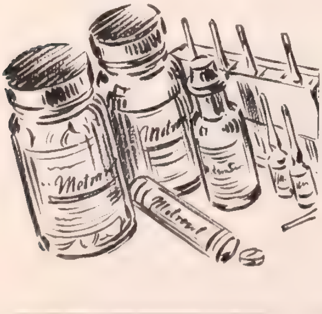

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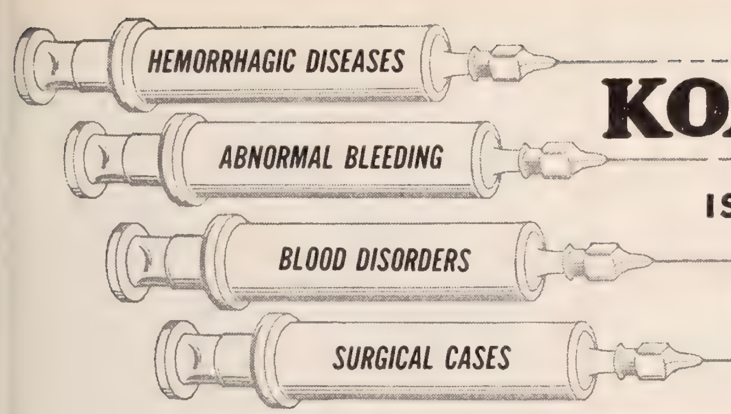

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The powder is a convenient method of preparing a solution when needed.

Compresses saturated in Buro-sol Solution prevents a sudden change in the pH value of the skin and will neutralize alkalinity.

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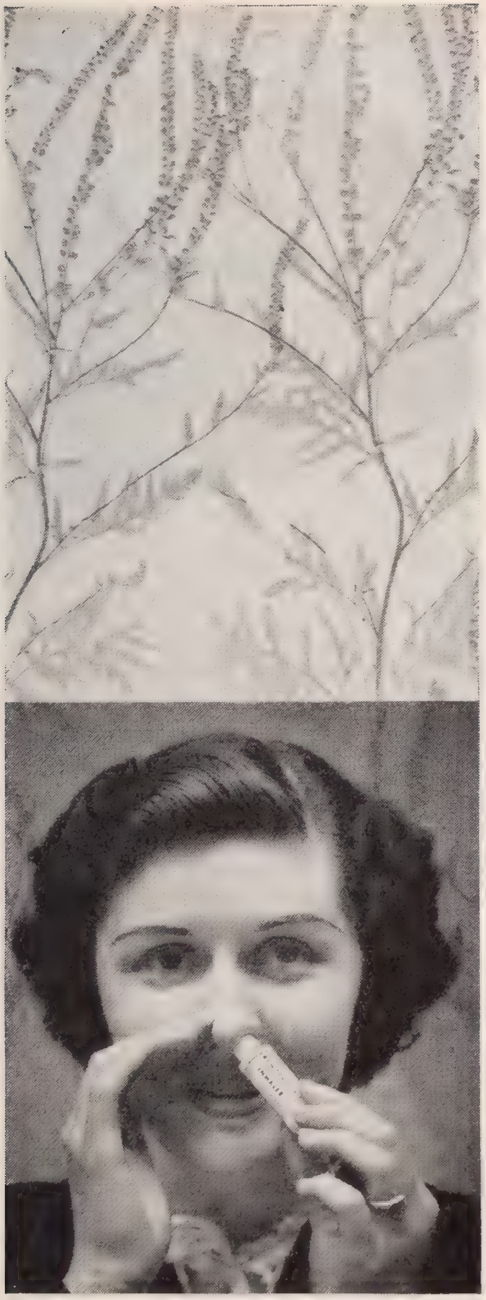

prompt symptomatic relief in hay fever

Your hay-fever patient wants most of all the ability to breathe normally —so that he can eat and enjoy it, sleep and be rested, work and play unhandicapped. For him, you can recommend Benzedrex Inhaler and be virtually sure that it will free him promptly of hay fever's most annoying symptoms.

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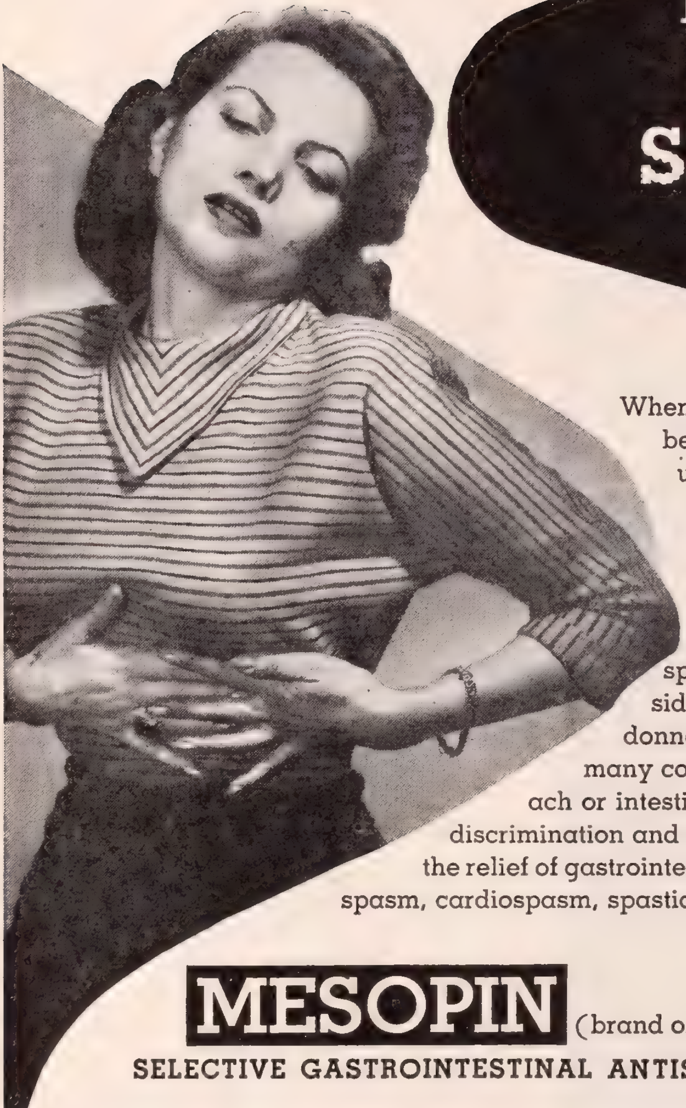
with
MESOPIN



When pain, heartburn, belching, nausea, or unstable colon are due to gastrointestinal spasm, Mesopin provides an effective means for prompt relief. Its selective antispasmodic action on the digestive tract controls spasticity without the undesirable side effects of atropine or belladonna. Thus, symptomatic relief of many common disturbances of the stomach or intestines can be achieved with discrimination and safety. Mesopin is indicated for the relief of gastrointestinal spasticity, such as pylorospasm, cardiospasm, spastic colon, and biliary spasm.

MESOPIN (brand of homatropine methyl bromide)

SELECTIVE GASTROINTESTINAL ANTISPASMODIC

SUPPLY: Elixir in 16 ounce bottles; tablets in bottles of 100. MESOPIN (homatropine methyl bromide)—2.5 mg. per teaspoonful of elixir or per tablet. Also supplied: MESOPIN-PB*—2.5 mg. Mesopin and 15 mg. (1/4 gr.) phenobarbital per teaspoonful of elixir or per tablet.

Detailed literature and samples on request.

Endo®

*PB abbreviated designation for phenobarbital.

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CASE: 16*

54-year-old man suffers severe parkinsonism of seven years' duration. Symptoms unrelieved by scopolamine hydrobromide, but treatment with RABELLON *Compound of Belladonna Alkaloids provides marked benefit.*

G. T., a 54-year-old man, had been suffering from severe parkinsonism for seven years. For the last five years he had been taking 5.0 mg. of scopolamine hydrobromide daily.

Despite this therapy, severe symptoms of parkinsonism persisted. These included sialorrhea, hyperhidrosis, restlessness, depression, marked tremor and rigidity of the extremities, loss of associated movements, masked facies, slow gait and retropulsion.

Moreover, the patient was unable to write, button his clothing or wind his watch, and was frequently unable to eat without assistance. He had not worked for the last three years.

After examination by his present physician, it was decided to change treatment. For the next 20 days scopolamine hydrobromide was gradually withdrawn and replaced by smaller doses of RABELLON Tablets Compound of Belladonna Alkaloids, 4.0 mg. daily.

Note characteristic posture of hands and fingers, the "pill rolling" movement. Slightly flexed head and masklike features are characteristic of parkinsonism.

On this new therapy the patient's improvement was marked and rapid. He was soon able to eat without assistance, write, button his clothing, and wind his watch. Rigidity, muscle pain, hyperhidrosis, salivation and restlessness were greatly diminished. Gait, tremor and general spirits were much improved.

No toxic effects from RABELLON Tablets were experienced except for occasional slight dryness of mouth. The patient reported he felt "50 to 75 per cent better," and spoke of returning to his old job.

RABELLON® Tablets Compound of Belladonna Alkaloids afford prompt and marked symptomatic relief in most cases of parkinsonism and paralysis agitans. RABELLON Tablets contain definite, specific amounts of three purified belladonna alkaloids that have demonstrated their efficacy in fixed ratio. Supplied in bottles of 100 and 1,000 quarter-sected tablets. A generous sample for your clinical use will be sent on request from: *Professional Service Department, Sharp & Dohme, Box 7261, Philadelphia 1, Pa.*

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*Actual case record

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Chlor-*Trimeton** is so potent, so much more effective in alleviating allergic symptoms, especially those due to hay fever, vasomotor rhinitis and urticaria, that more and more physicians turn to it when other antihistaminic compounds give only partial relief or fail entirely. No patient should be classed as unresponsive to antihistamines until Chlor-*Trimeton* has been tried.

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MALEATE

(brand of chlorprophenpyridamine maleate)

Chlor-*Trimeton*, most potent antihistaminic agent available, acts rapidly, providing relief in 20 to 30 minutes. Depending upon the nature of the allergic disorder and its intensity, symptomatic control is maintained from four to six hours. Side effects occur in less than 10 per cent of patients. Because Chlor-*Trimeton* is remarkably efficient, it would seem desirable to prescribe it first in all new patients requiring antihistamines.

Packaging: Chlor-*Trimeton* Maleate (chlorprophenpyridamine maleate) 4 mg. tablets. Bottles of 100 and 1000 scored tablets tinted yellow for identification. Chlor-*Trimeton* Maleate Syrup (brand of chlorprophenpyridamine maleate) containing 2 mg. per 4 cc. (1 teaspoonful) is available in bottles of 16 oz.

*T.M.

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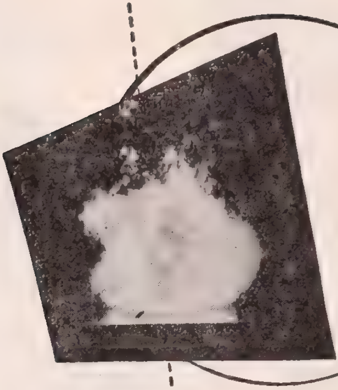

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2 ... light up your present brand

DON'T INHALE. Just take a puff and s-l-o-w-l-y let the smoke come through your nose. Notice that bite, that sting? Quite a difference from PHILIP MORRIS!

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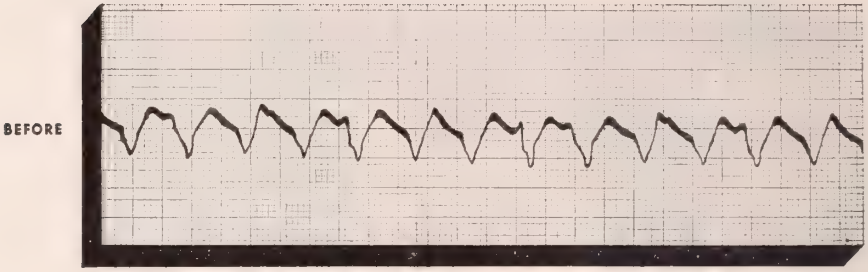
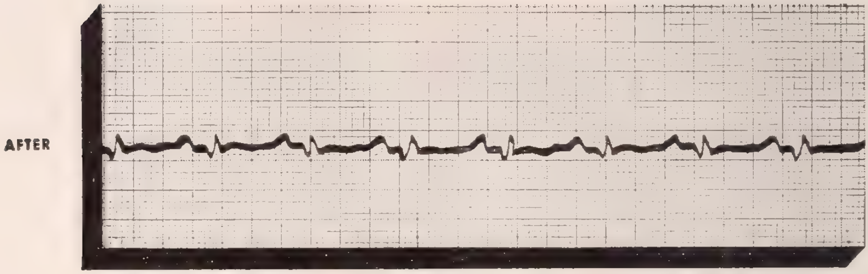
A New Drug..for the treatment of ventricular arrhythmias



Lead II. Ventricular tachycardia persisting after six days of oral quinidine therapy (8 Gm. per day).



Lead II. Normal sinus rhythm after oral Pronestyl therapy.

Effective in some patients with ventricular tachycardia who failed to respond to quinidine

PRONESTYL *Hydrochloride*

Squibb Procaine Amide Hydrochloride

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new product brief

PRONESTYL *Hydrochloride*

Squibb Procaine Amide Hydrochloride

for the treatment of ventricular arrhythmias

What is it?

Pronestyl Hydrochloride is Squibb procaine amide hydrochloride. Structurally, Pronestyl differs from procaine only by the presence of the amide grouping (.CO.NH.) in Pronestyl where procaine has the ester grouping (.CO.O.)

How does it act?

The action of Pronestyl is probably due to a direct depressant action on the ventricular muscle. In auricular arrhythmias, preliminary observations indicate that Pronestyl slows auricular rate but usually does not re-establish normal sinus rhythm. At present, Pronestyl is not recommended in the treatment of auricular arrhythmias.

When is it indicated?

In conscious patients, for the treatment of ventricular arrhythmias.

During anesthesia, to correct cardiac arrhythmias.

What are its advantages in ventricular arrhythmias?

As compared with quinidine: Unlike quinidine, no important toxic symptoms have been reported following the use of Pronestyl orally. In therapeutic dosage, Pronestyl orally does not produce the nausea, vomiting, and diarrhea often caused by quinidine. At high oral dosage, these symptoms may appear.

Whereas intravenous administration of quinidine is hazardous and unpredictable, Pronestyl may be given intravenously with relative safety.

Pronestyl has been found effective in some patients who failed to respond to quinidine.

As compared with procaine: For arrhythmias, procaine is used only in anesthetized patients because its dose in unanesthetized patients is too toxic for clinical use. Pronestyl can be used in conscious and anesthetized patients.

Intravenously, Pronestyl is much less toxic than procaine. In the recommended intravenous dosage, Pronestyl does not cause the central nervous system stimulation typical of procaine in conscious patients.

Procaine is unstable, being rapidly hydrolyzed in the plasma to para-aminobenzoic acid and diethylaminoethanol. Pronestyl is not affected by the plasma procaine esterase, consequently it is much longer acting than procaine.

Procaine is not used orally because of its instability in the organism; Pronestyl can be used orally and intravenously.

What are its side effects?

Oral administration of Pronestyl in doses of 3-6 grams per day, for periods of time varying from 2 days to 3 months, produced no toxic effects as evidenced by studies of the blood count, urine, liver function, blood pressure, and electrocardiogram. Intravenous administration to patients without ventricular tachycardia produced only a moderate and transient hypotensive effect in about one-third of the subjects. However, during intravenous administration to patients with ventricular tachycardia, a striking hypotensive effect was almost invariably present. This disappeared concurrently with the establishment of a normal rhythm. Further studies are in progress to see whether the drug may be given intravenously over a period of time longer than five minutes so as to revert the ventricular tachycardia without causing hypotension. That this may be possible is indicated by the fact that some episodes of ventricular tachycardia have been successfully treated by oral administration without significant change in blood pressure. Electrocardiographic changes: prolongation of QRS and QT intervals and occasional diminution in voltage of QRS and T waves have occurred.

What is the dosage?

IN CONSCIOUS PATIENTS

For the treatment of ventricular tachycardia:

ORALLY: 1 Gm. followed by 0.5-1.0 Gm. every four to six hours as indicated.

INTRAVENOUSLY: 200-1000 mg. (2 to 10 cc. Pronestyl Hydrochloride Solution). *Caution—administer no more than 200 mg. (2 cc.) per minute.*

Hypotension may occur during intravenous use in conscious patients. As a precautionary measure, administer at a rate no greater than 200 mg. (2 cc.) per minute to a total of no more than 1 Gm. Electrocardiographic tracings should be made during injection so that injection may be discontinued when tachycardia is interrupted. Blood pressure recordings should be made frequently during injection. If marked hypotension occurs, rate of injection should be slowed or stopped.

For the treatment of runs of ventricular extrasystoles:

ORALLY: 0.5 Gm. (2 capsules) every four to six hours as indicated.

IN ANESTHESIA

During anesthesia, to correct ventricular arrhythmias:

INTRAVENOUSLY: 100-500 mg. (1 to 5 cc. Pronestyl Hydrochloride Solution). *Caution – administer no more than 200 mg. (2 cc.) per minute.*

How is it supplied?

Pronestyl Hydrochloride Capsules, 0.25 Gm., bottles of 100 and 1000.

Pronestyl Hydrochloride Solution, 100 mg. per cc., in 10 cc. vials.

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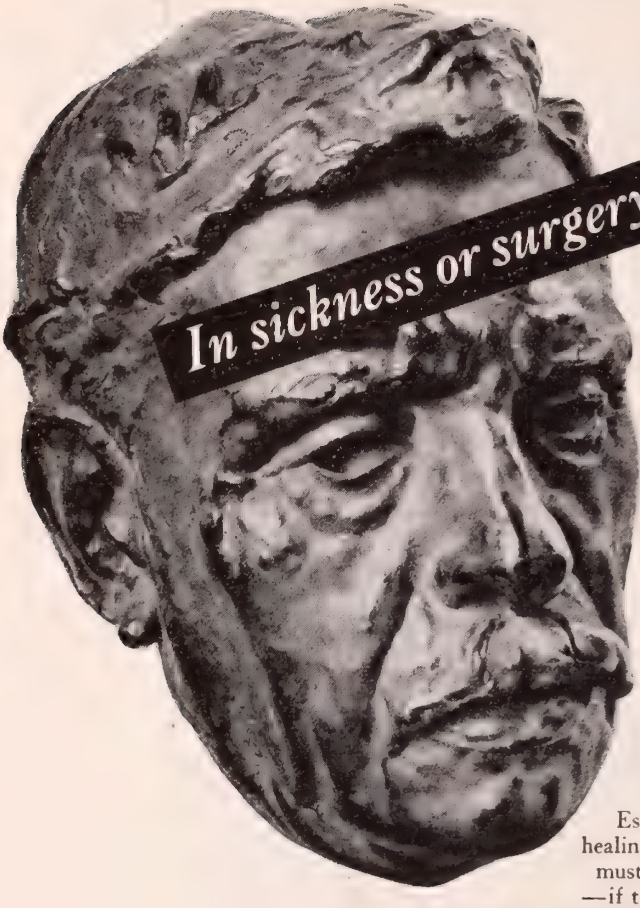

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FORMULA: *Each Allbee with C capsule contains:*

Thiamine hydrochloride (B_1)	15 mg.
Riboflavin (B_2)	10 mg.
Nicotinamide	50 mg.
Calcium pantothenate	10 mg.
Ascorbic acid (C)	250 mg.

REFERENCES: 1. Coller, F. A. and DeWeese, M. S.: Preoperative and Postoperative Care, J.A.M.A., 141:641, 1949. 2. Jolliffe, N. and Smith, J. J.: Med. Clin. North America, 27:567, 1943. 3. Kruse, H. D.: Proc. Conf. Convalescent Care, New York Acad. Med., 1940. 4. Spies, T. D.: Med. Clin. North America, 27:273, 1943.

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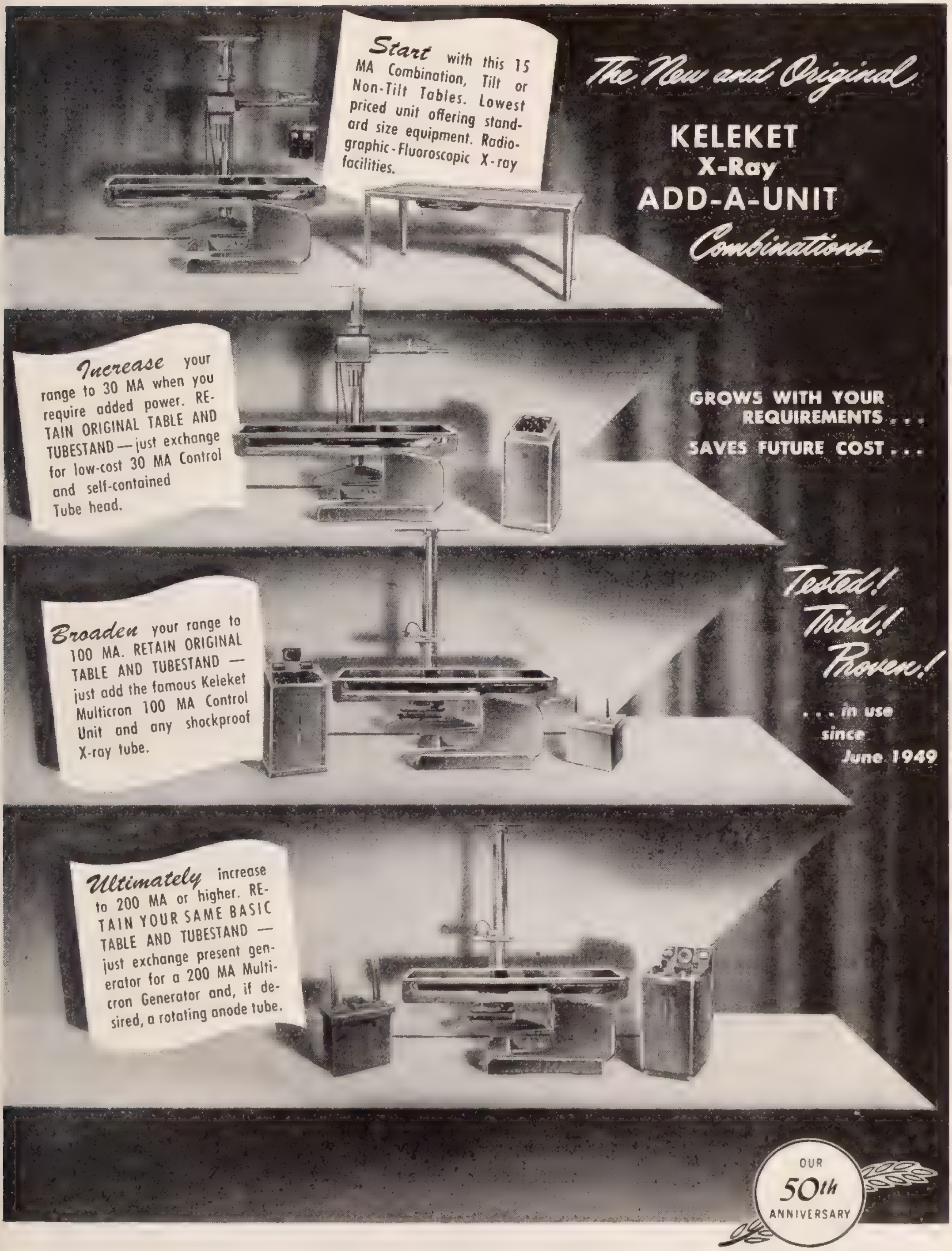

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– Wetzel, N. C., et al., Science 110:65

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MEONINE TABLETS: 0.5 Gm., bottles of 100 for oral therapy.

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1. Localio, S.A.; Gillette, L., and Hinton, J.W.: Surg., Gynec. & Obst. 89:69 (July) 1949.

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Editorials

Medicine and Civilian Defense

In the event of an emergency requiring the salvage of human casualties, the physician has a unique role. Whether or not, ordinarily, he specializes in some branch of the art and science of medicine, in an emergency he functions as a general practitioner and does what comes to hand with what facilities are available.

In the Empire State, General Lucius D. Clay, chairman of the Civil Defense Commission, acting through the State Department of Health and the Medical Society of the State of New York in the matter of the State's preparedness program, has recognized the vital and urgent medical problems confronting us in the development of a State-wide plan for medical defense. The Medical Society of the State of New York with its 22,700 members is the principal agency available, and its component county societies are the spearheads of medical defense planning and necessary action.

A Medical Advisory Committee has just been formed as this is written. Members of the Committee which will work closely with the Commissioner of the State Health Department, Dr. Herman E. Hilleboe, are as follows: Dr. Carlton E. Wertz of Buffalo, president of the State Medical Society, who will serve as chairman; Dr. W. P. Anderton of New York, secretary of the State Medical Society; Dr. Louis H. Bauer of Hempstead, representing the State Society in the metropolitan region.

Also Dr. Theodore J. Curphey of Forest Hills, chairman of the State Society's Committee on Public Health and Education; Dr. Thomas O. Gamble of Albany, representing the State Society in the Albany region; Dr. J. G. Fred Hiss of Syracuse, representing the State Society in the Syracuse region.

Also Dr. Joe W. Howland of Rochester, representing the State Society in the Rochester region; Dr. J. Stanley Kenney of New York, president-elect of the State Society; Dr. John J. Masterson of Brooklyn, chairman of the State Society's Committee on Emergency Medical Services, and Dr. Lester J. Unger of New York, chairman of the State Society's Committee on Blood Banks.

Already regional health directors have the responsibility for bringing information concerning medical aspects of atomic explosion to every physician in their regions through district, county, and full-time city health officers, working with representatives of the medical schools, presidents of county medical societies, academies of medicine, and the regional representatives of the State Advisory Medical Committee.

Instructional meetings for physicians, to begin no later than September 1 when possible, will be held in such locations that no physician will be required to travel more than about 20 miles. Total instructional hours will be about six, divided into two sessions of three hours each in successive weeks, and covering the agenda prepared by the Curriculum Committee of which Dr. Joe W. Howland of the University of Rochester School of Medicine and Dentistry is chairman. Such teaching is planned to reach at least 70 per cent of the physicians of the State. Representing the New York State Department of Health on the Committee are Drs. I. J. Brightman, James Lade, and F. B. Amos; a representation of each medical school in the State will also serve.

Regional committees are suggested to promote these meetings, composed of the regional representative of the State Medical Society, the regional health director, and the dean of the medical school. The Office of Public Health Education will also assist in State-wide promotion of attendance at the meetings. Teaching staff will be furnished largely by the medical schools with financial assistance by the New York State Health Department and the Medical Society of the State of New York.

County committees of instruction will also be appointed. The physicians of the State are hereby urged to watch for an announcement of this instruction and plan to attend. Instruction will follow this general outline:

Statement of the Problem of Medical Aspects of Atomic Explosion.

Film: Medical Effects of the Atomic Bomb, U.S. Army.

Plan for Medical Mobilization of Locality in Which Meeting Is Being Held.

Treatment of Mechanical and Thermal Injuries.

Problems in Replacement Therapy.

Radiation Syndrome in Man.

Film: Atomic Medical Cases, U.S. Army.

Medical Officers Needed

Once again this country fights for freedom. As this is written, the armed forces of the nation are engaged in active combat in the Orient; selective service, economic controls, calling up of reserves have commenced, to carry on what seems to ordinary folks like a war. By whatever name, it is fraught with the gravest intendments for the citizen-taxpayers.

The medical profession, as always, is among the first to be concerned. To the older and more familar modes of violent human fragmentation, human technical ingenuity has added something new, radioactivity. This, in a manner of speaking, seems to gild the lily with stupidity, but it offers certain practical problems which must be dealt with.

Medical personnel in large numbers will be needed as military operations expand. It is obvious that many of these will have to be recruited here, since medical education elsewhere has, of necessity, lagged behind because of the last war. Human material we have, but the potential of our educational system will have to be enormously expanded at great cost. Fortunately, the several state medical societies and their component county units have developed competent postgraduate educational programs, well-integrated with state departments of health, to cope with the problems of civilian defense.

Doctors for the armed services are needed, now. Fortunately, among the younger men in the profession are many well-trained doctors who received their medical education and training at government expense during and shortly after World War II. The profession has never yet failed to provide our armed forces with the skilled care they have a right to expect. We urge our young doctors to fill the urgent and growing need at once.

The call for service with the armed forces has been sounded; the American Medical Association says that both Army and Air Force are hopeful that they can avoid mandatory calls until early in September. By then they should have a good idea of how many men will come in voluntarily. However, don't depend on this; they may not be able to wait that long. The Army has some slight grounds for hope; about 20 per cent of the replies to a recent appeal indicate a disposition to volunteer.

All three services are keeping their spotlights on those former V-12 and ASTP men who have served no time on active duty. Individual letters have been addressed to all of these men, and medical societies have been requested to contact them.

The total number of doctors who will be required, even in the next month or so, is almost a matter of guesswork. Officially, the Army still is holding to its figure of 354, but officers admit this is low. On the other hand, a spokesman says that the Air Force is in immediate need of 500 doctors. If this is true of the Air Force, the Army's requirements would be closer to 1,000. The Navy has publicized no shortage figure, but it is significant that it was the first of the three services to call up reserves.

Through every medium possible, officials of the three services are pointing out that certain physicians may benefit economically if they volunteer for service before receiving mandatory orders. Under the law, medical officer volunteers are entitled to an extra $100 per month in pay. If these same officers wait for orders to report, the law says they are not entitled to this additional pay.

We remind our colleagues that one of the privileges of citizenship is service. Defense of this nation within and wherever our security is threatened has never found the medical profession laggard. Nor will it now.

Experimental Multiphasic Screening Unit

At a meeting in April, 1950, of the Council Committee on Public Health and Education with representatives of the State Department of Health, the matter of an *experimental* multiphasic screening unit to be established in Buffalo in connection with a chronic disease hospital was discussed.

A multiphasic screening examination is a series or battery of laboratory and x-ray tests, carried out by qualified technicians and designed to detect the presence of one or several asymptomatic diseases. Screening procedures have been or are being developed for the detection of many chronic diseases. The examination of large groups of people for a single disease is costly and time-consuming.

The objective of the multiphasic screening examination is to detect the presence of chronic disease in the earliest possible stage, in a major portion of the population, particularly in the age group over thirty-five years, and at a cost within reach of the individual or of the official or voluntary health agency or industrial plant sponsoring the program. The early referral of patients with chronic disease to physicians for diagnosis and treatment offers the best opportunity to reduce morbidity and mortality from these diseases and to lower the costs of medical care, particularly in the older age groups. Little progress has been made in encouraging large numbers of persons to obtain complete physical examinations periodically. This has been due to the great demands upon the physicians' time and the high costs involved. The multiphasic screening examination will reduce the costs of the laboratory and x-ray parts of the examination and decrease the amount of time required of the physician in completing the medical phase of the examination.

Syphilis, diabetes, glaucoma, anemia, tuberculosis and other chest diseases, tumors, obesity, visual defects, hearing loss, hypertension, nephritis, heart disease, and esophageal and gastric cancer will be screened, experimentally.

Chapman has indicated that, based on national estimates, a screening examination of 1,000 apparently well persons over the age of fifteen would result in finding 976 conditions related to chronic illness, although in many instances two or more of the conditions might be present in one person.[1] The distribution of the cases would be as follows: syphilis, 48 cases; diabetes, 22 cases; glaucoma, 20 cases (3 per cent of the population over forty); anemia, 75 cases; tuberculosis, 18 cases; obesity, 200 cases; visual defects, 266 cases; hearing loss, 250 cases; hypertension, 38 cases; heart disease, 39 cases.

To determine the practicability and reliability of multiphasic screening examinations, a multiphasic screening unit will be established as part of the Chronic Disease Research Institute being organized in Buffalo during the fiscal year beginning April 1, 1950. The Institute is to be operated under a joint agreement among the United States Public Health Service, the New York State Department of Health, and the University of Buffalo, whereby the Service makes available the buildings now being operated by the Marine Hospital in Buffalo, the Health Department makes available the necessary funds, and the University, through its College of Medicine, assumes responsibility for administrative and professional management. In addition to these three agencies, the multiphasic screening unit requires the support and participation of the Erie County Department of Health and the Medical Society of the County of Erie.

Equipment and the technical personnel will be furnished by the Chronic Disease Research Institute. The tests will be done at the Institute. Interpretation of the x-ray films and of the laboratory results will be done by the staff physicians of the Erie County Department of Health and of the Chronic Disease Research Institute.

All abnormal results will be referred to the private physician named by the patient at the time of the screening examination. Follow-up of patients with abnormal findings who fail to report to their private physicians will be done by the public health nursing staff of the Erie County Department of Health. Patients who make an initial visit to their physician following the screening examination, but who fail to complete the necessary workup or to begin treatment, will be followed by the Health Department staff only at the request of the private physician.

Work in this experimental study is now going forward. It is obvious that only time and patient objective study can properly evaluate the worth, the technics, and the results of such a multiphasic screening unit.

The program, as outlined, was endorsed by the Council Committee on Public Health and Education of the Medical Society of the State of New York, *only with the understanding that such endorsement concerned the conduct of the present experimental program.*

The Committee recommends that all physicians in the area of the project cooperate with the multiphasic screening unit there. Obviously, only by such cooperation can the ultimate value of the experiment be ascertained.

---

[1] Public Health Reports, October 21, 1949, page 1311.

The genius of one man often awakens the genius of twenty that otherwise might have slept in obscurity.

Some persons are so uncomfortably disposed as to have no pleasure in looking upon the bright side of anything.

Current Editorial Comment

Low Mortality Rates Continue. According to reliable sources, the low death rate of 1949 continues.[1] Also, possibly due to the intensive educational campaigns carried on unremittingly by various agencies, accidents, occupational and in the home, show an encouraging downward trend.

> For the first quarter of this year, the death rate among the many millions of industrial policyholders of the Metropolitan Life Insurance Company was 6.8 per 1,000, or identical with the all-time low recorded in the like period of 1949. This favorable record was achieved despite an appreciably higher mortality this March than last.
>
> The continued low mortality so far this year results largely from the decline in the death rate among the colored policyholders. Among white persons the death rates in each sex were somewhat higher at some age periods than in 1949. Among white males, higher rates this year than last are observed in the age range fifteen to thirty-four years and at ages fifty-five to sixty-four. Among white females, a sizable rise in mortality occurred at ages ten to fourteen, while smaller increases were recorded in several of the other age groups under fifty-five years. On the other hand, declines exceeding 20 per cent are found at the ages under five among both boys and girls.
>
> In contrast with the generally favorable record for the acute diseases is the mortality experience for the major conditions of middle and later life. The group of cardiovascular renal diseases, which accounts for approximately one half of all the deaths among the industrial policyholders, has registered a slight increase so far in 1950 as compared with the first quarter of 1949. The malignant neoplasms, which rank second among the causes of death, showed a rise in rate from 119.4 to 123.8 per 100,000.

The external causes of death registered little change in the level of the death rates from a year ago. The mortality from homicide and accidents is about the same as in 1949, while that from suicide has declined slightly. The accident picture shows contrasting trends—an increase in the mortality from motor vehicle accidents and a decline in the rates from home, occupational, and other accidents. In fact, the death rates from home and occupational accidents dropped to new low levels this year.

Confidently assert that you have discovered the universal remedy, and you will find fools enough to believe you.

Radioactive Nicotine and the Heart. According to recent experimental evidence released by the University of Chicago, Aaron Ganz, AEC fellow in the Department of Pharmacology working with radioactive nicotine, has been able to find out just what happens when the body absorbs this drug.[1]

The nicotine was produced by tobacco plants grown indoors in the "atomic farm" at the University. These plants are grown in sealed gas containers. A gas, carbon dioxide, containing radiocarbon is pumped into the surrounding air. The plants take in this gas, and the radiocarbon eventually appears in the drugs the plants produce. The "atomic farm" permits scientists for the first time to find exactly what happens when various drugs such as digitalis, nicotine, and belladonna are taken into the body. Before the use of tracer atoms, the specific chemical actions of these drugs were very difficult to follow. The radioactive nicotine could be traced as it passed through the tissues of animals by means of a Geiger counter and through a sensitive device for chemical analysis called a spectrophotometer.

When nicotine was injected just below the skin of a rat, it was promptly taken up in the blood stream and appeared in the urine only a minute later.

Inside the body, the nicotine tended to collect in the lungs, liver, heart, spleen, and kidneys, as well as in the body excretions. Ganz found that a rat could excrete in a single day in its urine some 65 per cent of the nicotine it had absorbed.

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[1] Statistical Bulletin, Metropolitan Life Insurance Company, April, 1950.

[1] News Release, April 19, 1950.

The heart does not have an unlimited capacity for absorbing nicotine. When the heart of a guinea pig was removed and yet kept alive by fluids passing through it, at first it absorbed almost all the nicotine in the fluids. But after a few minutes the heart stopped absorbing nicotine.

These findings may help explain the way nicotine affects the human heart, long admitted to be one of the important medical aspects of smoking. Perhaps the heart is able to protect itself in some way against too great an intake of nicotine.

The spectrophotometer and the Geiger counters allowed the scientists to detect previously undetectable amounts of the drug. Through the use of both methods, Ganz was able to trace and detect amounts as small as $^1/_{9,000,000}$ of an ounce in the body tissue. Ganz's researches are part of a broad program of investigation of plant-produced drugs through radioactive tracers that is being carried on at the University of Chicago.

Information of this kind in our view far outweighs the importance of the aspects of atomic energy typified by atom bombs, atom energy-propelled submarines, and the like, which have been featured by the public press.

It occurs to us that in the course of time investigations may yet reveal the nature, action, and distribution of the toxic substances which poison the hearts and minds of men against each other. Envy, malice, hatred, and all manner of uncharitableness must surely have as traceable a cause as they undoubtedly have a destructive effect. We await the results of further researches with patient hopefulness.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
September 12	Fifth	Syracuse University College of Medicine and Hotel Syracuse	Morning and afternoon (buffet luncheon and dinner)
September 14	Seventh	Clifton Springs Sanitarium	Afternoon and evening (dinner)
September 27	Fourth	Cambridge	Afternoon and evening (dinner)
September 28	Third	Hudson	Morning and afternoon (luncheon)
October 4	Sixth	Statler Club, Ithaca	Afternoon and evening (dinner)
October 5	Eighth	Hotel Statler, Buffalo	Afternoon and evening (dinner)
October 18	Ninth	Rockland Country Club, Piermont	Afternoon and evening (dinner)
November 1	Second	Huntington or Garden City	Afternoon and evening (dinner)

"Of 428 cases [of seasonal rhinitis and perennial rhinitis of allergic origin], 60% to 76% were benefited."

NOTE: A table, listing the results obtained in hay fever, shows that Hydryllin was used by ninety-seven patients and that 73 per cent experienced from 50 to 100 per cent benefit.

Gay, L. N.; Landau, S. W.; Carliner, P. E.; Davidson, N. S.; Furstenberg, F. F.; Herman, N. B.; Nelson, W. H.; Parsons, J. W., and Winkenwerder, W. W.: Comparative Study of Antihistamine Substances: III. Clinical Observations, Bull. Johns Hopkins Hospital 83:356 (Oct.) 1948.

In hay fever, asthma and other allergic manifestations, the clinical effectiveness of Hydryllin and its relative freedom from side reactions has been amply demonstrated. Hydryllin not only furnishes an active antihistaminic principle but also the stimulating, antiasthmatic and spasmolytic effects of Searle Aminophyllin.

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Racephedrine Hydrochloride	25 mg.

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A potent vasodilator effective by mouth...

Priscoline hydrochloride "has a definite place in the armamentarium of drugs... particularly in the field of *peripheral vascular disease*, or for conditions of visceral pain due to vascular spasm. Presumably the drug can be used to a great advantage in those cases in which sympathectomy would be advantageous. . . . It can also be used as a substitute for paravertebral sympathetic block."[1]

"Priscoline per se appeared to slow down progression of the disease and produce symptomatic benefits in 88 per cent of 25 patients with early proliferative and degenerative *arthritis* involving peripheral joints."[2]

In doses of 25 to 75 mg., administered either orally or parenterally, Priscoline "usually is tolerated with few side effects."[3]

Comprehensive literature on request.

1. Rogers, Max P.: J.A.M.A., May 21, 1949
2. Wyatt, Bernard L.: Ann. West. Med. & Surg., Aug. 1949
3. Grimson, Marzoni, Reardon & Hendrix: Ann. Surg., 127:5, May 1948

PRISCOLINE, Tablets of 25 mg.; 10 cc. Multiple-dose Vials, each cc. containing 25 mg.

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THE VALUE OF PROCTOSCOPY AS A ROUTINE EXAMINATION IN PREVENTING DEATHS FROM CANCER OF THE LARGE BOWEL

Charles J. Miller, M.D., Emerson Day, M.D., and Elise S. L'Esperance, M.D.,
New York City

(From Memorial Center for Cancer and Allied Diseases; Kips Bay-Yorkville Cancer Detection Center, New York City Board of Health; and Strang Cancer Prevention Clinics)

A STUDY of the findings on proctoscopy of 7,494 patients at the Strang Prevention Clinics and Kips Bay-Yorkville Cancer Detection Center, between January, 1946, and March, 1949, was undertaken to ascertain the value of the procedure in the so-called normal healthy adult (Tables 1 to 4). A second and third group of statistics concerning the relationship of colon adenomas to cancer of the colon were taken from the Colon and Rectal Service of Memorial Center for Cancer and Allied Diseases. In one of these clinics an estimated 4,500 routine proctoscopic examinations are now being done yearly. Although it cannot be anticipated that the meticulous cancer detection or prevention type of examination with all its tests will ever be popular or even possible, except in the larger cities, certain aspects of the examination, such as the vaginal smear technic popularized by Papanicolaou and proctoscopy, should have proved their merit sufficiently by this time to warrant their adoption in the general practitioners everyday practice. Ideally, this places the cancer prevention and detection clinic where it should be—in each and every physician's office.

In terms of cancer detection and cancer prevention, the questions that seem to need answering by a study such as this and may be answered in part by these data are as follows:

1. At what age can proctoscopy be recommended as a practical routine procedure?
2. What can one expect to find?
3. Is rectal bleeding necessary to recommend proctoscopy?
4. What is a simple safe method of treatment for small adenomas?

Several years ago, Deddish reported an incidence of cancer of the colon in normal healthy adults found at the Strang Clinic of 0.5 per cent in a total of 1,011 examinees forty-five years of age or over.[1] Six per cent of these applicants had colonic polyps. Eighty-six per cent of the lesions were visualized at proctoscopy. Since these figures were obtained in the early days of the clinic, it is logical to ask if this high percentage of significant findings still persists. Incidentally, Wangensteen, as recently as April, 1950, reported an incidence of 11 per cent in a group of 194 rectal polyps in patients over the age of forty-five. Swinton's incidence was 7 per cent.[2]

In the 7,494 patients used in this study, 479 mucosal tumors of the colon were found and proved by biopsy, an incidence of 6.4 per cent. Helwig in studying the colons of 1,460 consecutive autopsies found an incidence of 10 per cent colon adenomas and noticed a fairly constant progressive increase from the ages of thirty to eighty.[3] The highest incidence showed 25 per cent of men had colonic adenomas in their eighth decade. Helwig's over-all incidence of 10 per cent polyps in routine autopsy material and our consistent incidence of 6 per cent, as reported by Deddish in 1948, and the incidence of 6.4 per cent in this group of 7,494 proctoscopies compare favorably and offer tremendous possibilities to prevent deaths from cancer of the large bowel.

Ninety-eight per cent of the polyps were found on routine proctoscopy. Although 39 of the adenomas of the sigmoid were also seen on air contrast study, the relative importance of proctoscopy over barium enema study is emphasized

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Gastroenterology and Proctology, May 10, 1950.

TABLE 1.—RESULTS OF PROCTOSCOPY OF HEALTHY ADULTS*

	Total	Number of Males	Per Cent	Number of Females	Per Cent
Proctoscopies	7,494	3,456	46	4,038	54
Polyps	479	315	66	164	34
Incidence	6.4	...	10.5	...	4.0

* Average age was fifty and three-tenths years.

TABLE 2.—PATHOLOGIC FINDINGS OF POLYPS FOUND ON ROUTINE PROCTOSCOPY

Total number of benign adenomas	439 (92%)
Total number of adenomas with atypism	16 (3%)
Total number of adenomas with carcinoma	24 (5%)
Over-all incidence of carcinoma	0.3%

TABLE 3.—AGE DISTRIBUTION OF PATIENTS WITH COLON POLYPS

Age (Years)	Number of Polyps	Per Cent
13	1	0.2
20 to 29	4	0.8
30 to 39	47	9
40 to 49	177	37
50 to 59	178	38
60 to 69	61	12
70 to 79	10	2
80	1	0.2

TABLE 4.—RESULTS OF PROCTOSCOPY ACCORDING TO AGE RELATED TO FIRST VISITS OF STRANG PATIENTS (JANUARY 1, 1948, THROUGH JUNE 30, 1948)

Age (Years)	Number Proctoscoped	Negative	Sign Findings*	Per Cent Sign Findings
20 to 29	32	32	0	0
30 to 39	95	92	3	3.2
40 to 49	343	332	11	3.2
50 to 59	346	327	19	5.5
60 to 69	99	87	12	12.1
70 to 79	9	8	1	11.1
Total	914	868	46	5.0

* Polyp only, no cancer found.

TABLE 5.—PROCTOSCOPY VERSUS BARIUM X-RAY STUDY IN SMALL ADENOMAS

Number of polyps found by proctoscopy alone	433	(98%)
Number found by proctoscopy and barium enema	39	
Number found by barium enema alone	7	(2%)
Total found	479	

by the fact that only seven polyps, or 2 per cent of the total, were demonstrated by x-ray findings alone (Table 5).

In order to determine the frequency at which proctoscopic examinations should be recommended, this group of mucosal polyps was studied from the standpoint of how many patients with a negative first examination were found to have polyps on recheck visits. Seventy-seven per cent of all the polyps found on repeat proctoscopy were in patients who had polyps at the time of their first recheck examination. Many of these re-examinations were done within one month, which suggests that the first examination was unsatisfactory or that symptoms warranted another examination. Others were delayed as long as one year after the original proctoscopy. Ninety-five per cent of the polyps found on the second examination ranged from 0.2 to 0.5 cm. It is probable that most of them were present at the time of the first examination but were overlooked. The small number of polyps found in patients having their second, third, and fourth yearly examinations has been impressive. Whether the polyps were overlooked at the time of the first examination or grew in the interim, the examination warranted being repeated at the end of one year. The study suggests that the yield of polyps on follow-up proctoscopy will be considerably less than the initial incidence of 6.4 per cent and that yearly examinations are unncessary after the patients have had negative findings for two successive years.

Obviously, the interval between examinations depends on the seriousness of the condition. The majority of the polyps in this study were small, but they were undoubtedly the very early stage of a more serious disease. The following case histories from records of the Colon and Rectal Service, under the direction of Dr. George E. Binkley at Memorial Center, illustrate the importance of having a definite routine follow-up time for all patients who have a mucosal growth of the colon.

Case 1.—Mrs. V. K., aged forty-five, stated that she had a change in her bowel habit time associated with rectal bleeding intermittently for nine years. The bleeding was bright red and streaked the stool and usually coincided with attacks of diarrhea. She had been treated for colitis. Nine years previously her physician had told her not to worry about the polyp which had prolapsed through her rectum.

On admission, a proctoscopic examination revealed a 2-cm. ulceration beginning 8 cm. from the anal margin and raised 0.3 cm. above the mucosal surface. Eighteen centimeters from the anal margin was a second tumor having the appearance of a benign tumor which was 1.4 cm. in diameter with a normal mucosal pedicle 2 cm. in length. A biopsy taken from both lesions was reported as adenocarcinoma. An abdominoperineal resection was done. The lower tumor was reported as an adenocarcinoma, grade II, which had already metastasized to one node in the mesorectum opposite the ulcerated growth. The second one was an adenocarcinoma arising in an adenomatous polyp. The base of the polyp showed no infiltration indicating that such a growth was amenable to cautery snare removal.

It seems highly probable that the lower tumor seen nine years previously was a polyp on a pedicle long enough to prolapse through the anal canal. In the interim the cancer had replaced the benign elements of the polyp, had grown down the musocal stock, and had become an infiltrating, ulcerating small cancer which had metastasized to one node in the mesorectum opposite the tumor. Undoubtedly, this patient could have been saved the inconvenience of a colostomy by treatment of the pedunculated adenomas at the time her symptoms were first noticed. The need for immediate treatment of adenomas is self-evident. The multiplicity of the adenomas suggests the importance of regular examinations. The educational value of a thorough examination is illustrated by the following case history.

Case 2.—Mr. S. W., aged forty-seven, first reported to a cancer detection clinic at the insistence of his wife. He denied symptoms referable to his colon or rectum. A proctoscopic examination revealed a pedunculated polyp 0.4 cm. in greatest diameter and located 7.5 cm. from the anal margin. A barium enema with air contrast study was negative. The polyp was removed with an electric snare and was reported to be an adenoma without evidence of atypism.

During this same period of time, the patient's father, aged seventy-four, noticed a change in his bowel habit time and slight rectal bleeding. He reported to his physician who proctoscoped him and performed a hemorrhoid operation. Because of a persistence of symptoms, namely, bleeding and a change in his bowel habits, he returned to his surgeon who performed a second proctoscopic examination and said he found nothing. At the insistence of the son, the father reported to the clinic where an annular, operable carcinoma 10 to 12 cm. from the anal margin was found. Although a year's delay had occurred, during which time it took three proctoscopic examinations to make the diagnosis, an examination of the specimen at the time of an abdominoperineal resection showed it to be an adenocarcinoma, grade III, without metastases to lymph nodes.

It is probable that the growth was present one year previously and was overlooked because of inadequate preparation for the examination. Inquiry into the patient's history suggested that the proctoscopist had difficulty in seeing because of retained fecal material, and he failed to put the patient through the inconvenience of a castor oil preparation for a complete inspection.

We have found that two ounces of castor oil given the day before the examination is adequate to cleanse the bowel thoroughly yet does not continue to affect the patient over too long a period.

Although the association of multiple polyps in the rectum of the son, aged forty-seven, and cancer of the rectum in the father at the age of seventy-four is an interesting speculation, its actual statistical significance cannot be proved in this series, even though similar hereditary associations are frequently seen.

Significance of a Family History of Cancer

That a cancerous disposition is inherited is strongly suggested in many clinical histories; that such a disposition may be inherited and confined to a single system (alimentary) is strikingly proved by the families with congenital polyposis. Anticipating that the incidence of colon and rectal polyps might be high in those with a family history of cancer or more specifically a history of cancer of the colon, thus giving us another indication regarding those who should be proctoscoped, we investigated a group of 752 consecutive proctoscopies from these angles. Forty-eight per cent of all patients gave a history of cancer in their family. Only 68, or 9 per cent, gave a family history of cancer of the colon, and there were only four colonic polyps in this group. This is an incidence of 5.9 per cent which is no higher than the average incidence of polyps in the whole group. Thus, the incidence of polyps in those having a positive family history was not statistically significant.

Roughly, half of the individuals who submit to periodic cancer health examinations may be doing so because of a fear of cancer obtained from having seen a member of their family with the disease.

As previously mentioned, the over-all incidence of carcinoma was 0.3 per cent. Five per cent of the 479 polyps discovered were carcinoma. The type of polyp one would expect to find in individuals who are relatively asymptomatic should be a benign group. Adenomas of the size of these could possibly remain undetected and relatively asymptomatic for years. What is the relationship of rectal polyps to carcinoma? Are we justified in insisting on their removal?

A review of all histologic material in a series of 80 papillary adenomas, better known as villous tumors, treated at Memorial Center, whose average size was well over 2.5 cm., showed that only 10 per cent remained benign, 27 per cent had atypical changes, which means that malignant transformation had begun, and 63 per cent became cancerous.[4] Yet, 58 per cent of these tumors were considered benign on the first histologic examination.

A select group of papillary adenomas such as these are far removed in time from the type of rectal polyps seen in cancer detection clinics, yet the large polyps in which 63 per cent became cancerous had to start from something.

In a series of 272 colon adenomas from the same hospital, 59 per cent remained benign throughout treatment, 16 per cent had atypical changes, and 25 per cent contained fully developed cancerous elements.

In comparing the symptoms and signs of the polyps seen in cancer detection clinics with the fully developed adenomas and papillomas reporting for treatment, one gets the impression that it might take five, ten, or even fifteen years for the small polyps found in the detection clinic to reach the stage seen in the hospital for treatment.

From the pathologist's report, no definite pattern can be established, the location of the carcinomatous change may occur deep within the tumor, near the stalk, at the base or periphery of the adenoma. Thus, an accurate histologic diagnosis demands that an adequate number of sections be studied. In general, the benign adenomas as a group are smaller in size than the class of adenomas with malignant foci. Since 90 per cent of villous tumors and 41 per cent of adenomatous polyps proved to be atypical or cancerous, we have an opportunity in the field of cancer prevention and preventive medicine that is far more important than cancer detection for most systems.

Significance of Rectal Bleeding

Forty per cent, or 195, of the 479 patients with polyps had rectal bleeding. Because of the small size and lack of ulceration of this group of polyps, how frequently was the bleeding from the adenoma? In 792 consecutive proctoscopies, 41 per cent, or 311, stated they had noted recent blood in their stools. Forty-three polyps were found in this group, and only 24 noted bleeding. Thus, bleeding was a significant symptom in only 24 of the 311 cases or 8 per cent of the time. Ninety-two per cent of the time, rectal bleeding probably originated in the anal canal, but the examiner, although cognizant of pertinent anal findings, felt compelled to do a complete proctoscopy and to follow this by a barium enema with air contrast studies.

Early Cancer of the Colon

Cromar in 1941 reviewed a series of 61 cases of carcinoma of the colon and rectum in which the lesion measured less than an inch (2.5 cm.) in diameter.[5] These were considered to represent the earliest type of recognizable lesions. Nine had already invaded adjoining lymph nodes, and four of them had spread to the liver; the percentage of five-year cures following radical surgical excision was only 46 per cent, a figure no better and no worse than that obtainable by surgeons for colonic carcinoma irrespective of size.

The symptoms and early end results of 42 cancers of the colon and rectum, found in these cancer detection clinics during the same period the polyps were being diagnosed, were reviewed. The average duration of symptoms was ten and one-half months. Seventy per cent of these cancers were diagnosed with the first complete examination. Only 12 of the 42 could be said to be asymptomatic after repeated questioning. We were able to obtain the histologic report on 26 of the removed specimens. Ten had already spread to nodes. In 11 the growth was confined to the wall of the colon, and in five it had extended through the intestinal coat. Thus, it can be anticipated that the survival of this group of small cancers discovered in two cancer detection clinics will not be much better than the over-all figure. Routine proctoscopies and the proper treatment of intestinal adenomas before they become cancerous obviously offer more to the patient. The following case history is an example of what might happen on many occasions if we remember the dictum that more things are missed by not looking than by not knowing.

Case 3.—Mr. J. K., aged fifty-six, stated that approximately two weeks after his wife had made a routine appointment for an examination at a cancer detection clinic, he had noticed slight rectal bleeding on the toilet tissue. This bleeding was noted at approximately weekly intervals. He denied any other symptoms referable to his intestinal tract. A proctoscopic examination revealed a sessile, hard, polypoid mass 0.5 cm. in its greatest diameter, raised 0.5 cm. above the mucosal surface, and located about 5 cm. from the anal margin on the anterior rectal wall. Although the tumor mass was hard and appeared to be confined to the mucosa, there was no evidence of fixation to the submucosal tissue. A biopsy showed this to be an adenocarcinoma, grade II. Approximately one month after the patient's symptoms developed, the tumor and a cuff of mucosa on each side were removed with the cautery snare. The base of the resection was thoroughly cauterized. The gross diameter of the specimen removed was 1.2 by 1.2 by 0.8 cm., and a careful analysis showed the margins to be clear. The patient has been examined at regular intervals and has remained free of disease for twenty-five months.

Treatment of Small Adenomas

Complete removal of small adenomas is of paramount importance. Those sessile adenomas under 0.5 cm. are best removed with a biopsy forceps followed by complete fulguration of the base and surrounding mucosa. Small polyps which have undergone definite malignant change will not always have recognizable induration or ulceration producing bleeding with slight trauma. Therefore, removal of the tissue in such a fashion that it can be delivered to the pathologist in a state that he can diagnose it is equally important with the complete removal. Electric snare removal of the small polyps frequently cooks them beyond a state where a proper diagnosis is possible. The pedunculated polyps having a visible normal mucosal pedicle are ideal for removal with an electric snare. Fulguration of the base must be more thorough in those with a short pedicle.

The removal of carcinomatous mucosal polyps will be followed by most disappointing end results unless there is a complete understanding between the surgeon and the pathologist. Whether the local removal of the carcinomatous polyp is sufficient can only be determined by knowing that the base is not infiltrated. Sometimes the base can only be recognized by the surgeon who removed it, which means that he must orient the pathologist and make certain that sections are taken through this aspect of the tumor. Instances of local recurrence or metastases to the pericolonic tissues in which there was not infiltration of the base of the pedunculated adenoma have not been seen. Instances of recurrence and death from invasive carcinoma following the local removal of a sessile polyp are all too common and probably would not occur if an adequate histologic examination plus an understanding between the pathologist and surgeon could be reached.

Regardless of the method of local treatment used, the removal must be complete. Some of the sphincter preservation operations have their place in the treatment of the sessile rectal adenoma with malignant foci, but this operation has no place in the fully developed rectal carcinoma arising in such an adenoma.

Conclusions

1. Proctoscopy of normal healthy adults will yield six adenomas in 100 examinations.
2. Routine proctoscopy is recommended for all individuals reaching the age of forty-five.
3. Proctoscopy at yearly intervals until two negative examinations have been done is recommended.
4. Adequate preparation with castor oil for proctoscopy insures against overlooking small adenomas.
5. No hereditary association in those with a family history of cancer of the colon could be proved in this series.
6. Malignant transformation occurs in intestinal adenomas in an unpredictable but high percentage of cases.
7. Bleeding is not a characteristic symptom of small adenomas.
8. It is anticipated that carcinoma of the large bowel as found in cancer detection clinics will not be attended by a higher than average survival; however, removal of the small adenomas undoubtedly prevents death from large bowel cancer.
9. Complete removal of the rectal and colon adenomas is of paramount importance.

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Discussion

A. W. Martin Marino, M.D., *Brooklyn.*—Dr. Miller's report of the proctosigmoidoscopic findings in approximately 7,500 patients certainly proves that the examination is quite worth while, especially since six out of every 100 patients showed positive findings. His presentation represents a tremendous amount of work, and I for one am indebted to him for bringing this timely subject to our attention. His study shows that the preponderance of polyps found were benign adenomas, and, inasmuch as it is generally agreed that many, if not all, rectal and colonic adenomas are definitely premalignant tumors, it follows that every effort should be made to diagnose these lesions early, and immediately upon discovery, such tumors should be completely removed or thoroughly destroyed. In that way, cancer prevention, in the truest sense of the phrase, can be practiced.

The importance of relying on proctosigmoidoscopy and not on x-ray for the discovery of tumefactive lesions of the rectum and lower sigmoid is emphasized by the fact that in only 2 per cent of Dr. Miller's 479 examinations were polyps demonstrated by x-ray findings alone. The inescapable conclusion is of course that proctosigmoidoscopy should be done first, followed by x-ray studies to determine the presence or absence of polypoid lesions higher than the proctosigmoidoscope can reach.

I am in perfect accord with Dr. Miller in his recommendation that all individuals reaching the age of forty-five should be proctoscoped. To carry out such a program more proctosigmoidoscopic examiners are needed. Each hospital should have on its staff competent proctosigmoidoscopists whose duty it would be not only to do the proctosigmoidoscopic examinations which they ordinarily would be called upon to perform but to stand ready to guide, advise, and assist members of the professional staff who choose to do their own proctosigmoidoscopics and also to have a definite program for the training of the house staff in the skillful use of that fact-finding instrument of precision, the proctosigmoidoscope.

CHOLINERGIC AND ANTICHOLINERGIC DRUGS AND THEIR TRIAL IN TREATMENT OF GASTROINTESTINAL DISORDERS

Trial of Urecholine and Banthine*

KEITH S. GRIMSON, M.D., Durham, North Carolina

(From the Department of Surgery, Duke University School of Medicine)

IMPORTANCE of the sympathetic and parasympathetic divisions of the autonomic nervous system as regulatory mechanisms controlling function of the gastrointestinal tract has long been recognized.[1] The hypothesis that certain individuals have a dominant "sympathetic tone," while others have a dominant "parasympathetic tone," led in early literature to use of the terms sympathicotonia and vagotonia. Although the conditions suggested by these terms have not been clearly established as clinical entities or as definite neuroses or diseases, there is little doubt that individuals vary among themselves or that the same individual varies from time to time. For example, hypomotility and hypoacidity of the stomach and delay of transit through the small bowel and colon with constipation may occur in patients or alternately hypermotility and hyperacidity of the stomach with increased transit time and diarrhea. These conditions and several other manifestations of abnormal gastrointestinal regulation are currently regarded as "functional disorders."

Many interested in diseases of the gastrointestinal tract emphasize that tension or stress associated with maladjustment and often occurring in patients with difficult emotional or environmental problems may be a primary or an important secondary etiologic factor. Certainly rest and reassurance are important as adjuncts to treatment of patients with peptic ulcer, ulcerative colitis, and several other disorders.

Sympathectomy and vagotomy as employed in patients with hypertension or peptic ulcer have made possible studies which have confirmed the old concept that the autonomic nervous system functions mainly as a regulatory mechanism and is not primarily responsible for gastrointestinal motor function. Removal of the stellate ganglia, the twelve thoracic and first lumbar ganglia, and the splanchnic nerves and celiac ganglia in patients with hypertension alters gastrointestinal motility or gastric secretions little if at all.[2] Sympathetic nerves are in general inhibitory when stimulated but can be eliminated without ill effect.

The parasympathetic nerves, which, in general, stimulate gastrointestinal activity, can be removed without causing serious abnormality of digestion or elimination. Nevertheless, according to tests, removal of these nerves is followed by some definite alterations. Vagotomy used as a treatment for peptic ulcer interferes with gastric function much more than sympathectomy but nevertheless is compatible with normal digestion and elimination in most patients.[3] This operation effects marked reduction of gastric peristalsis. Unless a gastrojejunostomy is also performed, retention of gastric content usually follows. Also vagotomy causes abnormalities of motility of the small intestine. External secretions of the pancreas diminish, and steatorrhea occasionally develops.[4] Experience with one of our patients treated by vagotomy for ulcer and at the same time splanchnicectomy for hypertension indicates that both nerve supplies can be removed without serious alteration.

Obviously, motor and secretory functions continue only partially handicapped in the absence of connections of the gastrointestinal tract with the central nervous system, and function is, therefore, primarily maintained by the peripheral or outlying mechanisms such as the intrinsic nerve plexus and the humeral devices of the gut. Of secondary importance is the vagus, and the least important is the sympathetic. Sympathectomy has its greatest value in gastrointestinal problems when used to interrupt visceral pain pathways traveling through the sympathetic nerve trunks in patients with abdominal visceral pain, as, for example, that caused by chronic pancreatitis. Sympathectomy is little or not at all useful for disturbances related to abnormalities of function. It follows that drugs which stimulate or inhibit the parasympathetic nervous system are more useful for gastrointestinal disorders or diseases than sympathomimetic or sympatholytic agents. Also drugs capable of blocking ganglia of the intrinsic plexus will produce greater effects than those blocking only the regulator nerves. Ganglionic blocking drugs can abolish peristalsis throughout the gastrointestinal tract. Adrenolytic or sympatholytic drugs,

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* Urecholine was supplied by Merck & Co., Inc., and Banthine was supplied by G. D. Searle & Company.

since they have little or no value as treatments for gastrointestinal diseases, will not be discussed in this report.

Effect of parasympatholytic drugs is dependent upon their action on mechanisms which transmit nerve impulses. It has long been known that electrical changes or waves, action currents, travel through the parasympathetic nerves as they do throughout the central nervous system. Some believe that these action currents are the primary or most important factor in nerve transmission. Also, it is well established that a substance, acetylcholine, is liberated in ganglia during synaptic transmission, that injection of acetylcholine stimulates postganglionic transmission, and that nicotine blocks both transmission and the action of acetylcholine. An enzyme, cholinesterase, is found at nerve endings in the central, peripheral motor, and parasympathetic nervous systems. This enzyme is capable of destroying acetylcholine and thus allowing rapid repetitive impulse transmission by rapidly hydrolyzing acetylcholine during each refractory period. Prostigmine accentuates action of acetylcholine by inhibiting cholinesterase. Physostigmine also inhibits cholinesterase.

These observations emphasize the chemical transmission theory or the hypothesis that action currents and transmission of nerve impulses are both dependent upon the acetylcholine-cholinesterase mechanism. Certainly this chemical transmission theory explains the mode of action of the cholinergic and anticholinergic drugs and affords the basis for their use. Also, fortunately some difference exists in selectivity of drug action or in susceptibility at synapses or end organs so that a variety of different pharmacologic responses can be produced by using various agents.

Ganglia of the intrinsic plexus, Auerbach's plexus, or other similar peripheral ganglia or nerve plexus in the stomach and intestines are, as stated above, primarily responsible for motor activity such as peristalsis and are capable of independent or automatic action. These ganglia are intimately related to or actually are the postganglionic distribution of the parasympathetic nerves. Injection of acetylcholine stimulates transmission through this postganglionic plexus, and nicotine blocks both transmission and action of acetylcholine, paralysis following stimulation. Curare also has an effect upon autonomic ganglia, although its major action is interruption of conduction between peripheral nerves and striated muscle. The effect of curare is at the ganglia. Greatest recent interest has been caused by the study of Etamon and SC-1950.[5,6] These drugs, given in small amounts, have a selective action for ganglia of the parasympathetic and sympathetic systems and, unlike nicotine and curare, do not produce major effects on the central nervous system or the motor pathways to skeletal muscle. Because of this selective action these ganglionic blocking drugs may be used clinically in treatment of clinical problems requiring reduction of gastrointestinal motility and decrease of volume and acid of secretions from the stomach. Clinical use, however, is limited, since neither drug is effective when given orally, and each drug blocks sympathetic as well as parasympathetic nerve transmission and thus reduces blood pressure and produces postural hypotension. That their ganglionic blocking action is closely related to the acetylcholine mechanism is evidenced by abolition of drug effects when Prostigmine is given.[7] Prostigmine is, therefore, a useful antidote. Neither of these drugs can be given continuously to ambulatory patients. Since their utility is limited, the remainder of this presentation will deal with newly available and orally effective cholinergic and anticholinergic drugs which can be given continuously to ambulatory patients.

Cholinergic Drugs

Muscarine, acetylcholine, Mecholyl, physostigmine, neostigmine (Prostigmine), and pilocarpine are drugs which stimulate parasympathetic activity. Two new preparations, Doryl (carbamylcholine chloride)* and Urecholine (urethane of beta-methylcholine chloride), which can be given parenterally or orally are well tolerated by patients and are definitely effective as parasympathomimetic or cholinergic agents. Of these our studies indicate that Urecholine is the most effective on the gastrointestinal tract. Experiences during clinical trial of Urecholine will, therefore, be presented.

Starr and Ferguson did the initial developmental work with Urecholine and first gave this drug to patients.[8] They described side-effects experienced by normal volunteers. After 2 to 3 mg. subcutaneously sensations of increased peristalsis and occurrence of audible borborygmi were noted. After 4 to 6 mg. subcutaneously slight salivation developed, sweating of the palms was evident, and increased peristalsis was conspicuous. In over half the patients there occurred an intensive desire to void. These symptoms were prompt and more marked after 7 to 10 mg. subcutaneously, and abdominal cramps and nausea occurred, requiring the prompt administration of atropine. These authors recommended use of 2-mg. doses subcutaneously, to be repeated at intervals of one-half hour as necessary, for patients with postoperative urinary retention.

Our tests were made in normal patients, in patients after vagotomy with or without gastroenterostomy, and in patients with achalasia, megacolon, or unexplained "functional" abdominal pain. Miscellaneous observations were also obtained using Urecholine for postoperative abdominal distention or urinary retention. The work of Rundles, who used Urecholine in additional megacolon patients and for diabetic neuropathy with disturbances of ileal pattern and transit time, was also observed.[9] Results of tests will be summarized and then results of clinical trial outlined.

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* Furnished by Merck & Co., Inc., Rahway, New Jersey.

Balloons placed in the esophagus of normal patients with achalasia registered fluctuations of pressure which became more frequent and greater in amplitude after 2.5 mg. of Urecholine subcutaneously. Larger balloons, 300 cc., placed in the stomach of normal patients registered typical contraction waves which were slightly more frequent and exaggerated following injection of 2.5 or occasionally 5 mg. or after ingestion of 30 mg. Similar intragastric balloons placed in patients weeks to several years after vagotomy recorded rhythmic waves which were very shallow, fluctuations of intragastric pressure seldom exceeding 3 or 4 mm. of water. Urecholine, 2.5 mg. subcutaneously or 30 mg. orally, effectively restored rate and height of contractions toward normal, 15 to 30 mm., two or three times a minute. Our early studies indicated, as judged by the 300-cc. balloon method, that though there was good restoration after Urecholine, Doryl produced only moderate restoration and mecholyl little or none.[10] By fluoroscopic methods some activation of gastric motility after vagotomy was observed after each of these drugs. Two and one-half milligrams of Urecholine produced active and 5.0 mg. violent emptying of the barium from the stomach. Thirty milligrams orally were effective, although 5 or 10 mg. orally were not. As judged by tracings using small balloons in the jejunum or by ileal and jejunal pattern and transit time recorded by roentgenograms obtained hourly after ingestion of barium, 2.5 or occasionally 5 mg. of Urecholine subcutaneously moderately stimulated motility of the small intestine in normal patients. Two and one-half milligrams definitely restored motility and pattern of the small bowel toward normal in those few patients with definite abnormality following vagotomy. Balloons placed in the lower sigmoid colon and rectum of normal patients and of children with megacolon revealed variable fluctuations of pressure of irregular height and inconsistent rhythm or rate before Urecholine. After 2.5 or occasionally to 5 mg. the sigmoid of the normal and particularly of the megacolon patients exhibited greater contractions occurring at a more frequent interval or with a more regular rhythm. It is of interest that activation of contractions which were, however, apparently abnormal occurred in the normal-sized segment of lower sigmoid and the normal rectum distal to the dilated bowel of the sigmoid type of megacolon. Our motility studies in rabbits and dogs during experiments studying vagotomy and Urecholine were reported by Postlethwait.[11]

Tests of secretions were made by aspiration of gastric content of normal and of vagotomized patients. Volume and acidity were moderately increased after Urecholine, although, as emphasized by Machella, free acid might have been larger had greater care been observed to have these patients expectorate saliva which increased in amount and which, if swallowed, would tend to neutralize gastric content.[12]

During the above studies of effects of subcutaneous injection of Urecholine, it became evident that 2.5 mg. almost always produced satisfactory results and that 5 mg. produced forceful and occasionally violent contractions and also not infrequently disturbing side-effects. Two and one-half milligrams subcutaneously, or at times intramuscularly, therefore, were adopted as our usual initial and subsequent therapeutic dose with injections repeated at four-hour intervals. It should be emphasized that this is one-half of the ampule supplied by the company and that use of 2.5 mg. is accomplished only by regularly repeated instructions to house officers and nurses. Five milligrams were once injected intravenously through an error of interpretation of instructions. The patient experienced alarming symptoms with borborygmi audible some distance from the bedside, vomiting, profuse salivation, and unusually great perspiration. Fortunately he recovered with the aid of use of atropine as recommended by Starr.[8]

During these studies it was similarly determined that the 5-mg. oral tablet supplied by the company is usually ineffective, this amount being approximately one fifth of the optimum amount. Twenty-five or thirty milligrams (five or six tablets) orally constitute the minimum dose which will produce consistent activity, and this amount is rarely, if ever, followed by any unpleasant side-effects. The usual adult dose used in the trial described below has been 30 mg. on arising and 15 or 20 mg. midmorning and midafternoon. In children the amounts are 15 or 20 mg. on arising and 10 mg. midmorning and midafternoon. These amounts have been continued two or more years in several patients without occurrence of abnormalities of blood count or urinalysis or evidence of developing increasing tolerance.

Temporary, intermittent, or continuous treatment during clinical trial of Urecholine has been limited for the most part to patients with known or assumed interruption of the preganglionic parasympathetic pathways or the outlying ganglia and plexus. Two and one-half milligrams subcutaneously have been given every four hours during the day to patients treated by vagotomy and gastroenterostomy for peptic ulcer. Subcutaneous injections were started on the third or fourth day when postoperative intragastric suction was discontinued. Injections were continued every four hours until feedings were tolerated and then replaced by oral Urecholine, 30 mg. on arising and 15 mg. midmorning and midafternoon. Oral medication was not started until it was ascertained that the Urecholine would reach the small intestine, since the drug is not effectively absorbed by the stomach. Oral medication was continued a minimum of two or three weeks after discharge from the hospital. Such a program employed routinely following the last 90 operations has decreased the incidence of occurrence of sensations of fullness after eating, bowel cramps, and diarrhea. Fifty-three patients of the 148 now in the vagotomy series have taken Urecholine intermittently, a few of these more or less continuously during several years following operation, and have described partial or complete relief of any abnormal gastrointestinal symptoms noticed. The few with steatorrhea have required high carbohydrate and low fat diet plus other medications for additional benefit.[4]

Eight patients with achalasia received Urecholine orally during intervals varying from several weeks to a month or two. Although temporary relief was described by a few, each finally came to the conclusion that dysphagia was not appreciably altered while taking the drug. Ten patients with megacolon, two of whom had enlargement of all of the colon including the rectum, type I, and seven great enlargement of the descending and sigmoid colon above a normal sized but presumably abnormally functioning segment of lower sigmoid and a normal sized rectum, type III, were treated.[13,14] Each was also advised to use laxatives or enemas not oftener than twice a week and to examine the abdomen and rectum at intervals for occurrence of hard masses or balls of inspissated stool and to have these broken up by bimanual rectal and abdominal manipulation should they occur. Four of the patients had minor symptoms and described benefit but used Urecholine only a few months. The remaining six had more serious difficulty and used the drug continuously, the longest period of treatment now being two years. Most have described occurrence of spontaneous bowel movements every day or two. Although enlargement of the sigmoid colon was enormous in some of these patients, results of an earlier study led to the belief that surgery was unnecessary.[14] Results with use of Urecholine have been favorable and have further substantiated this conclusion. Ten patients with unexplained abdominal pain, or "functional bowel distress," have been tried on Urecholine to determine whether their pain might be related to a neurogenic dysfunction of abdominal viscera amenable to treatment by a cholinergic drug. Four described definite improvement during several weeks of treatment, but after trial of placebos or interruption of therapy for several weeks there was no conclusive evidence that suggestion could be ruled out as explanation for benefit.

Urecholine, 2.5 mg. subcutaneously every four hours, has been used in patients with postoperative abdominal distention and in some with urinary retention. Benefit was greatest in those with neurologic lesions such as follow extensive pelvic or colon surgery or chordotomy. Benefit occurred, but less regularly, in patients receiving other abdominal operations. Rundles has observed definite improvement of symptoms and partial or complete correction of abnormalities of ileal transit time in diabetic patients with gastrointestinal abnormalities presumably caused by diabetic neuropathy.[9]

As a result of clinical trial it is our belief that Urecholine is the most effective of the presently available cholinergic drugs and that its use is particularly indicated in patients with disturbances of the parasympathetic innervation causing decreased motor activity. It is effective and well tolerated, providing one uses 2.5 mg. subcutaneously or 30 mg. orally and never injects the drug intravenously.

Anticholinergic Drugs

Drugs of the atropine-alkaloid series, atropine, hyoscyamine, scopolamine, and belladonna, and synthetic substitutes, such as Syntropan and Trasentine, depress parasympathetic activity. Atropine, belladonna, and Trasentine are the most frequently used for gastrointestinal disorders. Mode of action and clinical value of these drugs is well known and will not be reviewed. During the last several years the action of many newly synthesized chemicals capable, as judged by screening experiments, of affecting functions of the autonomic nervous system has been studied in animals and, when proved effective and safe, has also been tested in patients. One of these drugs excited our interest because it had potent atropine-like action and also in larger doses a ganglionic blocking property.

This drug, beta-diethylaminoethyl xanthene-9-carboxylate methobromide, first termed SC-1703 as the chloride and then SC-2910 as the bromide and now labeled Banthine, has been described in previous reports.[15-23] After trial in animals we first used test doses in patients in January of 1949 and then started continuous treatment, particularly in patients with peptic ulcer, in May of 1949. Test doses ranged from a few milligrams to 200. Although atropine-like effects followed smaller doses, the optimum dose was determined as 100 mg., and we believe this amount introduces some ganglionic blocking effect. With this dose motility of the stomach, small intestine, and colon is consistently arrested or depressed, and volume and free acid of secretions of the stomach is usually reduced. Effects last from two to six hours. Our therapeutic dose used for treatment of peptic ulcer has been 100 mg. whether taken orally or injected intramuscularly, and the interval between doses has been every four or every six hours. A minimum maintenance dose of 50 mg. every six hours has been elected for use after healing of ulcer has been evidenced. Unlike atropine and like the ganglionic blocking drugs, lethal doses of Banthine in animals cause a curare-like paralysis. For this reason the term anticholinergic is chosen in preference to the term parasympatholytic.

Patients receiving these amounts of Banthine will notice dryness of the mouth which is usually troublesome during the first few days but is variable and much less troublesome later. Dilatation of the pupil occurs and may interfere somewhat with reading of fine print. A few patients will experience constipation and require laxatives, diet, or medicine. Decrease in force of urination will occur, and an occasional patient with prostatic obstruction may develop urinary retention. When this occurs, continuation of decreased amounts of Banthine for several days and then return to a full schedule has been possible. One patient who had indication for a transurethral prostatic resection developed persisting retention but several months after operation was able to take full treatment. Effect on blood pressure and pulse rate has been slight.

One would expect an effective anticholinergic drug to stop sweating. Patients taking Banthine notice decrease of sweating, and in six patients with marked hyperhidrosis Banthine has successfully dried the hands both during initial testing and continuing treatment. One would also expect that a good anticholinergic drug might aid treatment of some diarrheas, radiation gastroenteritis, ulcerative colitis, and certain chronic, colicky abdominal pains. Trial of Banthine in a few patients has produced some encouraging results.

Since abnormal or excessive motility and secretion of the stomach are important among the etiologic factors causing peptic ulcer, one would expect benefit in this condition. The remainder of this report will summarize results of clinical trial of Banthine in the first 100 patients with peptic ulcer. Treatment was started between May, 1949, and March, 1950, and present results have been ascertained by a regular follow-up system. Details of the results are presented in other manuscripts.[23,24]

The 100 patients had serious ulcer problems and were referred to the surgical service or sought treatment with Banthine because of failure of conventional management. Trial using Banthine was usually instituted in lieu of rest, restriction of diet, or use of antacids and other medications. It is emphasized, however, that elimination of conventional restrictions and medical treatment, although necessary for study purposes, is not recommended as a good general practice. Each patient was treated several weeks to a month or two by the full therapeutic dose schedule of 100 mg. every four or six hours and, then, after roentgenologic evidence of healing, continued on a maintenance schedule of 50 mg. every six hours. Importance of taking Banthine regularly during the middle of the night was emphasized, and each patient has followed this practice.

Six of the 100 patients had jejunal ulcer following gastroenterostomy, one had a jejunal ulcer following subtotal gastric resection, two had both gastric and duodenal ulcer, two channel ulcer, and the remainder duodenal ulcer. The seven patients with jejunal ulcer met indications for vagotomy because of pain and repeated major hemorrhages. Symptoms and findings in another 55 patients by conventional conservative standards also indicated need for surgery. Of the 62 who otherwise needed surgery only five have as yet been treated by operation, four having vagotomy and gastroenterostomy after five, six, six, and ten weeks of use of Banthine and one subtotal gastric resection after six weeks of therapy.

Results of clinical trial have been gratifying, as judged by effect upon symptoms in the 95 patients continuing use of Banthine. Pain had been intractable during the days or weeks before use of Banthine in 27 patients, severe although usually intermittent during months or years in 45, and moderate but persistent in spite of conventional treatment in 28. Most patients described relief from pain fifteen to thirty minutes after the first 100 mg. and on continuing treatment have not since had pain. Eleven patients, however, described occasional intermittent and usually mild ulcer-like pain, gradually diminishing during the first fourteen to one hundred three days of treatment and then subsiding. Another four, now treated forty-seven to ninety-six days, have not yet experienced complete relief. Following relief of pain in the 91 patients most have remained asymptomatic, but 15 had single recurrences during a period of overwork, emotional stress, or illness and usually while on the maintenance dose. Recurrences lasted three to forty-seven days. Relief was achieved by resuming full therapeutic doses of Banthine and supplementing treatment by rest and use of antacids.

Vomiting had been persistent in 15 patients and occasional in 37 before Banthine and occurred afterward in only seven patients. The seven were among the 15 with recurrences and had vomiting at that time and only occasionally during several days. Before use of Banthine, major and repeated hemorrhages had occurred in 19 patients and minor hemorrhages or melena in 12. As yet no patients have developed bleeding during therapy.

It is evident from this statement concerning symptoms during treatment that relief is usually achieved promptly and before ulcers could have healed. Therefore, roentgenologic examinations have been obtained after about three weeks of treatment, six weeks later, and subsequently at intervals of two or three months. Change from therapeutic schedule (100 mg. every four or six hours) to maintenance schedule (50 mg. every six hours) has been recommended only after fluoroscopic examination and roentgenograms have evidenced improvement or healing. It is recognized that deformity present at the start of treatment in each patient resulted from scarring during many years of ulcer activity as well as from edema or spasm. Complete correction of deformity was not anticipated. The effect of treatment as judged by roentgenologic study is summarized.

Following treatment the seven patients with jejunal ulcer have now little or no deformity. The five patients who required surgery each evidenced marked obstruction with four to six-hour retention of barium before operation. There remain 88 of the original 100 in whom the effect of continuing treatment upon duodenal deformity can be studied. For the purpose of analysis deformity of the duodenum has been classified as slight if narrowing of the lumen was less than one quarter its normal diameter, moderate if narrowing was between one quarter and three quarters of normal, and marked if narrowing is three quarters or greater or if the duodenum could not be visualized.

Forty-five patients had marked deformity before treatment. Films at intervals during treatment revealed definite lessening of deformity or improvement in 35, no change in eight, and increase of deformity possibly related to contraction by scar tissue occurring with healing in two. Twenty-one patients had moderate deformity before Banthine, and afterward there was improvement in 12, no change in seven, and increase in two. Twenty-two patients had slight deformity before treatment and afterward there was improvement in six, no change in ten, and increase in six. Since 23 of the 88 patients have as yet had only one study about three weeks after start of treatment, it is possible that later examinations may show more frequent improvement.

Thirty-three patients had a barium-filled defect or pocket outlined on roentgenograms which could be interpreted as an ulcer crater. In four, the crater had been visualized during preceding years but was not demonstrated during the study just before Banthine. Therefore, 29 patients had craters when treatment was started. These varied in size from 0.2 to 1.6 cm., averaging 0.6 cm. By the time of the first studies during treatment with Banthine and at fourteen to seventy-seven days, roentgenograms and fluoroscopic examinations failed to demonstrate crater in 22 patients. In six patients small single craters were visualized during treatment in fourteen, fourteen, twenty-four, thirty-six, forty-seven, and fifty-five days but were not visualized during subsequent examinations. After healing, definite craters were not visualized in any of the group of 95 during any examination with one exception. This exception was a definite recurrence two hundred sixty-three days after start of treatment. This patient, then asymptomatic and taking a maintenance dose of 200 mg. daily, developed a severe respiratory infection of "flu." Pain, nausea, and vomiting recurred, and the crater reappeared. After five weeks of treatment of therapeutic doses, rest, and antacids, symptoms have ceased, and this crater at the present time has healed.

Blood counts and analysis of urine were obtained at regular intervals in each of the above patients. Abnormality has not occurred. Also tests of motility and secretions after several months of treatment have repeated results of original tests. Evidence of development of tolerances has not been observed.

Summary

Several drugs which variously act on the cholinergic pathways of the parasympathetic nerve supply to the gastrointestinal tract are useful in treatment of functional disorders or diseases. These may stimulate (cholinergic) or block (anticholinergic). Of those that stimulate, Urecholine, 2.5 mg. subcutaneously or 30 mg. orally, has proved most effective and has aided treatment of megacolon, diabetic neuropathy with abnormal intestinal function, postvagotomy disturbances, abdominal distention or ileus, urinary retention following pelvic surgery or chordotomy, and various other conditions. Of those that inhibit, Banthine, 100 mg. orally or

10 mg. subcutaneously or intramuscularly, has proved most effective and has aided treatment of peptic ulcer and to some extent several disorders or diseases of the small bowel and colon. As an anticholinergic drug Banthine also stops the excess sweating of hyperhidrosis.

Conclusion

Urecholine is an effective agent for treatment of gastrointestinal disorders associated with diminished motor activity, and Banthine is an effective agent for treatment of disorders which, like peptic ulcer, are associated with excessive motor activity.

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Discussion

Harry L. Segal, M.D., *Rochester.*—Dr. Grimson has presented a very instructive paper on the cholinergic and anticholinergic drugs.

My remarks will be confined to the anticholinergic drug called Banthine. Dr. Grimson and his group have been the first to publish a report on the use of this drug in the treatment of duodenal ulcer. Our results with the use of this drug in duodenal ulcer are generally in agreement with those of Dr. Grimson and his group. We have also used doses averaging 100 mg. every six hours. However, the tolerance of this drug is definitely variable and ranged from the low of 25 to 50 mg. every four to six hours to the high of 150 mg. every six hours.

The fact that the ulcer niche is still present in patients in whom relief of symptoms has occurred must suggest causes other than the mere presence of hydrochloric acid as the direct cause of pain. The average time required for the disappearance of the ulcer niche in Dr. Grimson's series has not been decreased. In our experience, 100 mg. of Banthine lowers the volume of gastric secretion after alcohol stimulation. No decrease occurred after insulin or histamine stimulation in the patients that we have tested. Our experience with the effect upon night secretion is still too limited to make any definite statement.

Patients with obstruction should not be treated primarily with Banthine, because symptoms have frequently been made worse. The loss of propulsive power due to the action of Banthine may increase the retention. It probably is best to start such patients on the usual medical regimen and, after they have improved, to add Banthine to the regimen.

In 15 patients with chronic duodenal ulcer and three patients with chronic regional enteritis, our results have been as follows:

Eight of the ulcer patients were completely relieved of their symptoms within a few days. In two ulcer patients, a gnawing sensation recurred occasionally.

Five ulcer patients failed to be benefited by Banthine. Of these five patients, three had partial obstruction and came to surgery. One of these five patients had an active ulcer on the posterior wall of the duodenum adherent to the capsule of the pancreas and required surgery. One patient who failed to improve with 50 mg. of Banthine later perforated into the pancreas while on an orthodox medical regimen.

Two of the three patients with ileitis were relieved of their pain and diarrhea. In the third, in whom no cicatricial obstruction was present, the drug was discontinued.

The side-effects were dryness, blurring of vision, and constipation. In most patients, these decreased or disappeared without discontinuing the Banthine.

From this limited experience, it can be said that Banthine alone is not the answer to the peptic ulcer problem. It is, however, a contribution in the management of duodenal ulcer. Combined with frequent feedings and other measures, it should play an important part in the medical treatment of the intractable ulcer. Excessive night secretion of certain duodenal ulcer patients may be sufficiently lowered by the proper dosage of Banthine to aid in the healing of ulcers which now require surgery.

THE INCIDENCE OF AMEBIASIS IN THE ALBANY (NEW YORK) AREA

ROBERT C. TOWSE, M.D., Albany, New York, D. A. BERBERIAN, M.D.,* Albany, New York, and E. W. DENNIS, Ph.D.,* Rensselaer, New York

(From the Medical Department of Winthrop-Stearns Inc., and the Sterling-Winthrop Research Institute)

THE purpose of the present survey was to determine the incidence and significance of Endamoeba histolytica infection in the Albany-Rensselaer area of New York State.

Material and Methods

Stool specimens were solicited from the staff of the Sterling-Winthrop Research Institute, from personnel of Winthrop-Stearns Inc., from private patients of collaborating physicians, and from second-year medical students at the Albany Medical College. The 350 subjects included in the survey reside in Albany, Rensselaer, Schenectady, and Columbia Counties and, with the exception of six who were foreign missionaries on furlough, may be considered as representative of the young and middle-aged adult population of the area. Although 208 members of the group were employed in Rensselaer, they worked in a variety of buildings, and very few had any contact or possible source of infection in common. With respect to occupation, this group included senior research chemists, technicians in dispersed chemistry and biology laboratories, chemical operators in the manufacturing plant, maintenance laborers, new employes reporting for work, etc.; there was no common cafeteria or drinking water supply. Members of the group reside in urban, suburban, and rural situations provided with conventional or superior sanitary facilities. The group of medical students were representative normal individuals of their age group and educational status. The private patients were individuals who in most instances sought medical attention for primary complaints which would not suggest a clinical diagnosis of amebiasis.

A total of 773 stool specimens from 350 persons were examined. One hundred and sixty-three persons submitted only a single specimen; 60 persons brought in two specimens each; 80 persons, three specimens each; 17 persons, four specimens each; 15 persons, five specimens each, and 15 persons brought in six or more specimens. An average of 2.2 fecal samples per person were examined.

Upon receipt of a stool sample in the laboratory, two to four fecal smears were examined as wet, unstained preparations, using as diluent physiologic saline and D'Antoni's iodine solution. Also, half of the series of stool specimens were further examined by both the zinc sulfate concentration method and by culture on Locke-egg-serum slopes. All positive findings by direct microscopic examination were confirmed by culture.

Results

As shown in Table 1, 34, or 9.7 per cent, of the 350 individuals examined were found to be infected with E. histolytica. When related to the groups of subjects examined, it is noteworthy that the infection occurred with equal frequency (10 per cent) among the 214 men and 136 women. The 208 industrial and laboratory employes yielded an infection rate of 11.7 per cent; 9.5 per cent of the medical students were positive, and 8.5 per cent of the private office patients were positive in contrast to the 3 per cent incidence recorded for the few hospitalized patients. Since there was often a lapse of several days between the time stools were collected from patients and their receipt at our laboratory, it may be safely assumed that the infection rate was higher in the two latter groups than the data indicate. The figures for the group of private clinic patients were somewhat restored by the fact that this group included two missionary families recently returned from India; three of the six persons were found to be positive.

Fourteen of the 34 positive cases were persons who reported overseas service or residence; of this number 12 were men, and only two were women. In view of the 10 per cent incidence among both men and women and since only two of the 13 positive women gave a history of overseas residence, it is apparent that overseas residence per se was not responsible for the rate of incidence encountered. If the two foreign residents were excluded from the women's series, there would still remain 11 infections among 136 women (8.2 per cent). Only two of the remaining 11 positive women were married to infected men, and neither of the positive husbands had been in the armed services or traveled outside of the survey area.

It is always important to the physician to be able to estimate the significance of a negative

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* By invitation.

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The survey was carried out as a cooperative study by the Sterling-Winthrop Research Institute and the medical department of Winthrop-Stearns Inc., at Rensselaer, New York.

TABLE 1.—Description of Subjects of Survey and Incidence of Endamoeba histolytica

Source	Men				Women				Summary			
	Number Examined	Positive Number	Positive Per Cent	OSR*	Number Examined	Positive Number	Positive Per Cent	OSR*	Number Examined	Positive Number	Positive Per Cent	OSR*
Industrial and laboratory employes	127	12	9.4	5	81	11	13.6	0	208	23	11.7	5
Medical students	19	2	10.5	2	2	0	0	0	21	2	9.5	2
Private patients	52	6	11.5	5	43	2	4.6	2	95	8	8.5	7
Hospital patients	16	1	6.0	0	10	0	0	0	26	1	3.4	0
Totals	214	21	9.8	12	136	13	9.6	2	350	34	9.7	14

* OSR: History of residence or military service overseas in known endemic areas.

laboratory report, and this is particularly true in the case of suspected amebiasis where a definitive diagnosis is usually dependent upon the microscopic demonstration of trophozoites or cysts of E. histolytica. As shown in Table 2, in which the appearance of new cases is related to the number of stool specimens per persons examined, 26 (76.5 per cent) of the 34 infections were detected at the first examination. Each of three subsequent examinations of previously negative subjects yielded an additional small number of new positive cases. On the basis of the infection rates found and by correcting for the number of persons who were not re-examined, it is estimated that the actual infection rate among the survey group of 350 persons is not less than 13 per cent instead of the 9.7 per cent demonstrated.

In order to evaluate the clinical significance of the amebic infections which were encountered in persons who were not obviously ill, an inquiry was made into the state of health of the 34 persons harboring E. histolytica, and each was given a physical examination. On the basis of the information obtained the severity of the infection could be assessed, and it was convenient to classify the 34 cases in four groups as follows:

1. Asymptomatic carriers who harbored E. histolytica in their intestinal tract without demonstrable signs or symptoms referable to the gastrointestinal tract.

2. Light or mild cases of amebic colitis in persons with such poorly defined symptoms that they would not normally seek medical assistance, but who nevertheless yielded histories of headaches, lassitude, anorexia, flatulence, colic, etc., associated with constipation, slight tenderness in the abdomen, occasional loose bowel movements, or a "normal" pattern of three or more soft bowel movements daily.

3. Moderately severe cases of chronic intestinal amebiasis with signs and symptoms definitely referable to the infection, such as recurrent attacks of diarrhea or habitually loose bowel movements, constipation alternating with diarrhea, flatulence, marked tenderness over the cecum, transverse colon, or sigmoid flexure, and in some cases hepatomegaly.

4. Severe ulcerative intestinal amebiasis with marked and clearly defined intestinal signs and symptoms, amebic hepatitis, or amebic abscess of the liver.

The frequency distribution of the detected cases of amebiasis according to clinical severity is shown in Table 3. Of the 34 positive cases, five (15 per cent) were classified as asymptomatic carriers; 18 (53 per cent) suffered from light amebic colitis; ten (30 per cent) suffered from the moderately severe chronic amebic colitis; and one (3 per cent) suffered from severe chronic intestinal and acute hepatic amebiasis.

Of the 34 persons in whose stools E. histolytica was demonstrated, 20 had not been out of the survey area in recent years. Of the 20 cases of undoubted local origin only two (10 per cent) were classified as asymptomatic; 12 (60 per cent) were "mild"; five (25 per cent) were moderately severe, and one (5 per cent) was very severe. In the case of the remaining 14 positive cases (12

TABLE 2.—Relation of Repeated Examination to the Accuracy of Diagnosis

Specimen Submitted	Number Examined	Number of New Positives	Group Rate (Per Cent)	Cumulative Incidence Found (Per Cent)	Positives Detected (Per Cent)	Estimated Incidence*	
						Number	Per Cent
First	350	26	7.4	7.4	76.5	..	...
Second	187	4	2.1	8.6	88.4	33	9.4
Third	127	3	2.4	9.4	97.2	41	11.7
Fourth	47	1	2.12	9.7	100.0	47	13.4
Fifth	15	0	...	...	...	..	...
Sixth	15	0	...	...	...	..	...

* Adjusted on the assumption that all members of the series (350) were examined at least four times unless positive earlier.

TABLE 3.—Clinical Classification of Detected Cases of Endamoeba histolytica

Source	Number Positive	Clinical Severity of Positives Detected: No Signs or Symptoms	Light	Moderately Severe	Severe
Industrial and laboratory employes	23/208	2	13	8	0
Medical students	2/21	0	1	1	0
Private patients	8/95	3	4	1	0
Hospital patients	1/26	0	0	0	1
Total frequency	34/350 (9.7%)	5 (15%)	18 (53%)	10 (30%)	1 (3%)

men and two women), the history of overseas residence or service was not related to the severity of the clinical manifestations: three (21 per cent) were classified as asymptomatic, six (43 per cent) as mild, and five (36 per cent) as moderately severe.

Comment

Amebiasis is generally regarded as a tropical or subtropical condition. It should be emphasized that E. histolytica was first discovered in 1875 in Leningrad by Lösch who found the parasite in the excreta of a patient who was suffering from an attack of acute dysentery.[1] Osler first reported a case of amebic dysentery in the United States in 1890, and Councilman and Lafleur published their classic description of the pathology of intestinal amebiasis in 1891.[2,3] As an aftermath of the Chicago epidemic, acute amebic dysentery has been widely publicized as a rare exotic importation from the tropics. Actually, infection with E. histolytica is cosmopolitan in distribution, and chronic subacute ulcerative colitis is the common form of the disease.[4-6] According to Craig and Faust, the incidence of the infection in the population of the United States is conservatively estimated to be 10 to 20 per cent.[4-6] The data presented in the present report indicate that an incidence of 9.7 per cent can readily be demonstrated in the Albany area and that the infection rate probably exceeds 13 per cent. These figures are not significantly different from those reported by Dennis and Lund for the subtropical city of Beirut, Lebanon.[7]

In so far as the incidence of amebiasis in New York State is concerned, only three surveys have appeared in the medical literature. Thomas and Baumgartner on the basis of one stool specimen examined from each of 1,100 inmates in a New York State institution reported the incidence of infections with E. histolytica to be 10.7 per cent.[8] Later, Nauss and Salinger reported an incidence of 5.6 per cent when one stool sample was examined from each of 676 persons who were considered to be representative of groups living in New York City.[9] The third survey was made by Birnkrant, Greenberg, and Most in which three stool specimens were examined from each of 1,917 inmates and employes of an insane asylum, and an incidence of 11.5 per cent was reported.[10] These reported institutional rates of infection are low for institutions of the type surveyed.

There are numerous adequate descriptions of the clinical manifestations of amebiasis, which we shall not repeat.[4,5,11] However, the relatively high incidence of a parasite which has the potential pathogenicity of E. histolytica presents both a clinical and a public health problem of considerable magnitude, namely, should apparently asymptomatic carriers and mild cases of amebic infection be sought out and treated? The answer appears to be clearly "yes," on the basis of our increasing understanding of the pathogenesis of subacute chronic amebiasis.

The accumulated evidence indicates that typically the onset of intestinal amebiasis is so insidious that the patient remains in a state of marginal ill health for protracted periods of time, and the appearance of such evidence of irritation to the colon as an increased daily number of semiformed stools, flatulence, mild colonic spasms, or constipation come to be accepted as normal. It seems probable that patent amebic ulcers remain small and few in number in the absence of exposure to massive reinfection or decreased capacity for tissue repair. Consequently, the development of extensive cicatrization, adhesions, amebomas, and metastatic extension to the liver or other extraintestinal organs can occur in the absence of conspicuous signs of intestinal infections. Musgrave found typical amebic ulceration of the colon in 50 Filipinos who had died of diseases other than amebic infection and who had not given any history of amebic diarrhea or dysentery.[12] Faust attempted to answer the question, "Are there perfectly healthy carriers?," by examining the intestines of 202 individuals who had died as the result of accidents and found that 13 (6.4 per cent) harbored E. histolytica in their large intestines.[13] Of these 13 cases, seven showed typical amebic lesions which were superficial; in six no macroscopic lesions were found, although, in four of the six, amebas were demonstrated throughout the entire length of the large intestine; in the remaining two cases the infection was diagnosed by finding a single cyst in each instance. Bond *et al.* studied, both macroscopically and microscopically, the intestines of five rhesus monkeys which were symptomless carriers of E. histolytica.[14] None of the monkeys showed gross ulceration, but microscopic lesions in the form of low-grade chronic inflammatory reaction and interstitial hemorrhage and shallow mucosal ulcers were found; amebas were discovered in the gland crypts, some having invaded the mucosa.

The available histopathologic evidence indicates that demonstrable ulceration precedes clinically apparent symptoms, and the period of latency may be prolonged. Furthermore, when the so-called "healthy carriers" are questioned and are subjected to a careful physical examination, it is often possible to elicit evidence that the infection was not as innocuous as it first appeared to be; this was true in 85 per cent of the cases in our series. Craig, Faust, and many others urge the treatment of all carriers for two reasons: (1) to eliminate the possibility of future development of clinical amebiasis and/or its complications and (2) to reduce the reservoirs of infection.[4–6]

We urge, therefore, that there is a responsibility of the physician to seek and treat obscure cases of amebiasis; since a number of effective amebacides are now available, the ambulatory treatment of amebiasis is a practicable and eminently desirable procedure. It is our opinion that much valuable information would be obtained and industrial efficiency profitably increased by the treatment of cases uncovered if stool examinations by qualified technicians became a part of the routine medical examination which is required of new employes of many industrial organizations.

Finally, it is in order to comment briefly on the diagnosis of amebiasis. A definite diagnosis is entirely dependent upon microscopic demonstration and identification of trophozoites or cysts of E. histolytica. A prevailing idea that the laboratory diagnosis requires the exercise of exceptional skill by exceptional personnel is fallacious. It is true that occasional individual amebas or cysts are difficult to identify, but any intelligent laboratory technician who is sufficiently skilled to perform a differential leukocyte count can be taught the essential differential criteria within a few hours. The really essential factors are interest on the part of the examining physician and the cooperation of the patient in providing fecal specimens as soon as possible after collection.

The opinion in regard to the extent and usefulness of proctoscopic findings in the diagnosis of amebiasis is extremely divergent; it was possible to do proctoscopic examinations of only five of the positive cases in our series, and all were essentially negative. Manson-Bahr claimed that lesions were found on proctoscopic examination of 90 per cent of 298 cases of amebiasis coming under his observation.[5] On the other hand, Craig almost completely disregarded the diagnostic value of the procedure.[11] Browne, McHardy, and Spellberg found lesions on proctoscopic examination in only 42.2 per cent of their cases of active amebic dysentery, and Jackman and Cooper reported finding lesions proctoscopically in only 20.8 per cent of 115 cases of amebic dysentery.[16,17] This divergence of opinion may be readily explained by the fact that most of the cases of amebiasis seen by Manson-Bahr were chronic cases of long standing, with widespread colonic lesions, in persons returning from overseas service who had been subjected to repeated treatment abroad and at home. Rectal and sigmoidal lesions are frequently absent in carriers and in many cases of the mild forms of symptomatic amebiasis.[11,18] It must be concluded that microscopic examination of fecal specimens is the most reliable basis for diagnosis of amebiasis.

Summary

1. Stool specimens were examined from 350 persons (214 men and 136 women), living in Albany, Rensselaer, Columbia, and Schenectady Counties of New York State.

2. An average of 2.2 specimens were examined from each person, and 34 persons (9.7 per cent) were found to be infected with E. histolytica. The calculated incidence of amebiasis for the group was 13.4 per cent.

3. The incidence of infection was the same in both sexes. Although ten of 21 men infected with amebas gave a history of overseas residence, only two of 13 positive women gave a similar history. Any effect of overseas residence on the rate of infection was not apparent. Of 34 cases, eight occurred in husband and wife.

4. Of the 34 cases of infection with E. histolytica, only five (15 per cent) were asymptomatic; 18 (53 per cent) showed signs and symptoms of a light form of chronic amebiasis; ten (30 per cent) had moderately severe symptoms of chronic amebic colitis, and one (3 per cent) showed markedly severe symptoms of the disease.

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Discussion

Howard B. Shookhoff, M.D., *New York City.*—Dr. Towse and his associates have made a very important contribution. First, they have shown that, in a part of the country where sanitary conditions are considered to be of the best, the rate of infection with E. histolytica in adults probably exceeds 10 per cent. Second, they have pointed out that the majority of infected individuals have symptoms, even though they may not be severe enough in many cases to make them seek medical attention. In other words, even though it scarcely figures in the mortality statistics, amebiasis is affecting the health and efficiency of a large group of individuals in the most productive period of their lives.

Our experiences in the New York City area are similar. The results of surveys of specific groups are often startling. For example, routine examinations of the stools of the foodhandlers in a first class hotel showed an incidence of infection with E. histolytica of 18 per cent. The same rate was found in the pre-employment examinations of a series of applicants for positions as foodhandlers at that hotel. With a few exceptions, these individuals were not from any tropical or subtropical area.

Another survey of a group of 250 adults composed of doctors, nurses, laboratory technicians, clerks, and other individuals engaged in the study, teaching, and practice of public health, disclosed an infection rate of 25 per cent. This high incidence may have been due partly to the fact that many of the group had traveled extensively. Perhaps, too, public health work is a hazardous occupation, at least in so far as amebiasis is concerned. More impressive than the high incidence of infection in this group was the high incidence of symptoms in infected individuals. Of the first 40 persons found infected, no less than 32 had symptoms. In many cases, these were brought out only by questioning. In a few, they were not recognized until after treatment had been given. Only four individuals had felt sick enough to consult a physician. In two of the four, the diagnosis of amebiasis had not even been considered.

As Dr. Towse has suggested, examination of stools should be more of a routine, especially in the case of patients with vague and ill-defined complaints for which there is not a ready explanation. Such patients are often labeled neurotics until someone thinks of doing a stool examination.

I agree wholeheartedly with Dr. Towse's contention that every infected individual should be treated, even if he has no symptoms, in order to forestall future complications and to prevent his infecting other persons. It is evident that an adequately protected water supply, proper sewage facilities, and laws against the use of human excreta for fertilizer are not sufficient to wipe out amebiasis. Detection and treatment of infected individuals gives a further measure of protection by decreasing the size of the reservoir of infection.

There is just one matter on which I cannot agree with Dr. Towse. That is the question of the technical identification of amebic infections in the laboratory, and on this I must take sharp issue with the essayist. He has said, "A prevailing idea that the laboratory diagnosis requires the exercise of exceptional skill by exceptional personnel is fallacious." I agree that one does not need special or unusual qualities to learn to identify intestinal protozoa. But one does have to learn. If the skill called for is exceptional, it is only because so few have taken the trouble to acquire it. Dr. Towse has asserted further that " . . . any intelligent laboratory technician who is sufficiently skilled to perform a differential leukocyte count can be taught the essential differential criteria within a few hours." Taken literally, this statement is true. As I recall, it did not take me long before I could write down for examination purposes the detailed differences between Endamoeba histolytica and Escherichia coli, but it was much longer before I had acquired reasonable technical competence in the practical microscopic diagnosis. There is a great gap between book learning and laboratory practice, especially when one is dealing with cellular morphology.

One can learn the essential criteria of a malignant cell in an hour. Many of you can undoubtedly write them down right now. But certainly no one would suggest that that makes one competent to undertake the smear diagnosis of malignancy. Every article dealing with this phase of cancer diagnosis insists that it takes several months to acquire technical competence in the field. That is no less true of protozoology, which also belongs to the field of cytology. There is no substitute for practice and experience.

Since 1944, the Tropical Disease Diagnostic Service of the New York City Health Department has given practical training to more than one hundred physicians and technicians. We can assure you that an experienced bacteriologist takes a minimum of two months to acquire real technical competence in protozoologic diagnosis, and that is possible only where there is a plentiful supply of fresh positive material. At the end of a year, he will still be improving his technic.

One final point. Dr. Towse has said, "The really essential factors are interest on the part of the examining physician and the cooperation of the patient. . . ." With this I heartily agree. We can train hordes of parasitologists, but it will do little good unless the clinician is willing to clamor for their services and insist that technicians so trained be assigned to the work by the pathologists who direct our laboratories and, further, that these technicians be provided with suitable fresh stool specimens for examination.

DIARRHEAL DISEASES—A NEW SPECIALTY

William Z. Fradkin, M.D., Brooklyn, New York

(From the Gastrointestinal Clinic, Brooklyn Jewish Hospital)

DESPITE the phenomenal progress which medical science has made during the past quarter of a century, there has been very little specialized medical care made available to patients suffering with diarrheal diseases. Specialized medical care is essential if progress is to be achieved in this growing field of gastroenterology.

Specialties have been generally discouraged, and certainly the tendency to overspecialization has been practically condemned. Many a good physician has been discouraged from entering or even interesting himself in a specialty. This is regrettable, for progress in any field is primarily made by the specialist. He has the inclination, the training, the facilities, and the time to carry on intensive investigation at the bedside, in the hospital, and in the laboratory. The general practitioner, and even the internist, looks forward to the application of the specialist's findings to advance his own knowledge and practice. How would medicine fare today without the aid of the discoveries of specialists? The patient demands and needs both. The index of a country's medical progress may well be directly proportional to the number of its competent specialists.

The recognition of diarrheal diseases as a subspecialty in gastroenterology will well serve both our patients and ourselves. The hundreds of so-called "cures" for diarrhea as advertised by the manufacturers of drugs and prescribed by thousands of physicians are unscientific and wasteful and may even aggravate or be harmful to the condition for which the "cure" is recommended. The countless number of antiseptic drugs, adsorbents of all sorts, various mixtures of sulfonamides, expensive antibiotics, stock vaccines, complex preparations of enzymes and food powders, hormones and vitamins, and all types of colonic instillations are but a few of the drugs and procedures advertised and widely used. The patient is disheartened. The physician is confused and denounced.

The parent specialty, gastroenterology, must accept this new offspring—diarrheal diseases—as a blessed event for the welfare of the suffering patient, the guidance of the practicing physician, and the restoration of confidence by the public in the so-called "stomach specialist." Tubercular diseases, vascular diseases, and allergic diseases are considered as subspecialties. Diarrheal diseases deserve the same consideration. As scientists we should not be satisfied with symptomatic relief when, by intelligent effort and systematic investigation, we can recognize and specifically eliminate the cause. Precise knowledge concerning the etiology and pathogenesis of diarrheal diseases is certainly fundamental to the prevention and cure.

The fact must be faced that man will seek health whether it be derived from ethical or unethical, professional or lay sources. He will seek it next door, from his neighbor, in the next state, or thousands of miles away. He will seek it in the newspaper, over the radio or television, and in grocery, butcher, and health stores. Health is man's most prized treasure, and no one physician or group of physicians can afford to ignore this basic desire.

Why should diarrheal diseases constitute a specialty? The ever-increasing amount and scope of scientific knowledge and ever-broadening sphere of application of the recent discoveries necessitates the creation of specialists and specialties. No individual alive possesses the ability to master all phases of medical practice or even the specialty of gastroenterology itself and still have sufficient time for office, clinic, and hospital patients, clinical and laboratory research, teaching, and writing. The subject of diarrheal diseases as such is at present greatly neglected by the medical school, the hospital, the general practitioner, the internist, and the gastroenterologist.

Why is it so neglected? Because the very nature of the symptom—diarrhea—causes the average human being (and doctors also are human) to shy away from it subconsciously. False modesty on the part of the patient and the unpleasantness involved in the study of diarrheal diseases makes neglect a natural winner.

The high mortality and morbidity in this group of diseases requires concentrated study and investigation. The loss of 40 to 80 newborn infants of every 100 suffering with epidemic diarrhea is reason enough to muster specialists for its prevention and cure. The high morbidity of the infectious diarrheas of infants and children is known to every pediatrician. Among adults, 84 of every 100 patients suffer with diarrhea for more than three months before they find any relief. Sixty-six per cent suffer with diarrhea for from one to thirty-two years before they find a specialist trained and prepared to treat their illness efficiently. Furthermore, 64 of every 100 patients suffering with persistent diarrhea are

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stricken during their most productive period between the ages of twenty-five and fifty years. Can one really appreciate the enormous social and economic displacement of such an illness during this active age? The chronicity in this group of diseases has forced patients to attempt and even commit suicide. There is a demand by the suffering public for specialists in diarrheal diseases. The medical profession should supply this demand from the ranks of gastroenterologists.

Numerous contributions in many fields have led to progress in the diagnosis and the treatment of diarrheal diseases. This progress however has been but a byproduct of effort outside the sphere of gastroenterology such as research in bacteriology and in biochemistry and studies in nutrition and in psychosomatic medicine. Rarely have investigations been made by gastroenterologists whose main interests were diarrheal diseases.

Who shall be the specialist in this field? It is the gastroenterologist whose main interest in diarrheal diseases becomes known to the profession through his clinical and laboratory researches, publications, and experience in the field; the gastroenterologist who does not fear the appearance or the odor or the composition or the contagion of a stool specimen; the gastroenterologist who has still retained the doctor-patient relationship of his general practice. The gastroenterologist who specializes in this field must possess a firm background in general medicine with a special liking for diarrheal diseases. I say "special liking" advisedly because a keen interest in the various branches of medicine must come from a natural urge. Only in this way can a specialist be satisfied and remain happy in his specialty. Such satisfaction will be felt by the patient and will tend to promote the doctor-patient relationship. The specialist in diarrheal diseases will be about forty years of age. He will have many years left to practice his specialty, to engage in clinical and laboratory research, and, most important of all, to function as a teacher and writer so that others may benefit by his labors and experience. He must be encouraged to teach and to write. It is most unfortunate that rivalry in medical institutions sometimes undermines the innate desires of a specialist to teach.

What should be the scope and the duties of a specialist in diarrheal diseases? The scope of any specialty is difficult to define. We hope that there will always be general practitioners and gastroenterologists who will be well enough informed to treat diarrheal diseases. The exact boundary line which divides the general practitioner and specialist is not possible and not desirable to determine. The wise physician knows his limitations. He practices the golden rule. It is the function of the specialist to aid the general practitioner with the problem case, the patient who does not respond within a reasonable length of time to the usual therapy. By confining his attention to this field the specialist becomes more experienced and skillful and thus more efficient in the management of the more complicated cases. He is thus able to shorten the period of suffering for the patient.

The value of a specialist in diarrheal diseases to a hospital cannot be overemphasized. Every hospital with 300 beds or over should have a clinic for diarrheal diseases. It is amazing indeed that no hospital in this country (as far as is known) has such a clinic. There are vascular clinics, hypertension clinics, rheumatic fever clinics, cerebral palsy clinics, glaucoma clinics, headache clinics, and mental hygiene clinics, but no clinics for diarrheal diseases. The embarrassed patient who seeks hospital aid is first sent to the medical clinic. After several visits he is referred to the rectal clinic. In the meantime the diarrhea continues. After several more weeks or months in this clinic he is sent to the gastroenterology clinic where he may finally meet the physician whose interest and training offer him the hope and comfort he was seeking at the time of admission. By now it is extremely difficult, if not impossible, in the infectious cases to detect the bacterial or protozoan pathogen, even if present.

The staff of this diarrheal diseases clinic should be equipped to examine thoroughly the diarrhea patient with complete laboratory investigation immediately upon admission. The patient should not be treated by a physician who is perpetually on the run from the hospital to the office or from the office to the hospital. The study of the diarrhea patient requires time and patience. Progress in this field cannot be expected from rushed clinics. Nutritional guidance, medication, x-ray studies, psychotherapy, and social service aid (when necessary) require a great deal of time and harmonious teamwork.

This same staff should be in charge of the diarrhea patients in the wards of the hospital and among the professional personnel. The multiplicity of etiologic agents responsible for epidemic diarrhea of the newborn should be a problem for the specialist in diarrheal diseases. He should have the facilities for determining the specific cause quickly. The busy general practitioner, obstetrician, or pediatrician cannot be expected to handle these difficult problems efficiently and skillfully. Hospital administrators and chiefs of staffs would be wise to delegate these duties to the gastroenterologist whose main interests are in the field of diarrheal diseases. Such centralization of responsibility will gain for

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the hospital additional respect and confidence by the public and profession.

It is necessary that the specialist be active in the department of laboratories because diarrhea often presents a laboratory problem. He has at his call technical assistance in bacteriology, hematology, biochemistry, and parasitology. In this division of the department all stool specimens of patients in the hospital and clinic, as well as members of the hospital staff and personnel suffering with diarrhea, are analyzed. All food handlers are screened for intestinal pathogens. In this respect close cooperation with the dietetic staff is essential.

The specialist in diarrheal diseases is actually a public health guardian. He should be in close contact with the Department of Public Health. He should report carriers of intestinal pathogens as well as local outbreaks of infectious diarrhea. He should serve as representative of the hospital administration in any discussion of problems relative to the prevention of epidemics. Such a setup will promote the common goal of hospitals and health departments which is the protection of public health.

In conclusion, a plea is made for the recognition of diarrheal diseases as a subspecialty of gastroenterology. The interest of younger men in this field must be stimulated. The parent body—gastroenterology—by supporting this new specialty and emphasizing its importance to the profession, to the hospital, and to the community can succeed in obtaining specialized medical care for the diarrhea patients.

27 PROSPECT PARK WEST

Discussion

Joseph Felsen, M.D., *New York City.*—Dr. Fradkin has quite properly directed attention to our relative inadequacy in the field of infectious diarrheas. In the past, this has been due to both public health and clinical deficiencies. Prior to 1937, for example, bacillary dysentery was not a reportable disease in 15 of our states. Without reasonably accurate knowledge of the extent of this disease, adequate public health control was impossible. Clinically, diarrheal disease was handled in a rather crude manner, both as to diagnosis and therapy. All measures appeared to be aimed at stopping the diarrhea, a point of view which we now know to be fallacious if carried to extremes. Some of the sickest patients with Shigella or Salmonella disease coming to my attention have been those with constipation. Babies frequently die from systemic toxemia rather than from such bowel manifestations as diarrhea and associated dehydration. Diarrhea is usually a compensatory phenomenon aimed at ridding the body of toxins as quickly as possible. It should be ameliorated only to the point of comfort. Sigmoidoscopy in the diagnosis of infectious diarrheas is a relatively new procedure because of the failure of clinicians in the past to correlate intestinal studies in the living human and those made at necropsy. The sigmoidoscopic picture of Shigella and Salmonella infections is quite distinctive. We now confirm it by direct mucosal crypt aspiration cultures and wet smears. A purulent cytology in the mucosal exudate is characteristic of Shigella infection. Cultural diagnosis now rests not on biochemical identification alone but on type-specific, absorbed, monovalent sera. This involves a knowledge and setup hardly within the scope of the average practitioner.

It will be seen from this very brief discussion that a proper evaluation of infectious diarrheas involves a rather complex clinical, epidemiologic, pathologic, and bacteriologic background. Dr. Fradkin proposes that the responsibility for the care of these patients be delegated to specialists well trained in these fields. If attainable, this ideal is a most commendable one. Pursued to its logical conclusion, it also means a better understanding of diarrheas due to causes other than primary enteric pathogens. I refer specifically to focal nonspecific enterocolitis, allergic colitis, diarrheas associated with neoplasia, and amebiasis or other parasitic infestations. In my own case, it has opened up a most interesting field involving the sigmoidoscopic diagnosis of systemic disease, e.g., plumbism, periarteritis nodosa, subacute bacterial endocarditis. I earnestly offer this challenging and intriguing concept to my younger colleagues.

SURVEY OF INCIDENCE OF INFECTION

The first comprehensive survey to be made in this country of the incidence of infection among laboratory and research workers is now being conducted with the assistance of a $3,200 grant from the Division of Research Grants and Fellowships of the National Institutes of Health, Public Health Service, it has been announced.

Drs. S. E. Sulkin and R. M. Pike of Southwestern Medical College, University of Texas, who are conducting the survey, will send questionnaires to all governmental and private laboratories handling infectious agents. Some 3,000 questionnaires, requesting information on numbers and types of infections which have occurred in individual laboratories in the past twenty years, have already been sent out; another 12,000 will be sent in the next few months.

The demands of modern medicine require increased numbers of laboratory technicians to handle potent disease-producing agents, both in diagnostic work and in research. As a result, significant increases in laboratory infections have occurred, according to reports received by the Public Health Service.

ACUTE PANCREATITIS: FURTHER OBSERVATIONS OF VALUE IN ITS RECOGNITION

William F. Lipp, M.D., and A. H. Aaron, M.D., Buffalo, New York

(*From the Department of Medicine of the University of Buffalo and the Buffalo General Hospital*)

IN RECENT years there has been a change in attitude toward the management of acute pancreatitis. At the present time it is rather generally accepted that a lower mortality rate is associated with medical (supportive) treatment as opposed to early surgical intervention for purposes of drainage. Acceptance of the concept of conservative management requires the security of correct diagnosis. Fortunately, in the majority of cases the clinical picture is characteristic, and usually elevation of the serum amylase is found. However, frequently enough, the diagnosis of acute pancreatitis may be difficult, either because typical findings are absent or because the clinical picture resembles that of such surgically susceptible lesions as perforated peptic ulcer and certain acute diseases of the gallbladder. It is always true that, if reasonable doubt exists as to the presence of a lesion requiring early surgical attack, laparotomy should be performed.

In his original communication Fitz established the value of the clinical picture, pointing out that severe epigastric pain, vomiting, and abdominal distention were rather constant findings.[1] Others have emphasized the left upper quadrant location of the pain with radiation through to the back, the frequency of collapse, the value of a history of cholelithiasis, the absence of a febrile reaction, and the presence of leukocytosis. Elman has repeatedly emphasized the value of elevation of the serum amylase early in the course of the disease.[2]

It is the purpose of this report to call attention to three observations that may be of further aid in arriving at the correct diagnosis of acute pancreatitis: the Grey Turner sign, pulmonary findings, and depression of the serum calcium.

It is well established that there are two clinicopathologic subtypes of pancreatitis, acute pancreatic edema and acute hemorrhagic necrosis. Although there are some who feel that surgical intervention is indicated in hemorrhagic necrosis, it can be argued that at the present state of knowledge it would constitute better judgment to treat all patients conservatively in the hope of saving the majority and losing the few in whom surgical drainage of the biliary tract or pancreatic region might be of questionable benefit. The primary problem is to differentiate acute pancreatitis from other acute intra-abdominal conditions rather than to distinguish between the two forms of pancreatitis, although, of course, the attempt should be made. In this paper the term acute pancreatitis includes both forms.

Material

In the fourteen-year period 1936 through 1949, there were treated in the Buffalo General Hospital 44 patients in whom the diagnosis of acute pancreatitis can be reasonably accepted. That difficulties in diagnosis are real is demonstrated in Table 1. A correct diagnosis was made in 17 cases, or 38.6 per cent of the series. A comparison of the last seven-year period with the first seven years of the study reveals that the rate of recognition is improving. Yet, almost two thirds of all the cases received an incorrect diagnosis.

In keeping with general experience, acute disease of the gallbladder and perforated peptic ulcer were the two conditions with which acute pancreatitis was most often confused. In 24 of the 27 incorrectly diagnosed cases these lesions were suspected, as shown in Table 2.

TABLE 1.—Correct Diagnoses in 44 Cases of Acute Pancreatitis (1936 to 1949)

Year	Number	Correct Diagnosis
1936	1	0
1937	3	0
1938	2	0
1939	1	0
1940	0	0
1941	2	0
1942	5	0
1943	5	3
1944	6	3
1945	2	2
1946	4	2
1947	3	1
1948	3	3
1949	7	3

Total correct diagnoses = 17 of 44 cases, or 38.6 per cent.

TABLE 2.—Incorrect Diagnoses in Acute Pancreatitis

Acute cholecystitis	14
Perforated peptic ulcer	7
Common duct stone	3
Intestinal obstruction	2
Ruptured appendicitis	1
Total	27 (61.4 per cent)

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TABLE 3.—Serum Amylase (32 Cases)

Units	Number
16	3
32	6
64	8
128	10
256	5

Of special interest were the values for serum amylase in 32 cases in which these determinations were made. (In this laboratory the Wohlgemuth method is employed, and the average normal value is 16 units.) As shown in Table 3, in 15 instances the amylase was significantly elevated, while in 14 cases it was above the accepted normal. It is well known that the determination should be made during the first forty-eight hours of disease, for the concentration may fall rapidly on succeeding days. Four of the low determinations were made rather late in the course of the disease, usually after operation, when the diagnosis was established, and as a matter of interest.

The Grey Turner Sign

It is only recently that our attention has been directed to this finding, and in the last four years it has been observed in three cases. In two, the ecchymotic area occurred in the left flank, later extending to involve the right flank, while in one case it appeared about the umbilicus. The discoloration was first noted on either the fifth or sixth day of illness and remained visible for three to eight days.

Case 1.—G. H., forty-five-year-old male, entered the Buffalo General Hospital on August 8, 1946, with a history of mild epigastric distress for two or three days, associated with loose bowel movements. Just prior to admission he was seized with sudden, severe, generalized abdominal pain radiating to both flanks and the back, associated with nausea and vomiting. The physical examination revealed a man in acute distress with a rectal temperature of 100 F. and a pulse of 100. The skin was grayish in color, and the extremities were cold and clammy, although the blood pressure was 110/80. There was no scleral icterus. The abdomen was diffusely distended with marked muscle spasm throughout; there was generalized tenderness without rebound; peristalsis was absent.

Examination of the blood revealed a serum amylase of 128 units and a white blood cell count of 26,000 with a marked left shift.

It was felt that a clinical diagnosis of acute pancreatitis was justifiable, and a conservative plan of medical treatment was inaugurated, including the use of intravenous fluids, duodenal decompression, and antibiotic therapy.

For several days his condition remained serious. On the third day hiccoughs developed, associated with pain in the left shoulder and a flat percussion note at the left base. On the fifth day of disease the serum calcium was depressed (8.6 mg. per cent). Also on the fifth day of illness a faint bluish discoloration appeared over the left flank. The following day it was darker in color, and the next day it extended to involve the right flank. Gradually, the discoloration faded, much in the manner of an ecchymotic area with changing colors, until it disappeared on the eighth day following its appearance. This phenomenon was interpreted as a Grey Turner sign.

There was gradual improvement and the patient was discharged from the hospital on September 5, 1946. Several months after discharge oral cholecystograms on repeated occasions failed to visualize the gallbladder. On March 1, 1947, a cholecystectomy was performed; the gallbladder was found to contain three moderately large stones. It is of interest that the pancreas grossly did not appear abnormal to the surgeon.

In 1920, Grey Turner described the finding of discoloration of the skin in two patients with acute pancreatitis.[3] In one the discoloration involved both flanks, while in the other it appeared about the umbilicus. Incision of the flank in the first case revealed the tissues to be edematous and to contain a quantity of thin, dirty fluid similar to that present in the peritoneal cavity; the subcutaneous fat as well as the retroperitoneal fat showed areas of necrosis. Since then this finding has been reported by several observers.[4–6] The Grey Turner sign may be described as a discoloration of the skin, usually in the region of the left or both flanks and sometimes about the umbilicus, which resembles an area of ecchymosis with a mixture of blue, green, red, and yellow colors which gradually fade. It is probably attributable to direct extension of pancreatic secretion and blood through the tissues as the result of enzymatic activity. Apparently, this sign is distinct from the so-called Cullen's sign, which is a bluish-black discoloration about the umbilicus observed in some cases of tubal pregnancy, probably due to the presence of free blood in the peritoneal cavity.[7] The mechanism of the Cullen's sign is not well understood; it is felt that an anatomic abnormality in the umbilical region may be necessary to allow the escape of blood to the subcutaneous tissues, or perhaps there is spread through the lymphatics. The discoloration has also been observed at the sites of hernias and operative scars.

Obviously, the Grey Turner sign occurs a number of days after the time when the decision as to management must be made. However, the appearance of ecchymosis during the course of acute pancreatitis offers comforting confirmatory evidence of the correctness of the diagnosis.

Pulmonary Findings

Although it has long been recognized that pleural effusion may occur in association with inflammatory processes within the abdomen, this

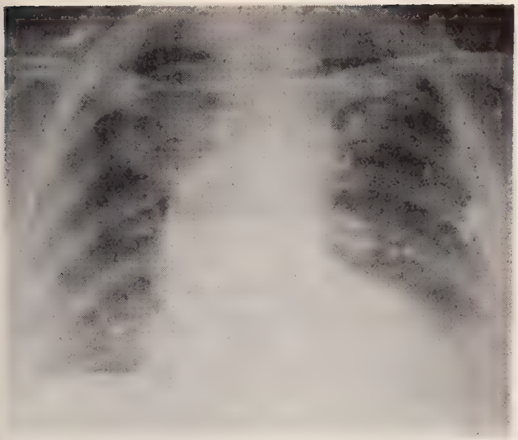

FIG. 1. Pleural effusion in case of acute pancreatitis.

finding is usually not mentioned in descriptions of the clinical picture of acute pancreatitis. Some time ago Ochsner reported that pleurisy with effusion occurred on the affected side in 388 of 1,380 cases of subdiaphragmatic abscess, while Aaron and Leahy emphasized its occurrence in other instances of acute intra-abdominal inflammatory lesions.[8,9]

Adequate records of examination of the chest were available in 31 of the 44 cases in the present study, and positive physical signs were reported in 22 instances, or approximately 71 per cent (twelve cases with signs of pleural effusion, ten with signs of atelectasis). In the majority of cases these were present at the left base, although in five patients the signs were bilateral. It is significant that these findings were observed during the first few days of the disease.

In 12 cases the findings were those of pleural effusion: dullness to flatness, absent breath and voice sounds. Chest films, when taken, were usually reported as showing elevation of the left hemidiaphragm with pleural reaction and fluid (Fig. 1). The occurrence of pleural effusion in acute pancreatitis is probably an irritative phenomenon secondary to an acute process involving the diaphragm.

In ten cases the physical signs were those of pulmonary congestion: impairment of resonance and rales. This is most likely due to elevation of the diaphragm with atelectasis or perhaps a pneumonitis, the result of an irritative phenomenon.

Thus, secondary pulmonary changes occurred in the majority of patients with acute pancreatitis and early in the course of the disease. It is possible, but not necessary, that their presence may be explained on the same basis as the Grey Turner sign, that is, by direct extension of pancreatic secretion through the diaphragm as the result of enzymatic activity. Although these signs are not specific for acute pancreatitis, their presence has definite diagnostic value.

Depression of the Serum Calcium

Recently, changes in the serum calcium during the course of acute pancreatitis have been reported by Edmondson and coworkers, and several case reports have been published in confirmation of this observation.[10-15]

Depression of the serum calcium was observed in seven of eight patients in the present series in whom determinations were made and in two additional patients from another hospital, a total of nine cases. An analysis of this material will be the subject of a separate report.[16] The fall in serum calcium occurred sometime between the third and the fourteenth days of disease and was most frequently observed from the fourth to the ninth days. In several cases a low value was found on only one occasion.

*Case 2.**—R. C., a moderately obese, sixty-year-old housewife, entered the Buffalo General Hospital on March 14, 1946. Two days before admission she was seized with sudden, severe pain in the epigastrium radiating to both sides of the abdomen. This was associated with nausea and vomiting. Repeated injections of morphine sulfate by her family physician gave only slight relief. Physical examination revealed a woman not acutely ill with temperature of 102 F. and pulse of 98. There was no scleral icterus. Impaired resonance was present at the left base posteriorly with diminished breath and voice sounds and rales. The abdomen was moderately distended, tympanitic, and without spasm; there was tenderness throughout, most marked in the left upper quadrant where a smooth, slightly mobile, orange-sized mass was felt coming down from under the costal margin; peristalsis was not heard. Rectal examination was negative.

Examination of the blood shortly after admission revealed a serum amylase of 128 units, serum calcium of 7.0 mg. per cent, and a white blood count of 26,000 with marked left shift. Daily determinations of the serum amylase, serum calcium, and leukocyte count were made until these values returned to normal (Table 4).

TABLE 4.—SERUM CALCIUM IN ACUTE PANCREATITIS (R.C.)

Day of Illness	Amylase	Calcium	Phosphorus	White Blood Count
3	128	7.0	...	26,000
5	64	8.5	2.0	15,000
7	16	8.7	1.2	18,000
9	...	8.9	2.0	12,000
11	...	7.9	3.5	11,000
13	16	8.4	...	8,000
15	...	9.3	3.1	...

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* This case is reported in detail elsewhere and is here used because of the completeness of the laboratory studies.[11]

The clinical course was that of gradual, slow improvement. The mass diminished in size and finally disappeared. A Grey Turner sign was present over the left flank from the sixth to the thirteenth day of illness.

The serum amylase, white blood count, and serum calcium values returned to normal on the seventh, tenth, and fifteenth days of illness, respectively. It will be noted that the serum calcium was depressed from the third to the fourteenth days of illness.

Edmondson made quantitative determinations of tissue and blood calcium in a number of cases of acute pancreatitis. Postmortem analysis of areas of fat necrosis in the region of the pancreas revealed high concentrations of calcium precipitated as soaps. In 36 of 50 clinical cases of pancreatic necrosis serum calcium values below 9 mg. per cent were found some time between the second and fifteenth days of the disease, the lowest level usually on the sixth day. With healing the calcium returned to normal, usually during the second week, lagging several days behind evidence of clinical improvement and fall in the blood amylase. There seemed to be correlation between the level of serum calcium and the intensity of the clinical process. In three instances in which death occurred, the value fell below 7 mg. per cent. The authors' interpretation of their findings is as follows: In acute pancreatic necrosis neutral fat is split into fatty acids and glycerol by lipase released into the abdominal cavity. The glycerol is absorbed, and the fatty acids combine with calcium to form soaps. As a result of this dislocation and fixation of calcium in the tissues of and surrounding the pancreas, there is a corresponding fall in the level of serum calcium.

This laboratory finding, like the Grey Turner sign, appears later in the course of the disease. However, in addition to being of considerable physiologic interest, it also offers confirmatory evidence of the presence of acute pancreatitis and may have definite prognostic value.

Obviously, if it is to be of diagnostic worth, repeated determinations must be made, and this is not always practical.

Summary and Conclusions

1. In a study of 44 cases of acute pancreatitis admitted to a general hospital during the years 1936 to 1949, it was noted that the error in diagnosis was considerable. However, the rate of recognition has improved in recent years.

2. If the concept of conservative management in acute pancreatitis is accepted, an accurate diagnosis must be made. The significance of the characteristic clinical picture associated with an increased amylase content of the serum is well recognized. Unfortunately, in not a few instances typical findings may be absent, and there will be difficulty in diagnosis.

3. Attention is directed to three further observations that may have diagnostic value: (1) the presence of a Grey Turner sign, (2) the presence of pleural fluid or atelectasis, and (3) the laboratory finding of a depression of the serum calcium some time during the course of the disease.

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Discussion

Harry E. Reynolds, M.D., *Schenectady.*—Dr. Lipp has emphasized the importance of accurate diagnosis in acute pancreatitis and offers three diagnostic hints to add to the widely accepted clinical picture with elevated serum amylase.

A review of 12 cases in the Ellis Hospital during the past year also revealed a high diagnostic error. On our medical service it is routine to obtain serum amylase determinations when an electrocardiogram is taken for suspected myocardial infarction. I believe it should be a routine test in all so-called acute abdomens. The test can be performed within an hour. A word of caution—it has been reported that a high serum amylase level was observed from peritoneal absorption of pancreatic secretions escaping through a free perforation.

We have been impressed by the rarity of vascular changes in the skin, although mottling of the lower extremities was observed in one case. When abnormal physical signs were present in the chest, they occurred in the right base or both bases, and al were observed in the elderly group.

Concerning blood calcium, I should like to cite a male patient, aged thirty-four, explored for a probable perforated ulcer with a twelve-hour history o abdominal pain. The surgeon noted a tendency t free bleeding on manipulation of all intraperitonea viscera, particularly around the pancreas which wa enlarged and nodular in the body and tail. Eighteen hours later, the serum calcium was 6.2 mg. per cen and the diastatic activity 21 (normal 10 to 20) He expired twelve hours later.

Two years ago, Dr. Bockus discussed acute pancreatitis before this Section. In four of his cases th greatest depression of serum calcium concentration occurred on the fourteenth day of the disease

Others have reported its occurrence on the sixth day. One of his patients on the second day showed a marked hypocalcemia which he considered to be a laboratory error. I would raise the same point in the case cited in the absence of fat necrosis a few hours before the test was made.

I should like to compliment Dr. Lipp on his fine presentation. It should stimulate one to make more careful physical examinations and to make more use of laboratory tests. Perhaps we should look for evidence of additional electrolyte imbalance in this disease. Laboratory tests are aids in diagnosis and must be interpreted in respect to duration of disease and intensity and extent of the pathologic process.

Certainly, a diagnosis by exclusion is a dangerous one. Merely thinking of this disease and employing appropriate laboratory tests now available, we should make a primary diagnosis of acute pancreatitis in a much higher percentage of cases.

THERAPEUTIC TRENDS AND MANAGEMENT IN ADVANCED CARCINOMA OF THE COLON AND RECTUM

MICHAEL R. DEDDISH, M.D., New York City

(*From the Colon and Rectal Service, Memorial Center for Cancer and Allied Diseases*)

ANY annular or deeply ulcerated and infiltrating cancer of the lower bowel and rectum must be considered as advanced disease. The most successful treatment at present is radical surgery. This is particularly dependent upon the initial radical attack on the primary cancer, its area of regional lymphatic spread, and locally invaded structures. The operating surgeon must have extensive general surgical training, know the disease, and have courage to attack it in any phase. It cannot be emphasized too strongly that many patients are being denied a longer life because of an inadequate initial surgical attack on their cancer.

A definite follow-up examination of every postoperative patient must be instituted. This should be at two to three-month intervals, for the first three years, and at four to six-month intervals for the remainder of that patient's life. Dr. Owen Wangensteen has recently stated that exploratory laparotomy to determine possible residual disease be advocated approximately six months after the initial surgical procedure.[1] Certainly, when there is evidence of any possible residual disease, every effort should be made to determine its presence or extent and immediate treatment instituted. In recent years many gratifying results have been seen in reoperating these patients. When feasible, patients with solitary lung metastasis from intestinal cancer should have thoracotomy and resection.

Advances in surgical treatment of lower bowel cancer have been expressed by the concepts of Clogg, Jamieson and Dobson, Moynihan, Miles, McKittrick, Looney, and Grinnell.[2-7] They have advocated and practiced the removal of greater segments of bowel with adjacent lymph node bearing tissues. Appleby, Brunschwig, Cattell, and Sugarbaker have encouraged the attack on extensive local disease and liver metastases.[8-13]

In nonresectable residual cancer within the lower abdomen and pelvis an attempt should be made at palliation by high voltage or supravoltage x-ray therapy. This therapy should be accurately outlined after consultation between the surgeon and x-ray therapist at the patient's bedside. The response of residual intestinal cancer to x-ray therapy cannot be predetermined by the differentiation of the tumor type, and this criterion should not be used to withhold such treatment.

X-ray and intrathecal alcohol as sensory nerve block have been the most effective agents in the control of infection and pain in residual and rectal cancer.

A more successful surgical attack on bowel cancer has been influenced by many factors. The thorough appraisal of the patient by systems, correction of metabolic deficiencies, adequate cleansing, and decompression of the intestinal tract before radical surgery are most important. The intraluminal intestinal tube has aided greatly in the preparation of the partially obstructed patient and has reduced many postoperative complications. Blood replacement,

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sulfa drugs, antibiotics, and anticoagulant therapy have contributed to the reduction of morbidity and mortality. Correction of potassium deficiency has been a recent adjunct. Gentle handling of tissues, transillumination of the bowel mesentery with accurate preservation of the blood supply and the open method of intestinal anastomosis are basic principles but should be reëmphasized. Last, but certainly not least, there has been continued improvement in anesthetic agents and technics for better relaxation and exposure.

At the Memorial Center for Cancer and Allied Diseases an attempt is being made to extend resection of large bowel and rectal cancer and dissection of node-bearing tissues beyond the limits of the present standardized procedures.

For cancer within the cecum, ascending colon, hepatic flexure, and proximal transverse colon, a right hemicolectomy with end-to-end ileotransverse colostomy has been most successful. The ileocolic, right colic, and middle colic vessels are ligated at their origin. The superior mesenteric artery should be exposed and a short segment of the lymph node chain removed both superiorly and inferiorly to the origin of the colic vessels. Peritonealization of the right posterior abdominal wall is not important. In midtransverse and left transverse colonic lesions, the middle colic vessels are ligated at their origin and both flexures mobilized. The omentum, transverse mesocolon, and gastroepiploic lymph nodes are resected.

Splenic flexure and proximal descending colon lesions should have at least ligature of the left branch of the middle colic and the left colic arteries. In extensive lymphadenopathy, either or both the middle colic and inferior mesenteric vessels may be sacrificed. In splenic flexure lesions, lymphadenopathy must be looked for at the hilum of the spleen and splenectomy done if indicated.

Distal descending colon and proximal sigmoid lesions should have ligature of the inferior mesenteric artery at the aorta and a left para-aortic lymph node dissection done. In sigmoid lesions, the node dissection should be extended to include the right para-aortic, common iliac, promontory, and hypogastric lymph nodes. Our findings in these nodes, outside the intermesenteric group usually resected, will be published in another article. It can be stated, however, that metastases are being found in these nodes, and they should be dissected.

Obesity and partial obliteration of collateral marginal blood supply in patients of advanced age are the two greatest factors contributing to a limited large bowel excision.

It is my opinion that resection and end-to-end anastomosis of the colon can usually be accomplished in these radical procedures in the average patient. When there is any question about adequate blood supply or edema of the bowel wall, the bowel ends should be brought to the abdominal wall surface. In the distal colon the Hartmann procedure may be employed and bowel continuity re-established at a later date. If the patient must be left with a terminal colostomy, it cannot be considered much of a compromise with a lethal disease.

Rectal cancer is being treated by the Miles type of abdominoperineal procedure with the following modifications: The inferior mesenteric artery is ligated at the aorta or just below the left colic artery. The aortic sympathetic plexus is interrupted at the level of the transverse portion of the duodenum, and the plexus with the para-aortic lymph nodes is stripped distally to the bifurcation of the aorta. The dissection is continued to include the promontory, iliac, hypogastric, and obturator lymph node areas. In the female, bilateral salpingo-oöphorectomy, total hysterectomy, dissection of the broad ligament contents, and excision of the proximal half of the vagina is done. When there is definite invasion of the midportion of the vaginal tube, complete removal of the vagina is advocated. We believe the incidence of residual disease in these areas and organs justifies this radical approach. Metastases to the pelvic nodes, the vagina, and ovaries are too frequent, and these sites must be considered for excision at the initial surgical procedure.

In the male, in anterior, infiltrating, or annular lesions at the level of the seminal vesicles or posterior prostate, both vas deferens are interrupted above the seminal vesicles, and the vesicles with the posterior one half or two thirds of the prostate are removed with the rectum. Lymphatic spread to these structures is more frequent than is generally recognized.[14]

In squamous cancer of the anus and colloid cancer of the lower rectum, a radical resection of the rectum with pelvic lymph node dissection is done. Bilateral inguinal lymph node dissection is done when lymphadenopathy is present or may be done prophylactically.

In previously hysterectomized patients and in male patients with invasion of the base of the urinary bladder by apparently localized disease, proctocystectomy with removal of the pelvic viscera must be done. The ureters may be implanted into the large bowel or into the anterior abdominal wall. Dissection of the pelvic lymph nodes and those accompanying the great vessels of the lower abdomen should be done as part of the initial procedure. Inguinal lymphadenopathy may be dissected at a later stage.

There has been increased postoperative morbidity in these radical resections and node dissections for rectal cancer.[15] This is particularly manifest in the urinary tract as bladder dysfunction, infection, and azotemia. Strict postoperative supervision of these patients is mandatory.

Summary

1. The initial surgical attack on colon and rectal cancer must remove widely the primary lesion with the regional lymph node-bearing tissues.

2. Some new concepts of extent of lymphatic spread are advanced.

3. There has been increased morbidity in these extensive surgical procedures, especially in removal of cancer of the rectum. Complications involve the urinary tract primarily.

4. Thorough evaluation and preparation of the patient preoperatively and strict supervision postoperatively are mandatory.

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Discussion

Lester S. Knapp, M.D., *Buffalo.*—Looking back over the last twenty-five years, it is gratifying to note the progress we have made in cancer surgery of the lower bowel. At that time mortality was the all-important question. Due to the factors mentioned in Dr. Deddish's paper, mortality has become insignificant, and we are now reaching out for a greater cure rate and longer life for the incurable.

It is pleasing to me to hear a paper extending our scope in surgery toward more radical procedure. We have passed through fads of low anterior resections and "pull-downs" with preservation of sphincter mechanism. We have read for some years the importance of the grades of carcinoma and also how the rectum can be divided into levels or zones measured by one or more centimeters, with application of surgery to fit it. However, we are dealing with carcinoma, and you are just as dead with a grade I metastatic lesion as grade IV. When we check the recurrence rate at well-established institutions, we find that there is a great deal to be desired, and it can only be improved by being more radical in the means that we now have.

We all know and agree that our success in right colon lesions is due to radical removal. It is also true that in the left side many inadequate operations are performed; the main reason is the greater technical difficulty of taking down the splenic flexure. There is no reason why we cannot be just as radical on the left side when we have so mobile a transverse colon. Dr. Deddish has given us an accurate résumé of the vessels to be ligated in the various locations in the bowel. When we observe the work being done today whereby more is sent to the pathologist than goes back to the hospital bed, we certainly should follow the principles of proper exploration of the lymphatic channels. Dr. Deddish has taken us beyond the usually accepted procedures and should be commended for showing the way. I wonder if Dr. Deddish has used any of the dyes like pontamine sky blue to help outline the lymphatics at the operating table. I believe that all of us would benefit from reading the work of Jamieson and Dobson on lymphatics, just as I am sure Dr. Deddish has, since his paper follows the principles laid down in this work very closely.

There is one other phase which has been a great concern to me, and that is venous inclusions and how we can cope with this almost hopeless situation. Recently, I have had several cases with metastatic lesions occurring one to three years after primary surgery with death as the result. At the necropsy table we find a clear abdomen. One of the cases came in with a one-sided exophthalmos as the first indication of trouble, another with dizziness as the first sign of cerebral involvement. Undoubtedly, these are the results of venous inclusions. We have been working out a principle of ligating the vessels before manipulation, hoping that we will not disturb and disseminate these cells from the inclusion.

I wish to commend and encourage the radical procedures in these advanced cases. Regardless of the chance of cure, we believe that resection is indicated on the primary lesion, since we all know that a "liver death" is so much easier for the patient than the severe suffering of terminal pelvic invasion. We should do this, regardless of our five-year cure records, to prolong life and make death so much easier.

Radiation has not been the boon that we hoped for inasmuch as adenocarcinoma is so radioresistant, and often the results of high voltage therapy cause more distress than the lesion itself.

Any method for the relief of pain should be used for the hopeless case. In addition to those mentioned, we have had great help from the neurosurgical department, especially with cordotomy.

If you mean to do a generous action, embrace the first impulse.

A NEWER CONCEPT IN THE MANAGEMENT OF CHRONIC ULCERATIVE COLITIS

James J. Stefano, M.D., Brooklyn, New York

(From the Brooklyn Hospital)

IN THE past, medical opinion has placed psychic and somatic disturbances at opposite poles. Such opinion, however, is on the wane, and psychic and somatic affections are gradually being considered as one. Time and experience are proving that there is no pure psychic and no pure somatic disturbance.

These former conceptions left little room for constructive thought. The materialistic and dogmatic teachings of cellular pathology have made medicine loath to acknowledge the fact that organic pathology could result from or be caused by emotional disturbances, although this pathologic condition could be understood in terms of mechanistic psychology. However, our experience in the management of visceral diseases through the somatic approach has forced a change toward a more intensive investigation and a new type of study of the total personality. Knowledge so acquired has supplied much of the understanding we now have of the autonomic nervous system, endocrine glands, and the smooth muscle relationship. It appears that, when this relationship is better understood, many diseases affecting various viscera, causes of which are not very well understood, may ultimately be found to be the result of mental disturbances.

Further investigation into the workings of the primitive mentality may unravel many of the infectious diseases which have not been satisfactorily managed. By understanding this psychologic phenomenon and its effects we may be able to explain some of the visceral disorders which our present methods have failed to do.

Let us give some thought to the problem of chronic, nonspecific ulcerative colitis and why we have failed in its understanding and management.

Diarrheal diseases which, from their description, could have been ulcerative colitis date from prehistoric times. However, a clear-cut description of this disease, as we recognize it today, was first presented by Sir John Wilkes in 1875.

Etiology and Pathology

The basic etiology is unknown. Modern thought relates the cause to infection or emotional disturbances. A multitude of organisms have been recovered from the bowel and its discharges, and many of them have been incriminated. However, no single organism or group of organisms has ever been proved to be the causative agent. The hypothesis of the psychogenic etiology has received the greater support, and it is generally recognized that most patients with this disease exhibit emotional disturbances. In fact, it is believed by some observers that the disease is the end result or the organic consequence of such emotionalism, that the ulcerative and infective state is the terminal phase, and that the infection would not have taken place except in a bowel already disorganized by a more or less chronic dysfunction resulting from an autonomic imbalance produced by psychogenic stimuli. It strongly appears that the bacteriologic approach has been so unsatisfactory, because the simple mechanics of the production of the bowel dysfunction have been overlooked. If we were to recognize such imbalance early enough and treat the complaint, the organic state would not occur.

Symptomatology

The most characteristic symptoms are pallor, weakness, loss of weight, emaciation, abdominal cramps, frequent bouts of bloody diarrhea containing mucus and pus, fever, and tachycardia. During an acute exacerbation, prostration may occur. As the disease progresses, the patient suffers loss of appetite with subsequent loss of weight, grows weaker, and finally becomes cachectic with ultimate death.

Diagnosis

The diagnosis should be made only after a careful and complete study. A thorough physical examination should be performed. Usually, evidence of emaciation, dehydration, anemia, and vitamin and mineral deficiencies are noted. Proctoscopic examination at times reveals only a few isolated ulcers. Occasionally, there may remain only small islands of mucosa in the midst of extensive fibrosis. Vascular thrombosis is frequently present. All laboratory tests that are necessary for a differential diagnosis should be ordered.

Psychologic Observation

Study of our 60 cases presented certain personality traits which were common in the entire series, as follows:

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1. All our cases occurred between the ages of twenty to thirty years.
2. The vegetative imbalance was common to all. The striking manifestations were rapid pulse and dilated pupils.
3. All gave a history of unstable and irritable bowels.
4. Most of them had higher than average intelligence.
5. Most of them were inclined to introspection. All of them were the fussy and overly neat type (exemplified in their appearance and home care).
6. All were unable to throw off emotional tension. They seemed to suppress the usual methods of expression of anger. Most of them were considered nonchalant by their friends.
7. The commonest precipitation of attacks were financial worries, marital and sex difficulties, death of father or mother, vocational maladjustments, and loneliness.
8. All demonstrated an abnormal attachment to either father, mother, or relative.
9. The majority of our patients were unable to meet everyday problems and were unable to assert themselves as other neurotic people can.

Treatment

A disease such as this is apt to be difficult to treat. It represents a multitude of ills, varying from a spastic and irritable colon to an inflamed bowel. The accompanying diarrhea, consisting of mucus, pus, and blood, may be intermittent or continuous and may alternate with constipation. Dehydration and anemia are always present in variable degrees. The unending and shifting symptomatology in an individual who is so emotional makes therapy of any kind difficult and often disappointing, unless the patient is treated as a total personality rather than as a diseased bowel.

In the past, no group of methods of treatment, and much less any single method, has proved adequate under these varying manifestations. The various therapies recommended by the many workers in this field are positive proof of the lack of complete understanding of this serious affliction. The numerous and dissimilar approaches attest to its complexity and the multiple factors involved.

In our attempt to study and understand this disease, we have assumed that it could only occur in an individual who is emotionally unstable and has an irritable colon. The bowel dysfunction which occurs after any emotional conflict is directly the result of and answer to the inability of the individual to solve his problem. It appears that the diarrhea is a compromise between the inability to accept the situation that has arisen from the conflict and the lack of ability to change it. This mental aberration, when allowed to continue, acts like a dynamo for the intensifying of colonic dysfunction which ultimately produces ulceration, hemorrhage, and secondary infection. Finally, a full-blown colitis becomes evident. It is believed that the rectum and sigmoid are first to show evidence of organic changes, and, when progressive, the upper sigmoid may also be affected. Later, the inflammation may extend to the entire course of the colon and at times may even involve the ileum. The organic form may be divided into acute and chronic states. The acute may also be subdivided into acute mild and acute fulminating. Since this paper deals with the chronic form, I shall limit my remarks to its study and management.

These patients are chronically ill and have frequent exacerbations. They are virtually in continuous activity which results in fluctuating degrees of incapacitation. They are characterized by their moderate to severe weight loss, little or no toxicity, debility, dehydration, pyrexia, anemia, and tachycardia. Barium colon studies reveal moderate to extensive colonic pathology, depending on the frequency, severity, and duration of the attacks. Various body affections, such as arthritis, fistula in ano, rectal abscess, erythema nodosum, cardiac and hepatic complications, are frequently observed.

This disease, in the past, has failed to respond adequately to any medical management. Spontaneous arrest is not the rule. As a result, the greatest number of ileostomies are recruited from this group.

At this time, it is of interest to note that two of our patients became pregnant, and during the entire period of gestation and for about six months following the delivery of a normal child, there had been a complete cessation of symptoms. The bowel habits were normal during this period, although barium colon studies taken about three months after delivery demonstrated advanced colon pathology.

These patients were treated psychologically as well as physiologically. This was done simultaneously. Our medical plan took care of all the physical effects this disease produced in the body, whether local in the colon or systemic.

The blood picture, which was one of anemia resulting from the lowered hemoglobin and number of red blood cells and lowered blood volume, was changed to a high hemoglobin and increased red blood cells with hydration restored by massive blood transfusions and parenteral fluids. At the same time, we attempted to disinfect the bowels with sulfasuxidine and sulfathalidine at first and later with other antibiotics. The hypoproteinemia was combated with a high protein diet. Vitamins were supplied by whatever means we could give them.

We realized early in our studies that many of these patients had well-advanced colonic pathology and yet could have normal bowel functions. It was evident that nature provided abundant colonic tissue for such changes.

The psychologic therapy given during hypnosis demonstrated in many of these patients that we could dissociate their bowel irregularities from being the sounding board for their emotions. The latter appeared to result when their personality had become lowered to an infantile level. We were able to revert the depersonalization to an adult status which did not require the bowel activities to be part of an emotional reaction when it occurred.

The therapeutic regimen was divided into four categories: (1) hyperalimentation, (2) intestinal disinfection, (3) hyperventilation and hyperoxygenation, and (4) psychotherapy.

Hyperalimentation.—This procedure was accomplished by feeding these patients large amounts of protein and carbohydrates and normal amounts of fat. We were able to give as much as 150 to 300 Gm. of protein in a formula containing protein hydrolysate and dextrimaltose. Proteins and vitamins were also given parenterally. A complement of all known vitamins was also ordered. They were helpful, because the intestinal absorption was disturbed and the need of vitamins was very evident. The large amount of protein helped to restore and maintain a positive nitrogen balance which most of these patients lacked. Vitamin K, about 20 mg. per day, was also given as a prophylactic against hemorrhage. Two cubic centimeters of crude liver were given every second day for the vitamin content and hematopoetic properties and as a substitution therapy, for most of these cases demonstrated liver involvement. We constantly strove to place these patients on a well-balanced house diet as soon as possible, because, in our opinion, prolonged dieting with its necessary restrictions produces a constant conditioned reflex reminder of continued illness.

Intestinal Disinfection.—During our early studies, we employed sulfasuxidine and sulfathalidine. These drugs were helpful in destroying most of the intestinal organisms. However, we found the result was not too satisfactory because we had to use them for a long time, and in some cases for months and years, with the acute exacerbations occurring frequently enough to distress us. However, during the past year, since aureomycin and chloromycetin have become available, we have used them exclusively with satisfactory results. All our cases demonstrated a bacteria-free stool after a short time, although several of them exhibited pure culture of fungi in the stool which, in turn, caused rectal and vaginal itching. To control this symptom, it was necessary to stop the drug. It appears from our brief experience that aureomycin and chloromycetin, when used in colitis with pyrexia, are the answer to the infectious aspect of the disease. Time, of course, will tell whether this is so.

Hyperventilation and Hyperoxygenation.—The blood loss and dehydration which cause varying degrees of anemia with its subsequent lowering of the oxygen-carrying power of the blood is a result of the reduction in the number of red cells and the interference with the intracellular fluid content of these cells. This results in a state of hypoxia, which causes and maintains mental dullness and systemic lethargy. These patients lose interest in almost everything in life. They lack the desire and will to get well and appear to accept the chronic state of illness with equanimity. One can readily see evidence of depersonalization. They appear to look upon their disease as something that they have to bear, a sort of martyr-like reaction. Although they suffer by their disease, they live upon it. By their complaints they attract sympathy to themselves, without which they are at a loss. They utilize their disease as a reason for living. One can readily observe that at times they actually refuse to be detached from their disease. The entire emotional conflict, as one sees it, is a conflict between reality (you must grow up) and fantasy (I want to retain my childish dependence on my mother). This reaction expresses frustration.

With the above knowledge, we attempted to correct the physical condition of hypoxia, which I believe continued the depersonalization, by elevating the blood elements to the highest degree possible with massive transfusions of whole blood. The red blood cells were increased to five and six million and the hemoglobin to 100 per cent or more. The results of such cellular levels were attended by a remarkable sense of well-being. In fact, in some cases the effects were spectacular. These patients seemed to acquire a new lease on life. Optimism was substituted for pessimism. There was a renewed zest for living, and thus a goal in life again was restored. We continued this state of artificial polycythemia for two weeks or more, depending upon the general physical response of the patient.

Psychotherapy.—This is a science or a method of treatment that has much to offer. I believe it attacks the disease of colitis at its source.

In disentangling the multiple problems and difficulties of patients with colitis, we direct our efforts at clarification of the individual's inner life to eliminate his unhealthy and immature attitudes toward the world and people. An attempt is made to improve the individual's unpleasant environment by removing the cause for stress and strain. We attempt the formation of healthful and mature behavior patterns in order to enable them to deal with future difficulties adequately and efficiently. They are made to realize that they are going to have vicissitudes and are re-educated to accept this mental and physical expression as normal. Building and rebuilding of mental health is primarily a matter of understanding and realization of what is wrong. It is not easy to convince them that their disease could result from psychogenic causes. These patients seldom complain of anxiety, resentment, depression, weakness, dizziness, or the like, because they seldom can believe that their colitis may be the expression of a neurotic behavior.

The various methods of psychologic procedures were studied, and from our experience and knowledge we were convinced that a radical and drastic therapy such as psychoanalysis was too long and too expensive and that it was not the panacea. Furthermore, it could not be used on all patients with success. There were several patients who came to us for treatment who had been psychoanalyzed and were not helped. These patients had been confused by the interpretation and advice given by the analyst. There was a lack of understanding, and the patients felt that the analyst's suggestions were unreasonable and unjustifiable. As one patient explained to me, he had been told that he had to resent his parents in order to improve. He detested such advice and did not care to get well just to prove to the psychiatrist that he was wrong. Certainly, psychoanalysis has its place in medicine, but in a case of this type there is nothing to be gained in scraping the bottom of the barrel of conflicts for the key to health. The simpler methods are more rational, easier to perform, less expensive, and produce results in a much shorter time. The effect of treatment will be measured by the degree of cessation of acute exacerbation and the returning to a normal bowel function. We may cure the patient but not the disease. We attempt to follow the simple rule of the normal psychologic phenomenon of forgetting and learning. The procedure is not difficult to understand. The purpose of the treatment is to dissociate the bowel from being the pathway of emotional expenditure. The following methods have been utilized with good results.

Hypnosis.—This is a scientifically established phenomenon. The technic of hypnosis is comparatively simple. The production of a hypnotic state was effected by a combination of relaxation and repeated verbal suggestions. It has its limitations, but it is well suited in the cases of colitis. The average daily session lasted about fifteen to thirty minutes. It required several sessions to obtain and retain therapeutic results. Many times we were able to establish the nature of the hidden psychologic causes.

Narcosynthesis.—For those patients whom we at first were not able to hypnotize for some reason or other, sodium Pentothal, delvinal, or sodium amytal were given intravenously. These drugs produced a semihypnotic sleep on all the patients to whom they were administered. They always worked and were easy to administer. For the past three years we have utilized this procedure exclusively. Many times, the patient promptly recalled the unpleasant experiences which may have precipitated the diarrheal attack. During the sleep, the technic of explanation, persuasion, and reassurance was used in conjunction with other psychotherapeutic measures, and at each session a certain amount of pent-up emotion was usually uncovered and released. Emotional material was carefully analyzed and discussed. We always acted as a friend, interpreter, and guide. After each session, a posthypnotic suggestion was given. In a kindly fashion, the patients were told that they were going to regain their appetite and that this would increase day by day and that the more that they ate, the stronger they would become and the sooner they would get well. Usually in a few days, they ate most foods without any ill-effects. They were advised that the number of bowel movements would diminish day by day and that in a short time they would have one or two well-formed bowel movements daily. In further suggestions, it was impressed upon them that their sleep would improve every night and that they would soon sleep the whole night through without the assistance of hypnotics. They would feel refreshed, happier, and have a feeling of well-being after a restful night of sleep. Therefore, these posthypnotic suggestions did incline the patients toward a more normal life. We further instructed them to acquire the habit of repeating Coué's suggestion of "Every day in every way I am getting better and better," at least 25 times a day.

This combined form of psychotherapy was continued for the patient's entire stay in the hospital. The results were uniformly good. All of our patients, with one exception, had an arrest of exacerbations within two to three weeks. In this case, which had advanced colonic pathology with multiple intestinal abscesses complicated by many discharging fistulas, an ileostomy was done, later followed by a colostomy. The results were excellent. This case occurred before antibiotics were known.

Conclusions

1. It has been pointed out that chronic nonspecific ulcerative colitis must be considered as a syndrome in which multiple and variable factors contribute to form fairly constant pathology and clinical patterns. Why the colon is the site for emotional localization is not yet clear.

2. It is our belief that colitis begins as a functional disease and that the organic phase can result from continuation of colonic dysfunction. The degree of involvement can be so severe that the advanced form may be the first to be observed.

3. The regimen of hyperalimentation and hyperventilation with the production of artificial polycythemia has been of value in terminating the physical disturbances seen in acute exacerbation.

4. Psychotherapy through hypnosis has helped these patients to stop the abnormal attachment of their bowel dysfunction to an emotional reaction.

197 Cumberland Street

Discussion

J. Edwin Alford, M.D., *Buffalo.*—I have had no personal experience with psychotherapy, hypnotism, or narcohypnosis in the treatment of this dread disease so I am unable to offer any discussion of this phase of the author's regimen. His results seem to follow the suggestions made by such observers as Alexander, Portis, and others in the psychogenic aspect of the disease.

It seems quite remarkable to a proctologist that only one case out of the 60 observed by Dr. Stefano had to have any definitive type of surgery to arrest the progress of the disease. It may be that we see the cases after complications have developed, but, at any rate, in considering the management of chronic ulcerative colitis, I would like to stress that surgery is indicated when any of the four major complications develop: (1) chronicity without remission, (2) hemorrhage, (3) perforation, and (4) polyposis.

The surgical management has been clearly defined by such observers as Cave, Ault, Leahey, and others and consists of ileostomy followed by hemicolectomy or complete colectomy.

It occurs to me that many of the chronic cases without remission are allowed to progress too long before surgical intervention is suggested to the patient and that these cases are rehabilitated much too slowly or not at all, because irreversible changes have taken place before the ileostomy and/or hemicolectomy were performed.

It is important that, after surgery is performed, the close doctor-patient relationship be maintained with continuance, if you will, of good psychotherapy. Too many ileostomies have been done in the past with no careful postoperative follow-up. This is one of the sad neglects that has been a deterrent to earlier ileostomized patients.

Certainly, there is no controversy about the use of ileostomy in the other three classes of complications.

Nowadays, with the potent antibiotics, cases of perforation in the acute fulminating disease are being saved with ileostomy, antibiotics, and intensive supportive therapy. A few years ago, the mortality in this type of case was always 100 per cent.

Polyposis demands complete colectomy because of the danger of the development of carcinoma in one or more of the pseudopolyps. Studies show that over 10 per cent of these cases develop carcinomatous changes.

Massive hemorrhage is a distressing complication to treat, but ileostomy with hemicolectomy, or closely followed by hemicolectomy if the patient is too precarious to stand the combined operation in one sitting, is the treatment of choice. It is sometimes difficult, even with massive transfusions and the use of vitamin K, to restore these people adequately before ileostomy. Too much time should not be spent in preparing a case of hemorrhage for surgery. The ileostomy seems to arrest the severe bleeding temporarily.

Matthew Brody, M.D., *Brooklyn.*—Dr. Stefano's standing in his specialty and the thought that there might be others as anxious as he for my comments make me feel obligated to be as thorough as possible in my criticisms, although I am in agreement with much of what he said, particularly the statements about medical management.

Dr. Stefano is entirely correct in pointing out that the so-called dichotomy between psyche and soma is purely artificial and man-made. He might be interested in Professor Albert Einstein's recent article in the *Scientific Monthly* in which this brilliant scientist suggests that there is a unity behind all laws of nature. Be that as it may, there is indeed a practical reason for the subdivision of knowledge. Our learning has become so extensive that it is no longer possible for any one person to become versed in more than a small part of that knowledge. I must confess that I too felt as omniscient about psychologic manifestations as Dr. Stefano, many years ago. At the completion of my residency in neurology, I decided that for practical reasons I would have to know psychiatry in order to make a living and planned to devote all of six months to acquire that knowledge. However, after five years in a mental institution, several postgraduate courses, analytic training, and private practice, I now find myself humbly aware of the limitations of my knowledge in my own specialty. I envy Dr. Stefano his self-assurance and sincerely regret the necessity of attacking it this morning.

For orientation a few basic concepts are necessary. I must point out that there is a narrow dividing line between the many psychosomatic disorders and the psychoses. This is especially true of colitis. In state hospitals psychosomatic disorders are relatively rare. Patients with asthma, for example, who develop involutional melancholia, generally lose their asthmatic symptoms while they are psychotic. There is a surprisingly low incidence of diabetes among schizophrenics. Dr. Stefano is aware of at least one patient who lost her peptic ulcer only to develop a psychotic depression. A patient with colitis who develops schizophrenia generally loses his colitis. The reverse is also true. I recall at least two patients who received shock therapy for involutional melancholia only to become asthmatic again as the psychoses waned.

While it is true that a person who develops colitis, for example, may have a bowel that is predisposed, either congenitally or psychologically, to express a conflict in this manner, a corollary is also required—that this person has some psychologic defense against expressing his conflict in a psychotic manner. This defense cannot be a rigid or static one; otherwise there would not be those patients who can shift, under certain circumstances, from a somatic break to a mental break, and vice versa.

It is because of the possibility of this shift that psychotherapy should be undertaken only by those with experience and training. I am fully aware that there are people who consider themselves expert amateur psychiatrists capable of arguing on an equal footing with psychiatrists who have devoted their lives to the specialty. In court every smart-aleck lawyer believes he knows as much psychiatry as the doctor, and in our culture the question of sanity and mental responsibility is left to lay juries. There are stage performers who regularly hypnotize publicly to the amusement of everyone concerned. Even psychologists without clinical experience are endeavoring to secure state sanction for the practice of psychotherapy.

I should like to relate a few disastrous experiences. Some time ago, I saw a young man in a hospital who had been seriously ill for almost three years with peptic ulcers and colitis since the death of his mother from cancer of the breast. After spending a great deal of time with him, carefully probing, I suspected that the death of his mother touched upon a long-repressed infantile fear of his that, if he loved his mother, he must eat her as one eats food one likes. This was a working hypothesis which I did not communicate to the patient. What I told the patient was that there was no hurry about getting well and that he could stay in the hospital as long as he desired. Unfortunately, someone read my note to the patient. Within a week the patient was dead of a perforated gut. This really was a psychosomatic suicide. I am not that much of a scientist to derive any pleasure from so drastic a confirmation of a theory.

In another hospital, an intern watched me do a Pentothal interview. Some time later, a lady arrived from Puerto Rico for diagnosis and treatment of epilepsy. There were indications of contributing psychologic factors. This intern, having seen one Pentothal interview done, took it upon himself to do one on this lady. He secured information about incestuous relations. That night I was called to see this lady and had to commit her for an epileptic furor state.

In an excellent institution in this city, a lady who suffered for many years from a severe pruritic eczema was hypnotized with the suggestion that one patch on her arm would clear up. In an almost magical manner her itching stopped over the entire body, except for the little patch that was suggested to her. In the next few days her skin fell off in shreds to be replaced by healthy new skin. Two weeks later, she had to be committed to a state hospital where she received shock therapy. This case has been written up and thoroughly described.

I have a suggestion to make as to the origin of the defense that wards off a psychosis in these psychosomatic patients. This is only an hypothesis. It seems to me that the mothers of schizophrenics and of these patients with psychosomatic disorders fall into one groove. In state hospitals they are unofficially called schizophrenogenic mothers. They are, for the most part, severely hysterical women who at the same time, or alternately, seduce and destroy their young. They tend to glut their children somatically, yet starve them as far as affection is concerned. These are the mothers who try to derive through their children what pleasures they cannot themselves obtain. These children must eat to appease their mother's hunger, and, no matter what they eat, the mother remains dissatisfied. As far as the topic under discussion today, patients with colitis, these were usually children who could never produce enough in the toilet to satisfy the mother. Each bowel movement was looked upon by the mother with disdain and was often followed by an enema to get some more out. The mothers have the "I-know-what-is-best-for-you" attitude, against which the child can offer no argument.

These mothers constantly proclaim how much they are doing for their children and at the same time are busy robbing from these children their individuality and their ability to do things for their own pleasure.

The difference in the family constellation of the psychosomatic patients and the psychotics is in the fathers. The fathers of the schizophrenics are either weak and offer no defense against the insidious onslaught of the mother or are in active collaboration with her. The fathers of the psychosomatic cases are relatively normal as a rule. It is the ability to identify with a relatively normal father that enables these people to hold onto reality, and hence their sanity, and, when the break does come, it comes somatically. In the light of this hypothesis, it is a bit easier to see why there is this easy shift from the one condition to the other. What the psychotic does is to retreat from the world and reality, because his infantile world, his parents, were hostile and unbearable. The psychosomatic patient, and I will now speak of the patient with colitis, says, in effect, (1) "What fun do you think you can get out of me when I am sick?," and (2) "You want me to move my bowels? Alright, I will move them all day long and all over the place," etc. However, he is still in contact with reality enough not to be hallucinating or suffering from delusions. If a therapist comes along and assumes a hostile attitude (and a premature interpretation is looked upon as an aggression by the patient), then he will have to regress into more archaic ways of handling his problem and that is a psychosis. The therapist's attitude must be such as to reinforce healthy identifications in the patient.

The patient who left me to go to Dr. Stefano improved for two reasons: (1) He could no longer take his state board exams as the time had passed. (2) He had advanced sufficiently in his psychotherapy that he was able to leave me, owing me money, with sufficient stamina to be able to tell Dr. Stefano what a lousy doctor I was. What the patient did not realize, and I hope Dr. Stefano does not tell him, was that what he felt and said about me, he really felt but could not admit about his mother. He never was analyzed, because he was too close to schizophrenia.

I go into all this detail in order to indicate what the treatment of psychosomatic disorders should be. There must be adequate attention to the medical needs of the patient. However, what is most important is the attitude of the physician. There must be no hurry to get the patient well. Treatment must never be on the basis of "you-must-get-well-to-please-me (or your mother)." The doctor must be kindly, permissive, yet firm, objective, and never too friendly. He should have a man-to-man attitude. With this approach he will find that many of his patients will improve, and it matters little what the somatic therapy is. It is for this reason that some doctors get as good results with acid in peptic ulcers as alkali, why some doctors have been successful with oral antibiotics, or intravenous mercurochrome, or the laying on of hands, or with some pseudopsychotherapy such as Couéism. None of these patients will have the core of their problem cured, and in many patients, especially those too close to the psychoses, no more should be attempted. Patients who do not respond to this regimen or patients who are sufficiently intelligent and have a sufficiently strong ego to warrant an attempt at a definitive cure should be treated by a *team* of psychiatrist and internist. The medical man who knows nothing about psychiatry, and even holds its concepts in contempt, paradoxically is much better for his patients than the medical man with a smattering of psychiatry, because he would be less tempted to play with dynamite.

FOOT ERUPTIONS LINKED TO SHOE MATERIALS AND CONSTRUCTION

Rapid increase in foot eruptions has paralleled the use of certain materials, particularly waterproof materials, in manufacturing footgear, two Evansville, Indiana, dermatologists point out.

Writing in the July issue of *Today's Health*, published by the American Medical Association, Drs. L. Edward Gaul and G. B. Underwood say:

"Parents can learn something from instinctive actions of their children. Instead of calling their toe itch the fungus or athlete's foot and promptly rubbing in an irritating remedy, they should (like their children) kick off their shoes.

"The financial setbacks of the shoe industry in 1919 sent fabricators scurrying for cheaper materials. Time-proved leather was replaced by rubber and adhesives, by bonded, laminated, coated, and impregnated fabrics and papers. Various plastics are now replacing these. The result is that we have steadily exposed our feet to a wide variety of chemicals."

Foot eruptions are the third most common skin disease, the doctors find. One survey indicated that three out of four people have foot eruptions. Careful studies by dermatologists have shown fungus to be the cause in approximately 50 per cent of cases.

"Certainly the rapid increase in foot eruptions paralleled the use of cheaper materials in manufacturing footgear, and particularly waterproof materials," the doctors say. "Tanners and processors have succeeded in destroying the natural porosity and absorbent properties of leather. Various chemicals highly irritating to the skin are added. Zealous manufacturers seal any porosity left in leather with moisture-resistant adhesives and cements.

"To make sure that none of the sweat from the sole can evaporate, beneath the insole is a bottom filler that seals out wet weather. Anything on hand that will not dissolve in water is used as filler. One combination consists of asphalt and a mass of cemented rubber, containing pieces of cork. These substances ooze up through tack holes and cracks and make the feet sweat, burn, itch, and break out.

"Contact of an impervious material like rubber sheeting, plastic, or painted leather with the skin is soon followed by an accumulation of moisture. This results from unconscious sweating. In hot weather the sweat increases. If the sweat cannot evaporate, the cooling effect of evaporation is lost and the skin heats up.

"An annoying burning sensation results. The skin swells, blood vessels dilate, and the functions of the skin as a protective covering for the body are quickly lost. Then the chemical irritants in the shoes work their havoc. The feet burn, smart, itch, become reddened, and soon break out. The thin skin between the toes is white and soggy, a warning that the shoes do not allow the sweat to evaporate.

"Investigators emphasize that fungi grow and thrive in moisture. Water-tight shoes provide ideal growth and multiplying conditions. Future footgear should take care of two basic needs: (1) rapid dissipation of sweat from the feet; (2) dryness in wet weather. Loose-fitting rubbers allow air movement around the shoe. This protection should be removed as soon as the wearer is in a dry place.

"Nature furnished us with a delicate alarm system for detecting irritations of the skin. Its warnings are itching, burning, stinging, and swelling. If these symptoms appear, suspect your shoes at once. More severe warnings are redness, blisters, and 'weeping.'"

CHLOROMYCETIN THERAPY IN CHRONIC ULCERATIVE COLITIS

Z. T. Bercovitz, M.D., New York City

(From the Department of Gastroenterology, St. Clare's Hospital)

CHLOROMYCETIN therapy of chronic ulcerative colitis was undertaken on February 14, 1949, to determine the effect of the new antibiotic upon stool cultures and also the clinical progress of patients with this disease. There was such an inhibitory effect of chloromycetin upon the growth of Escherichia coli and streptococci in the stools and also clinical improvement in so many patients that at the end of the first year of study a progress report is made.

Chloromycetin was selected for study because of the reports of its effectiveness in many types of infections, especially in diseases associated with the gram-negative bacilli.[1-7] The marked clinical improvement of typhoid fever patients also indicated that it might be of value in chronic ulcerative colitis.

This study was divided into two parts, the bacteriologic studies on stool cultures and the clinical observations in active cases of chronic ulcerative colitis.

Bacteriologic Methods

In general, two bacteriologic procedures were used.* In one, the fecal matter was emulsified in sterile saline and inoculated into suitable media of which pour plates were made. In the other, the fecal matter was emulsified in enriched broth and then streaked immediately on plates.

The effect of chloromycetin upon stool cultures is being reported only in terms of the two major groups of organisms, namely, E. coli and streptococci.

Dosages

Three grams daily of chloromycetin were found to be the most effective dosage. Six of the 13 cases treated received 6 Gm. in the first twenty-four hours, but this increase revealed no bacteriologic or clinical advantage.

Eight normal individuals included in this study received 6 Gm. during the first twenty-four hours, followed by a maintenance dosage of 3 Gm. daily. The bacteriologic results compared closely with those of the chronic ulcerative colitis group receiving 3 Gm. daily.

Smaller dosages of 1 to 2 Gm. daily have generally been found to be ineffective, both clinically and bacteriologically.

Untoward Reactions to Chloromycetin

No serious toxic reactions were noted during therapy. There were, however, certain reactions in some patients, including temporary dryness of the mouth, mild nausea, occasional giddiness, and a maculopapular rash, which disppeared when the drug was withheld. Hepatic and renal function tests, done routinely in some of the cases, were unaffected, and chloromycetin administration did not cause alteration from normal in the blood counts and urine examinations.

Chloromycetin Effect on Stool Cultures

The bacteriologic conclusion from stool culture studies was marked inhibition of the growth of both E. coli and streptococci from the first to the fourteenth day of chloromycetin therapy in 13 patients with chronic ulcerative colitis, eight normal individuals, and five patients in whom subtotal colectomy had been performed. In the latter group, the inhibition of bacterial growth was more marked in rectal mucus than ileostomy feces. During the first fourteen days of treatment with chloromycetin, a total of 90 plated cultures was made in the 13 patients with chronic ulcerative colitis. Of these, 42 per cent were entirely negative for E. coli, and 54 per cent were negative for streptococci. An additional 15 per cent of the cultures had ten colonies or less of E. coli, and 16 per cent showed a similarly scanty growth of streptococci. Thus, in the 13 chronic ulcerative colitis patients, 57 per cent of the plate cultures during the first fourteen days of therapy showed an inhibition of E. coli, while streptococci were inhibited in 70 per cent of the same group of cultures. Following the fourteenth day, there was, in spite of continued administration of chloromycetin, a reversal of the bacterial flora, both quantitatively and in regard to the cultural characteristics.

Clinical Observations During One Year

The preliminary observations of clinical progress in 24 patients treated with chloromycetin

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Gastroenterology and Proctology, May 11, 1950.

* The bacteriologic studies were carried out in the laboratories of the Micro-Biology Department of the New York University-Bellevue Medical Center and in the Steffen Biological Laboratories in New York City.

during the past year indicate that 67 per cent showed either marked or moderate improvement during the first month of therapy, and only 33 per cent failed to demonstrate any favorable change. By the end of the first month of treatment, all of the patients had fallen into three major groups: (1) marked improvement to essentially normal (54 per cent), (2) moderate improvement (13 per cent), and (3) not improved (33 per cent).

The initial period of therapy ranged from one week to three months of continuous medication in a number of the group, because prolonged bacteriologic studies were being made. After the completion of that phase of the observation, the average patient received an initial period of treatment with chloromycetin for about one month.

In the 13 patients who were markedly improved there were marked changes both symptomatically and by sigmoidoscopic examination. There was decrease in the number of bowel movements to essentially normally formed stools with no blood or mucus, good rectal sphincter control, no night movements, and no abdominal cramps. In effect, this group might be considered essentially normal from a clinical standpoint. Sigmoidoscopic examination revealed essentially normal mucosa with no submucous petechiae. Many of these were severely debilitated at the time treatment was started. In some, within forty-eight hours the bowel movements, which earlier contained blood, mucus, and pus, were successfully reduced from as many as 40 to 50 per day to three or four, with no evacuations at night and a definite tendency toward formation. Sphincter control was likewise noted to improve, and rectal straining and tenesmus disappeared. Those in the markedly improved class responded within the first week of chloromycetin therapy, and their tendency has definitely been to remain improved. Of the 13 originally improved patients, nine have remained in complete remission and without therapy during the periods of observation. In four instances relapses were seen, but they were characteristically mild, and prompt response to reinstitution of therapy was noted.

In three patients there was quite marked improvement but not so striking as in the first group of 13 individuals. They fluctuated at irregular intervals so that at times they were exceedingly well and during other periods throughout the year had relapses of varying degrees but never to the point where they were as ill as at the onset of treatment.

Eight patients were considered as having failed to respond even though they exhibited varying mild degrees of initial temporarily favorable response to therapy. There has been only one death during this year. That was at the end of five months observation in a patient who had undergone treatment almost continuously during that time but in whom the disease had been present for about twenty-five years and in whom there had occurred marked nutritional and nervous change. In one other case, a total colectomy had to be performed during the period of therapy. The bowel when seen at the time of operation showed marked evidence of chronic ulcerative colitis.

Chloromycetin Therapy in Cases of Ileostomy with Subtotal Colectomy

Six patients included in this group were studied separately. The clinical response in this group of patients is interesting in that the previously inflamed mucosa of the distal stumps of sigmoid and rectum showed not only bacteriologic changes with almost complete inhibition of the growth of all organisms in the rectal mucus, but a simultaneous improvement in the sigmoidoscopic appearance of the bowel. This clinical and sigmoidoscopic improvement was transient for varying periods of time, with remissions up to about four months. It is not possible to predict, in this early period of study, that this particular mode of management will more favorably enhance the eventual reunion of the ileum to sigmoid in these cases. It is of great value, however, as a preoperative adjunct.

Discussion of Results

Chronic ulcerative colitis is a disease characterized by wide variations, not only in individuals but also as a group. These patients undergo spontaneous remissions which may last for great lengths of time. Definite seasonal variations have been noted also, and it is a frequent observation that remissions and relapses occur at about the same time of the year. The duration o relapses also seems to be more or less the same There are certain years when the majority of the cases are mild and respond quite readily to almost any form of therapy, while there are other years in which all, or most of the cases, seem to be fulminating in character. During this type of season, individuals who have been quite well for lon periods of time develop relapses which are mor serious and, in some cases, are so fulminating tha they fail to respond to any therapeutic procedure Pregnancy has been shown to be of marked benefi to a certain number of patients, and some hav been known to go into complete remissions of lon duration as the result of a normal pregnancy.

This paper, therefore, must, of necessity, b considered as only a preliminary report at the en of the first year of study, and any conclusion drawn at this time must, of necessity, be subjec to revision over a period of years in order to arrive at the full truth of the matter.

Although this study was not designed with a view toward determining the etiology of chronic ulcerative colitis in terms of current bacteriologic concepts, it nevertheless seems worth while to mention that it appears there may be some relationship between the inhibition of bacterial flora and the clinical response during the first month of therapy.

Another important observation is that the patients continue to improve even though chloromycetin therapy is discontinued. In many instances this has been so striking that the patients have come to look for the post-therapy improvement to bring them to a better level of well-being.

Some of the markedly improved cases have received only short periods of medication, and thus the possibility that these periods of post-therapy improvement represent spontaneous remissions has to be borne in mind. The most significant fact, however, is that 67 per cent of all the patients showed improvement under the same dosage of treatment at about the same relative period of time, namely, within the first month. Also of significance is the fact that relapses have been of short duration, never as severe as before therapy, and the response to exhibition of chloromycetin the same as at first.

The same facts also apply to the questions of psychoemotional relationships and seasonal variations. In fact, many of this group of patients have had sufficient nervous and mental stress and strain to have caused profound relapses, but they continued entirely well.

Summary and Conclusions

A study of the clinical progress of 24 patients observed during this one-year period reveals the following:

Sixty-seven per cent of all patients suffering from chronic ulcerative colitis show either marked or moderate improvement during the first month of observation, only 33 per cent failing to show any favorable change.

The patients showing marked improvement had prompt and often dramatic decline in the number of bowel movements, with essentially normally formed stools, no blood or mucus, good sphincter control, no night movements, and no abdominal discomfort. In effect, this group of individuals, from a clinical standpoint, might be considered essentially normal. Sigmoidoscopically, the mucosa was essentially normal, showing no submucous petechiae. Thirteen of the 24 patients are included in this group.

Those showing no essential change included eight individuals. In spite of the fact that they exhibited varying mild degrees of initial favorable response to therapy, it was usually of a temporary nature, and in no instance was it comparable to the type of response characterizing the first group. Only one has finally progressed to the point where he could be considered markedly improved.

Three patients were moderately improved.

Chloromycetin therapy is of definite value, not alone in the initial treatment period, but in subsequent relapses as well. The prompt administration of chloromycetin prevents the usual marked decline associated with tendency to relapses and often results in rapid and very favorable response. No individual relapsed to the level of the original severity of the disease.

Chloromycetin can be used repeatedly and for prolonged periods of time without evidence of toxic side-reactions. Following the initial period of therapy, an interrupted schedule of treatment for relatively short periods of time is superior to constant and prolonged administration.

In the post-therapy period, patients continued to be improved for extended periods of time, both symptomatically and sigmoidoscopically.

Final clinical evaluation can be made only after a period of five years when sufficient time has elapsed to account for spontaneous remissions, seasonal variations, psychoemotional situations, and many of the other unknown conditions which may influence this disease.

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Discussion

Asher Winkelstein, M.D., *New York City.*—Dr. Bercovitz deserves commendation for his careful study of the clinical and bacteriologic effects of choloromycetin in ulcerative colitis.

I will add a few words in general about this disease and its treatment. Ulcerative colitis is a disease of unknown etiology. It is probably a psychosomatic disease with a secondary infection. In the acute fulminating forms, in addition to parenteral feeding and transfusions, an ileostomy may be necessary. In the chronic severe forms, with complications, such as polyposis, fistulas, and hemorrhage, ileostomy with subtotal colectomy may be required. The third group which consists of mild or moderate uncomplicated cases should be treated medically. In these there is a characteristic tendency, as in peptic ulcer, to spontaneous remissions. Hence, care must be exercised in drawing conclusions concerning any special form of therapy.

We agree with Dr. Bercovitz that the secondary infection which may be aerobic or anaerobic or viral should be attacked. The various antibiotics as they appear are used for this purpose. In my experience, the most useful antibiotics today are streptomycin, aureomycin, and choloromycetin. My experience with chloromycetin in the severe, toxic cases has not been a fortunate one. One case died of perforative peritonitis and another of hemorrhage while on intensive chloromycetin therapy. Also, it has not healed the isolated rectum after subtotal colectomy.

I agree with Dr. Bercovitz that in the mild and moderate uncomplicated group, one sees a fair percentage of improvement after weeks or months of therapy with antibiotics. However, this group of patients has been described as the "70 per cent group," that is, most therapeutic procedures, if carried out long enough, will give a 70 per cent good result!

We will become more optimistic about the use of antibiotics if and when a specific infecting etiologic agent is discovered and proved susceptible to a known antibiotic. Until that utopian state arrives, we should use not only the antibiotics, but all the available medical therapeutic measures in this devastating disease. These measures include today, in addition to the antibiotics and certain sulfonamides, psychotherapy, transfusions, parenteral feeding, anti-coli serum, possibly antilysozyme agents, and, in properly selected cases, the surgical approach.

Edward F. Driscoll, M.D., *Buffalo.*—This paper shows the usual diligent and thorough work which is characteristic of the author. We must keep in mind, however, that chronic ulcerative colitis is a disease which seems to respond to almost any type of therapy in approximately 70 per cent of cases. This has been true whether biologicals, antibiotics, or supportive therapy alone are used.

At the present time most authors feel that chronic ulcerative colitis is primarily a psychosomatic disturbance. At a recent meeting we had the pleasure of hearing Dr. J. Groen of the Netherlands report on the treatment of 24 cases of chronic ulcerative colitis with psychotherapy alone. The results in this series of cases were the same as reported by any other method of treatment. About 70 per cent improved. He stressed care, support, and protection of the patient against the environment, frequent visits by the physician, and an attempt to solve the patient's problems.

In any group of patients with chronic ulcerative colitis subjected to special study, the added attention and interest of the physician contribute greatly to the patient's feeling of importance and constitute the "tender, loving care", so necessary to their improvement. Fortunately, all physicians use a great deal of psychotherapy whether planned or not.

The part played by infection in the colon as an etiologic factor has not been completely evaluated at the present time. In the past various organisms have been named as causative factors, and at present, lysozyme is being very carefully studied. By the use of the various antibiotics the colon can be practically sterilized, or lysozyme can be completely inhibited by detergents without changing the clinical course of the disease. On the other hand, the use of Cortisone, as reported by Rafsky, promoted marked improvement without changing the bacterial content of the stool.

It seems to me that sterilization of the colon has little influence on the course of the disease, except perhaps for protection of the peritoneum in the acute fulminating perforating cases. We must remember it is the patient we treat and not just his colon. Physical, mental, and moral support must be given by the physician, and we need all the help we can get.

Edwin Boros, M.D., *New York City.*—Chronic ulcerative colitis is a formidable disease, one that taxes one's medical resources to the utmost. In the evaluation of possible causative factors, uncertainty of attainment often times is the reward of one's endeavor. An intricate array of therapeutic measures for its control has been offered in the past, and an eager profession has awaited some dependable means which might be relied upon with confidence in confirming the glowing results which have been promised by the sponsors of a particular medication or method. Much of the enthusiasm which accompanied these newly introduced attempts at cure were found in time to be wanting, and early enthusiasm soon faded into doubt and reality. Were this not so, the essayist would hardly have attempted to chart a new course of management for this troublesome problem. Let no one cavil about the multitudinous ideas and suggestions which have been propounded in the past as to etiology and therapeusis. From infections to allergy, from enzyme action to the role of the psyche, not to omit the intricate interplay of the splanchnics themselves, all of which have been viewed by their respective adherents as *the* item which would explain all features of this disease. One cannot disregard the long list of medicaments which have been proposed: antidysentery serum, typhoid vaccine, amebicides, oxygen administration rectally, multiple transfusions, recourse to sulfa compounds, and lately the use of aureomycin, terramycin, and chloromycetin. And in the background stands the surgeon whose services all too often await the call of the disappointed.

Just what place does chloromycetin hold for us? Does Dr. Berocvitz propose that this agent is a reliable improvement over those means or methods now at our disposal, or is it a substitute for other remedies to be used to their exclusion? The speaker has had a fair clinical experience in the use of chloromycetin. It cannot be denied that an abatement of symptoms in some patients has been most gratifying and promising. All too often, however, have recrudescence and disappointment tempered early enthusiasm. One awaits with hope, and pardonable restraint, future experiences in the use of chloromycetin in the treatment of chronic ulcerative colitis.

REHABILITATION OF THE LOWER EXTREMITY AMPUTEE IN A LARGE GENERAL HOSPITAL

WARD M. SCHULTZ, M.D., New York City

(From the Department of Physical Medicine and Rehabilitation, Bellevue Hospital)

THROUGHOUT the recent literature referring to experience gained in World War II with amputations and the care of the amputee, there are two concepts which are singularly outstanding. The first of these is the need for consideration of the patient as a whole, rather than just a body divorced of one or more limbs or parts of limbs. The second is the need for a closer working relationship between the surgeon, the rehabilitation physician, and the limb maker.

The planning and organization in the surgical treatment and rehabilitation of amputees as a result of the recent war and the need for establishing such services in large civilian hospitals, just as fracture and other special services have been developed in the past, have been discussed by Alldrege.[1] The benefits to the amputees obtained in the program of the U.S. Navy through segregation and specialization are brought out by Owen.[2] Better surgical management and psychologic adjustment were possible; the limb maker and patient were brought together, and there was daily supervision for detection and correction of defects in the stumps, prostheses, and training. Kessler carries the planning further in discussing the rehabilitation of the amputee for gainful livelihood and speaks of three broad objectives: physical restoration, vocational guidance and training, and suitable employment.[3]

Objectives in the Rehabilitation of the Amputee

It has been estimated by Thomas and Hadden that there are approximately 75,000 new amputation cases in this country every year and that, of this number, 40,000 are major amputations requiring prostheses.[4] It is conservatively estimated that over 250 new amputees are evaluated by the Department of Physical Medicine and Rehabilitation at Bellevue Hospital each year, and at least 50 of these amputees are trained by the Department each year. Since its inception in 1947, amputees have been trained on the rehabilitation wards which provide 80 beds for training of the disabled, cooperating with but independent of the action of other departments in the hospital.

Rehabilitation of the amputee has been defined as the endeavor to achieve the maximum function and adjustment of the amputee and to prepare him physically, mentally, socially, and vocationally for the fullest life compatible with his abilities and disabilities. It is the objective at Bellevue not only to fill in the gap between surgeon and limb maker, but also carry the patient well beyond this stage so as to permit that patient the fullest possible life. The physician practicing physical medicine and rehabilitation at Bellevue learns the problems of the surgeon, develops an intimate knowledge of the types and working of available prostheses, studies the problems of the limb maker, follows through with the training of the amputee on the Rehabilitation Wards, and evaluates his work potentialities.

Organization

Cases are brought to the attention of the Department either by consultation with the Surgical and Orthopedic Departments at Bellevue or by requests for evaluation and training from other hospitals, the New York City Department of Welfare, private physicians, and various welfare organizations.

Amputees who have their amputations at Bellevue are seen preoperatively whenever possible. At this time the site of election for amputation is discussed with the surgeons, and instruction in proper exercises and psychologic preparation are begun. Great care is taken to avoid promising a prosthesis to a patient who obviously will never have the skill to use one. Two to three days postoperatively, the amputee starts his rehabilitation program which consists of stump positioning when in bed, stump exercises and stretching, crutch training for the unilateral amputee, and wheelchair training for the bilateral amputee. The medical personnel and patient are instructed in the importance of stump exercises and positioning. When sutures are removed and the wound healed, stump shrinkage is promptly begun. Two 6-inch "Ace" bandages are used for above-knee amputations, but special leather corsets have been found more effective for below-knee amputations. No shrinkage is attempted initially if the patient is thought to be a possible candidate for a suction socket prosthesis. The hospital social service is contacted by the Department of Rehabilitation, and the means of securing a prosthesis as well as the vocational future of the patient is discussed. When the patient is considered to have had a fair trial of crutch training, he is presented at the Department's prosthetic clinic which is held once a week. Amputees from the outside are requested to present a complete medical abstract, and a preliminary examination is given by a member of our resident staff.

At the prosthetic clinic are an orthopedic consultant, a prosthetic specialist trained in limb manufacture and repair, the Department's house staff, the therapists concerned with amputee training, and the Department's own social service worker and vocational counselor. Also frequently present are a representative of the New York State Division of Vocational Rehabilitation and guest surgeons and limb makers.

The purpose of the clinic is to determine the following:

1. The advisability of securing a prosthesis for the particular amputee presented and his specific training problems.
2. The most suitable prosthesis for the individual and the arrangements to be made for securing the prosthesis.
3. The care or further training needed before a prosthesis is secured.
4. The changes or adjustments in prostheses already secured.
5. The changes in an amputee's present training program.
6. The reasons for not securing a prosthesis for a particular amputee.
7. The gaining of further clinical experience.

In determining whether or not a prosthesis should be secured for a patient, certain evaluating criteria are used. These will be discussed later. Those patients whom we feel should not have a prosthesis are not necessarily denied further training. Many unilateral lower extremity amputees are admitted for further crutch training. Many bilateral amputees are admitted for training with the proper wheelchair. Those potentially employable are given proper vocational guidance. An interesting case, for example, was that of a fifty-year-old bilateral, above-knee amputee. Because of his previous history, it was felt that he did not have the necessary skill to use bilateral prostheses. The patient lived two flights up in a rooming house. The securing of a ground floor room was not possible. He would be able to run a newspaper stand on the corner if he could only get back and forth. The solution was securing the proper wheelchair and a low platform which he could propel with his arms by using iron weights. A wheelchair which could fit through all room doors was obtained and the patient trained in its use, making him independent in the home. He was taught to navigate the stairs on his buttocks and arrangements were made to leave the platform in the downstairs hallway. Once downstairs, he simply boarded his platform and easily got to his newspaper stand.

The determination of the proper prosthesis is, of course, always important, and here the prosthetic specialist is of great aid. At the same time, social service explores the various avenues open for payment for the prosthesis. When possible the patient purchases the prosthesis, usually with considerable aid from social service. Other possibilities are New York State Division of Vocational Rehabilitation in those potentially employable, the Department of Welfare for those on relief, other welfare organizations, or the City Purchase Department when no other means are possible.

Frequently, stump revisions or further stump stretching and exercise or further crutch training may be needed before a prosthesis can be recommended. This is determined in the clinic, arrangements made, and the patient re-evaluated at a later date.

Each week patients are seen, who, with just minor adjustments made in the prostheses, are able to carry on much better. Patients must be guided in the progression of training programs such as the step from balancing in parallel bars to actual ambulation, to learning stair climbing, etc. The training program of the amputee must be personalized to meet his specific physical, social, and vocational needs.

Many people who never should be are promised prostheses prior to amputation. A common misconception is that, if a proper fitting limb is made, the patient need only put it on and walk away. This is not true, and no patient should be provided with a prosthetic appliance until he has first demonstrated his ability on crutches. If a prosthesis is denied a patient, this must be carefully explained to him with sound reasoning presented.

Another important function of the clinic is to permit all those involved in the rehabilitation of the amputee to be together at the same time and learn from and with one another; it is the total team approach to the total need of the patient.

Following evaluation, outpatients accepted may be admitted to the hospital for preprosthetic training. If this is not necessary, they wait at home, being checked at frequent intervals, until the prosthesis is ready. They are then admitted directly to our wards for a closely supervised five-hour daily program of training and vocational guidance. The use of interim pylons is not encouraged because of the economic problem and the danger of developing a poor gait.

Criteria for Acceptance

These criteria apply particularly to lower extremity amputees in the older age groups. Approximately 75 per cent of the Bellevue amputees are in an older age group and have lost their limb or limbs because of peripheral arteriosclerosis with or without diabetes mellitus. Although little is seen in the literature regarding this problem, the Department is constantly faced with the decision as to whether a limb should be secured for a particular patient. The seven items influencing this decision are as follows: (1) ability to perform an adequate,* swinging-through gait on crutches,** (2) evidence of senile degeneration, especially encephalomylacia, (3) severe intercurrent disease, (4) condition of the opposite extremity, (5) severe contractures, (6) painful phantom limb or stump, and (7) desire and dependability of the patient.[5]

In general, any of these factors above, if pronounced enough (such as severe senility or uncorrectable contractures), is considered a "primary cause" for refusal of prosthesis and training. A "contributory cause" for refusal is one which influences refusal only when considered as a part of the total problem.

With any amputation through or above the knee joint, it has been our experience that any evidence of senility or severe intercurrent disease is prohibitive to the learning of satisfactory use of a prosthesis.

Barring senility in the unilateral above-knee amputee, the most important single prognostic guide as to the ability to use a prosthesis has been the skill and daring required to perform an adequate swinging-through gait on crutches. In the case of unilateral amputation below the knee joint, inability to perform an adequate swinging-through gait on crutches is not considered of major importance unless coupled with other contributory causes.

One of the most difficult decisions to make is what to advise the unilateral amputee when fairly severe arterial insufficiency exists in the contralateral extremity. No patient is advised against a prosthesis because of the absence of the dorsalis pedis and posterior tibial pulses or because of poor oscillometric readings. Unless there are other strong contributory causes, the tendency is to lean over backwards and encourage all but the most severely complicated cases to learn to use an artificial leg. In this way, it is felt that, should the patient later lose the opposite extremity, he may have a chance of learning to use bilateral prostheses. Results of what happens to the opposite extremity in the diabetic arteriosclerotic amputee who has learned to use a prosthesis are now being studied in the Department.

In the evaluation of the bilateral above- or below-knee amputee, the problem is even more difficult. If one extremity has been amputated some time before the other, much importance is placed on the patient's ability with a unilateral amputation. If a bilateral below-knee amputee has previously learned to use one prosthesis or has acquired much skill on crutches, he is generally accepted for further training. A similar policy is followed for patients with one above and one below-knee amputation, provided other criteria cited previously were favorable. Bilateral above-knee amputees present special problems and will be mentioned later.

Interestingly enough, severe contractures and painful stumps have not been too prominent a feature in most cases. Also, a number of patients who have adjusted well to crutches have expressed no desire for a prosthetic device. Psychopathic personality and personal dependability have been strong factors in considering securing prosthetic devices in amputations due to frostbite in alcoholics.

Analysis of 100 Consecutive Cases

To consider the results with the type of program and criteria outlined, 100 consecutive cases of lower extremity amputees were studied. No attempt was made to eliminate undesirable or obviously hopeless cases from the findings. In fact, the inclusion of consecutive cases regardless of age, sex, site of amputation, socioeconomic and psychologic problems was considered highly desirable, since initial findings in this relatively small number of cases might better determine the course in the future with the ever-increasing problem of the lower extremity amputee in an aging population.

The average age of the amputee in the series was fifty-nine years, with the youngest being twenty-two years and the oldest eighty-three years. Seventy-two were males, and 28 were females.

It can be seen from Table 1 that 70 per cent of

TABLE 1.—CAUSES OF AMPUTATION

Causes	Number of Cases
Peripheral arteriosclerosis with diabetes mellitus	46
Peripheral arteriosclerosis without diabetes mellitus	24
Trauma	8
Osteomyelitis	5
Thromboangiitis obliterans	4
Tumors	4
Frostbite	3
Acute occlusion	2
Chronic leg ulcers with spreading cellulitis and gangrene	2
Gas gangrene	1
Filariasis	1

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* *Adequate*—The ability is sufficient to permit the patient to ambulate, climb stairs and curbs, and in most instances travel public transportation.

** *Swinging-through crutch gait*—Both crutches are lifted by rocking backward, the arms are straightened, crutches placed forward, the body raised and swung forward through the crutches.[5]

TABLE 2.—Sites of Amputation

Site	Number of Cases
Unilateral above-knee	51
Unilateral below-knee	24
One above- and one below-knee	9
Bilateral above-knee	7
Bilateral below-knee	6
One below-knee and one through the foot	1
Bilateral through the feet	1
Hemipelvectomy	1

TABLE 3.—Causes for Refusal of Prostheses

Cause	Number of Cases
Senility	
Primary cause	9
Contributory cause	8
Inadequate swinging-through gait on crutches	
Primary cause	9
Contributory cause	14
Severe intercurrent disease	
Primary cause	4
Contributory cause	5
Poor circulatory state of contralateral extremity	
Primary cause	1
Contributory cause	5
Unreliability	
Primary cause	2
Contributory cause	0
Severe contractures	
Primary cause	2
Contributory cause	4
Severely painful phantom or stump	
Primary cause	0
Contributory cause	0

amputations were for peripheral arteriosclerosis, and almost two thirds of these were complicated by diabetes mellitus.

Table 2 shows sites of amputation in 100 cases. No amputation at the site of or through the knee or ankle joint was seen in this series.

Prostheses were refused in 49 of the 100 amputees. The actual statistics of primary and contributory causes for refusing prostheses are shown in Table 3.

Of the nine cases primarily refused artificial limbs because of an inadequate swinging-through gait on crutches, eight were above-knee amputees. Only one of the 24 unilateral below-knee amputees was primarily refused a prosthesis because of the lack of this ability, and she was completely terrified and unable to cooperate when in the erect position on crutches. None of the below-knee amputees accepted for training failed because of a lack of skill. There were, however, six unilateral above-knee amputees who were inadequate on crutches but insisted on purchasing a prosthesis and receiving training despite advice to the contrary. Only one of these learned to use his prosthesis in a "near" adequate fashion.

There were 57 unilateral amputees with peripheral arteriosclerosis or thromboangiitis obliterans. Fourteen had a clearly palpable dorsalis pedis pulse, and 39 had at least fair color and warmth in the remaining foot. Three were observed to have intermittent claudication, and five patients gave a history suggesting the latter. Only one was primarily refused because of the circulatory status, and only five were refused with this as a contributing cause. In only one case was the other extremity lost after a prosthesis had been recommended, and in this case it occurred before training actually began.

It is of interest that in no case of peripheral arterial insufficiency was a successful below-knee amputation performed first and an above-knee amputation performed on the opposite extremity later. However, in the nine cases in the series the reverse was seen. The above-knee amputation was performed first, and successful attempts were made in performing the second amputation below the knee. A history of having a below-knee amputation followed by an above-knee amputation on the same side because the wound failed to heal was given in four cases. With the advent of chemotherapy it has undoubtedly been possible to perform many more below-knee amputations in the presence of cellulitis and gangrene. As will be shown, this seems to be all-important in the prognosis for rehabilitation, particularly in the older age group.

One morphine addict and one alcoholic were refused prostheses because of extreme unreliability. Severe contractures were seen as a major problem in only two cases where the patient would have otherwise been acceptable. Although 5 to 10 per cent of phantom limbs are painful, no disabling phantom limbs or severely painful stumps were seen in this series.

Results of Training

Of the 76 unilateral amputees studied, 35 learned to perform an adequate swinging-through crutch gait. An additional 12 learned an adequate swinging-to gait.*

Of the total 100 cases, 49 were accepted for actual training with prostheses and two with a pylon. The distribution was as follows:

1 above-knee	25 (plus 2 with pylon)
1 below-knee	11
1 above and 1 below-knee	5
Bilateral below-knee	4
Bilateral above-knee	2
1 below-knee, 1 foot	1
Bilateral through the tarsal bones	1

The problem of how to secure aid in purchasing the artificial limbs was always present. The means used in the total 51 cases accepted for training were as follows:

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* *Swinging-to gait*—Instead of swinging the foot completely past the crutches as with the swinging-through gait, the foot is swung up to the crutches before placing the crutches ahead again.[6]

Patient with aid from the Social Service Department	31
Department of Welfare	9
New York State Division of Vocational Rehabilitation	7
City Purchase Department	3
Department of Rehabilitation	1

Actual Results of Training

Of 27 unilateral above-knee amputees (average age fifty-six) accepted for training:

1. Five were trained to extremely limited use, i.e., could only use the prosthesis on level ground with crutches. The same activity could be performed more easily in a wheelchair, and the prosthesis had only a cosmetic or psychologic value.
2. One required one crutch and cane but could climb curbs and stairs.
3. Eleven required two canes but could climb curbs, stairs, and in most instances use public transportation.
4. Seven required only one cane and were able to travel public transportation.
5. One needed no canes or crutches.
6. Two were re-evaluated and refused a prosthesis because of inability to use crutches adequately.

Of 11 unilateral below-knee amputees (average age forty-six) accepted for training:

1. Eight were trained to complete self-sufficiency without crutches or canes.
2. Two were trained to complete self-sufficiency with one cane.
3. One failed (amputation of other leg).

Of five bilateral amputees (all sixty years or over) one above- and one below-knee:

1. Two only had limited use of artificial limbs.
2. Two used crutches or canes but were able to climb curbs and stairs.
3. One used canes and was able to use public transportation.

Of four bilateral below-knee amputees (average age sixty-eight):

1. Two used public transportation with one cane.
2. Two were able to climb curbs and stairs with two canes or crutches.

Comment

It is important to note that the five unilateral above-knee amputees who were unable to use their prostheses adequately were the same patients who had been unable to perform a swinging-through gait on crutches and were advised not to secure prostheses.

Two patients were provided only with a pylon. One of these latter did exceptionally well but was refused a prosthesis because of severe chronic alcoholism. The other learned poor ambulation and stair climbing, the pylon being purchased only in an attempt to take some strain off a severely osteoarthritic opposite hip.

The success in training the unilateral below-knee amputees (ten of 11 trained to complete self-sufficiency) dramatically points out the desirability of below-knee amputations whenever possible.

Of those with one above and one below-knee amputation, all were in an older age group, and despite limited use by two, all felt the prosthesis well worth while in getting around the house, going to the toilet, etc. It is notable that the three who succeeded quite well were patients who had previously learned to walk on a unilateral above-knee prosthesis. The others were not.

In the case of the bilateral below-knee amputees, it was concluded that two who mastered curbs and stairs would have failed had one amputation been above knee.

Training of two bilateral above-knee amputees, both over seventy years, was attempted. In each case, it was after much coaxing on the part of the patient. Both learned to use "stubbies" fairly well with crutches, but it was felt that the step to bilateral prostheses with knee joints would be too great, and training was discontinued.* A number of other cases outside of the series have been seen, and it is hoped to report on these at a later date.

One patient had one below-knee amputation and one amputation through the tarsal bones, leaving only part of the navicular bone. This was done for frostbite. The foot amputation required skin grafting, and there was scar formation in the weight-bearing line. A conventional below-knee prosthesis and a special orthopedic shoe with an anklet and filler to keep the foot dorsiflexed were secured. A special metatarsal-like bar was placed on the bottom of the shoe to prevent full weight-bearing on the tender scar area. This patient, after training in which he learned to become completely self-sufficient, stated unequivocally that he preferred the foot amputation. This was not our experience in another frostbite case, a patient with bilateral amputations through the tarsal bones. His results were much more unsatisfactory. These foot amputations required well over a year of skin grafting before there could be any attempt at weight-bearing. The pull of the tendoachilles constantly kept the feet plantar flexed, and, despite special orthopedic shoes, weight-bearing was extremely painful, and the patient required two crutches.

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* Stubbies are short above-knee prostheses without knee joints and with a wide base of support.

Although not included in the series, a number of other cases of amputations through the tarsal bones and metatarsals because of faulty circulation have been seen and have given uniformly poor results for weight-bearing because of pain and tenderness. In such cases, where pain and tenderness continue, it is felt that below-knee amputations and training with the proper prosthesis is to be desired.

The length of hospital stay was completely unpredictable in this series. Necessary repairs, problems of fit, etc., as well as the individual abilities of the patients and site of amputation, all contributed to extremely variable lengths of time. More accurate methods for determining the actual average training periods for the various groups and ages of amputees are now being used and will be reported in the future.

Conclusions

From the analysis of the data presented, it appears that in a prosthetic program in a general hospital such as Bellevue the following conditions will be met:

1. At least two thirds of the amputees seen will be males.
2. About 70 to 75 per cent of the lower extremity amputations will be due to peripheral arteriosclerosis with or without diabetes mellitus.
3. About 50 per cent will be unilateral, above-knee amputations and 25 per cent unilateral, below-knee amputations.
4. At least 50 per cent cannot adequately use prosthetic appliances because of age, lack of skill, severe intercurrent disease, contractures, or unreliability of the patient.
5. The ability to perform an adequate swinging-through gait on crutches is a reliable test for the skill necessary to use an above-knee prosthesis.
6. The degree of skill needed to use a below-knee prosthesis is much less than that required for an above-knee prosthesis.
7. With the proper case selection, specific prosthetic prescription to meet the individual need, proper fitting and adjustment, and adequate training, excellent results can be obtained in this type of amputee, even in the older age groups.

It is desired to express sincere appreciation to G. G. Deaver, M.D., and Earle Daniel, who are responsible for the direction of the amputee program at Bellevue Hospital.

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BLUE-EYED PERSONS FOUND MORE SUSCEPTIBLE TO CANCER CAUSED BY SUNLIGHT

Blue-eyed persons are more susceptible to cancer caused by exposure to the sun's rays than are brown-eyed persons, a study made by a Santa Monica, California, doctor shows. Racial stock apparently is an important factor in determining the amount of sunlight to which a person can be exposed safely, Dr. A. Fletcher Hall of the Graduate School of Medicine, University of Southern California, says in the *Archives of Dermatology and Syphilology*, published by the American Medical Association. Dr. Hall bases his conclusion on study of 100 persons.

"There are certain racial stocks and hereditary complexion patterns in which sunlight is not an important, if any, factor in skin carcinogenesis," Dr. Hall says. "These include certainly the Negro and Oriental races, probably the Mexican and Mediterranean, and possibly all homozygous brown-eyed persons."

EXPERIMENTAL STUDY OF A SYNTHETIC BREAST MILK FOR INFANT FEEDING FORMULA

Harry R. Litchfield, M.D., Robert Norton, M.D., and Charles Hoffman, M.D., Brooklyn, New York

(From the Department of Pediatrics, Beth-El Hospital)

EVER since Talbot's attempt to preserve human milk, which at that time was so indispensable to infant nutrition, the science of infant feeding has progressed so rapidly that babies are no longer dependent on breast milk and the majority can be reared satisfactorily without its use. The decline of milk production by mothers in recent years may itself be related to the increasing sophistication of diet, since lactation seems to be peculiarly dependent upon the intake of the B vitamins as well as of certain amino acids. Because an infant is breast fed, however, does not insure that he is always well fed. The mother's milk may be deficient in quantity, in quality, or both.

A quarter of a century ago Emerson reported excellent results in the preservation of human milk, but, unfortunately, the problem of obtaining a sufficient supply to satisfy the demand as well as other factors forced the group at the Boston Floating Hospital to discontinue the procedure.[1]

The pendulum keeps swinging back and forth from artificial to breast feeding. Artificial feeding must be considered as a substitute for breast feeding. It became established through studies based on breast feeding. Several years ago, Powers read a classic paper before the American Pediatric Society, in which he traced the historical background of artificial feeding.[2] Perhaps the two main contributions to the success of artificial feeding resulted from (1) better care of cow's milk bacteriologically (pasteurization and refrigeration) and (2) heat-treating milk to change the protein for better digestion.

The pediatrician, however, never lost sight of the fact that human milk was the ideal food for the newborn. Breast feeding will always play a leading role in problems confronting pediatricians. It requires constant work on the part of the pediatrician to teach and convince a mother that it is the proper method of nourishing the infant. This is an endless procedure. When breast milk is unavailable, however, the question arises, what formula may take its place?

Along with progress in nutrition, more consideration has been given in recent years to reconstruct a milk similar to breast milk. The problem is how near a formula to human breast milk can be constructed and at the same time have a satisfactory formula from the standpoint of food value, digestibility, and sterility.

For many years a large proportion of the country's pediatricians have been feeding infants some form of dried cow's milk. The introduction of powdered milk came largely through the report of the government of Great Britain whose extensive survey of the use of dried milk in infant feeding was favorably reported by many English authorities.[3] Soon thereafter, in our own country, the opinion was expressed that when breast feeding is impossible, dried milk may be used. Since a dry milk powder was feasible, we now advanced one step further. An attempt was made to reconstruct a dry milk powder to simulate breast milk.

Of the numerous reconstructed formulas on the market, none have all the metabolic characteristics or the same modifications characteristic of human milk. For comparison we will briefly analyze the leading reconstructed milk formulas that, on the surface, approach the chemical and metabolic characteristics of human milk.

In these formulas the fat of cow's milk is largely replaced by a mixture of vegetable fats; the protein is reduced in quantity, and in one case is partially adjusted; the lactose is usually unchanged; the minerals are reduced in quantity, and the ratio of calcium to phosphorus is approximately equalized. The fat is approximately equal in quantity and degree of dispersion to that in human milk but does not closely resemble human milk fat in fatty acid composition and chemical constants. The protein is equal in quantity to that in human milk but not in proportions of casein, lactalbumin, or amino acid composition. The amounts of calcium and phosphorus are greater than in human milk but not in the same proportions.

It is not our purpose to discuss the advantages of breast milk nor to compare it with cow's milk formulas. Rather, we wish to report our experiences of one and one-half years clinical study with the use of a powdered synthetic breast milk, Bremil.*

Composition of Bremil

Fats.—Bremil has the same amount of fat as human milk, the fat having the same metabolic characteristics as well. In human milk the fat is in a finer state of emulsion than in cow's milk. In powdered synthetic breast milk this fine state of emulsion, considered to be so desirable in breast milk, is also found. The fat of cow's milk contains much larger amounts of the esters of the volatile fatty acids, including the irritating butyric acid esters, than human milk. The fat in Bremil is almost free of these volatile fatty acids and, therefore, with respect to its fat content, has the same characteristics physically, chemically, and metabolically as breast milk. Note the similarity shown in Table 1.

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* Bremil, Powdered Infant Food, was supplied by The Borden Co., Prescription Products Division, New York City.

TABLE 1.—FAT CONTENT OF COW, HUMAN, AND SYNTHETIC BREAST MILKS

	Cow's Milk[4] (Per Cent)	Human Milk[5] (Per Cent)	Bremil (Per Cent)
Fat (total)	3.5	3.5	3.4
Volatile*	5.1	0.8	2.1
Capric	1.8	2.2	1.8
Lauric	2.5	5.5	12.0
Myristic	11.9	8.5	4.9
Palmitic	23.5	23.2	25.2
Stearic	11.6	6.9	3.8
Arachidic	1.1	1.1	1.6
Oleic	35.9	36.5	38.0
Linoleic (unsaturated)	5.3	15.3	10.6
*C_4, C_6, C_8 acids			
Iodine number	30.0	54.7	54.5
Reichert-Meisel value	28.0	2.2	3.9

Proteins.—The mean value for protein content of human milk varies from 0.78 to 2.1 per cent. The variation in individual milks must be greater. The protein of cow's milk is different from that of breast milk in that only five sixths of the protein of cow's milk is in colloidal solution, whereas two thirds of human breast milk is in true solution. In powdered synthetic breast milk, the proteins are soluble in the same degree as in human milk and are equal in nutritive value.

The proteins of human milk are casein, lactalbumin, and lactoglobulin, 60 per cent, nearly two thirds, of the total protein present being lactalbumin.

The amount of protein in human milk (1.5 per cent) is much less than in cow's milk (3.3 per cent), but the protein composition is somewhat different. Although human milk contains a higher percentage of lactalbumin than cow's milk (67 per cent as against 15 per cent), Cox *et al.* have shown that casein and lactalbumin are approximately equivalent for human nutrition.[6] Casein is somewhat deficient in the sulfur-containing amino acids and tryptophane. These deficiencies have been corrected in Bremil by the addition of methionine and niacin. The vitamin niacin and the amino acid tryptophane are closely interrelated, and one may largely replace the other in the ratio of 1:50.[7]

Amino Acids in Protein.—The amino acid content of human milk may be compared with that of cow's milk diluted one half, so as to approximate the same total protein content (Table 2).[8] It was shown by Osborne and Mendel that if tryptophane and lysine are present, animals grow normally and remain in good health.[9] These factors are amply supplied in Bremil for growth and development of the infant.

TABLE 2.—COMPARISON OF AMINO ACID CONTENT OF MILKS

Amino Acid	Cow's Milk (Gm. per Quart)	Human Milk (Gm. per Quart)	Bremil (Gm. per Quart)
Arginine	1.42	0.70	0.44
Histidine	0.86	0.38	0.31
Lysine	2.47	1.01	1.06
Tryptophane	0.58	0.27	0.29
Phenylalanine	1.88	0.83	0.76
Cystine and methionine	1.32	0.76	0.70
Threonine	1.52	0.64	0.66
Leucine and isoleucine	5.77	2.55	2.31
Valine	2.18	0.85	0.74

Carbohydrates.—An infant should receive daily not less than 1 per cent of his body weight in carbohydrate (0.15 ounce for each pound or 10 Gm. for each kilogram.)

Powdered synthetic breast milk contains the same sugar (lactose) in the same concentration as human milk.

While lactose and sucrose have the same empiric formula, $C_{12}H_{22}O_{11}$, they differ in many respects.[10] One molecule of sucrose yields two molecules of glucose on hydrolysis, but one molecule of lactose yields one molecule of glucose and one of galactose on hydrolysis. Although glucose and galactose both have the formula, $C_6H_{12}O_6$, they differ in spatial configuration. The unique spatial configuration of lactose and of its constituent, galactose, gives it unique nutritional properties.

The lower solubility and greater stability enable lactose (unlike other sugars) to pass unchanged into the intestine. There the lactose nourishes acid-producing bacteria such as Bacillus acidophilus and Bacillus bulgaricus. The lactose is oxidized by these and related organisms t lactic acid.

The acid medium produced by lactose fermentation, moreover, facilitates the absorption o utilization of dietary calcium and phosphate lactose thus acts as an antirachitic agent, as doe vitamin D, but by a different mechanism. Human milk is more antirachitic than cow's milk because it is richer in lactose.

Mineral Salts.—The various salts, with th exception of iron, are present in sufficient quantities and in proper proportions in human milk In most modifications of cow's milk there is a excess of salts, and the proportions of the variou salts are different from those in human mil The normal infant can, as a rule, thrive in spi of this excess of salts. There is no doubt, ho

TABLE 3.—Comparative Composition of Milks of Different Animals With Emphasis on Ash Content

Milk	Water	Solids	Fat	Casein	Total Nitrogen	Sugar	Ash
Human	87.58	12.42	3.74	0.80	2.01	6.37	0.3
Cow	87.80	12.20	3.40	2.70	3.40	4.70	0.7
Goat	86.30	13.70	4.00	3.60	4.60	4.30	0.8
Sheep	81.50	18.50	7.00	4.30	5.60	5.00	0.9
Rabbit (1 analysis)	69.50	30.50	10.45	...	15.54	1.95	2.56
Dog (8 analyses)	77.00	23.00	9.26	4.15	9.72	3.11	0.91
Cat	81.64	18.36	3.33	3.11	9.53	4.91	0.59
Pig	82.37	17.63	6.44	...	6.09	4.04	0.59

ever, that a part, perhaps a considerable part, of the disturbances of digestion in infants fed on modifications of cow's milk are due to the excess and abnormal relations of the salts in them. It does not seem reasonable, nevertheless, to go as far as some pediatricians and attribute all the disturbances of digestion to them. At present, however, our knowledge concerning the salts, the part which they play in normal digestion and metabolism, and the symptoms of the disturbances which they cause is so limited and incomplete that we can pay but little attention to them in the regulation of the diet either in health or in disease.

We must, however, recognize the fact that the ash content contributes greatly to the weight increase. In Table 3 it will be noted that the greater the ash content, the more rapid the gain in weight.[11] Animals, for instance, double and triple their weight, not so much on the fat, carbohydrate, and protein content, but depending on the amount of ash content in the milk.

The breast-fed infant, receiving daily 165 ml. of milk for each kilogram of body weight (2.5 ounces to the pound), or the artificially fed infant, receiving 100 or 130 ml. of cow's milk for each kilogram of body weight (1.5 to 2 ounces for each pound), is provided sufficient mineral constituents with the exception of iron and possibly iodine.

Iron-containing foods or a small amount of iron should be added to the diet of all infants after the third month of age, earlier in the case of those who are anemic. Iodine additions are indicated only in regions where goiter is prevalent.

Experience has shown that the minerals in cow's milk or in the form of mineral supplements are not as readily utilized by the human infant as are the salts in breast milk. This was confirmed by observations noted in the report of our clinical findings later in this paper. It was deemed desirable, therefore, to raise the level of minerals in Bremil considerably above those in human milk, as shown in Table 4.

TABLE 4.—Comparison of Mineral Contents of Milks

	Cow's Milk (Per Cent by Weight)	Human Milk (Per Cent by Weight)	Bremil* (Per Cent by Weight)
Total minerals (ash)	0.7	0.2	0.5
Calcium	0.12	0.034	0.103
Phosphorus	0.093	0.015	0.064
Iron	0.00024	0.00018	0.00082 (8.0 mg. iron per quart)

*One tablespoon in 2 fluid ounces of water.

Vitamins.—Vitamin A: The amount of vitamin A in customary cow's milk formulas, together with the amount ingested by an infant receiving the usual supplements, is probably ample for the well infant. The amount of vitamin A in human milk seems to be approximately the same as that in cow's milk.

Vitamin B: It seems certain that no additional riboflavin is needed by the infant fed appropriate amounts of cow's milk. It appears probable also that at least the minimum requirements of the other members of the group are met by modern standards of infant feeding. The intake of the breast-fed infant depends so much on the amount of these vitamins received by the mother that the danger of insufficiency of these vitamins may be very real in the low-income groups in which subacute or acute vitamin deficiency is prevalent among adults.

Morgan and Barry have shown that a shortage of vitamin B_1 can be a factor limiting growth of children.[12,13] Hess showed that many marasmic infants had their interest in food, and the urge to eat increased by the administration of vitamin B_1.[14] Stucky and Rose stated that the anhydremia noted in certain marasmic infants has its origin, in the last analysis, in a shortage of vitamin B_1.[15] Thus, if there is any question as to the adequacy of the intake of vitamin B during infancy, the vitamin should be administered to the newborn infant.

Vitamin D: Vitamin D should be added to the diet of all infants, beginning as soon as feeding is established. The vitamin D milks, providing 400 U.S.P. units to the quart (415 units to the liter), provide sufficient vitamin D for the healthy infant who ingests 100 ml. or more for each kilogram (1.5 ounces for each pound) of body weight or a total of 720 ml. (24 ounces) daily.

The vitamin content of Bremil is shown in Table 5.

TABLE 5.—VITAMIN CONTENT OF BREMIL

	Powder (Per Gm.)	Reliquefied (Per Fluid Ounce)	(Per Quart)
Vitamin A (U.S.P. units)	25.7	100.0	3200
Vitamin D (U.S.P. units)	6.4	25.0	800
Vitamin B_1 (mg.)	0.0032	0.0125	0.4
Vitamin B_2 (mg.)	0.0080	0.0313	1.0

The vitamins in this preparation are not only equivalent to those in human breast milk, but additional amounts have been added so that they are present in the proportions considered to be the infant's requirements for optimal nutrition.[16]

Plan of Study

Our investigations on infants fed Bremil were started in May, 1948, and continued through the fall and winter of 1949. The infants studied were newborns in the Menorah Maternity Pavilion of the Beth-El Hospital and the infants coming into the Well Baby Clinic.

The cases were not selected. All service cases in the maternity pavilion were taken and followed through the Outpatient Clinic. The newborns were in the hospital for one week or more and for six months or more in the Outpatient Department.

All infants were given 25 mg. of ascorbic acid on discharge from the hospital and fresh juices starting at the end of one month. Infants who reached the age of six weeks or beyond were given supplementary feedings, starting with cereals and juices and gradually adding egg yolk, vegetables, purees, etc. in the following months.

The method of preparation of the formula was quite simple and was explained to the mother on discharge from the hospital.

Newborn Infants

The test of any formula is in the ability of the very young to digest and thrive on it. Powdered synthetic breast milk in all dilutions is digested in the same way and at the same rate as breast milk.

In our study synthetic powdered breast milk was fed 171 newborns. Of this total, 100 infants were on the formula from May, 1948, through December, 1948. During this period some changes were made in the composition of the formula, particularly in raising the mineral content. The formula at first was 6 tablespoons of powdered synthetic breast milk to 18 ounces of boiled water. We noticed that the infants took the formula well but were not satisfied. The gain back to birth weight was slow.

After January 1, 1949, when changes in the composition of the formula were complete, we noted first that we could give this formula to the infants at approximately 20 calories to the ounce, or 1 tablespoon to 2 ounces of boiled water. The infants took almost $2^1/_2$ to 3 ounces from the second day, and the birth loss was regained usually on the fourth or fifth day. The majority were above birth weight by date of discharge (Table 6). On this latter formula we had a total of 70 cases. These were then followed up in the Outpatient Department.

Apparently the increase in the mineral content and the notable adaptability of the infant to take and retain normal breast milk caloric proportions added to rapid increase in weight.

Breast-fed infants were not weaned. In every instance where breast feedings were possible, they were strongly encouraged. Where the mother's supply was found to be inadequate or maternal nursing was inadvisable, the powdered synthetic breast milk was given. However, the digestibility of the formula was in every instance the same as that in breast-fed infants, in the retention of the feedings and the color of the stools. Powdered synthetic breast milk offers a means of protecting the infant from gastrointestinal upsets. Its ease of preparation protects the infant from upsets caused by possible errors in the preparation of the formula. Its constant composition provides a constant factor in the infant's routine; unlike other milk formulas there is no variation in its composition. The ease and completeness with which powdered synthetic breast milk is digested by the infant assures a minimum of gastric upset. The consistently zero curd tension insures short periods of digestion. Its uniformity with human milk allows its substitution for breast milk without danger of gastric upset. The volatile fatty acids in ordinary cow's milk are somewhat irritating to the infant's gastrointestinal tract. This irritation has been eliminated by the process of changing the characteristics of the fat content to those of human breast milk.

The gain in weight is usually taken as the index of the suitability of the formula, because this is influenced markedly by any disturbing factors, such as regurgitation, vomiting, or loose bowel movements.

Of the newborns fed exclusively on the powdered synthetic breast milk, 70.5 per cent regained their birth weight by the end of six and one-half days. As stated above, this was far superior to those infants who were fed solely on maternal milk or the control group fed on a formula of 6 fluid ounces of evaporated milk, 12 fluid ounces of boiled water, and 2 tablespoons carbohydrate.

TABLE 6.—AVERAGE WEIGHTS OF INFANTS FED BREMI

	Birth Weight (Pounds)	Discharge Weight (Pounds)	Net Gai (Ounces)
70 Infants	7.1	7.2	1.9
42 Males	7.3	7.4	2.4
28 Females	6.8	6.9	1.3

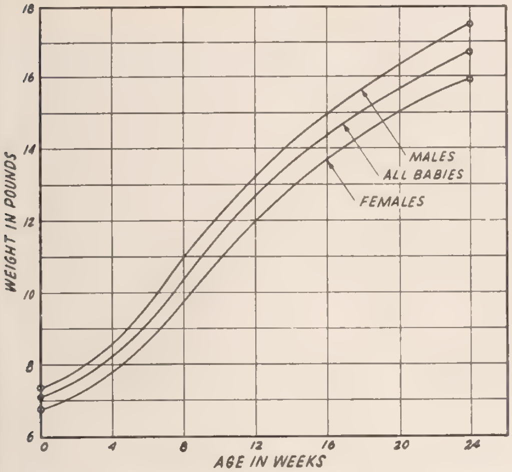

FIG. 1. Age-weight relationship of 23 male and 16 female infants fed Bremil formulas six months postpartum.

Our results showed that the powdered synthetic breast milk is readily taken. As judged by nurses and house staff, the taste is the nearest to breast milk. The formula is readily utilized, and no gastrointestinal disturbances, such as vomiting, distention, or diarrhea, were encountered. The amount of feeding in the bottle was usually drained, and apparently the infants liked the formula.

Well Baby Clinic

Powdered synthetic breast milk was fed to 38 infants in the Well Baby Clinic of the Beth-El Hospital Dispensary. The infants were considered normal, with only occasional complaints. Summary of the total number of cases with the weight and height averages is shown in Tables 7 and 8.

The majority of the infants had an excellent start, being above birth weight on discharge as indicated. Full details over a six-month period, including complete blood counts and x-rays, were obtained on most of the infants (Table 9, Figs. 1 and 2). Many cases were followed for shorter periods, and the reasons for this varied. Some dropped out of the clinic because of distance, weather, or a minor ailment. We recorded those cases which showed gastrointestinal upsets. The percentage was small and usually followed an upper respiratory infection. Routinely, the infants were continued on the following formula: 12 tablespoons of powdered synthetic breast milk to 24 ounces of boiled water. This was fed to infants weighing 6 pounds or less. This would give these infants sufficient calories for body growth and development and enough calories above the requirements for increased metabolism.

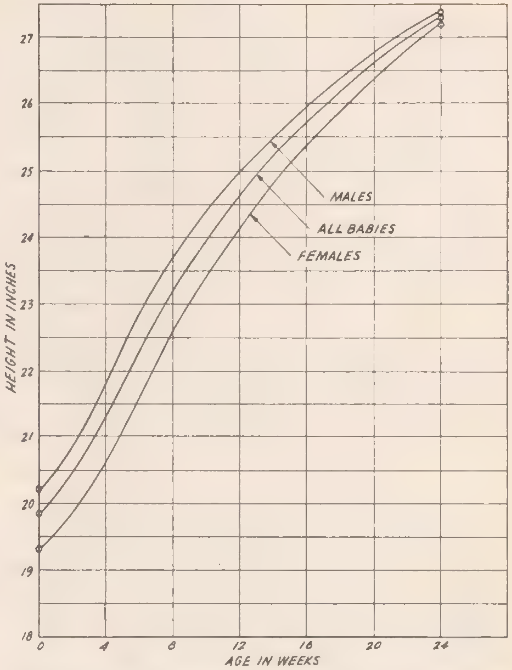

FIG. 2. Age-height relationship of 23 male and 16 female infants fed Bremil formulas six months postpartum.

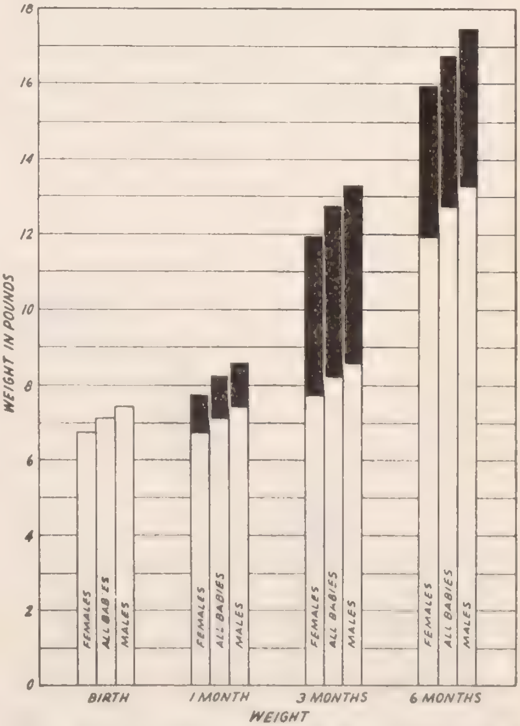

FIG. 3. Periodic increases in weight of 23 male and 16 female infants fed Bremil formulas six months postpartum.

TABLE 7.—Weight Data on Infants Fed Bremil (Average)

	Weight in Pounds				Weight Gain			
	Birth	First Month	Third Month	Sixth Month	First Month	Second to Third Months	Fourth to Sixth Months	Average per Month
39 Infants	7.2	8.3	12.7	16.8	1.1	4.5	4.0	1.6
23 Males	7.4	8.6	13.3	17.5	1.2	4.7	4.0	1.6
16 Females	6.8	7.7	12.0	15.9	1.0	4.2	3.9	1.5

TABLE 8.—Height Data on Infants Fed Bremil (Average)

	Length in Inches				Length Gain			
	Birth	First Month	Third Month	Sixth Month	First Month	Second to Third Months	Fourth to Sixth Months	Average per Month
39 Infants	19.9	21.13	24.7	27.3	1.5	3.3	2.7	1.2
23 Males	20.2	21.8	25.0	27.4	1.5	3.3	2.4	1.2
16 Females	19.3	20.7	24.1	27.2	1.4	3.4	3.2	1.3

TABLE 9.—Average of Complete Blood Counts Taken over Six-Month Period

	Red Cell Count	Hemoglobin (Per Cent)
Average of 39 Infants	3,790,000	73.7
Maximum	4,600,000	88.0
Minimum	3,000,000	60.0

To those infants who required more fluids, the formula was stepped up to 15 tablespoons of powdered synthetic breast milk to 30 ounces of boiled water. The formula could likewise be fortified by increasing the powdered synthetic breast milk to 16 or 18 tablespoons to 30 ounces of boiled water. This increased formula was all that was necessary to show a good weight gain.

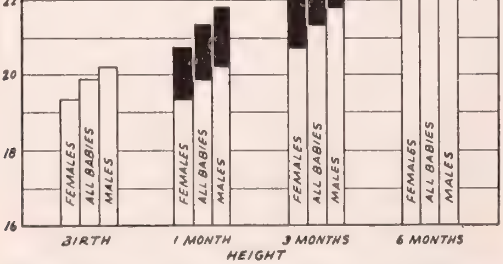

Fig. 4. Periodic increases in height of 23 male and 16 female infants fed Bremil formulas six months postpartum.

Three-month interval shows the progress made by these infants (Figs. 3 and 4). Up to the sixth month there was a sharp rise in weight comparing favorably with breast-fed or other artificially fed infants. At the end of a six-month feeding program the gain in weight was 1.6 pounds per month. The height is comparable to, if not better than, infants fed other formulas as gauged by usual standards.

It is thus evident that infants on powdered synthetic breast milk showed good weight and height gains during their visits to our outpatient Well Baby Clinic. Weights in many instances were better than the average. The mothers stated that the infants took their formula well, and it was very well liked.

Since the daily requirements of all vitamins were present in the formula, no additional vitamins were added except vitamin C, as indicated previously.

Periodic x-ray and blood examinations on the majority of the infants were taken for nine months (Table 9). X-ray studies of 36 infants were made. One showed an absence of epiphysis of radius in two x-ray studies. Another infant revealed absence of radial epiphysis as well as underlying rickets. On repeat there was no evidence of rickets. The remaining x-ray studies were all normal.

Thirty-nine hemoglobin tests were made. The average color index was 73.7 per cent. The highest was 88 per cent and the lowest 60 per cent. Out of 39 infants, 37 showed no pathologic conditions. One revealed an enlarged thymus and another an umbilical hernia.

All the infants had good bowel movements. Surprisingly few ever developed any diarrhea unless there was a parenteral infection present.

During the heat spell in 1948, and in 1949, none developed diarrhea. The stools were soft, yellow, pasty. The first few weeks there were three to five movements daily, as in breast feeding, later tapering off to three daily of a darker color (yellowish-brown).

Summary

An unselected group of 171 newborn infants was fed a powdered synthetic breast milk (Bremil). Birth weight was regained in most instances before the sixth day.

Thirty-nine infants were fed Bremil up to six months of age. These infants had remarkably few upsets even when high caloric feedings were given. Complete blood counts, x-rays, and weight and growth charts showed the formula to be excellent in all respects and to give unusually good results.

Conclusions

1. The growth curves of unselected infants fed exclusively on powdered synthetic breast milk from birth closely resemble and sometimes better those of the average breast milk infants.

2. The infants are far less liable to suffer any gastrointestinal upsets than babies fed on ordinary cow's milk or other reconstructed milk formula—even less liable than purely breast-fed infants who are affected by the mother's daily emotional or physical upsets and diet.

3. Composition of powdered synthetic breast milk is close to human milk, as reflected in digestibility, uniformity of taste, and sterility.

4. A greater number of newborn infants regain their birth weight, some even on the fourth day.

5. Clinical, x-ray, and laboratory evidence proves conclusively that the infants progress normally and that no deficiencies develop during the time of the powdered synthetic breast milk feeding.

6. The stools were soft, yellow, without curds, well digested, averaging three to five daily up to three or four months, then one to three daily.

7. Powdered synthetic breast milk is advocated for continued use up to the first year, or longer if desired, and there are no nutritional disturbances.

8. Bremil is a complete infant food and as such can be used with confidence as either part or all of the food supplied to the normal healthy infant. He will develop normally.

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DAILY OFFICE WORK MAY CAUSE NECK RIGIDITY AND HEADACHE

Office work literally gives a pain in the neck to some typists and bookkeepers, according to a Chicago eye, ear, nose, and throat specialist. "Numerous headaches are due to prolonged contraction of the neck muscles," says Dr. Noah D. Fabricant in the June issue of *Today's Health*.

"Some people's daily work causes an accumulation of pain-producing substances in the muscles of the neck and back," Dr. Fabricant continues. "A person forced to hold his head rigidly in a particular position may get a headache. Bookkeepers, typists, proofreaders, and dressmakers are especially susceptible to this type. They often find comfort in sitting with the head forward, chin in hands.

"Treatment for rigid, hypertonic neck muscles consists mainly of heat and massage. Heat can be applied at home in the form of an electric pad, a hot-water bottle or hot towels, or from an electric bulb with a reflector or an infrared lamp. Obviously, one must be careful not to burn the skin.

"Physical therapy in all forms must be applied skilfully; otherwise it can do more harm than good."

Case Report

IMMEDIATE TENDON REPAIR WITH FASCIA LATA TRANSFERENCE IN A COMPOUND FRACTURE TREATED WITH AUREOMYCIN

Frank Richard Cole, M.D., Flushing, New York

(*From the Harlem Hospital*)

TENDON repairs complicated by compound fractures have always called for secondary repair, especially when the wound was contaminated. Mason among others has emphasized that primary repair gives a more favorable prognosis.[1,2] This premise must be carefully evaluated in tendon repair, taking into consideration the contamination of the wound and associated injuries.

Since the introduction of aureomycin, a revolutionary change has taken place in the conception of many of our technics of surgery. This is seen in bowel surgery as well as in bone cases. In many clinics the evaluation of primary plating of fractures with the newer antibiotics is taking place. Aureomycin is effective in many gram-positive as well as gram-negative bacteria. With this in mind, the following case is reported.

Case Report

R. F., age forty-one, was admitted to the Horace Harding Hospital in Forest Hills with a lacerated left index finger. The history in brief was that, while he was jacking up the front right wheel, the car rolled back, and the jack imprisoned his finger against the headlight, broke the latter, lacerated his finger, and still pinned it down. The patient jerked his finger out when help was not forthcoming. This tore the entire extensor surface of the finger to the metacarpal phalangeal junction.

In the operating room, after adequate cleansing of the finger of grease and oil and under general anesthesia, a complete examination was possible. It was found that the patient suffered a compound fracture of the distal phalanx just above the joint. The entire tendon was avulsed up to the metacarpophalangeal joint. Although the patient was operated on within four hours after injury and with the experience of aureomycin aid in other bone cases, it was decided to perform a tendon plastic operation. This was in order, since not only the lateral slips of the tendon distally were gone, but there was a gap in the dorsal aponeurosis over the proximal interphalangeal joint.

A strip of fascia lata was secured. This was folded over so that no raw surface presented. A thin covering of fat tissue was inserted anteriorly. This was done so that a gliding surface would be present. After the method of Koch, a small perforation was drilled transversely, the fascia lata inserted, and then sutured dorsally end-to-side with interrupted fine silk sutures. This gave a very secure hold to the distal phalanx. The distal part of the graft was united to the tendon of the extensor digitorum indicis proprius. An annular ligament was bridged across with the graft over the middle and proximal phalanx with fine black silk sutures. After the surgery a plaster splint was applied to keep the finger in extension. The patient was given aureomycin, 600 mg. per day.

At the end of two weeks the splint was removed; in two and one-half weeks active motion was started. At present, four months after injury, it can be reported that the wound healed per primum. There is almost full extension and flexion of the index finger. The terminal phalanx has about 175 degrees extension, but in flexion it touches the proximal volar crease. The patient has returned to his usual employment, which is that of a cutter.

Comment

This case is interesting from the following points:

1. A tendon plastic procedure was done at primary operation in a wound complicating a dirty compound fracture.
2. Primary healing resulted with the use of aureomycin.
3. A free fascia lata transfer, folded and leaving an anterior thin layer of fat which is most important for a gliding surface, was used.

144–21 Sanford Avenue

References

1. Mason, M. S.: Surg., Gynec. & Obst. **70**: 393 (1940).
2. *Ibid.* **62**: 449 (Feb.) 1936.

Special Article

WHAT ABOUT BLINDNESS IN OUR STATE?

Prevention of Blindness Service, Commission for the Blind,
New York State Department of Social Welfare,
New York City

[The Commission for the Blind of the State Department of Social Welfare of the State of New York here presents the latest facts and figures relating to a three-year study of blindness in this State, ended in 1948.

We believe the importance of this study to be such that we are pleased to present the entire report for the information and guidance of our membership.—Editor]

Who Are the Blind?

Are they men or women; are they old or young? What causes their blindness? Is it a result of accident, disease, or injury at birth? Are they employed or unemployed? Are they married, do they have families, or are they single? Are they planning their lives with an adjustment to their handicap? What do they do, and what are their attainments? These questions and many more are asked from time to time.

Study of 5,051 Cases

An analysis of 5,051 cases answers some of these questions which the layman presents. Adequate eye reports for this group were received at the New York State Commission for the Blind during the years 1946, 1947, and 1948. The records represent names of blind persons newly referred to the Commission.

Reporting of Blindness

It is the legal responsibility of the Commission for the Blind to maintain a register of the blind in the State. An amendment to the law, mandating the reporting of blindness, became effective in 1946. Thus, it is the duty of every health and social agency, attending or consulting physician, or nurse to report to the State Commission for the Blind the names of all blind persons. This amendment strengthens the function of the Commission, yet, since the law carries no penalty for failure to execute, it is reasonable to suppose that not all of the blind are even now being reported.

Definition of Blindness

One must realize, first, that blindness in this State does not necessarily constitute a total loss of sight. The law defines the condition as "20/200 with correction in the better eye or where loss of vision is due wholly or in part to impairment of field vision." For instance, a person with defective sight in both eyes is considered blind when his better eye cannot be improved with glasses to more than 20/200 visual acuity. The second part of the definition of blindness refers to "impairment of field vision." As an example, central visual acuity may be normal, or in any event not reduced to 20/200 (the point of legal blindness), but side or peripheral sight may be lacking. The loss of peripheral vision may be slight, or it may include practically all of the field of vision so that the amount of visual acuity which remains is central only. When this occurs, vision is said to be tubular or telescopic. With New York State's definition of blindness made clear, the question arises: How many persons are totally blind, and how many have residual vision which may aid in their rehabilitation?

The register of the blind at the close of 1948 contained 18,309 names. This figure included 5,051 names for which adequate eye reports were obtained during the years 1946, 1947, and 1948. These were isolated for review because complete medical information was available for a unit of study.

Where Do the Blind Live?

The ratio of blindness to the sighted population reported in upstate New York was seen to be two persons to every 10,000, whereas in Greater New York four cases were found in every 10,000 of sighted population. This points to a higher proportion of blindness in the metropolitan area. It must be remembered, however, that the availability of eye clinics in Greater New York may lead to more complete reporting of blindness.

We found that only 450, or 9 per cent, live in rural areas. The reason for this is not known. It is an accepted fact, though, that life in the country is less wearing than life in the city. Those living in the wide open spaces are not called upon as frequently as urban dwellers to apply their eyes to close, detailed work. Out-of-door interests consume their time. Since close use of the eyes is not involved in these pursuits, they may be either unaware of, or not troubled by, a decreasing ability to see small, fine objects clearly.

The very existence of the city resident, on the contrary, is linked with the need for sharp sight. His life is attuned to the printed word, which requires quick, ready vision. To earn his living, the urbanite finds that good sight pays. The pace of city living demands split-second reaction. Keen visual discrimination is needed, else time and money are lost. Hence, the man in the city strives constantly to keep his physical condition up to par. With medical facilities easily at hand, he finds it relatively simple to secure medical attention. This contrast seems to be one of the fundamental reasons for the greater amount of known blindness among the urban population.

Age Groups of the Blind

Blindness is no respecter of age. Although it is not common to childhood, blindness can and does occur at birth and throughout life.

During the period of this three-year study, 236 blind children under seven years were reported to the Commission for the Blind. Between seven and seventeen years of age the incidence of loss of sight fell off considerably; only 163 cases were reported for this age group. A gradual increase in blindness was shown during the older years, yet nearly half of all cases reported were sixty-five years of age or older at the time of referral.

The fact that 236 children from birth to seven years were blind seems to indicate a rise in congenital eye conditions. Increase in the rate of blindness after seventeen years of age may be accounted for by industrial accidents. Likewise, a part of this group were veterans of World War II. After fifty years of age, when most blindness occurs, the degenerative diseases were responsible for much loss of sight.

Sex Incidence

Blindness almost paralleled the sexes. Among the total number of cases studied, there was only a slight difference between male and female. Yet a careful scrutiny of the records brought out the fact that females retained their vision to an older age than males.

In infancy and childhood, blindness among boys exceeded that of girls by 39 per cent. It is not possible to account for the greater amount of blindness in male infants. As these male infants grow into childhood and adolescence, however, the hazardous types of boyish play in which they take part may involve eye accidents with a consequent loss of vision. Throughout the early years girls, on the contrary, are more sheltered. During the height of the employable years, blindness was seen oftener in males where it exceeded females by 20 per cent. At this time in life men are exposed to the dangerous experiences of life, whereas women seldom face the same risks. We find, though, that blindness dominated in women who were over the sixty-five-year group. This is understandable. Their span of life exceeds that of men, and the degenerative processes of old age, which assert themselves in these years, are frequently accompanied by loss of sight.

Diagnosis and Causes of Blindness

Among the eye diagnoses causing blindness, cataract ranked highest. Diseases of the choroid and retina were the next heaviest contributors, followed closely by glaucoma.

In the 5,051 cases studied, cataracts were responsible for loss of sight in 1,220 people. This condition, found primarily among older people, is a clouding of the lens, rather than a growth as many people are prone to think of it. Yet the disease can be found in any age where degenerative processes have taken place, even though the person is not actually of advanced years.

The figures showed a sharp increase in the incidence of cataract after seventeen years of age, with the development of 1,031 cases after fifty years of age. For the majority of cataracts, amounting to 955 cases, the causative factor was not known. General disease, said to be responsible for 133 cases, stood first among the known causes of cataract.

Diseases of the choroid and retina, the second highest cause of blindness, affect the internal, sensitive structures of the eye. Of the 1,177 cases, falling largely within the age group of forty to sixty years, 568 were due to general diseases. Among those whose visual loss was due to glaucoma, 490 women were affected in contrast to 428 men. The study confirmed the fact that glaucoma is a disease of middle life. It was found in only 86 persons under fifty years of age, which leaves approximately 90 per cent of all glaucoma reported in the older age group.

Retrolental fibroplasia must be mentioned, since its incidence is increasing. In New York State, 54 cases were reported during the given three-year period. This disease, common to premature infants, is an important cause of blindness. Today many research projects are being conducted in an effort to find its cause and thereby its prevention.

Since we know that the well-being of the eye is associated with the state of general health, it is essential to mention the causative agents of the 5,051 cases of blindness studied. In over half of the cases reported they were medically undetermined. Prenatal factors, including those of hereditary and prenatal origin, were stated in 556 instances. Diabetes, still a great offender, was the cause of 443 cases of blindness. Infectious diseases, such as meningitis, septicemia, and syphilis, proved to be among the lesser causes. Only 377 cases were attributed to these infections. Accidents, too, were found to be in the minority as causes of blindness; only 199 cases were reported as the result of trauma during this three-year period. It must be remembered that an injury to only one eye is not necessarily referred to the Commission for the Blind. Hence, obviously, all of the eye accidents are not included in this study.

Marital Status

Figures on marital status were incomplete. From the information received, we know that only 21 per cent of the blind were single; 32 per cent were married or had been married at some time. The status of the remaining 36 per cent was unknown. Of the 809 who have lost their spouse, it is interesting to note that 70 per cent of the survivors were females.

Are the Blind Employed?

In analyzing employability of the blind, all those under eighteen and over sixty-five years of age were considered as not eligible for employment. This shows that about 650 people were actually employable. Of this number 171 were employed. As one would suspect, males constituted about 80 per cent of the employed. The 489 blind people who would be classed as unemployed no doubt include a large number of housewives not seeking work opportunities.

Other Handicaps

About 36 per cent of the blind were additionally handicapped. We found 499 people confined to mental institutions, 135 reported as having a hearing disability, nine a speech defect, and 1,217 were known to have physical disorders.

Blindness in Old Age

It is an accepted fact that the life span is now longer than ever before. With old age comes degeneration, not only in the body but also in the eyes. Among the aged, senile cataracts present a definite problem. Added to visual impairment is the dread and fear of operative measures. Contrary to popular opinion, the surgical removal of a cataract should not be rejected solely on the basis of advanced years. Sight has been restored to countless persons who have followed ophthalmologic advice and have undergone this type of operation. Nevertheless, one must remember that surgery cannot improve every case. Systemic factors, as well as eye complications, must be considered in determining operative risks.

Comment

Blindness, as shown in this survey, occurs in all ages and in all walks of life. Even so, it need not be an unsurmountable barrier. It is true that special services may be required in adjustment to the handicap, yet with only certain restrictions the blind can lead normal, useful lives and take their places as valued members of society.

205 East 42nd Street

ANTIHISTAMINIC DRUGS FAIL AS COLD CURES

There is no indication that two antihistaminic drugs taken at the first sign of a cold have any important effect on the duration or severity of the common cold, according to Drs. Donald W. Cowan and Harold S. Diehl, of the University of Minnesota, in the June 3 issue of the *Journal of the A.M.A.*

The drugs are phenindamine and tripelennamine hydrochloride. The latter was used in one of the earliest studies in which antihistaminic drugs were reported to be effective against the common cold.

"The subjects were University of Minnesota students who volunteered to join the group because they were especially susceptible to colds and because colds constituted a real problem to them," the doctors say.

"We received many enthusiastic reports from the subjects of the cold study. However, some of the most glowing testimonials came from members of the control group."

"On enrollment, each subject was asked to fill out a questionnaire. Then, after a brief discussion, he was given a box of medicine with written instructions to take one dose at the first symptoms of a cold and to repeat the dose every four hours until the cold was definitely 'cured' or until the medicine (10 doses) was used.

"The medicaments were given out in strict rotation to the students as they enrolled, as follows:

"1. Placebo (citric acid to simulate the taste of ascorbic acid, lactose, cornstarch, sugar, talc, and stearic acid).

"2. Ascorbic acid plus the binders and fillers mentioned.

"3. Phenindamine tartrate plus citric acid, lactose, and binders.

"4. Ascorbic acid plus phenindamine tartrate plus binders.

"5. Tripelennamine hydrochloride plus citric acid and binders in special large white tablets to look like the others.

"Each subject was instructed to return for more of his medicament whenever needed so that it would always be available for the early treatment of any cold that might occur.

"Of the 430 subjects enrolled, the records of 367 were used in tabulating the final results." (Sixty-three of the students were dropped because they were suffering from allergies rather than from the common cold, had no colds, failed to send in their reports, etc.).

Results were based on both the students' and the doctors' opinions as to the severity and duration of symptoms.

"None of these comparisons indicates that any of the experimental groups fared better than the control group," the doctors say.

FORTY-FOURTH ANNUAL MEETINGS
# of the
DISTRICT BRANCHES
# of the
MEDICAL SOCIETY OF THE STATE OF NEW YORK

PROGRAMS

FIFTH DISTRICT BRANCH

Tuesday, September 12, 1950
State University College of Medicine
and
Hotel Syracuse
Syracuse, New York

Morning Session

10:30 A.M.—*Medical, in Auditorium*—**Paul Bunn, M.D.**, *presiding*

1. Clinical x-ray conference, **Clayton Hale, M.D.**
2. "Purpura in Pregnancy and in the Newborn," **Richard Greene, M.D., William Waters, M.D.,** and **Eugene Lozner, M.D.**
3. "Cardiac Arrhythmias," **John L. Ayer, M.D.**
4. "Status Asthmaticus," **William Woodin, M.D.**
5. "Oral Penicillin," **Charles Adair, M.D.**, and **Paul Bunn, M.D.**

10:30 A.M.—*Surgical, in room 116*—**Arthur Raffl, M.D.**, *presiding*

1. "The Bone Bank," **Horton L. Murray, M.D.**
2. "Acute Pancreatitis," **William J. Michaels, M.D.**
3. "The Management of Acute Bleeding Peptic Ulcer," **Robert O. Gregg, M.D.**
4. "The Tumor Clinic," **Walter Wiggins, M.D.**

12:30 P.M.— Buffet luncheon, marquee on the lawn.

Afternoon Session

2:00 P.M.—**Wardner D. Ayer, M.D.**, *presiding*

Greetings

Carlton F. Potter, M.D., president, Onondaga County Medical Society

Herman G. Weiskotten, M.D., dean, School of Medicine

Panel on European Medicine

Richard H. Lyons, M.D., professor of medicine; **Richard S. Farr, M.D.**, professor of orthopedics; **Harold H. Joy, M.D.**, professor of ophthalmology, recently returned from special continental missions

"Facts and Fancies in the Treatment of Psychoses"

Robert C. Hunt, M.D., director, St. Lawrence State Hospital, Ogdensburg

"Abuses of the Compensation Law"

John F. Kelley, M.D., Utica, chairman, Malpractice Insurance and Defense Board, Medical Society of the State of New York

"The Shibboleth of Modern Treatment"

Isidore Snapper, M.D., New York City, clinical professor of medicine, Columbia University College of Physicians and Surgeons

"Ductus Arteriosus"—A Case Report

Walter F. Bugden, M.D., associate professor of thoracic surgery

Evening Session

5:45 P.M.—Social hour
6:30 P.M.—Dinner, Grand Ballroom, Hotel Syracuse
Address by **Carlton E. Wertz, M.D.,** Buffalo, president, Medical Society of the State of New York
Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York
"Some of the Advances of Surgery Today"
Frank H. Lahey, M.D., chief, Lahey Clinic, Boston, Massachusetts

Ladies will join the members of the district branch for dinner.

The executive committee of the Fifth District Branch will donate a prize of $25 to that woman's county auxiliary from which county there is the largest percentage of physicians registered at this meeting (not including the home county).

Officers—Fifth District Branch

President	Wardner D. Ayer, M.D., Syracuse
First Vice-President	Arthur F. Gaffney, M.D., Clinton
Second Vice-President	Richard B. Cuthbert, Jr., M.D., Canastota
Secretary	Donald C. Tulloch, M.D., Ogdensburg
Treasurer	Olin J. Mowry, M.D., Oswego

Presidents of Component County Societies

Herkimer	Ernest Enzien, M.D., Frankfort
Jefferson	Carl B. Alden, M.D., Adams
Lewis	Elbert Dalton, M.D., Beaver Falls
Madison	Lee S. Preston, M.D., Oneida
Oneida	John F. Kelley, M.D., Utica
Onondaga	Carlton F. Potter, M.D., Syracuse
Oswego	Umbert Cimildoro, M.D., Oswego
St. Lawrence	Abram D. Burr, M.D., Gouverneur

SEVENTH DISTRICT BRANCH

Thursday, September 14, 1950
Clifton Springs Sanitarium and Clinic
Clifton Springs, New York

Afternoon Session

1:30 P.M.—"The Pneumonias"
Hobart A. Reimann, M.D., professor of medicine, Jefferson Medical College, Philadelphia, Pennsylvania

2:10 P.M.—"Neuropsychiatric Problems of the Older Age Group"
David C. Wilson, M.D., professor of psychiatry and neurology, University of Virginia Medical College, Charlottesville, Virginia

2:50 P.M.—"Identification and Prevention of Influenza"
Thomas Francis, Jr., M.D., chairman, Department of Epidemiology, University of Michigan Medical School, Ann Arbor, Michigan

3:30 P.M.—Intermission

3:40 P.M.—"Differential Diagnosis of Acute Abdomen"
Philip Thorek, M.D., clinical assistant professor of surgery, University of Illinois, College of Medicine, Chicago

4:20 P.M.—"Surgical Problems of the Abdomen in the Newborn and Infant"
Grover C. Penberthy, M.D., professor of clinical surgery, Wayne University College of Medicine, Detroit, Michigan

4:40 P.M.—Question and answer period

5:20 P.M.—Business meeting

5:45 P.M.—Social hour

Evening Session

7:00 P.M.—Dinner
Introduction of officers of the Medical Society of the State of New York
Address by **J. Stanley Kenney, M.D.,** New York City, president-elect, Medical Society of the State of New York
Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York

Ladies will join the members of the district branch for dinner.

Officers—Seventh District Branch

President	George H. Gage, M.D., Rochester
First Vice-President	Samuel A. Munford, M.D., Clifton Springs
Second Vice-President	Glenn C. Hatch, M.D., Penn Yan
Secretary	James J. Yanick, M.D., Hornell
Treasurer	Everet H. Wood, M.D., Auburn

Presidents of Component County Societies

Cayuga	Augustus B. Chidester, M.D., Auburn
Livingston	Anderson V. Vickers, M.D., Mount Morris
Monroe	John L. Norris, M.D., Rochester
Ontario	Claude C. Williamson, M.D., Gorham
Seneca	Kenneth Keill, M.D., Willard
Steuben	Maynard W. Gurnsey, M.D., Corning
Wayne	George W. Pasco, M.D., Wolcott
Yates	William G. Roberts, M.D., Penn Yan

FOURTH DISTRICT BRANCH

Wednesday, September 27, 1950
Mary McClellan Hospital
Cambridge, New York

Afternoon Session

2:00 P.M.—"A Clinical Review of 300 Gallbladder Operations"
Howard H. Romack, M.D., Cambridge

"What a Physician Should Know About Legislation"
Honorable L. Judson Morhouse, assemblyman, Essex County

"Recent Advances in Antibacterial Therapy"
Paul A. Bunn, M.D., associate professor of medicine, State University College of Medicine, Syracuse

Business meeting—election of officers

Evening Session

5:30 P.M.—Social hour—Hotel Cambridge

6:30 P.M.—Dinner

Introduction of officers of the Medical Society of the State of New York and of the Fourth District Branch

Address by **J. Stanley Kenney, M.D.,** New York City, president-elect, Medical Society of the State of New York

Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York

Officers—Fourth District Branch

President	Joseph A. Geis, M.D., Lake Placid
First Vice-President	William E. Gazeley, M.D., Schenectady
Second Vice-President	J. Frederick Sarno, M.D., Johnstown
Secretary	Alfred A. Hartmann, M.D., Malone
Treasurer	Walter S. McClennan, M.D., Saratoga Springs

Presidents of Component County Societies

Clinton	Leonard J. Schiff, M.D., Plattsburg
Essex	Bartholomew H. Ring, M.D., Lake Placid
Franklin	Carter R. Morse, M.D., Tupper Lake
Fulton	John H. Larrabee, M.D., Johnstown
Montgomery	Adam A. Kindar, M.D., Amsterdam
Saratoga	Robert S. Hayden, M.D., Saratoga Springs
Schenectady	William M. Mallia, M.D., Schenectady
Warren	John E. Cunningham, M.D., Warrensburg
Washington	Joseph Feingold, M.D., Fort Edward

THIRD DISTRICT BRANCH

Thursday, September 28, 1950
General Worth Hotel
Hudson, New York

Morning Session

9:00 A.M.— Registration

9:45 A.M.— "The Role of the Physician in High School Athletic Injuries"
Mr. Lawrence Grimes, executive secretary, New York State High School Athletic Protection Plan

10:00 A.M.— Clinical presentation by staff of Hudson City Hospital

12:00 NOON—Business meeting—election of officers

Afternoon Session

1:00 P.M.—Luncheon

Introduction of officers of the Medical Society of the State of New York

Address by **Carlton E. Wertz, M.D.,** Buffalo, president, Medical Society of the State of New York

Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York

2:30 P.M.—"Pneumoperitoneum in the Treatment of Pulmonary Tuberculosis"
Isadore D. Bobrowitz, M.D., medical superintendent, Municipal Sanatorium, Otisville

Discussion to be opened by **G. Emerson Learn, M.D.,** roentgenologist, Mount Morris Tuberculosis Hospital, Mount Morris

[Continued on page 2082]

"us doctors agree Eskadiazine tastes better"

Patients of all ages take Eskadiazine willingly—it is so good tasting, so light, so easy to swallow. Furthermore, Eskadiazine *acts faster* because it contains—instead of ordinary sulfadiazine—S.K.F.'s microcrystalline sulfadiazine in a stabilized suspension. With Eskadiazine desired serum levels may be attained 3 to 5 times more rapidly than with sulfadiazine in tablet form. No wonder Eskadiazine stands above all fluid sulfadiazine preparations available today.

Each 5 cc. (one teaspoonful) contains 0.5 Gm. (7.7 gr.) of sulfadiazine—the dosage equivalent of the standard half-gram sulfadiazine tablet.

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The outstandingly palatable fluid sulfadiazine

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[Continued from page 2080]

3:20 P.M.—"The Early Diagnosis of Carcinoma of the Gastrointestinal Tract"

D. Dexter Davis, M.D., attending surgeon, Putnam Memorial Hospital, Bennington, Vermont

Discussion to be opened by **John L. Edwards, M.D.,** Hudson City Hospital

4:10 P.M.—"The Use of Cortisone, ACTH, and Other Steroids in Rheumatic Disease"

Joseph J. Bunim, M.D., Brooklyn, associate professor of clinical medicine, New York University College of Medicine

Discussion to be opened by **Richard T. Beebe, M.D.,** professor of medicine, Albany Medical College

Ladies will join the members of the district branch for luncheon.

Officers—Third District Branch

President	Harry Golembe, M.D., Liberty
First Vice-President	William C. Rausch M.D., Albany
Second Vice-President	John H. Wadsworth, M.D., Cobleskill
Secretary	Donald R. Lyon, M.D., Middleburg
Treasurer	William M. Rapp, M.D., Catskill

Presidents of Component County Societies

Albany	Thomas J. O'Donnell, M.D., Albany
Columbia	Oscar Wilcox, Jr., M.D., Chatham
Greene	Marion K. Colle, M.D., Catskill
Rensselaer	George F. Reed, M.D., Troy
Schoharie	Franz Konta, M.D., Richmondville
Sullivan	Louis Launer, M.D., Liberty
Ulster	Saul Ritchie, M.D., Kingston

A.M.A. COUNCILS GIVE RECOMMENDATIONS FOR IMPROVING NUTRITION OF WORKERS

A three-point program for improving nutrition of industrial workers is recommended to industry by the American Medical Association's Council on Foods and Nutrition and the Council on Industrial Health.

The program includes:

1. Use of plant facilities to make available foods well selected and prepared in the light of modern nutritional knowledge.
2. Support of nutrition research.
3. Campaigns to teach how to select a good diet.

These measures, the councils point out in an article in *Archives of Industrial Hygiene and Occupational Medicine*, published by the A.M.A., are superior to indiscriminate, mass administration of vitamins, a "practice which supports the commercial exploitation rather than the scientific, rational use of these important dietary factors."

Such mass administration of vitamins is unwise nutritionally because special vitamin preparations cannot take the place of valuable natural foods in achieving the completely satisfactory nutritive state, the councils say, adding:

"Concerns that are interested enough to consider spending large sums of money just to buy vitamin pills for their employes could render a valuable service to their industry and section of the country if they would use this money to support research on this question in their plants.

"Numerous suggestions can be offered for constructive action that business executives might take now in relation to this question pending the completion of the researches just mentioned.

"Industrial plants might assist more than they do in the educational work that must be done. They might be used for the display of posters and the distribution of literature that teach how to select a good diet. Organizations of employes could well be enlisted in a campaign to educate the individual workers in such matters, and through them their wives could be encouraged to attend the various nutrition classes established in the communities throughout the land.

"The use in the plant of machines that dispense bottles of milk could be studied to determine its value for the plant in question. Through health department officials the management of any plant may readily secure advice and assistance in improving the general nutrition of workers."

For Safe Symptomatic Relief During the "*Late*" Hay Fever Season

There are good reasons why many allergists consider "late" hay fever a more serious threat than the Spring and Summer types of seasonal allergy: ragweed pollens cause a greater incidence of hay fever than all other pollens combined; more pollens are in the air during the ragweed season than at any other time; and since "the United States is the favorite habitat of ragweed, it has the dubious distinction of harboring more hay fever victims than all the rest of the world together."[1]

Fortunately, more and more patients each year are enjoying the therapeutic benefits of Neo-Antergan® Maleate. Because of its safe and strikingly effective action in relieving the distressing symptoms of allergy, Neo-Antergan has become a favorite antihistaminic with physicians and patients—*in every season of the year.*

Neo-Antergan is advertised exclusively to the medical profession. Your patients can secure its benefits *only through your prescription.*

Neo-Antergan Maleate is stocked by your local pharmacy in 25 mg. and 50 mg. tablets. Complete information concerning its clinical use will be sent on request.

[1] Cooke, R. A.: *Allergy in Theory and Practice.* Philadelphia: W. B. Saunders Company, 1947, p. 186

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COUNCIL ACCEPTED

NECROLOGY

Clarence Charles Burlingame, M.D., of New York City and Hartford, Connecticut, died July 22 in Leicester, England, at the age of sixty-four. He had gone to England to attend the annual meeting of the Royal Medico-Psychological Association. Dr. Burlingame received his medical degree from the Illinois General Medical College in Chicago in 1908. He had served as assistant physician, medical director, and psychiatrist at the Westboro, Massachusetts, State Hospital; the Fergus Falls, Minnesota, State Hospital, and an industrial firm in Manchester, Connecticut, respectively. During World War I he served in the U.S. Army Medical Corps.

From 1921 to 1928, Dr. Burlingame was executive officer of the administrative board of Columbia-Presbyterian Medical Center, New York City, and from 1923 to 1925, he was executive vice-president of Presbyterian Hospital. In 1931 he became psychiatrist-in-chief of the Institute of Living at Hartford, Connecticut. Dr. Burlingame was also associate psychiatrist at the Vanderbilt Clinic, New York City, and consulting psychiatrist at St. Francis Hospital, Hartford; Charlotte Hungerford Hospital, Torrington, and St. Raphael Hospital, New Haven, Connecticut.

Dr. Burlingame was a Diplomate of the American Board of Psychiatry and Neurology and a Fellow of the American College of Physicians. He was a member of the New England Psychiatry Society, the American Psychiatric Association, the Society for Research in Nervous and Mental Diseases, the New York Academy of Medicine, the New York Society for Clinical Psychiatry, the New York Neurological Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Volkert Lincoln Getman, M.D., of Gloversville, died on July 20 at his home at the age of eighty-four. Dr. Getman received his medical degree from the New York Homeopathic Medical School in 1904 and practiced in Oneonta before opening his practice in Gloversville in 1909. He retired a year ago because of ill health. Dr. Getman was a member of the Fulton County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Edward Golding, M.D., of Setauket and Brooklyn, died on July 27 at his home in Setauket at the age of seventy-two. Dr. Golding received his medical degree from the New York University and Bellevue Hospital Medical School in 1903 and did postgraduate work in ophthalmology after opening his practice in Brooklyn. Dr. Golding was consulting surgeon in ophthalmology at the Lutheran, Greenpoint, and St. Catherine's Hospitals, all in Brooklyn, and was senior surgeon in ophthalmology at the Brooklyn Eye and Ear Hospital. During World War I he served as a captain in the U.S. Army Medical Corps.

A Diplomate of the American Board of Ophthalmology and a Fellow of the American College of Surgeons, Dr. Golding was a founder and first president of the Brooklyn Ophthalmological Society and a member of the American Academy of Ophthalmology and Otolaryngology, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Lewis Wade Heizer, M.D., formerly of Watertown, died on July 30 in Cincinnati, Ohio, at the age of sixty-five. Dr. Heizer received his medical degree from the Ohio-Miami Medical College of the University of Cincinnati in 1910 and interned at Christ Hospital in Cincinnati. He was chief medical inspector of the Cincinnati public school system until 1929, when he was appointed supervisor of health and physical education in the Watertown public school system. Until his retirement last year, he was medical director of the city's public schools. Dr. Heizer was a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Edgar Walter La Fontaine, M. D., of Watertown, died on July 18 at his home at the age of seventy-nine. Dr. La Fontaine received his medical degree from Trinity Medical College in Toronto, Canada, in 1900. Dr. La Fontaine started his practice in Dexter in 1900, moved to Smithville in 1901, and in 1920 moved to Watertown, where he had remained for the past thirty years. In May, Dr. La Fontaine was honored by the Medical Society of the State of New York for the completion of fifty years of practice.

An associate on the staff of the Mercy Hospital, Watertown, Dr. La Fontaine was a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Walter A. Leonard, M.D., of Cambridge, died on July 18 at his home at the age of seventy-seven. Dr. Leonard was graduated from the Albany Medical College in 1899. From 1904 to 1908 he was health officer of the Town of Salem and since 1915 had been health officer of the consolidated health district of Jackson, White Creek, and the Town and Village of Cambridge. From 1923 to 1928 he was secretary of the State Sanitary Officers' Association and served as president from 1929 to 1935. He had also served for several terms as a member of the Public Health Council of the State Department of Health. Dr. Leonard was a member of the American Public Health Association, the Washington County Medical Society, of which he had been president, the Medical Society of the State of New York, and the American Medical Association.

Alfred Meyer, M.D., of New York City, died on July 14 at his summer home in Ogunquit, Maine, at the age of ninety-six. Dr. Meyer was graduated from the College of Physicians and Surgeons, Columbia University, in 1877, interned at Mount Sinai Hospital, and studied postgraduate courses for two years in Vienna and Leipzig. Dr. Meyer was the oldest founder of the National Tuberculosis Association and the oldest living graduate of Columbia University.

In 1880 Dr. Meyer began the practice of medicine in New York City and also served as clinical professor at New York University and Bellevue Medical College. A physician at the Montefiore Hospital, he was chief of tuberculosis when the Montefiore Hospital Country Sanatorium was established at Bedford Hills fifty years ago. A leader in the movement to establish the State Hospital for

[Continued on page 2086]

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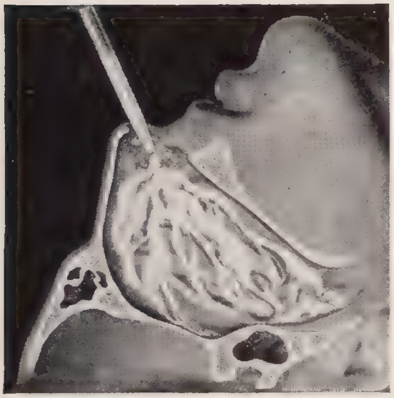

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[Continued from page 2084]

Tuberculosis at Raybrook, he also assisted in getting New York City to establish its own hospital for early tuberculosis at Otisville.

Although Dr. Meyer retired from practice in 1930, he continued as consulting physician at the Mount Sinai and Montefiore Hospitals. A Fellow of the American College of Physicians, he was a member of the American Society for Thoracic Surgery, the New York Tuberculosis and Health Association, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Amedeo Michael Pecoraro, M.D., of New York City, died on July 30 at his home at the age of fifty. Dr. Pecoraro received his medical degree from Loyola University, Chicago, in 1929 and interned at Columbus Hospital in New York City. He was assistant attending adjunct surgeon at the Mother Cabrini Memorial Hospital and Outpatient Department and assistant attending surgeon and clinical surgeon at St. Clare's Hospital, both in New York City. Dr. Pecoraro was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Henry March Pfeiffer, M.D., of New York City and Katonah, died on July 11 in St. Luke's Hospital, New York City, at the age of fifty-eight. Dr. Pfeiffer received his medical degree from the University of Pennsylvania Medical School in 1919 and did postgraduate work in psychiatry in London and Vienna.

For the past twenty-two years Dr. Pfeiffer was associated with the Four Winds Sanatorium in Katonah, having been associate medical director since 1946. A Diplomate of the American Board of Psychiatry and Neurology, Dr. Pfeiffer was a member of the American Psychiatric Association, the New York Society of Clinical Psychiatry, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Reich, M.D., of Brooklyn, died on July 7 at the Prospect Heights Hospital at the age of fifty-two. Dr. Reich received his medical degree from the New York University and Bellevue Hospital Medical School in 1920 and had practiced in Brooklyn since that time.

J. Frederick Rommel, M.D., of Oneida, died on July 30 at the age of sixty-seven. Dr. Rommel received his medical degree from the University of Vermont Medical School in 1911. He was senior attending surgeon and obstetrician at the Oneida City Hospital. Dr. Rommel was a member of the Madison County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ida Rothschild, M.D., of New York City, died on May 18 at the age of forty-one. Dr. Rothschild received her medical degree from the University of Pavia, Italy, in 1935. She was clinical assistant physician at the Fordham Hospital Outpatient Department. Dr. Rothschild was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

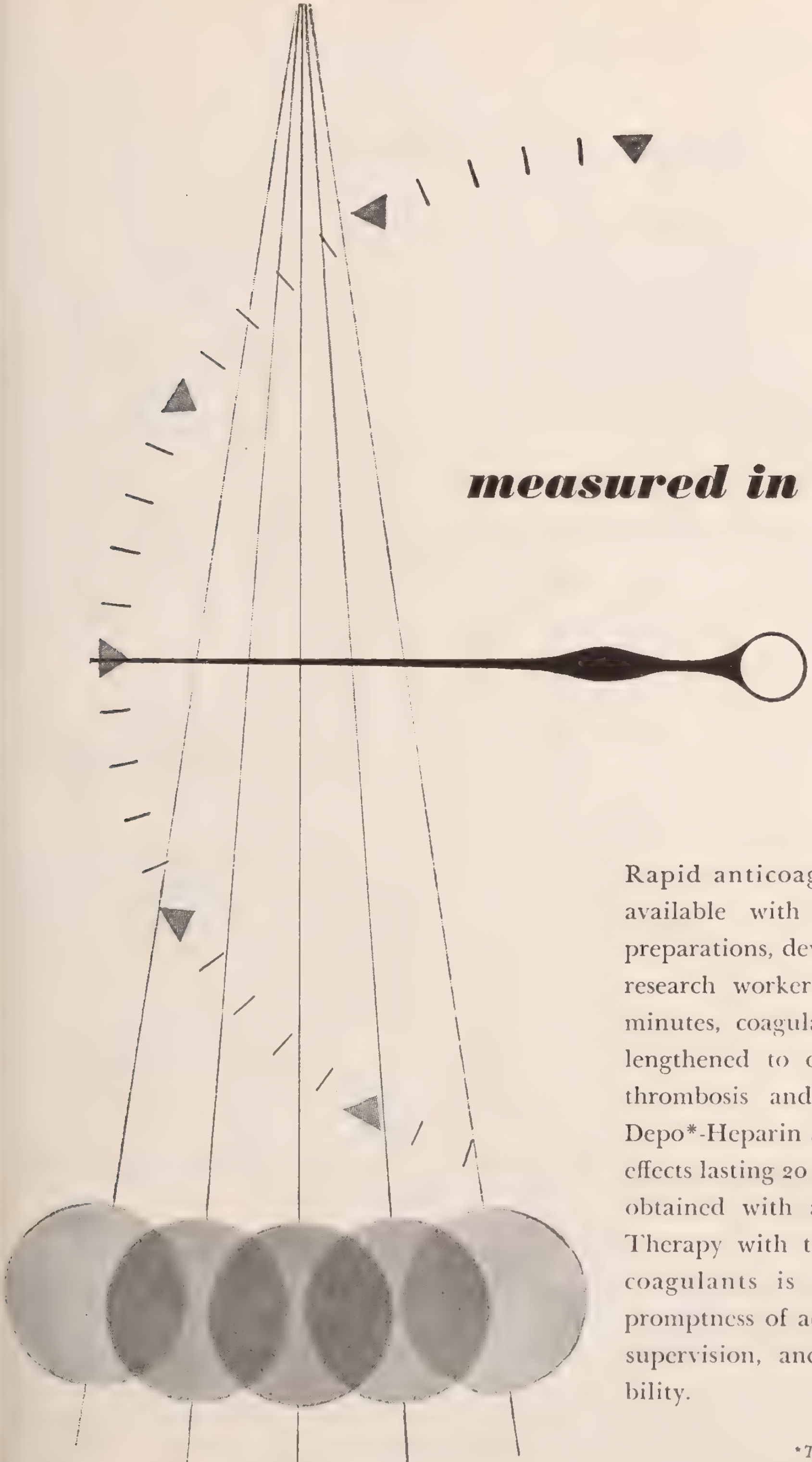
William Freeman Snow, M.D., of New York City, died on June 12 in Bangor, Maine, at the age of seventy-five. Dr. Snow received his medical degree from the Cooper Medical College, San Francisco, California, in 1900 and did postgraduate work at Johns Hopkins University until 1902. Dr. Snow was founder and chairman of the board of the American Social Hygiene Association and also served as president of the National Health Council. In 1917 President Wilson appointed him a member of the National Council of Defense. During World War I he went to France with the American Expeditionary Forces to take charge of venereal disease prevention measures, and during World War II he was a member of the Interdepartmental Venereal Disease Committee. From 1924 to 1928, Dr. Snow was chairman of the League of Nations Committee to Study Traffic in Women and Children, and since 1936 he had been a special consultant to the United States Public Health Service.

Julius Tannenbaum, M.D., of New York City, died in May at the age of seventy-nine. Dr. Tannenbaum was graduated from the Long Island College Hospital School of Medicine in 1900.

Richard Augustus Taylor, M.D., of New York City, died on July 9 at the age of eighty. Dr. Taylor received his medical degree from the Long Island College Hospital School of Medicine in 1903 and had practiced in New York City since that time. He was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Mario Francis Taurchini, M.D., of Brooklyn, died on April 17 at the age of thirty-five. Dr. Taurchini was graduated from the New York Medical College in 1943 and interned at St. John's Hospital in Brooklyn. He was assistant attending obstetrician and gynecologist at St. John's and Swedish Hospitals in Brooklyn and attending obstetrician and gynecologist at the Kings County Hospital Outpatient Department. Dr. Taurchini was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Fred Wise, M.D., of New York City, died on July 26 at Memorial Hospital at the age of sixty-eight. Dr. Wise was graduated from the College of Physicians and Surgeons, Columbia University, in 1904. In 1947, he retired as clinical professor of dermatology and syphilology at Columbia University and as chief of the clinic of the Skin and Cancer Unit of the New York Post-Graduate Hospital. Dr. Wise was consulting dermatologist at Beth-El Hospital. He was associate editor of the *Journal of Cutaneous Diseases* for many years and in 1931 became editor of the *Year Book of Dermatology and Syphilology*. A Diplomate of the American Board of Dermatology and Syphilology, Dr. Wise was a member of the American Academy of Dermatology and Syphilology, the American Dermatological Association, the New York Academy of Medicine, the New York Dermatological Society, the Manhattan Dermatological Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.



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Auxiliary Members Attend National Convention

NINETEEN delegates from the Woman's Auxiliary to the Medical Society of the State of New York attended the twenty-seventh annual convention of the Woman's Auxiliary to the American Medical Association, held June 26 to 30 at the Fairmont Hotel, San Francisco, California. A total of 1,674 delegates were registered, with New York State having the second largest delegation, California being first.

Three members from New York State received recognition by selection for national committee work during the coming year. Mrs. Harry F. Pohlmann was named national program chairman; Mrs. Luther H. Kice, parliamentarian, and Mrs. William J. Lavelle, to the nominating committee.

Delegates from New York State included: Mrs. Eugene H. Coon, Mrs. Clifton L. Dance, Mrs. Thomas M. d'Angelo, Mrs. Maurice J. Dattelbaum, Mrs. Frederic E. Elliott, Mrs. Adolph H. Emerson, Mrs. Leonard C. Evander, Mrs. Louis R. Ferraro, Mrs. Simon Frucht, Mrs. Joseph D. Hallinan, Mrs. Adele Hallinan, Mrs. Harold B. Johnson, Mrs. Luther H. Kice, Mrs. William J. Lavelle, Mrs. Sydney L. McLouth, Mrs. Everett N. Perkins, Mrs. Kenneth T. Rowe, Mrs. Leo F. Schiff, and Mrs. Leo F. Simpson.

County Auxiliaries Elect Officers for 1950–1951

Officers of the county auxiliaries in New York State who will serve during the coming year are as follows:

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[Continued on page 2090]

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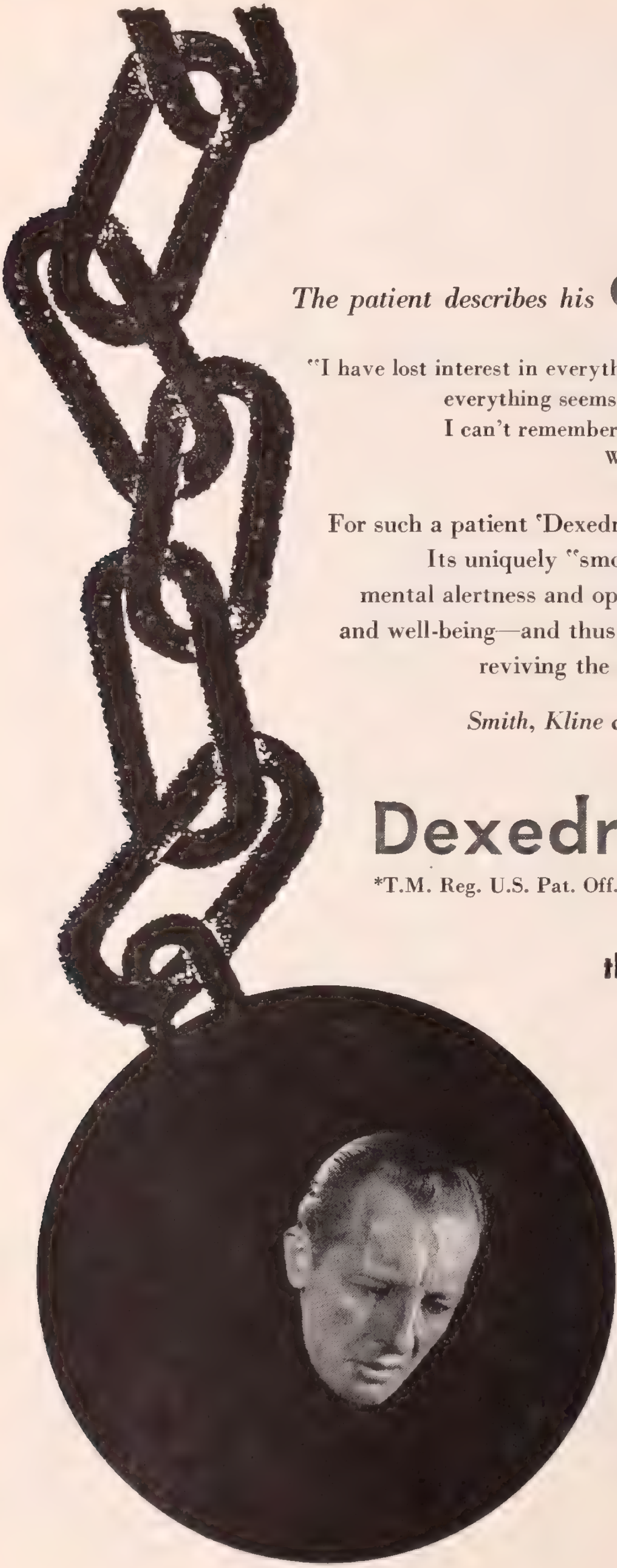

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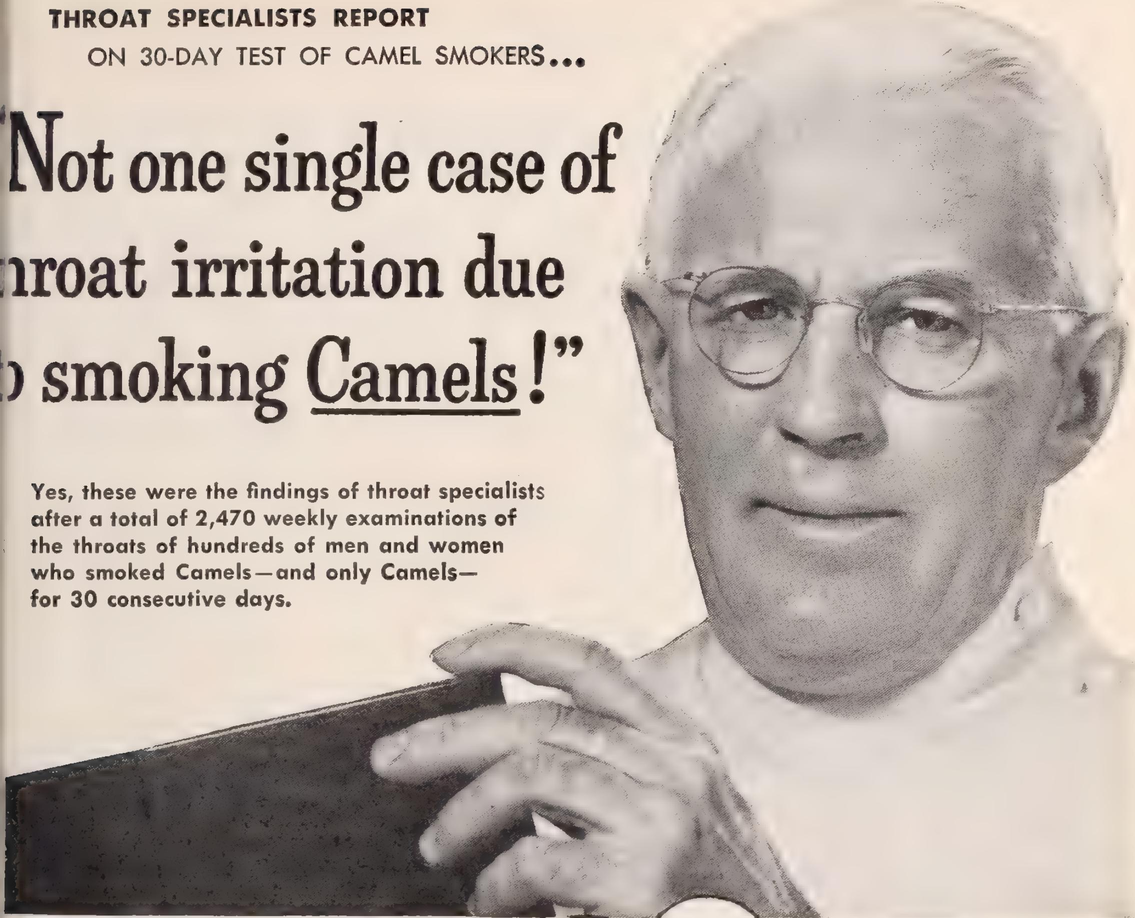

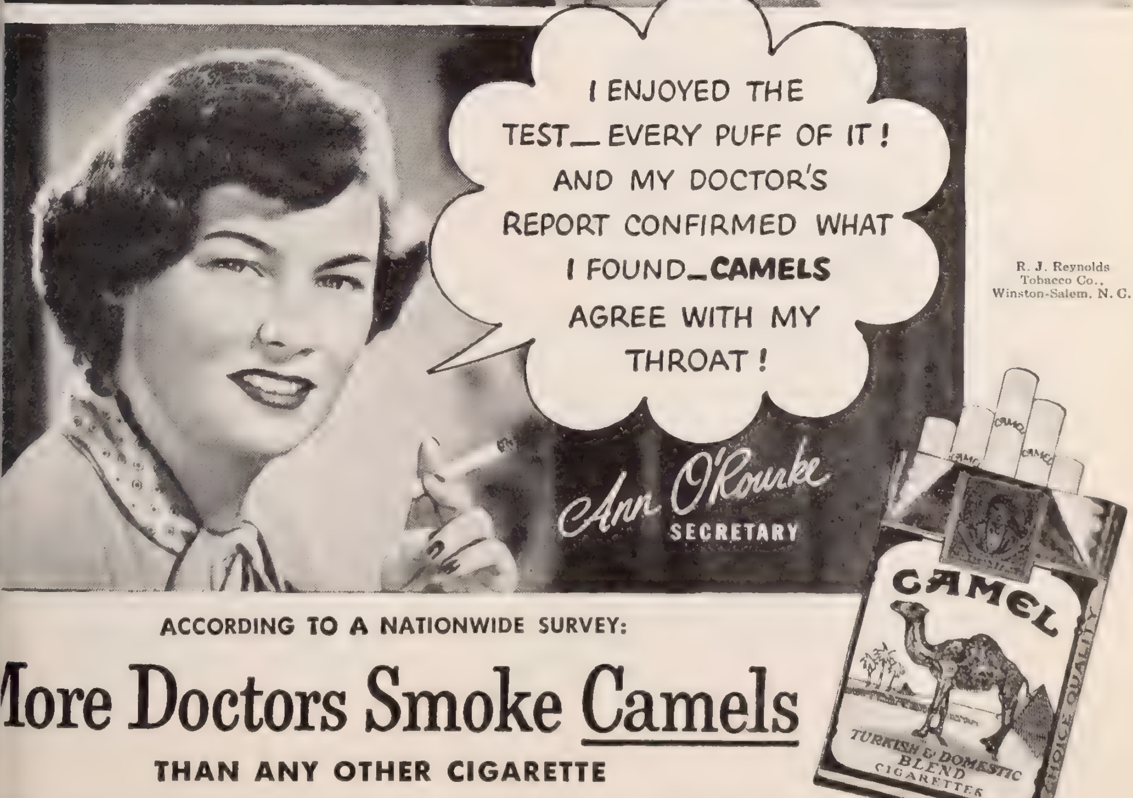
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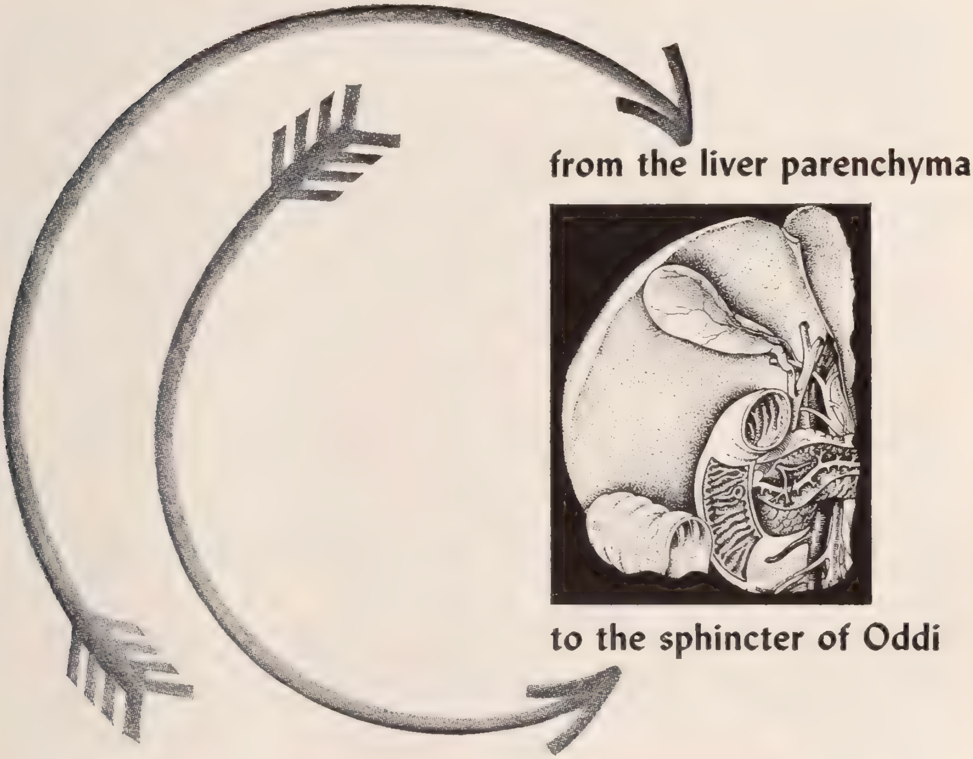

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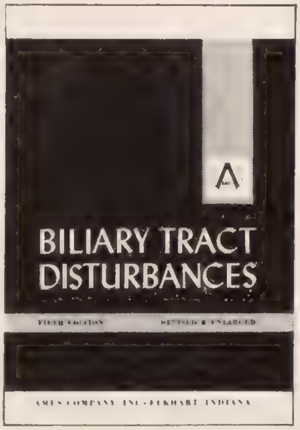

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1. HANSEL, F.: Ann. Allergy *6:* 155 (Mar.) 1949.
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RYAN, R.: J. Missouri M.A. *47:* 107 (Feb.) 1950.

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1. Jeans, Philip C.: Handbook of Nutrition. Chicago, American Medical Association, 1943, p. 354.

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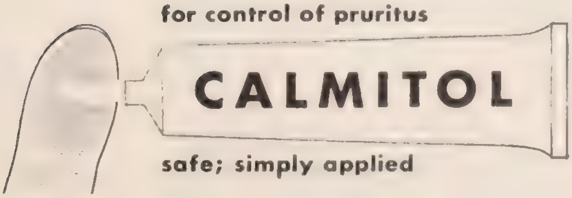

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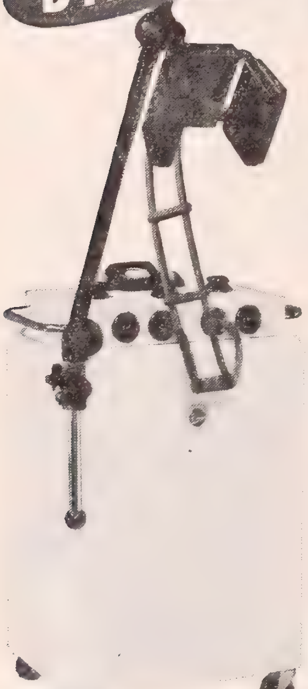

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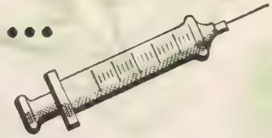

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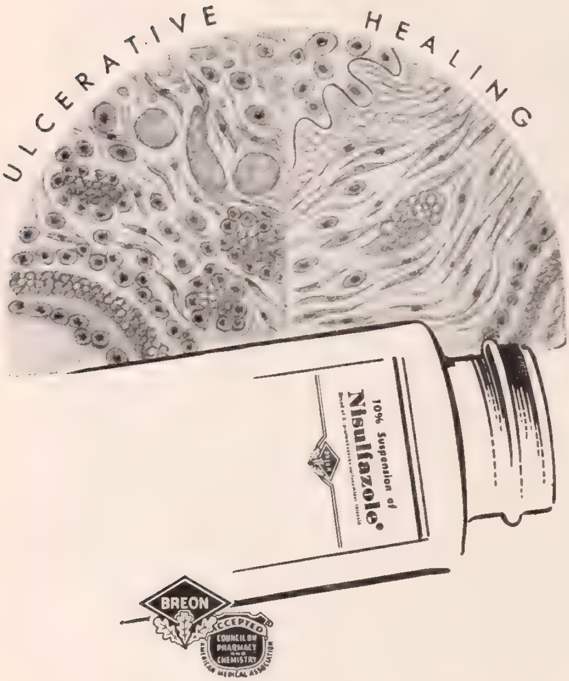
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[1] Hansel, F.K.: Ann. Allergy, 5:397, 1947

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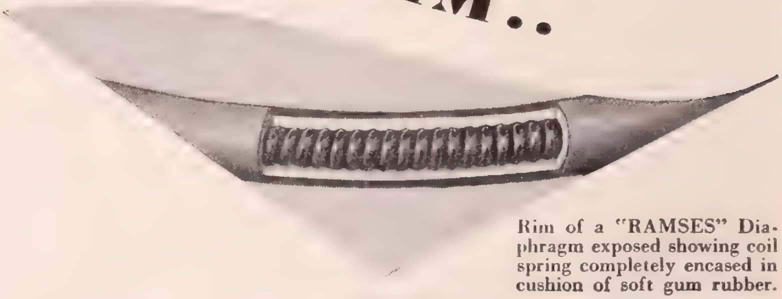

Rim of a "RAMSES" Diaphragm exposed showing coil spring completely encased in cushion of soft gum rubber.

A coil spring with the necessary tension to hold it firmly against the vaginal walls can produce discomfort unless it is properly cushioned. Examine the rim of the "RAMSES"* Diaphragm and you will find that the coil spring is encased in soft rubber tubing, which acts as a protective cushion. This construction is patented and available only in the "RAMSES" Flexible Cushioned Diaphragm.

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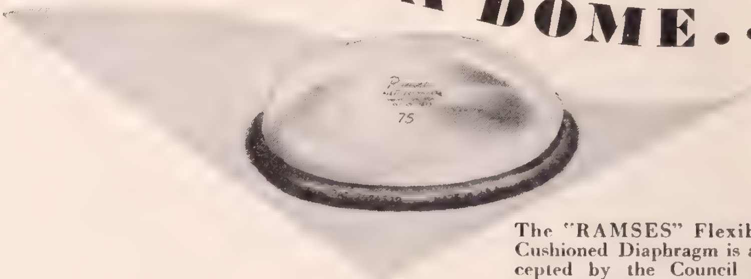

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Each 0.6 cc. contains: Vitamin A 5000 U. S. P. units • Vitamin D_3 1000 U. S. P. units
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*a specially-prepared, more stable analogue of pantothenic acid.

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In estimating the value of support of the abdominal wall during pregnancy a prominent Obstetrician* states, among other items, the following: –

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Education of mothers to see their physicians early in pregnancy is still sorely needed. Camp Supports are recommended by many Obstetricians.

**Alfred C. Beck, M.D.,*
Obstetrical Practice, Fourth Edition,
Chapter IX, Page 181,
Published 1947 by
The Williams & Wilkins Company, Baltimore

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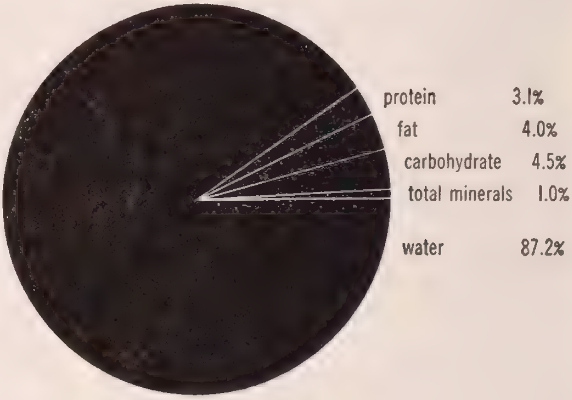

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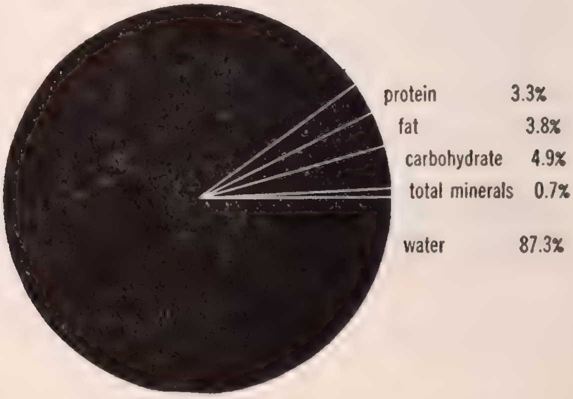

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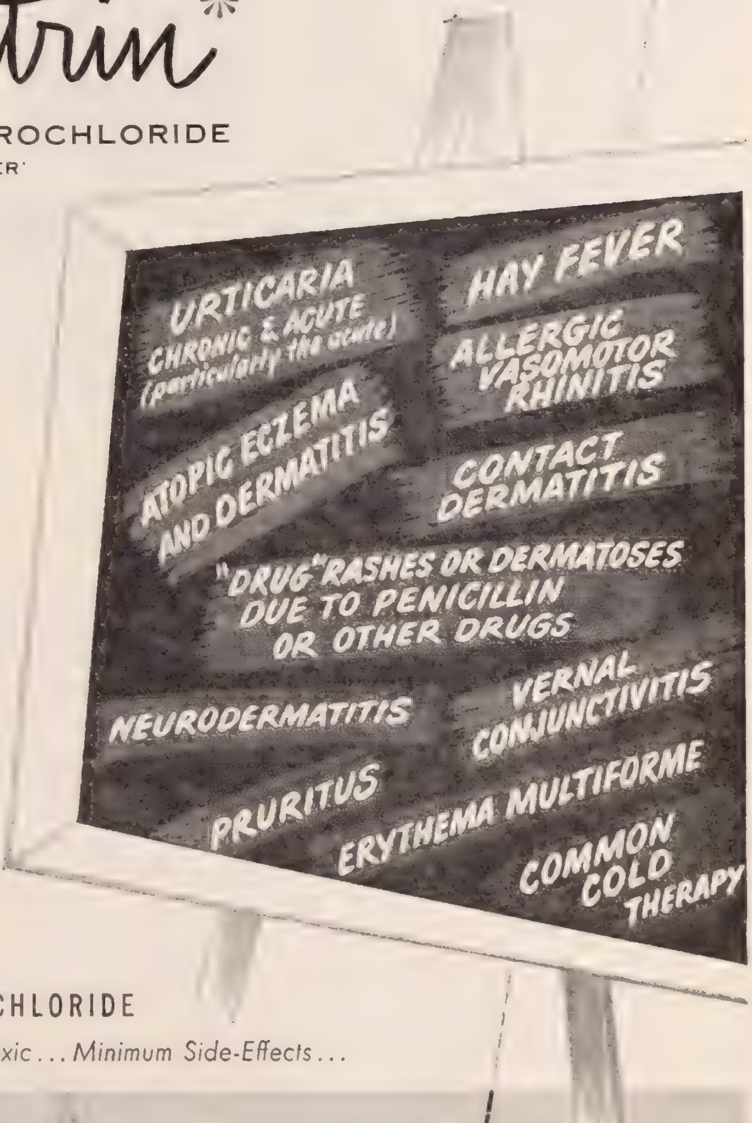
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1. Combes, Frank C., Zuckerman, Ruth and Canizares, Orlando: Diatrin Hydrochloride; a New Antihistaminic Agent for the Treatment of Pruritis and Allergic Dermatoses, Ann. of Allergy, 7:676-678, Sept.-Oct., 1949.
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3. Combes, Frank C., Zuckerman, Ruth and Canizares, Orlando: Diatrin Hydrochloride; Clinical and Toxicologic Studies of a New Antihistaminic Agent, J. Invest. Dermatol, 13:139-144, Sept., 1949.

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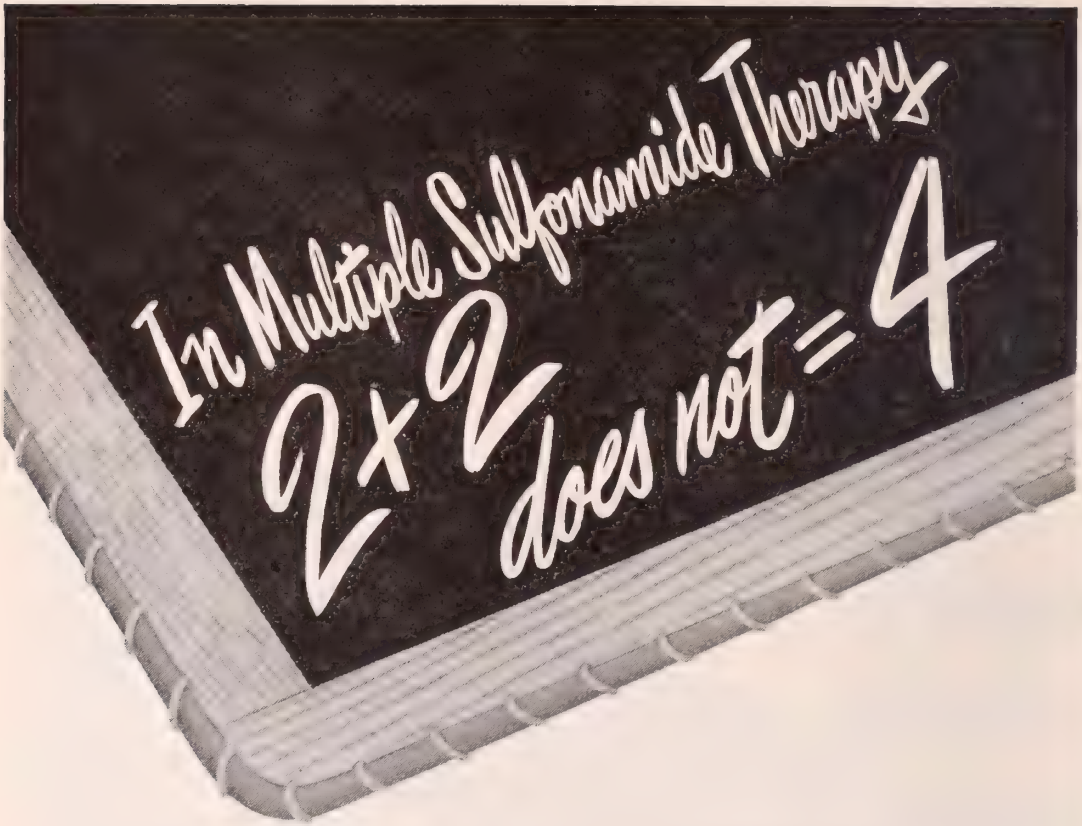

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Sulfadiazine (microcrystalline)	0.25 Gm.
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Sodium Citrate	1.0 Gm.

Aldiazol-M

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Nutrition is a Primary Factor

Whether the condition under treatment is an acute infection, a bowel upset, an injury or a metabolic derangement, nutrition is always a primary factor in therapy. Regardless of other indicated measures, nutritional adequacy is essential for prompt recovery.

When dietary supplementation is the indicated means of increasing the nutrient intake, the food drink, Ovaltine in milk, can prove highly beneficial. Providing significant amounts of all nutrients considered essential, it virtually assures dietary adequacy when the recommended three glassfuls daily are taken in conjunction with even a fair diet.

Temptingly delicious and readily digested, this dietary supplement fits well into the framework of most indicated diets, and finds ready patient acceptance. Its generous nutrient content is detailed in the table below.

THE WANDER COMPANY, 360 N. MICHIGAN AVE., CHICAGO 1, ILL.

OVALTINE
OVALTINE

Ovaltine

Three servings of Ovaltine, each made of ½ oz. of Ovaltine and 8 oz. of whole milk, provide:*

PROTEIN	32 Gm.	VITAMIN A	3000 I.U.
FAT	32 Gm.	VITAMIN B_1	1.16 mg.
CARBOHYDRATE	65 Gm.	RIBOFLAVIN	2.0 mg.
CALCIUM	1.12 Gm.	NIACIN	6.8 mg.
PHOSPHORUS	0.94 Gm	VITAMIN C	30.0 mg.
IRON	12 mg.	VITAMIN D	417 I.U.
COPPER	0.5 mg.	CALORIES	676

*Based on average reported values for milk.

Two kinds, Plain and Chocolate Flavored. Serving for serving, they are virtually identical in nutritional content.

One of a series of reports on

Cortone*

TRADE-MARK

Key to a New Era in Medical Science

THE CLINICAL RESPONSE In RHEUMATOID ARTHRITIS And Its VARIANTS

Among the conditions in which Cortone has produced striking clinical improvement are:

RHEUMATOID ARTHRITIS and Related Rheumatic Diseases

ACUTE RHEUMATIC FEVER

BRONCHIAL ASTHMA

EYE DISEASES, Including Nonspecific Iritis, Iridocyclitis, Uveitis, and Sympathetic Ophthalmia

SKIN DISORDERS, Notably Pemphigus, Angioneurotic Edema, Atopic Dermatitis, and Exfoliative Dermatitis, Including Cases Secondary to Drug Reactions.

CORTONE is available for use in hospitals having facilities for required laboratory studies, and also for use in nonhospitalized cases following initial therapy in such hospitals. These hospitals can supply physicians' requirements for Cortone.

MERCK

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

**Trade-mark of Merck & Co., Inc. for its brand of cortisone.*

THE usual pattern of response to CORTONE begins with diminution in subjective stiffness, commonly within 24 to 48 hours, but sometimes within 6 hours after the initial dose. In many cases this symptom is significantly or completely relieved within a few days. Next, articular tenderness and pain on motion decrease. Finally, swellings of the joints diminish, sometimes fairly rapidly and completely, but occasionally more slowly and incompletely.

In many patients, mild soft-tissue deformities of the knees or elbows have disappeared within 7 to 10 days. An increase in muscle strength has been reported. The extent of return to normal has been limited, as must be expected, by the degree of permanent pathologic change present.

Appetite usually improves rapidly, and many patients have described a loss of the feeling of malaise associated with the disease and have experienced a sense of well-being, occasionally within several hours after initial administration of the drug.

When treatment with CORTONE is discontinued, signs and symptoms may begin to reappear within 24 to 48 hours, becoming gradually worse during the following 2 to 4 weeks. The degree of relapse varies, and is apparently unrelated to the duration of treatment. In some patients, however, the greater part of the remission has persisted for as long as several weeks or months. If CORTONE is re-administered when manifestations of the disease return, prompt remission is again induced.

Cortone

TRADE-MARK

ACETATE
(CORTISONE Acetate Merck)
(11-Dehydro-17-hydroxycorticosterone-21-Acetate)

☑ palatable

☑ potent

☑ complete

SYRUP Hyotole®

vitamin B-complex and ferrous sulfate

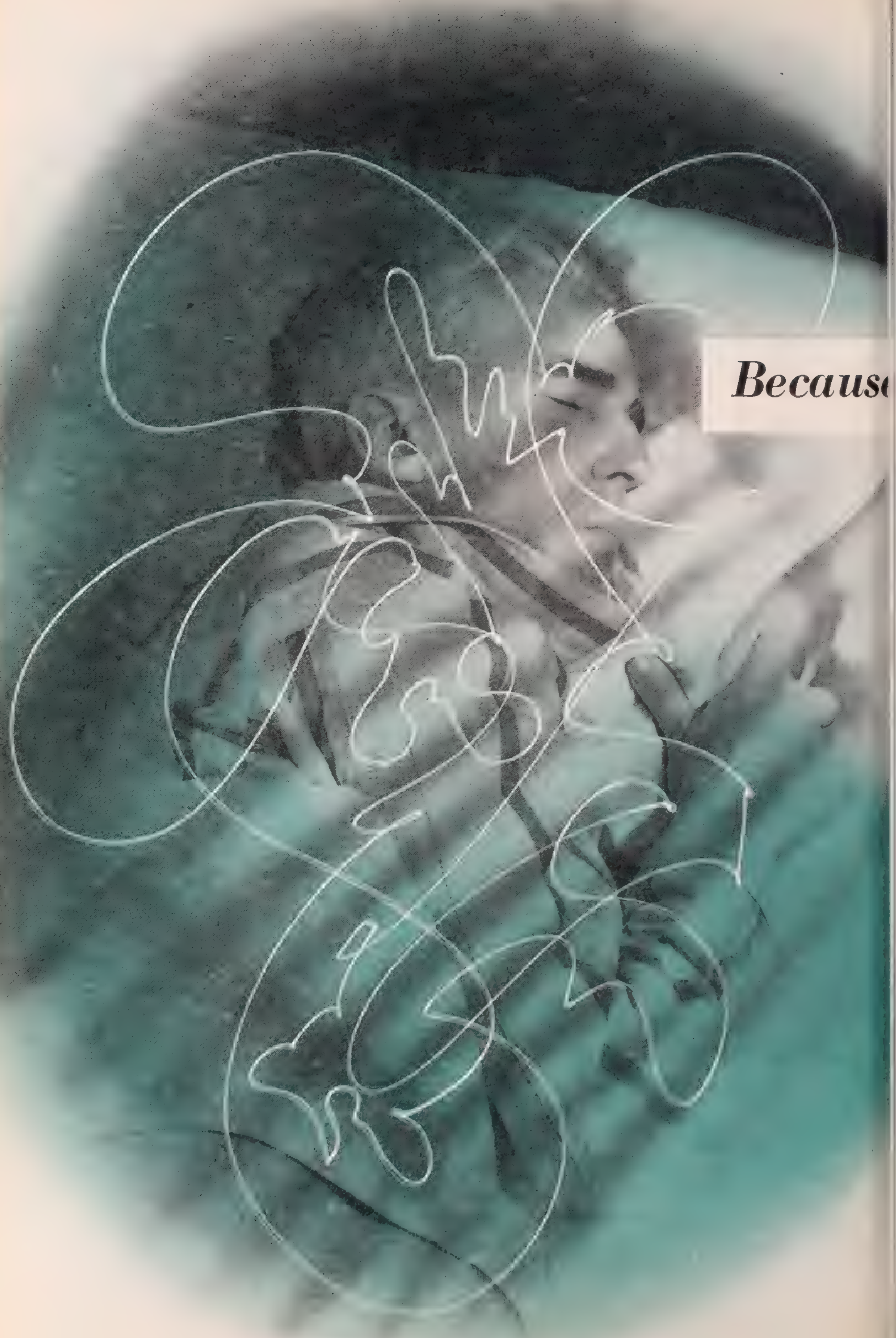
check list
to check ANEMIA

These food factors, as combined in Sharp & Dohme's potent new antianemic preparation, HYOTOLE® Syrup, produce an exceptionally prompt hemopoietic response in all types of anemia (except pernicious anemia) susceptible to oral treatment:

1 fl. oz. (30 cc.) HYOTOLE Syrup Provides			
✓	**Iron** . . . Ferrous Sulfate 1.3 Gm.	✓	**Calcium Pantothenate** . . 2 mg.
✓	**Vitamin B$_1$** Thiamine HCl . 10 mg.	✓	**Niacinamide** . . . . 30 mg.
✓	**Vitamin B$_2$** Riboflavin . . . 2 mg.	✓	**Choline Chloride** . . . . 20 mg.
✓	**Vitamin B$_6$** Pyridoxine HCl . 1 mg.	✓	**Folic Acid** . . . . 5 mg.
✓	**Liver** . . . Concentrated from 90 Gm. of fresh liver and other factors of the vitamin B complex including vitamin B$_{12}$.		

SHARP & DOHME

HYOTOLE Syrup is pleasantly flavored and particularly acceptable to children, as well as to obstetric and geriatric patients. It is especially indicated in nutritional anemias. Supplied in *Spasaver®* pints, and in gallon bottles.
Sharp & Dohme, Philadelphia 1, Pa.



Becaus

patients can't

"SLEEP OFF" *hypertension...*

prolonged vasodilation should accompany sleep as well as the day's activities. (One more reason why NITRANITOL is the most universally prescribed drug in the management of hypertension.)

NITRANITOL®

FOR GRADUAL, PROLONGED, SAFE VASODILATION

Merrell
1828
CINCINNATI • U.S.A.

When vasodilation alone is indicated. *Nitranitol.* (½ gr. mannitol hexanitrate.)

When sedation is desired. *Nitranitol with Phenobarbital.* (¼ gr. Phenobarbital combined with ½ gr. mannitol hexanitrate.)

For extra protection against hazards of capillary fragility. *Nitranitol with Phenobarbital and Rutin.* (Combines Rutin 20 mg. with above formula.)

When the threat of cardiac failure exists. *Nitranitol with Phenobarbital and Theophylline.* (½ gr. mannitol hexanitrate combined with ¼ gr. Phenobarbital and 1½ grs. Theophylline.)

*Intermediate Acting**

GLOBIN INSULIN

'B.W.& CO.'

**Clinical Evidence:—*

"...it was found that the characteristic activity of globin insulin and 2:1 mixture (of protamine zinc and regular) insulin is essentially the same."[1]

"Not often do either globin insulin or a 2:1 mixture require supplementary use of regular insulin. Fully 80% of all severe diabetics can be balanced satisfactorily with one of them."[2]

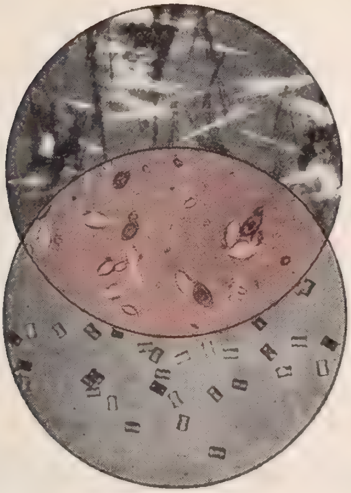
1. Reeb, B. B., Rohr, J. R., and Colwell, A. R.: Proc. House Staff Dept. Med., Wesley Memorial Hospital, Chicago, Ill. Feb. 6, 1948.

2. Rohr, J. H., and Colwell, A. R., Proc. Amer. Diabetes Assn. 8:37, 1948.

COMPLETE CLINICAL
INFORMATION WILL BE
SENT ON REQUEST

'Wellcome' brand Globin Insulin with Zinc, 'B. W. & Co.'®
is supplied in vials of 10 cc., U-40 and U-80

BURROUGHS WELLCOME & CO., (U.S.A.) INC., TUCKAHOE 7, NEW YORK



Photomicrographs showing calcium gluconate (upper circle) theobromine (bottom circle) and Calpurate crystals (center) resulting from Maltbie's synthesis.

"...It is twice
bless'd;
"It blesseth him
that gives
and him
that takes..."

– Portia in
The Merchant of Venice,
Act IV, Sc. 1.

Shakespeare, of course, is talking about the quality of mercy. But his famous lines remind us, not irreverently, of Calpurate, the *double salt* that affords the established benefits of xanthine therapy—without the plaguing side-effects of simple mechanical mixtures of theobromine and calcium gluconate.

Calpurate is the result of the synthesis in the Maltbie Research Laboratories of a *double salt* of calcium theobromine and calcium gluconate. Calpurate is indeed "twice bless'd." It is absorbed slowly and steadily, which means—

...more sustained blood levels
...longer-lasting relief

Calpurate exhibits low solubility and does not liberate a significant amount of free theobromine alkaloid in the stomach, thus making possible—

...prolonged, uninterrupted administration in cardiac decompensation, coronary disease (angina pectoris, thrombosis), and hypertension.

Dosage: 1 or 2 tablets t.i.d.; Powder: 7 to 15 gr. t.i.d.

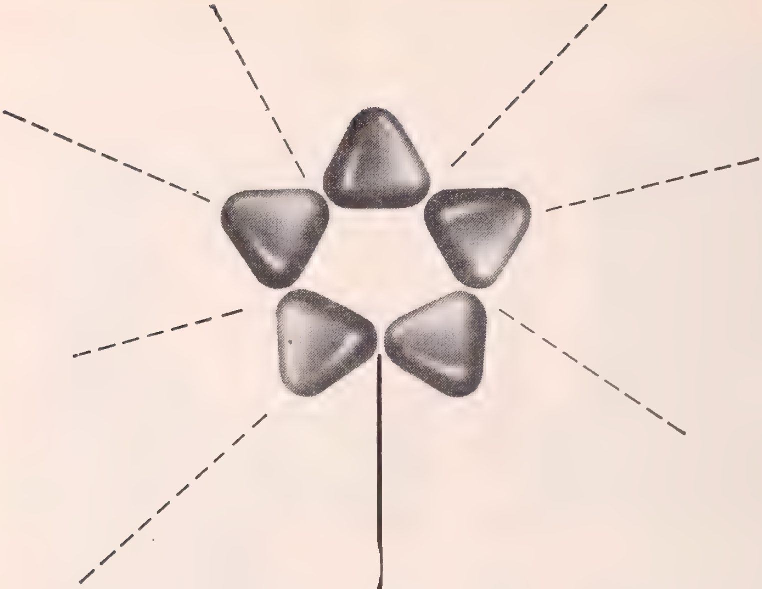
Available in drugstores in bottles of 100, 500, 1000 and as Powder in 1-oz. bottles.

for *trouble-free,* prolonged cardiac therapy prescribe the double salt—

Calpurate *Tablets and Powder*
Theobromine Calcium Gluconate Maltbie

Calpurate *with* Phenobarbital *Tablets*

MALTBIE LABORATORIES, INC., *Newark 1, New Jersey*



the "magic" of the coating...

another reason why Feosol Tablets are the standard iron therapy

Each Feosol Tablet contains 3 grains exsiccated ferrous sulfate, equivalent to approximately 5 grains crystalline ferrous sulfate.

Feosol Tablets' specially developed coating insures *timed disintegration* of the tablet in the acid medium of the stomach and upper duodenum, where iron is best absorbed. Furthermore, each Feosol Tablet supplies 20 mg. blood-building iron per grain—*far more than ordinary iron preparations.* No wonder Feosol Tablets effect such rapid hemoglobin regeneration and prompt reticulocyte response in the iron-deficient patient.

'Feosol' T. M. Reg. U.S. Pat. Off.

Feosol Tablets

Smith, Kline & French Laboratories, Philadelphia

puppy dog,
pollen,
or paint...
INT

your allergic patients need not suffer

prolonged distress until a specific allergen is discovered and—if possible—eliminated. Rapid, sustained relief can usually be obtained with BENADRYL, pioneer antihistaminic.

Today, for your convenience and for ease of administration, BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a wider variety of forms than ever before including Kapseals,® Capsules, Elixir and Steri-Vials.®

BENADRYL® *pioneer antihistaminic*

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA
PD & CO.

a most significant advance

Authoritative reports *both published and in press acclaim the greater margin of safety of this drug.*

(1) Bickel, G., and Della Santa, R.: ***A New Synthetic Anticoagulant, the ethyl ester of dicumarinyl acetic acid.*** Rev. med. de la Suisse Rom. *69*, No. 9 (September 25) 1949. (2) Burke, G. E., and Wright, Irving S.: ***A New Coumarin Anticoagulant (Tromexan)*** 4,4′ dihydroxy dicumarinyl ethyl acetate: Preliminary Report of Its Action. Bull. New York Acad. *26*:264, 1950. (3) Burt, C. C.; Wright, H. P., and Kubik, M.: ***Clinical Tests of a New Coumarin Substance.*** Brit. M. J. 1250, (December 3) 1949. (4) Della Santa, R.: ***A New Synthetic Anticoagulant, Tromexan*** (G. 11705): Schweiz. Med. Wchnschr. *79*:195 (March 5) 1949. (5) Della Santa, R., and von Kaulla, K. N.: ***Hypoprothrombinemia Induced in Patients with Liver Disease.*** Helvet. med. acta. Series A. 16, 251-257, 1949. (6) Deutsch, E.: ***Experiences with Tromexan, A New Anticoagulant of the Dicumarol Series.*** Schweiz. Med. Wchnschr. *79*:1010 (October 22) 1949. (7) Gianella, C. V., and von Kaulla, K. N.: ***Detectability of Ethyl Esters of 3,3′-dicumarinylacetic acid and Dicumarol in Human Blood.*** Experientia *3*:125, 1949. (8) Gruber, C. E.: ***Personal communication.*** (9) Lian, C.; Siguier, F.; Welti, J. J.; Piette, M.; Coblentz, B., and Trelat, J.: ***Reflections on a New Anticoagulant.*** Bull. et. mem. Soc. d. Hop. de Paris *66*:110, 1950. (10) von Kaulla, K. N., and Pulver, K.: ***Animal Experiments with a New Antithrombotic Agent, Tromexan.*** Schweiz. Med. Wchnschr. *78*:806 (August 21) 1948. (11) Pulver, R., and von Kaulla, K. N.: ***The Absorption and Biological Inactivation of the New Antithrombotic Drug "Tromexan."*** Schweiz. Med. Wchnschr. *79*:956 (October 2) 1948. (12) Reinis, von Z., and Kubik, M.: ***Clinical Experiences with a New Preparation of the Coumarin Series.*** Schweiz. Med. Wchnschr. *78*:785 (August 14) 1948. (13) Solomon, C.; McNeile, H. J., and Lange, R.: ***Experience with the New Anticoagulant, B.O.E.A.*** J. Lab. & Clin. Med. *36*:19 (July) 1950. (14) Wright, Irving S., and Burke, G. E.: Circulation. In Press. (15) Wright, Irving S.; Sorenson, C. W., and Burke, G. E.: ***Experimental and Clinical Experiences with the New Anticoagulants—Tromexan and Paritol.*** Twenty-third Scientific Session, Am. Heart Association, June 23, 1950.

Originators of DDT insecticides, the worldwide Geigy organization—established in 1764—has a noteworthy history in the production of synthetic organic compounds. Leadership in organic research and synthesis has led to the development of original pharmaceuticals now widely prescribed throughout the world.

Among its more recent advances, Geigy has introduced two totally new compounds: EURAX® Cream, antipruritic and scabicide and PANPARNIT,T.M. for parkinsonism. Now, an outstanding development in anticoagulant therapy—TROMEXAN—is presented to the medical profession.

Geigy

TROMEXAN T. M.

ethyl acetate

new, safer, oral anticoagulant

Throughout the exhaustive studies on TROMEXAN, involving many hundreds of cases, this new anticoagulant has proved singularly free from the dangers of hemorrhagic complication. Other advantageous clinical features of TROMEXAN are:

1 ***more rapid therapeutic response***
(therapeutic prothrombin level in 18-24 hours);

2 ***smooth, even maintenance of prothrombin level***
within therapeutic limits;

3 ***more rapid return to normal***
(24-48 hours) after cessation of administration.

In medical and surgical practice . . . as a prophylactic as well as a therapeutic agent . . . TROMEXAN extends the scope of anticoagulant treatment by reducing its hazards.

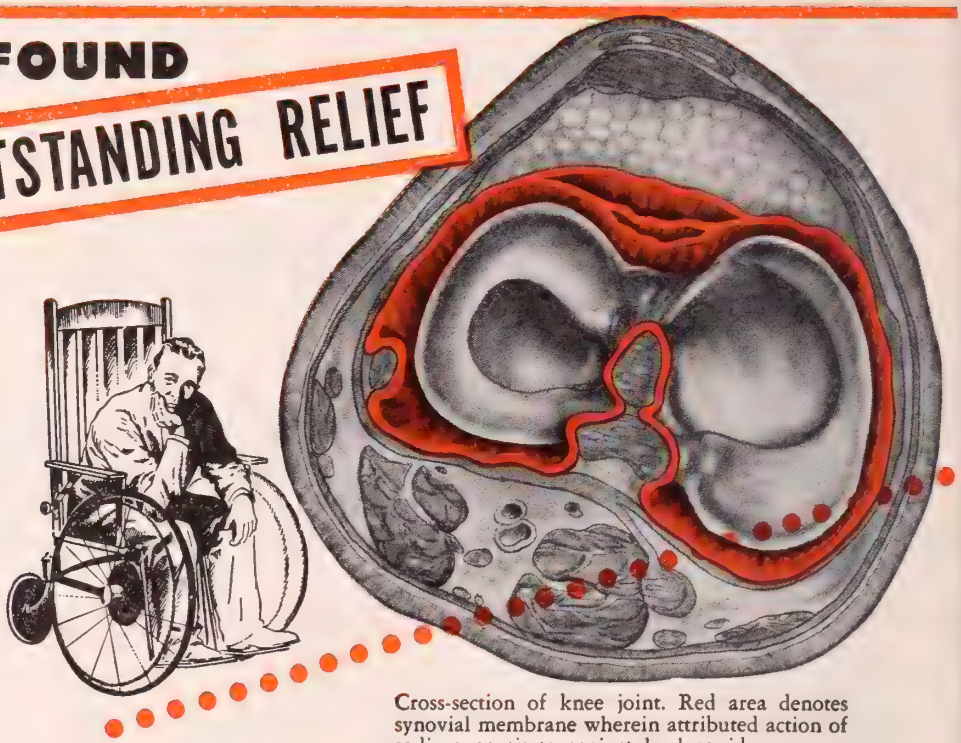
Detailed Brochure Sent on Request.

TROMEXAN (brand of ethyl biscoumacetate): available as uncoated scored tablets, 300 mg., bottles of 50 and 250.

GEIGY COMPANY, INC.
Pharmaceutical Division, 89-91 Barclay St., New York 8, N. Y.

RHEUMATIC CASES OF

FOUND OUTSTANDING RELIEF



Cross-section of knee joint. Red area denotes synovial membrane wherein attributed action of sodium gentisate against hyaluronidase occurs.

Clinical work now being carried on with GENTARTH on arthritic patients, some of whom have been suffering for 30 to 35 years, reveals that this new Raymer formula gave relief beyond that ever experienced with any previous drug. *Not a single case of intolerance has been reported.* Furthermore, toxicologic reports indicate that on a weight-for-weight basis, GENTARTH is less toxic than aspirin.

GENTARTH *contains in each salol-coated tablet:*

Sodium Gentisate	*100 mg.*
Raysal (*representing 43% Salicylic Acid and 3% Iodine in a Calcium-Sodium Phosphate Buffer Salt Combination*)	*325 mg.*
Succinic Acid	*130 mg.*

Recommended dosage:

2 or more tablets, 3 or 4 times daily (after meals and before bedtime)

Available at all pharmacies on prescription

Nearly a Third of a Century Serving the Physician

RAYMER PHARMACAL COMPANY

Pharmaceutical Manufacturers

30-35 YEARS' STANDING

WITH GENTARTH

The New Gentisate-Containing Anti-rheumatic

GENTARTH INHIBITS SPREAD OF HYALURONIDASE

While the basis of GENTARTH is buffered salicylate, still the accepted stand-by in the arthritides, to it has been added sodium gentisate which Meyer and Ragan[1] have shown to bring favorable results in rheumatoid arthritis and acute rheumatic fever. Pain, swelling and joint inflammation disappeared. The action of sodium gentisate has been attributed to its inhibition of the spreading effect of hyaluronidase.[2, 3] *Raymer has pioneered in making sodium gentisate available to the medical profession.* Succinic acid, also present, protects against decrease in prothrombin time, a necessary precaution in continued salicylate therapy.

GENTARTH *Tablets are supplied in bottles of 100, 500, 1,000.*
Also Available Sodium Gentisate Tablets 325 mg.—bottles of 100. Sodium Gentisate (powder) for prescription formulation through leading pharmacies.

[1] Meyer, K. & Ragan, C.: Mod. Concepts of Card. Disp., 17:2 (1948)
[2] Quick, A. J.: J. Biol. Chem., 101:475 (1933)
[3] Guerra, J.: J. Pharm. Exp. Ther., 87:1943 (1946)

TRY A CASE ON GENTARTH

Fill in the coupon. Let Raymer send you enough GENTARTH Tablets for one case for a week. Marked results in pain-relief should be demonstrated in that time. Reduction of swelling and/or inflammation usually follows.

N. E. Cor. Jasper & Willard Sts.
Philadelphia 34, Pa.

Literature available upon request

RAYMER PHARMACAL COMPANY Dept. NYS
N. E. Cor. Jasper & Willard Sts.,
Philadelphia 34, Pa.

Gentlemen:

Please send me free sufficient GENTARTH Tablets for a clinical trial for 1 week.

____________________ M.D.

ADDRESS ____________________

CITY & STATE ____________________

SPERMICIDAL TIME

To be completely safe, a reliable contraceptive must exhibit the highest spermicidal power possible . . after dilution. In Koromex (jelly or cream) you have the fastest spermicidal time measurable . . when tested . . according to the Brown & Gamble technique representing a 1:10 dilution.

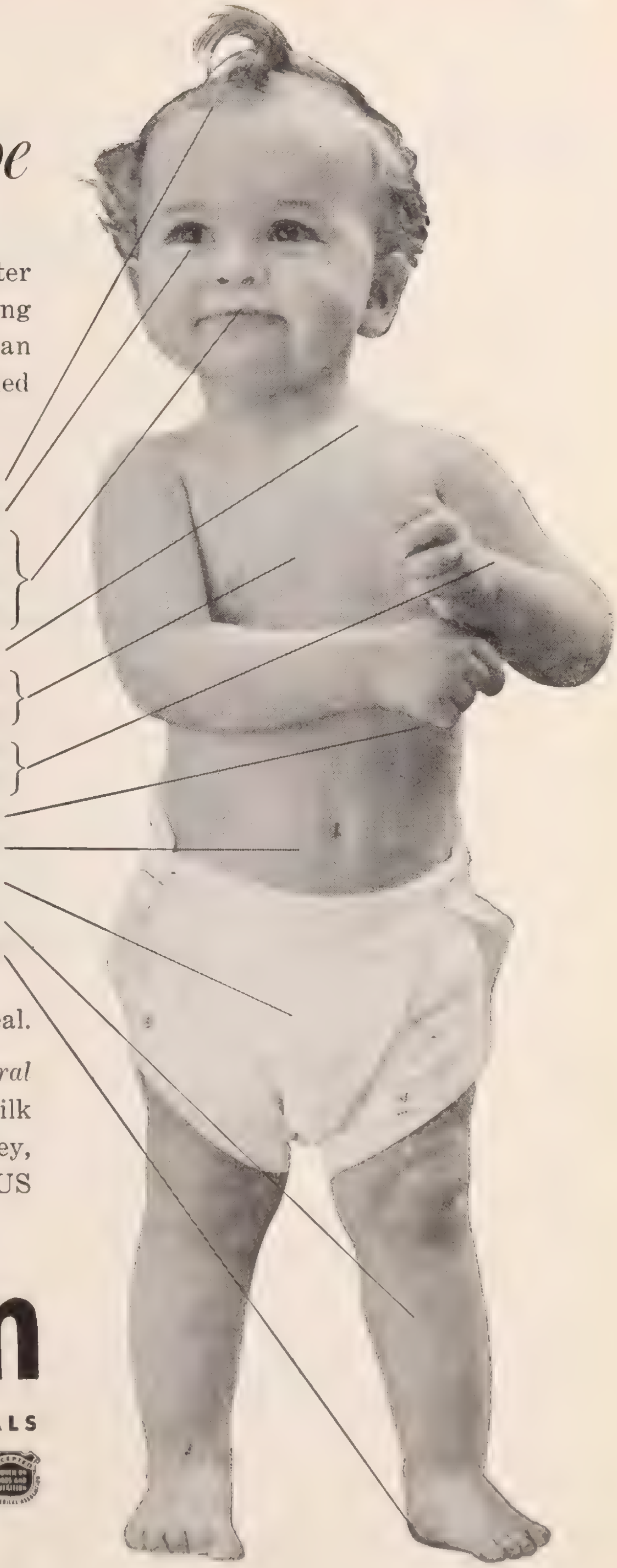
ACTIVE INGREDIENTS: BORIC ACID 2.0% OXYQUINOLIN BENZOATE 0.02% AND PHENYLMERCURIC ACETATE 0.02% IN SUITABLE JELLY OR CREAM BASES

HR KOROMEX®
A CHOICE OF PHYSICIANS

HOLLAND-RANTOS COMPANY, INC. • 145 HUDSON ST., NEW YORK 13, N. Y.
MERLE L YOUNGS PRESIDENT

from *head* to *toe*

CEREVIM-fed children showed greater clinical improvement, in the following nutrition-influenced categories, than children fed on ordinary unfortified cereal or no cereal at all:[1]



hair lustre

recession of corneal invasion

retardation of cavities
condition of gums
condition of teeth

skin color

skeletal maturity
skeletal mineralization

*blood plasma vitamin A increase
*blood plasma vitamin C increase

subcutaneous tissues

dermatologic state

urinary riboflavin output

musculature

plantar contact

Here's why: CEREVIM is not just a cereal.

Much more: CEREVIM provides *8 natural foods:* whole wheat meal, oatmeal, milk protein, wheat germ, corn meal, barley, Brewers' dried yeast and malt – PLUS added *vitamins* and *minerals.*

CEREVIM

CEREALS + VITAMINS + MINERALS

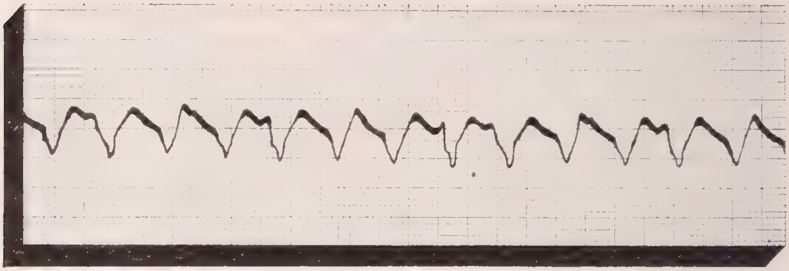
[1] "A Study of Enriched Cereal in Child Feeding" Urbach, C.; Mack, P. B., and Stokes, Jr., J: Pediatrics 1:70, 1948.

*Cerevim contains neither vitamin A nor C, but apparently exercises an A-and-C sparing effect attributed to its high content of predigested protein and major B vitamins.

SIMILAC DIVISION M & R DIETETIC LABORATORIES, *Columbus 16, Ohio*

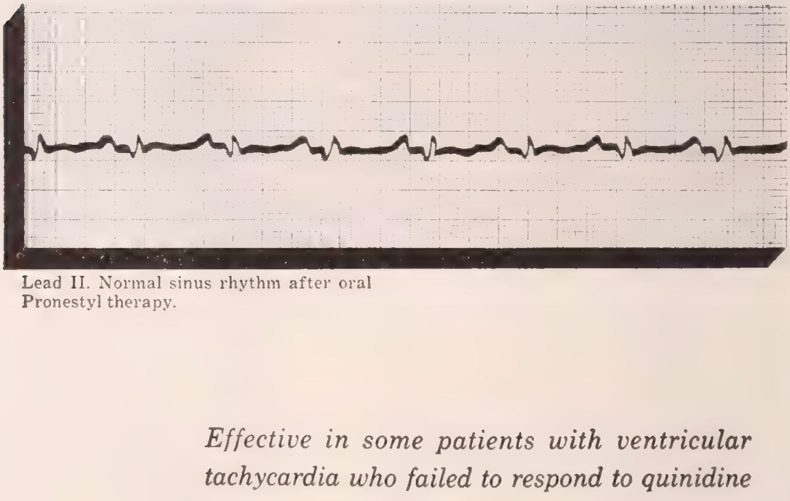
A New Drug ..for the treatment of ventricular arrhythmias

BEFORE



Lead II. Ventricular tachycardia persisting after six days of oral quinidine therapy (8 Gm. per day).

AFTER



Lead II. Normal sinus rhythm after oral Pronestyl therapy.

Effective in some patients with ventricular tachycardia who failed to respond to quinidine

PRONESTYL *Hydrochloride*

Squibb Procaine Amide Hydrochloride

SQUIBB

"PRONESTYL" IS A TRADEMARK OF E. R. SQUIBB & SONS

new product brief

PRONESTYL *Hydrochloride*

Squibb Procaine Amide Hydrochloride

for the treatment of ventricular arrhythmias

What is it?

Pronestyl Hydrochloride is Squibb procaine amide hydrochloride. Structurally, Pronestyl differs from procaine only by the presence of the amide grouping (.CO.NH.) in Pronestyl where procaine has the ester grouping (.CO.O.)

How does it act?

The action of Pronestyl is probably due to a direct depressant action on the ventricular muscle. In auricular arrhythmias, preliminary observations indicate that Pronestyl slows auricular rate but usually does not re-establish normal sinus rhythm. At present, Pronestyl is not recommended in the treatment of auricular arrhythmias.

When is it indicated?

In conscious patients, for the treatment of ventricular arrhythmias.

During anesthesia, to correct cardiac arrhythmias.

What are its advantages in ventricular arrhythmias?

As compared with quinidine: Unlike quinidine, no important toxic symptoms have been reported following the use of Pronestyl orally. In therapeutic dosage, Pronestyl orally does not produce the nausea, vomiting, and diarrhea often caused by quinidine. At high oral dosage, these symptoms may appear.

Whereas intravenous administration of quinidine is hazardous and unpredictable, Pronestyl may be given intravenously with relative safety.

Pronestyl has been found effective in some patients who failed to respond to quinidine.

As compared with procaine: For arrhythmias, procaine is used only in anesthetized patients because its dose in unanesthetized patients is too toxic for clinical use. Pronestyl can be used in conscious and anesthetized patients.

Intravenously, Pronestyl is much less toxic than procaine. In the recommended intravenous dosage, Pronestyl does not cause the central nervous system stimulation typical of procaine in conscious patients.

Procaine is unstable, being rapidly hydrolyzed in the plasma to para-aminobenzoic acid and diethylaminoethanol. Pronestyl is not affected by the plasma procaine esterase, consequently it is much longer acting than procaine.

Procaine is not used orally because of its instability in the organism; Pronestyl can be used orally and intravenously.

What are its side effects?

Oral administration of Pronestyl in doses of 3-6 grams per day, for periods of time varying from 2 days to 3 months, produced no toxic effects as evidenced by studies of the blood count, urine, liver function, blood pressure, and electrocardiogram. Intravenous administration to patients without ventricular tachycardia produced only a moderate and transient hypotensive effect in about one-third of the subjects. However, during intravenous administration to patients with ventricular tachycardia, a striking hypotensive effect was almost invariably present. This disappeared concurrently with the establishment of a normal rhythm. Further studies are in progress to see whether the drug may be given intravenously over a period of time longer than five minutes so as to revert the ventricular tachycardia without causing hypotension. That this may be possible is indicated by the fact that some episodes of ventricular tachycardia have been successfully treated by oral administration without significant change in blood pressure. Electrocardiographic changes: prolongation of QRS and QT intervals and occasional diminution in voltage of QRS and T waves have occurred.

What is the dosage?

IN CONSCIOUS PATIENTS

For the treatment of ventricular tachycardia:

ORALLY: 1 Gm. followed by 0.5-1.0 Gm. every four to six hours as indicated.

INTRAVENOUSLY: 200-1000 mg. (2 to 10 cc. Pronestyl Hydrochloride Solution). *Caution—administer no more than 200 mg. (2 cc.) per minute.*

Hypotension may occur during intravenous use in conscious patients. As a precautionary measure, administer at a rate no greater than 200 mg. (2 cc.) per minute to a total of no more than 1 Gm. Electrocardiographic tracings should be made during injection so that injection may be discontinued when tachycardia is interrupted. Blood pressure recordings should be made frequently during injection. If marked hypotension occurs, rate of injection should be slowed or stopped.

For the treatment of runs of ventricular extrasystoles:

ORALLY: 0.5 Gm. (2 capsules) every four to six hours as indicated.

IN ANESTHESIA

During anesthesia, to correct ventricular arrhythmias:

INTRAVENOUSLY: 100-500 mg. (1 to 5 cc. Pronestyl Hydrochloride Solution). *Caution – administer no more than 200 mg. (2 cc.) per minute.*

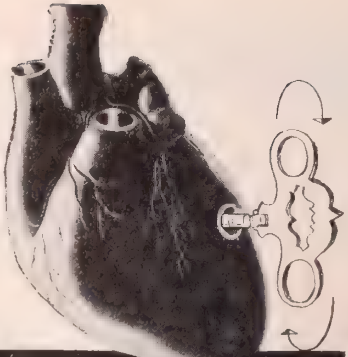
How is it supplied?

Pronestyl Hydrochloride Capsules, 0.25 Gm., bottles of 100 and 1000.

Pronestyl Hydrochloride Solution, 100 mg. per cc., in 10 cc. vials.

SQUIBB

Until mechanical means for winding-up the failing heart exist, consider this:
Digitaline Nativelle digitalizes in hours—maintains the maximum efficiency obtainable. *Positive maintenance*—because absorption is complete and the uniform rate of dissipation provides full digitalis effect between doses. All, with virtual freedom from side reactions.



Digitaline Nativelle

Chief active principle* of digitalis purpurea [digitoxin]

MAINTENANCE: *0.1 or 0.2 mg. daily depending on patients' response.* CHANGE-OVER: *0.1 or 0.2 mg. Digitaline Nativelle replaces 0.1 or 0.2 gm. whole leaf.* RAPID DIGITALIZATION: *0.6 mg. initially, followed by 0.2 or 0.4 mg. every 3 hours until patient is digitalized.*

*Not an adventitious mixture of glycosides.

Send for brochure "Modern Digitalis Therapy" Varick Pharmacal Co. Inc. (Div. E. Fougera & Co. Inc.), 75 Varick St., New York

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NEW USES FOR A FAMOUS LEADER
Gebauer's
ETHYL CHLORIDE, U.S.P.

Gebauer's
ETHYL CHLORIDE

Recent researches in Ethyl Chloride have discovered a new use for a world-famous product in the *control of pain*. By proper spraying with GEBAUER'S ETHYL CHLORIDE from the "dispenseal" bottle, in the adjunctive treatment of *Stiff Neck, Lumbago, Sciatica, and Sprains,* pain can be stopped or greatly alleviated —often with very outstanding and gratifying results to both the physician and the patient.

The mechanism of action does not depend for its effect upon the central nervous system, nor upon refrigeration. *In fact, frosting is to be avoided.* Application of Ethyl Chloride apparently breaks up vicious cycles of muscle spasm and pain resulting from trauma, chronic muscular strain, chilling, or visceral disease, by some pharmacologic process as yet not fully determined. These cycles reside in certain areas of the muscle or muscles interpreted by the patient as tender points, which may be called trigger areas. The spraying of the skin overlying these areas releases the self-sustaining painful spasm. More complete details and application procedure may be obtained from your surgical supply dealer or by writing direct to Dept. D.

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"The Accepted Standard Since 1902"

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Savings

Bonds

greater fall
in
blood pressure

decreased
peripheral
resistance

more efficient
myocardial
action

diminution
of
cardiac size

reversal of
left ventricular
strain patterns
in the EKG

relief of
palpitation
dyspnea
headache

clearing of
hemorrhages and
exudates in the
optic fundi

PREDICTING RESPONSE

in essential hypertension

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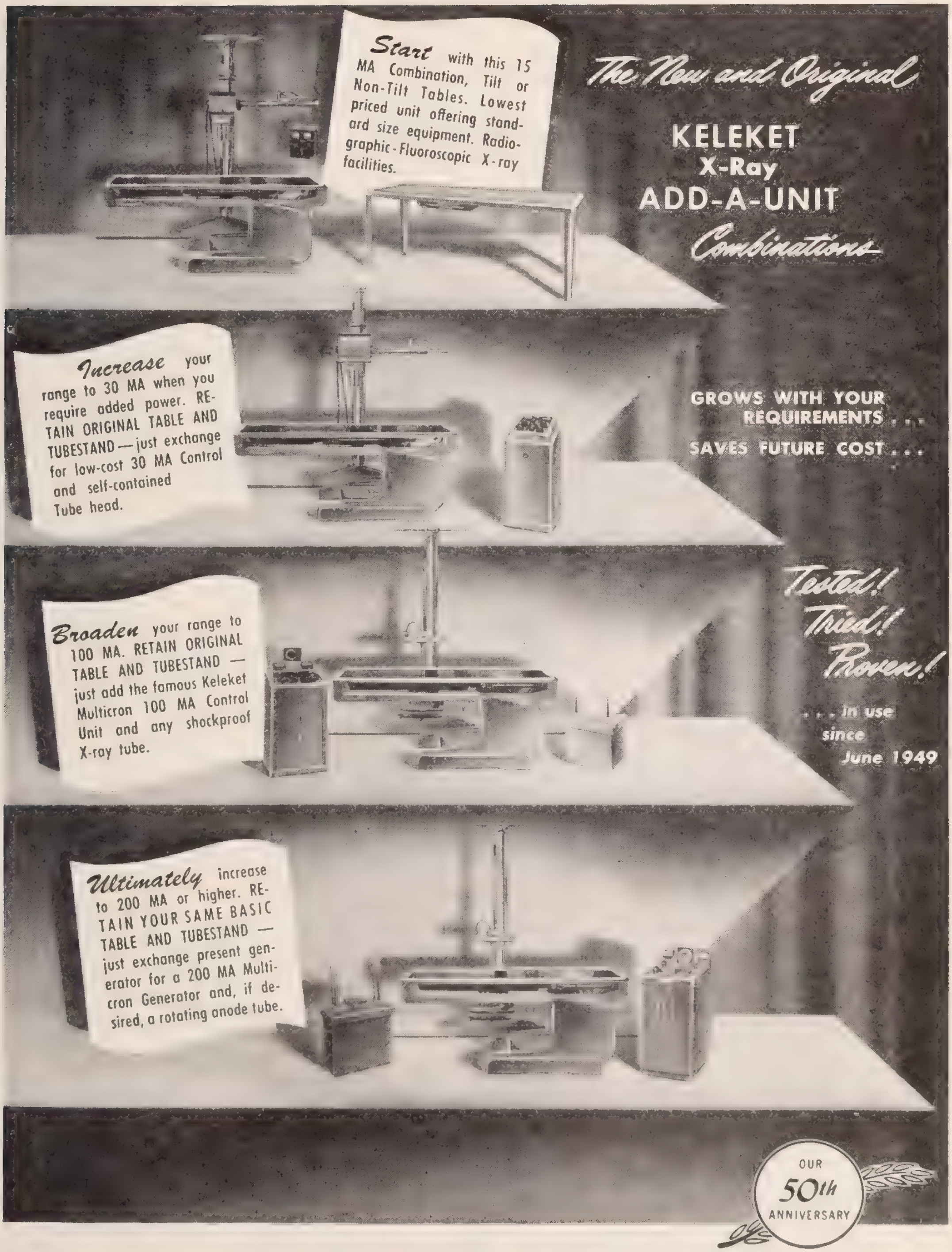
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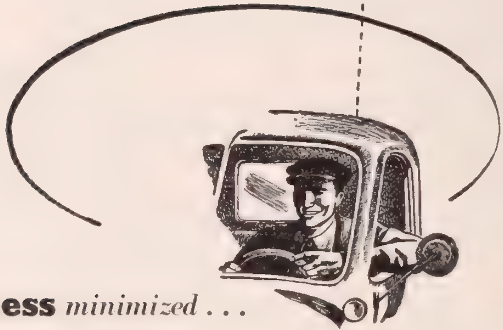

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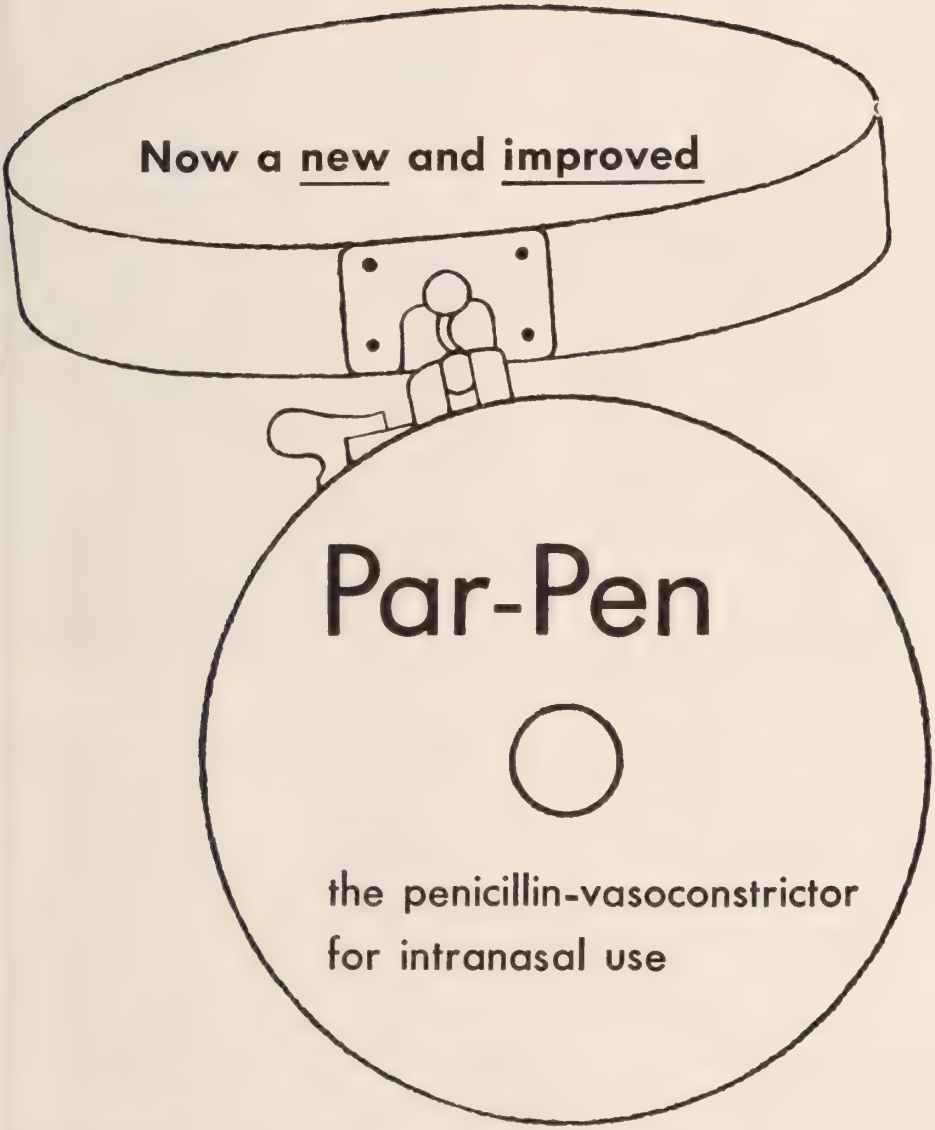
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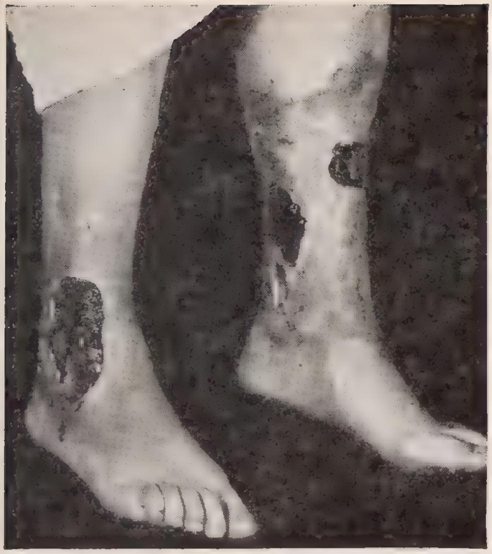

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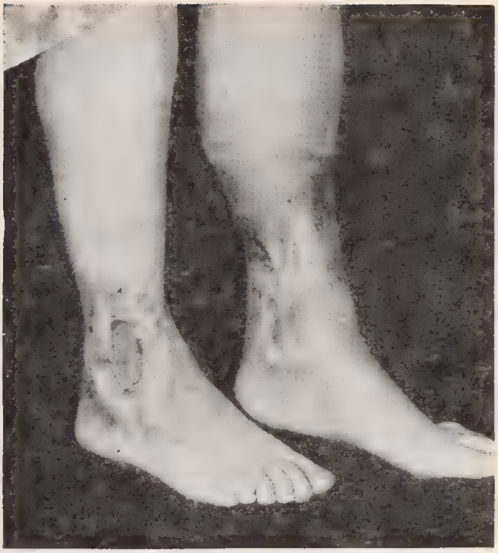

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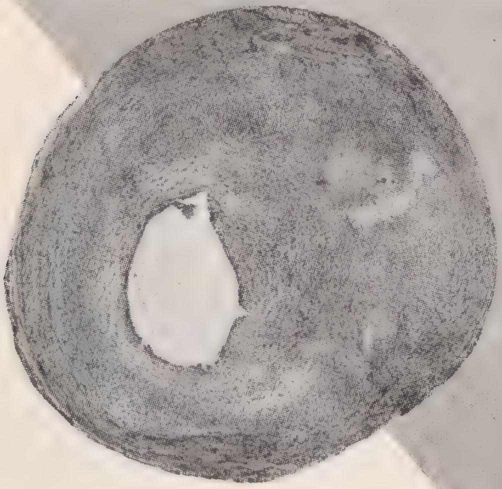

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As printed in International Clinics, Vol. 1, page 199, March 1937

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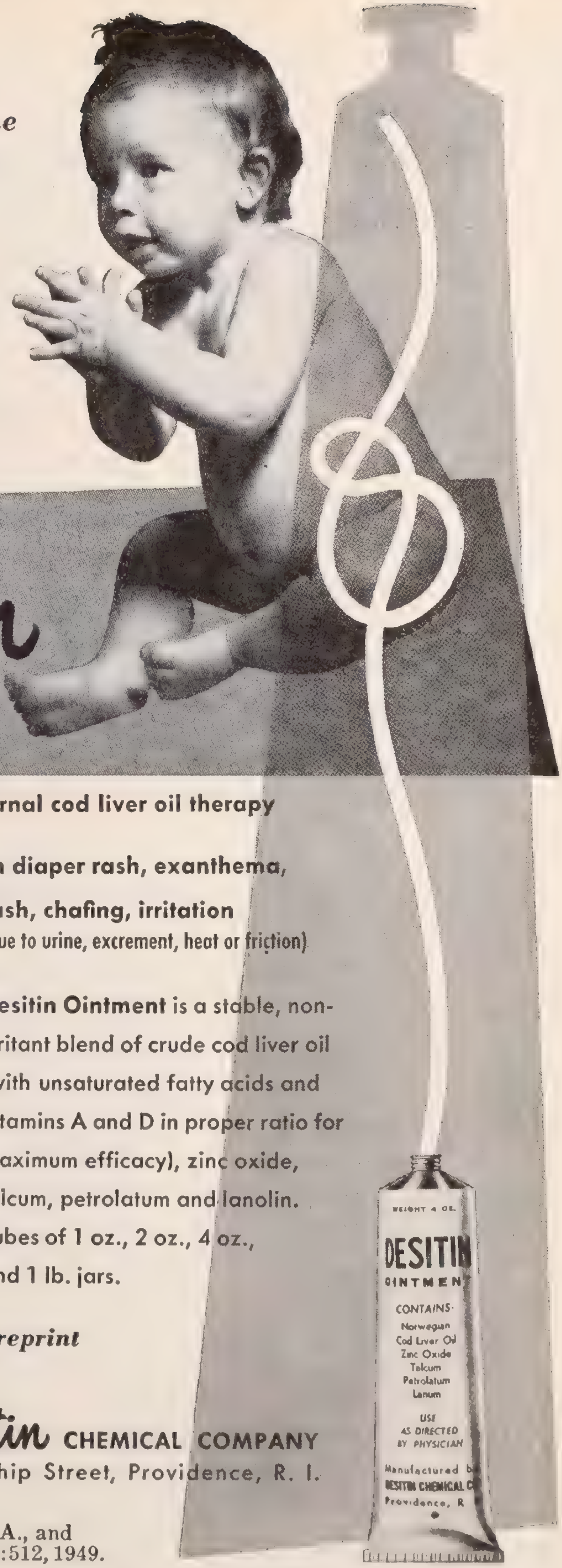
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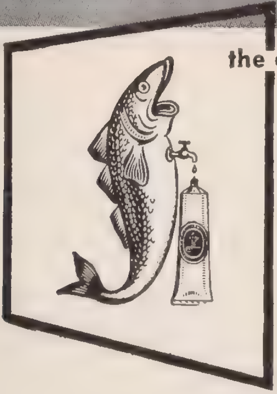

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[1] Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Industrial Med. & Surg. 18:512, 1949.

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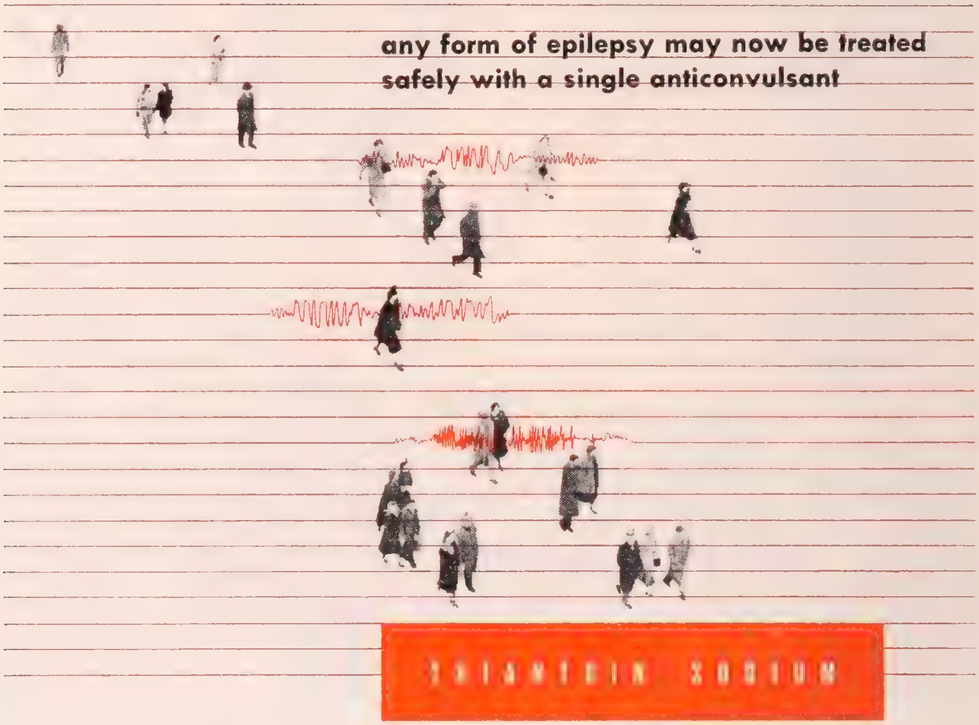

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VOLUME 50 SEPTEMBER 15, 1950 NUMBER 18

Editorials

Duties of Citizenship

In probably the gravest issue this country has known since Pearl Harbor, the citizen-taxpayers are faced with their historical obligation to decide at the polls who shall represent them in Congress and the several state governments. In some respects the political situation now is not dissimilar to that of 1867, when the Congress and the President were at bitter odds, or that of President Woodrow—he kept us out of war—Wilson's second term, when again the legislative and executive branches of the Government did not see eye to eye. Today one has the uneasy feeling that the citizen-taxpayers are not being told the whole truth concerning either the domestic or the foreign policy of the government. We need in local, state, and national government the best brains available and representatives of the highest integrity.

It is imperative that every doctor and the members of his family who are legally qualified register and vote. No excuses are valid. Especially is this true when the additional obligations of service with the armed forces or as necessary participants in civilian defense bring to every doorstep the grimmer aspects of citizenship.

The issue of compulsory national health insurance, while in abeyance, is not settled. The practice of continued deficit spending by Federal and state governments with few exceptions continues to be laid like a lash on the backs of the poor. It is time and past time for intelligent, constructive leadership to be exercised. We urge every physician to register and vote in the coming elections.

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Current Editorial Comment

It's a Short Life. It gives us great pleasure to quote from the annual report of Dr. Willard C. Rappleye, dean of Columbia University's Faculty of Medicine:

> There is no such thing as premedical education, nor should students in colleges who plan to enter professional schools be regarded as premedical or predental students... Training on the college level should be preparation not for medicine or dentistry or public health, but for life.[1]

In hearty agreement with this doctrine let us take for our example a bright boy who finishes his high school at the age of eighteen. He goes to college and gets four years of training which will prepare him for life. Thence he breezes into medical school and graduates at twenty-six. We are indulging, of course, in pure theory. Our young man never flunks a course, has no financial difficulties, and no desire to get married. Perhaps it would be better to say that the idea of marriage never impinges on his horizon. He then has his two years of hospital internship. By that time he has no doubt made up his mind as to what specialty he wishes to embrace. The world is now for the first time creeping up on him, and the fact has seeped into his consciousness that there is more money to be made as a specialist than as a general practitioner. A specialty will involve him in two to fours years of residency in hospitals and in the passing of his specialty board examinations. Thus he may be ready to come to grips with life between the ages of thirty and thirty-two. This is assuming that his progress through life has not been interrupted by wars, financial difficulties, or sentimental involvements.

He will have been as completely isolated from the world as a man may be for twelve to fourteen years during the most formative period of his existence. For the sake of argument we have assumed that during this period our young man has been completely untroubled by the world.

We quite agree with Dr. Rappleye that, of all professions, doctors should be most thoroughly educated in the facts of life, in the strains and stresses of human existence, in the intangibles that make one patient react in such a diametrically opposite way from another, both apparently afflicted with the same complaint. Finally, we never forget the pathetic inquiry of a doctor from the far West who asked, "Isn't there any medical school any more who trains doctors to be doctors just because they like to look after sick people?"

We don't quite see how our medical students are going to have the time and the money to measure up to Dr. Rappleye's ideal. And if they did, we fear that their very possession of both would prevent them from being the broad type of humanitarian that he and we envisage. The razor edge of kindness and understanding is honed upon the grindstone of struggle, deprivation, and experience of every phase of human life.

We venture a suggestion. Let our perfect young man who has never failed an examination, never had a financial worry, never had a sentimental yearning, go into a practice in a small town. He will there find out in the shortest possible period of time the answers to the two essential questions: What does he think of people, and what do people think of him?

He will miss the refinements of laboratory examinations on which he has been accustomed to rely as a substitute for his five senses. On the other hand, he will be able to dispense the wonder drugs to which the population of his somewhat isolated community has probably not yet become accustomed, so that, by and large, the mortality of the town will not be adversely affected.

We pose these remarks hoping that they may stimulate someone to answer the question as to how a young man of the present generation is going to get sufficiently educated and have enough years left over to become the kind of doctor that he would like himself to be—the kind of doctor for whom the public, for so many years, has been praying.

Man is the only animal that drinks without being thirsty.

A New Language for Medicine? Doctors should have available a "plain working language" with which to explain to patients what is the matter with them and what the doctor proposes to do about it, the *Westchester County Medical Bulletin* says editorially.[1] Otherwise, "the day may soon come when, on the basis of its alleged jargon or jabberwocky, the profession may be adjudged 'high hat' and be classed with professional politicians whose 'gobbledygook' has set them laterally in the seats of the mighty, sematologically speaking."

---

[1] New York Times, July 23, 1950.

Says the New York Times[2]—

> The bulletin insists that the use of complex medical terms by doctors is not intentional, as many patients believe, but is in part because of the growth, for example, of many new synthetic chemical substances and the resultant creation of synthetic nomenclature. Defensively, the editorial points out that medical language reflects its long history and, necessarily, has had to be compounded of Latin and Greek terms "to which have been added in the course of time accretions from other sources."
>
> The needed simplifications, the editorial concludes, probably will be based on the plane of the "comics" or the language content of the "movies" and video programs.

The problem, it seems to us, is no simple one but yet is everyday more needful of a practical solution. If it is not solved somehow, language difficulties will assuredly lead to professional isolationism, the net effect of which can well be a contributing factor to poor public relations for medicine. We concede that science as such needs an exact language that means precisely what it says. Developed to its logical extreme through the ages, such scientific communication can become almost meaningless to nonscientific people. It is here that the patient becomes lost, and the practitioner of medicine becomes alien to the public.

We do not know the remedy. We do feel that the problem should be studied, for medicine has to deal with people, most of whom are nonscientists and all of whom want to comprehend.

---

[1] June, 1950, p. 17.
[2] June 19, 1950.

A refined taste depends upon sensibility for its acuteness, and upon judgment for its correctness.

Health Expenditures. A government "Survey of Current Business" by the Department of Commerce discloses some interesting figures on current consumer expenditures for 1949.

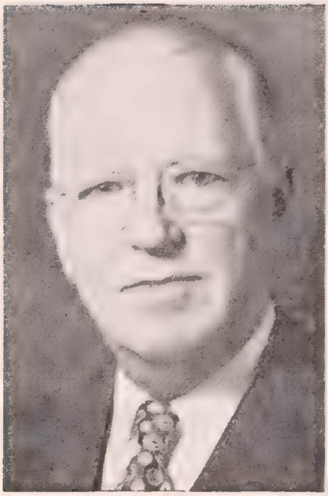
According to the report there is evidence that only about one third of the money spent for health purposes goes to physicians in payment for their services. The report says that about 1.2 per cent of all money spent by American families for consumer goods and services goes to doctors of medicine. On the other hand, 2.06 per cent of the total goes for other health expenses.

During the twelve months physicians received $2,267,000,000. During the same twelve months Americans were spending $1,391,000,000 on drugs, $105,000,000 on private nurses, $416,000,000 on ophthalmic products and orthopedic appliances, and $1,631,000,000 on private hospitals. Incidentally, if nonprivate hospitals were included—U.S., state, and local—the hospital costs figure would be several times as high, with a subsequently greater difference between payments to physicians and payments for other health services.

This JOURNAL has long advocated the distinction here made. The public rarely troubles to distinguish the difference between professional fees and other costs of medical care. It would seem advisable to present more frequently in the public press such a breakdown of costs, to avoid misunderstanding.

The report goes still further into detail. Several other comparisons are interesting. For instance, $395,000,000 went for such burial items as cemeteries, crematories, monuments, and tombstones. This figure, according to the survey, just about equals the "net amount" spent for accident and health insurance. It is almost four times as great as expenditures for private nurses, and it is found to total almost half the amount paid to dentists.

Doctors and Civilian Defense



The trend of events today indicates that we are moving closer to the time which all the world dreads—the time when full scale atomic warfare may break out. As much as we regret this, and as much as we hope that such a disaster may be averted, we dare not delay any longer in taking the necessary steps to be prepared.

Our armed forces have the responsibility for military defense. Civilian defense, however, is *everybody's business*, and the physicians' role is indispensable in the program. Should an atomic bomb strike in our midst, thousands of people will turn to us for help. They will need the skill of professional men with special training in the latest method of administering to bomb casualties. It will be a time to test all of our resources, and the lives of thousands will depend upon how well we are prepared.

With this in mind, the Medical Society of the State of New York, the State Department of Health, and the medical colleges of the State have worked out a program of postgraduate instruction in the handling of atomic bomb casualties. The purpose of the program is to give every physician the opportunity to familiarize himself with the emergency treatment of atomic bomb victims.

When this is published it is hoped courses will have already started in certain areas and others will follow rapidly. They will be of short duration—only two sessions of approximately three hours each—and they will be held at locations less than twenty miles travel for most doctors attending. The courses will be supplemented by films and other teaching aids, and all physicians taking the course will be registered and given a certificate. Dr. Carlton E. Wertz, president of the State Society, wrote to the presidents of all the county medical societies early in August, requesting that this information be given to all physicians in their respective counties and urging their participation in the program.

The Committee on Emergency Medical Preparedness strongly endorses President Wertz's recommendation that all physicians take these courses. The time involved is short. The knowledge acquired is important.

While the threat of an atomic explosion is greatest in the metropolitan area and the larger cities of the State, and it is there where the casualties would be highest, we wish to remind our colleagues in the less populated sections of the State that their services will be required should a bomb deplete the medical resources in the larger cities. For this reason we feel all physicians, regardless of their location, should take the course.

Our duty is clear. As long as the threat of atomic warfare hangs over us, we must prepare for it. In days gone by it was sufficient for defense to build a moat about our castle. Today the situation has changed, and modern warfare requires that we also construct a moat within the castle. The strength of the *inner* moat will depend upon how well our civilian resources are mobilized. Our part in the program will require cooperation with the State and local health departments, the hospitals, the nursing profession, pharmacists, pharmaceutical manufacturers, and any other agency that can assist us in our work.

John J. Masterson, M.D., *Chairman*
Special Committee on Emergency
Preparedness

DEVELOPMENTS IN PUBLIC HEALTH

From the New York State Department of Health

William A. Brumfield, Jr., M.D., Editor

New Procedure for Physicians Applying for Inclusion in the Specialist Roster of the New York State Department of Health

The procedure governing the application of physicians for the specialist roster of the New York State Department of Health was revised at a recent joint meeting of the Council Committee on Public Health and Education of the Medical Society of the State of New York and representatives of the State Health Department. This roster of specialists indicates physicians who may provide special clinical, consultant, or educational services to several programs of the Health, Education, and Social Welfare Departments. The procedure which appears on the reverse of all application forms is printed below. Applications may be obtained from the New York State Department of Health, Albany, New York, or from your county, full-time city, or district health officer.

Application for Enrollment for Specialist Service

The public health programs administered by the New York State Department of Health require the participation of highly qualified specialists in the various fields of medicine. These specialists serve as consultants and educators, and in many instances provide clinical services calling for unusual degrees of training and experience. The Department maintains its own specialist roster listing the names of physicians approved for these programs.*

Requirements for Approval for Specialist Service

Physicians may qualify for the specialist roster under any of the following categories. These requirements have been agreed upon by the Medical Society of the State of New York and the State Department of Health.

1. Certification as a diplomate or licentiate of a specialty board.
2. For physicians who have been graduated from medical schools since 1935, training and experience similar to those required for admission to the examination of the specialty board. In the main, these consist of:
    - (*a*) Graduation with degree of Doctor of Medicine from a recognized medical school.
    - (*b*) At least one year of internship in an accepted hospital.
    - (*c*) Residency in the particular specialty in a hospital approved for residency training by the Council on Medical Education and Hospitals of the American Medical Association. The duration of the residency required varies in different specialties from two to four years. A full-time, carefully-supervised preceptorship may be credited toward no more than one of these years. A full-time fellowship in an approved medical research institute or teaching center may be credited toward one or two of these years.
    - (*d*) Two years of additional study or practice limited to the specialty.
3. For physicians who were graduated from medical schools in or prior to 1935, appointment to position of attending, associate, or visiting physician on the staff of a hospital offering an approved residency in the specialty; or equivalents of the above listed requirements considered by the Medical Specialty Advisory Committee of the Medical Society of the State of New York as qualifying for specialty practice.

Procedures for Filing Applications

1. Any physician who considers himself eligible, according to the requirements listed above, is invited to complete the application on the reverse side of this form and submit it to the special committee on qualifications of his county medical society. (Application forms are available at all district State health offices and local health offices with full-time health commissioners.)
2. After the chairman has indicated the recommendation of the committee, the secretary of the county medical society will forward the application to the district State health officer or the full-time city or county health commissioner having jurisdiction over the area of the applicant's residence. The health officer or commissioner will pass the application to the State Department of Health with his own recommendations.
3. The State Department of Health, which is charged by law with establishing and maintaining standards for each of its public health programs, is responsible for final action on the application. All applicants will be informed directly by the State Department of Health of the disposition of their applications. Physicians whose qualifications are clearly consistent with the requirements will be referred to the Medical Advisory Committee of the Medical Society of the State of New York for recommendation.

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* The State Department of Health specialist roster is utilized by the Division of Vocational Rehabilitation of the State Education Department and by the Bureau of Vocational Rehabilitation of the Blind, State Department of Social Welfare. Other official agencies utilize their own specialist rosters, for which the criteria and procedures for approval may be quite different.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
September 27	Fourth	Cambridge	Afternoon and evening (dinner)
September 28	Third	Hudson	Morning and afternoon (luncheon)
October 4	Sixth	Statler Club, Ithaca	Afternoon and evening (dinner)
October 5	Eighth	Hotel Statler, Buffalo	Afternoon and evening (dinner)
October 18	Ninth	Hotel Thayer, West Point	Afternoon and evening (dinner)
November 1	Second	Garden City Hotel, Garden City	Afternoon and evening (dinner)

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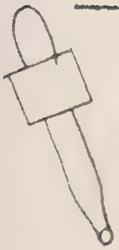

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Scientific Articles

HEALTH AND MEDICAL SERVICES FOR AGRICULTURAL WORKERS IN THE TROPICS

EDWARD I. SALISBURY, M.D., F.A.C.S., New York City

(*From the Medical Department of the United Fruit Company*)

IN THE economic operation of a tropical industry one cannot divorce welfare from purely medical services. One is dependent upon the other. The well-being of the worker is dependent upon his health, but the converse is economically possible only when the welfare of the worker is given first consideration.

Many successful industries have been lauded by the public for their paternalistic dealings with labor and praised for philanthropic programs in the communities in which they operate. On the other hand, less fortunate or struggling organizations condemn the first for establishing precedents that, they say, will only lead to smaller profits and ultimate losses.

This latter mode of thought is as false as declaring that money spent in advertising will only bring diminished returns. Neither business nor individuals can expect a continuous and prosperous existence by working solely for personal and selfish objectives. They must function as useful units of society in general. Corporate industry has an obligation to its workers and to society, as well as to its shareholders. The kind of philanthropy that insists on providing for the well-being of its workers is not only a virtue—it is a basic law of survival. Industry should not, therefore, impute to itself any high degree of morality in merely fulfilling its obligations. It pays dividends: dividends in wealth, in good repute for fair practice, and in the acclaim of competitors and associates alike. Today this is known as "good public relations."

Success in an agricultural venture in the tropics depends primarily upon the stabilization of labor, which makes it economically possible to build up a healthy labor force and to control disease. When one considers the environment of a tropical plantation, he can readily see that the problem is not merely one of providing adequate medical service. The laborer and his family would not be content to remain long in an isolated region and would seek work in more exciting surroundings. This would lead to a high turnover of labor. If one were attempting a program of disease control, he would soon find that it would eventually be necessary to treat a large proportion of the general population in the entire area in succession and to re-treat many who would become reinfected outside of the plantation boundaries.

Environmental and working conditions on the farms must be made more attractive than those prevailing in other employment localities. Laborers must be provided with respectable and adequate housing, schools, churches, recreational facilities, market places for fresh foods and meats, commissaries for their necessities and minor luxuries, and, above all, with sanitary surroundings, disease control, and health services. The laborer should be paid a living wage, and this is usually higher than is paid by native industry. These are the requisites of stabilization.

It must be remembered that labor is not always indigenous to the low tropical areas, and must therefore be recruited from the highlands of the interior. This poses an important problem in nutrition. In their new environment and cut off from instinctive selection of their normal foods, they fall prey to a diet foreign to custom. With a natural tendency to be economical in their purchases and with an ignorance of food values, they contract many deficiency diseases and are thus more susceptible to infectious ailments. Therefore, in providing a complete home for the worker, space must be allotted for his garden, chicken-runs, and pigsties, and for pasturage for those who possess a cow. Fruit trees should be planted throughout the farm areas in sufficient numbers to supply all with free fruit. Recent studies have shown that, where there is a natural selection, the native diet is adequate, even though the proteins are of cereal or leguminous origin.

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This is easily supplemented by meat, with the butcheries under company control.

This year the United Fruit Company celebrates its fiftieth anniversary. Fifty years is a relatively short period in which firm foundations can be laid and upon which traditions are built. Nevertheless, this Company had its beginning in an era when ports were closed by yellow fever, plague, and smallpox, and it became evident very early that economic disaster could be averted only by an effective medical service.

The founders, who were pioneers in tropical engineering and agriculture, had seen the French Canal fiasco in Panama, the human and financial failure of the Madeira-Mamore Railroad in Brazil, and many other adventures collapse in the tropics. In our times, it seems but a natural prelude to any tropical undertaking to consider first things first, but fifty years ago, except to the initiated few, only three prerequisites seemed necessary to the idea. They were financial backing, a will to work, and a strong physical constitution. It was, therefore, an exception that the founders of the Company had the unusual foresight to improve the working conditions by health and sanitary measures. At the same time, they provided churches and schools and proper living quarters for the laborers.

Quoting from the first Annual Medical Report of the United Fruit Company, we find these lines: "Another factor in promoting health conditions has been through the education of the laborer. He has been taught that all measures toward screening houses, draining stagnant water, and other means of exterminating mosquitoes is a certain cure for 'fever.' He has also been taught that prompt and efficient medication from the dispensers of the hospital service, who are always available, will in most instances prevent a trip to the central hospital. The Company has provided schools and churches as a means of securing a better class of labor, and the plan is eminently successful. With a good job, a house, and garden where the laborer can raise garden truck and fowls, he is happy. These measures promote contentment, and a contented mind is an asset toward good health." Thus was born an idea that has become a tradition of the United Fruit Company.

Teachers for native schools are obtained from government sources, but their salaries are paid by the company. Churches are provided in central districts and port towns, and services are held at regular intervals in the farm centers. Homes in these centers are usually built around a recreation field, and sports equipment is provided. Moving pictures are made available, and this gives an opportunity to exhibit health or educational propaganda.

Small markets are located at readily accessible points where the ambitious may sell their surplus fruits and vegetables. Butchering is done on regular days to provide a variety of fresh meats at low cost.

The commissaries supply not only staple foods but also ice, iced soft drinks, and beer, and minor luxury items that are incentives to regular work.

All of these things assist in making labor content and stable.

The financial security of the worker is provided for by pension and compensation plans of the operating company. This is often affected by existing laws in the countries in which it operates. The pension system that provides pension and insurance is usually a cooperative plan on the part of the employer and employe. Workmen's compensation is usually covered by the employer alone. In countries with social security laws it is combined into a government-employer-employe cooperative plan, each contributing various percentages of the pay roll. The government plan is the most costly because of top-heavy administrative expense and high compensation claims. The latter is brought about by disinterested treatment and care by government agencies.

The principles governing sanitary and medical services should be clearly outlined. They comprise only one department of a vast enterprise and should work in harmony and cooperation with all other departments. Without harmony, little will be accomplished, for many of the projected health measures may be vitiated by ignorance, resistance, or resentment if the medical approach is dictatorial or high-handed.

It would be poor administration, for example, to include autonomous engineering in the sanitary services, since it most certainly would conflict with the engineering department in charge of the irrigation projects. Results are only obtained by close cooperation and an understanding of each department's plans and problems, from the executive to the division of buildings and grounds. Every effort must be made to see that your company coworkers understand your problems and the reason for them. They must be made to understand that preventive medicine is more important and costs less than curative medicine and that it means saving lives and preventing illness and loss of time. They must be made to understand the benefits to be accomplished from the proper sequence and location of construction.

To be brief, these may be enumerated as follows:

A pure water supply, either temporary or permanent, should precede the mass entrance of labor to any projected camp site or town site.

This applies also to sanitary facilities. Adequate temporary toilets should be provided for the workers, and permanent facilities should precede the construction and occupation of permanent quarters.

Camp and town sites should be selected because of natural drainage and remoteness from insanitary hazards. Camp sites should be graded before construction. The grading should be turtle-back fashion, which permits of dispersion of rain water and eliminates ditches that are expensive to maintain.

Irrigation canals should have proper gates for changing water levels for the periods that they are not in full operation.

Drainage canals should be provided with automatic gates or siphons to permit alternate filling and flushing. These devices save oil and labor in larvicidal control and cleaning.

These few measures will not only save money, if they are a primary and not a secondary consideration, but will also prevent illness from water and fecal-borne diseases as well as from malaria, which is of prime importance.

Mosquito-control procedures are more or less standardized the world over, but the use of D.D.T. and the other new insecticides may alter much of this control work and possibly eliminate the necessity of screening laborers' quarters. At present residual insecticides are applied externally and internally to all labor camps. Since these camps are usually raised several feet from the ground, and the space beneath is utilized as dining and sitting rooms during the day, the substructure is also treated. The application of this residual insecticide is timed to the wet and dry or dust seasons in order to get optimal results. Temporary and other mosquito-breeding areas which cannot be economically eliminated are treated with the same insecticides, which increase the time effectiveness over the older larvicidal agents. The mosquito index is checked by room counts and by mule traps.

Various methods of applying these new insecticides and various solvents and suspensions are used, depending upon the surface to be sprayed, such as brick, adobe, rough wood, or painted surfaces. Hand pumps, electric pumps, steam generating sprays, and various fog machines are being utilized for this work.

Dairies, slaughterhouses, garbage dumps, and garbage cans are treated at regular intervals, resulting in the practical elimination of flies. Occupants of the camps are anxious to cooperate on spray day, as this program gives them sleeping comfort and freedom from vermin.

The old-fashioned rural latrine has been replaced on practically all farms by the water closet with septic tank. In labor camps these are installed in batteries of three baths and three toilets. An automatic siphon or dump bucket is located on the upside, as are the shower baths, which also assist in the flushing. Where such communal services are used and everybody's business is nobody's business, it is necessary to keep them clean. This is done twice daily by a sanitary laborer whose other duties consist of policing the grounds, sweeping down the cement-lined kitchen drains that run along the rear of the kitchens, and emptying the garbage cans.

The duties of the sanitary inspectors include those common to any health department, such as inspecting mess-halls and kitchens, canteens, clubs, dairies, markets, cold storage plants, and other services. They regularly send specimens of milk and water to the laboratory for examination. The departments involved cooperate with the sanitary inspectors in taking corrective measures.

The medical service consists of a base hospital, field dispensaries, and, in certain areas, ambulant dispensaries.

The base hospital is equipped and staffed to take care of all ordinary medical and surgical emergencies. A complete and well-functioning laboratory is important, not only to the patient but to disease control. Dispensaries in the larger centers should be under the direction of a well-trained physician, and emergency beds should be available for patients awaiting transportation. Emergency or ambulance transportation to the hospital is best provided from strategically located stations in the farms area. Farm dispensaries can function satisfactorily under a well-trained and guided dispenser. He is responsible not only for the dispensary itself, but also for the welfare of the camp in health matters. He should make daily house-to-house visits and room-to-room inspections to see that no one confined to quarters is unreported when sick or goes without medical service. Early treatment and care frequently prevent the development of a more serious illness and consequent additional loss of time.

The hospital's outpatient clinic is receiving more attention than formerly. Previously, because the hospital provided bed and board, admission was a matter of convenience. Today there are more married employes with homes, and guest houses provide quarters for visitors and patients from the farms, and even laborers find lodging with relatives and friends in town, while attending the clinic.

Pre-employment examinations of both laborers and other employes are an economic necessity. Chest examination by photoroentgenograph, now being extended to the tropical employes, will, no doubt, bring new problems in regard to proper disposition of present employes with lung infections.

Trained employes are more valuable to an organization than new employes, and periodic health surveys may prevent many physical disasters and prolong the working life and capacity of faithful workers.

Regular mass surveys for malaria by thick blood smears give an index of the effectiveness of control measures. Positive malaria patients discovered in the hospital and dispensaries are reported to the sanitary inspectors. These reports often permit inspectors to locate new breeding sites of anophelines and to eliminate them before they get out of hand.

Another important service is the children's department in the hospital. It is necessary not only to treat the children, the workers of tomorrow, but to train the mothers in the proper care and feeding of children. In some of our company's divisions this service has been extended to the farms through welfare nurses.

The hospital and our company schools have done much toward bringing hygiene and a sensible knowledge of health and diseases to the children who have grown up to be the fathers, mothers, and workers of today. The simple tenets of hygiene and diet, the transmission of disease, the procedures of sanitation, and disease-control measures are now understood and accepted. The grandparents were not so easily trained, and more often obstructed any measure meant for their own benefit. Indeed, sanitary regulations had to be enforced. A high infant mortality was accepted as a natural occurrence.

All these things have changed. Our survival is proof that the physical and moral welfare of the worker is not an imponderable asset but, rather, one that favorably tips the balance toward successful business. Granting that the outlay for sanitary and medical services is a part of production costs and that industry always endeavors to reduce its unit cost by the introduction of streamline methods, it cannot be said that preventive medicine, disease control, and medical treatment have not kept apace from the fiscal viewpoint.

Aside from the fact that improved health conditions have made for more efficient workers and hence a more productive working day, the cost of these services is less as the advances of science are applied. This statement may seem paradoxical in view of the increased costs in wages, new drugs, complicated hospital apparatus, machines and chemicals for sanitary work and even the cost of feeding patients, but the following examples are pertinent:

Our company now builds only about one fourth of the housing for its laborers that was necessary twenty or more years ago, because a full force now turns out for work every work day.

In 1949, the cost of medical and sanitary services was over a million dollars less than it would have been twenty years ago with the 1949 volume of labor.

To practical men asking for costs and statistics, this generalized report might be found wanting. However, if concrete evidence is desired, the following figures will, perhaps, meet this requirement:

In 1949, our company had an average of 90,976 tropical employes, with 130,884 members of their families, making a total of 221,860 dependent upon our medical department for service. There were 1,830 hospital beds available, with an average of 1,481 occupied daily. The cost of medical service was $2,971,459.63 and of disease control $304,220.97—a total of $3,275,680.60. This represents 4.5 per cent of the tropical payroll. The cost of these efforts in health and sanitation is well within the financial scope of profitable venture, and the results have justified the expense.

There were 256,041 hospital days for employes and 283,333 for nonemployes, a total of 539,374. The average number of hospital days per employe per year was 2.81.

There were 630,508 dispensary treatments for employes and 483,871 for nonemployes, or a total of 1,114,379.

The admission rate for employes was 354 per 1,000 per year. This is probably high, but it must be remembered that our employes freely exercise their right of entry to the hospital.

The average number of employes in the hospital each day was 7.73 per 1,000.

The average number of employes receiving dispensary treatments was 19.04 per 1,000 per day.

The executives of the United Fruit Company realize that sick employes are unproductive and that economic advance depends upon production. Therefore, they are not only agreeable to, but insistent upon medical and sanitary standards that promote the human dignity and welfare of the laborer, protect his health, and provide optimum living conditions for him and his family. They feel not only that it pays but that in making these expenditures they are fulfilling a duty to their stockholders by conducting a successful business for them.

Discussion

Kenneth R. Fourcher, M.D., *New York City.*—Dr. Salisbury's remarks coincide, in general, with the views that we in the Medical Department of Standard Oil Company of New Jersey have held for a good many years.

A doctor in industry should realize that any company is vitally interested in getting the necessary work performed, and to do that they must have healthy workers. The medical program that pays the best dividends for the money invested is that which uses every phase of preventive medicine. One affiliate in South America presented an opportunity to show what splendid results can be obtained in antimalarial work. For as long as this company had records, there was an average of 450 cases of malaria each month. A residual D.D.T. spray campaign was inaugurated, and within six months the rate had dropped to 20 per month, and a year later it had dropped to 12, a level that has been maintained for the past year. This eliminated much suffering and enabled the employe to increase his efficiency. Furthermore, it permitted the company to close about 50 hospital beds which had been used entirely for the treatment of malaria. As Dr. Salisbury has pointed out, the cardinal points of preventive medicine are a pure water supply and adequate sewage facilities. Also, garbage disposal, proper drainage to prevent mosquito breeding, sanitary slaughterhouses, and other sanitary facilities are of extreme importance. On the clinical side, food handler examinations have been very valuable in lowering the incidence of amebiasis.

In the Jersey Standard and affiliated companies, periodic physical examinations are performed on employes at intervals in accordance with their physical condition and age and permit the practice of "constructive medicine." This means that many diseases can be discovered in their early stages when favorable results can be expected. It is by emphasizing preventive and constructive medicine that it is possible to keep the curative phase of medicine at the lowest level. Certainly, it is far better to keep people in good health and out of the hospital than to practice purely curative medicine.

In the program of constructive medicine it is felt that the use of well-placed ambulant clinics is desirable, and it is at this level where education can be given regarding sanitary measures and hygiene. If these clinics are equipped with x-ray and laboratory facilities, a great deal of treatment can be done efficiently and well, and it is quite feasible to decrease the hospital burden.

Good medical service can easily be justified from a purely economic standpoint. Every progressive business must maintain an adequate medical service in order to operate efficiently in the tropics.

APPRAISAL OF INDUSTRIAL HEALTH EXAMINATIONS

Frederick H. Shillito, M.D., New York City

(*Medical Director, Atlantic Division, Pan American World Airways, Inc.*)

THIS discussion is concerned with health maintenance of selected groups of industrial employes who present no special exposures which are specifically detrimental to health. Control of radiation hazards, lead and benzol exposures, etc., are toxicologic problems often requiring extensive and highly specialized medical technics. Here, however, we are concerned about natural processes which constitute morbidity and mortality in the general population. No medical director in industry is willing to ignore these health factors. Industry stands ready for an assault on disease and illness in so far as it can be approached through industrial medical services already in existence. These plans are called health maintenance programs.

An industrial health maintenance program, as far as physical examinations are concerned, consists of periodic (calendar date) examinations plus consultation service between employes and industrial physicians. These latter appointments are made at any time of the year at the request of employes. Invariably they are made when an employe has any of a wide variety of symptoms which are disturbing his peace of mind.

The objective of industrial health examinations is to increase capacity to work through health improvement. This definition is succinct but adequate. It implies an advantage to the individual as well as to the employer. It means that health of the individual is raised to the highest possible level that can be reached. Obviously individuals vary, and it is impossible to maintain perfect health on every individual. There is always some pathology which is existent and not subject to improvement.

Periodic Examinations Results

At this point it should be stressed that we are limiting the discussion of industrial health maintenance to examinations which are subsequent to thorough preplacement physical examinations. It is obvious to all that many pathologic states are uncovered at original examinations and that improvement of these states is conducive to improved health of the individual and increase in the capacity to work. There is such a unanimity of opinion as to the positive value of preplacement examinations that there is little

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room for discussion, and we are not devoting ourselves to this matter at all.

Assuming thorough preplacement examinations have antedated periodic "calendar" examinations, we find these latter do not regularly turn up highly significant pathologic states. Such conditions as we shall see are far more frequently discovered in the second type, or consultation examinations. The actual results of periodic health examinations have been discussed in the medical literature. It has been reported by Dr. H. J. Johnson, medical director of Life Extension Examiners of New York City, that only 18 per cent of examinees could be declared to be normal after a periodic health examination.[1] These figures were based on examinations of 1,000 apparently healthy executives. Kuh has stated that, while periodic health examinations do disclose many abnormal findings, the actual importance of these results is questionable.[2] We are all familiar with the same facts. There is no denying but that four out of five examinees will be found to show some urinary changes, variations of body weight from the standard, electrocardiographic changes, or chest x-ray findings. Many of the changes found in four out of five men are of only passing interest, and attention to them has no proved value in regard to mortality. In our experience, urinary changes, findings of overweight, and chest x-ray patterns have proved to be the most valuable of the changes detected in periodic examinations.

Any industrial physician could cite cases where a periodic health examination has disclosed glycosuria substantiated by elevated blood sugar, cases of inadvisable weight gain, and shadows in the chest which have changed. These matters can be detected at a periodic examination without any previous symptoms whatsoever. The following is an example of such a sequence of events.

Case 1.—In this case the original examination was in 1943. Slight x-ray changes in the root shadows of the lung were detected, but in the opinion of one of the best known chest specialists in the country the shadows were of no clinical significance. The patient was allowed to work and over the next five years was given check-up examinations with particular attention to the pulmonary areas. The lesion remained quiescent. In January, 1949, he appeared for his annual routine health examination. The chest x-ray disclosed for the first time evidence of activity at the right apex. This is a clear-cut example of a "silent" lesion. Had the periodic examination not been scheduled, he would not have consulted a physician for several more months, and the lesion would have progressed to a point where it could not be controlled by a few months of specific treatment which was all that was necessary.

Periodic calendar examinations, as practiced by industrial physicians, vary widely in extent and thoroughness. Before deciding on the kind of periodic examination to carry out routinely, it is important to know in advance what are the concrete aims and desired results of the program. Periodic examinations fall into certain categories and can be designed to accomplish one or more of the following objectives:[3]

1. *Establishment of a friendly contact and rapport between the industrial physician and employe:* During an unhurried quiet consultation period, the physician and employe discuss the importance of thorough medical investigation of any disquieting symptoms which may appear at any future date. It is explained that the original preplacement examination of the employe will always serve as a baseline with which the results of any future examinations can be compared.

2. *Discernment of the commonest correctible deviations from the norm,* such as condition of teeth, skin, weight, acuity of eyes and ears, blood pressure, and errors of personal hygiene: When a physician personally examines a patient, the results of such an examination are limited to fairly simple findings. Such an examination should never be represented as a thorough health appraisal. It will almost never uncover incipient disease or the early stages of serious disorders.

3. *Detection of chronic debilitating conditions,* such as chronic infection of lungs, prostatitis or pyelonephrosis, anemia, cardiac disorders, or gastrointestinal pathology: In order to uncover disorders of these kinds, it is necessary for the examining physician to have at his disposal aids such as clinical pathologic laboratory, x-ray equipment, electrocardiograph machine, etc. The physician restricts such investigations to cases where the history gives some suggestion of the disorder. This is the philosophy of the usual diagnostic medical study of a practicing physician.

4. *Discovery of early and incipient diseases by the employment of highly technical procedures:* Examination programs of this kind are based on the proposition that any group, if large enough, is harboring a certain number of disorders which may or may not be accompanied by symptoms. For instance, it is known that 1 or 2 per cent of the general population is harboring tuberculosis of the lung in an incipient, latent, or active stage. Probably 0.5 per cent of the general population has actual diabetes or a tendency toward it. A program can be set up for any pathologic condition and consists of applying to every individual an extremely thorough study to discover the one or two actual cases in the group. Case-finding studies are not personalized. As far as the individual is concerned, he learns only that he is free of one selected disorder only at the

time of the wholesale examination. He is given no assurance that the disorder will not develop in his case at a later date.

The most dramatic findings in an industrial medical department are in employes who voluntarily come to the office as a result of symptoms which are disturbing. It should be borne in mind that these men willingly and cheerfully and without apprehension come in for advice at such times because of their familiarity with the medical department and with the industrial physician, such familiarity having been established over a number of years through periodic calendar examinations. It is presumable that, were it not for this rapport between the industrial physician and employe, that request for consultation would often be postponed and delayed. Naturally, in most cases the symptoms reflect some minor disorder and require no extensive study. Not infrequently, however, the nature of the symptoms directs a thorough investigation of some organ or organs. Such investigations are followed by the disclosure of true significant pathology at a rate far higher than is routinely found at calendar type examinations. The following are examples of such cases.

Case 2.—This story starts in September, 1939, when our man was twenty-eight years old. He received a thorough preplacement examination by an expert examiner. Laboratory studies included urinalysis, blood counts, serology, stool examination, basal metabolism, electrocardiography, and fluoroscopy and x-ray of the chest with precise measurements of the heart. No one could say that this was a casual examination. A great deal of time was devoted to the individual. For all practical purposes the examination showed an absolutely normal healthy individual with a normal life expectancy. Very thorough and comprehensive health examinations were given this individual approximately every six months over the next nine years. During this period he undoubtedly benefited by advice on health habits and attained a self-consciousness in regard to his personal health, but no clue in the health examinations was given for the appearance of the most dramatic event in his health history in the spring of 1948, when he came into the medical department with a palpable lymph node in the axilla which revealed Hodgkin's disease on biopsy. Less than six months before he had been given a careful, complete, comprehensive physical examination with laboratory and x-ray studies. He had no complaints except a chronic sinusitis and a desire to be transferred to another part of the country because his wife was suffering from asthma.

Case 3.—As in the second case, this individual had received the benefit of comprehensive health examinations on the average of twice a year over a fifteen-year period. There is no question that because of these examinations his health was modified in the direction of weight control and alleviation of emotional stress by a large number of conferences in the field of mental hygiene. The dramatic moment in his health history was in August, 1947, when he sought help because of a sense of heaviness in his chest and difficult breathing. Within five or ten minutes it was possible to determine the presence of pleural fluid and x-ray shadows characteristic of metastatic cancer. He had received a complete examination only six months before with complete blood studies and x-ray of the chest; they were completely normal. In the months that followed, before his death, the most extensive studies in several hospitals failed to disclose the primary site of the tumor. It is obvious that nothing was missed at the periodic health examinations six months before, although it is conceivable that he was harboring an early cancer.

Summary

Periodic calendar health examinations augmented by nonscheduled voluntary consultations between employes and industrial physicians have been discussed. It is seen that certain factors, such as weight changes, urinary findings, and x-ray patterns, are especially important at periodic examinations. In addition, these examinations serve to establish a good rapport between the individual and the industrial physician. Because of this association the individual feels no reluctance in consulting the friendly industrial physician when he experiences any disturbing symptoms. He does not wait for his next scheduled examination. The discovery of really dramatic and significant events, such as the development of neoplasms, intestinal hemorrhages, or heart attacks, is made at the nonscheduled examinations far more frequently than at the calendar examinations.

It is seen that the health maintenance program is deficient if it does not provide for both kinds of medical services. Periodic calendar examinations and voluntary consultation service augment each other in a program designed to improve industrial capacity through improvement of individual health.

180 Fort Washington Avenue

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Discussion

Robert Rehm, M.D., *New York City.*—Dr. Shillito, with his broad experience in the planning of industrial health programs, has given a really basic appraisal of the various types of industrial health examinations as performed today. He has pointed out their limitations and their advantages and by doing so has taken some of the "gilding off the lily" and provided thought for constructive planning whereby the industrial physician and surgeon can provide more adequate medical benefits for the individuals with whom he is concerned.

It is a primary assumption that most industrial medical departments have been formulated as a preventive measure to reduce illness and injuries among individuals in industry by periodic examination, voluntary examination of the individual, care and treatment of the emergency conditions as they arise. In this discussion, since Dr. Shillito has limited his remarks to appraisals of industrial health examinations as pertaining to the nonhazardous occupations, I am necessarily limited in my opinion as to the true value of the various types of examinations. However, throughout all of industry the general trend of the modern medical department is to extend the facilities to those individuals in the nonhazardous positions by setting up a varied type of health maintenance program.

In industry, with the various industrial hazards which are of common knowledge to all of those present, the industrial medical department which is set up to handle such conditions will vary greatly; therefore, in extending the health maintenance programs to all individuals, there will necessarily be limitations of the type of examination and the extent to which it is carried dependent on the medical facilities on hand. Such a health maintenance program should be undertaken only after a very careful analysis of the needs of that particular group.

In view of Dr. Shillito's dissertation, the industrial physician must admit that the calendar or periodic examination has certain limitations to its true diagnostic value. I will make no attempt at this time to bring any particular case studies to point, as Doctor Shillito stated any industrial physician can point out case studies in which the periodic examination revealed true major pathology, and, on the contrary, we have observed cases following a completely normal periodic examination in which death has occurred without previous warning. I view these latter cases not from the standpoint of being reasons for discontinuing the periodic examination but of showing that we are lacking in our diagnostic procedures for revealing such conditions prior to their event. It reveals further the need for trained physicians with a real interest in industrial medicine plus more adequate diagnostic procedures.

The advantages of establishing rapport, of health and psychologic counseling cannot and should not be minimized. This rapport can be obtained only through thorough periodic examination. Moreover, if we assume that the periodic examinations are performed on a truly professional level by qualified physicians who are aware of the working conditions, and, in addition, if laboratory procedures are adequate, the real value of the periodic examination will then be seen. The physician will be able not only to establish the true basic "norms" for that individual, but over a period of time will be able to show basic trends which will be of assistance in health counseling and of diagnostic aid in the event of an acute emergency.

Again, in accordance with Dr. Shillito, the true value of industrial examination lies in nonscheduled voluntary examination. Through the rapport which has been built up over a period of time, the individuals in all occupations will have a true confidence in the industrial physician, providing a truly professional approach has been taken. The individual then unhestitatingly reports any minor changes in his physical condition. Where definitive treatment is necessary, this will aid the industrial physician in coordinating his findings of the established basic "norms" for that individual with the findings of the practicing physician or qualified specialist to whom the individual is referred, thereby aiding in early diagnosis of the true pathologic conditions.

One phase of industrial health examination which was not mentioned by Dr. Shillito but should be considered of major importance is the examination of the employe returning to work after a protracted illness. A thorough and complete examination at such time can aid materially in assisting the industrial physician to facilitate the rehabilitation of the individual and properly evaluate his ability in the various occupations. Rehabilitation in job evaluation with proper placement of the individual has been one of my major considerations, since it aids the individual to return to his normal income at an earlier time than would be done normally. This in turn aids the industrial concern in reducing costs due to longstanding absenteeism and increasing the efficiency of the entire organization.

In conclusion, it is my opinion that the only real source of establishing adequate medical control, whereby the individual can realize the true medical benefits of his industrial medical department, is through periodic and voluntary examination. These examinations should be carried out by trained industrial physicians, incorporating basic laboratory procedures and qualified analytic evaluation of the examination. Combined with increasingly efficient diagnostic aids and the accumulation of statistical information in regard to the various occupations, age groups, etc., this will make it possible for the industrial physician and surgeon to aid industry materially by reducing the lost time due to absenteeism and by increasing the work expectancy of the individuals concerned.

E'EN THEN—

The English Parliament passed the following law against the wiles of women: "That all women of whatever age or rank or profession, whether virgin, maid or widow, that shall from and after such act impose upon, seduce and betray into matrimony any of his Majesty's subjects by means of scent, paint, cosmetics, washes, artificial teeth, false hair, Spanish wool, iron stays, hoops, high-heeled shoes, bolstered hips, shall incur the penalty of the law now in force against witchcraft and like misdemeanors, and that the marriage, upon conviction, shall stand null and void." . . . They did—back in 1700!

SEROLOGIC TESTS FOR CANCER

Linn J. Boyd, M.D., F.A.C.P., New York City

(From the Department of Medicine, New York Medical College, Flower and Fifth Avenue Hospitals)

During the last quarter of a century no less than 70 laboratory tests have been introduced to aid in the detection or diagnosis of cancer. In a vast majority of these tests the material examined is blood, and the procedure involves the study of some chemical change, alteration of enzyme activity or physical properties or immunologic reaction. The largest contingent of blood tests is provided by those which determine gelification, turbidity, precipitation, or coagulation of serum or plasma proteins; determinations of antienzyme activity and physical alterations hold second and third places among the blood tests.

Until recently the status of these tests was relatively clear. Most of them had failed to survive preliminary evaluation, and others vanished after a brief period of popularity. At present, the situation threatens to become extremely confusing. New tests and modifications of old ones are appearing in greater numbers and at shorter intervals. Moreover, the procedures involve principles, nomenclatures, apparatus, and methods with which most physicians are not familiar. This statement may be illustrated by the mere enumeration of a few serologic tests for cancer: methylene blue reduction in the Savignac test; reduction of methylene blue and brilliant blue in the Black-Kleiner test; discoloration of serum by neutral red in the Roffo reaction; alteration of serum fluorescence in the Herly test; determination of antienzyme activity of the serum of cancer patients, utilizing tyrosinase, hyaluronidase, rennin, chymotrypsin, and peptidases; elevation of serum aldolase; changes in serum phosphatases in the presence of zinc ions in the Roche test; serum gelification; turbidity; chemical or heat coagulation; iodoacetate index; polarographic patterns; pentolysis, and many others. Since some of these tests are available in certain hospitals and others are performed by commercial laboratories, there is ample opportunity for confusion, and grave responsibility is involved in the interpretation of the results.

Because of the multiplicity of these tests, the employment of highly specialized technics, the time and energy required to reproduce the original experiments with exactitude, preoccupation with other problems, and belated realization that cancer may provoke systemic repercussions, a critical analysis of the various tests is not available, although one would be highly desirable. Nevertheless, enough evidence has accumulated to permit one generalization with some degree of assurance: Apart from cytologic methods, none of the new tests in their present form is sufficiently specific or sensitive to warrant serious consideration as a detection test for cancer in its manifold forms among the general population. However, these tests warrant diligent investigation, since they reflect some alteration of function, and, entirely apart from the study of cancer, they may provide significant information of a new order concerning metabolic abnormalities in disease. In this connection one may recall that delta 9-11 etiocholanolone is regularly excreted in the urine of patients with carcinoma of the prostate and is found very commonly in the urine of patients with lymphatic leukemia and cancer of the male breast and of the larynx, but it appears infrequently in the urine of female patients with cancer of the breast. Later, in discussing the thermal coagulation point of serum proteins, reference will be made to another interesting and seemingly significant observation of a metabolic abnormality not due to neoplastic disease.

Since clarification of a complex situation is desirable and a critical review seems premature, the present speaker considered it practical to approach this subject by a discussion of a single representative test at some length, partly to indicate its place in the detection of cancer and mainly to offer some suggestions which may assist physicians in evaluating similar innovations in the future. The test selected for discussion concerns deficient coagulation of serum proteins in cancer and the iodoacetate index of Huggins, Miller, and Jensen.[1] Briefly, in this test one determines the smallest amount of iodoacetate necessary to prevent gelification of serum heated to 100 C. for thirty minutes. By dividing the micromolarity of the iodoacetate used by the total protein content of the serum employed, one obtains the iodoacetate index. If this index is below 9, the test is positive. In 85 consecutive, clinically active cases of cancer a low index (less than 9) was found in all; of three other patients with cancer the index was higher than 9. In one of these an excision of an apparently solitary metastatic lesion had been done two weeks earlier, and, in the other two, carcinoma of the prostate was well controlled by antiandrogenic measures. Among 100

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normal individuals none had an iodoacetate index less than 9. The figure of 97 per cent of low indices in cancer patients contrasted strikingly with the zero per cent of healthy individuals. Huggins also noted that 16 of 95 patients with noncancerous disease also had an index below 9.

Sufficient time has not yet elapsed for a large number of workers who are employing the test to report their results on the basis of a convincing number of carefully controlled cases.* Owing to a fortunate circumstance, the present writer has had an opportunity to analyze the results of more than 1,700 tests of thermal coagulation of serum proteins in 1,340 patients; this compares favorably, at least from a statistical standpoint, with the 300 tests reported in Huggins' original paper.

The fortunate circumstance just mentioned deserves to be related. In 1936, my colleague, Dr. George Glass, who was interested in defective thermal coagulation of serum proteins, published his results of 400 determinations in a paper entitled "The Significance of Determination of the Thermal Coagulation Point for the Clinical Evaluation of Various Diseases and for the Diagnosis of Some Malignant Neoplasms."[5] During the succeeding years, 1,500 sera were studied by his method.[6–8] This consists of determining within 1 C. the amount of heat which suffices in one minute to coagulate serum to such an extent that the coagulum does not break when subjected to standardized shaking. The results in the Glass test are reported as normal thermal coagulation (negative result) and as 1 to 4 plus. Normal serum coagulates under the conditions of the test between 75 and 81 C.; this is called a negative result. Thermal coagulation between 82 and 84 C. is designated as 1 plus, between 85 and 89 C. as 2 plus, between 90 and 95 C. as 3 plus, and above 95 C. as 4 plus. Usually, when a serum does not coagulate at 95 C. when heated for one minute, it will not coagulate at 100 C., but some of them can be coagulated between 105 and 110 C. which is below the boiling point of serum. One plus reactions are encountered so frequently in a wide variety of conditions that they are considered borderline; only the 2 to 4 plus results are called positive.

As has been shown elsewhere the fundamental principal of the two procedures is the same. It will be noted, however, that in one test the duration of heating remains constant, while the amount of heat applied varies. The end point of the test is the formation of a coagulum with definite characteristics; for example, this coagulum will not break when subjected to standardized shaking, nor will fragmented particles enter a salt solution superimposed on the shaken coagulum. In the Huggins' test, one observes the prevention of gelification, an early phase of coagulation.[9] Time and temperature are constants, while the amount of iodoacetate is the variable. Since we are not concerned with the superiority of one method or the other, many details may be omitted, but it should be stated at this point that even with the "piano-wire technic," utilized in the simplified Huggins' procedure, the end point at times will be read at different points by different observers.

For purposes of comparison Drs. Glass, Dworecki, and myself tested 240 sera employing the Glass technic and the Huggins' technic simultaneously.[10] The two methods are in agreement in over 98 per cent of the positive cases and in over 95 per cent of the negative results. If one plots the defect in thermal coagulation according to the amount of heat necessary to coagulate serum, as well as according to the amount of anticoagulant required to prevent coagulation in the presence of the same amount of heat, the curves obtained indicate that it is immaterial which procedure is employed.

Huggins' suggestion to refine the reaction by introducing the determination of total serum proteins is interesting, but its advantages remain to be established. From 400 simultaneous determinations of the thermal coagulation point and of total serum proteins by Glass, it became evident that the thermal coagulation point may be low, normal, or high with a serum protein content between 6.5 and 7.5 Gm. per cent. While there is a trend toward higher normal thermal coagulation points with lowering of the total serum protein values, there is no absolute correlation between the two. When the total serum proteins are below 6.0 Gm. per cent, the thermal coagulation point seems to be decidedly increased.

Since the results obtained by the two procedures are in substantial agreement and the simultaneous use of both technics on the same sera fails to reveal any significant difference, statistically evaluated, it seems proper to utilize our rather extensive experience in thermal coagulation point determination in the discussion of this question. The important point of difference is that Huggins states the iodoacetate index is a "simple though rough screen" for cancer patients, while we believe that the measurement of thermal coagulation of serum proteins, irrespective of the method by which it is determined, is not appropriate on theoretic or practical grounds for screening cancer patients. In fact, it is more than doubtful whether the test should be considered a test for cancer at all. Some reasons for these assertions follow.

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* Since this paper was written, three articles have appeared on this subject. Bodansky and McInnes concluded that qualitative defects in serum proteins revealed by thermal coagulation tests is not specific for cancer but is one manifestation of reaction of the organism to noxious stimuli.[2] The percentage of error encountered by them is of the same order as that reported in this communication. Homburger *et al.* conclude that the iodoacetate index is useless and confusing as a diagnostic test for cancer.[3] Pollak and Leonard likewise conclude that the reaction is not suitable as a diagnostic test.[4]

In 85 patients with a malignant tumor of an abdominal viscus, defective thermal coagulation of serum proteins, graded 2 to 4 plus, was noted in 70.8 per cent; in 19 patients with tumors of the bones, thyroid, or prostate, positive reactions were obtained in 63.1 per cent. In 58 patients with carcinoma of the uterus, breast, skin, lip, tongue, or lung, a positive test was obtained in only 22.4 per cent of the patients. Thus, the actual incidence of defective thermal coagulation of serum proteins in proved malignancy of various kinds was 52.5 per cent. This means that over 47 per cent of patients with known malignancy had normal thermal coagulation of their serum proteins. If one includes borderline reactions, that is, an increase of 1 plus, the incidence of false negative tests can be reduced to approximately 30 per cent, but at the same time the incidence of false positive reactions in patients without malignant disease rises so rapidly that the diagnostic significance of the test becomes very small. Since the test failed to reveal the presence of cancer in 47 per cent of the patients whose malignancy was sufficiently advanced to warrant hospitalization, it seems highly improbable that it is sufficiently sensitive for accurate screening of patients with early neoplastic disease. In order to avoid a conclusion analogy we performed the Huggins' test itself on 25 additional patients with proved malignancy of the digestive tract, kidney, bladder, prostate, thyroid, or lung and obtained nine positive results (36 per cent); in 12 others with carcinoma of the cervix, breast, brain, bones, or skin, three positive results were secured (25 per cent).

The test might yield important diagnostic information in patients with cancer despite the high percentage of false negative results if the test were specific. In this connection it will be recalled that 16 of 95 ill people tested by Huggins gave positive tests. Some further observations in this direction are illuminating.

Determination of the thermal coagulation point in 58 pregnant women yielded the following results: Positive tests were obtained in 27 per cent of 11 women with early normal pregnancy, in 43.6 per cent of 33 patients late in pregnancy, and in almost 100 per cent of 14 women whose pregnancy was complicated by hemorrhage or infection. In 14 other women whose pregnancy was complicated by eclampsia, hemorrhage, or infection, however, we obtained a positive Huggins' test in 35.7 per cent. Positive results, that is, abnormal thermal coagulation points, were obtained in all of 20 patients in the nephrotic stage of glomerular nephritis, eclampsia, bichloride of mercury poisoning, in all seven with extensive burns or frostbite, and in 13 patients with lung abscess. Positive results were also obtained in over 90 per cent of eight patients with pyloric stenosis and 11 with prolonged obstructive jaundice not the result of malignancy. Positive results were obtained in various infections ranging from 90 per cent positives in those with peripheral gangrene, 88 per cent of those with acute and subacute bacterial endocarditis, and 83 per cent in acute peritonitis down to 29 per cent in active pulmonary tuberculosis. Apart from infectious disease and inflammations, a positive test was obtained in two thirds of patients with congestive heart failure if peripheral edema is present or a transudate has formed in one of the serous cavities.

There is also a host of conditions in which positive responses are obtained in less than 5 per cent of the patients. These conditions include patients with bronchitis, pulmonary emphysema, tonsillitis, cystitis, uterine fibroids, and the like. Since the details will be published elsewhere, it may suffice to state that in 371 patients who did not have neoplastic disease, Glass noted false positive results in 64.2 per cent. In other words, the incidence of false positive results (62.4 per cent), i.e., positive results in patients without neoplastic disease, was higher than the incidence of true positive results (52.4 per cent) obtained in patients with a variety of neoplastic diseases. One should not place too much emphasis on these figures, for the percentage of correct positives can be increased by adding cases of neoplasms of abdominal viscera or lowered by bronchogenic carcinoma; on the other hand, the incidence of false positive responses can be lowered to 5 or 6 per cent by restricting the cases to those diseases in which thermal coagulation is usually not disturbed. Nevertheless, the frequency with which positive reactions are obtained in a wide variety of diseases, only a few of which have been mentioned, indicates that the test is nonspecific and cannot be employed in the general diagnosis of cancer. Unfortunately, an attempt to correlate the thermal coagulation defect with the total protein content of the serum does not improve the accuracy of the test. Thus, Glass determined the total serum protein content in 100 sera which showed an abnormal thermal coagulation point. The distribution of patients with and those without cancer was precisely the same, and the ratio of the thermal coagulation point to total serum protein content in malignancy did not differ from that of non-neoplastic disease. The notion that cancer sera show a greater defect in coagulation per unit of content of protein does not seem to be true.

This discussion of specificity points, in the opinion of the present writer, to an item of importance for all serologic tests for cancer. If, for example, thermal coagulation of serum proteins is studied in patients with gastritis, bronchitis, lymphadenitis, pleurisy, or functional disturbances of the gastrointestinal tract, the incidence of false positive results is about 10 per cent. Thus, Glass noted 54 false positive reactions in 523 patients with the diseases just mentioned. By selecting "controls" from patients with fractures, compensated cardiovascular diseases, bronchial asthma, false positive results occur in only 3 per cent of the patients. This figure stands in striking contrast to the incidence of 70 per cent true positive results secured in patients with gastric carcinoma when the neoplasm has attained a certain size, the precise dimensions of which are unknown. Since altered thermal coagulation depends upon changes in the serum albumins, a control subject who is normal or who has some slight inflammation would scarcely be expected to display any abnormality. If the principle of defective thermal coagulation of serum proteins is evaluated as a cancer detection test, it would seem advisable to the present writer that controls ought to be selected from patients whose illnesses closely simulate cancer from a clinical standpoint and whose diseases provoke alterations of serum proteins; otherwise, it scarcely seems proper to speak of specificity and of a cancer test.

The criteria for a cancer test include among other attributes simplicity, sensitivity, and specificity. The simplicity refers not only to the method of performing the test but simplicity and accuracy in the determination of the end point of the reaction and simplicity in the interpretation of the finding. In the preceding remarks we have dealt at some length with sensitivity and specificity in one test and have indicated that evidence of both are lacking. From this discussion it should not be too difficult to form preliminary opinions concerning several other innovations which are awaiting evaluation as cancer detection tests. If we are told a particular test was positive in 90 per cent of patients with cancer and in only 10 per cent of controls, it will be advisable to consider the kind of control employed. If the first figure is obtained from patients with carcinoma of the stomach and the second from patients with prolonged benign pyloric obstruction, the test deserves further study. If, on the other hand, the second figure is derived from healthy individuals, from those with colds, a fracture, or the like, the comparison may be meaningless and perhaps some alteration of a general nature rather than a specific test for cancer is involved. If, as happens with some heat turbidity tests employed in cancer detection and diagnosis, we are told that the test is not reliable when the patient recently has had penicillin or has rheumatic fever, cirrhosis of the liver, tuberculosis, or is pregnant, we may properly suspect that many other exceptions exist and that the test lacks specificity.

By the assay of chorionic gonadotropin in patients with trophoblastic tumors of the testis and uterus one may obtain important information. In contrast to the tests described earlier in these remarks, in this bioassay one measures the particular product of a particular type of tumor. Since most tumors of other cell types do not produce similar products, the results of bioassay in cancer diagnosis have been, generally speaking, disappointing. This suggests that bioassay may be informative in the recognition of one tumor, acid phosphatase in another, and so forth; possibly, accurate cancer diagnosis may be forced to await the development of a huge battery of tests, each one of which is suitable for the detection of a particular kind of tumor.

Determinations of ketosteroids in patients with some tumors of the adrenals or of the interstitial cells of the testis may also provide useful information. Since individual ketosteroids may be excreted in abnormal amounts when a neoplasm does not involve the adrenal but is present in the breast, it is possible that determinations of some ketosteroids at times may serve as a sort of index of metabolic repercussions in disease rather than as a test for cancer. The fact that ACTH alters thermal coagulation of serum proteins and lowers the iodoacetate index without influencing the neoplasm, if one is present, lends further support to the notion that this test of serum protein coagulation reflects a metabolic response to a variety of morbid stimuli rather than a specific response to cancer.

About 80 per cent of patients with carcinoma of the prostate show increased acid phosphatase values after the carcinoma has spread to bone marrow, lymph nodes, or liver. Prior to this time, a prostatic carcinoma, irrespective of its size, will not elevate serum acid phosphatase. Serum acid phosphatase may also be increased in other diseases, in osteopetrosis for example, although the elevations in other diseases are not as marked as in metastatic prostatic carcinomatosis. In this instance, a test which is neither specific nor extremely sensitive has proved invaluable in measuring the activity of a single tumor, providing the test is correctly performed and properly interpreted.

Levels of alkaline serum phosphatase may increase with primary osteogenic tumors. They may also increase when a carcinoma of epithelial origin, from the prostate for example, metastasizes to bone and provokes the proliferation of nonmalignant osteoblasts. Since most metastatic growths in bone do not provoke osteoblastic growth, elevation of alkaline serum phosphatase does not occur with many secondary tumors of bone. The alkaline serum phosphatase is elevated in a variety of hyperplastic diseases of bone, and enormous increases of this phosphatase may occur in the serum owing to obstructive jaundice. Although these facts are known to every physician, sometimes it is forgotten that the proper interpretation of these old tests has been laboriously acquired. Since, even at present, their limitations are not universally appreciated, it seems well to adopt a very conservative attitude respecting some of the new tests which still lack adequate evaluation.

In multiple myeloma, hyperglobulinemia or an altered electrophoretic pattern may exist so that the beta or gamma peaks increase or an intermediary "M" spike appears. Hyperglobulinemia may be absent in multiple myeloma and may be present in 20 or more diseases of nonneoplastic nature. As information about blood globulins increases, changes formerly attributed to quantitative changes in these globulins now are assigned to qualitative shifts within the alpha, beta, and gamma complexes of serum globulin. It is entirely possible that similar shifts may occur within the serum albumin fraction, and such changes in amino acid composition may underlie changes in thermal coagulation. In other words, changes in thermal coagulation may depend on a "dysalbuminemia" rather than on the amount of serum albumin present. Changes in albumin A as well as in the tyrosine and cystine composition occur in disease, and it has been suggested that abnormal albumins may form as a sort of albumin reserve just as they may result from abnormal degradation of serum proteins which occurs with special frequency in frostbite, severe burns, and other diseases which are associated with the same defect of thermal coagulation of serum proteins as cancer.

The information obtained as the result of determinations of thermal coagulation of serum proteins seems to be of a new order. In 60 simultaneous determinations of the thermal coagulation point and of the sedimentation rate, Glass found thermal coagulation may be normal or slightly or decidedly increased when the sedimentation rate is normal. This might be anticipated since sedimentation rates are related to fibrinogen content, while the thermal coagulation point is related to the type and amount of serum albumin. In 200 simultaneous determinations of the thermal coagulation point of serum proteins and of the Weltman heat flocculation there was also no correlation except in severe infectious diseases and pyogenic processes. This might also be anticipated since the Weltman reaction depends on the lability of the globulin fraction, while thermal coagulation, as was stated above, is related to serum albumins. This lack of parallelism was further confirmed by 43 determinations of the thermal coagulation point and of serum globulins in which no concordance was observed. This might also be anticipated, since there is little hydration of globulin molecules in comparison to that of albumin molecules.

With further refinement the new type of information afforded by determinations of thermal coagulation may yield diagnostic and prognostic data of importance. After all, a 4 plus alteration of thermal coagulation is seven times as common in neoplastic disease of the gastrointestinal tract as in benign disorders of this system. The ascites associated with abdominal malignancy is regularly associated with altered thermal coagulation of serum proteins, while ascites due to hepatic cirrhosis is not, unless edema or transudate has formed in other tissues. This may aid in the differential diagnosis of carcinomatous peritonitis and ascites from hepatic cirrhosis. Other possible applications will readily occur to the reader.

In acute diseases little prognostic information can be obtained, since marked changes may revert to normal readings in a short time. Even a marked alteration produced by simple laparotomy tends to become normal in a week or ten days. In chronic diseases of various kinds some prognostic information may be obtainable. Thus, in 822 determinations of thermal coagulation in chronic diseases, in 383 patients with a normal thermal coagulation the mortality in one year amounted to only 8.4 per cent, while in 143 patients with a thermal coagulation point above 95 C., that is, a 4 plus reaction, 97, or 68 per cent, were dead in a year. Again, in pulmonary tuberculosis, altered thermal coagulation occurs relatively late, to cite another example. Of 32 patients with carcinoma of an abdominal viscus and a 4 plus reaction, 16 were dead in one month, and all died within three months. Limitations of time preclude reference to many other possibilities which warrant thorough investigation.

Conclusions

Serologic tests for the general detection or diagnosis of cancer in its various forms have been discussed utilizing thermal coagulation of serum proteins as an example. The evidence submitted in respect to this test shows that false negative results, that is, normal readings in patients with obvious cancer, occur very frequently. Unwarranted optimism which might be awakened by these errors could be catastrophic in patients with early cancer. On the other hand, false positive results also occur with great regularity, and the psychologic trauma which could easily result, to say nothing of the legal implications, might be equally disastrous. In addition, evidence was submitted to show that this particular test is not a "cancer test" at all. It is implied without the submission of actual evidence at this time that a similar situation prevails in respect to various other serologic tests now available to detect cancer early and in its manifold forms. In short, a reliable serologic test for screening patients for the early detection of cancer is not available at present.

Reference is made to some of the limitations of several extremely valuable blood and urine tests which serve to indicate the activity of single forms of neoplastic disease.

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Discussion

Gilbert Dalldorf, M.D., *Albany.*—It seems to me that Dr. Boyd has accurately reported the present status of the known serologic tests for the presence of cancer, and I agree with his judgment of them. There is probably no opportunity as great as in the cancer field for a satisfactory presumptive laboratory test. A satisfactory method would revolutionize the cancer problem. Under the circumstances we cannot afford to be discouraged by past failures.

Several years ago, the Division of Laboratories and Research of the New York State Department of Health undertook to explore this field. It was our feeling that the long experience of the Division in immunologic research qualified us to tackle the problem of immunologic tests for cancer, and the work that has so far been done seems to justify the decision. At present, a group from the scientific staff of the Division is at work in the Sloan-Kettering Institute in New York City where they profit from the experience of the staff of the Sloan-Kettering and the clinical material of the Memorial Hospital. It seems to me that an effort of this kind is more than an opportunity. It is a responsibility, as it is of all of us, to do what we can to further our knowledge of cancer. I look forward to the day when Dr. Boyd will return to a meeting of this Society with a much more encouraging report.

"DOCTOR JONES" SAYS—

Outbreaks of sickness traced to foods other than milk, all over the country: There were 304 of 'em in 1948. Yes, that's those same U.S. Public Health Service reports. We spoke recently, you know, about some of the outbreaks from milk. These other foods—well, there were several outbreaks of trichinosis, botulism, and other diseases. There were five of chemical poisoning. One of 'em: a "trusty" that was cook in a prison—he was mad because his liberty'd been limited, so he put cleaning powder in the Thanksgiving turkey dressing.

But the whole list (300 plus) the most striking thing about it was that upwards of 80 per cent of the outbreaks were bacterial food poisoning. And the largest proportion of those—it was that same old gangster bug we've been hearing about for years: the staphylococcus—"staph" for short.

One reason the "staph" germs are so important: They're so common. Boils, furuncles, and other human skin infections: Staphylocci are liable to be at the bottom of 'em—and, usually, the top as well. And, when we have colds, they're often in the discharges. Another thing: If they get into the right kind of food and it's left at room temperature three or four hours, they give off an active poison—a toxic. Take that into your stomach and the chances are that, inside of another three or four hours, you're going to be sick—uncomfortably if not dangerously.

Foods they particularly like, these germs, are moist meat and poultry concoctions—those and "cream fillings." And here, by way of illustration, is one little story. Down in Rhode Island chicken salad sandwiches were served at a wedding reception. Inside of about three hours, 50 people were sick. Whether that included the bride and groom deponent sayeth not.

Year after year, over and over, it's that same old story: food contaminated by infected folks, food left several hours without refrigeration, folks eat the food—the result: an outbreak of food poisoning. Those Public Health Service reports—their purpose isn't to provide reading matter. I s'pose they're hoping we'll learn, in time, and stop having 'em.—*Paul B. Brooks, M.D., July 10, 1950*

CLINICAL EVALUATION OF AUREOMYCIN, CHLORAMPHENICOL, AND TERRAMYCIN

VERNON KNIGHT, M.D., New York City

(From the Department of Medicine, New York Hospital-Cornell Medical Center)

AUREOMYCIN and chloramphenicol have been available to the public for approximately one and one-half years. It is evident, after this relatively short interval of time, that these agents have proved to be safe, reliable, and effective therapy in the treatment of a wide variety of infections. These two agents bear many resemblances in their pharmacologic and antimicrobial properties. Significant examples of these are activity after oral administration, excretion in high concentration in the urine, growth inhibition of susceptible strains rather than outright destruction in the usual ranges of dosage, and absent or minimal development of drug resistance. Most important, however, is the broad spectrum of antimicrobial effectiveness exhibited by these two compounds. They are active against rickettsiae, certain viruses, and most gram-positive and gram-negative bacteria. It is appropriate that these two agents be considered together, and they can properly be designated as broad spectrum antimicrobial agents. Moreover, within recent months another member of this group of antibiotics, named terramycin, has been discovered, and observations on its clinical testing will be presented.[1]

Because of the familiarity of most of you with aureomycin and chloramphenicol in clinical medicine, I do not propose to discuss these points in detail, but I would like to describe observations on the side-effects occurring after administration of these agents. It should be emphasized at this time that no instances have come to our attention of the occurrence of serious toxicity in any patient which can be directly related to the use of aureomycin. With the exception of a recent report of granulopenia in three patients following chloramphenicol, no important toxicity has been noted with this drug.[2] As is the case with most orally administered medications, variable degrees of gastrointestinal intolerance to these agents have been reported. Sufficient time has now elapsed to permit a more accurate evaluation of these phenomena, and our experience with this problem may be of interest. It has been found that, in general, chloramphenicol can be administered in higher daily doses than aureomycin without causing intolerance. With chloramphenicol, nausea and vomiting have only rarely occurred, even with large doses, and loose stools or mild diarrhea have not been bothersome. One feature in particular which has followed chloramphenicol administration has been the occurrence of a bitter metallic taste and dry tongue and throat after high doses. In a few individuals, with continued dosage the pharyngeal mucosa has become fiery red with associated pain and tenderness. These signs suggest an atropine-like effect but have not proved to be serious. Discontinuation of therapy has always been followed by prompt relief of symptoms.

After aureomycin was first released to the public, there were frequent reports of nausea and vomiting and diarrhea after its use. As a result a program of investigation was begun to elucidate the causes of this intolerance, and a continuous survey of therapy was begun at the New York Hospital. In this survey numbered lots of aureomycin, representing various improvements in production and purification, were administered to the ward patients in the hospital. No effort was made to control either the indications for or the doses administered to these individuals. A form provided with each prescription was completed by either the doctor or the charge nurse of a particular ward. It was then possible to correlate the intolerance observed and dosage employed with the producer's lot numbers. This program has been under way since June, 1949. It was soon evident that the only important evidences of intolerance were nausea and vomiting or diarrhea. Anorexia or other minor evidences of gastrointestinal irritation were excluded from consideration in this study, because they did not constitute a contraindication to therapy. Other reactions to aureomycin, which have been described elsewhere, were so infrequently encountered in the doses here employed as to be unimportant.

In the survey, continuing from June, 1949, to March, 1950, 1,189 patients have been observed. In Table 1 these data can be seen, divided into three consecutive periods of four, three, and three months, respectively. It will be noted that the intolerance is reported as "instances" rather than the number of patients in which it occurred. It was observed in the study that nausea and vomiting or diarrhea tended to occur as single manifestations, and in only a small percentage

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TABLE 1.—AUREOMYCIN ORAL INTOLERANCE*

Date of Factory Issue	Total Patients (Children and Adults) Receiving Aureomycin	Instances of Nausea and Vomiting or Diarrhea	Per Cent Intolerance
June to September, 1949	677	129	19.1
October to December, 1949	304	25	8.3
January to March, 1950	236	12	5.7

* More than 90 per cent of adult doses 2.0 Gm. per day or less.

of patients were both observed. This suggested a mutually exclusive effect. The per cent of intolerance reported in this series represents, therefore, a slightly larger figure than would have occurred if only the number of patients exhibiting reactions was considered. As can be seen, in the first four months of the study there was an almost 20 per cent incidence of intolerance to therapy with 677 patients as a basis for observation. In the second period of three months there was a sharp decrease with only 8.3 per cent intolerance observed among 307 patients. In the most recent period, up to March, 1950, there was only 5.7 per cent incidence of intolerance. This represented an appreciable improvement in tolerance to aureomycin, and it was interesting that this observation was made quite independently by several staff members on the various services.

There were two possible explanations of this change: either reduction in dosage given to the patients or elimination of irritating properties by the manufacturer. It was found that the doses administered ranged from 0.5 to 4.0 Gm. daily but that more than 90 per cent of these in each of the three groups were of 2.0 Gm. per day or less. When the doses administered to patients exhibiting intolerance were tabulated, it was found that more than 80 per cent of intolerance occurred in patients receiving 2.0 Gm. or less per day in each of the groups reported. These data indicated that there had been no substantial change in the doses of aureomycin employed by the various wards, and the distinct increase in tolerance observed was most likely related to some aspect of the manufacture of the drug. The producers of aureomycin were consulted concerning the changes that were made in their product at various stages during the course of this survey. In the main, their efforts had been to increase the purity of aureomycin, with a view to eliminating any possible irritating trace substances from the material, and the production of a crystalline highly purified product. It was revealed that recent lots of aureomycin tested were of a thrice recrystallized material that was virtually free of contaminating substances. This change has been accomplished gradually during the study, going progressively through stages of one, two, and three recrystallizations. It was found that this increased purity was associated with a more homogeneous yellow color of the drug. Moreover, tests of tolerance in animals confirmed the opinion from clinical studies that this crystalline material was better tolerated.

The dosages employed in this study have presumably resulted in optimum therapeutic results, and personal observation of large numbers of these patients suggests that this is the case. In the course of the study, then, it is apparent that a notable reduction in intolerance to aureomycin has been accomplished, which undoubtedly results from the increasing purity of the material.

Aureomycin itself probably possesses inherent gastrointestinal irritating properties, but these studies indicate that effective therapy can be accomplished in the great majority of patients in dosage ranges below the level of such intolerance.

Terramycin

Within recent weeks one more new antimicrobial agent has received intensive clinical testing. This drug, terramycin,* was discovered and is produced by the Charles Pfizer Company of Brooklyn and has many properties in common with aureomycin and chloramphenicol.[1,3–5] As an example of the speed with which this rapidly changing field of medicine moves, terramycin has received extensive human trials and has been approved for prescription by the medical profession, all within a period of slightly more than three months.

In a study by members of the Department of Medicine of the Cornell Medical College, 150 patients have received this drug. These studies have been conducted at the New York Hospital, the Cornell Services at Bellevue Hospital, and in joint studies in Mexico at the University of Guadalajara, at Guadalajara, and in Mexico City. In Table 2 can be seen pertinent data regarding these cases. The Mexican patients were treated in collaboration with Dr. Francisco Ruiz-Sanchez in Guadalajara and Dr. Samuel Morones in Mexico City.

Twelve patients with brucellosis received terramycin. The diagnosis was established by the presence of a bacteremia in nine cases (predominantly Br. melitensis), or by significant elevation of antibody titer in association with characteristic clinical manifestations. Eleven of these patients were acutely ill prior to therapy, with fever, joint pains, night sweats, malaise, anorexia, and other symptoms of the disease. However, two of

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* The terramycin used in this study was supplied by Dr. Gladys Hobby of the Charles Pfizer Company, Brooklyn, New York.

TABLE 2.—Summary Data of 150 Terramycin-Treated Patients

Diagnosis	Number of Patients	Result
Brucellosis	12	Excellent
Typhus	5	Good
Typhoid	6	Doubtful effect
Paratyphoid	2	Doubtful effect
Amebiasis	2	Excellent
Anthrax	1	Excellent
Smallpox	1	No effect
Pneumococcal pneumonia	60	Excellent
Unclassified bacterial pneumonia	20	Good
Urinary tract infections		
Str. fecalis	1	Excellent
E. coli	6	Excellent
A. aerogenes	2	Excellent
B. proteus	8	Poor
Ps. aeruginosa	2	Poor
Paracolon bacillus	1	Poor
Erysipelas	2	Excellent
Streptococcal pharyngitis	3	Excellent
Pulmonary tuberculosis	3	No effect
Influenza	2	No effect
Measles	3	No effect
Regional ileitis	3	1 excellent 2 no effect
Ulcerative colitis	1	No effect
Malaria (P. vivax)	1	No effect

these patients, one of whom was bacteremic, were afebrile on the day therapy was begun. These patients, as a group, were entirely representative of the serious type of infection caused by the melitensis strain which is commonly encountered in Mexico and were comparable to series treated previously with aureomycin and chloramphenicol.[6,7]

They received divided doses of 100 or 150 mg. per Kg. of body weight per day until afebrile, and then the dose was reduced to 50 mg. per Kg. for a total treatment period of twenty-eight days. Within a few hours after start of therapy, striking relief of symptoms was noted with marked improvement in the severity of the illness of each of these 11 patients. Defervescence was rapid, requiring only one and nine-tenth days on the average, among the nine patients febrile on the first treatment day. After defervescence most patients noted extreme asthenia but were, nevertheless, comfortable. In a few days, under continued therapy, strength and appetite were regained. Despite severe illness of over a month in many cases, all of these patients were up and around by the end of the first week of treatment.

An example of the course of one of these acutely ill patients can be seen in Fig. 1. This forty-three-year-old woman had been acutely ill for almost a month. Following terramycin she improved rapidly, as is suggested by her rapid defervescence. The only unusual occurrence was a sharp chill associated with moderately severe epigastric pain and weakness, occurring a few hours after start of therapy. This was spontaneously terminated, and her course was otherwise entirely uneventful. This was the only patient in the series who experienced such a Herxheimer-like reaction despite the intentional omission of small preliminary doses which have been recommended in conjunction with aureomycin therapy in this disease.

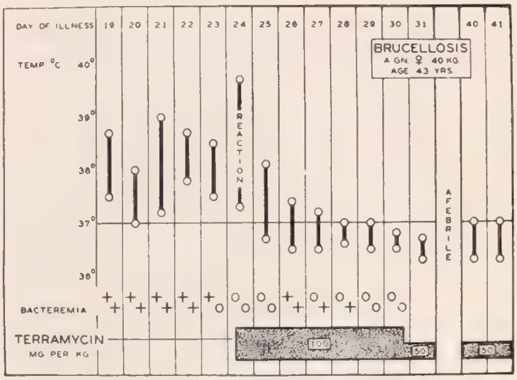

Fig. 1. Severely ill, bacteremic patient with Br. suis infection. Rapid improvement with defervescence following terramycin. Bacteremia persisted four days.

The course of a second patient acutely ill with brucellosis may be seen in Fig. 2. This twelve-year-old boy had been ill one month at the time treatment was started. Following terramycin he improved rapidly, becoming afebrile within forty-eight hours. There was nothing to suggest a Herxheimer-like reaction despite a heavily positive blood culture for Br. melitensis, which only became free of organisms after four days of treatment.

Bacteremia usually disappeared with defervescence, but in four patients (including the two described) blood cultures were positive longer—three for four days and one for six days. This is indicative of the severity of the infection, and

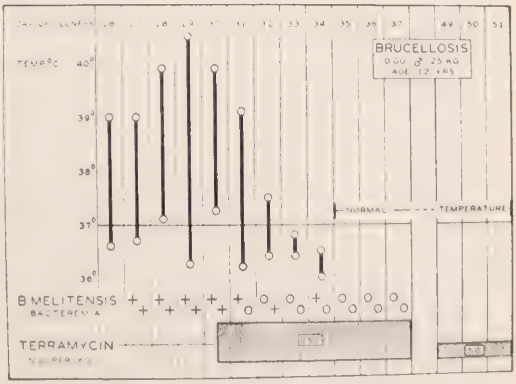

Fig. 2. Very rapid clinical improvement following terramycin in bacteremic brucellosis patient.

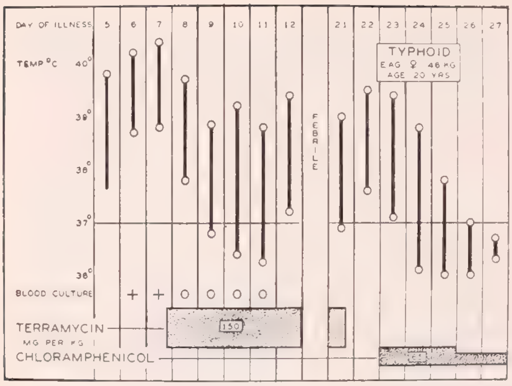

Fig. 3. Persistence of fever despite slight clinical improvement in bacteremic typhoid following terramycin. Within three days after chloramphenicol patient was permanently afebrile and convalescent.

limited information suggests that this may occur following aureomycin and chloramphenicol.

The twelfth patient was one in whom extensive bony involvement was present. He failed to improve appreciably during terramycin treatment, but complete information concerning his course is not yet available.

None of these patients has relapsed after follow-up periods ranging from two to eight weeks. This is considered to be a result of the longer period of therapy and contrasts with results obtained after aureomycin and chloramphenicol where therapy was limited to less than two weeks because of lack of availability of the drugs. It is considered probable that a small incidence of relapsing infection may be observed in these cases after further observation.

Five patients with typhus fever, two with murine and three with the epidemic type of infection, were treated with terramycin. One patient with murine typhus treated with 100 mg. per Kg. per day of terramycin required slightly more than four days to become afebrile despite definite clinical improvement by the third day, while the other patient with murine infection was afebrile and convalescent after only thirty hours of treatment. The three patients with the epidemic (Rickettsia prowazeki) infection were all afebrile after fifty-four hours of treatment and were asymptomatic. None has relapsed in either group. The small number of cases treated does not permit precise evaluation, but it seems reasonable to believe that terramycin favorably influenced the course of illness in these patients. Accurate comparison of terramycin with aureomycin and chloramphenicol in typhus must await further trials.

Six patients with typhoid fever were treated with doses of terramycin ranging from 100 to 200 mg. per Kg. of body weight per day for periods of about four to fifteen days. Two patients were bacteremic at the time therapy was begun, while the others, although acutely ill, failed to show positive blood cultures. The two bacteremic patients were in the second week of illness and corresponded in every way to the severe type of typhoid that is characteristic of Mexico. The two patients with bacteremia received oral doses of 100 and 150 mg. per Kg. of body weight per day, respectively. The day following start of therapy, there was definite clinical improvement in both cases. The improvement did not continue, however, and afternoon spikes of fever with symptoms were observed to continue for periods of about two weeks. In Fig. 3 one can see the course of one of these patients who was given chloramphenicol on the fourteenth terramycin treatment day, and after three days she became afebrile and asymptomatic.

The nonbacteremic patients recovered in a shorter time, but it was felt that even in these individuals the results were less satisfactory than might have been observed after chloramphenicol treatment.

Two patients acutely ill and bacteremic with paratyphoid A infection received terramycin in doses of 100 and 200 mg. per Kg. of body weight per day, respectively. Their illnesses were clinically indistinguishable from the two patients just described with bacteremic typhoid. On these high doses of drug they continued to be ill, although not bacteremic; one lasted for a period of two weeks, and the other was still extremely ill five days after start of treatment, but complete data are not yet available on this latter patient. It was concluded that there was no evidence of drug effect in these two patients.

One patient with a malignant pustule of anthrax on the left cheek received terramycin. The course of her infection can be seen in Fig. 4. Figure 4A shows the patient before start of therapy. The eye was closed by swelling, and there was severe inflammation with induration and acute tenderness around the site of the lesion. Cultures were heavily positive for anthrax bacilli at this time. In Fig. 4B can be seen her appearance after only twenty-four hours of therapy. Improvement is evident with reduction in swelling and inflammation, and the patient stated at this time that she was much improved. Cultures at this time failed to yield anthrax, although on smear a few apparently dead organisms could be seen. Figure 4C shows the patient's appearance seventy-two hours after start of treatment. She was obviously improved and asymptomatic. Cultures yielded no anthrax,

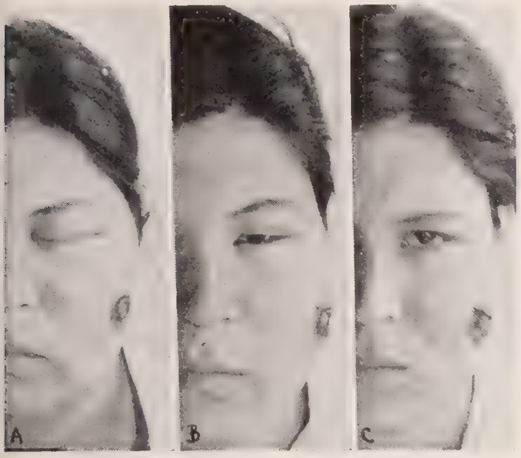

FIG. 4. Course of anthrax infection following terramycin:
(A) Before treatment. Cultures positive for anthrax bacilli, intense inflammatory reaction.
(B) Twenty-four hours after start of terramycin. Definite reduction in local reaction. Cultures no longer positive for anthrax bacilli.
(C) Asymptomatic at seventy-two hours. Recovery uneventful.

and therapy was discontinued at this time. Convalescence was entirely uneventful, and the patient was discharged home, well, one week later. This result is entirely comparable to those obtained in similar cases with penicillin.

Two patients with amebic dysentery, characterized by bloody diarrhea, abdominal cramping pain, weight loss, and malnutrition, received terramycin. Before start of treatment smears of ulcers from the large bowel or from the stools revealed actively motile amebas. Following therapy, diarrhea disappeared within twenty-four hours, and subsequent stools were free of amebas. Blood-streaking of feces continued to be present for two days, but this was greatly reduced and disappeared completely by the third day. Recovery was virtually complete by the third day with return of appetite and normal bowel habit. No relapses were observed in relatively short follow-up periods of two and three weeks, respectively. Similar results have recently been obtained by other investigators with larger series of cases.

In a study conducted on the Cornell Medical Service of Bellevue Hospital by Dr. A. E. Timpanelli, 60 patients with pneumococcal pneumonia received terramycin therapy (Table 2). The distribution according to age, sex, and causative pneumococcus type compares very closely to groups treated in previous years with various dosage forms of penicillin. They were all seriously ill, for the most part of an older age group in which the mortality is usually greater, and not infrequently had other chronic or degenerative diseases. Twelve of these patients (20 per cent) had positive blood cultures for pneumococcus. Two patients had empyema when admitted to the hospital, and one patient was subsequently proved to have a lung tumor. The dosage routinely employed in this series was 5 Gm. daily, divided into four equal doses given at six-hour intervals.

After the administration of terramycin, 59 of the patients in the series improved rapidly, with almost complete defervescence within twenty-four hours. Following initial improvement, recovery was complete in all of these patients, except for the three above who continued to have small daily elevations of fever associated with the lesions described. In addition, one patient died after four days of treatment following failure to respond to therapy. His illness was characterized by daily elevations of temperature and a clinical picture of complete exhaustion. At autopsy it was observed that this patient had an extensive organizing left lobar pneumonia. Despite the fact that seven patients had evidence of pleural fluid or pleurisy on admission, they responded as well to terramycin as the others. Furthermore, there were no cases of pneumococcal meningitis or other purulent complications in this group of patients following terramycin therapy.

Twenty patients, who were considered to have a bacterial pneumonia but in whom adequate cultural evidence for the diagnosis was not obtained, received terramycin. In general, these patients had a greater proportion of associated illnesses and were more chronically ill than the previous group. The response to therapy by these patients was considered satisfactory, although defervescence occurred more slowly than with the pneumococcal pneumonia patients. There was only one fatality in this group, in a man who had serious cardiac decompensation.

Twenty patients with urinary tract infections from commonly encountered organisms are described in Table 2. The results of this brief study compare very closely to results reported after the other two agents of this group. Bacillus proteus and Pseudomonas aeruginosa infections have been the most difficult of the gram-negative bacteria to eradicate, and it appears that this agent has not significantly changed that situation.

As indicated in Table 2, erysipelas and streptococcal pharyngitis improved promptly following terramycin therapy. Smallpox, measles, influenza, malaria, ulcerative colitis, and pulmonary tuberculosis did not appear to be influenced by therapy. One patient with regional ileitis was very much improved after therapy, while two others were unchanged.

The side-effects associated with terramycin treatment, when present, have consisted of nausea and vomiting or diarrhea. A few patients have complained of a burning feeling in the epigastrium following the first few doses. It was found that the Mexican patients exhibited a significant degree of intolerance only when doses of 150 or 200 mg. per Kg. of body weight per day were administered, but among the adult patients studied in New York who received 5 Gm. daily it was noted that a greater number experienced moderately severe diarrhea or vomiting. It was frequently observed that intolerance improved greatly or completely subsided after one or two days of treatment without reduction in the daily doses. In a few cases exhibiting intolerance, therapy was discontinued, and the symptoms promptly regressed.

It is not possible at present to compare the tolerance to terramycin to that of other members of this group. It is fair to say, however, that intolerance has not constituted a serious problem in this investigation, despite the relatively high doses employed. It is expected that further study will demonstrate optimum therapy with lower doses than those presently reported, and with this a further diminution in intolerance is expected.

Comment and Summary

One serious problem that is facing the chemotherapist today is the selection of a drug for an infection for which a number of effective agents are available. This is especially true in the case of pneumococcal pneumonia. Table 3 indicates that all three of the agents discussed today are effective against this disease. Despite rather large groups of patients treated with each, it is not yet possible to say which is superior. Furthermore, no decision concerning the comparison of these agents with penicillin in this disease is available. It is probably rational to employ any one of them in the treatment of a usual case of pneumococcal pneumonia. The serious cases should receive special consideration, however, and until further information is available penicillin should be one of the agents employed in the treatment of any such cases.

Evaluation of agents has been further complicated by the lack of homogeneity of drug-sensitivity of certain strains of bacteria. Staphylococci and streptococci illustrate this problem especially well. Some strains of these organisms are found to be sensitive to penicillin or streptomycin in vitro, and infections caused by them respond well to these agents. Others of the same species may not be sensitive, either as a result of exposure to these agents, or as a naturally occurring phenomenon, and infections caused by them fail to be benefited in therapy. It then becomes necessary to qualify any generalization concerning therapy of staphylococcus and streptococcus infections by these considerations. Aureomycin has proved to be beneficial in therapy of many of these infections but has not infrequently failed to sterilize the lesions in serious cases, and thus its effectiveness has been limited.

Another problem which indirectly acts to nullify effectiveness of chemotherapy is one which is well demonstrated in urinary tract infections The broad spectrum antimicrobial agents have provided effective, long-term suppression for several species of gram-negative bacilli commonly present in the urine of patients with chronic genitourinary disease. Although the infection is controlled, the chronic disease remains, and after a period of time other species resistant to the drug have appeared in almost pure culture. Thus, a mechanism for selection of species of organisms that are not drug influenced is evolved. Proteus and Pseudomonas organisms have been the most common secondary invaders in such a situation, and recently Monilia has been found in increasing numbers in cultures of urine. This phenomenon has been repeated in chronic pulmonary disease, and even blood cultures of patients with drug-sensitive organisms have been replaced by Proteus or Pseudomonas after therapy with aureomycin or chloramphenicol in the presence of a continuing focus of infection such as a liver abscess. One must seriously contemplate the advisability of no longer administering prophylactic penicillin therapy to patients with chronic valvular disease of the heart because of the apprehension that drug-resistant enterococci may be selected as a cause of infection, rather than a penicillin-sensitive Streptococcus viridans. This circumstance has occurred in patients undergoing extensive surgical procedures for congenital heart disease. It is probably reasonable, however, to combine penicillin with aureomycin or terramycin as prophylactic therapy in such cases in an effort to extend the protection against such an occurrence.

In Table 3 are presented what are considered conservative and reasonable recommendations for therapy with the broad spectrum antibiotics. In a number of instances they have not been indicated as drug of choice, even though highly successful therapy in a few cases would suggest that classification. It is expected that these agents may subsequently become "drug of choice" in the treatment of certain infections for which penicillin and streptomycin are currently employed.

The present status of therapy of brucellosis is worthy of comment. All three of these agents

TABLE 3.—Indications for Therapy with Aureomycin, Chloramphenicol and Terramycin*

Disease or Infective Organism	Aureo-mycin	Chloram-phenicol	Terra-mycin	Comment
Urinary tract infections				
E. coli	I	I	I	
A. aerogenes	I	I	I	
B. proteus	III	III	III	Frequently fail to eliminate the causative organism
Ps. aeruginosa	III	II	III	
Typhoid	III	I	III	
Bacillary dysentery	II	II	U	
Acute brucellosis	I	I	I	Combination with SM may prove to be "I"
Chronic brucellosis	I	I	I	
Tularemia	II	U	U	I = SM
Friedländer's bacillus infection	II	II	II	I = SM + one of these agents
Tuberculosis	0	0	0	I = SM + PAS
Syphilis	II	II	II	
Lymphopathia venereum	I	I	I?	
Ornithosis-psittacosis	I	I	I?	
Rickettsial infections	I	I	I?	
Amebic dysentery	II	III	II	II = May prove to be choice
Fungus infection	0	0	U	
Hemolytic streptococcus, Group A	II	U	II	I = Pen
Subacute bacterial endocarditis				
Streptococcus viridans	II	U	U	I = Pen
Streptococcus, Group D	II	U	U	I = Pen + SM combined
Staphylococcus				
Furunculosis	I	U	U	
Osteomyelitis	II	U	II	I** = AM; Pen; SM; TM; in various combinations
Bacteremia	II	U	U	
Pneumococcal pneumonia	II	II	II	I = Pen
Anthrax	II	U	II	I = Pen
Meningococcal meningitis	II	U	U	I = SDZ
Gonorrhea	II	II	II	I = Pen
Influenza bacillus meningitis	II	II	U	I = CM + SDZ + serum
Pertussis	II	II	U	I = To be determined

* Key to symbols:
I—drug of choice
II—effective; requires further evaluation
III—slightly active; not dependable
0—no effect
U—unknown

SM—dihydrostreptomycin or streptomycin
PAS—para-amino-salicylic acid
Pen—penicillin
SDZ—sulfadiazine
AM—aureomycin
CM—chloramphenicol
TM—terramycin

** Selection based on in vitro sensitivity tests.

have proved to be highly efficacious in therapy of acute infection with brucellosis.[6–9] They are definitely superior to any previous therapy, and this is most strikingly demonstrated against the highly virulent Br. melitensis infections which occur in Mexico. The results with all of these agents are typified in the responses previously described after therapy with terramycin. Differences in effectiveness of these agents in acute brucellosis undoubtedly exist, but this point has not been adequately studied. That ultimate therapy has not been achieved is indicated by the recurrence of bacteremia and acute illness among significant numbers of treated patients. It is expected that prolongation of treatment periods for several weeks may greatly reduce relapses. A possibly more effective approach, however, is suggested by the results of treatment of the experimental infection in mice. It was found in this laboratory that significantly beneficial results were obtained when these agents were employed alone in periods of therapy of two weeks but, nevertheless, fell far short of eradicating the infection, as judged by cultures of the spleens of the animals.[10] It was further observed that, when streptomycin was combined with each of these agents, a significantly greater eradication of organisms resulted. In these studies a combination of streptomycin and aureomycin proved to be more effective than the combinations of streptomycin with chloramphenicol or terramycin. Similar results were obtained by Heilman in a more limited study with aureomycin, alone and in combination with streptomycin.[11] Studies with this combination of drugs in humans have shown good results in a limited number of cases and deserve more extensive investigation.[12]

The treatment of chronic Brucella infection rather than the acute disease is a more commonly occurring problem in this region. It would be expected that, in a disease in which specific diagnostic criteria are difficult to obtain and in which the variable and often vague symptomatology may frequently resemble other diseases, evaluation of antimicrobial therapy would be difficult. Nevertheless, studies by Ralston and Harris reveal that a majority of patients treated by them with aureomycin and chloramphenicol have responded favorably.[13,14] On the basis of chronic cases which have been treated by us with all three agents, in which the diagnosis has been unequivocally established, there is no reason to doubt that symptoms resulting from the presence of Brucella organisms may be uniformly relieved by adequate

Brooklyn Jewish Hospital Agrees to Train Unit for Army

THE United States Army Medical Department and Jewish Hospital, Brooklyn, signed an agreement in August under which the hospital will organize a medical unit trained for instant use by the Army in case of any national emergency.

Colonel Roosevelt Cafarelli, of the Army Medical Department, representing Major General Raymond W. Bliss, Surgeon General of the Army, said that four other New York hospitals had agreed to organize similar mobile units. These are Queens General Hospital, Presbyterian Hospital, Mount Sinai, and the Kings County Hospital, he said.

In Washington, Army representatives said that such units are being organized in hospitals throughout the United States as part of the nation's reserve mobilization program. They will be expected, it was said, to meet any emergency which may arise.

In the agreement the Jewish Hospital plans to hold quarterly training periods for personnel participating in the program, and to make available at no expense to the government adequate space for classroom facilities and for storing equipment.

While the Army will not direct the unit, it will, Colonel Cafarelli said, lend its medical experts to address classes on technical subjects and will advise on the training programs. Emphasis will be placed on coordination as a unit, and the rules, regulations, and practices of the Medical Corps, so that the group might shift smoothly to Army direction should any national emergency develop.

Admission Rates for Public Mental Hospitals Increase

THE "first admission" rate to public mental hospitals during 1946 was 88.4 per 100,000 of the population for the country as a whole, and for the same year the hospitalization rate was 372.2, according to figures of the Mental Hygiene Division of the Public Health Service.

These rates showed considerable variation from state to state. The "first admission" rate ranged from a high of 146.3 in New Hampshire to a low of 58.1 in Indiana, and the corresponding range for the hospitalization rate was from 593.9 in New York to 206.1 in Utah. Although this variation may reflect to some degree differences in the extent of mental illness from state to state, it is much more likely that it represents differences in the extent of the facilities available for the care of the mentally ill, the rate of turnover in hospitals of the type under consideration, and other administrative factors.

The figures are based on the results of the 1946 Census of Patients in Mental Institutions, collected and tabulated by the Bureau of the Census, Department of Commerce. Collection of these data was made a function of the Mental Hygiene Division, Public Health Service in February of this year in view of the Service's increased responsibilities under the National Mental Health Act.

Since patients in private mental hospitals are not necessarily hospitalized in the states in which they reside, the rates are based on statistics for public hospitals only. The statistics on veterans hospitals are adjusted figures based on tabulations prepared by the Division of Medical Research Statistics.

NEWS NOTES

At the July 12 meeting of the staff of St. Francis Hospital, Poughkeepsie, Dr. J. J. Toomey presented a case report on intraperitoneal cyst of presumably traumatic origin. The discussion was by Dr. M. M. Simon. At the August 9 meeting Dr. Louis Ferraro presented kodachrome studies of specimens.

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Dr. Claude E. Forkner, New York City, presented a discussion on "The Diagnosis and Treatment of Leukemia" at the June 23 meeting of the Sharon Hospital staff, Sharon, Connecticut.

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Plans are underway for the building of a new wing to Wyckoff Heights Hospital, Brooklyn, which will add 100 beds to the present capacity of the hospital. This will increase the hospital's capacity one-third, making a total of 300 beds and bassinets.

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A week-long series of conferences was sponsored in August by the Council of Rochester Regional Hospitals. About 100 persons, representing hospital staffs of 11 counties, attended the conference. Miss Esther N. Thompson, council nursing associate, was in charge of the program, and the meetings were held in the Catherine Strong Hall of the University of Rochester.

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Completion of several remodeling projects for St. Luke's Hospital, Utica, has been announced by Carl P. Wright, Jr., director of the hospital. The work, in the process of planning and construction for several months, is part of a general renovation program.

An extensive remodeling of the maternity floor—including enlargement of both delivery and nursery facilities—and creation of a private admissions office for incoming patients were cited especially as alterations designed to improve patient comfort. Another change—the setting up of a central sterile supply room for the entire hospital—was considered essential by the State Board of Nurse Examiners in connection with the approval of St. Luke's Nurse Training School.

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The Olean Medical Group, the first group practice medical center in the Buffalo area, was opened in August. The medical staff comprises Dr. William C. Goodlett, Dr. Norman P. Johnson, Dr. A. L.

Runals, Dr. Wilber J. Manley, and Dr. Fred W. Kehr. Upon call will be Dr. Leslie J. Atkins, consulting urologist, Dr. Leo D. Moss, consulting pathologist, and Dr. Murray Reswick, consulting roentgenologist.

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The expansion of Albany Hospital is being planned, according to an announcement from the hospital. The new bed section of the addition would provide 37 beds for neurosurgery, 38 for thoracic and plastic surgery, 26 for pediatric cases, and 20 admitting unit beds for overnight patients.

The hospital at present has a capacity of 541 beds and 30 bassinets, but is overcrowded with 60 additional beds and 18 bassinets set up.

The new addition also would provide lecture rooms and laboratories for the expanding school of nursing. The new outpatient department would provide a diagnostic clinic and mental hygiene clinic. The present outpatient department would be used for locker and rest rooms, the medical records department, and housing for staff members.

PERSONALITIES

Appointments

Dr. Jesse Donald Stark, director of radiology, Gouveneur Hospital, New York City, as expert Civilian Consultant to the Surgeon General in the occupied European zone. Dr. Stark will devote a month to visiting, with three other appointees, the United States hospitals in Germany and Austria to promote and further improve the quality of medical instructional facilities in the field of radiology . . . As coordinator at the Staten Island Hospital, Dr. John S. Snider, who will guide the interns in their courses of instruction as facilitated by the New York Committee for the Study of Internships and Residencies.

Dr. Herman B. Snow, supervising psychiatrist of Binghamton State Hospital, as assistant director of Utica State Hospital . . . As chief surgeon of the A. Barton Hepburn Hospital, Ogdensburg, Dr. John E. Free, succeeding the late Dr. G. C. Madill . . . To the medical board of St. Vincent's Hospital, Staten Island, Dr. Mather Cleveland, consultant in orthopedics; Dr. Thomas Mulcahy, to the attending staff in urology, and Dr. Joseph Hulnick, adjunct in gynecology.

Dr. Joseph Levi, formerly chief clinical psychologist, Veterans Administration Hospital, Bronx, as research psychologist, Institute of Rehabilitation, New York University-Bellevue Medical Center.

WARN EX-SYPHILITIC VETS

A warning is being issued to veterans who were treated in service for syphilis with penicillin that they need periodic checkups because there is a possibility that between 20 and 30 per cent of these cases were failures, officials of the Veterans Administration stated.

The old Army treatment for the disease with arsenic and bismuth was time-tested, and results were therefore predictable. The disadvantage in this twenty-six-week treatment was that one out of every 30,000 was killed, while penicillin has proved superior without killing any patients. However, penicillin treatment is still in an early stage. It will require about twenty years study and follow-up to determine the effect on the patient.

Meanwhile, Uncle Sam is worried about the boys who received treatment and thought themselves cured, because in many cases the patient received either inadequate treatment, because of discharge did not get the necessary blood and spinal fluid tests required for a year after treatment, or was discharged before he got an examination of his spinal fluid.

Syphilis, if not treated, or inadequately treated, may attack the heart and nervous system and therefore in many cases leads to insanity. Officials estimate that each case of insanity in a veteran costs the taxpayer $40,000 from the time the patient is admitted to a hospital until his discharge.

They estimate that approximately 400,000 veterans were treated while in service in the armed forces. About 52,000 veterans were treated in 1946 following their discharge, but there is no way of telling what proportion were infected after they got out and which of them were relapse cases. No one has followed Army cases long enough.

The officials of the Veterans Administration cautioned that without preventive action now, syphilis in veterans will cost the taxpayer around one billion dollars in the course of the next twenty-five years.—*Science News Letter, August 7, 1948*

NEWER INSULINS WITH SPECIAL REFERENCE TO NPH INSULIN

Franklin B. Peck, M.D., and W. R. Kirtley, M.D., Indianapolis, Indiana

(From the Lilly Research Laboratories, the Department of Medicine and Diabetes Clinic, Indianapolis General Hospital, and the Department of Medicine of the Indiana University School of Medicine)

THE number of possible modifications of insulin is legion; all of them exert characteristic insulin effects, and consequently all are efficacious in treatment of diabetes. Because the marketing of a number of different modifications would not be feasible economically and would also be confusing to patients, the main question to be decided on clinical grounds has been which time-activity is actually the best fitted to meet the needs of the greatest number of patients.

Insulin preparations having intermediate time-activities have their greatest usefulness and display their most critical differences in timing in diabetes of severity (unstable). In such cases the long-acting preparations exert their most important function, namely, the maintenance and bridging-over of insulin effect from one day to the next. The mild diabetics and many of the moderate cases (stable) whose daily insulin requirements range to 20 or at times 30 units daily do well with almost any preparation of insulin, and their treatment was greatly simplified by introduction of protamine zinc insulin given in a single morning dose. It is when these rather arbitrary limits of dosage must be exceeded that difficulties begin to arise. It would appear in such instances that the "metabolic reserve capacity" of the patient has been so seriously reduced as to be incapable of dealing with a relatively moderate influx of metabolites from food. Various degrees of decompensation ensue, the blood sugar rises, and sugar is excreted into the urine. When this occurs during periods of starvation (overnight), the patient becomes almost wholly dependent upon artificial administration of insulin, and a long-acting preparation is essential. Nocturnal hyperglycemia may well signify the onset and existence of a much more serious and hazardous defect than does the hyperglycemia and glycosuria of the daytime hours when the patient is not starved, and which, therefore, may reflect merely an overflow mechanism.

In general, as severity increases, so rises the level of nocturnal blood sugar (fasting). Almost in parallel is the need for increasing duration of insulin effect if one single daily dose is to protect the patient from acute decompensation of diabetes over the nocturnal period of starvation. Like most generalities there are many exceptions, and, unfortunately, the individual response of diabetic patients to a given dose of insulin of any kind varies so greatly that the problem of making valid comparisons between preparations having different time-activities is a laborious one.

The facility with which different mixtures can be made and individually tested on the case at hand presented opportunity to determine clinically the most suitable over-all effect. Over the last several years more than 25 different modifications of insulin have been tested.[1] The most generally useful of these have been preparations which have acted in the range exhibited by 2:1 admixtures of insulin and protamine zinc insulin, either extemporaneously prepared in the syringe or premixed in vials.[2] Both clear and cloudy preparations have been studied. The former have uniformly been more unpredictable in their action than have buffered suspensions, whether modified by protamine, histone, or globin.[1] In clinical comparisons the 2:1 mixture, specially modified protamine zinc insulin type NP50, as described by MacBryde, and, more recently, type NPH50 (NPC50), which has the necessary stability lacking in type NP50, have emerged as modifications having the most ideal time-activity of any of the large series tested.[3] These three preparations all seem to act long enough over twenty-four hours to reinforce each succeeding morning dose by means of a single injection before breakfast. In exceptional cases it may be advantageous to provide some dietary redistribution by lowering the food value of the breakfast, and occasionally a larger component of protamine zinc insulin is needed to maintain a great enough nocturnal effect. A supplemental dose of rapidly acting insulin is required at times, or more rarely a second smaller dose of the modification later in the day. By and large, however, it appears that a modification having this particular timing is capable of better meeting average needs in the majority of patients than any other time-activity that has been studied.

It has been the consensus that the action of globin insulin with zinc extends on the average about sixteen to eighteen hours, occasionally longer, and reaches its maximum approximately eight hours after administration.[4] In our experience this preparation has behaved much like a 3:1 mixture of insulin and protamine zinc in-

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Presented, by invitation, at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Medicine, May 12, 1950.

sulin, having significantly less duration of effect than a 2:1 mixture as indicated by higher blood sugar levels fasting. Rohr and Colwell's recent studies on two carefully balanced patients show a somewhat greater intensity of action of globin insulin with zinc in the twelfth and sixteenth hours when compared with a 2:1 mixture, with slightly less pronounced later effect on blood sugar but considerably more delayed effect of the mixture on glycosuria.[5] It must be borne in mind that Colwell's curves were, by necessity of his method, obtained in diabetics whose cases were mild (and stable) enough to permit them to be treated for long periods without any insulin whatever in order to balance diurnal fluctuations and differences in sugar output. Consequently, the duration of effect of all the preparations tested may appear prolonged beyond the time commonly observed when treating severe unstable cases clinically. By this method the effect of a single dose of unmodified insulin is extended over a period much longer than that commonly substantiated by ordinary clinical experience. Izzo has pointed out that it is in the unstable, severe case that insulin timing is critical, and supposedly minor differences in intensity and duration may be markedly exaggerated.[6] His data indicate that the 2:1 mixture possesses greater breadth therapeutically than globin insulin with zinc, and more recently completed studies with the NPH series suggests that the maximum advantage that can be anticipated from modified timing effects has been attained in NPH insulin.[7] These differences show up markedly only in the severe unstable group of patients, where globin insulin exhibited a strong peak action eight to twelve hours after injection but failed to control adequately the fasting level overnight. The "overlapping effect" of the latter from dose to dose was either feeble or lacking altogether.

A number of other new modifications have been described and some subjected to clinical studies, but none of them has seemed of sufficient advantage to arouse much interest in the United States. It appears that none of the many methods of modifying insulin has any particular advantage over protamine. The time-activity of insulin can be modified by protamine to useful ranges between that of insulin and protamine zinc insulin. Safety has been established by many years of clinical usage. Whether they are clear or cloudy depends upon whether such preparations are acid or buffered in reaction.

Specially modified insulin, type NPH50, hereafter called NPH Insulin, was reported on previously as NPC50.[1] This is a buffered suspension of protamine zinc insulin crystals prepared under isophanous conditions according to methods developed by Krayenbuhl and Rosenberg in Hagedorn's laboratory.[8] The crystals are quite stable under proper conditions but change rapidly in the presence of serum.

Published reports from Peck, Rohr and Colwell, Izzo, Kirkpatrick and Wilder, and Dolger, and personal communications from others, with clinical reports on more than 1,500 cases studied, substantiate the essential similarity of the effect of NPH Insulin with 2:1 mixture and NP50.[1,5–7,9,10] Only MacBryde has been in disagreement.[11] Of some advantage is the diminished tendency of NPH Insulin to adsorb insulin which is added to it, so the addition to it of a supplemental dose may be reflected in hypoglycemic effect more directly than is the case when insulin is added to protamine zinc insulin.[12]

White states that a single injection of this modified insulin in severe juvenile diabetes proved more effective than separate injections of insulin made from zinc-insulin crystals and protamine zinc insulin in the clinical trial carried on at the camps for diabetic children in Boston.[13] The only rise in blood sugar that was characteristic of NPH Insulin occurred immediately after the breakfast period. The experience of Marble and Gabriele in the Joslin camp for boys was likewise favorable, and use of NPH Insulin resulted in a marked decrease in the total number of injections required with an accompanying improvement in control of hyperglycemia and glycosuria.[14] Blood sugar determinations carried out at hourly intervals during a twenty-four-hour period indicated that NPH exerts an effect for at least a full twenty-four hours and probably for twenty-eight to thirty hours. The period of maximum action began in the late afternoon and extended into the evening and night. Under the conditions of exercise at this camp an afternoon lunch and bedtime feeding were utilized to prevent hypoglycemic reactions. In the course of their studies a comparison was made in 13 patients of the effect of giving unmodified and globin insulin with zinc by separate injections in the morning before breakfast with a single injection of NPH Insulin and with separate injections of unmodified and protamine zinc insulin.[15] The results indicated a tendency to hypoglycemia in the afternoon when globin insulin with zinc was given, which was overcome by afternoon feedings, but of more serious disadvantage was the failure in severe cases of globin insulin with zinc to exert an effect for the full twenty-four hours, with the result that the blood sugar fasting was often considerably elevated.

NPH Insulin has been studied at the Indianapolis General Hospital since 1945–1946. These studies have been of three different varieties:

1. *Observations of the pharmacologic activity of the preparation by means of acute time-activity*

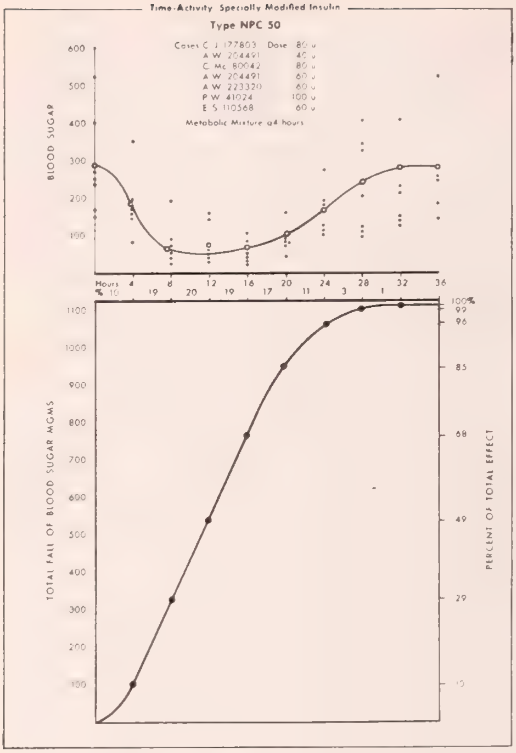

Fig. 1.

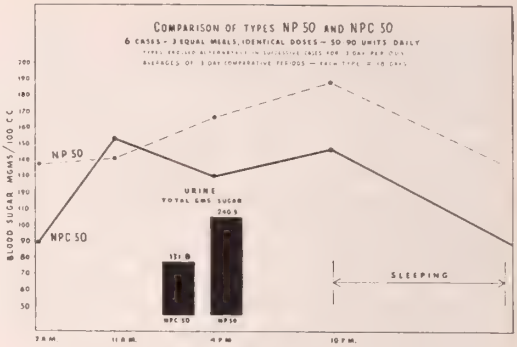

Fig. 2.

curves made on severe cases of diabetes in the Lilly Research Ward.—The duration of action of NPH Insulin (NPC50) was approximately twenty-eight to thirty hours (Fig. 1).[1] Comparisons of clinical treatment periods gave results similar to those obtained with type NP50 except for a lower level fasting, which is a reflection of its slightly longer effect, and a slightly higher morning postprandial level, which indicates that it is a little slower in onset of action (Fig. 2). These results did not differ markedly from those obtained following treatment with a 2:1 mixture. All three preparations were interchangeable under routine conditions of treatment.

2. *Comparisons in 48 patients followed up in the Diabetes Clinic.*—An evaluation of the control of the case over the prior six-month period was used as a basis for evaluating results with NPH Insulin over subsequent similar periods using NP50 and 2:1 mixtures. Most of these patients had been previously observed for long periods while taking several other modifications and mixtures of insulin and protamine zinc insulin. In some instances, complications and other factors supervened to render judgment difficult. In no instance, however, was it necessary to withdraw NPH Insulin because of failure of the insulin preparation, for in these circumstances the re-establishment of proper dietary regulation and, at times, the temporary provision of a supplemental dose of regular insulin during a complication served to re-establish proper control. Patients who did badly under NPH Insulin were cases that experience had shown did poorly under any other circumstances of regulation.

There were two patients under ten years of age, six between nineteen and thirty years, four in the thirties, nine in the forties, eight in the fifty-year group, and 19 were sixty or older. The duration of diabetes ranged from one to twenty-seven years.

Data on these cases are briefly summarized in Table 1. Only four cases showed greater glycosuria while taking NPH Insulin; 33 cases excreted approximately the same quantity of sugar, while 11 patients became sugar-free or excreted less total sugar. The averages of their fasting and 11 A.M. blood sugar levels disclosed that, while taking NPH Insulin, 13 cases showed an elevation of fasting blood sugar, while in 31 cases the fasting level was lowered, and in four it was unchanged. The average postprandial blood sugar level was higher in 20 cases, lower in 24, and equal in four cases.

TABLE 1.—Summary of Results in 48 Cases

	Greater	Equal	Lower
Glycosuria	4	33	11
Blood sugar			
Fasting	13	4	31
Postprandial	20	4	24

TABLE 2.—Grand Average of All Blood Sugars

	Fasting	Postprandial
Control period	179	244
NPH Insulin	164	247

The grand average of the blood sugars in two comparative periods is shown in Table 2. The postprandial level is 10 to 11 A.M. which experience has shown is most difficult to control by the single-dose method. (Criticism may be directed at the height of these average blood sugar levels. They are one indication of the severity of this group of cases.) Because these patients were transferred from either a 2:1 premixture or the NP50 modification of protamine insulin acting in a similar manner, the conclusion seems supported that there is no essential difference in the effect of such combinations and NPH Insulin.

Reactions were not troublesome in this entire series of cases. Since 1942, when beginning study of insulin mixtures and a large series of intermediate modifications, routine between-meal and bedtime feedings have been omitted, except where the patients' habits of eating and working made them essential. At no time has there been any attempt to favor an insulin preparation by redistributing the diet to conform with its action. The deliberate choice has been to modify the insulin rather than the conditions of feeding.

Twenty-two patients had no reactions at all (Table 3). Of the others, four had hypoglycemic reactions at some time during observation. These were all patients who were troublesome in this regard while taking other preparations of insulin than NPH Insulin. Their experience with NPH Insulin was no different in that they encountered about the same number of attacks. Only five patients had an increased number of reactions, and seven had a reduction in hypoglycemic reactions. Reactions were easier to control than was the case with protamine zinc insulin.

The time of onset of hypoglycemic reactions was of interest also (Table 4). Only one patient complained of reactions in late afternoon, at 5 P.M. One case developed reactions most frequently at 2 A.M., another in the early morning hours, and two at 6 A.M. There were two cases having reactions most frequently at 10 A.M. and four at 11 A.M. In the others, reactions were inconsistent in time and dependent on individual conditions, food, and exercise.

TABLE 3.—HYPOGLYCEMIC REACTIONS

Number of Reactions	Number of Cases
None	22
Equal	14
Increased	5
Diminished	7

TABLE 4.—TIME OF REACTIONS (MOST FREQUENT)

Time	Number of Cases
Late afternoon (5 P.M.)	1
Night (2 A.M.)	1
Early morning (4 to 5 A.M.)	1
Morning (10 to 11 A.M.)	6
Inconsistent (missed meals, exercise)	14

3. *During 1949, NPH Insulin was used as the routine insulin preparation in another series of 80 cases on the wards and in the outpatient Diabetes Clinic.*—No formal comparisons were attempted since the main point to be determined was one of utility and to ascertain how the intern and resident staff would utilize NPH Insulin in ordinary management of patients. Use of NPH Insulin resulted in greatly lessening the need for supplementing with regular insulin except during complications, but, when infection or acidosis required it, NPH Insulin may be supplemented in the same manner as has been customary with protamine zinc insulin. Of further advantage has been the combination in the same syringe of the supplemental dose mixed with the basal dose of NPH Insulin.

The control of these cases has been rated excellent or very good in 28, good in 24, fair in 13, and poor or very poor in 15. In the latter we have been unsuccessful in obtaining better results by any other means. For example, one case does as poorly with 45 units of protamine zinc insulin supplemented by 35-, 15-, and 15-unit doses of regular insulin as on 85 units NPH Insulin and 25 units of regular insulin. The gain is only in lessening the number of daily injections. NPH Insulin facilitated the routine management of diabetes by lessening the total number of injections per day; it acted satisfactorily as a single dose insulin in the majority of cases and simplified management by diminishing the need for mixtures or supplements of regular insulin.

Conclusion

It should be unnecessary to point out that no mixture or special modification of insulin whether prepared in the syringe extemporaneously or as a premixture in vials can be expected to meet all the requirements of the complicated case having rapidly changing and unpredictable insulin demands from day to day or even during different periods of the same day. The case having relatively stable insulin requirements responds to almost any kind of insulin and is no problem. Unstable cases of severe diabetes are the test of insulin timing, and with NPH Insulin the results appear at least as good as, and often far better than, those obtained by other means, owing undoubtedly to its more efficient timing of action. That such timing can be deliberately chosen and duplicated pharmaceutically has only been made possible through the clinical experience gained by use of adjustable extemporaneous mixtures on a large enough clinical scale to permit conclusions as to the most desirable type of action. Even when NPH Insulin becomes generally available, there will still remain instances where it will be advantageous to alter further its effect by additions of insulin, either to the modification itself or as a supplemental dose of unmodified insulin.

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Discussion

J. Frederick Painton, M.D., *Buffalo.*—A few years ago, I am told, someone asked Dr. Charles Best when he was going to have a better insulin available. The questioner received the brisk reply, "Why don't you learn to use what you already have?" Actually, I think most of us have learned quite a bit about the use of the present insulin combinations, but up to the moment there have been certain drawbacks and disadvantages in the use of the present premixed insulin combinations, namely, the standard protamine zinc insulin and globin insulin. In the use of protamine zinc insulin, and, in particular, in those patients requiring over 50 units, the problem of early morning hypoglycemia and the later afternoon or early evening hyperglycemia and glycosuria has been difficult to overcome without additional dosage of regular or unmodified insulin. There has also been the occasional case that demonstrated the effect of repeated overlapping of insulin effect, with the resultant marked lowering of blood sugar, often manifested by a severe insulin reaction.

As far as globin insulin is concerned, I am entirely in agreement with Dr. Peck's criticism of that preparation. In the relatively few patients to whom I have given this type of insulin, the control has not been satisfactory. Even with midafternoon feedings, these patients became hypoglycemic late in the afternoon, but the urine from midnight to breakfast usually contained considerable sugar.

In regard to the extemporaneously prepared mixtures, (2 : 1) which are necessary in a certain number of severe cases, I can only say that, in general, I am rather reluctant to utilize this procedure. We all know that education of the diabetic is exceedingly important and requires a lot of time on the part of the physician, dietitian, and, of course, the patient. The mere teaching of the patient the proper technic for administering insulin of any type is time consuming. To explain the details of utilizing various mixtures, in not a few cases, becomes quite confusing and complex. For the diabetic patient who is working, it means added consumption of his or her valuable time. For those cases where extemporaneously prepared mixtures seemed unjustifiable, as in some severe juvenile cases, in order to achieve at least fair control one must give additional dosages of unmodified insulin. This obviously required extra injections with attendant discomfort and bother to the young patient, often leading to a lowered state of morale not unlike the situation we saw in some patients in the preprotamine era.

With these few preliminary remarks, I think most of you will agree we do need a better insulin; rather, I think I should say, a better insulin mixture or better insulin combination, because the insulin itself is a highly refined, purified preparation. I think that what most of us would like is an insulin preparation which would be effective for a period slightly in excess of twenty-four hours, an insulin that would be absorbed rather rapidly so that it would be effective upon the first meal ingested after its injection, and, last, an insulin which would be absorbed at an even rate so that there would be no high blood sugar peaks or extremely low levels. That would be an ideal preparation and would in some respects parallel the normal insulin production in the nondiabetic patient.

It seems to me that Dr. Peck has conclusively demonstrated that NPH Insulin, at least in part, fulfills some of these desired requisites. He has demonstrated that the new modified type of protamine zinc insulin is effective for at least twenty-four hours, and probably for twenty-eight to thirty hours. He has also shown that there is prompt absorption in most of the cases, and that the 11 A.M. blood sugars were lower in his group of patients on NPH than they were previously on "the old standard protamine zinc insulin," or any combinations of protamine zinc insulin and regular insulin, and mixtures. His observations as well as those of White indicate that in most cases only a single injection of NPH Insulin was necessary, which is obviously very desirable. Dr. Peck also adequately demonstrated that hypoglycemic reactions were definitely not a problem when this type of insulin was employed. Actually only five of his cases had increased reactions, and those might have been avoided had he chosen to redistribute the diet. As you recall, he avoided this procedure to assay thoroughly its action.

During the past few weeks I have had an opportunity to use NPH Insulin on a few selected cases. Not having an unlimited supply, I employed this insulin on several severe juvenile patients, all of whom had previously required an excess of 60 units, and all required additional injections of unmodified insulin. All but one of the patients was completely cooperative, but in assaying the previous control of each of the cases, I would have to regard it as poor. Since employing NPH Insulin upon these patients, all of them were better controlled with but a single injection. I do not mean to imply that these patients were well controlled but, as I said, were better controlled. These patients were in the category mentioned by Dr. Peck which had never been well controlled with any type of insulin or combination or mixture of insulin. Incidentally, the one uncooperative patient did better on NPH Insulin from the standpoint of weight gain than she had ever done during the previous three years since she developed diabetes.

In conclusion, I believe Dr. Peck has adequately demonstrated the advantages of the use of NPH Insulin, which is the first really satisfactory modification of protamine insulin designed to replace extemporaneous mixtures of regular or crystalline insulin with protamine zinc.

Joseph L. Izzo, M.D., *Rochester*.—I am sure that Dr. Peck has, if you will pardon the colloquialism, leaned over backwards in being conservative about his conclusions on the efficacy of NPH Insulin. Eli Lilly Company should be complimented for the splendid manner in which they have handled the problem of intermediate insulins. Those of us who have been actively working in the field have sincerely appreciated the reluctance on the part of Eli Lilly and Company to release any new insulin preparation until its value could be established by full-scale clinical and pharmacologic studies. It is well to point out that NPH Insulin in present form is the culmination of a series of tedious, painstaking laboratory and clinical studies on intermediate insulins extending over a decade or more. To be sure, NPH Insulin is not a panacea. We do feel, however, that, like the 2 : 1 mixture, it is within the optimal timing zone for treating the large majority of patients. It is fairly safe to state that we have reached the maximal advantage in insulin timing that can be obtained with existing insulin types.

In the evaluation of insulin timing it is important to consider not only type of insulin but also type of patient. Observations on different types of patients which we have encountered in our studies, to be reported soon, indicate that it is possible to separate two large groups. They have been called the *relatively stable group* and the *relatively unstable group*, irrespective of type of insulin used or amount of exogenous insulin required. Although a sharp line of demarcation does not exist between the two groups, a definite classification of patients into one group or the other is possible after a sufficient period of observation under controlled conditions. In the stable group in which residual homeostatic regulatory mechanisms appear to be functioning, insulin timing is relatively unimportant. On the other hand, timing is critical in the unstable group in which homeostatic mechanisms appear to be seriously disrupted. It is in the latter group that the advantages of an insulin preparation with a more balanced distribution of insulin over a twenty-four-hour period, such as NPH Insulin, are chiefly discernible.

Obviously, the rapidly changing and unpredictable insulin demands from day to day or even during different periods of the same day frequently seen in the unstable patient cannot be overcome by any insulin or combination of insulins with fixed timing, no matter how well timed they may be. While it is true that the timing of no one single preparation is ideal for all patients, particularly in the unstable group, I should like to point out that the variability in response of the unstable patient may be considerably greater than minor defects in timing. Changes in patient response may erroneously be attributed to insulin. For example, an unstable patient taking NPH Insulin may exhibit a moderate glycosuria following breakfast on an average of two out of three days. An attempt to correct this by adding a small dose of soluble insulin before breakfast may invite hypoglycemic reactions on the day that the glycosuria does not occur. Therefore, a certain margin of safety has to be allowed. Finally, I should like to emphasize that, although an insulin with optimal timing may add to the comfort and convenience of the patient, what we really need is a better understanding of the basis of instability.

NEBRASKA STATE MEDICAL ASSOCIATION RESOLUTION

The following resolution was approved and adopted by the House of Delegates of the Nebraska State Medical Association in annual session on May 3, 1950:

Whereas, the Nebraska State Medical Association is a constituent society of the American Medical Association, and

Whereas, members of the American Medical Association now must pay dues to retain their membership, and

Whereas, the House of Delegates of the Nebraska State Medical Association believes that members of the association and its component societies should be members of the American Medical Association,

Therefore *be it resolved*, that to be eligible for membership in the Nebraska State Medical Association a physician must be a member of his component medical society and a member of the American Medical Association, and

Be it further resolved, that a copy of this resolution be transmitted to the Secretary of the American Medical Association and to the secretaries of all constituent state medical societies.

WORKING MINIMUM OF HEPATIC FUNCTION TESTS FOR RATIONALIZING THE TREATMENT OF JAUNDICE

Franklin M. Hanger, M.D., New York City

(From the College of Physicians and Surgeons, Columbia University)

MORE than five hundred functions have been ascribed to the liver. Many of these represent complex enzymatic activities in the intermediary metabolism of foodstuffs and are still beyond the range of clinical study. Others can be measured relatively easily in the human and thus may be utilized to evaluate the status of hepatic efficiency in health and disease.

The liver, by reason of its complex structure consisting of parenchymal cells, biliary duct system, unique vascular bed, and stroma rich in mesenchymal elements, may show a wide variety of derangements which may be grouped with certain overlappings as follows: (1) impairment of one or many metabolic functions, (2) abnormalities in the excretion of various constituents of the bile, (3) disturbances of flow of blood through the liver or inadequate distribution of blood to hepatic cells, and (4) inflammation or scarring of the supporting structures of the liver.

Owing to the close integration of the various tissues constituting the hepatic units, it is not unusual to encounter derangements in all these categories during the course of diseases with widespread involvement. On the other hand, lesions of the liver may be highly selective, and, unless the appropriate type of test is employed, the disorder may be completely unrecognized.

Liver function tests are indicated under a variety of clinical circumstances: (1) for the diagnosis of an obvious hepatic derangement such as jaundice or hepatomegaly, (2) to follow the course of a disorder, or (3) for the detection of possible hepatic involvement among subjects who have been exposed to certain infections, noxious agents, or other hazards known to be debilitating to the liver.

Tests for the recognition of metabolic impairment, for biliary obstruction, and for inflammatory reactions within the liver are in current use and, despite certain recognized limitations, are of definite value.

Satisfactory tests, however, for circulatory derangements and for the presence of fibrosis have not yet been adequately developed. The diagnosis of these conditions rests in great part upon the physical examination, x-ray studies, and biopsy findings. Hence, the final appraisal of the status of the liver in every case depends not only on an integration of hepatic disturbances as shown by tests, but also on further correlation of these with the over-all clinical picture.

In our clinic the following procedures for hepatic investigation are used almost exclusively:

1. For the detection of decreased metabolic activity: (*a*) total serum cholesterol with the determination of the esterified fraction, (*b*) serum albumin level, and (*c*) bromsulfalein clearance.
2. For the recognition of excretory difficulties: (*a*) total serum bilirubin with the determination of the prompt direct reacting fraction and (*b*) serum alkaline phosphatase.
3. For the recognition of necrotizing or inflammatory reactions in the liver: (*a*) cephalin flocculation, (*b*) thymol turbidity, and (*c*) serum globulin level.

Every survey should include at least one test from each group. Numerous alternative procedures have been recommended for the various categories of study enumerated above, and even today certain tests that are seldom employed by some observers are regarded as indispensable by others. The reason for this divergence of opinion lies in the fact that a single test furnishes no more than a limited viewpoint of hepatic inadequacy. Furthermore, no test is infallible, and the more the accuracy is enhanced by technical modifications, the more frequently false positive reactions are encountered and the greater the likelihood of irrelevant factors engendering a misleading conclusion. Many methods currently employed for the study of the liver are relatively crude and nonspecific, but the factors of speed, simplicity, and cost have led to their adoption in preference to meticulous time-consuming quantitative procedures. Certainly, the information obtained from any test, even a poor one, is greatly increased as its success, its vagaries, and its failures are observed under a wide variety of conditions. The limitations of liver function tests are primarily ascribable to the great functional reserve of the liver. More than half of the organ could probably be removed with few demonstrable aberrations if the remaining structures were entirely normal. Indeed, microscopic lesions located at strategic sectors of each hepatic unit tend to cause more striking

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dysfunction than the actual loss of considerable masses of tissue. It is also often difficult in hepatic disease to distinguish the derangements caused by the primary process from the secondary ill-effects that may be associated. For example, the extensive necrosis found in carbon tetrachloride poisoning has been shown by Himsworth to be due not alone to primary toxic injury, but rather to the intralobular ischemia following compression of the sinusoids by swollen hepatic cells. In similar manner a small neoplasm near the portal of the liver, occluding blood supply to the hepatic parenchyma, may cause extensive damage, while a comparable mass located in the periphery of the liver would be most difficult to detect by clinical methods. The various patterns of hepatic functional derangement encountered in hepatic disease are determined largely by the acuteness of cellular damage and the extent of involvement. Injury to the affected tissue may be sudden and irreparable and is manifested by widespread necrosis and autolysis of hepatic cells. Inflammatory reactions (primary or secondary) are common throughout the mesenchymal structures of the liver. Jaundice occurs frequently, and various other symptoms of hepatic insufficiency appear early, since all functional activity ceases in the injured portions.

Acute necrotizing lesions usually cause the prompt appearance of a positive cephalin flocculation reaction. The thymol turbidity reaction tends to become positive as inflammatory reactions develop. Both of these tests, therefore, are indicated in the diagnosis of conditions such as acute and chronic hepatitis, active Laennec's cirrhosis, acute anoxia, and cases of poisoning with such agents as phosphorus, carbon tetrachloride, and other noxious agents.

Hepatic damage, however, does not necessarily lead to the formation of necrotizing or inflammatory lesions. Diets deficient in protein, chronic biliary obstruction, intrahepatic compression, chronic anoxia, repeated exposure to small doses of hepatotoxic agents, alcoholism, etc., lead to gradual damage with diverse manifestations, such as fatty infiltration, hyaline degeneration, atrophic changes, sluggish functioning, and depressed viability of parenchymal cells. Chronic injury often gives rise to selective impairment of hepatic functions, such as lowering of serum albumin, decreased esterified cholesterol fraction in the serum, impaired bromsulfalein excretion, etc., while other functions may be well maintained. The injured cells either remain viable, or, if not, disintegration takes place so gradually that inflammatory reactions in the mesenchymal tissues are inconspicuous or absent. Injury of this type may give rise to no jaundice or to other symptoms referable to the liver until hepatic damage is extensive or fibrotic replacement is far advanced. It is obvious that flocculation or turbidity tests, which are usually negative or irregularly positive during the course of sluggish degeneration of hepatic cells, are of little value in the recognition of conditions such as fatty infiltration, chronic passive congestion, neoplastic invasion, and chronic poisoning, unless necrotizing or inflammatory lesions are also present.

Despite the limitations of hepatic function tests outlined above, many of the common disorders of the liver can be identified by characteristic patterns of functional derangements. Further important information may be gained by repeating a small battery of pertinent tests at weekly intervals until the trend of the disease under standardized conditions has been established.

Hepatogenous jaundice can be differentiated from obstructive jaundice in many instances by the mere finding of a positive cephalin flocculation reaction. The differentiation is more firmly established if the jaundice is accompanied by normal serum alkaline phosphatase values. Patients with hepatitis, in some instances, show elevation of the phosphatase level presumably when an obstructive component in the biliary system is present, but the abnormal rise is usually temporary and tends to recede despite deepening of the icterus. When jaundice is solely on an obstructive basis (extra- or intrahepatic), the cephalin flocculation is negative and the alkaline phosphatase level continues to rise proportionally with the increasing bilirubinemia. Tests for metabolic functions are seldom indicated in the routine differentiation of hepatogenous from obstructive jaundice, except in cases of long duration or those in which a cholangitic form of hepatitis is suspected. Chronic extrahepatic obstruction, or biliary cirrhosis, eventually lead to atrophic changes and gradual impairment of function of the parenchymal cells, which may be recognized by the decreasing serum albumin values and lowering of the serum cholesterol ester level, as the disease progresses. The cholangitic form of hepatitis is fortunately rare, as this disorder may simulate surgical jaundice quite closely and give rise to serious diagnostic difficulties. When young patients are affected, or when jaundice develops during a course of arsphenamine therapy or at an appropriate interval after possible exposure to the virus of hepatitis operation should be deferred for at least six weeks. If, however, the jaundice deepens, the stools remain acholic, and the serum alkaline phosphatase level rises during this interval, surgery is indicated to rule

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out extrahepatic biliary obstruction. Needle biopsies are not always clear-cut in distinguishing cholangiolitic from extrahepatic obstruction, since edema and cellular infiltration of the portal triads may be present in both conditions. Impairment of metabolic functions is perhaps more common in the early stages of intrahepatic obstructive jaundice than in the extrahepatic variety. Also, the finding of hypercholesteremia in the acute stages of the disease may be helpful in distinguishing cholangiolitic hepatitis; elevation of blood cholesterol is a late manifestation of extrahepatic biliary obstruction. Nevertheless, clinical tests should not be relied upon too heavily, since the risks of neglecting extrahepatic obstructive lesions are considerable, and it is advisable not to delay exploration longer than several weeks when the cardinal features of obstructive jaundice enumerated above show no signs of abatement.

Relapse in chronic hepatitis characterized by icterus, positive flocculation reaction, etc., is often mistaken for a fresh attack of acute hepatitis. A differentiation between the two conditions, however, can be made by the finding of hyperglobulinemia, which is very common in chronic hepatitis and coarse nodular cirrhosis but occurs rarely, except in the late stages, in infectious hepatitis. Much concern prevails at the present time as to the proper management of patients convalescing from infectious hepatitis who are generally asymptomatic but who show a persistingly positive cephalin flocculation test or elevated thymol turbidity reaction. These tests, especially the cephalin flocculation, depend upon the presence of labile substances in the albumin fraction which in normal serum act as stabilizers of the emulsion and inhibit the flocculating effects of the gamma globulin fraction. In most hepatic disorders a positive test denotes the absence of adequate inhibiting factors. Positive reactions, however, are observed in nonhepatic conditions, such as some of the reticuloendothelial diseases, due to the elaboration of abnormal globulins. The mechanism of the positive reaction frequently found in infectious mononucleosis is also due to changes in the globulin fraction.

Positive tests in the convalescent period of hepatitis indicate merely that normal relationships have not yet been re-established in the serum complex. Studies on this group of patients, including serial biopsies of the liver and long-term follow-up records, do not establish that the presence of a positive reaction is necessarily indicative of chronic hepatitis or of active parenchymal breakdown. If the liver is no longer enlarged or tender, jaundice has cleared, bromsulfalein excretion has returned to normal, and the serum albumin and globulin levels are satisfactory, it is doubtful whether a gradual resuming of physical activity is harmful to the patient. Fatigue and exhausting activities have been known to cause relapses and actually prolong the activity of disease, but there is little evidence to show that overexertion or lack of proper dietary management are the determining factors in the permanency of the chronic inflammatory and degenerative processes that lead eventually to the picture of coarse nodular cirrhosis and hepatic failure.

The term cirrhosis denotes a heterogeneous group of disorders characterized by fibrotic replacement of injured hepatic tissue. The condition may be static and give rise to no disability; on the other hand, in the majority of cases, cellular breakdown is continually taking place, leading to a gradual loss of functioning elements. Progressive lowering of serum albumin levels and increasing impairment of bromsulfalein excretion are probably the best indices of an unfavorable trend, leading to reduction of viable parenchymal tissue. The cephalin flocculation test is valueless in determining the presence or absence of scarring or the degree of fibrotic replacement. A positive test in cirrhosis, however, is of ominous significance, since it serves as an indication that active necrotizing and inflammatory reactions persist in the tissues of the liver.

Portal hypertension may complicate both active or healed cirrhosis. X-ray studies for the demonstration of possible esophageal varices are indicated, therefore, in all cases of hepatic fibrosis. If blood can be obtained from dilated abdominal veins, portal hypertension can be demonstrated by administering 100 Gm. of glucose by mouth and, after an interval of about thirty minutes for intestinal absorption to take place, noting the higher sugar levels in the blood from the splanchnic collaterals than from the systemic circulation. Ascites, enlargement of the spleen, and a blood picture characterizing "hypersplenism" are also helpful in establishing the presence of portal hypertension.

Biliary cirrhosis, in contrast to portal cirrhosis, is essentially a scarring of the biliary tree and the supporting contiguous structures leading to narrowing and gradual occlusion of the blood vessels, lymphatics, and bile ducts of the liver. The primary dysfunctions in this form of cirrhosis are those of impaired biliary drainage and decreased flow of portal blood. Jaundice with elevated serum alkaline phosphatase and high serum cholesterol values are early distinguishing features. The cephalin flocculation is usually negative, and metabolic function is relatively normal; progressive anoxia and inanition of the hepatic cells, however, gradually lead to hepatic failure, as shown by increasing hypoalbuminemia and declining serum cholesterol ester, which characterize the terminal phases of the disease.

Neoplastic involvement of the liver is most difficult to recognize by laboratory tests, since the picture is extremely variable and may simulate that of many other conditions. In some instances compression leads to gradual atrophy of the hepatic cells without the appearance of jaundice, and without the development of a positive flocculation reaction. Function tests show no derangements until considerable portions of the liver have been destroyed. Tumor tissue, on the other hand, may compress portions of the biliary tree, giving rise to the symptoms and signs of obstructive jaundice. In certain instances, growing intrahepatic lesions may cause elevation of serum alkaline phosphatase without demonstrable jaundice. Occlusion of the vascular bed, on the other hand, causes acute necrosis with jaundice, positive flocculation tests, and a clinical picture resembling hepatitis or cirrhosis.

Even when inoperable neoplasm seems a strong probability, the diagnosis should be established in every case, even if abdominal exploration is required. All of us have seen fatalities from hepatic conditions that could have been corrected by timely intervention. Indeed, in view of the improvements in therapy and the great advances in the field of radical surgery that have been developed in recent years, it is becoming increasingly important that the nature of every hepatic disorder be determined as promptly as possible. The management may require extensive surgical resection, special diets, costly medications, many months of enforced bed rest, or abstinence from certain much-beloved addictions. Medical guesswork and empiric speculation do not constitute an adequate basis on which the modern clinician should make such momentous decisions.

Discussion

Alfred Lenzner, M.D., *Buffalo.*—Dr. Hanger's deliberative paper sounds a plea for the intelligent use of a restricted number of hepatic tests. Each test about which he speaks applies mainly to one of the group functions enumerated. The term "liver function test" has been derisively bantered about for years, and perhaps rightly so. One might say, however, that a given test for liver function is only as good as the employer thereof, for misapplication and poor follow-up are inexcusable and have bred much confusion.

With one or two exceptions only, each test enumerated by Dr. Hanger is easy to perform. Many of them are office procedures. All of them can be done in any laboratory in this country. His cephalin flocculation reaction, although non-specific, is still the simplest and best indicator of degenerative change. With it the most naive laboratory technician has frequently embarrassed the profoundest clinician, with almost devastating accuracy. It has hurriedly altered our surgical schedule on numerous occasions. Many of us would be lost today without it. I am absolutely certain that numerous persons owe their lives to this one test alone.

Its complementary partner, the alkaline phosphatase determination, is likewise indispensable in the therapeutic disposition of the jaundiced patient. When these two get together on a jaundice case, respect them.

In our experience, the thymol turbidity reaction is the least satisfactory adjunct. Its chief application is in lending quantitation or else serial definition to the positive cephalin flocculation reaction. And yet, some have used the thymol turbidity as a standard of reference for new hepatic tests. We are still looking for an objective critical analysis of this glibly used procedure. Its limitations are many.

Where chronic hepatic disease is suspect, albumin-globulin fractionation is mandatory. Many a coarse nodular liver has been labeled cirrhosis by a low serum albumin level. If chronic degenerative hepatitis be present, the serum globulin will reflect it. Dr. Alexander Gutman revived for us a very useful office counterpart to the quantitative serum globulin determination, namely, the formol-gel reaction. A positive formol-gel reaction rapidly indicates hepatogenous jaundice as being chronic in type.

Liver needle biopsy has been of great aid to us in deciding whether hepatomegaly is infiltrative or regenerative in type. Despite the fact, on his own admission, that the pathologist requires several years to acquire familiarity with the material, liver needle biopsy is probably here to stay. At the Buffalo General Hospital, Dr. Kornel Terplan has given us a correct answer in 40 or 41 consecutive needle biopsies obtained from jaundiced patients

In the problem of jaundice the most astute clinical sense is limited. It is chiefly in the older age group that jaundice of insidious onset poses a problem. Surgery here is often promiscuous. Here a carefully chosen set of function tests is indispensable.

Victor W. Logan, M.D., *Rochester.*—It must be a source of satisfaction to Dr. Hanger to know that the test, which is associated with his name, is still the most useful and widely used liver flocculation test.

We use essentially the same tests Dr. Hanger has listed. We possibly use the cholesterol ester test less often than we should. One of the most difficult things to teach our resident staff is the importance of the bromsulfalein test in the nonjaundiced patient. This test requires some added effort on their part and is not, therefore, very popular. It is another test which has stood the test of time remarkably well.

We use Dr. Watson's tests for urobilinogen in the urine and stool, more as a secondary line of investigation than as part of a primary panel of tests. Certainly in the differential diagnosis of extrahepatic obstruction with jaundice, it can give strong support toward carcinoma of the head of the pancreas or of the ampulla when the fecal figures are minimal. However, one point in this respect must be kept in mind. It has recently been shown that patients who are receiving aureomycin and chloromycetin by mouth will not have urobilinogen either in the feces or urine because of the suppression of the enteric bacteria.

I would also like to call attention to another procedure which is not used sufficiently in cases of longstanding jaundice. A biliary drainage will at times yield information as to whether bile is flowing into the duodenum; cholesterol and bilirubinate pigment are suggestive of calculus, and, finally, Papanicolaou stains of duodenal contents have been reported to show malignant cells both from metastatic cancer of the liver and from the bile ducts and pancreas.

We have recently begun to use the colloidal red test of Ducci, and a very crude analysis has indicated that it seems more closely related to the thymol turbidity test than to the cephalin flocculation test. It is a very simple test to perform and can be done in the doctor's office.

PERIODIC DISEASE

Bennett W. Billow, M.D., New York City

(From the Mount Sinai Hospital)

There is a group of paroxsymal medical disorders which occur without affecting the general health of the patient. These episodes are characterized by certain repeated features, and the name "periodic disease" was proposed for purposes of identification. Reimann in his recent paper presented additional cases and also summarized briefly the various theories which have been proposed to explain this disease.[1] It is the purpose of this report to present new cases and to bring attention to several clues which run like threads through the protean manifestations of this disorder. Under the term "periodic disease," Reimann quite rightly suggested grouping several conditions previously described as distinct entities, among them periodic fever, periodic abdominalgia, etc. This disease is not as uncommon as purported to be, and, if looked for by the clinician, many more cases will be found. It is interesting to note that no mention of this disease is made in Cecil's *Textbook of Medicine*, seventh edition, published in 1948. On the other hand, in the fourth edition published in 1938, Baldwin, under the heading of "ephemeral fever," discusses conditions in which the characteristic feature is the inability to refer the fever to any specific cause or to find any local lesion responsible for it. Careful interrogation of these patients will reveal periodic bouts of fever with other minor manifestations for which often no physician is called. I have three such patients whose symptoms will be described more fully later.

Case Reports

Case 1.—Mr. H. S., aged thirty-nine, consulted me because of attacks of fever, ranging from 38 to 39.5 C. (100.5 to 103 F.) and lasting from twenty-four to seventy-two hours, associated with chills, weakness, and myalgia. These attacks had recurred at about eight-month intervals since 1940. He was drafted, and, while in the army, Plasmodium was looked for but was never found. He was given atabrine, but it did not influence his illness. He was given many other tests, he stated, but none revealed any disease. He was discharged and felt well between attacks. He noticed that his attacks became more frequent, and he finally consulted me. For the past two years they had occurred at twelve to fourteen-week intervals.

The sedimentation rate and blood count, blood culture, blood proteins, and differential count were always within normal limits. The Wassermann test, heterophil antibody reaction, tuberculin and histoplasmin skin tests were negative. Repeated search for Plasmodium and Brucella was negative. Agglutination tests for typhoid, paratyphoid, and Proteus OX-19 were negative. Gallbladder and gastrointestinal x-rays were negative. Chest x-rays and intravenous pyelography were normal. Repeated examination of the stool for ova and parasites revealed none. The urine was normal. Physical examination was essentially negative.

Therapeutically he was given salicylates, sulfadiazine, penicillin, dihydrostreptomycin, and aureomycin and chloromycetin. None of these drugs influenced the course of his illness. Finally, he was placed on 1 Gm. of aureomycin daily with a view to preventing the next episode. However, his periodic cycles continued. The patient was reassured that his disease was mild and benign. At present, when ill, he takes to bed periodically for a few days without therapy.

Case 2.—D. G., a woman aged seventy-three came under my observation in 1946. She had been seen by numerous physicians since 1935 who treated her for attacks of "intestinal flu" and for "infection of the colon." These attacks came on suddenly and lasted from one to four days, and in the beginning she had one or two such episodes a year. However she noticed that these attacks became more frequent and, since 1946, had been recurring at two to three-month intervals. An attack was ushered in by a chill, perspiration, and generalized abdominal cramps with two to four loosely formed bowel movements ending in frank diarrhea and fever (39.5 C., 103 F.).

Physical examination during the attack was always negative except for borborygmi and generalized abdominal tenderness. She was a hypertensive with a systolic pressure of 190 to 220 and diastolic pressure of 110. Physical examination otherwise was normal through the fifteen years of study. Frequent and innumerable laboratory studies were made without any results. Systemic x-ray studies were negative except for an irritable colon.

During my observation she was given elimination diets, antibiotics, including streptomycin, aureomycin, and chloromycetin, without any fruitful results. Previously, other physicians had given her the various sulfonamides, penicillin, bacterial antigens from her stools, etc. None of these relieved her symptoms or changed the course of her attacks. Blood studies, agglutination tests, cultures, and repeated stool examinations were normal. Ear, nose, throat, gynecologic, proctologic, and hematologic consultations revealed no abnormality. Finally, she was given aureomycin in divided doses of 1 Gm. daily, but her attacks continued as before. She is finally reconciled that her illness is mild and continues to do well without medications or diets.

Case 3.—H. G., female, aged eighty-five, came under my observation four years ago complaining of temperature of about a week duration, associated with weakness, perspiration, and a nonproductive cough. Her physicians had given her sulfadiazine, injections of penicillin, and symptomatic therapy without beneficial results.

Her physical examination was negative except for an enlarged gland in the left axilla. Further anamnesis revealed that she had several such episodes annually during the previous three years. The patient was hospitalized where she was studied. Biopsy of the gland revealed normal tissue; blood cultures and blood count and differential were normal. The sedimentation rate (Westergren) was 16 mm. in sixty minutes. Stool cultures, urine, tests to rule out tuberculosis, Brucella, infectious mononucleosis, typhoid, lues, etc., were all negative. Liver and kidney function tests were all normal. Consultations brought no fruitful results. X-rays of the bones, gallbladder, gastrointestinal tract, and chest were all normal.

Her temperature ran between 38 and 39 C. (100.4 to 101.3 F.) for three days and then became normal. The patient was given no therapy and was discharged. Our diagnostic impression was Hodgkin's disease.

She felt well and resumed her normal activity. After about four months, she presented the same symptoms again. The patient remained in bed, was given no medication, and after a week became afebrile and asymptomatic. Up to last April, 1949, she continued to have these bouts at four-month intervals. Since that time, these attacks have been recurring at monthly intervals. With the advent of the newer antibiotics, she was given a therapeutic trial with both aureomycin and chloramphenicol, but there was no apparent change, either in the evolution of her symptoms or in shortening of her febrile periods.

She has gained weight, her appetite remains good, and she is otherwise asymptomatic. At this writing, I contemplate giving her aureomycin prophylactically but without conviction as to its efficacy.

Case 4.—R. C., a male, aged fifty-two, has been under my care for the past year. His history revealed that he had empyema at the age of twenty-four and bouts of cold with fever during the past seven to eight years. Physical examination was negative except for hypertrophic osteoarthritis of both knees and lower dorsal spines.

Routine laboratory examinations, including blood count, chest x-ray, electrocardiograph, and urine, were negative. However, about a month after his first visit, the patient was seen at his home for an "attack of fever." A more thorough anamnesis revealed that he had had these periodic attacks of fever, associated with sneezing, over the past eight years and that they recurred every eight to ten weeks. These episodes lasted for about three to five days, his fever ranging between 38.5 and 39.5 C. (100.6 to 103 F.). He had been seen by several physicians during these attacks and was given "flu injections," sulfonamides, and penicillin for them but without any success. He read about aureomycin, and he had hoped that I would give him a trial with it.

During the past year he has had such attacks every two months, and neither aureomycin nor chloromycetin has been of any help. Prophylactically he has been on 25-mg. tablets of Pyribenzamine Hydrochloride and 10 mg. of ephedrine sulfate tablets every four hours, ten to fourteen days before expected attacks. These do control his sneezing but do not prevent his fever or its evolution. Blood culture, blood count and differential, sedimentation rate, and agglutination tests as in the previously described patients were all negative during these febrile episodes.

Case 5.—J. D., a female, aged twenty-four, was seen by the author for the first time in 1949. Ever since the age of nineteen, she has had severe attacks of pain in the right side of her abdomen, which often made her double up. She was told this was due to a "chronic appendix" but was not advised to have it removed. Two years ago another physician informed her she had a cyst of the right ovary, and in his opinion this was the cause of her pain. He advised operation. Further interrogation revealed that these attacks had been occurring at three to four-month intervals and were ushered in by sneezing and rhinorrhea. After a few hours, abdominal pains would follow, sometimes severe enough to call a physician. There was no nausea, emesis, or other bowel changes associated with these attacks. Occasionally, these abdominal pains were preceded by swelling of her right ankle instead of sneezing and rhinorrhea. She never had fever with these episodes. These bouts generally lasted from three to four days. These attacks were not related to her menses.

Physical examination revealed vasomotor rhinitis and severe dermatographia but otherwise was essentially negative. Gynecologic consultant found no evidence of an ovarian cyst or other pelvic pathology. Chest x-rays, tuberculin test, and routine blood count and blood uric acid were normal. She was given a series of allergenic protein extract scratch tests. She reacted with urticarial wheal and irregular pseudopod formation to cat dander, cow dander, chocolate, almonds, green peas, and lima beans. She had a dubious reaction to ragweed and spinach.

She was given elimination diets and Neo-Antergan tablets of 50 mg. each every four hours. She was seen again at her next attack which occurred six weeks later. She had rhinorrhea, no fever, and complained of generalized abdominal pain, especially on the right side. Examination at this time revealed a tender abdomen, maximal about the navel. There was no rigidity. Examination of the rectum and pelvis was negative. She was afebrile; the blood count, sedimentation rate, and urine were normal.

It was our impression that this patient had periodic abdominalgia (benign paroxysmal peritonitis). In three days she was well again. The nature of her condition was explained to the patient.

She had two more, milder attacks at approximately two-month intervals. The author took a week-end holiday and upon his return was informed that the patient had had another attack. She was taken to a hospital where an ovarian cyst and a badly infected appendix were removed. The author requested the pathologic findings, but the family refused to divulge the physician's name. The patient refused to return to my office for further tests. However, two months later she called to inform me that her symptoms had recurred. At this writing her complaints follow the same pattern.

Comment

It is not within the scope of this paper to enter into a detailed discussion concerning the mechanism or the cause of this disorder. The literature to date is contradictory on this point. There is much speculation and theorization about it. However, it is important to stress that, whatever the cause, periodic disease is an entity and, as such, should be familiar to physicians. Careful interrogation of the patient is most important. Case histories will reveal recurrences of these periodic attacks. The patients may call them attacks of "cold or flu," but investigation of their complaints will reveal the repetitive symptomatology.

Four of the author's patients had fever with their attacks, yet innumerable and repeated laboratory investigation for years brought forth no explanation for it. Patients all recovered and felt fine between attacks. There have been no signs of any disease or infection or evidence of any physical deterioration during the years. Treatment ran the gamut from salicylates to the newer antibiotics, but all were of no avail. They did not shorten the course and evolution of the disease. Aureomycin prophylactically did not prevent its recurrence. Two of these patients had definite evidence of vasomotor disturbance, yet antihistamine therapy and ephedrine did not alter the evolution of the disease nor prevent its occurrence.

In two patients, abdominal pain was associated with the attacks. One, however, was constantly afebrile, and one had fever. It is interesting to note that in both patients the character and type of pain repeated itself in each cycle year after year. One (Case 2) had loose bowels with cramplike abdominal pains, while the other (Case 5) had doubling up, knifelike pain with each attack. Periodic abdominalgia, while discomforting to both patient and physician, does not carry the gravity and responsibility as when associated with evidence of accompanying peritonitis. Case 5 emphasizes this point. This patient did not show evidences of peritoneal irritation while under my observation. However, it is safe to assume that she must have presented evidence of a surgical abdomen. Notwithstanding appendectomy and oöphorectomy, this patient's symptoms recurred in cyclical periods. It is a pity that we could not obtain the pathologic reports in her case. It would have been interesting to compare the findings with Siegal's three patients who were operated upon.[2,3] Laparotomy of his patients revealed edema of the peritoneum in one, moderate vascular injection in another, and congestion of the entire abdominal contents of the third patient.

Summary

1. Five new cases of periodic disease are described and discussed.

2. The use of the new antibiotics such as aureomycin and chloramphenicol (chloromycetin) did not alter the progress and evolution of the disease.

3. The prophylactic use of aureomycin and chloromycetin did not prevent the recurrence of the disease or alter its cycle.

4. Appendectomy and oöphorectomy did not bring relief to one patient. Her symptoms continued in periods as before.

5. The patient should be reassured as to the benign nature of this disease.

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THE REDUCTION OF MORTALITY FROM ABORTION

Alexander H. Rosenthal, M.D., F.A.C.S., Brooklyn, New York

(From the Committee on Maternal Welfare of the Medical Society of the County of Kings)

ABORTION contributes heavily to three great causes of maternal deaths, namely, infection, hemorrhage, and heart disease. During the years 1937 to 1949, 182 case records of deaths associated with abortion were received by the Brooklyn Committee on Maternal Welfare. In 146, death was assigned to abortion, and these formed 17 per cent of the total primary puerperal mortality. Although deaths from abortion have been decreasing, they are still far from the irreducible minimum. Case records were studied to determine controllable factors and possible practical measures for the further reduction of mortality.

Four controllable factors appeared significant. These were color, hemorrhage, infection, and therapeutic abortion.

Color

On the basis of reported terminated pregnancies, mortality from abortion is much higher in the Negro than in the white. For the United States during the period 1933 to 1945, it has been estimated as four times as high.[1] For Brooklyn, for the period studied, it was about nine times as high. Further, abortion deaths have declined more slowly in the Negro.

Hemorrhage

Although it has been stated that "rarely does a patient who has had an abortion die of hemorrhage," there were 16 patients in which this occurred.[2] In 14, the period of gestation was at or after the twelfth week of pregnancy. The increase in vascularity with advancing pregnancy probably accounted for this greater incidence. Fourteen deaths occurred sufficiently long after hospital admission to indicate that proper and timely treatment would have prevented death.

Infection

A history of possible induction of abortion is notoriously unreliable. We believe that almost all severe abortal infections result from attempts at induction. In this study a history of introduction of a variety of articles was obtained. Catheters and slippery elm sticks were favored for self-induction.

There were 123 in the septic group, with 86 autopsies, generally by or under the direction of the medical examiner. Generalized suppurative peritonitis and septicemia with septic pelvic thrombophlebitis and embolic dissemination to the lungs were common.

Two pathologic findings were of special importance. They were rupture of abscesses and retention of tissue in the uterus.

Rupture of Abscesses.—Seven patients had spontaneous rupture of intra-abdominal abscesses. Three were tubo-ovarian, two were tubal, and two were not identified as to site. They generally had lengthy hospital stays with occasional readmissions and represented patients who might have survived, had proper and timely operative measures been instituted. The following case will illustrate.

Case 1.—A. E., a twenty-four-year-old Negro woman six weeks pregnant, was admitted for vaginal bleeding and chills and fever. Examination showed a fluctuant mass in the pelvis. She was brought to the operating room for incision and drainage. While she was being examined under general anesthesia, the mass disappeared, and she was returned to her bed immediately. Clinical evidence of generalized peritonitis appeared, and she died two days later. Autopsy showed suppurative peritonitis and a ruptured tubo-ovarian abscess.

Infected Retained Tissue.—There is still a very definite division of opinion as to the management of septic abortion with known retained tissue and without sufficient hemorrhage to warrant removal. Despite the experience of others, many still fear that measures to remove infected tissue will break down defensive barriers and spread infection. In the septic abortion deaths there were at least ten cases which showed retained, necrotic, infected chorionic tissue at autopsy. In several, sulfonamides or antibiotics had been liberally used in the therapy. It would seem that, although these drugs are generally effective against dissemination of susceptible pathogenic organisms from the placental site, they do not reach and cannot act against those in necrotic, infected, retained tissue. Ultimately, the continuous spread of pathogens from this site may get the better of the therapy, and the patient will succumb.

We believe that, when the infection appears clinically to be largely confined to the uterus, and this is true of the great majority of cases, the uterus should be gently emptied, regardless of the degree of hemorrhage.

Therapeutic Abortion

One ordinarily thinks of therapeutic abortion as a lifesaving procedure. Like any operation, it is not without risk. The patient may die of infection, or of hemorrhage and shock, or of the original condition for which it was done. The following cases will illustrate.

Case 2.—B. R., a thirty-six-year-old, white, gravida 3, eight weeks pregnant, had had eclampsia previously. On admission a diagnosis of chronic nephritis was made. At curettage a submucous fibromyoma was noted, and she went into shock after the procedure. She recovered from this complication but subsequently developed a pelvic abscess. A colpotomy, yielding 300 cc. of pus, was done twenty days later. She died of peritonitis on the following day.

Case 3.—A. T., a twenty-five-year-old, white, gravida 4, was hospitalized for pernicious vomiting. She had had two previous therapeutic abortions for the same condition. On admission she was psychotic. A vaginal hysterectomy was done, and she died one-half hour later of shock.

Case 4.—S. O., a thirty-four-year-old, white, primigravida, was hospitalized at twenty weeks of pregnancy because of albuminuric retinitis, albuminuria, and a hypertension of 220/160. A hysterotomy was performed, and she died twenty-eight days later of sepsis and uremia.

Case 5.—L. A., a thirty-one-year-old, white, gravida 5, was admitted to the hospital at ten weeks pregnancy because of heart disease. A curettage was done, and she died within one day of either hemorrhage and shock or cardiac decompensation.

Case 6.—N. T., a twenty-seven-year-old, white, gravida 3, was admitted at twelve weeks pregnancy because of malignant hypertension. A curettage was performed, and she died nine days later of malignant hypertension.

Summary and Conclusions

1. Every physician has a definite obligation to the patient who indicates a desire or determination to be aborted illegally. He should attempt to dissuade her by informing her of the risks of subsequent sterility or chronic pelvic infection resulting in disability and even death. Educational measures are especially indicated in the Negro.

2. When a patient dies of abortion, it is generally because of infection during the first trimester of pregnancy. Hemorrhage and shock becomes a more likely cause as pregnancy advances. Timely evacuation of the uterus in the incomplete abortion with adequate replacement of blood will avoid death from hemorrhage.

3. Spontaneous rupture of the postabortal intra-abdominal abscess into the peritoneal cavity is almost certain to cause death. The necessity for its recognition and timely incision and drainage is apparent.

4. Retained infected tissue should be removed, even in the absence of hemorrhage. Its role in continuing severe general infection which may ultimately result in death has been adequately shown.

61 Eastern Parkway

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ANALYSIS OF 10,000 APPENDECTOMIES

Pathologic evaluation of 10,000 specimens received by the Department of Pathology of the University of Minnesota Medical School revealed that the corrected percentage of normals was 44.8 per cent. In the group of normal appendices, the women outnumber the men two to one. This is probably due to the fact that the female genital tract may yield symptoms simulating appendicitis. In 18 per cent of these latter, it is significant that ovary or ovaries were resected, showing tiny follicular or luteal cysts or normal corpora lutea. The pathologic study, says the author, forces the conclusion that these additional procedures were not warranted and adds that removal of a normal corpus luteum, which occurred in 5.5 per cent of the negative female group, is particularly unjustified. While it is generally accepted that a good diagnostician should not have more than 20 per cent normals in a large group of appendectomies, the author comments, "with dozens of physicians scattered over thousands of miles contributing material, it could hardly be expected that an ideal percentage of diagnostic accuracy would be attained."—*Elmer C. Paulsom, M.D., Minnesota Medicine, January, 1950*

Case Reports

INTESTINAL OBSTRUCTION DUE TO GALLSTONES DIAGNOSED PREOPERATIVELY

Morris W. Molinoff, M.D., Brentwood, New York, and Sol Shlimbaum, M.D., F.A.C.S.,
Bay Shore, New York

(From the Department of Surgery, Southside Hospital)

INTESTINAL obstruction due to gallstones is not rare and should be considered in differential diagnosis, especially if the patient has never previously been operated upon. The condition is more common in women than in men in the proportion of fifteen to one, whereas the incidence of gallstone disease is only three to one in favor of women.[1]

Gallstones large enough to cause obstruction can enter the gastrointestinal tract only through a cholecystenteric fistula. The gallbladder becomes attached to the stomach, or more commonly to the duodenum, by adhesions resulting from chronic inflammation of the gallbladder wall. Pressure of a large stone will cause ulceration and erosion of the wall of the gallbladder and the adherent stomach or intestine. Small stones pass through the intestinal tract and are unnoticed. Large ones become impacted in the narrow lumen of the terminal ileum.

The diagnosis can often be made preoperatively by an early scout film of the abdomen in the erect position. This will show gas in the biliary tree, dilated loops of small bowel, and the gallstone if it is radiopaque. A barium enema in the presence of a relaxed ileocecal sphincter will aid in visualization of the gallstone.

This report presents two cases diagnosed by roentgenologic examination and verified at operation.

Case Reports

Case 1.—An eighty-three-year-old white woman presented symptoms of severe abdominal pain and vomiting for two days prior to her admission to the hospital. She became mentally confused at the onset of illness.

Her past history revealed that she had frequent episodes of upper right abdominal pain with nausea and some vomiting. These attacks were less frequent of late, and she was comparatively free of gallbladder colic after an episode of hematemesis two years ago.

Physical findings on admission on October 24, 1947, were remarkably few for an aged woman in acute pain. The abdomen was soft and only slightly distended below the umbilicus. There were no palpable masses. Rectal examination revealed some stool in the rectum, and mineral oil given two days previously was recovered from the lower bowel by enema.

Laboratory findings revealed a serum protein level of 3.85 Gm. per hundred cubic centimeters of blood. This was improved to 5.6 Gm. before operation by the administration of blood plasma. First scout film showed moderate distention of the small intestine with gas, suggesting presence of obstruction.

Barium was forced through the ileocecal valve for a distance of about nine inches. At this point the flow of barium stopped, and an oval mass was outlined with the barium (Fig. 1). It appeared to be intraluminal.

The abdomen was opened through a midline incision from the umbilicus to the symphysis pubis. Intestinal obstruction was apparently incomplete, because the loops of small bowel were not distended. The obstructed segment of ileum was located in the pelvis behind the uterus and was delivered from the

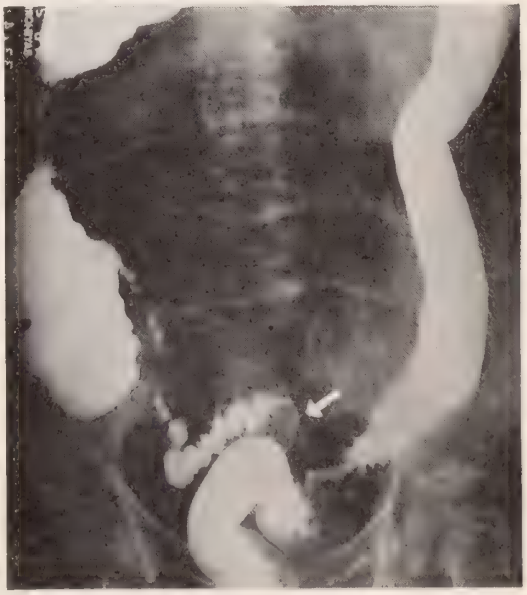

Fig. 1. Oval mass, outlined with barium, which was apparently intraluminal.

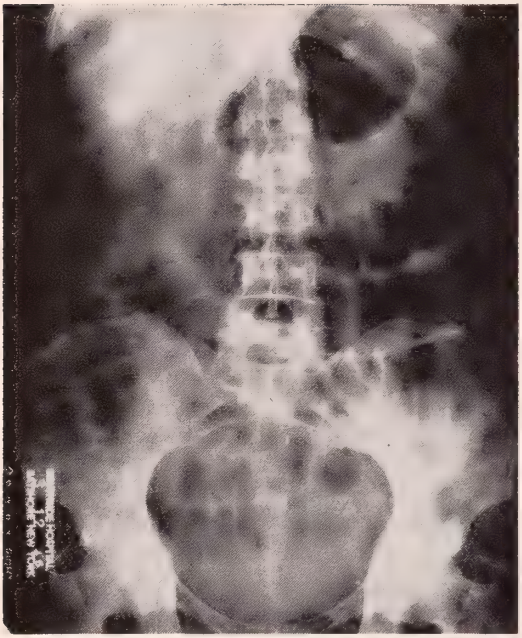

FIG. 2. Distended loops of small intestine with tendency to ladder formation.

peritoneal cavity. It was then isolated by moist laparotomy pads, and rubber-covered intestinal clamps were applied above and below the obstruction. A $1^{3}/_{4}$-inch longitudinal incision was then made on the antemesenteric side of the bowel, and a gallstone the size of a walnut was removed. The ileum was closed with a row of chromic number 0 Connell sutures, reinforced by a row of number 0 chromic Lembert sutures, buried by a layer of continuous chromic number 0 serosal sutures which invaginated the second row. Ten grams of sulfathiazole powder were applied to the suture area, and the abdomen was closed in layers after application of four tension sutures.

Shortly after the operation the patient's mental condition improved. The wound drained for about two weeks, after which she was discharged from the hospital in good condition.

Case 2.—A sixty-three-year-old white woman had a history of obstipation for six days and vomiting for five days prior to her admission to the hospital on March 11, 1946.

Past history revealed gallbladder disease of many years duration. She was treated for gallbladder colic once at another hospital but was not operated upon. Thirty-five years ago a uterine suspension had been performed.

Physical examination on admission revealed a pale, flabby, acutely ill patient. Positive findings were a markedly distended and tympanitic abdomen. No masses were palpable.

X-ray examination revealed distended loops of small intestine with tendency to ladder formation (Fig. 2). Gas was noted in the biliary tract. The common duct and several hepatic radicals were outlined by gas.

A calcified gallstone, $1^{1}/_{2}$ inches long and $^{3}/_{4}$ inch in diameter, was found impacted in the terminal ileum two feet from the ileocecal valve at operation. The gallstone was removed through a longitudinal incision which was closed in two layers transversely and covered with a segment of omentum. The abdomen was closed in layers: plain catgut for the peritoneum, chromic for the fascia, dermal tension and Stewart stitches for the skin.

The patient expired two hours postoperatively.

The authors are indebted to B. L. Feuerstein, M.D., and S. T. Herstone, M.D., roentgenologists of the Southside Hospital, for their diagnostic aid and for permission to publish the x-ray films.

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USE DRUG TO COMBAT CEREBRAL PALSY SYMPTOMS

Encouraging results in treating children with cerebral palsy by administering tolserol, a synthetic drug which produces muscular relaxation, have been reported. Beneficial results occurred in 14 of 16 children with the cerebral palsy manifestations known as athetosis (constant recurring series of movements of hands and feet), Dr. Charles H. Frantz, of Grand Rapids, Michigan, said in the June 3 issue of the *Journal of the A.M.A.*

"Children with spasticity and rigidity did not respond satisfactorily in the group evaluated," Dr. Frantz said. "Children over ten years of age seemed to respond better than the younger subjects," he added. "In the over ten age group, hand skills seemed to improve. Sleeping habits were noted to improve in four children eight years of age and younger."

Of the 27 children studied, 23 were able to take the drug. Dizziness, nausea, irritability, and listlessness were noted as side effects of tolserol.

ADENOACANTHOMA OF THE UTERUS

Sidney Cohn, M.D., and Philip Rosenblatt, M.D., Brooklyn, New York

(From the Department of Laboratories of the Jewish Hospital of Brooklyn)

ENDOMETRIAL tumors composed of glandular and squamous elements, designated as adenoacanthoma, were first described by Herxheimer in 1907.[1,2] Either element may have malignant potential, but, as a rule, adenocarcinoma with interspersed nests of squamous cells is most common. Squamous cell epithelioma of the endometrium, in conjunction with adenocarcinoma or without glandular malignancy, has been described.[3-5]

Adenoacanthoma may develop from endometrium regardless of location. Teilum, Moss and Runals, and Novak have reported adenoacanthoma developing from endometrial cysts of the ovary.[6-8]

The diagnosis of adenoacanthoma is made histologically. When making such a diagnosis, a similar process or tumor in the cervix must be ruled out, or if there is some cervical pathology, it must definitely be established that there is no connection between the two.[9]

These tumors do metastasize, but, as a rule, only one element is present in the distant foci, usually adenocarcinoma. Stein and Torek reported an unusual adenoacanthoma in which the uterine tumor was composed of adenocarcinoma with a few scattered, apparently benign squamous elements.[4] Microscopic examination of surgically removed metastatic foci in the posterior mediastinum and lung two years later revealed adenoacanthoma with squamous cell carcinoma as the principal invasive component.

Case Reports

Case 1.—M.S., aged sixty-four, was admitted to the hospital on May 14, 1945, complaining of intermittent vaginal bleeding of one and one-half years duration. She gave a normal menstrual history. The menopause had occurred twenty years previously. She had had a breast tumor excised thirty-eight years previously and an umbilical hernioplasty for an incarcerated hernia ten years prior to admission. Following the latter procedure she suffered an episode of coronary thrombosis. On admission she admitted to dyspnea on exertion. Physical examination revealed auricular fibrillation with systolic murmur at the base. Pelvic examination revealed a senile posterior floor, a slightly relaxed anterior wall, a small urethral carbuncle, a senile cervix, and a small retroverted uterus. Urinanalysis revealed a trace of albumin, and hematologic studies were within normal limits.

On the second hospital day, dilatation and curettage were done. At operation the uterine cavity was found to be 6.25 cm. deep, and the procedure produced several pieces of granular and cheesy material. Because of the complicating arteriosclerotic heart disease it was decided to treat the patient with radium. On the sixth hospital day three capsules of radium, totalling 100 mg., were inserted into the uterine cavity, and 4,200 mg. hr. of radiation therapy were given. The postoperative course was uneventful, and the patient was discharged May 27, 1945.

Subsequently, the patient received deep x-ray therapy which was completed by September, 1945. She was last seen on December 6, 1946, at which time she told of having seen blood in her urine on November 30, 1946. However, pelvic examination revealed the cervix to be closed, the uterus to be small, and the parametria to be free.

Pathologic Examination.—Gross: The specimen consists of several fragments of soft and spongy, pink and gray tissue.

Microscopic: The preparations reveal fragments of endometrial tissue which show a variegated appearance. In places there are nests and sheets of atypical columnar cells which often arrange themselves about lumens. The cells are variable in size and shape, and they are heaped up. Mitotic figures are often seen within the nuclei which are somewhat bizarre. The basement membranes cannot be made out. In other areas there are nests of atypical squamous epithelium. These cells are pleomorphic, bizarre, and in some places keratinization in the form of "pearls" is prominent (Fig. 1). Intercellular bridges can be made out. Mitotic figures within the pavement cells can be seen as well as tumor giant cells. In some areas, both tumorous elements intermingle freely (Fig. 2). The stroma is fibrous and infiltrated with lymphoid cells.

Diagnosis: Adenoacanthoma of the endometrium.

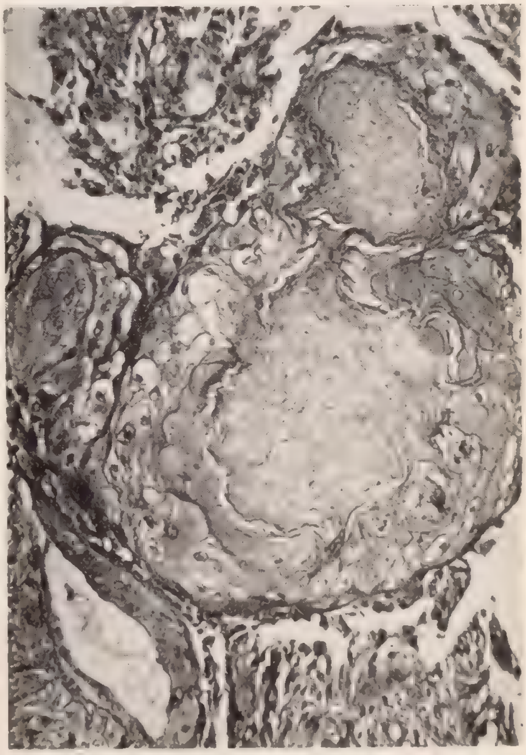

Fig. 1. Adenoacanthoma (Case 1). Note "pearl" formation. (Hematoxylin and eosin, 200 ×)

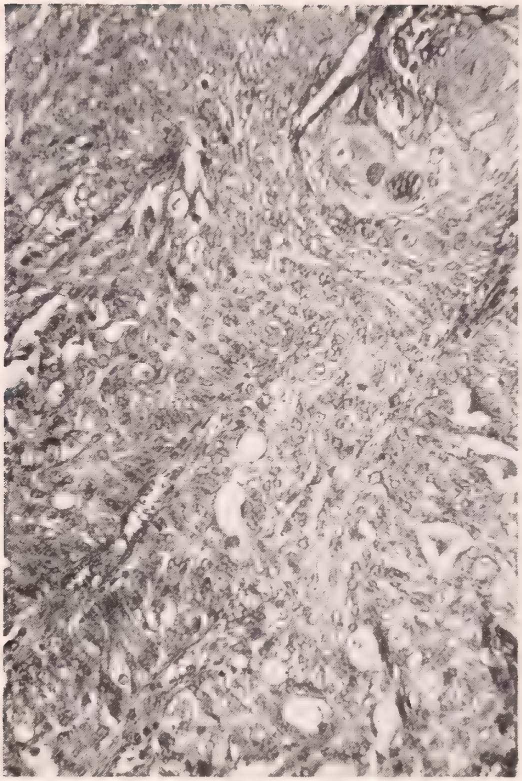

FIG. 2. Adenoacanthoma (Case 1). Note intermingling of adenocarcinoma and epitheliomatous portion of tumor. (Hematoxylin and eosin, 200 ×)

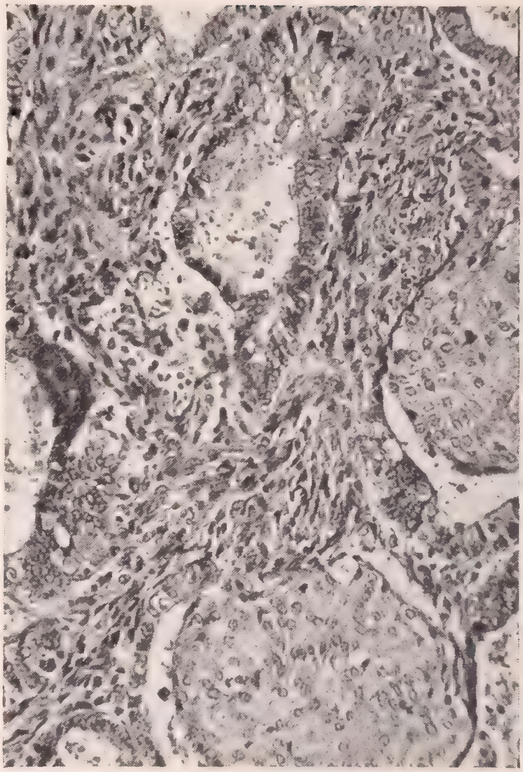

FIG. 3. Adenoacanthoma of uterus (Case 2) with intermingling of adenocarcinomatous and epitheliomatous elements. (Hematoxylin and eosin, 200 ×)

Case 2.—M. G., aged forty-five, was admitted to the hospital on October 28, 1948, complaining of vaginal bleeding of eight months duration. She had noticed, during that time, increasing menometrorrhagia. A nineteen-day period had terminated two days prior to admission. The past history was noncontributory. A preoperative diagnosis of uterine fibroids was made, and a laparotomy was performed. The uterus was found to be irregular, enlarged to the size of a three months gestation, and to contain several fibroids. A total hysterectomy and right salpingo-oöphorectomy were done. The postoperative course was uneventful, and the patient was discharged on November 7, 1948.

The patient was last seen in February, 1949, at which time she had no complaints, and examination was negative.

Pathologic Examination.—Gross: The specimen consisted of a totally extirpated uterus with right Fallopian tube and ovary attached. The uterus and cervix measured 9.0 cm. in length, 4.0 cm. being cervix. The endocervical canal contained numerous nabothian cysts measuring up to 0.8 cm. in diameter. The uterine cavity measured 6.0 cm. in depth. The anterior and posterior walls in the lowermost portions were adherent to a globular, pink-tan, 3.0-cm. mass which, in places, was firm, and in other areas was necrotic. Gentle separation showed this mass to be pedunculated. Elsewhere, the endometrium was pink, soft, and measured 0.4 cm. in thickness. The myometrium measured 3.0 cm. in thickness and contained several fibroids. The right tube and ovary were not remarkable.

Microscopic: Preparations taken from the uterine mass reveal a fibrous stroma in which are scattered atypical glands and nests of squamous epithelium somewhat similar to those described in Case 1 (Fig. 3). Here, however, keratinization is not seen. The centers of some of the nests of epithelioma are necrotic, and numerous polymorphonuclear leukocytes are present.

Diagnosis: Adenoacanthoma of the uterus.

We wish to thank Dr. R. Schwartz and Dr. S. Linder for permission to report these case histories.

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CARDIOPERICARDIOPEXY FOR THE TREATMENT OF CORONARY ARTERIAL DISEASE

A. N. Gorelik, M.D., A.I.C.S., and S. Krell, M.D., F.A.C.P., New York City

(From the Metropolitan, Bronx, and Morrisania Hospitals)

IN AN effort to rehabilitate patients incapacitated from coronary heart disease, several surgical procedures have been tried. These fall into one of two classifications: (1) efforts to relieve anginal pain either by means of alcohol injection into nerve roots or resection of ganglia or (2) efforts to increase the blood supply to the myocardium and in that way not only free the patient of anginal attacks but to increase his working capacity as well. Under the latter category may be included the following: (1) grafting of a variety of tissues to the myocardium-pectoral muscle, omentum, lung, mediastinal fat, spleen, stomach, and intestine (Beck, O'Shaughnessy, Lezius, and Carter); (2) cardiopericardiopexy produced by spraying the epicardium and pericardium with such irritating substances as bone dust, asbestos (Beck), or talcum powder (Thompson); (3) anastomosing blood vessels to the coronary sinus (Beck), and (4) ligation of the coronary sinus with or without denervation (Fauteux).[1-7]

We hereby wish to report a case of cardiopericardiopexy using the talcum powder method of Thompson.[6]

Case Report

J. M. L., a physician from Oran, Algiers, North Africa, aged fifty-four years, came to the United States on February 19, 1949, to undergo surgical treatment for coronary heart disease. In the past eight months this patient had been suffering from angina pectoris of increasing frequency and severity. He was forced to give up a lucrative practice. For several months before his arrival in this country he was unable to walk more than 100 meters without having an anginal attack.

His oldest brother died of coronary thrombosis; his youngest brother, also a physician, suffers from coronary disease. One of us (S.K.) did the preliminary studies of the patient and found definite evidence of coronary insufficiency after exercise; the rest of the physical examination and laboratory findings were negative. On February 24, 1949, under gas-oxygen-ether anesthesia a cardiopericardiopexy was performed by one of us (A.N.G.) using the talcum powder method.

The postoperative course was uneventful except that the mediastinal reaction with severe left pleural effusion took place almost at once. The effusion being large in amount, it was aspirated twice (March 2, 500 cc.; March 3, 850 cc.). The patient was able to leave his bed the first postoperative day. In addition to the severe mediastinal reaction, the operative wound was draining from the costal cartilagenous bed (confirmed by Dr. Medinger in Algiers). Dr. L. was discharged from the hospital on March 11. The day of his discharge from the hospital, he was invited by friends for dinner. He had a very heavy meal without any ill effects. Previously that would have precipitated an anginal attack.

From March 12 until the day of his departure, Dr. L. visited a number of physicians and cardiologists to show them the results of his operation. Electrocardiograms were taken, and thorough examinations of the heart were performed. Besides the numerous daily visits to doctors and hospitals for demonstrations, Dr. L. engaged in various activities requiring physical effort such as walking 3 miles and climbing stairs. At no time did he suffer any anginal attack. Dr. L. flew back to Oran on March 21.

In his first letter from Algiers, dated March 24, exactly one month after the operation, he mentioned that the trip back by plane was uneventful except for severe cold weather between Newfoundland and Lisbon. He was examined by Professor Curtillier, the most experienced thoracic surgeon in Algiers, who found fluid at the left base. A paracentesis yielded only 2 cc. of lemon-colored fluid. The effusion was walled off anteriorly behind the operative wound, as proved by x-rays. There was no drainage from the wound on the trip back. In April, 1949, Dr. L. was able to resume his practice. Since then we have received regular communications from Dr. L., and as of now he is entirely free of anginal attacks. He is not only able to attend to his duties as a physician, but he is also entirely free of pain upon taking long walks and climbing stairs.

Comment

Unlike congestive failure and most of the arrhythmias which can be treated fairly adequately, coronary heart disease does not lend itself to a ready medical solution. The medical man is, of course, never at a loss for suggestions to his patients. He tells them to lose weight, to cut down on their salt intake, to stop smoking, to reduce their activities, not to overburden themselves mentally, and to train themselves to become emotionally neutral. He also prescribes a multiplicity of drugs, such as xanthines, nitrites, opiates, sedatives, vitamin E, testosterone, etc. Having disemburdened himself of all this advice, the physician experiences a sense of relief in the knowledge that he has instructed his patients wisely. And well he has—for in these sketchy remarks, you find practically the sum total of the medical treatment for coronary heart disease, particularly those cases which are characterized by frequent and distressing anginal seizures. Unfortunately, this is not good enough. In the first place some of this advice is difficult, if not impossible, to follow. A patient may be willing enough to relinquish a physical habit which he has cherished for years, but his emotional reactions which are part of his personality pattern cannot easily be altered. Then, too, our drugs are for the most part disappointing, with the result that a patient may follow scrupulously our advice and still continue to be terrorized by dread anginal seizures.

Obviously there is a need for something better, in the treatment of coronary heart disease, than the medical man can offer. Cardiopericardiopexy provides a rational and more hopeful approach to the problem. It converts an ischemic myocardium into a hyperemic myocardium by the introduction of sterile talcum powder inside the pericardial sac. The talcum powder remains permanently in the pericardial sac except for a small amount which is lost by phagocytosis. A foreign body inflammatory reaction takes place, producing a granulomata pericarditis. Autopsies revealed definite collateral vascular formation in a generalized, adhesive granulomatous pericarditis. The pericardium was quite adherent posteriorly to the myocardium. The infarcts have shown definite revascularization. The newly-formed blood vessels between the pericardium and the myocardium were of various sizes, some of which could be distinguished by the naked eye. The foreign body inflammation or the pericarditis persists for a very long time without interfering with the patient's daily activities. Since the procedure is simple and the need for an effective treatment admittedly great, we believe that this operation merits a much wider application.

NOTE: Since this report was written, five additional cases have been treated with excellent results and will be reported at a later date.

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TYPHOID FEVER SUCCESSFULLY TREATED WITH CHLORAMPHENICOL IN A TWO-YEAR-OLD CHILD

T. CAMPBELL GOODWIN, M.D., and MARY STEWART GOODWIN, M.D.,
Cooperstown, New York

(From the Mary Imogene Bassett Hospital)

TYPHOID fever may occur at any age, but it is unusual in the first two years of life. Cases occurring in this age group comprise about 2 per cent of those seen in the first fourteen years, and less than 0.5 per cent of the total incidence. Since Woodward and his coworkers demonstrated the value of chloramphenicol in typhoid fever, several reports of its use in adults and older children have been published.[1,2] It seems wise to report the successful use of this drug in a young child with typhoid fever, since it was begun early in the disease and since various difficulties were encountered in the technic of administration.

Case Report

D. H. G., twenty-four months old, was admitted to Mary Imogene Bassett Hospital on September 19, 1949. The source of the disease in this child is unknown. In the village of three thousand where he lives, no patient with typhoid fever has been seen for over three years. None of the members of the family or visitors to the house, including the service help, had ever had typhoid fever, and the child had not been away from home for the two or three weeks prior to the onset of the disease. It is interesting that nearly two hundred thousand people visit this village during the summer months. The number of visitors coming to see the various museums in town has more than doubled in the past two or three years. The toilet facilities, both public and private in the town, have not increased to meet this new excessive demand. Late in the summer, after a long dry spell and shortly before the onset of typhoid fever in this patient, 6 inches of rain fell in thirty hours. This washed a great deal of material into the lake on the shores of which the village is situated. This child went swimming in the lake ten days before the first fever began.

Family History.—The parents, a brother, and a sister are all quite well. None of them has had typhoid fever, and the parents have been inoculated numerous times against the disease.

Past History.—The patient was born at full term, weighing $7^{1}/_{4}$ pounds. He was delivered by cesarean section because of premature separation of the placenta due to thrombosis of the marginal placental vein. His neonatal condition was excellent, however, and until the onset of the present illness his medical history was singularly negative. Two minor upper respiratory infections and a mild unilateral catarrhal otitis were his only illnesses. He was inoculated against diphtheria, tetanus, and pertussis and vaccinated against smallpox during the second half of his first year. On three occasions he received immune globulin after exposure to measles. He has always been an unusually vigorous, robust child, and two weeks before the present illness on his second birthday he weighed $33^{1}/_{2}$ pounds and was $36^{1}/_{2}$ inches tall.

Present Illness.—The onset was sudden. He awoke on the morning of September 14 with a headache, voluntary resistance of the neck to lateral motion, irritability, and a temperature of 104 F. The temperature, which came down two degrees after the administration of aspirin, rose again and remained irregularly elevated. The voluntary stiffness of the neck and headache lasted three or four days. Signs of moderate respiratory infection began on the second day with a reddened pharynx and palpable, tender, anterior cervical lymph nodes. Both ear drums were inflamed. All these symptoms improved after the administration of 300,000 units of procaine penicillin in oil.

On the third night of illness the child developed an explosive diarrhea. The first two stools were of the consistency of meconium, dark green in color and quite voluminous. After this they became watery, brilliant green, and occurred every two or three hours. The odor was not foul. There was some tenderness and resistance in the right upper quadrant of the abdomen and moderate generalized gaseous distention. His appetite was poor; however, the fluid intake was excellent the first two days but began to drop off, and by the fourth day of illness he was moderately dehydrated. The white count at this time showed 6,700 cells with a normal differential. The stool culture was negative for enteric pathogens.

On the fifth day of illness he was worse, with a higher temperature, poor peripheral circulation, hoarseness, and more tenderness with some rigidity in the right upper quadrant. After an intravenous infusion of 800 cc. of normal saline and 5 per cent dextrose, he showed temporary improvement but was worse that night, and the next morning, the sixth day of illness, he had several chills. Up to this time his medication consisted of from 2 to 5 grains of aspirin a day, procaine penicillin in oil, two doses of 300,000 units, and streptomycin, 200 mg. twice daily on the fourth and fifth days of illness. Because he was becoming worse with no obvious beneficial effect from the therapy mentioned above, he was admitted to the hospital on the morning of September 19.

On admission to the hospital he was obviously an ill child, drowsy and fretful when disturbed, and resisting any type of attention. His nutrition was good and his color fair. His dry lips and tongue, flabby inelastic skin, and sunken eyes bespoke dehydration. No rash was visible. The extremities were mottled, slightly cyanotic, and his cheeks were flushed. Small hard lymph nodes could be felt in the posterior cervical triangles and in both axillae. The head was normal in size and contour and was not tender. There were no signs of increased intracranial pressure. There was a mild injection of both the conjunctivae and the posterior pharynx. The tongue was not coated, although rather dry. The ear drums were normal. The neck was not stiff, although he resisted lateral motion. The lungs were clear to percussion and auscultation with a regular respiratory rate of 35 to 40 per minute. The heart rate was 140, and the sounds were quite good. There was a normal rhythm, and no murmurs were heard. The abdomen was moderately distended and generally tender with a good deal of resistance to palpation. Peristalsis was active. The spleen was not enlarged. The liver was tender and palpable 3 cm. below the costal margin. The genitalia were normal. The extremities showed some mottling and mild cyanosis. The deep tendon reflexes were normally active.

The day following admission, the seventh day of illness, his spleen became palpable 1 or 2 cm. below the costal margin; about 20 typical rose spots appeared on the trunk and thighs, and the agglutination done the previous day was reported as positive for typhoid. The blood culture was also positive. New rose spots continued to come out for twenty-four hours and disappeared by the end of three or four days.

At the time of admission it was suspected that the patient had a bacterial enteral infection, probably of the Salmonella group, and, therefore, chloramphenicol was started (Fig. 1). When the diagnosis of typhoid fever was confirmed by the laboratory the next day, the seventh day of disease, the dosage of the drug was increased. Two hundred milligrams per kilogram in twenty-four hours were given every six hours for the first three days. The drug was dissolved in water and given by nasal tube. After this it was administered by rectum. On the third day of administration the dose was decreased to 125 mg. per Kg. and on the eleventh day to 60 mg. per Kg. where it was kept until it was stopped entirely a week later. Because of the rather rapid drop in hemoglobin, transfusions were given on the eighth and ninth days of illness. A bland, low-roughage diet commensurate with his appetite was continued. No other drugs were used except a moderate dose of phenobarbital on two occasions.

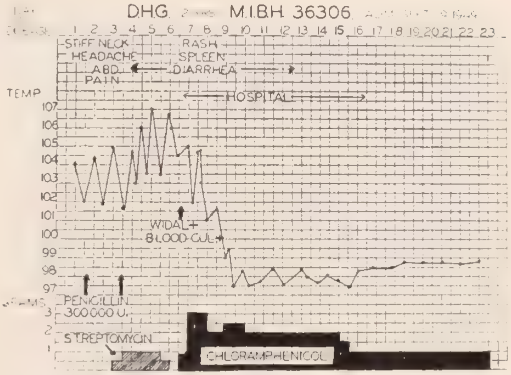

FIG. 1. Chart showing progress of disease on treatment with penicillin, streptomycin, and chloramphenicol.

Definite improvement was noted within twelve hours after the chloramphenicol was begun, with better circulation and less irritability. The cry, although still hoarse, was stronger, and the appetite and acceptance of fluid were definitely better. At the end of sixty hours the temperature had reached normal and did not rise again. Except for weakness and loss of muscle tone, the obviovs after-effects of high fever, no signs of illness remained. His diarrhea stopped, but the stools continued to be unusually green for several days. Within a week he was eating enormously, and a month after discharge from the hospital his weight, strength, muscle tone, and general condition were all normal.

Laboratory Examinations.—Stool culture on September 26 was negative for blood, ova, and parasites, and subsequent cultures were consistently negative for organisms of the enteric group.

On September 19, the blood culture was positive for Salmonella typhosa, bacteriophage type E_1 (Craigie), in forty-eight hours, and agglutinations on this date were positive for S. typhosa alcoholic antigen in dilution of 1:1,280 and for S. typhosa in formalin antigen in dilution of 1:160. Agglutinations in the melitensis group were negative on September 27 and were positive for S. typhosa alcoholic antigen in dilution of 1:1,280 and for S. typhosa formalin antigen in dilution of 1:2,560.

Blood chemistry on September 27 showed bilirubin, direct, 0.3 mg. per cent, and urea nitrogen 7.7 mg. per cent.

Blood and urine examination results are shown in Table 1.

Comment

Several points in this child's story are worthy of comment. Typhoid fever, although unusual in this country and particularly rare in young children, must still be considered among the causes of severe illness. In infants the onset and early symptoms may be bizarre and the physical signs atypical. In this child the appearance of rose spots and a palpable spleen on the seventh day of illness made the suspected diagnosis of Salmonella infection more specific. The positive agglutination against the

TABLE 1.—Results of Blood and Urine Examinations

	September 19	September 21	September 26	September 27
Blood				
Hemoglobin	9.9 Gm.	...	...	17.5 Gm.
Red blood cells	...	...	...	5,400,000
White blood cells	4,300	...	...	6,200
Polymorphonuclear leukocytes	44%	...	...	23%
Lymphocytes	53%	...	...	74%
Monocytes	2%	...	...	2%
Eosinophils	1%	...	...	1%
Urine				
Specific gravity	1.025	1.025	1.035	...
Albumin	+	0	0	...
Sugar	0	0	0	...
Microscopic	Rare white and red blood cells	Numerous single and clumped white blood cells	Occasional single white blood cell	...

typhoid organism reported later that day and the growth of S. typhosa in the blood culture the following morning left no room for doubt.

Chloramphenicol was begun in full doses when the type of infection was suspected on the sixth day of illness, and as far as we know this was its earliest recorded use in the treatment of typhoid fever.[*] Because relapses occurred in several of the patients with typhoid fever treated with chloramphenicol, we were advised to continue the drug for a longer period of time.[4] One hundred twenty milligrams per kilogram, or a total daily dosage of 2 Gm., were continued for a week. For the first eleven days the interval between equally divided doses was six hours, after that eight hours, and the last three days twelve hours. The dose was decreased to 1 Gm. daily for the final week.[**]

The technical difficulties in the administration of chloramphenicol to young children have not been sufficiently emphasized. Due to its extremely bitter, lingering taste and the difficulty of disguise in any of the usual vehicles, the oral route is not practical. Forceful administration in an acutely ill child is often followed by gagging and vomiting. Frequent repetition of this situation would pose a serious physical as well as economic problem. We found that the drug was well tolerated when introduced into the stomach by nasal tube. However, after several doses at six-hour intervals, vomiting occurred, not from immediate gagging but fifteen to thirty minutes after the administration of the drug. The inclusion of 0.5 Gm. of aluminum hydroxide with the 30 cc. of water and 250 mg. of chloramphenicol decreased the irritative effect of the drug, and for two days no further vomiting occurred. During the period when the vomiting did occur, the child was eating very little food.

The rectal absorption of the drug has been reported, and we used this route after the ninth day of illness when the diarrhea had subsided. It was suggested that at least a 20 per cent increase in dosage be used when the drug is given by rectum instead of by mouth. The 250-mg. capsules were soaked in equal parts of glycerine and water for twenty to thirty seconds, punctured at each end with an ordinary pin, and inserted well up into the rectum. There was a great variability in the time of dissolution of the capsule and disappearance of the drug. On some occasions a small stool observed an hour later contained no obvious trace of medication. At other times small sticky masses of gelatin containing some of the white powder were exhibited in a stool three or four hours after administration. Suppositories containing 150 mg. of chloramphenicol were used several times. When they were well moistened with a lubricant jelly, the insertion was easy, but the absorption seemed to be slower than that following the use of the capsules. Pieces of suppositories representing at least a third of the original volume were seen in stools passed four hours after insertion. Mild irritation of the anus and lower rectum was present after two days of the rectal administration of capsules of chloramphenicol. This was never very severe but was accompanied by some tenderness and spasm. It improved slowly during the last week of drug administration when the dose interval was twelve hours.

Many stool cultures were done, the first on the fourth day of the disease and the last six weeks after the temperature was normal. At no time was the typhoid bacillus recovered from either stool or urine.

Except for the local irritative effects, no toxic manifestations of the drug were observed. Within a few hours after the first dose, in spite of the persistently elevated temperature and pulse, it was obvious that the patient's course had changed and that he was getting better. This rapid disappearance of the severe toxic symptoms was most striking. It is of interest that the temperature remained consistently below normal for over a week after the fever disappeared.

Summary

1. A case of typhoid fever in a two-year-old boy successfully treated with chloramphenicol is reported.

2. The importance of the early use of this drug and its continuance for at least two weeks after defervescence are stressed.

3. Comment is made on the technical difficulties encountered in the administration of choramphenicol to small children.

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[*] After this report was written, a clinical conference was reported from St. Louis Children's Hospital where five children from seven to thirteen years of age were treated with chloramphenicol. In one of them the drug was begun the fifth estimated day of illness.[3]

[**] This is a larger dose than has been advised, but it was deemed wise because of the patient's abrupt and severe reaction to the infection.

POSTPARTUM PELVIC HEMATOMA

MORTON A. BEER, M.D., and J. IRVING KUSHNER, M.D., F.A.C.S., New York City

(*From the Department of Obstetrics, Bronx Hospital*)

OBSTETRIC hematomata may be vulvar, paravaginal, intraligamentary, or retroperitoneal or may appear in a combination of these locations. Discussions on intrapartum and postpartum complications in the textbooks and at scientific meetings assign little space to hematomata. A survey of the literature disclosed 188 cases of paravaginal hematoma reported from 1854 to 1948.[1] The incidence varies from 1 in 1,951 deliveries reported by Moschkow to 1 in 7,000 reported by DeLee.[2,3] The latter states that the mortality was 40 per cent prior to the institution of active treatment. Hamilton reported a mortality of 8.3 per cent since the introduction of active treatment, and Frank-Kamenetsky reported a 9.5 per cent mortality.[4,5]

The vulvar type appears immediately or within a few hours after delivery, the bleeding vessel being located external to the pelvic fascia and levator muscles. Later, a blue, sensitive, elastic mass appears, and the diagnosis can be made on inspection and palpation. The paravaginal type may go unnoticed for some time. The patient complains of increasingly severe pain, "bearing-down" pains, or rectal discomfort. On examination a mass may be found in the vaginal wall projecting into the vagina. On rectal examination a mass may be palpated. This is the type that can dissect upward beneath Poupart's ligament, into the broad ligament, and retroperitoneally to the diaphragm. Finally, with massive hemorrhage, the patient exhibits signs of shock, necessitating immediate supportive measures.

It is generally agreed that the lesion is caused by trauma or pressure necrosis of vessels due to prolonged compression of the fetal head. The diagnosis is made by the bluish discoloration where there is tumefaction and pain. Inspection and examination of any patient complaining of severe, continuous pain after delivery is mandatory. All reviewers stress the fact that cases are missed because the attending physician attributes the complaint of pain to episiotomy sutures or perineal lacerations.[1]

An episiotomy will help prevent vulvar damage, especially in young primiparas. A thorough inspection for lacerations and connective tissue approximation is essential. Early diagnosis and evaluation of the case is the next step. When a small hematoma is discovered and it does not increase under observation, it is best treated expectantly. A hematoma that is enlarging or a hematoma that is large on discovery may be incised and evacuated and the bleeding controlled because of the possibility of infection. Transfusions may be necessary.

In view of the early ambulation now advocated and the shorter hospitalization now popular, more late hematomata may be seen than in the past.

The following case is presented with these considerations in mind.

Case Report

J. L., a white, thirty-five-year-old, gravida 4, Para 2, was first seen in the Prenatal Clinic of the Bronx Hospital on March 3, 1949. She had had two previous full-term pregnancies in 1933 and 1940 resulting in spontaneous deliveries of 7-pound living children. A twelve-week spontaneous abortion occurred in 1945.

The last menstrual period began July 3, 1948, and the patient's expected date of delivery was April 10, 1949.

A pelvic examination at her first visit showed a soft, lacerated cervix with closed internal os. The vagina was found to be normal in size with no masses palpable. No varicose veins were seen in the vulva or introitus. A cystocele and rectocele were present. The fundus was firm, ovoid, and 23 cm. above the symphysis with the fetal heart heard in the left lower quadrant.

After an uneventful antenatal course she was admitted in labor at 9:00 A.M., on April 4, 1949. At this time the cervix was 4 cm. dilated, membranes were intact, and an engaged vertex was the presenting part. At 4:22 P.M. on April 4, 1949, after patient had been fully dilated for one hour and fifty-two minutes, with no descent of fetal head and an arrested right occiput transverse position, a mid-Kielland forceps operation was done, and a 7-pound, $9^1/_2$-ounce female child in good condition was delivered. No perineal laceration occurred, and the placenta was expressed spontaneously four minutes after delivery of the infant.

The following day, the patient complained of pain in the right lower quadrant. Physical examination revealed no pathologic condition. The hemoglobin was 9.9 Gm. with 3,300,000 red blood cells. On the fifth postpartum day, temperature rose to 100.6 F., and a vaginal examination now revealed a large cystic tender mass, about the size of an orange, extending from the right ischial spine into the right broad ligament. The vaginal wall on the right side was pushed medially by this mass. Above Poupart's ligament on this side a firm irregular mass could be felt extending upwards for 5 cm. The fundus was distinct from this mass and was felt 2 fingers above the well-involuted umbilicus. A diagnosis of hematoma of the right vaginal vault (?) extending into the right broad ligament was made. A blood count at this time showed a hemoglobin of 6.4 Gm. with 2,400,000 red blood cells. Accordingly, the patient was given a 500-cc. blood bank transfusion. A blood count three days later showed a hemoglobin of 10.5 Gm. with 3,500,000 red blood cells. The pelvic mass, however, remained the same.

On the fourteenth postpartum day a pelvic examination was again made, and a tense fluctuant mass, unchanged in size, close to and adherent to the right vaginal wall, was found. Under antiseptic conditions this mass was now aspirated per vaginam, and about 15 cc. of dark red, clotted blood were obtained. Direct smear showed no bacteria, and there was no growth in culture after forty-eight hours.

Following aspiration, the patient felt better, the pain disappeared, and the mass became smaller and nontender. The patient was discharged two days later on the sixteenth postpartum day.

Presented at a meeting of the Bronx Gynecological and Obstetrical Society, January 23, 1950.

Follow-up examination two months after discharge showed the mass on the right side to be much smaller and not palpable by abdominal examination. There was now only slight tension present, and the blood in the right broad ligament had been completely absorbed, as the upper limits of the hematoma could now be easily made out. Three weeks after the above visit, examination showed the mass to be very firm, probably the result of fibrous organization of the blood. Final examination six months after delivery showed the mass to be completely absorbed. Patient was asymptomatic.

We are indebted to Dr. Meyer Rosensohn, director of the Deparment of Obstetrics at the Bronx Hospital, for his helpful suggestions in the preparation of this report.

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MIXED TUMOR OF SALIVARY GLAND TYPE IN THE NOSE

Samuel Baer, M.D., and Carter M. Alexander, M.D., Troy, New York

(From the Departments of Otolaryngology and Pathology, Samaritan Hospital)

MEDICAL literature is replete with the varied sites in which mixed tumors are found. Cordray reports mixed tumors found in the parotid gland, the submaxillary region, the palate, lacrimal gland, jaw, tear sac, neck, tongue, cheek, tonsil, and pharynx.[1] In a review of the literature we have found no record of a mixed tumor in the nose. For this reason, this case is reported.

Case Report

On March 25, 1949, one of us (S.B.) was consulted by a young Negro woman, aged twenty-eight, who stated that for several months she had been unable to breathe through the right nostril, had frequent attacks of epistaxis on the right side, and also that she had constant epiphora from the right eye. She also complained of some pain in the right cheek. She reported no weight loss and stated that aside from the above-mentioned symptoms, she had no other complaints.

Physical examination revealed a plump woman in no apparent discomfort. Her right eye was tearing, and there seemed to be a fullness in her right cheek. Anterior rhinoscopy was normal on the left. On the right side, there was seen a swollen, bluish structure almost entirely filling the right nasal cavity. At first glance this resembled an intumescent inferior turbinate, but examination proved otherwise. This structure was stony hard to palpation, bled easily and profusely when touched, and did not shrink with the application of cocaine and ephedrine. This being recognized as something other than a minor variant of normal tissue, biopsy was done.

Transillumination revealed no abnormalities in the accessible sinuses, and x-ray of the sinuses was also negative. Complete blood counts were normal. There was no reaction in the complement fixation test for syphilis.

With 2 per cent novocaine, the right sphenopalatine ganglion was blocked, and the anesthesia was completed by the use of 10 per cent cocaine locally. Then with a circular turbinate punch, penetration of the outer wall of this tissue into the contents was attempted. The outer wall was found to be of a stony hardness, but, once penetrated, thick caseous material extruded from the punched out opening. What should normally have been inferior turbinate bone was completely supplanted by this tissue which was nothing more than tumor tissue enclosed in a hard bony shell. This tissue and the bony shell were removed as completely as possible by curettage.

Pathologic report was as follows:

On gross examination, the specimen consisted of fragments of soft, pink tissue, measuring together 2 by 1.5 by 0.6 cm.

Microscopically, there were clusters and cords of epithelial cells in a rather acellular stroma (Fig. 1). The epithelial cells were columnar in shape, with oval, pyknotic nuclei. A moderate number of cystic glands, lined by flattened epithelium, were present. A few epithelial cells had a swollen, deeply eosinophilic cytoplasm that was sometimes vacuolated. These cells suggested early squamous metaplasia; however, the pattern was not that of mucoepidermoid tumor.

The stroma consisted of widely separated cells in a faintly basophilic matrix. Most of the stromal cells had stellate protoplasmic processes. A few cells were clearly encapsulated, indicating cartilaginous transformation of the stroma.

The diagnosis was mixed tumor of salivary gland type.

This patient was last seen again nine months after operation. There was no apparent recurrence of the original tumor mass. She had no difficulty in breathing, the epiphora had ceased entirely, and she had returned to her work as a stenographer.

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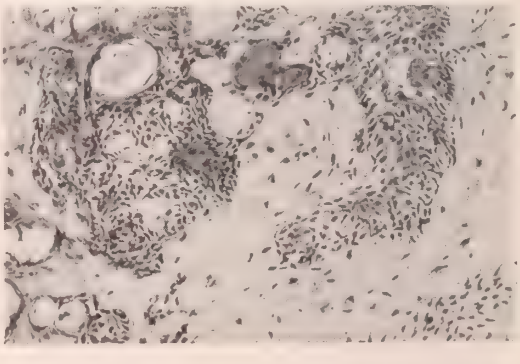

Fig. 1. Epithelial nests containing cystic glands embedded in a mucoid and partly cartilaginous stroma. Cartilage cells are fairly well demonstrated near the lower right-hand corner of the figure. (Hematoxylin and phloxin, 210 ×)

ROCKY MOUNTAIN SPOTTED FEVER

Irving Greenfield, M.D., F.A.C.P., Woodmere, New York

THE spread of Rocky Mountain spotted fever into new areas of the country is attracting the attention of both public health officials and practicing physicians. On Long Island, spotted fever was reported first by Davis in 1913.[1] Since then an increasing number of cases have been recorded. In Suffolk County, up to 1947, 100 cases were reported. Scattered cases have occurred in Nassau County. The majority have been Suffolk County contacts. Many people vacation each year in areas of Long Island where ticks are present. Ticks, the only known vectors of this disease, and animal hosts, both wild and domestic, are abundant. Wider knowledge regarding the disease, therefore, appears essential. For that reason, a proved case of Rocky Mountain spotted fever in an individual whose contact was in an area in Nassau County where the disease was hitherto unknown is presented.

TABLE 1.—Results of Hemogram

	July 18	July 23
Hemoglobin	73%	78%
Red blood cells	2,980,000	3,580,000
White blood cells	4,700	5,300
Polymorphonuclear leukocytes	76%	50%
Lymphocytes	18%	33%
Monocytes	1%	1%
Eosinophils	2%	4%
Basophils	2%	2%
Stab forms	1%	1%

TABLE 2.—Agglutination Reactions

	July 18	August 4
Blood Wassermann	Negative	. . .
Proteus X-19	Negative	1:320
Proteus X-2	Negative	1:80
Proteus OXK	Negative	Negative
Rocky Mountain spotted fever	Negative	1:460
Salmonella typhosa	Negative	. . .
Brucella abortus	Negative	. . .

Case Report

A white female, forty-three years of age, was employed as a domestic for many years and accompanied her employer from a city apartment to a rented summer home in Hewlett Neck, Nassau County, Long Island. In the line of her duties, she walked the family dog a distance of approximately 50 yards through heavy underbrush to the water's edge. Frequently, she returned from the walks with ticks attached to her clothing and on her body. They were always removed manually and crushed between the fingers. In addition to the walk to the water's edge, the dog was permitted to run about on the grounds. At least twice daily the dog was deticked. Ticks were frequently seen in the house and often were removed from beds, walls, and furniture.

On July 6, 1949, the patient noted a dead tick on the inner aspect of the left thigh, adjacent to the labia. She brushed it off with the palm of her hand. On July 14, she was taken ill with a chilly sensation, fever, headache, universal pains, and aches. She had a malar blush, appeared prostrated, and, in general, was far too ill to justify the paucity of findings on physical examination. Her temperature was 101 F. The pharynx, the conjunctivae, and the nasal mucous membrane were congested. Photophobia was evident. The remainder of the findings were entirely normal. The following day a macular rash appeared on the forearms and wrists. It disappeared within two hours. The patient was toxic. The lips were cyanotic and dry. Her face had a brownish flush. Beads of perspiration were present on the forehead and upper lip. Throbbing pulsations of the neck vessels were visible. The fever was 103 F., and she was prostrated. The pharyngeal congestion was no worse than it had been. There was no nuchal rigidity. No abnormal reflexes were present. The headache was severe.

On July 16, 1949, the fever was 104 F. The rash reappeared on the forearms, arms, and chest. An eschar was noted on the upper, inner, aspect of the left thigh. Control specimens of blood were sent to the laboratory for agglutination against Proteus OXK, X-19, X-2, and Rocky Mountain spotted fever. The results of laboratory examinations are contained in Table 1. There was a considerable anemia. The leukopenia was striking. An electrocardiogram was normal. Rocky Mountain spotted fever was suspected, and 250 mg. of aureomycin were given at six-hour intervals. Within thirty-six hours, the clinical picture changed. The headache subsided. The photophobia, evidences of prostration, and toxicity were no longer present. The fever was 100 F., and the patient was considerably improved. At no time was the spleen enlarged. The hemoglobin and the red cell count were at a more normal level. The leukocyte count was 5,300, and the smear contained 33 per cent lymphocytes. Recovery was uneventful. After ten days, blood was again submitted to the laboratory for the agglutination tests.

The control titers of agglutination for Proteus OXK, X-19, X-2, and Rocky Mountain spotted fever on the fourth day of her illness were negative. However, three weeks later, the titers of these agglutination reactions demonstrated a significant rise (Table 2). The agglutination titer against Rocky Mountain spotted fever was positive in a dilution of 1:460.

Summary

Rocky Mountain spotted fever is rather widely distributed throughout the country. The clinical picture is characteristic. Prevention of infection may be secured by adhering to simple precautionary measures.

The beneficial action of aureomycin on the course of the disease is reaffirmed. Report is made of a proved case occurring in an area where the disease has not been recognized previously.

799 Central Avenue

Acknowledgment is made to the New York State Department of Health, Division of Laboratories and Research, for the agglutination reactions. The epidemiologic investigation was conducted by I. J. Tartakow, M.D., Department of Health, Nassau County.

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Special Article

THE DOCTOR'S RESPONSIBILITY IN CHILD ADOPTION

George W. Kosmak, M.D., New York City

THERE are few physicians who, at some time in their careers, have not been involved to a greater or less degree in the problems of child adoption. This is particularly the case with obstetricians, pediatricians, and those in general practice. It is to them that the distressed mother turns when she cannot keep her baby. The doctor's tradition of helpfulness and his own broad sympathy incline him to do what he can in these circumstances, and it is quite proper that he should, in so far as questions of health are concerned. But adoption has many facets other than health, and it seems wise from time to time to review this situation in medical publications.

There are three primary interests concerned in any adoption: the mother who is giving up the child, the prospective adoptive parents, and the child himself. Of them all, the interests of the infant or child must remain paramount, for the only sound goal in adoption is to find a suitable home for the child. This is a point of extreme importance to the physician, inasmuch as would-be parents often urge him to find a child for them, and he, recognizing their emotional upsets and needs, and, under their importunity, may tend to approach the matter in relation to the prospective parents rather than the child.

The first interest to be conserved, then, is the child, more often than not an infant. He is, of course, a helpless, nonarticulate entity. To him, the physician has the obligation of assuring health as far as this is possible. That is a professional responsibility for which only the physician is equipped and need not be further discussed here. However, also in the field of health, the physician who participates in adoptive procedures must protect the infant's interests by being sure that the prospective parents are themselves healthy—from a physical and emotional standpoint. The latter will offer more difficulties than the former, and, if the doctor has known and attended the couple for some years, he is in a peculiarly favorable position to pass upon their stability and adjustment, one to the other and socially. One parent, or both, with a tendency to follow fads and fancies and cults or to be overly aggressive or introspective is not, as a rule, a good risk.

As will be discussed in detail presently, every kindness and consideration needs to be given to the problems of the infant's own mother. Further, of course, the prospective parents have every right to assurance that the child they expect to adopt is sound mentally and physically and to get sound advice as to how to proceed in the adoption.

When there is to be an adoption of a newly born infant, one of the first questions to arise is how soon the mother and child should be separated. At first thought it may seem better that the child be removed from the mother at once so that too strong an attachment does not develop on the mother's part. Each case is, of course, an individual problem, but many doctors and social workers who have watched adoption plans work out have come to believe that taking the baby from its mother too soon may, in fact, have unhappy consequences for both infant and mother.

Moreover, most obstetricians would agree that the mother of a newborn infant needs time to reach a decision that involves her child's entire future. This is particularly the case when to the ordinary weaknesses and reactions of pregnancy and childbirth are added the fear, uncertainty, and unhappiness experienced usually by unwed mothers. A woman in these circumstances is not in a physical or emotional condition to make a quick, irrevocable, and, at the same time, wise decision. Babies are not necessarily given for adoption because the mothers do not love them. Many mothers make the decision from an earnest and responsible desire to see that the children get the best possible chance for security and happiness. When these various aspects of the matter are considered, the wise procedure in the average case is to give the mother time to reach her decision. Moreover, she will want to know that her baby is normal and healthy, as will the adoptive parents, and of no small importance is the fact that the love and care of his own mother, even for a short time, has a great value to the baby.

For parents to give up their own children is always a sad and distressing thing. Fortunately, it is no longer necessary for families to give children for adoption merely because of poverty. Mothers' assistance, relief grants, allowances for dependent children, and similar social provisions for the distressed now make it possible for families to stay together notwithstanding their poverty.

On the other hand, the problem faced by the young unmarried mother is heart-rending and ghastly. Social attitudes are such that many of these mothers still feel they must turn to adoption to avoid disgrace for themselves and their children. Often this mother is young and immature emotionally. She may have feared to confide in her own family or have been cast off by them, or she may be a young woman with no family or friends to whom she can turn for help. Such mothers, bewildered and unhappy though they may be, usually want to do the best thing for their children. Sometimes they feel sure that in an adoptive home, where he is loved and wanted and assumes the name and status of his new parents, the child will be far happier and better protected than if brought up as an illegitimate child, shifting between boarding homes or the shelter of unwilling relatives.

It is at such times that these mothers turn to their doctors for aid and ask them to find adoptive homes for their children. A physician may feel inclined to place the baby in the home of some childless friends or patients as soon as the health of mother and baby permits, but such a well-meant plan is fraught with complications. Doctors who have done this out of the kindness of their hearts have sometimes suffered the experience of having a mother appear a few months later, demanding the return of her child after the new parents have learned to love him. Or the new parents may decide they do not want a child, after all, or not this particular child, and may hold the doctor responsible for relieving them of what they now consider a burden. Whatever the ensuing results, they will bring heartache to the child's own mother or the adoptive parents and often disturb the child greatly.

It is much better for the doctor to whom the baby's mother has turned for aid and comfort to recognize that more than medical knowledge is now involved, that it is much wiser for him, and less drain upon his time and energy, to refer the problem to those who are experts in adoption as he is in his field. These workers will approach the matter sympathetically and humanely, but they will also be in a position to apply to this matter of delicate human relationships all that they have learned in the process of placing hundreds of children in good adoptive homes.

There are many unmarried mothers who either do not have a personal physician or do not consult their family doctor because of embarrassment, or they may be unable to afford the services of a private physician. These mothers use the facilities of hospital clinics and, therefore, do not know the doctor who treats them in any personal way. Nevertheless, the mother who is a clinic patient and has met the doctor only through the hospital where she is enrolled may have the same impulse to turn to him for help in finding a place for her baby. The physician who is consulted by a clinic patient in this way has less knowledge of the mother's situation or of her family resources and is, therefore, even more likely to find himself involved in a complicated situation if he attempts to help directly in placing the baby for adoption. Most hospitals have trained social workers available, either in the social service division of the hospital itself or in the welfare agencies of the community, to whom the physician can refer the clinic patient for guidance and help in respect to the placing of her baby for adoption.

If the physician calls upon an adoption agency and refers the prospective mother to its social workers, what will they do for her? First, they will confer with her prior to the baby's birth and will often help her to make far better arrangements for the prenatal period than she could alone. They will help to plan for her own living arrangements before the birth of the baby if, as so often is the case, she is a stranger and alone in an unfamiliar community. If she is also without adequate financial resources, they will know the kinds of help that can be made available to her. She will be able to talk her problems over with sympathetic listeners who will help her to resolve her own confused and unhappy feelings and to await the coming of her child in a better frame of mind.

The social workers, of course, rely upon the physician to guide the mother's prenatal care and will cooperate with him in behalf of his patient. After the baby is born they will need the doctor's advice and information about the health of both the mother and the newborn baby. They will help her to plan for the time immediately after his birth, if necessary, arranging for his care in a good, supervised boarding home as soon as he leaves the hospital. The mother, however, will not at this point give up all her own responsibility for the child. If she is able, she may pay for all or part of his board, and, if she wishes, arrangements can be made for her to see the child occasionally. Far from being the grim-visaged, censorious persons pictured by the unknowing, the social workers of adoptive agencies are sympathetic people who understand the mistakes and misfortunes of humanity. They realize the mother's conflicting emotions and will give her time to recover her health and make up her mind as to whether she wishes to keep her child or give him up for adoption. If the mother finally signs a legal surrender to a properly authorized agency, it will be after she has had time to think the matter over thoroughly and not when she is suffering from illness or despair.

If her child is placed with the help of such an agency, she knows that the agency's workers have tried to find the best possible home for her particular child, that they have selected this home for him after getting to know his particular abilities and disposition, that they will stand in the relationship of a guardian to him as long as is necessary. How much better it is to know this than to think he has been placed in the first available home without any regard to the suitability of this home for him!

The doctor, busy with the problems of health, will find it a welcome solution to his problems to be able to refer a young woman who comes to him for help in the adoption placement of her child to a child welfare agency. Throughout New York State there are agencies, public and private, which place children of all creeds and colors in adoptive homes. In most large cities there are local agencies, all prepared to help the mothers with their own needs and to place the children whose own parents cannot keep them in carefully and individually selected adoption homes. True, the social agencies cannot always do exactly what the mother wants in exactly the way she thinks she would like best. She too may have to make some adjustments, may have to exercise some flexibility in accepting the services that are available. Nevertheless, by calling upon the services of a social agency the doctor can best help all those involved in the adoption process—the mother, the child, the new parents. He can assure them of thoughtful consideration and of protection through the fact that the social workers will recognize and respect the confidential nature of their relationship, and the protection of identity is one of the special services which the agency can give the mother and child as well as the adopting parents.

By working through an agency the child and his own mother are assured of competence, thoroughness, and knowledge in the choice of adoptive parents. The people who apply to an agency for children are of varied types, incomes, educational backgrounds, and occupations—farmers and businessmen, bus drivers and college teachers, lawyers and mechanics. They are interviewed and visited by staff workers who get to know them well and are, therefore, able to recommend the sort of child best fitted to them. Meanwhile, the children are cared for in private boarding homes prior to placement, visited frequently by the social workers, examined regularly by the staff doctors, given an ability test by a staff psychologist. The knowledge thus gained enables the agency staff, as far as is humanly possible, to find the sort of home best suited to each child and, in turn, the child who will fit with the greatest ease and promise of happiness into a particular home.

Even after placement of a child in a new home, legal adoption is generally not permitted for about a year. The staff worker visits the home several times to see how the placement is progressing and is available at all times for help or advice. No busy doctor can do all this. Moreover, if a child is placed through an agency, the doctor can know that the agency will protect and care for the child if anything happens to the adoptive parents.

In brief, by availing himself of an agency's services, a doctor is doing the best thing for everyone concerned in the adoptive process. He will save himself time and worry as to whether he is making a mistake in trying to help a distressed mother. Rather, he will know that he is assuring her of time and consideration in making her decision and giving her peace of mind as to her child's future. He will make available to himself and to all those concerned what the workers in the social sciences have learned about methods of child adoption. By not succumbing to a hasty impulse to help immediately and directly, he will in the end be far kinder both to the adopted children and their own mothers than by attempting the haphazard type of placement too common in the past.

23 East 93rd Street

TROPICAL DISEASE INFECTIONS AMONG VETERANS

Although the fear has not materialized that introduction of new disease agents carried by discharged service men might create serious public health problems, the problems of individual veterans have turned out to be more numerous and more serious than expected. The factors of latency and delay in appearance of recognizable symptoms resulted in the discharge of numerous service men, who had never been hospitalized while in service, with unrecognized parasitic infection. This paper is a report on 696 veterans examined over two years at a clinic established by the author for the diagnosis and treatment of tropical diseases (Institute of Tropical Diseases, Winston-Salem, North Carolina). Since the group was made up of veterans referred to the Institute because a tropical disease was suspected and of others who were known to have had a service-connected tropical infection, the incidence of infection found in the group would be higher than in the general veteran population. In spite of this, the study indicates, says the author, "that these conditions are far more prevalent among veterans than had been suspected. More important are the facts that, with very few exceptions, the infections were not only clinically significant in the sense of their association with a handicapping chronic disability but that the individual had not previously had accurate diagnosis or effective treatment."

The author points out that the great majority of practitioners in this country are unfamiliar with tropical diseases. The Veterans Administration in this respect is faced with the same problems that faced the armed forces at the start of the war: lack of fully competent diagnostic services in the country as a whole. In his opinion, chronic infections by Endameba histolytica are the major problems. The solution for the individual veteran is in the hands of the general practitioner.—*Thomas T. Mackie, M.D., The Journal of the Kansas Medical Society, February, 1950*

3 Useful Cardiac Drugs

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NECROLOGY

Leon M. Ajemian, M.D., of New York City, died on June 24 at the age of sixty-four. Dr. Ajemian received his medical degree from the University of Geneva Medical School in Geneva, Switzerland, in 1914. He began his practice in New York City in 1922.

Frank Benedict Collins, M.D., of Webster, died on August 15 in a Rochester hospital as the result of an automobile accident. He was seventy-nine. Dr. Collins received his medical degree from the Wayne University Medical School, Detroit, Michigan, in 1901 and had practiced for forty-nine years in Webster. An owner and racer of trotting horses, Dr. Collins was a member of the Monroe County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Stephen Hubert de Coste, M.D., of Brooklyn, died on July 30 at his home at the age of seventy-one. Dr. de Coste was graduated from the New York University and Bellevue Hospital Medical School in 1906. During World War I he served as a captain in the U.S. Army Medical Corps. Dr. de Coste was consulting otolaryngologist at the Greenpoint and St. Catherine's Hospitals, both in Brooklyn, and consulting bronchoscopist at the Mary Immaculate Hospital, in Queens. A Diplomate of the American Board of Otolaryngology, Dr. de Coste was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Martin M. Friedlandt, M.D., of Brooklyn, died on July 30 at the age of fifty-nine. Dr. Friedlandt received his medical degree from the University of Vienna in 1922 and came to the United States in 1940. He was clinical assistant physician at the Cumberland Hospital in Brooklyn, had served on the Hospital's social service committee, and was a member of the New York City Department of Welfare. Dr. Friedlandt was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Otto Bernhardt Geist, M.D., of Buffalo, died on July 27 at the Meyer Memorial Hospital at the age of thirty-five. Dr. Geist was graduated from the University of Buffalo School of Medicine in 1940. He was assistant attending surgeon at the Meyer Memorial Hospital and associate surgeon at the Emergency Hospital, both in Buffalo. Dr. Geist was a member of the Buffalo Surgical Society, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Horace Hallock, M.D., of Southampton, Long Island, died on August 21 at his home at the age of sixty. Dr. Hallock received his medical degree from the Johns Hopkins Medical College in 1916 and interned at New York Hospital. During World War I he served in France as a captain in the U.S. Army Medical Corps. Since 1919 he had practiced in Southampton, where he was attending surgeon at the Southampton Hospital. A Diplomate of the American Board of Surgery and a Fellow of the American College of Surgeons, Dr. Hallock was a member of the Association of Military Surgeons of the United States, the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Joseph Goodman Levy, M.D., of New York City, died on June 11 after a long illness at the age of sixty-nine. Dr. Levy was graduated from the Columbia University College of Physicians and Surgeons in 1903. He was consulting proctologist at the Harlem Hospital and attending proctologist at the Beth David Hospital and the Home and Hospital of the Daughters of Israel, all in New York City. Dr. Levy was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas Joseph Longo, M.D., of Brooklyn, died on August 15 at the New York Polyclinic Hospital at the age of sixty-four. Dr. Longo received his medical degree from the Fordham University School of Medicine in 1916 and did postgraduate work at the New York Post-Graduate Hospital. For the past twenty-one years, Dr. Longo was an attending physician at the Coney Island Hospital, having served as director of medicine there for the past five years and as president of the medical board for the past three years. He was also consulting physician at the Samaritan Hospital and attending physician at the Harbor Hospital, both in Brooklyn.

A former instructor of medicine at the Long Island College Hospital, Dr. Longo had been a member of the board of visitors of Creedmoor State Hospital, a consultant in cardiology for the State Insurance Fund, and a member of the State Medical Advisory Board. A Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, Dr. Longo was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Maxwell Rosenzweig, M.D., of Brooklyn, died suddenly on August 14 in his office at the age of fifty-two. Dr. Rosenzweig was graduated from the Columbia University College of Physicians and Surgeons in 1921 and interned at the Jewish Hospital in Brooklyn. He was attending gynecologist at the Jewish Hospital. During World War II Dr. Rosenzweig served in the U.S. Army Medical Corps at Fort Devens, Massachusetts, and in the Pacific Theatre with the rank of lieutenant colonel. A Fellow of the American College of Surgeons, Dr. Rosenzweig was a member of the Brooklyn Gynecological Society, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frank Raymond Surber, M.D., of Queens Village, died on July 14 at the age of fifty-seven. Dr. Surber received his medical degree from the University of Nebraska Medical School in 1920. He was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

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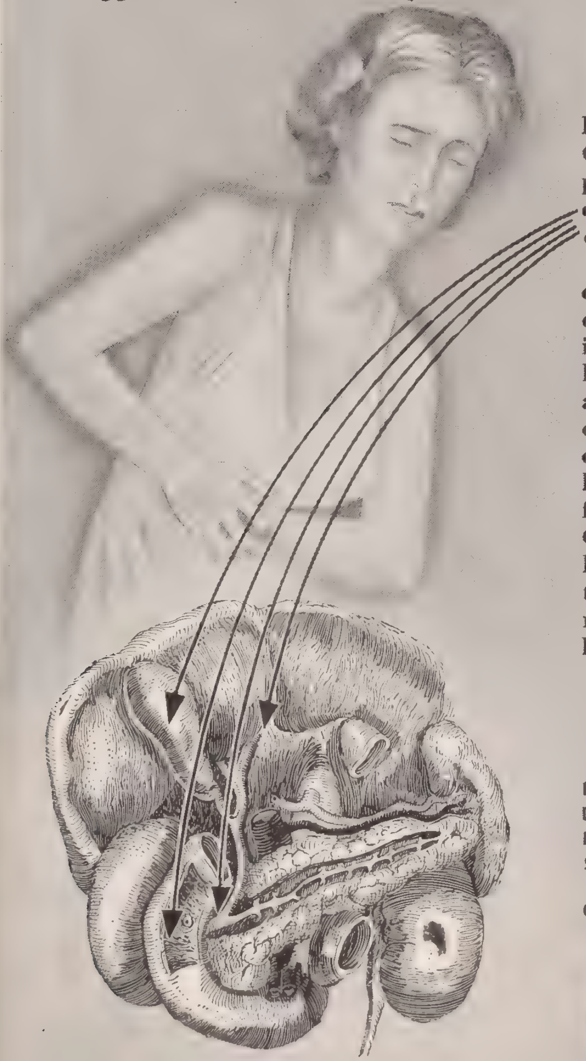

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FORTY-FOURTH ANNUAL MEETINGS
# of the
DISTRICT BRANCHES
# of the
MEDICAL SOCIETY OF THE STATE OF NEW YORK

PROGRAMS

SIXTH DISTRICT BRANCH

Wednesday, October 4, 1950
Statler Club, Cornell Campus
Ithaca, New York

Afternoon Session

2:00 P.M.—Registration

2:30 P.M.—"Recent Advances in the Treatment of Peripheral Vascular Disease"
William T. Foley, M.D., New York City, instructor in medicine, Cornell University Medical College; acting chief, Vascular Clinic, New York Hospital

3:30 P.M.—"The Relationship of Acute and Chronic Relapsing Pancreatitis to Obscure Abdominal Pain"
Francis E. McDonough, M.D., associate in gastroenterology, Lahey Clinic, Boston, Massachusetts

4:30 P.M.—Business meeting

Evening Session

6:30 P.M.—Dinner
Introduction of officers of the Medical Society of the State of New York
Address by **J. Stanley Kenney, M.D.**, New York City, president-elect, Medical Society of the State of New York
Remarks by **Mrs. Hugh G. Henry**, president, Woman's Auxiliary to the Medical Society of the State of New York

8:00 P.M.—"The Doctor-Citizen"
Reed B. Dawson, New York City, legal counsel, Medical Society of the County of New York

Ladies will join the members of the district branch for dinner.

Officers—Sixth District Branch

President	Norman C. Lyster, M.D., Norwich
First Vice-President	Elton R. Dickson, M.D., Binghamton
Second Vice-President	Gilbert M. Palen, M.D., Margaretville
Secretary	James L. Palmer, M.D., Binghamton
Treasurer	Robert H. Kerr, M.D., Cortland

Presidents of Component County Societies

Broome	Leonard J. Flanagan, M.D., Binghamton
Chemung	Augustus H. Hillman, M.D., Elmira
Chenango	William H. T. Crull, M.D., Afton
Cortland	Warren J. Pashley, M.D., Cortland
Delaware	Sydney Solomon, M.D., Stamford
Otsego	Harrie V. Frink, M.D., Richfield Springs
Schuyler	Joseph Y. Roberts, M.D., Watkins Glen
Tioga	Frederick K. Shaw, M.D., Waverly
Tompkins	C. Stewart Wallace, M.D., Ithaca

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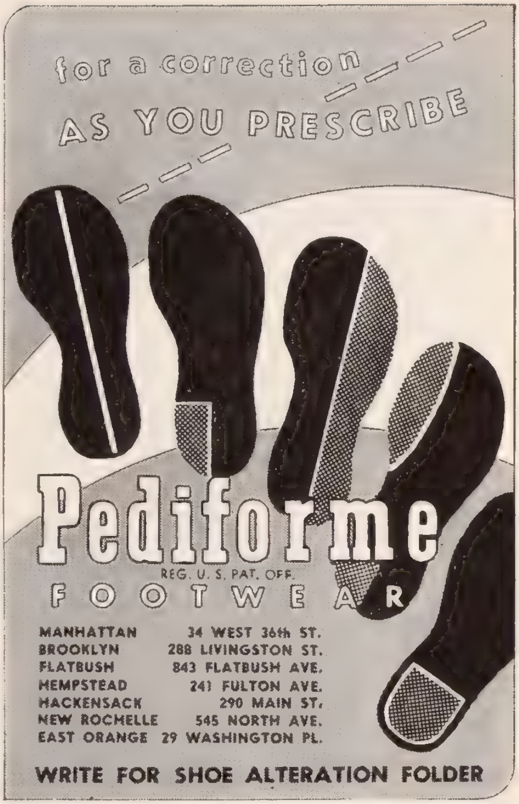

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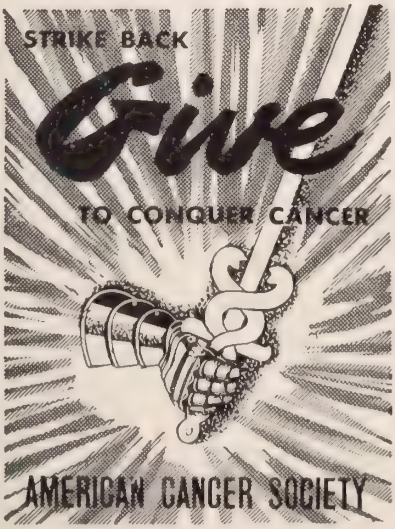


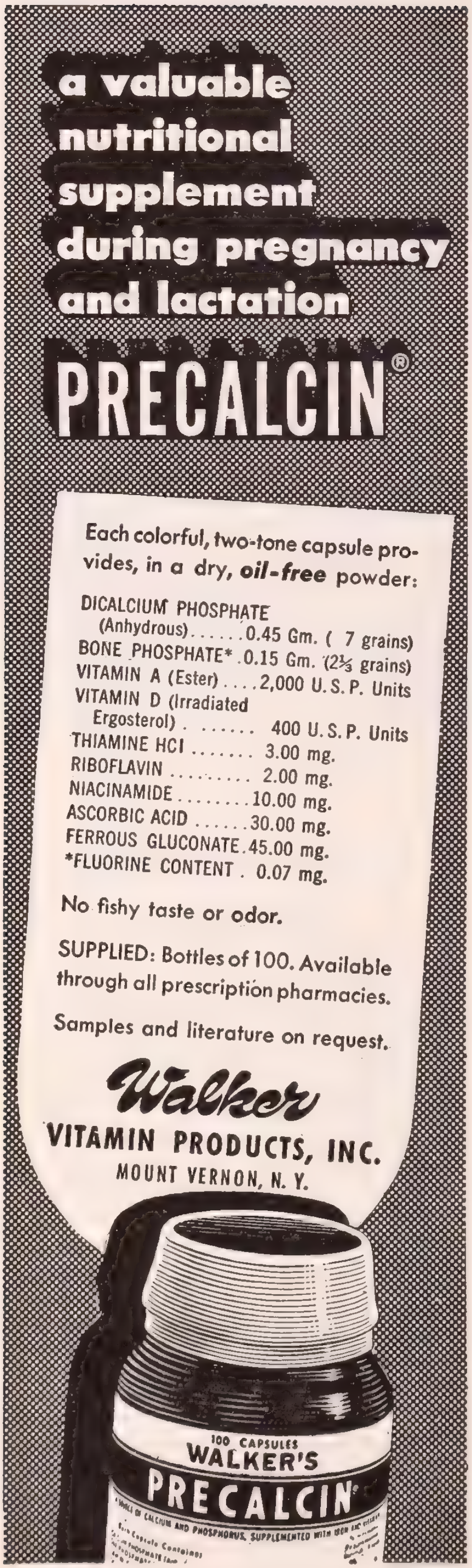
CEREBRAL PALSY INSTITUTE

A two-week Institute in Cerebral Palsy, for qualified physicians, nurses, physical, occupational and speech therapists, social service and guidance workers, and teachers, has been announced by Dr. Philip D. Wilson, President of The Coordinating Council for Cerebral Palsy in New York City, Inc., 270 Park Avenue, New York City. The Institute will be held for a two week period beginning Monday November 6, and will include lectures, clinical demonstrations and seminars.

An eminent faculty of physicians and professional personnel, authorities in their individual fields, will participate.

Following the Institute, opportunities for a three month in-service training course will be available to a limited number of physicians and therapists.

Further information can be obtained from Miss Marguerite Abbott, Executive Director of the Council, 270 Park Avenue, New York 17, N. Y.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BOOKS

REVIEWED

An Introduction to Gastro-Enterology. By Walter C. Alvarez, M.D. Fourth edition, Rev. Quarto of 903 pages, illustrated. New York, Paul B. Hoeber, 1948. Cloth, $12.50.

The fourth edition of this classic of medical literature, Alvarez' *Introduction to Gastro-Enterology*, retains the same general makeup as the previous editions. It has been enlarged somewhat by additions to many chapters, especially those concerning vagotomy, the gallbladder nerves, and flatulence.

This important work is a must with everyone interested in gastroenterology, whether clinician or laboratory worker, because it brings the world's significant basic literature together in one place. The author's charming style continues to make it effortless, profitable reading at all times.

Charles G. Williamson

The Compleat Pediatrician. Practical, Diagnostic, Therapeutic and Preventive Pediatrics. For the Use of Medical Students, Internes, General Practitioners, and Pediatricians. By Wilburt C. Davison, M.D. Sixth edition. Octavo of 250 pages. Durham, N.C., Duke University Pr., 1949. Cloth, $4.75.

This compact volume of information still continues to be one of the most valuable books on pediatrics, both for the pediatrician and the general practitioner. The contents are up to date and will aid the physician in his quest for rapid information as to symptomatology and pediatric diagnosis.

Mark J. Wallfield

Diseases of Women. By Ten Teachers. Under the Direction of Clifford White, M.D. Edited by Clifford White, Frank Cook, and Sir William Gilliatt. Eighth edition. Octavo of 461 pages illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.25.

Compiled by ten of England's leading gynecologists, this book is written primarily for students and practitioners in simple, practical form. It is adequately, though not copiously illustrated. It deals with symptom complexes as well as pathologic entities. There are chapters on anatomy, embryology, and malformations. A small section is devoted to operative technic.

J. Thornton Wallace

Clinical Biochemistry. By Abraham Cantarow, M.D., and Max Trumper, Ph.D. Fourth edition. Octavo of 642 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $8.00.

In the preface to the first edition appears the following statement: "Haldane has stated that the aim of physiology is to consider how the internal environment of the body is kept constant in spite of continual alterations in the external environment. The aim of this treatise is to consider how the internal environment of the body is altered by certain specific changes in tissue and organ physiology."

The authors have remained faithful to this aim in each subsequent edition, and this fourth edition is no exception. The third edition appeared in 1945, and the rapid progress in biochemistry during the past four years called for many revisions and additions which the authors have followed through thoroughly.

Among the new topics to be found in this book are: chemical changes in shock, a consideration of the alarm reaction, and the crush syndrome. In the field of liver function, thymol turbidity and flocculation are discussed. All these subjects are presented in a well-organized, orderly, and lucid manner. The printing is good, and altogether this is a very satisfactory addition to one's library.

BENJAMIN DAVIDSON

Treatment by Manipulation. In General and Consulting Practice. By A. Timbrell Fisher, M.B. (Eng.). Being the fifth edition of "Manipulative Surgery." Octavo of 275 pages, illustrated. New York, Paul B. Hoeber, 1948. Cloth, $5.00.

This is the fifth edition of the author's work on manipulative surgery. The illustrations throughout the book, supplementing the various joint defects, describe thoroughly this most worthy art.

Contraindications to manipulation are also fully discussed in special references to infections. The author makes it clear that manipulations in the hands of the well-trained orthopedist have nothing whatever to do with osteopathy, which he describes from its inception to the present day.

The anatomic drawings are unusual, and the book makes very instructive and pleasant reading.

JOSEPH I. NEVINS

Food and Facts for the Diabetic. By Joseph H. Barach, M.D. Octavo of 113 pages, illustrated. New York, Oxford University Press, 1949. Cloth, $4.00.

This book is for the use of the diabetic patient. It is a sensible and practical guide for such patients as know little or nothing about their disease. The clearer the patient understands his disease and how to care for it, the less dark will be the future in terms of disease and complications.

This book tends to clarify the disease and is another valuable manual for the diabetic patient. It is recommended for its completeness and comprehension.

SAMUEL G. SLO-BODKIN

For the New Mother. By Mildred V. Hardcastle, R. N. Illustrated by Shirley Tattersfield. Octavo of 163 pages, illustrated. Philadelphia, John C. Winston Co., 1948. Cloth, $2.00.

This volume is a pleasant and helpful addition to the group of books which offer advice to the new mother, suggesting methods of relieving the burden of caring for a new baby.

Mrs. Hardcastle draws upon her experience as a nurse and her more intimate experience as a mother. Her instructions are given in a pleasant, familiar style, are accurate, and allow for individual differences among babies and environments. The novel feature of the book is the inclusion of descriptions of ways and means of giving the baby excellent care and still not neglecting the household and husband. The book should be most helpful to new mothers.

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An Atlas of Bone-Marrow Pathology. By M. C. G. Israels, M.D. Illustrated by D. Davison. Octavo of 79 pages. New York, Grune & Stratton, 1948, Cloth, $6.50.

This is probably the most concise and authoritative source of hematologic illustration the internist, pathologist, hematologist, and general practitioner have been offered in recent years. It is unfortunate, however, that the Wright's stain has not been uniformly used, as the *Atlas* would then be more familiar to the American physician. In addition, one is impressed with the concise and reliable information garnered through consulting this small volume.

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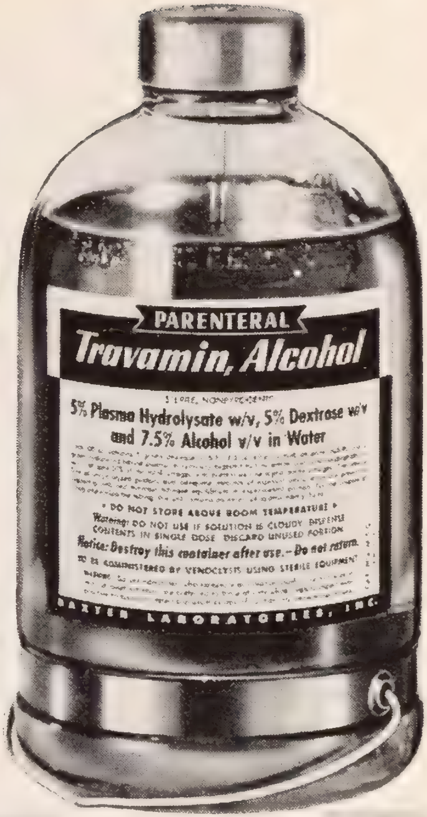
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[1] Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2] Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3] Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, p. 342.
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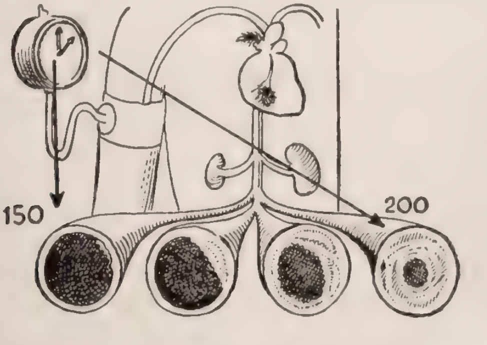

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Bibliography

1. Sollmann: A Manual of Pharmacology, W. B. Saunders Co. (1942).
2. Willson & Smith: J. Pharmacol., 79:208 (1943).
3. Hite: Ill. M. J., 90:336 (1946).
4. Freis & Stanton: Am. Heart J., 36:723 (1948).
5. Falk: South. M. J., 40:501 (1947).

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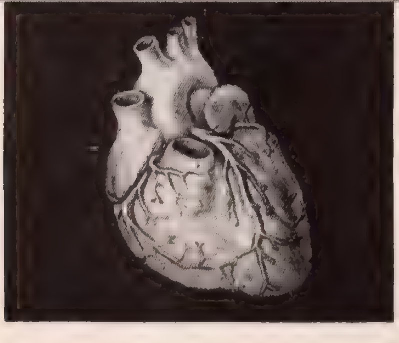

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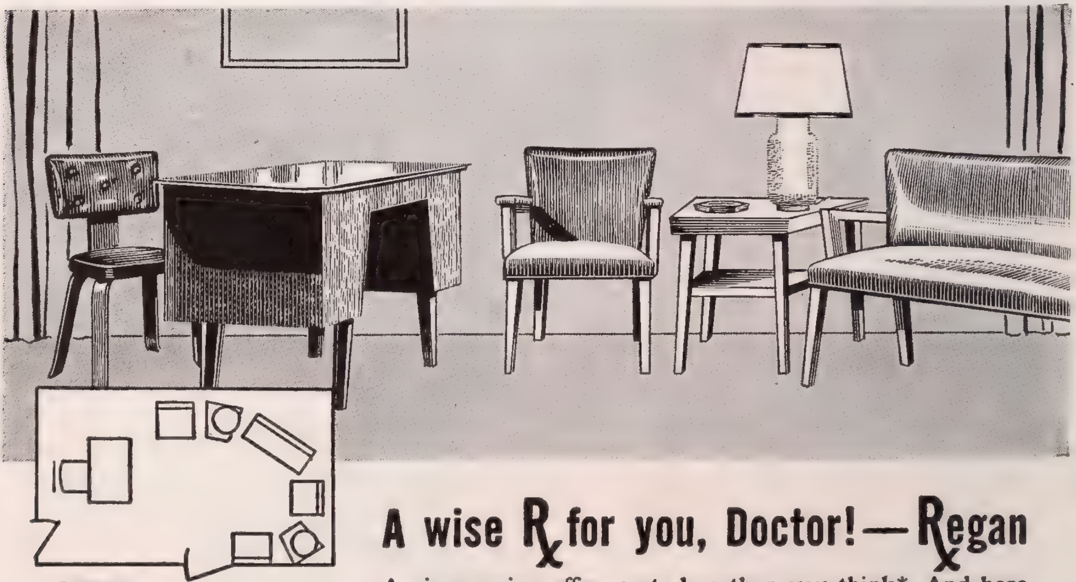

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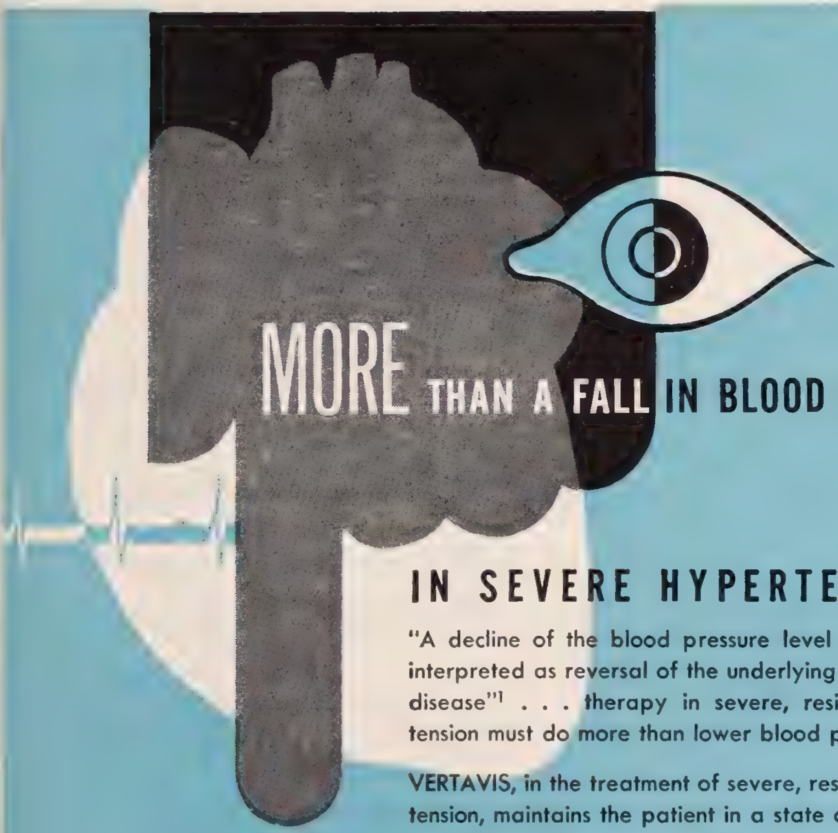

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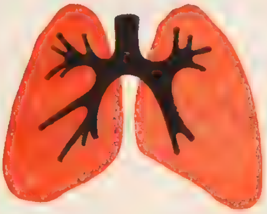

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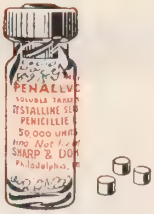

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Boroglycerin	10%
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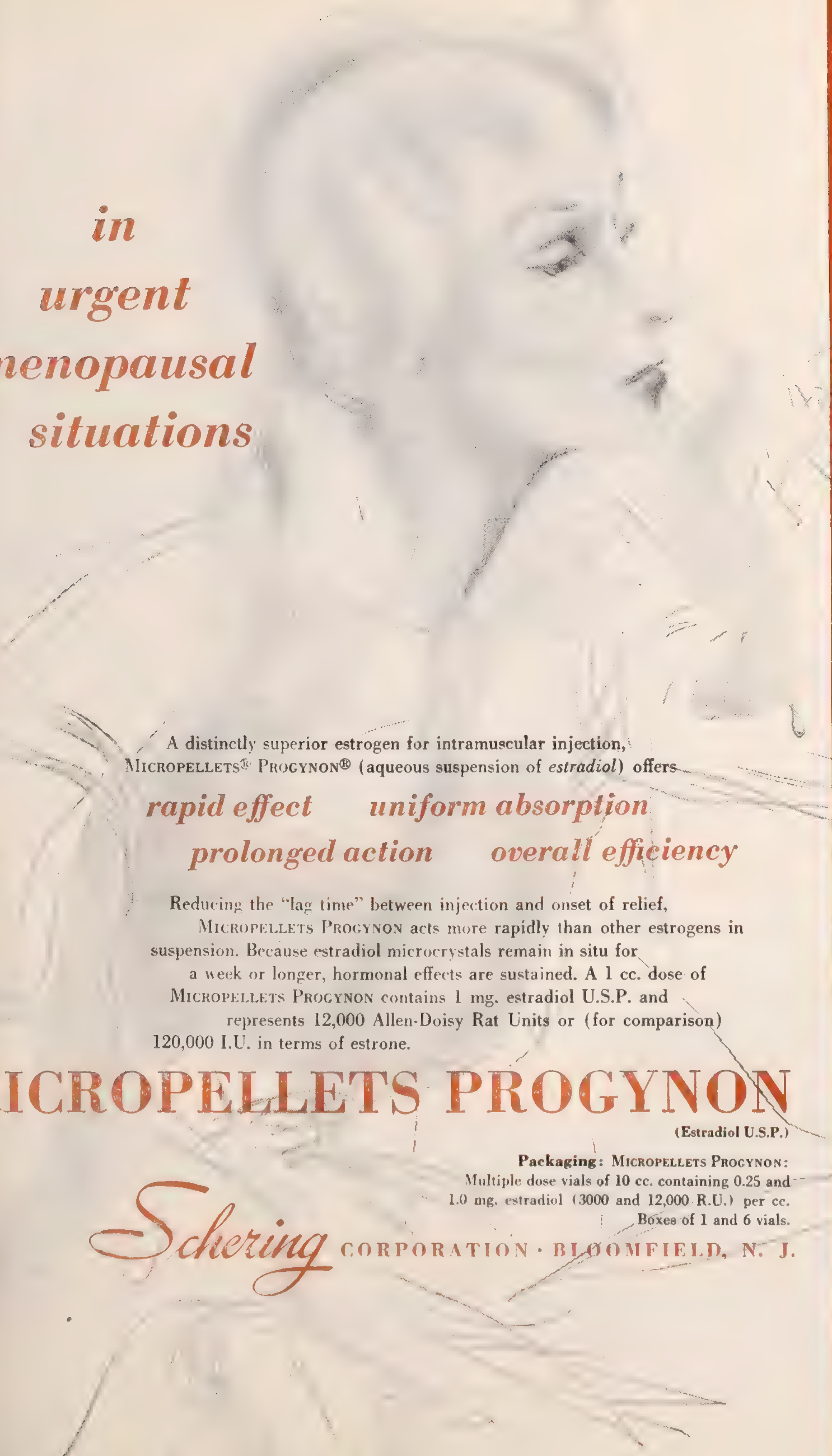

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situations

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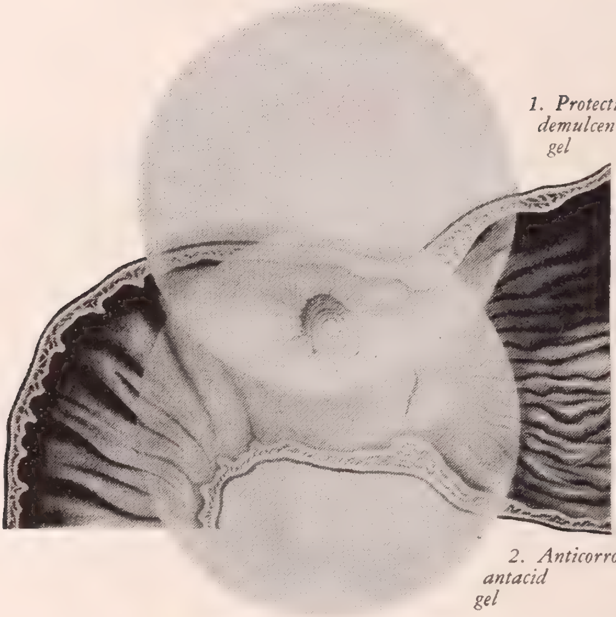

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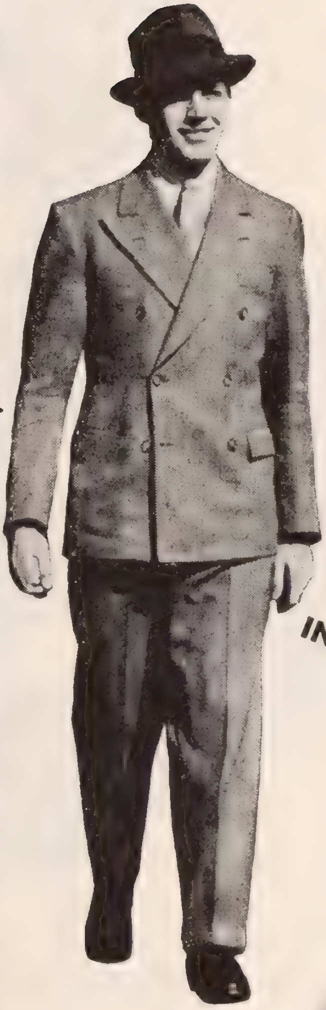

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1. Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Industrial Med. & Surg. 18:512, 1949.
2. to be published.

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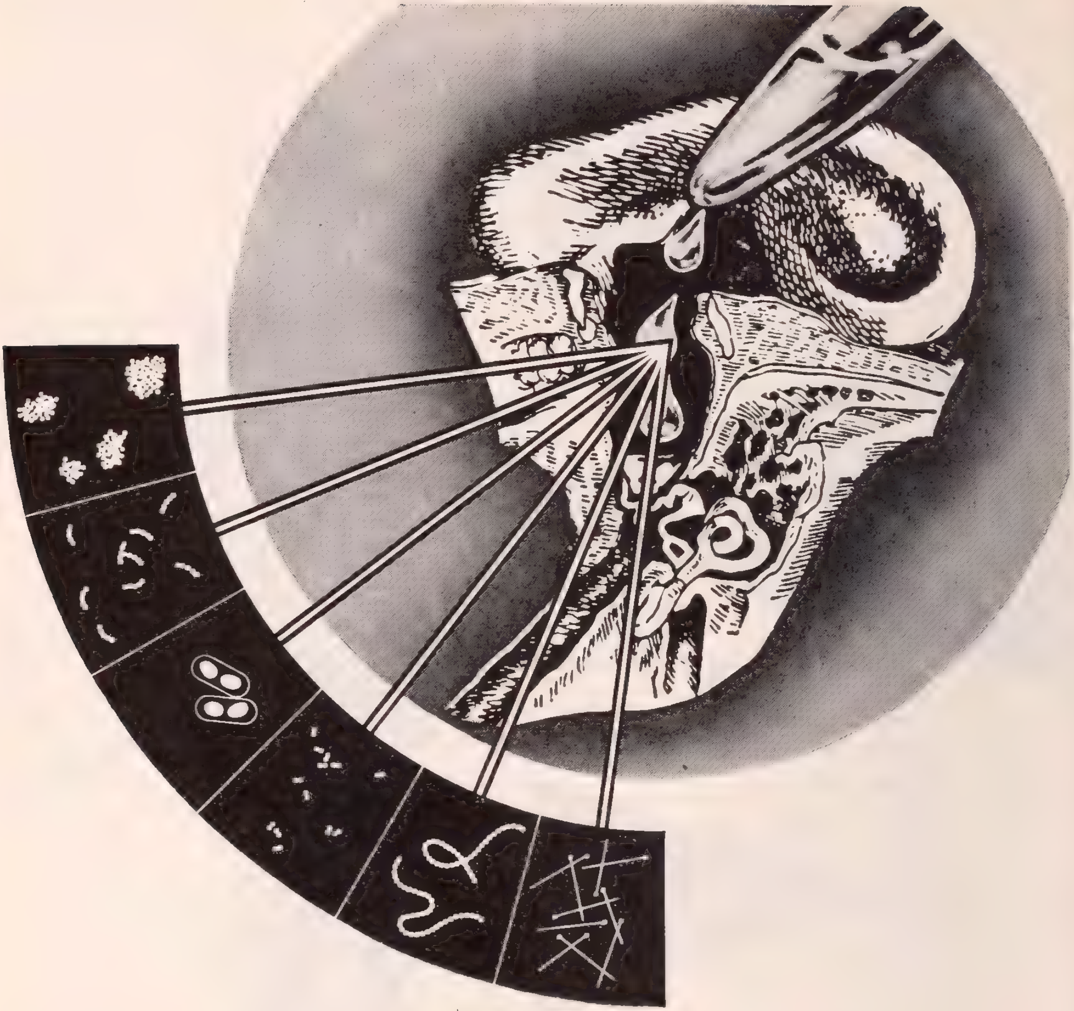

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FORMULA:	W/V
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Urea (carbamide)	10%
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Capsules: Bottles of 25, 50 mg. each capsule. Bottles of 16, 250 mg. each capsule.
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20 mg. per fluidounce
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20 mg. per cc.

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The KRF-3 Combination affords the doctor facilities for virtually all diagnostic X-ray technics. This single tube unit is easily positioned for horizontal or vertical radiography or fluoroscopy.

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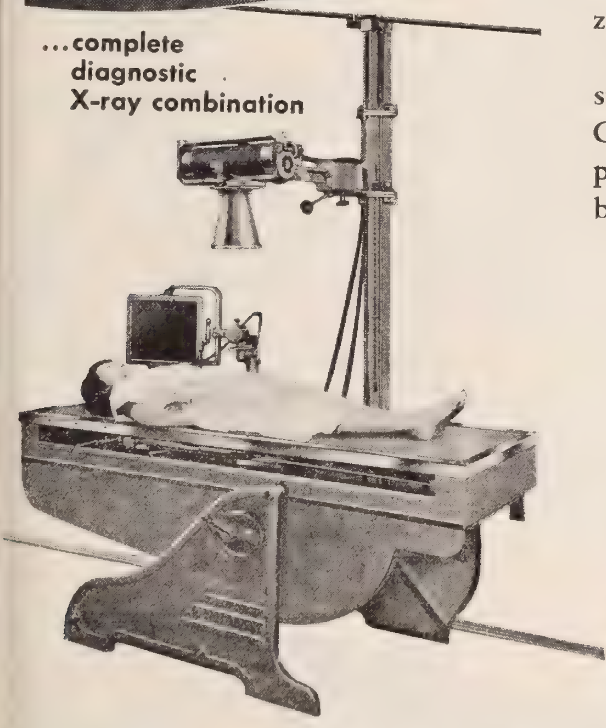
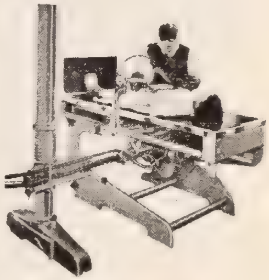


...complete diagnostic X-ray combination



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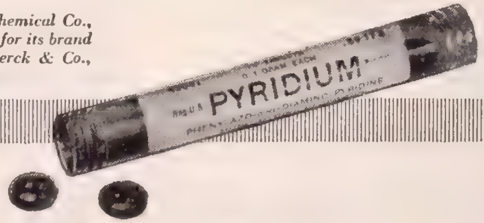

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51 Difficult Dermatologic Cases Treated With Tarbonis Showed These Remarkable Results[1]

	CASES	CLEARED or MARKED IMPROVEMENT	MODERATE IMPROVEMENT	SLIGHT or NO IMPROVEMENT
PSORIASIS	11	2	4	5
NEURODERMATITIS	5	3	2	-
ATOPIC ECZEMA	8	6	1	1
SEBORRHEIC DERMATITIS	6	5	1	-
CHRONIC RECURRENT CONTACT DERMATITIS	11	9	1	1
VARICOSE ECZEMA	4	1	1	2
ALLERGIC DERMATITIS	3	-	2	1
LICHEN PLANUS	3	2	1	-
TOTAL	51	28	13	10
%		54.9	25.5	19.6

In 41 of these cases, the condition had persisted for 2 to 10 years, not yielding to other forms of therapy.

Treatment with TARBONIS over a 5-week to 5-month period showed that 54.9% of the cases cleared or showed marked improvement, while 25.5% showed good response. TARBONIS, the original clean, white coal tar cream, gave satisfactory results in 80.4% of these patients!

1. Lowenfish, F P., N. Y State J. Med., 50:922 (Apr. 1) 1950.

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For prescriptions — all pharmacies stock 2¼-oz. and 8-oz. jars; for dispensing purposes, 1-lb. and 6-lb. jars are available through your surgical supply dealer.

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announcing:

'EDRISAL with CODEINE'

for the relief of moderately severe pain

. . . relieves pain dramatically

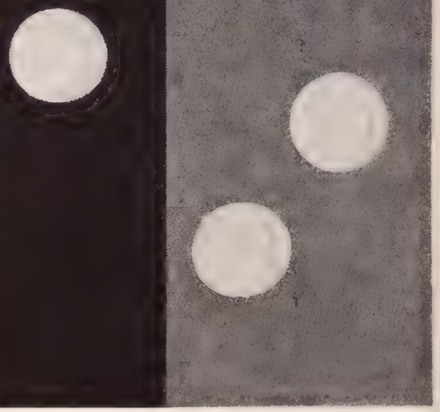
. . . lifts the patient's mood

. . . averts the depressant effect of codeine

Each tablet contains:

Codeine sulfate	¼ gr.
'Benzedrine' Sulfate	2.5 mg.
Acetylsalicylic acid	2.5 gr.
Phenacetin	2.5 gr.

Available in bottles of 50 tablets



Important: 'EDRISAL with CODEINE' does not replace familiar 'Edrisal'. 'EDRISAL with CODEINE' is for use in conditions that require more potent analgesia.

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Editorials

Fall, 1950

However the facts may be veneered with political semantics or clothed with gobbledygook, we are in a shooting war of indefinite duration and definite unpleasantness.

Members of the Medical Society of the State of New York will participate importantly as citizens and physicians, both with the armed services and in civilian defense. Doctors will prepare realistically for what they have to do. And, in preparing, will take into account the probable opening of other war fronts, necessitating an additional draft call late this year.

Registration of physicians is certain at the time of this writing, and will probably provide that they will be called as recommended by the A.M.A. in the following order: those who participated as students in the Army specialized training program or similar programs administered by the Navy, and persons who were deferred from service during World War II for the purpose of pursuing a course of instruction leading to medical education, and who have had no active duty as commissioned officers; those who have been deferred previously for other than physical disability and those previously rejected for physical disability who may be found fit on the basis of present physical requirements; those who participated in the Army specialized training program or similar programs administered by the Navy and who have served on active duty as commissioned officers for less than twenty-one months (exclusive of the time spent in postgraduate training), those who have had less than ninety days' prior active honorable military or naval duty; those whose total active honorable military or naval duty is less than twenty-one months.

September will have witnessed the instruction of possibly 70 per cent of the State's physicians in the care of atomic explosion victims and the surveying of medical and hospital facilities, blood donor resources, and evacuation possibilities.

Registration by citizens for the fall elections will have included, hopefully, all who read this and their families; strikes for higher pay to meet rising living costs will be numerous and about 36 billions will be asked for military expenditures, at least.

District Branch meetings will afford the officers of the Society the opportunity from September through October and early November to discuss the status of medical mobilization for defense of the State. Increased individual income taxes will begin to bite hard, and vastly increased corporation taxes (corporations do not vote) will be passed on to the citizens in the form of higher prices toward the year's end.

October will mark the commencement of the A.M.A.'s paid newspaper and periodical advertising campaign designed to inform the public of the truth concerning voluntary prepaid health insurance and the advances in American medicine. There should be no citizen of voting age going to the polls in November in ignorance of the excellent medical service he enjoys under the free enterprise system or of the pitfalls of compulsory tax-paid so-called "health" insurance, as advocated by Mr. Ewing of the F.S.A.

The campaign of paid advertising by the A.M.A. is designed to carry medicine's message to the public aggressively and constructively. But it will still be necessary for every citizen to register and vote. We hope that every member of the Medical Society of the State of New York will assume this obligation, no matter how pressing his duties may be. This is the least he can do. Register and vote without fail!

Narcotics and Civil Defense Plans

A practical problem is presented in the treatment of potential casualties under civil defense plans. This concerns the supply and distribution of narcotics. A recent meeting of representatives of the Medical Society of the State of New York, the New York State Department of Health, hospital administrators, and drug manufacturers and distributors considered the problem. The following conclusions and recommendations were reached as the result of a discussion meeting held at the New York City offices of the Department on August 8, 1950, for the purpose of obtaining opinion on the availability and proposed distribution of narcotic drugs for civil defense plan incorporation:

That the first line of availability for immediate use be through physicians. Secondly, through retail pharmacists. Thirdly, from supplies stored in police precincts, health centers, or such other governmental agencies of State, county, or municipal level as are desirable; from casualty stations situated closely adjacent to hospitals participating in the plan; from the stocks of major wholesale drug distributors.

Two methods of supplying narcotic drugs are considered, but in each of these only morphine sulfate, either in $^1/_4$ grain hypodermic tablets or in vials 20 cc., $^1/_4$ grain–1 cc. dose, is considered. The first plan considers distribution under existing methods involving the use of official narcotic order forms and the purchase of the morphine individually by physicians, pharmacists, hospitals, and either State, county, or municipal governments. A representative from the New York State Pharmaceutical Association believes that through his organization the majority of the retail pharmacists in any community may be persuaded to purchase through individual expense 20 tubes of 20 tablets each hypodermic tablets, morphine sulfate $^1/_4$ grain, a total of 400 tablets which are to be stored in a safe place in the pharmacy and reserved for civil defense emergency purposes. Similarly, representatives of the Medical Society of the State of New York believe that the majority of physicians in the State of New York can be persuaded individually to purchase 100 hypodermic tablets, morphine sulfate $^1/_4$ grain or 5 vials 20 cc. $^1/_4$ grain–1 cc. solution of the same drug, these to be placed under safe protective custody, reserved for use in the proposed plan.

That municipal governments in greater New York City, Buffalo, Rochester, Syracuse, Schenectady, and Albany purchase and distribute to the police precincts, State or county police headquarters, a suitable locked steel box capable of containing 30 to 35 20 cc. vials morphine solution $^1/_4$ grain cc., 1 dozen 2 cc. hypodermic syringes, and 4 dozen hypodermic needles. Such a box is presently available from the Bison Distributing Company, 1202 Hertel Avenue, Buffalo, New York. Such container should bear indication that it is the property of such and such government agency and is to be used only under the directive of civil defense authorities. This method could furnish the steel container in its entirety to a designated casualty station, or its contents could be distributed in part to one or more such casualty stations.

That approximately 70 of the major distributors of narcotic drugs in the pharmaceutical industry participate by providing through private purchase a safe percentage increase of their normal stocks, anticipating greater demand at time of emergency. The same group should anticipate replacement of the drugs through their usual channels.

That hospitals provide within their storage an additional quantity of morphine either in tablet or solution form to be reserved for such casualty stations as are developed and situated closely adjacent to the hospitals.

The foregoing is recommended as a basis under which distribution can be effected at the present time by the use of existing order forms, receipts, storage, and distribution as established, with the exception of the storage and distribution recommended for police precincts and similar government stations not at this time so authorized. An alternate plan is that of the purchase and distribution of narcotic drugs when these are purchased under State or Federal administration for civil defense purposes. The mechanics of distribution may be the same as those developed in the prior program by distribution to physicians, pharmacies, hospitals, wholesale dealers, and selected governmental agencies such as police precincts, etc. When narcotic drugs are to be purchased and distributed by government agencies for use in this manner, it will be necessary to devise records establishing distribution, receipt, and responsibility for these drugs, and the decision of those receiving the same that they will be reserved for distribution and use only under the directive of civil defense plan authorities.

Current Editorial Comment

Proposed Aid to Voluntary Health Insurance. A new bill, H.R. 8746, introduced in Congress June 7, 1950, and referred to the Committee on Interstate and Foreign Commerce, proposes to facilitate the broader distribution of health services by creating a Government Reinsurance Corporation to safeguard voluntary, nonprofit health insurance companies against heavy losses due to catastrophic illnesses, thus enabling such companies to write unlimited coverage. This bill would introduce a factor of safety into the health insurance field somewhat similar to the Federal Deposit Insurance Corporation plan which protects bank depositors.

Three directors would be appointed by the President and confirmed by the Senate to administer the Reinsurance Corporation. The Corporation would be granted a $50,000,000 appropriation by Congress to start business. It would insure two thirds of all payments made in excess of $1,000 per year to any one subscriber of a covered health insurance plan. Only nonprofit, voluntary plans would be eligible for reinsurance (no commercial companies). The Corporation would receive two per cent of the annual gross subscription charges from covered health plans. Eligible health associations would be required to write health insurance contracts (hospital, surgical, or both) covering medical expenses except costs incurred for private nursing, dentistry, or medicines. Coverage could extend to all types of illnesses including mental and chronic diseases. Contracts must be available to all persons whether or not members of groups. The premium charges to subscribers of plans must be scaled to income, with a $5,000 income being considered the maximum.

The A.M.A. *News Bulletin* says of this bill:[1]

> Coverage to individual subscribers of health plans would be complete except that physicians could permissively charge 25 per cent in excess of the established fee schedule, and subscribers would be required to pay one dollar a day on the hospital charges or five per cent of the total bill. Only 12 physician's office calls would be covered in a calendar year. Eligible companies would not be required to insure against charges of dentists or private nurses or the costs of medicines. The bill follows a recent suggestion made by Harold Stassen.
>
> The total assets and income of the Corporation would include the initial $50,000,000 from Congress *plus* two per cent of the subscription charges from covered health plans *plus* a matching sum equal to the total amount received from health plans which would be appropriated by Congress each year. Operational expenses for the Corporation would be appropriated by Congress each year in the absence of a surplus.

We bring this proposal to the attention of our members as a rational approach, of a reasonably nonpolitical character, to the practical problem of assistance to the *voluntary* health insurance agencies. With a minimum of governmental control, such a proposal would permit the voluntary plans to broaden their facilities and distribution of health services with a minimum of financial risk.

---

[1] June 15, 1950.

Some people suffer themselves to learn from experience what a little foresight would have taught them long before.

Civic Responsibility. Says the *New England Journal of Medicine:*[1]

> A privilege that is denied to millions of the world's inhabitants is considered as of little value, apparently, by many Americans who possess it. Perhaps it is true that familiarity breeds contempt and that free gifts are often held cheaply.
>
> But the right of Americans to choose their form of government and the persons to administer it did not come at all cheaply. It is the product of centuries of aspiring and the reward of countless struggles. It made its appearance as a limited gift in the market places of the Greek cities and in the Roman Forum; it was at the root of the Icelandic Parliament a thousand years ago. It was wrung from King John by his barons at Runnymede; it has been affirmed by revolution after revolution against oppression, and defended on far-off battlefields in modern times.
>
> How highly is this obligation that free men have placed upon themselves regarded in America? Some figures that have had wide publicity were obtained from the board of election of Summit County, Ohio, an industrial area including the city of Akron. They have reference to the national election of 1948. In that election in Summit County, 18 per cent of the physicians did not vote and 13 per cent *were not registered.* Twenty-two per cent of their wives did not vote and 16 per cent were not registered. Of members of chambers of commerce the comparable figures are 21 and 15; of bank employes, including executives, 32 and 26; of retail grocers, 34 and 20. Into the hands of persons not of their choosing these citizens thus put the means of their own undoing.
>
> This country has drifted into a crisis the outcome of which no man can see. Each one who is qualified to vote, however, can make his or her contribution to the ultimately successful outcome of the actions in which the nation is engaged or by indifference can continue the jeopardy in which its future lies.
>
> The need is for every citizen to do his duty at the polls on every occasion, not simply to vote a party line or for or against compulsory so-called health insurance or to approve the present stand, however tardy against the effronteries of communism, but to elect qualified candidates for office who will strive to maintain a government of and for and by the people.

Those who do the public duties ought to be well rewarded; but it is shameful to see the state drones feasting upon the honey that does not belong to them.

---

[1] Editorial: New England J. Med. 243: 355 (Aug. 31) 1950.

IMPORTANT INFORMATION: DOCTOR-DRAFT BILL

Who must register? Physicians and dentists who have not reached the age of fifty and are not members of military reserves. Veterinarians, optometrists, pharmacists, osteopaths and/or other specialist categories if specified by the President. (Law specifically states that it does not apply to military reserves; they are already subject to military orders.)

Who are eligible for draft, and in what order will they be called? Any registrant (above) is subject to induction if acceptable to the military. The law provides that registrants will be called up on the following priority:

1. Former ASTP and V-12 men who have not served on active duty (military, Coast Guard, or Public Health Service) and others deferred from service to continue their education during World War II, and who have had less than ninety days active duty (military, C.G., or PHS).
2. Members in the above groups who have had more than ninety days active duty (military, C.G., or PHS) but less than twenty-one months.
3. With no reference to above groups, those who did not have active service (military, C.G., or PHS) subsequent to September 16, 1940; this could include postwar medical graduates as well as other physicians who have not served and have not reached their fifty-first birthday.
4. All others, including World War II nonreserve veterans. Men in this group to be called on basis of extent of duty; those with least duty first, etc.

When will draft take effect? Not until the President sets a time for registration. Nothing official, but registration deadline probably in next few weeks. Men will register at "appropriate points of registration" in community. After registration, Selective Service will place the man in one of four classes listed above. Then, if to be called, he will be ordered up for his physical. Following this, twenty-one days to set affairs in order before reporting to Armed Forces Induction Station. Subsequently he will be offered a commission and assignment to a service.

Can registrant get reserve commission? Yes, if acceptable to military. If the man applies for and is granted a reserve commission, he will come under military orders and Selective Service will not process him further.

Who gets the $100 pay bonus? Every reserve officer called to duty, on voluntary or involuntary basis, receives the extra $100 per month. Men required to register under this act also may qualify for the $100—but only if they volunteer prior to their actual induction.

Who is eligible for deferment? Actual deferment is at the discretion of local Selective Service boards. However, the law states that "the President is authorized to provide for" certain deferments. Action under this clause would be based on the registrant's previous military service, his dependency status, and any undue hardship that might ensue.

Vinson says 5,000 more military doctors needed by next July 1. In House debate on the doctor-draft bill, Chairman Vinson of the Armed Services Committee cited these figures on military medical line-up:

Over all: 6,226 doctors now on active duty; total of 11,250 needed by next July 1, on basis of present military manpower planning for 2,500,000 men.

Army: 20,000 participated in ASTP program, of whom 12,500 served on active duty and 1,000 were discharged for physical or other reasons. Of remaining 6,500, about 2,000 failed to graduate for various reasons, and 1,500 of those in practice would be ruled out for physical and other reasons. This leaves approximately 3,000 men, educated in whole or in part by Army, who have not served and would be first to be called up.

Navy: 11,176 trained in whole or part in V-12 program; 5,872 of these have served at least two years on active duty. This leaves 5,304 with no service, but 1,429 of these are in Reserve and subject to call. Of remaining 3,875 enrolled in program, 1,262 did not finish school. This leaves at the most 2,613 who have finished school and would be eligible.

On paper, these sources alone—ASTP and V-12—could supply all military medical requirements for the next year. Requirements, 5,024; ASTP and V-12, 5,613. However, military planners have warned that physical handicaps, practice in doctor-shortage areas, and other factors will reduce this potential supply well below the requirements.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
October 4	Sixth	Statler Club, Ithaca	Afternoon and evening (dinner)
October 5	Eighth	Hotel Statler, Buffalo	Afternoon and evening (dinner)
October 18	Ninth	Hotel Thayer, West Point	Afternoon and evening (dinner)
November 1	Second	Garden City Hotel, Garden City	Afternoon and evening (dinner)

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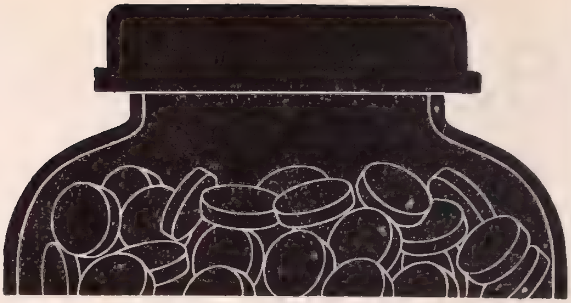

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CHILDHOOD EPILEPSY

William G. Lennox, M.D., Boston, Massachusetts

(*From the Children's Medical Center and the Department of Neurology, Harvard Medical School*)

SEIZURES are predominantly a disorder of youth. Convulsions and epilepsy in childhood are important numerically, as important as crippling polio or cerebral palsy. Study of seizures is intriguing because of the diversity of causes and of manifestations. Treatment of social and psychologic complications requires that the physician expend his heart as well as his mind.

Notwithstanding these challenging conditions, pediatricians have displayed relatively little interest in seizures. Of the articles on convulsions or epilepsy printed in a recent ten-year period, only one article in 30 appeared in a journal devoted to pediatrics. The treatment of epilepsy is primarily medicinal and sociopsychologic. Intrafamily relationships are important, and the pediatrician whose mind is alert and whose feelings are responsive should not resign his natural leadership in treatment to the neurologist or the neurosurgeon.

Epilepsy in children differs from epilepsy in adults in the following important respects:

1. Diagnosis is more difficult because of large borderline areas.
2. Brain pathology and, hence, neurologic and mental defects are more common.
3. Etiologies are more easily identified.
4. Seizures are more frequent but more readily controlled.
5. Seizure patterns are different; convulsions are more often localized; petit mal seizures are well-nigh limited to childhood, whereas psychomotor seizures are relatively rare.
6. Electroencephalograms display more abnormalities. These are more specific and more responsive to drug therapy.
7. Treatment is broader in scope, in that the whole family is involved. More time may be spent in relieving the fear and shame of parents than in stopping the seizures of the child.

Altogether, the epilepsy of children is more interesting, more diversified, and more rewarding than the epilepsy in adults, a rich field only partially explored. The predominance of epilepsy in childhood is due to the union of three streams of influence. First is the hair trigger susceptibility of the as yet poorly organized nervous system of the child. For example, the stimulus of febrile illness causes convulsions only during the first few years of life. Second is the greater liability of the young to acquired pathology of the brain from birth injury, cerebral complications of childhood infections, or from sporadic infantile convulsions themselves. Third is the tendency for a transmitted trait to manifest itself early in life. Thus, persons whose seizures began in the first five years have four times as many epileptic relatives as persons whose attacks began after the age of thirty.[1]

Important evidence is furnished by twins. We have studied a series of 115 twin pairs affected by seizures. If twins are identical and have no acquired injury of the brain, almost invariably both of them not only have seizures but the same type of seizure and the same abnormal pattern of the electroencephalogram.[2] Incidentally, epileptic twins are for me a collector's item, and the opportunity to study them is greatly appreciated.

Diagnosis

The differential diagnosis of epilepsy is especially difficult in children because they cannot describe subjective symptoms and, more importantly, because of the variety of manifestations that may confuse, e.g., spasmophilia, hypo-

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glycemia, breath-holding spells, syncope or prolonged periods of limp unconsciousness, sleepwalking episodes, bouts of extreme restlessness in sleep or sleep so deep that the child cannot be aroused, unexplained bouts of crying or of temper tantrums, vomiting, abdominal pain, or even bouts of fever without accompanying infection. Any of these conditions may be diagnosed as epilepsy if certain clinical details, such as amnesia for the events, the electroencephalogram, and therapeutic trial of anticonvulsant medicine, favor such a diagnosis. In making decisions, clinical experience is needed.

So-called febrile convulsions properly represent incipient or interrupted epilepsy, the overstepping of a low seizure threshold. Although the chances are ten to one that chronic epilepsy will not eventuate, febrile convulsions cannot be dismissed as of no importance.

Various Seizure Patterns

Both accurate diagnosis and effective treatment rest on a clear understanding of different seizure manifestations as encountered in children. Of the various seizure patterns, convulsions are most frequent and their control most important. In the adult, focal features of the attack (such as turning of head and eyes to one side, or one-sided convulsive movements) point to localized pathology of the brain. In the child, focal manifestations may be transient or shifting, suggesting that the underlying abnormality is physiologic rather than anatomic. Transient paresis or paralysis that follows a focal convulsion is disconcerting, and, because permanent paralysis may ensue, intensive therapy is indicated. A jacksonian march of movement or sensation is rarely encountered in childhood, perhaps because the pathology is subcortical rather than cortical. In the presence of focal seizures or a history of head injury, subdural taps or even a pneumoencephalogram may be required. The last-named procedure is best avoided during the first few years because air trapped outside the arachnoid may produce a subdural effusion.[3]

Petit mal and the associated spike-wave of the electroencephalogram are the distinctive badge of youth. In our vocabulary, the term petit mal does not mean a brief or minor seizure of any description but is specifically limited to a triad consisting of the following:

1. Petite absence—This is an uncomplicated blackout of consciousness lasting but a few seconds and usually recurring a number of times a day. A period of mental confusion lasting for hours may be a status of petite absence. Only the electroencephalogram may distinguish this state from a psychic seizure.

2. Myoclonic jerks—In babies under three years of age, these jerks may involve not just the arms, but the whole musculature in what we term a "massive myoclonic jerk."[4]

3. Astatic or drop seizures—These result in head-nodding or sudden flaccid collapse of the body.

These phenomena are clear-cut and accompanied by the 3-per-second dart and dome formation of the electroencephalogram. The symptoms that accompany the 2-per-second spike and wave form are less clear-cut. There may be only a short period of unusual quietness, a slight sagging of the body, a vacant look, or nothing.

An unexplained peculiarity of petit mal, when it exists alone, is its preference for girls. In our series of persons fifteen years or under, girls with uncomplicated petit mal outnumbered boys in a ratio of 175 to 100.

The third main group of epileptic phenomena is the so-called psychomotor seizures which are relatively infrequent in children. Psychomotor phenomena are of various sorts: brief periods of increased muscle tonicity, often with turning of the head to one side, and masculatory phenomena, smacking the lips, swallowing, or chewing motions. Attacks of rage, night terrors, or running fits, if judged to be epileptic in nature, belong here, or there may be arrest of motion with pallor and impaired or lost consciousness. Especially rare in children is automatic activity, with ambulatory automatisms, or dream states, déjà vu phenomena, or hallucinations of special sense.

Special interest attends these various psychomotor, automatic, and psychic phenomena because of evidence that lesions of the temporal lobe in many cases may be responsible for the clinical symptoms. Spike discharges over a temporal or anterior temporal area are often observed, especially if the recording is made during sleep.

Distribution of Seizure Patterns

Seventy-three per cent of our office patients under ten years of age and 63 per cent of those over that age had experienced but one type of seizure, a fortunate relationship for children since the presence of multiple seizure patterns greatly complicates treatment and hence depresses the prognosis.

The influence of age on the three principal types of seizures is demonstrated by comparison of 665 young office patients with 211 older patients. The following tabulation gives the percentage distribution of the three types, either alone or when some other type of seizure was also present (Table 1).

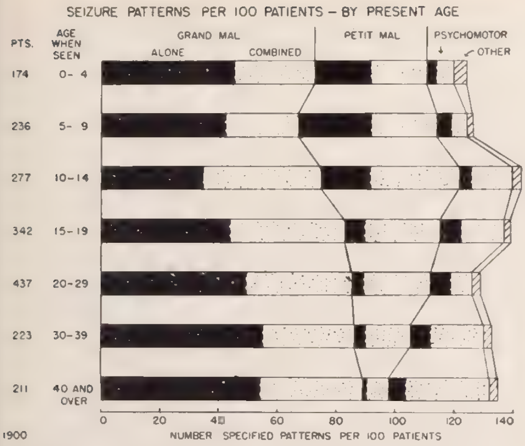

FIG. 1. Distribution of seizure patterns among 1,900 office patients with reference to the age of patients when their histories were taken. Approximately one third of the patients had experienced more than one type of seizure. The black portion of each bar represents patients with only the one specified type of seizure. The dotted portion represents the specified type in combination with one of the other two types. The solid lines between columns separate the four main groups: grand mal, petit mal, psychomotor, and other types, such as autonomic or unclassified.

TABLE 1.—PERCENTAGE DISTRIBUTION OF THREE TYPES OF SEIZURE PATTERNS

Age Group	Grand Mal	Petit Mal	Psychomotor
0 to 14 years	82	46	13
40 years and over	89	9	34

With increasing years, petit mal seizures tend to die out, whereas psychomotor seizures increase, probably because of damage to temporal lobes from repeated convulsions or trauma.[5] The detailed influence of age appears in Fig. 1.

The Electroencephalograph

This instrument outranks all other means of examination as an aid in diagnosis, prognosis, and treatment. At our clinics in the Children's Medical Center in Boston we find that, with a careful, detailed history and a well-made electroencephalogram, approximately 95 per cent of the children can be cared for in clinic or office. Hospitalization is required only for those needing a pneumoencephalogram or other very special procedures. Most distinctive of the electroencephalographic patterns is the 3-per-second alternate spike and wave formation that bespeaks petit mal. The slower 2-per-second spike and wave formation implies an underlying neuropathology and clouds the therapeutic outlook. Slow spike-wave formations or continuous high voltage slow waves, or a combination of the two, bespeak a poor prognosis.

However, more than with adults, electroencephalographic tracings of pronounced abnormality, under the combined influence of proper therapy and increasing age, may become normal or near normal. Aside from aid in diagnosis, prognosis, and drug therapy, the electroencephalogram may help the neurosurgeon in localization of cortical lesions, and, because the brain wave pattern is an hereditary trait, the electroencephalogram may aid in the difficult task of advising about marriage and children.

Treatment

Localized areas of neuropathology may be the object of neurosurgery, and the ketogenic diet tends to inhibit seizures. But for most patients drug therapy is the kingpin of treatment. This is begun as soon as a diagnosis of epilepsy is established. For convulsive and psychomotor seizures we usually begin with phenobarbital and proceed, if necessary, to dilantin, then to Mesantoin, and in extreme cases to a combination of two of these. For the petit mal triad there is Tridione and paradione.[6]

Next to the selection of medicines is the adjustment of dosage. The doctor's timidity has ruined the chances for health of many an epileptic. The dosage is much larger per pound of weight for children than for adults. Thus, a child aged five will usually tolerate, daily, $^3/_4$ grains (48 mg.) of phenobarbital, 3 grains (0.2 Gm.) of dilantin, $4^1/_2$ grains (0.3 Gm.) of Mesantoin, and 15 grains (0.9 Gm.) of Tridione or paradione. More details are given elsewhere.[7]

The drugs mentioned have peculiar side-effects. Phenobarbital, instead of being a sedative, may make some children unduly excitable and hard to manage. The greatest potential danger is to the blood. Aplastic anemia has caused death in persons taking Tridione or Mesantoin, for which reason persons given these remedies should be faithfully supervised and their blood examined at monthly intervals.

In certain cases, fortunately a minority, standard medicines fail to control attacks. Less likely means must then be tried: for convulsions, bromides, Mebaral; for petit mal, caffeine (as pills or coffee), amphetamine sulfate, Benadryl, glutamic acid. Finally, new and better drugs may yet be found. Phenacetylurea (phenurone) saves an occasional hopeless situation, but toxicity for the liver may limit or prohibit its use.

Social and Psychologic Treatment

A diagnosis and prescription of medicine completed, the responsibility of the physician is but half discharged. There remain problems of attitudes, of discipline, of food and rest, of participation in amusements and sports, and attendance at school. What should the teacher or playmates, or the child himself, be told? A dozen questions arise to perplex the parents and, if answered wrongly, to perplex the child and sour the parent-child relationship. Needed sympathy, encouragement, and hope can be dispensed only by the doctor who himself possesses these health and peace-giving qualities.

In general, as far as possible the child should be treated as his brothers and sisters are treated; he should, if possible, continue attendance at school. Activity, physical or mental, is an antagonist of seizures. The child's illness should be not a skeleton in the family closet but something which will be relieved in time, given good medical advice and full parent and child cooperation.

In addition to what the doctor can give, there must be cooperation of the community and support of organizations such as the National Epilepsy League, which tries to alter for the better public opinion about epilepsy and public acceptance of the epileptic and to remove the social and psychologic obstacles that now block his path.*

We have not spoken of the defects of mentality or of personality that to some epileptics are a greater blight than seizures. Fortunately, mental decay is not an essential feature of epilepsy but when it occurs is usually a concomitant symptom or a result of antecedent mal development or injury of the brain.

We pediatricians and neurologists, happy in our treatment of free patients, must not forget the thousands of epileptics of all ages who are confined within the walls of our state institutions. We must work for better medical and social treatment of those able to profit from such care. But also we must express our shame that mindless mistakes of nature—idiots and monsters—are given prophylactic inoculations and infection killing antibiotics and thus are forced to remain alive for an indefinite number of miserable years, thereby blocking the long line of needy children waiting outside the doors of our institutions. "Be ye merciful" is a compelling, but little heeded, command.

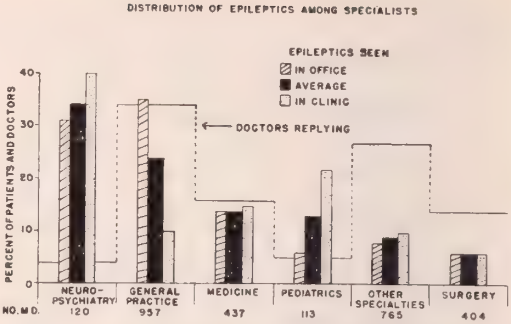

FIG. 2. Data gathered from 2,796 Massachusetts physicians regarding 11,185 epileptic patients seen by them in a year. The solid line represents the proportion of doctors replying who were specialists of various sorts. The columns represent the proportion of all patients seen by these specialists. The notched columns represent office patients and the dotted columns clinic patients, the black columns being the average of these two.

Finally, speaking of doctors, who cares for the epileptic? Figure 2 gives the returns from an inquiry made of all doctors in Massachusetts. The proportion of doctors in various types of practice is compared with the proportion of epileptic patients treated by these doctors. Neuropsychiatrists followed by pediatricians carried the heaviest patient load, but pediatricians were first in the proportion of patients seen as clinic rather than as private patients. Like Abou Ben Adhem, who loved his fellow man, their "name led all the rest."

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* National Epilepsy League, 130 North Wells Street, Chicago, Illinois.

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BRAIN TUMORS IN INFANCY AND CHILDHOOD

Sidney W. Gross, M.D., New York City

(From the Department of Neurosurgery, Montefiore and Mount Sinai Hospitals)

A STUDY of brain tumors in infancy and childhood soon discloses that cerebral neoplasms in this age period differ from those of adult life in symptomatology, location, and histologic character. In adult life, headache, mental and personality disturbances, visual impairment, convulsive seizures, speech disturbances, and focal paralytic phenomena among others are outstanding symptoms which lead to a suspicion that the patient may harbor a brain tumor. Occasionally, a focal jacksonian attack or an olfactory or visual hallucination may be the initial symptom of an intracranial expanding lesion. Such symptoms appear infrequently in infancy, although some occur more often in childhood. In infancy, the outstanding symptoms in the presence of an intracranial expanding mass are vomiting and enlargement of the head. In childhood, added to these are headache, failing vision, awkwardness in the use of the upper extremities, and/or unsteadiness of gait.

The variation in symptomatology in infancy and childhood contrasted with adult life can be explained by the differences in the developing skull and brain compared to those of adult life. In infancy the open fontanelles and ununited sutures allow the head to increase in size rapidly to accommodate a growing tumor or enlarging ventricles due to obstruction of cerebrospinal fluid pathways. Signs of increased intracranial pressure are thus often delayed until the lesion has been present for a relatively long period and has assumed an enormous size. For example, in an infant two months of age symptoms were present for only two days. Postmortem done six weeks after the onset of symptoms disclosed a huge pineal tumor.

After the tenth or eleventh year the sutures become more firmly united, and the skull becomes much like a closed box so that new growths very often are manifest early by signs of increased intracranial pressure, in many cases with few or no signs of focal neurologic disturbance. Neurologic examination in infants is more or less restricted to tests which do not require the intelligent cooperation of the patient. The general behavior, size of the head, motor activity, and condition of the pupils and fundi furnish the clues which may lead to a diagnosis of brain tumor. Examination of the visual fields and sensation is necessarily limited. In older children, with care and infinite patience it is frequently possible to carry out detailed visual field and sensory examinations.

Of the laboratory aids in the diagnosis of brain tumors in infancy and childhood, x-ray examinations alone or with the use of contrast media furnish the most valuable information. Enlargement of the head, separation or premature closure of the sutures, and areas of abnormal intracranial calcification are readily recognized. Ventriculography and encephalography provide information regarding the size, shape, and position of the cerebral ventricles, aqueduct of Sylvius, and the subarachnoid cisterns. In the presence of a history or clinical evidence of increased intracranial pressure, ventriculography should alway be followed by immediate surgical exploration and removal of the tumor if possible. Ventricular drainage for two or three days following operative intervention has materially reduced postoperative morbidity and mortality.

Cerebral angiography and electroencephalography are employed in the preoperative investigation of many infants and children suspected of having cerebral neoplasms. Both methods often yield significant information, but so far ventriculography remains the most important diagnostic procedure in infancy and childhood.

In most reported studies approximately two thirds of brain tumors in individuals under the age of fifteen years were located in the cerebellum or fourth ventricle. The remainder were distributed throughout the cranial cavity, being found in the brain stem, suprasellar region, optic chiasm, cerebral hemispheres, and lateral and third ventricles. Neoplasms rarely occur in the cerebellopontine angle or in the pituitary gland in childhood. When a diagnosis of brain tumor is made and its location determined either on clinical grounds alone or with the aid of ventriculography, speculation as to the histologic character of the neoplasm is in order. In many cases, according to past experience, one is justified in making a tentative diagnosis prior to actual visualization of the lesion. About 80 per cent of all tumors of the brain in individuals under the age of fifteen years are gliomas. Craniopharyngiomas, sarcomas, hemangioblastomas, and teratomas make up most of the rest. Meningiomas, neurinomas, pituitary adenomas, and metastatic tumors are rare in this period of life.

Medulloblastomas are the most frequent

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neoplasms of the cerebellum of infants and young children. Bailey and Cushing were the first to study this type of tumor exhaustively and to use the term "medulloblastoma" because of the resemblance of the neoplastic cells to the formative cells of the developing nervous system, the medulloblasts.[1] Prior to their study many of these tumors were variously described as sarcomas, neurocytomas, or neuroblastomas. With the aid of special staining technic Bailey was able to present convincing evidence of the ectodermal origin of these tumors.[2] In Cushing's series of 61 cases, cerebellar medulloblastomas were three times more frequent in males than in females. This is in agreement with other observers. In most reports of brain tumors in infancy, male infants are affected much more often than females. This is true, to a lesser degree, however, in brain tumors of later childhood also. Medulloblastomas occur characteristically in the cerebellar vermis overlying the fourth ventricle. They are soft, reddish-gray tumors, poorly delineated from the surrounding brain tissue. Medulloblastomas tend to spread by seeding throughout the subarachnoid space of the brain and spinal cord and the ventricular system. Microscopically, they are of fairly uniform structure with little supporting stroma. The cells are oval or pear-shaped, each having a large spheric nucleus and a narrow rim of cytoplasm. Mitotic figures are common. Clinically, vomiting is often the first symptom in these patients and may precede other symptoms, such as headache and ataxia, by several weeks. As in other types of cerebellar tumors, the vomiting occurs most frequently in the morning. Infants and children with medulloblastomas appear much sicker than children with benign cerebellar tumors. As with most other brain tumors, treatment is surgical. An attempt should be made to remove as much of the tumor as possible to relieve obstruction of the cerebrospinal fluid pathway. Surgical exploration should be followed by x-ray therapy. Although the ultimate outlook for patients with medulloblastomas is not good, survival of five years or more has been reported in several cases.

Astrocytomas of the cerebellum are the second most frequent brain tumors in infancy and childhood.[3,4] Happily, they are benign tumors which, if completely removed, rarely recur. While the midcerebellar region is the most common site, astrocytomas also occur in the lateral lobes of the cerebellum and in the cerebral hemispheres. Most are cystic with a tumor nodule in the cyst wall. The viscid yellow cyst fluid clots on standing. On microscopic examination the nodule is of more or less uniform structure with even distribution of the cells and a moderate number of thin-walled blood vessels. With Cajal's gold sublimate method the astrocytes are easily impregnated. Clinically, patients with astrocytomas have a longer preoperative course, often with remissions. They do not appear as acutely ill as do patients with medulloblastomas. Treatment is surgical. If the mural nodule is completely removed, long survivals or cures are to be expected.

Gliomas of the brain stem account for about 15 per cent of all brain tumors in infancy and childhood.[5] These lesions are characterized by the early appearance of bilateral cranial nerve palsies, cerebellar signs, and bilateral pyramidal tract signs. In most cases evidence of increased intracranial pressure occurs late, if at all. The diagnosis is easily made with the aid of air studies which show the floor of the fourth ventricle displaced backward and curved. Most brain stem gliomas are made up of long cigar-shaped cells, having long heavy processes which arise from one or both poles of the cell—hence, they have been called "spongioblastoma polare." Tumors of the brain stem are not amenable to surgical therapy. X-ray treatment has been of temporary benefit in some cases.

Craniopharyngiomas comprise another important group of intracranial tumors of early life. These neoplasms are congenital in origin, being derived from cell rests in remnants of the craniopharyngeal duct. They are characterized clinically by disturbances in growth and water metabolism associated with visual impairment and evidence of increased intracranial pressure. X-rays of the skull show calcification above the sella in about 80 per cent of the cases. Fortunately, many craniopharyngiomas are cystic so that relief of symptoms and long survival may follow removal of part of the cyst wall. It is rarely possible to remove a craniopharyngioma completely because of the frequent attachment of the optic nerves and carotid arteries to the tumor.

Among the other tumors encountered in infancy and childhood are ependymomas, sarcomas of the meninges, gliomas of the optic chiasm, teratomas, and gliomas of the cerebral hemispheres.[6,7]

In the differential diagnosis in this age period, the most important conditions to consider are stenosis of the aqueduct of Sylvius, subdural hematoma, and chronic abscess. Tuberculomas are rare in the United States. The results of surgical treatment have been uniformly good in only one type of brain tumor in this period of life—the cerebellar astrocytomas. In the other tumors relief of symptoms and prolongation of life for several months to several years may be expected. Operative mortality is still high in very young infants. Older children do surprisingly well. In recent years the surgical morbidity and mortality have been greatly reduced. This has been due in a large measure to more exact preoperative localization and also to improvements in surgical technic. The abandonment of two-stage operations more than any other single factor has reduced the surgical mortality so that now in most clinics it does not exceed 10 per cent.

8 East 83rd Street

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PSYCHOLOGIC FACTORS OF MIGRAINE IN CHILDREN

Joel Katz, M.D.,* Arnold P. Friedman, M.D., and Anne Gisolfi,* New York City

(*From the Headache Clinic of the Montefiore Hospital*)

THE importance of the pyschogenic factor in migraine has been repeatedly emphasized and is clinically well established. All these studies, however, have been done on adults, and little attention has been paid to childhood migraine. Figures concerning the frequency of migraine in childhood are confusing. Balyeat and Rinkel estimated that 2 per cent of all children manifested symptoms of migraine at some time during the first decade.[1] Vahlquist and Hackzell in Sweden found 55 cases of migraine (4 per cent) in 1,236 school children between the ages of ten and twelve.[2] In studies of adult cases, estimates of the number beginning in childhood have ranged from 21 per cent to 80 per cent. Our own figures in 400 adults revealed that 34 per cent began before the age of fifteen. This would indicate that the incidence of migraine in childhood is high enough to be of importance. Why these cases are not seen more frequently by the neurologist, pediatrician, and general practitioner is not entirely clear.

Previous studies of migraine in children have emphasized chiefly heredity, allergy, and symptomatology. The psychogenic aspects have been almost ignored, due in large part to the fact that modern psychiatric principles had not yet been absorbed and assimilated. Comby, in 1921, mentioned that these children were nervous and recommended country life and boarding school.[3,4] Balyeat and Rinkel, in 1931, wrote, "Much has been said concerning the importance of the stress and strain of life as predisposing factors in precipitating the attacks; however, in patients under ten years of age, the stress and strain of life play only a slight part."[1] Riley, in 1937, said, "Historiės of all these patients (eight) were typical, with the exception of one in which there was a marked psychoneurotic or psychiatric aspect."[5] However, he noted that the headaches were often absent during vacations from school and reappeared when school resumed. However, by 1949, Vahlquist and Hackzell stated, "Migraine is definitely a pyschosomatic disease, particularly in childhood and adolescence, and intelligent analysis along these lines is of paramount importance for good therapeutic results."[2]

Material

The present investigation of 15 children was undertaken in order to see how important a part psychologic factors may play in childhood migraine. It is intended only as a pilot study, since we feel that the series is not large enough to justify any definite conclusions. The orientation is essentially descriptive, and no attempts have been made to formulate any psychodynamic theory. For example, we did not feel justified, on the basis of our method or our material, in evaluating the possible symbolic meanings of the headaches, the problem of secondary gain, unconscious conflicts, etc. To do so would require intensive work with each patient. It should be added, however, that it is precisely this intensive type of investigation that should throw most light on the general problem of migraine. Present-day psychiatry has emphasized the importance of infantile conflicts

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in development of the adult personality. It would follow from this that the study of children with migraine would be of tremendous value in enabling us to understand this problem in the adult.

Our criteria for the diagnosis of migraine were the usual ones, i.e., periodic throbbing headaches, usually unilateral and often preceded by or associated with nausea, vomiting, photophobia, and mood changes. The symptomatology in children, contrary to other reports in the literature, was not essentially different from that of the adult. All the children were carefully studied from a medical point of view, and nothing of significance was found.

Of the 15 children, 11 were female and four male. The average age was ten, ranging from five and one-half to fifteen years. All of them were at public schools, and none had any difficulty keeping up with their studies.

The family history of these children was rather heavily weighted by migraine. In 11 of the 15, some member of the family had severe headaches of one sort or another, and in six of these the diagnosis of migraine was made.

The outstanding feature seen in these children was the presence of gross and obvious neurotic symptomatology. In nine of the 15, this could have been elicited in a few minutes interview. Of the remaining six, three either presented less apparent evidence of neurosis, or the presence of neurosis was revealed in the developmental history. In only three cases could it be said that an adequate adjustment had been and was being made. We would like to emphasize that no psychologic tests or special psychiatric technics were necessary to gain this information, and similarly no special psychiatric knowledge would have been necessary to come to the same conclusion.

The type of neurotic symptoms seen were varied and dramatic. They included temper tantrums, numerous phobias, frequent nightmares, hair-pulling, enuresis, obvious anxiety, hyperactivity, lethargy, thumbsucking, nailbiting, feeding difficulties, etc. Although the psychodynamics varied considerably, the following case illustrates one type of problem encountered.

A thirteen-year-old white female had headaches starting at the age of eighteen months. The headaches were unilateral, throbbing, and associated with nausea, vomiting, and severe prostration. They occurred every ten weeks with such regularity that the mother had future ones already marked on the calendar. They lasted three or four days, and in this period the child was almost completely helpless. The patient was an only child, and her relationship with her mother was vicious. The patient had few friends and insisted on staying in with the mother and going out only if the mother went with her. Any frustration, however, precipitated severe tantrums in which the patient banged her head against the floor. It was the mother's complaint that she "saves these for home." The mother and child battled constantly, screaming and yelling at each other. The mother was sensitive to neighborhood opinion and always closed the windows during these battles. The child followed her around and opened them. The patient was extremely sensitive to criticism, and, whenever she lost anything, she immediately began to cry and scream. Because of this the mother was reluctant to buy anything for her, which in turn would precipitate a tantrum.

The developmental history revealed numerous other difficulties. For example, up until the time of a tonsillectomy, the patient frequently would deliberately vomit over the mother.

In our study of this child, and also of the others, no definite chronologic relationship between emotional upsets and the occurrence of headaches was found. However, it is our contention that a relationship does exist and that detailed study would bring this to light. We would consider it unlikely, however, that the relationship is one common to all cases or that any specific dynamic pattern will be found.

Conclusion

1. While the exact incidence of the migraine syndrome in childhood is not known, it is probable that it is a much greater clinical problem than was previously believed.

2. Fifteen children with migraine were studied and, although the series is too small to warrant any definite conclusions, the type and severity of the neurotic symptomatology seen would suggest that psychodynamic mechanisms play an important part in the disease.

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Pride often makes us generous, but it is only illegitimate generosity.

Guess at the time when your visit becomes tiresome.

ELECTROENCEPHALOGRAPHIC CHANGES IN METABOLIC DISEASE

ROBERT M. JAEGER, M.D.,* and BURTON M. SHINNERS, M.D., Buffalo, New York

(From the Buffalo Children's Hospital, the Buffalo General Hospital, and the University of Buffalo School of Medicine)

THE importance of understanding the electrophysiology of the brain in relation to common medical problems has become increasingly evident. Limits of cerebral metabolic change in medical practice can be measured by the electroencephalogram. Since it is apparent that all diseases or human physiologic disturbances do, in some way, affect the central nervous system, it follows that the electrical activity of the brain must be modified or altered by such disturbances.

We have brought together a group of varied medical problems observed during the process of treatment and studied by means of electroencephalographic records. The problems included those commonly understood as to diagnosis but less understood in regard to central nervous system reactions.

Individual cases have been selected from large groups of conditions. We would like to discuss the following: (1) hyperinsulinism (adenoma of the pancreas), (2) tetany (nutritional deficiency), (3) tetany (pseudohypoparathyroidism), (4) hyperthyroidism, (5) eclampsia, and (6) porphyria. Case histories with electroencephalographic findings will be given with correlating analysis.

Case 1. *Hyperinsulinism (Adenoma of the Pancreas).*—M. W., a fifteen-year-old girl, began to work in a candy store in February, 1947. It is known that she had eaten several pieces of candy every few minutes and estimated, conservatively, that this amounted to two pounds of candy a day. This continued for three months; she was dismissed.

The past history was not contributory to this study.

Four weeks before admission to the Buffalo Children's Hospital, the patient noticed that she became hungry in the mornings on awakening. Two weeks before admission, the patient slept more than usual; her mother used to pour cold water over her in the morning but to no avail. She was finally admitted to the hospital in a comatose state, flushed, perspiring, and unresponsive. Extensor rigidity of the four extremities with bilateral ankle and patellar clonus was present. Bilateral Babinski phenomena were observed.

The urine examination showed both acetone and diacetic acid. The carbon dioxide combining power was 58 volumes per cent. The blood sugar was 39 mg. per cent (approximately nine hours of fasting). Spinal fluid sugar was 25 mg. per cent. After twelve hours of fasting, the blood sugar was 98 mg. per cent. With the use of adrenaline the blood sugar would rise to beyond 250 mg. per cent. After the use of adrenaline the blood sugar would drop in five hours to a level of 46 mg. per cent. The liver, not felt on admission, became enlarged and tender for one week when the patient was placed on a high carbohydrate diet.

The electroencephalographic findings were recorded at various stages. The original record showed a 3-per-second slow wave activity with a voltage of 150 millivolts, primarily occurring in the frontal leads. At this time the patient was unconscious and showed evidence of decerebration. Blood sugar level was 27 mg. per cent. With the injection of 50 per cent glucose intravenously, the electroencephalographic record returned to normal.

Ultimately, exploration of the abdomen was accomplished, and an enlarged multiple adenoma of the pancreas was removed. The postoperative electroencephalograms at various intervals during this day showed a normal record. Hyperventilation after four minutes produced no delta activity.

The appearance of slow waves or delta activity with the decrease of carbon dioxide tension by hyperventilation and/or a similar effect by lowering of the blood sugar is well known. Himwich has shown that there is an inverse relationship between oxygen utilization by the brain and delta frequency as recorded by the electroencephalograph.[1,2]

Hoefer and his associates in their studies of adults with islet cell tumors of the pancreas, either benign or malignant, have demonstrated variable and, at times, unpredictable brain wave changes.[3] They feel that the blood sugar level is not always a good index of delta activity, for at times delta activity has no relationship to the neurologic status.

Case 2. *Tetany (Nutritional Deficiency).*—H. B., a four-month-old boy, was admitted to the Buffalo Children's Hospital with generalized convulsions in status epilepticus. This had been present for twenty-four hours. Chvostek's and Trousseau's phenomena were present. The child improved quickly with the use of intravenous calcium gluconate. The electroencephalogram, originally showing a high voltage, slow wave activity, receded to normal as the calcium level approached normal.

Case 3. *Tetany (Pseudohypoparathyroidism).*—E. S., a twenty-five-year-old woman, was studied on December 10, 1948. The patient mentioned

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* By invitation.

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generalized convulsive activity during the last three years and decreasing vision over the past three months. At the age of ten she had transitory episodes of "stiffening" in her fingers. She has continued to have this. At present she has spontaneous twitchings of the fingers and of the facial muscles that are annoying.

Examination revealed an obese young lady with a round face. Slit lamp examination revealed bilateral, early subcapsular lenticular opacities. There was a generalized muscle reflex. Serum calcium was low; serum phosphorus was elevated. An Elsworth-Howard test demonstrated the inability of parathormone to alter her phosphorus metabolism. The original electroencephalogram showed a uniformly slow record with 6 to 7-per-second activity in all regions of the brain. With calcium replacement and vitamin D therapy, her symptoms disappeared. The electroencephalogram did not alter remarkably, but it did decrease the 3-per-second activity. The dominant rhythm continued to remain 6 to 7 per second.

These two cases of hypocalcemic tetany are of entirely different origin. The first represents a nutritional deficiency which, when corrected, caused the brain waves to return to normal in a short period of time. The second problem of hypocalcemia has not been worked out metabolically. The electroencephalogram did not return to normal. This is an indication that the problem of metabolism of the brain has not adjusted with the treatment.

There are two factors in this problem of hypocalcemia: one, the effect on the central nervous system; the other, the effect on the muscle structure itself to produce the clinical picture of tetany. It has been observed by Odoriz in his study of the electroencephalograms of patients with parathyroid insufficiency that the alpha rhythm disappeared to be replaced by slow wave activity.[4]

Case 4. *Hyperthyroidism.*—A five-year-old boy was admitted to Buffalo Children's Hospital on February 26, 1948. The child had been tense and nervous since the age of three. He had become more emotionally unstable and would laugh and cry uncontrollably. The physical examination showed an apprehensive child with exophthalmus. Tremor of the hands was observed. The skin was moist. The thyroid gland was diffusely and firmly enlarged. The blood pressure was 180/80. The pulse was 130. The child was irritable, emotional, and exhibited flights of ideas. Basal metabolic rate was 25. The original electroencephalogram on March 16, 1948, showed a rhythm of 5 to 6-per-second seen in the parietal and occipital areas. Hyperventilation brought out a much higher voltage and spikes. Following treatment with antithyroid medication, the patient showed improvement. Three months later, when the basal metabolic rate was −8, the electroencephalographic record showed a 9 to 10-per-second activity.

Case 5. *Eclampsia.*—J. P. was admitted to the Buffalo General Hospital on August 3, 1948, in active labor and after an uneventful pregnancy. An elevated blood pressure was present with a mild albuminuria. Immediately prior to delivery she had a grand mal convulsion. This recurred in the hours following delivery. Electroencephalogram taken shortly after delivery was grossly abnormal with high voltage, slow wave activity occurring in short and long bursts. Hyperventilation accentuated the abnormality. A repeat recording taken seven weeks later showed an improvement. Random slow waves were observed; hyperventilation produced an increased amount of 5-per-second high voltage bursts.

It is important to mention the possibility of permanent brain damage as a result of eclampsia, a disease peculiar to pregnancy and of unknown etiology. The findings are in accord with those of Jost in which he noted a direct relationship between improvement in the blood pressure and the electroencephalogram.[5]

Case 6. *Porphyria.*—Mrs. B. M. was admitted to the Buffalo General Hospital on January 15, 1948, with complaints of weakness and generalized pain of one month duration. She had several convulsions one month before. During her hospitalization a second convulsion occurred. Porphyrins were demonstrated in her urine. Her urine became muddy brown on exposure to sunlight.

The electroencephalographic study revealed a 4 to 5-per-second activity from all head regions. Without specific therapy the patient recovered. Repeat electroencephalogram fifteen months later on April 24, 1949, showed a more regular record with a dominant 10-per-second activity. On March 4, 1950, twenty-six months after the illness, a normal record which showed a dominant pattern of 8 to 10-per-second was obtained.

This is an extremely interesting case of a disease that we do not understand. We know that acute porphyria can cause demyelinization In this case the altered electrophysiology of the brain returned to normal.

These varied clinical cases have been presente to emphasize what metabolic changes can do t the normal physiology of the brain. In thes cases the change in brain activity is illustrated We have mentioned the effect on the level o blood sugar and blood calcium. The effect of cerebral metabolism as measured by th electroencephalogram and the basal metaboli rate are also indicated in the cases of hyper thyroidism and the least understood problems o eclampsia and porphyria. The records show in this paper indicate the changes in the functio of the brain produced by the problems of th total body. If the medical problem persists it is known that, ultimately, electrophysiologic changes will occur in the brain.

When we fully understand that brain abnormalities can occur in metabolic disease, then the electroencephalogram can be helpful in investigation, and treatment can be instituted earlier.

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MORTALITY IN HEAD INJURIES

Eldridge Campbell, M.D., F.A.C.S., Robert D. Whitfield, M.D., and Vernon T. Grizzard, M.D., Albany, New York

(From the Neurosurgical Service, Albany Hospital, and the Department of Surgery, Albany Medical College)

IT IS often profitable to review the results of treatment of common disorders, especially when there has been a tendency toward standardization of therapy. This is particularly true of head injuries. Of all the lesions which the neurosurgeon has occasion to treat, craniocerebral traumas are among the most frequent; if improperly handled, the results may be disastrous.

Material

In the fifteen-year period from 1935 to 1949 inclusive, 718 patients with head injuries came under the personal care of the authors. Of these, 60 died, a mortality rate of 8.4 per cent. A consideration of Table 1 shows that these over-all results compare favorably with other previously published series.* However, because of the difficulty of defining and of classifying head injuries, as well as the difficulties inherent in statistical analysis, no claim is made that these results are better than others. They are recorded to show that, by a rather simple plan of management which does not entail severe dehydration nor repeated spinal punctures, the mortality rate contrasts favorably with those obtained by other regimes. Our principal objective in this study has been a re-examination of the fatal cases in the hopes that our mistakes may not be repeated.

TABLE 1.—Comparison of Mortality Statistics[1]

	Cases	Mortality (Per Cent)
Besley (1916)	1,000	53.0
Sharpe (1916)	239	30.7
Wilensky (1919)	72	31.0
Moorhead and Weller (1921)	100	26.0
Stewart (1921)	6,135	52.0
Bower (1923)	62	26.1
Heuer (1924)	223	35.8
Kennedy and Wortis (1926 to 1929)	1,000	37.8
Beekman (1921 to 1926)	331	11.4
McClure and Crawford (1927)	441	14.7
Swift (1935)	112,000	25.0
Munro (1930 to 1933)	1,450	17.5
Fay (1927 to 1932)	528	20.0
Woodhall (1936)	240	18.7
Cutler and Whitfield (1913 to 1939)	396	11.9
Pilcher and Angelucci (1942)[2]	373	13.9
Munro (1945)[3]	1,807	21.2
Present authors	718	8.4

Policies Governing Therapy

Policies governing therapy of head injuries are directed toward the correction of shock, if present; the provision of an adequate airway, the treatment of the wound, if present, in such a way that primary healing may result, and constant vigilance for signs of hematoma or infection. The majority of such patients will recover spontaneously; a few, perhaps 5 to 10 per cent, will die regardless of what is done because of the location and degree of injury, while the outcome in 10 to 20 per cent will hang in the balance. It is with this last group that we are here principally concerned.

Surgical shock has seldom been a prominent feature of civilian or missile injuries unless the lesion has been very profound or unless there has been extensive hemorrhage from the scalp or venous sinuses. Associated injuries such as a ruptured viscus or fracture are easily overlooked in the unconscious patient and are not infrequently responsible for hypotension. A thorough examination of the patient is the first essential.

Care of the unconscious patient is directed toward the maintenance of a free airway. In our experience this is most readily effected by placing the patient in the "coma position" (Fig. 1A and B.) In this way the tongue tends to fall for-

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* Those series which comprised only gunshot wounds, of which several have been published in recent years, have been omitted since they are not comparable to our cases

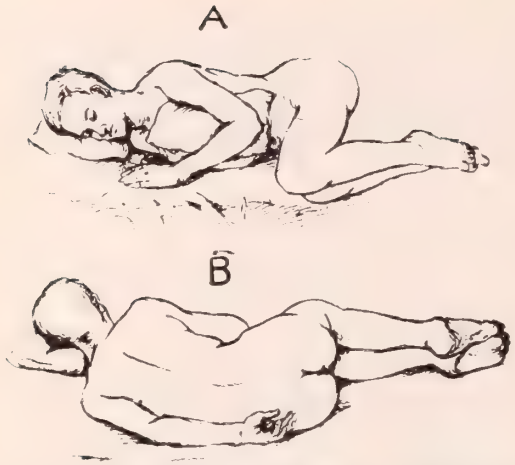

Fig. 1. Patient in coma position, viewed from (*A*) front and (*B*) rear. Note that the face is rotated slightly downward in order that the tongue will sag forward rather than backward, and that secretions in the pharynx drain outward rather than into the larynx.

ward rather than backward, while blood, mucus, and vomitus which reach the pharynx tend to drain outward rather than into the larynx and trachea. By turning the patient to the opposite side every two hours an opportunity is provided for both bronchial trees to drain. Catheter suction is employed as often as is necessary. Oxygen may be administered by nasal catheter. Very rarely, in short, fat, thick-necked individuals it has been necessary to employ intubation or tracheotomy.

Fluids are given in amounts adequate to maintain balance, i.e., 1,500 to 2,500 cc. per day for an adult, depending upon his size, his fever, and the weather. Dehydration is avoided. Normal saline intake has rather arbitrarily been limited to 1 L. If the patient is not alert enough to swallow without danger of aspiration by the third or fourth day, he is fed by duodenal tube.

Catheter drainage (external or "condom" type for men) keeps the patient drier and reduces nursing time considerably.

Penicillin is administered routinely until the patient is out of danger. This is done to minimize pulmonary as well as cranial infection.

Nowhere in medicine are the services of a good nurse of more value. Intelligent women can be greatly interested in these problems, provided the whys and wherefores are explained, the complications to be feared enumerated, and, above all, provided they are made to feel that they are an integral part of "the team." We ourselves have indeed been fortunate in this regard.

The treatment of the wound will not be discussed here in detail. It is to be covered at once with an adequate dressing. As soon as the patient's condition permits, the wound is to be debrided of foreign matter, dead or doomed tissue, and loose or indriven bone fragments. Needless to say, a depressed fracture should be elevated, particularly if near the motor area. Should the dura have been torn or should hemorrhage be visible through it, the brain should be exposed and clots and pulped cerebral tissue washed out or aspirated. The dura should then be sutured and the scalp closed in layers with fine silk or cotton. Five to ten thousand units of penicillin may be left in the wound and penicillin therapy then continued by parenteral injection as mentioned above. Tetanus antitoxin or toxoid is indicated as in any wound.

Bedside vigilance must be sharp if hematomas, infections, etc., are to be diagnosed in time to permit successful treatment. In our experience the most satisfactory gauge of intracranial pressure, not so much with respect to its measured elevation in millimeters of water as to the individual patient's ability to tolerate it (and this is quite variable), is the state of consciousness. Even minor variations of this should be recorded for subsequent comparison. It is to be remembered that restlessness may mark a narrow zone between drowsiness and deep coma; it may occur both on the way down to and, if the patient recovers, on the way back from profound stupor.

Temperature (rectal), pulse, respirations, and blood pressure are charted every half hour or hour. After the initial neurologic survey has been recorded, changes are to be looked for by all in attendance and reported promptly to the surgeon in charge.

Lumbar puncture, either diagnostic or therapeutic, has been used but seldom. Its chief use is in the confirmation of the diagnosis of complicating meningitis.

Sedation is avoided as far as possible. Restlessness is indicative of increasing pressure in many instances and of inadequate nursing care of the patient in others. In the first instance it is to be combated by measures directed at decompression, in the latter by emptying the full bladder, making the patient's position in bed more comfortable, correcting air hunger by tracheobronchial toilet, with or without the use of oxygen, etc. In some cases sedation has to be used; we prefer paraldehyde or phenobarbital. Opiates are dangerous, not only because they may mask symptoms but also because by depressing respiration they tend to increase cerebral anoxia.

Space does not permit discussion of the diagnosis of subdural, epidural, and intracerebral hematomas. In general, if the patient is not mending and if there be reasonable doubt that a hematoma is present, it is well to employ the burr hole as an exploratory procedure. Decompressive operations have in themselves seldom proved helpful unless there was extensive, spotty contusion of an underlying lobe in which the amount of clot and pulped tissue removed was not adequate to relieve pressure. In that case the area of bone removed had to be larger than that of the classic subtemporal decompression in order to be effective.

Incidence of Complications

The incidence of complications is shown in Table 2, in which the one considered chiefly responsible for the patient's death is tabulated. It should be noted that the total number with one or more complications comprised one third of the entire series.

TABLE 2.—Complications

	Number	Per Cent of Total
Subdural hematoma	94	13.1
Epidural hematoma	15	2.1
Basal fracture	50	7.0
Compound fracture	45	6.3
Laceration of brain	40	5.6
Associated injuries	67	9.3
One or more complications	240	33.3

Causes of Death

We have reviewed carefully the records of the 60 patients who died, in an effort to determine the primary factor. In some of these individuals there were several causes which contributed to and any one of which alone might have resulted in death. However in each case the one factor which seemed to have been predominant is listed in Table 3. It will be noted that in five cases the autopsy was inadequate; these have been excluded.

TABLE 3.—Primary Causes of Death

	Number of Cases
Epidural hematoma	1
Subdural hematoma	11
Intracerebral hematoma	1
Epidural and subdural hematomas	3
Subdural and intracerebral hematomas	4
Epidural, subdural, and intracerebral hematomas	1
Laceration of brain	9
Severe contusion of brain	15
Gunshot wound	2
Associated injuries	6
Meningitis	1
Pneumonia	1
	55
Incomplete autopsy	5
Total	60

Comment

Critical review of the 55 cases satisfactorily autopsied revealed that 15 died of complications probably preventable or correctable; the remaining 40 had suffered extensive brain injuries which, by present standards at least, doomed them.

Among the 15 preventable deaths the largest single factor was the unevacuated hematoma. In two cases the diagnosis was missed entirely. One of these was a boy, aged four and a half years, who was struck by a truck with resulting immediate loss of consciousness, then partial recovery, and subsequent deterioration associated with fixed dilatation of the left pupil, tremors, and slight spasticity of the right side and bilateral Babinski signs. Operation was not performed because he was considered to have a hopeless injury. Autopsy showed a small left subdural hematoma and a massive right intracerebral hematoma.

The second instance was a man, aged forty, who was hit on the head by a 12 by 12 beam. He was admitted in deep coma, bleeding from nose and ears, with bilateral Babinski signs. His blood pressure began to rise eighteen hours after admission, and at thirty-six hours he became temporarily pulseless. He died forty-seven hours after admission. Autopsy showed subdural and epidural hematomas.

A third patient was sent home by the emergency room intern and returned two days later moribund.

In four cases, a hematoma was removed from one side, while a similar lesion on the other went unsuspected. In the first of these a massive left temporal epidural clot was evacuated. The operative note indicated the dura was slack so that it was not opened. Autopsy showed subdural and intracerebral clots on the same side in the parieto-occipital region. In the second instance, right frontal and bilateral temporal trephines were made. The brain was "very tight" but was not needled. Autopsy showed an intracerebral hematoma in the right temporal and occipital lobes. The third and fourth cases illustrate the necessity of multiple burr holes. In the former, bilateral frontal trephines were made with the patient lying on his back, and on the right 5 to 10 cc. of old blood was encountered. "The brain could be seen to pulsate normally." Autopsy showed a large subdural clot covering practically the entire right hemisphere. In the fourth case right frontal, bilateral temporal, and bilateral parietal burr holes were made. The hematoma found at postmortem examination lay in the left frontal region with associated softening and contusion of the left frontal lobe.

It must be borne in mind that neurologic disturbances are notoriously inconspicuous in some subdural hematomas and that when present they may be homolateral rather than contralateral. The clot was bilateral in many of our cases.

In two instances recurrence of the hematoma after its initial removal was overlooked until too late, and in two others, although the brain was tight at the time of trephination, no decompression was made.

Total pulmonary complications were surprisingly infrequent. One patient died as an obvious result of pneumonia, while in four others this was a contributing factor. It is believed that the maintenance of a clear airway by the "coma position" and frequent catheter suction, as well as the avoidance of oral feedings until drowsiness is past, are chiefly responsible for these results. Routine use of penicillin undoubtedly affords an additional factor of safety.

Meningitis resulting from basilar fracture was responsible for one death in 1941 before the advent of penicillin. It was localized to the right frontal region, associated with pulped cerebral tissue, and discovered at postmortem examination, although the causative organism was not identified.

Two patients admitted in coma succumbed as the result of undiagnosed abdominal injuries, one of ruptured spleen and the other of ruptured liver. In each instance the shock was attributed entirely to the head injury.

Case 1.—The first of these was a thirty-eight-year-old man admitted in 1943 in deep coma with ashen pallor, stertorous respiration, bilateral Babinski signs, and blood pressure of 88/60. The admitting note recorded "questionable abdominal rigidity." The blood pressure rose slowly to 140/98. Abdominal dullness was recorded as abnormally high in the left flank. During the first twenty-four hours there was hardly any urinary output, and the urologic consultant advised forced fluids. Urinary suppression continued; forty-eight hours after admission edema was beginning to appear, and the blood nonprotein nitrogen rose to 88 mg. per cent. About sixty-five hours after injury the blood pressure began to fall rapidly and the temperature to rise until death seventy-five hours after admission.

Autopsy revealed contusion of the kidneys, rupture of the spleen, moderate hemoperitoneum, massive retroperitoneal hematoma, and petechial hemorrhages of the pons. In retrospect, insufficient attention was paid to the initial and terminal shock. Had we been more alert, the secondary hemorrhage from the spleen might have been diagnosed. We were not then alert to the danger of overadministration of fluids in lower nephron nephrosis.

Case 2.—The second case was that of a boy, aged three years, first admitted elsewhere in coma and shock who recovered consciousness following treatment for shock. He was transferred to this hospital twenty-four hours later because of recurrent coma and focal seizures. At that time he was found to be in shock; this was erroneously attributed to an extensive laceration and avulsion of the scalp, although there was no active bleeding. The laceration was debrided, and bilateral frontal and temporal trephines made which disclosed a slack brain. Despite whole blood transfusion he died twenty minutes after completion of the operative procedure.

Necropsy showed a linear fracture 2 cm. from the foramen magnum without significant brain injury. There were 600 cc. of bloody fluid in the peritoneal cavity, resulting from a tear in the capsule and parenchyma of the liver. The mistake lay in considering the extensive scalp laceration to be the cause of the shock when active bleeding had long since ceased. In retrospect, it would appear that the abdominal injury was largely responsible for the shock.

These cases serve to emphasize the fact that one must ever be alert for other injuries, particularly if shock be present.

Summary and Conclusions

1. A series of 718 personally observed cases of craniocerebral injury, covering a fifteen-year period, with a mortality rate of 8.4 per cent, is reported.

2. The general principles of management employed are reviewed. It is noteworthy that dehydration was purposely avoided, while lumbar puncture was but rarely employed and then only in search for meningeal infection.

3. Critical review of the 60 fatalities indicates that 15 were probably preventable. The largest single factor in the latter group was the uncorrected hematoma. Pulmonary and intracranial infections were relatively infrequent. In two patients who succumbed as the result of undiagnosed abdominal injuries, shock was erroneously ascribed to the cranial lesion.

4. It is believed that the strict maintenance of a clear airway by the use of the "coma position," the suction catheter, and also by hydration adequate to maintain positive fluid balance are of fundamental importance in the routine care of these unconscious patients.

5. Constant vigilance for evidence of hematoma formation is essential if diagnosis is to be made in time to permit effective surgery. When reasonable doubt exists and the patient is failing, exploratory trephination should be employed.

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COMMON TYPES OF ENCEPHALITIS IN CHILDREN

Horace L. Hodes, M.D., New York City

(From the Pediatric Service of Mount Sinai Hospital)

Measles is the most common cause of encephalitis among children in this area. The incidence of measles encephalitis varies considerably from outbreak to outbreak. Published reports indicate an incidence as frequent as one case of encephalitis for each 600 cases of measles and as rare as one in 3,000. In our own experience the incidence has been approximately one case of encephalitis for every 1,200 of measles. In a general way, measles encephalitis is more likely to occur among children suffering from severe attacks of measles than among those with mild measles. It is noteworthy in this connection that the incidence of encephalitis among children having an attack of measles modified by gamma globulin is extremely low.

While it is obvious that infection with measles virus is in some way related to the production of encephalitis, it is not generally believed that there is a direct action of the virus on the central nervous system. A number of theories have been proposed to explain the production of encephalitis. The most nearly satisfactory one postulates that the virus causes some primary injury to the nerve tissue of the central nervous system with the production of altered chemical substances which then act as an antigen. Antibodies are formed against these altered substances which then react not only with this material but with unaltered nerve cell constituents. The available evidence indicates that myelin may be involved in this reaction.[1,2] The possibility cannot be excluded, however, that measles encephalitis results from direct action of the measles virus against the central nervous system.

In this connection, it should be stated that, in a small percentage of patients suffering from measles encephalitis, symptoms of central nervous system involvement are seen early in the course of the disease, in some cases even before the rash appears. In such instances it is very difficult to visualize an antigen-antibody type of reaction, since the development of the antibodies requires a time interval of at least a few days. It would seem more logical in such instances to suppose that the encephalitis was the result of direct action of a virus upon the nerve cells. To support such a possibility one should be able to demonstrate the presence of measles virus in the central nervous system of patients with measles encephalitis. So far as we are aware, measles virus has been isolated under such circumstances on only one occasion in 1941. In this year, Shaffer, Rake, and the author isolated measles virus from the brain of a child who died of measles encephalitis nine days after the eruption of a typical morbiliform rash.[3] The measles virus was isolated by the inoculation of brain material from this child into two monkeys. Both of these animals developed signs characteristic of measles in this species. It should be stated that the microscopic examination of the brain of the child in question showed lesions considered to be typical of those seen in measles encephalitis, namely, edema, scattered hemorrhages, infiltration of small mononuclear cells about the blood vessels, areas of necrosis, and many foci of demyelination. Some doubt regarding our findings should be noted, since there exists the possibility that the virus was present in the blood contained in the brain rather than in the nerve tissue itself. That this is very unlikely is indicated by the fact that attempts to demonstrate measles virus in the blood even four days after appearance of the eruption have never been successful.

We believe that in most cases of measles encephalitis the antigen-antibody reaction described above probably produces the central nervous system injury, but in a small number of cases, particularly those in which the signs of encephalitis come on early in the disease, the possibility exists that direct action of the measles virus upon the nerve cells is the cause of the central nervous system injury.

The prognosis in measles encephalitis is, in general, serious, the mortality varying from 10 to 40 per cent. Of those who survive, the majority recover completely, but perhaps 25 per cent of those surviving do have sequelae of varying degrees of severity. The possibility of permanent injury to the central nervous system is present, therefore, in each case of measles encephalitis, and any method which might give a clue to the ultimate prognosis would be of great value. With this idea in mind, Dr. Samuel Livingston and the author have made electroencephalographic studies of eight children at intervals following onset of measles encephalitis. As has been shown by others, abnormal electro-

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encephalographic findings are encountered in many types of encephalitis, including that following measles.[4-7] Our examinations have confirmed these findings and also indicate that serial electroencephalographic studies are of value in reaching conclusions regarding the degree of recovery. All of the eight children with measles encephalitis who were studied showed markedly abnormal electroencephalograms at or soon after onset of symptoms of encephalitis. Seven of these eight children showed progressive improvement clinically and eventually showed normal electroencephalogram tracings. It is of interest in this connection that in each instance clinical improvement preceded the improvement of the electroencephalogram, and in several instances the patients were judged on clinical grounds to be entirely recovered while still exhibiting abnormal electroencephalogram patterns. All of the children under discussion apparently recovered without detectable brain injury, and their electroencephalogram records, after varying intervals, became normal. The eighth child studied had a very severe attack of encephalitis following measles and never showed any great improvement of his marked central nervous system symptoms, and the electroencephalogram examination a few days before his death was still grossly abnormal.

A brief summary of the course of three of the eight patients studied follows.

Case 1.—S. M., an eight-year-old white child, appeared to be convalescing normally following measles until the seventh day after onset. At this time she began to complain of headache, vomited several times, and had a series of convulsions lasting for approximately fourteen hours. She was delirious on admission to the hospital and soon became comatose. Forty-eight hours after onset of symptoms of encephalitis she regained consciousness and, except for noticeable apathy, seemed normal. By the third day after onset she seemed quite well; she was alert, cheerful, and clear mentally. On the fourth day after onset, although she appeared normal in every way clinically, an electroencephalogram showed large, slow waves ($1^1/_2$ per second) in all leads.

She was re-examined twenty days after onset of encephalitis. At this time physical examination was entirely normal, as was the electroencephalogram. When last seen, nine months after onset, the child appeared to be entirely normal.

Case 2.—F. H., a five-year-old white boy, four days after onset of coryzal symptoms of measles began to have severe convulsions and was semicomatose. Improvement began three days after onset. When an electroencephalogram was taken seven days after onset, the child seemed entirely well. The electroencephalogram showed large, slow waves (2 per second), and the tracing taken twenty days after onset was very similar, although the child seemed well clinically. Seventy-two days after onset of encephalitis, the electroencephalogram still showed bursts of large, slow waves. Large buildup and slow recovery after hyperventilation were observed, and the question of epilepsy was raised. One hundred sixty days after onset, re-examination showed a normal electroencephalographic pattern, and the child seemed entirely well. It should be noted that he had appeared to be quite well clinically on the fourth day after onset of encephalitis despite a grossly abnormal electroencephalogram.

Case 3.—B. S., a white boy of ten years, suffered an extremely severe attack of encephalitis six days after onset of measles. On this day he suffered a series of protracted convulsions, lapsed into coma, and never regained consciousness. He was unable to swallow, had very marked paralysis of all extremities, and eventually appeared to have the characteristics of a decerebrate animal. He suffered a series of episodes of hyperpyrexia and eventually died three months after onset. Five days after the first appearance of encephalitic symptoms, his electroencephalogram showed large, slow waves (about 2 per second), and a tracing taken six weeks after onset still showed gross abnormalities.

In contrast to the above findings six children of ages similar to those described above, who were convalescent from an attack of measles unaccompanied by symptoms of involvement of the central nervous system, all showed normal electroencephalographic tracings.

In summary, eight patients with measles encephalitis showed abnormal electroencephalographic findings soon after onset of their central nervous system disease. In seven of these, the pattern became normal, and all of these children appear to have recovered without detectable evidence of permanent central nervous system injury. It is noteworthy that in each case clinical recovery seemed to have occurred before the electroencephalogram became normal. In the case of the eighth child, the central nervous system damage did not improve, the electroencephalogram remained abnormal, and death resulted. That the electroencephalogram may be an aid in accurate prognosis of the outcome in measles encephalitis is indicated.

Encephalitis on very rare occasions also follows chickenpox. This complication is so unusual, however, that the author encountered only 14 such cases in a period of twelve years at the Sydenham Hospital in Baltimore, although this hospital treated practically all patients with complications occurring during the course of chickenpox in the entire city and its environs with a population of over 1,000,000. In general, chickenpox encephalitis resembles that seen in measles, but the course of the disease tends to be milder and the prognosis better than is the case in the former condition. Another interesting difference between the two conditions is that cerebellar symptoms are relatively more common in encephalitis following chickenpox than is the case in measles encephalitis.

On very rare occasions, encephalitis also occurs as a complication of German measles. We have seen only two such instances, and a survey of the literature indicates that this complication in German measles is so rare as to be of no practical importance. It should certainly not interfere with the practice which we recommend of deliberately exposing children to German measles in order to minimize the danger of infection with this virus during pregnancy.

The involvement of the meninges in mumps occurs with some regularity, in our own experience in approximately 20 per cent of patients hospitalized for treatment of this disease. However, almost invariably, meningeal symptoms predominate, and there is little evidence of involvement of the brain itself. On four occasions we have, however, observed definite evidence of involvement of the central nervous system itself. In three of the patients there was well-marked cranial nerve involvement, including oculomotor, facial, and abducens. In the fourth case generalized convulsions were observed followed by coma of twenty-four hours duration. In each case recovery was prompt and complete.

Encephalitis during the course of whooping cough is at the present time the most serious complication in this disease, since deaths from pneumonia have practically been eliminated by antibiotics. The brain appears to be injured in pertussis in three ways: by rupture of a large blood vessel, by multiple petechial hemorrhages, and, least commonly, by what appears to be a primary disseminated encephalomyelitis. In addition, convulsions may occur in whooping cough as a result of tetany due to diminished concentration of plasma calcium brought about by alkalosis following vomiting as well as by rickets. It is very important, although often difficult, to distinguish between these conditions, since treatment and ultimate prognosis differ in each case. In general, the prognosis is most serious in the primary type of encephalitis and best when tetany has produced the symptoms of central nervous system involvement. In passing, it should be noted that injury to the central nervous system has occurred following vaccination against pertussis, as has occasionally been the case following injection of other antigens. In our own experience these complications following pertussis immunization have not been so frequent as reported by some authors, but we believe that, when severe systemic reactions, accompanied by convulsions or other evidence of central nervous system involvement, follow injection of pertussis vaccine, further injections should be omitted. This does not mean that these reactions are so common that one should consider the abandonment of pertussis immunization for children as a general measure.

In many parts of the United States three closely related viruses have caused primary encephalitis in children as well as in adults. These viruses are those causing St. Louis encephalitis, eastern equine encephalitis, and western equine encephalitis. All these viruses cause damage primarily by injury to the neurons of the central nervous system. It is impossible here to give a detailed account of our knowledge regarding all these viruses, but a brief résumé concerning their outstanding characteristics may be in order. The St. Louis virus caused a small outbreak of encephalitis among human beings in Paris, Illinois, during the summer of 1932. In 1933, the disease occurred in St. Louis and Kansas City, Missouri. Since then sporadic cases have occurred in various places in the Middle West, on the west coast, in western Canada, and in eastern Texas. Abundant evidence has been furnished that reservoirs of this virus exist in animals and in birds. For example, in 1940, Cox and his associates demonstrated the presence in horses of antibodies against the St. Louis virus and showed that these animals were susceptible to infection with the virus.[8] Hammon a year later reported the finding of antibodies against the St. Louis virus in domestic and wild birds and animals.[9] The virus has been found in nature in mosquitoes (Culex tarsalis and C. pipiens) and is readily transmitted to animals in the laboratory by these and other species of mosquitoes.[9] It soon became apparent that mosquitoes might not be the only vector involved in the transmission of this disease, since all attempts to demonstrate the transmission of the virus from the mosquito to its offspring had failed, and attempts to show the persistence of the virus after hibernation in the mosquito were also unsuccessful.

In 1944, during a nonepidemic period, Smith, Blattner, and their associates isolated St. Louis virus from chicken mites (Dermanyssus gallinae) infesting chickens near St. Louis.[10-12] The mites were found to be capable of transmitting infection with the virus to their offspring in indefinite series, thus providing a constant source of infection. When infected mites were allowed to bite chickens, viremia without encephalitis resulted. In 1947, Hammon isolated St. Louis virus from mites of the species Liponyssus sylviarum found in the nest of a yellow-headed blackbird in California.[13] There appears every reason to believe that appropriate mites spread the virus among chickens and other birds, thereby providing a reservoir of the virus in avian blood. Since bird mites do not bite mammals, a second vector must be assumed to be involved, and it seems quite likely that a number of species of mosquitoes which regularly suck the blood of both birds and mammals actually make the transfer of virus from avian to mammalian species. As we have indicated above, this belief is strengthened by the finding of the virus in the C. tarsalis and C. pipiens mosquitoes caught in the field, and in the laboratory such transfer of the virus from chickens to mammals by mosquitoes has been demonstrated.[9-12]

Western equine encephalitis is in most respects similar to the St. Louis type. The virus causing this disease was isolated by Meyer from horses dying of this disease in California in 1930.[14] In 1938, 22 human cases of encephalitis were observed in Kern County, California, and Howitt isolated the western equine encephalitis virus from the brains of two children dying of the disease. Outbreaks among human beings have since occurred in Saskatchewan, the State of Washington, North Dakota, South Dakota, Montana, Nebraska, Manitoba, and Texas. The epidemiology of this disease is similar to that of St. Louis encephalitis. The disease occurs in nature among horses, and evidence of infection among birds has been found. The virus has been recovered from mosquitoes in nature, and in the laboratory mosquitoes have been found to be capable of transmitting the disease to susceptible animals.[9] The virus was isolated from the chicken mite, D. gallinae, in Texas in 1944, from mites (L. sylviarum) associated with yellow-headed blackbirds, and from L. bursa (tropical fowl mites) caught in a sparrow's nest.[15,13,16] Thus, it seems quite likely that this virus too is spread from bird to bird by mites, and from birds to mammals by mosquitoes.

The virus of eastern equine encephalitis was isolated in 1933 by TenBroeck from horses dying of this disease.[17] In the summer of 1938, an outbreak of encephalitis among human beings in Massachusetts was proved to have been caused by the virus of eastern equine encephalitis. There were over 200 cases among horses, and 44 cases occurred in humans, mostly in children. Although there were few cases, the disease was extremely severe, and the mortality rate was approximately 75 per cent, while profound permanent cerebral changes occurred in two thirds of those surviving. The eastern strain of equine encephalitis virus was isolated from the brains of a number of patients at autopsy.[18]

The eastern equine virus has caused encephalitis in horses in many eastern states, in Alabama, Florida, Texas, Louisiana, Michigan, Missouri, Mississippi, Panama, and Brazil. Sporadic human cases of encephalitis due to this virus have occurred in Texas (1941) and Louisiana (1946). From May to October, 1947, 3,700 mules and horses died of eastern equine virus encephalitis in southwest Louisiana. Ten cases occurred among human beings, of whom nine were children. Seven of these patients died, and eastern equine encephalitis virus was recovered from the brains of two of these children. Antibodies against the virus were found in sera from human beings, chickens, and horses in the affected area.[19,20] During this same summer (1947), sporadic cases of encephalitis occurred among children in central Tennessee. Neutralizing antibodies against the eastern equine encephalitis virus were demonstrated in the sera of 22 chickens in the area under study. The virus of eastern equine encephalitis was recovered from a pool of chicken mites (D. gallinae) as well as from chicken lice.[21] It seems very likely that the epidemiologic factors in eastern equine encephalitis are very similar to those which operate in St. Louis and western equine encephalitis.

Although Japanese encephalitis virus does not play any part in the production of encephalitis in this country, its similarity to the St. Louis, eastern, and western equine viruses, together with the fact that it has recently spread eastward to Guam, warrants a brief description of its chief characteristics here. As is true of the other three viruses referred to, the Japanese virus causes outbreaks of encephalitis only during the summer months. Japanese investigators have reported isolation of the virus from mosquitoes in nature, although this has not been confirmed by American workers.[22,23] In the laboratory many species of mosquitoes have been shown to be capable of transmitting the infection to laboratory animals, and Hodes and Hurlbut showed that infected mosquito larvae, when they emerge as adults, are capable of transmitting the disease through bites to infant mice.[22,23] In the Okinawa outbreak of encephalitis in 1945, it was found that a large percentage of Okinawan horses showed antibodies against the Japanese virus, as can be seen in Table 1.[24] It was also demonstrated that the virus was capable of causing encephalitis in these animals. These considerations suggest the possibility that horses may be an important reservoir of the Japanese encephalitis viruses.

It should be stated that there are minor differences in the clinical and pathologic effects produced by the four viruses considered above.

TABLE I.—Complement Fixing Antibodies in Sera of Okinawan Horses

Serum	Japanese Antigen —Final Serum Dilution—						Western Equine Antigen —Final Serum Dilution—					Eastern Equine Antigen —Final Serum Dilution—					Serum Control
	4	8	16	32	64	128	4	8	16	32	64	4	8	16	32	64	
Okinawan horse A	4+	4+	4+	4+	4+	3+	0	0	0	0	0	0	0	0	0	0	0
horse B	4+	4+	4+	4+	4+	0	0	0	0	0	0	0	0	0	0	0	0
horse C	...	4+	4+	4+	+	±	0	0	0	0	0	0	0	0	0	0	0
horse D	...	4+	4+	+	±	0	0	0	0	0	0	0	0	0	0	0	0
horse E	...	4+	4+	+	±	0	0	0	0	0	0	0	0	0	0	0	0
horse F	...	4+	3+	±	0	0	0	0	0	0	0	0	0	0	0	0	0
horse G	...	4+	4+	4+	+	0	0	0	0	0	0	0	0	0	0	0	0
horse H	4+	4+	3+	±	0	0	0	0	0	0	0	0	0	0	0	0	0
horse I	4+	4+	4+	3+	±	0	0	0	0	0	0	0	0	0	0	0	0
Guam horse	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Immunized Japanese hamster	4+	4+	4+	4+	4+	2+	0	0	0	0	0	0	0	0	0	0	0
Immunized guinea pig																	
Western equine	0	0	0	0	0	0	..	4+	4+	4+	4+	0	0	0	0	0	0
Eastern equine	±	0	0	0	0	0	0	0	0	0	0	4+	4+	3+	3+	3+	0

TABLE 2.—Production of Complement Fixing Antibodies Against Japanese Encephalitis Virus During Convalescence

Patient	Day of Disease Serum Obtained	Japanese Virus Antigen —Final Serum Dilution— 1 to						Western Equine Virus Antigen —Final Serum Dilution— 1 to						St. Louis Virus Antigen —Final Serum Dilution— 1 to						Serum Control
		4	8	16	32	64	128	4	8	16	32	64	128	4	8	16	32	64	128	
1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1	20	4+	4+	4+	4+	3+	+	0	0	0	0	0	0	0	0	0	0	0	0	0
2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	17	4+	4+	4+	3+	2+	±	0	0	0	0	0	0	0	0	0	0	0	0	0

One of these, for example, is that the Purkinje cells of the cerebellum seem to be much more susceptible to injury by the Japanese virus than by the other viruses under discussion. In general, however, a specific differentiation can only be made by isolation of the virus from the central nervous system or by the demonstration of the production of antibodies against one of the viruses in question. An illustration of the establishment of an etiologic diagnosis by means of the complement fixation test is given in Table 2, which shows the production of antibodies against the Japanese virus in the sera of two patients during convalescence from Japanese encephalitis, and a lack of antibodies against the St. Louis, western, and eastern equine encephalitis viruses.

In conclusion, it should be pointed out that we have available two methods for the control of the viruses under discussion. Since their transmission depends upon arthropod vectors, control of these vectors should eliminate them as a threat to great masses of population. Furthermore, since these viruses are all good antigens, there is reason to believe that active immunization against them on a wide scale would be very effective.[25,26]

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COD LIVER OIL OINTMENT THERAPY IN PROCTOLOGIC DISORDERS

Robert Turell, M.D., New York City

IN THE past, the application of ointments to the anoperianal region was unpopular. The objections to the use of ointments were tradition, local discomfort, and the exaggerated fear that medication applied by patients to an erogenous zone may be utilized as a form of sexual gratification. However, a revision of this attitude followed the advent of the newer derivatives of the fatty acids and antihistaminic drugs which are employed with some degree of success as topical applications in pruritus ani. Since this experience indicated that the judicious use of ointments in the anogenital area has a therapeutic niche, a search was made for a bland ointment that could be used in routine proctologic practice. This investigation was finally narrowed to the use of a practically odorless ointment containing cod liver oil (Desitin), largely because of the favorable reports of experience with the external application of cod liver oil preparations to minor skin irritations, burns of various degrees, and surgical wounds.

The last status report on the external use of cod liver oil by the Council on Pharmacy and Chemistry appeared in 1943.[1] At that time, the Council indicated the need for further scientific observations and controlled experimentation. Recently, a team of investigators at Bellevue Hospital restudied the dermatologic aspects of this problem and reviewed the literature dealing with cod liver oil therapy, not only of the dermatoses but also of burns and wounds.[2–10] The Bellevue group observed that dermatologic disorders, such as stasis dermatitis, eczematous dermatitis, intertrigo, especially infantile, and superficial ulcerations, responded well to the topical application of cod liver oil ointment.

Impressed by these favorable results and others reported in the literature, as well as by a limited personal experience with adjunctive external cod liver oil therapy of burns and other wounds during military service in World War II, I decided to evaluate its usefulness in proctologic disorders and following anorectal surgical procedures.

Material and Method

The ointment, Desitin, used in the therapy of these cases contains cod liver oil in a base containing zinc oxide, talc, petrolatum, and lanolin.* In addition, this ointment is halogenated, a small amount of chlorine being slowly added to the base during manufacture. The chlorine is practically inert, since chemically it is within the molecule and as such exists in a bound rather than a free state.

TABLE 1.—Results of Topical Therapy with Cod Liver Oil Ointment in Various Proctologic Disorders

		Results (Complete Healing)	
Name of Disorder	Number of Cases	2 Weeks or Less	Less than 1 Month
Postoperative wounds (anorectal)	100	Used only as lubricant	
Superficial anal fissures, acute	18	15	3
Nonspecific perianal dermatitis			
With pruritus	20	18	2
Without pruritus	12	9	3

This ointment was employed as a lubricant for the routine, twice weekly digital examination of the wounds of 100 patients following hemorrhoidectomy, excision of anal ulcers, fistula in ano, and others. This digital rectal examination is employed for the control of the rate of healing of the wound and to break up any bridging that may occur. This ointment was used therapeutically in 18 cases of acute, superficial anal fissures and in 32 patients with acute and subacute dermatitis of nonspecific origin, in conjunction with hot baths. In the cases of anal fissure or perianal dermatitis, the application of the ointment was made by the patients twice daily at twelve-hour intervals, following the hot baths. Improvement was definite and rapid in practically all cases. The rate of progress varied from patient to patient and depended on the severity and extent of the lesion. No untoward effects were observed (Table 1).

In the absence of controls, no attempt was made to ascertain the effect of this ointment on the rate of healing of the postoperative anorectal wounds. All wounds, however, healed without incident, and the ointment was well tolerated by all patients. This ointment compares well and, in fact, appears to be superior to other nonaqueous lubricants employed in the past. Booe has obtained good results in treatment of selected cases of poorly healing anorectal wounds.[11]

Summary

The application of a thin film of an ointment containing cod liver oil to the anoperianal region was tolerated well by 150 patients. This ointment is especially useful as a lubricant and as a film for wounds following proctologic operative procedures, as well as in cases of acute and subacute perianal dermatitis of undetermined origin. The cod liver oil ointment described in this report is nonirritating and devoid of untoward local or systemic reactions. It is presently being employed in minor proctologic disorders as a bland surface covering to the exclusion of all other nonaqueous topical preparations.

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* Desitin ointment is manufactured by the Desitin Chemical Company.

876 Park Avenue

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HYPERTHYROIDISM WITHOUT TACHYCARDIA

Nicholas R. Occhino, M.D., Johnson City, New York

(From the Department of Medicine, Charles S. Wilson Memorial Hospital)

THERE is hardly a disease process in all of medicine whose clinical picture can be as unmistakable and dramatic as the one seen in full-blown, classic exophthalmic goiter. The protruding eyes, the anxious frightened stare, the croplike protrusion on the neck, the quick nervous manner, and rapid pulse are manifestations which force the observer to an immediate diagnostic decision. Admittedly, there are many gradations from the obvious to the obscure.

The underlying cause of hyperthyroidism is not completely known. Means considers it "a constitutional disease of varying clinical pictures of a single etiologic entity in which the abnormal thyroid function is but one phase."[1] Patients are seen with and without goiter, with and without eye signs, with and without myopathy, and with modifications of circulatory adjustments. Various hemodynamic phenomena exist, ranging from simple sinus tachycardia to the appearance of manifest heart disease.

When present in excessive amounts, thyroid hormone exerts a general systemic effect upon cellular metabolism. Moreover, there appears to be a differential effect on various structures in patients with comparable degrees of thyrotoxicosis, suggesting that thyroid hormone may have a selective action. Means finds no evidence of selectivity.[1] He attributes this apparent differential action to basic defect of the cells in question. Opinion is divided as to the existence of a specific cardiotoxic principle.

Tachycardia is not dependent upon nervous connections. The effect on the heart rate is not due to general metabolic stimulation but to a direct effect on the heart.[2] Early in the course of hyperthyroidism, increased activity of the thyroid may accelerate the heart from a previously subnormal rate to normal. In such instances, tachycardia is absent, although other manifestations of increased thyroid function may be present.

It can generally be stated that tachycardia constitutes one of the prime clinical features of hyperthyroidism.[3–6] The index of suspicion of increased thyroid function is heightened by the presence of a rapid heart action. Conversely, because a normal or slow pulse rate is present, thyrotoxicosis might be readily overlooked.

It is the intent of this article to focus attention on those patients having hyperthyroidism with pulse rates within the normal range. Although partially masked by this phenomenon, detection of thyrotoxicosis could be facilitated if this possibility was kept in mind. The following are illustrative clinical histories. For convenience of comparison all cases are summarized in tabulated form (Tables 1 and 2). Three of these are presented in more detail.

Case Reports

Case 1.—R. McK., single, white male, twenty-five years old, complained of nervousness, fatigue, and weight loss of 42 pounds in six months. He ate and slept well. Pertinent physical findings were as follows: hot, moist hands with a definite fine

TABLE 1.—SALIENT CLINICAL FEATURES

Case Numbers	1	2	3	4	5	6	7	8	9	10
Age	25	31	25	32	34	35	48	28	38	34
Sex	M	M	M	M	F	F	F	F	F	F
Duration of symptoms (months)	6	8	12	12	6	12	6	12	4	6
Weight loss in pounds before treatment	42	$43\frac{1}{4}$	75	20	21	$14\frac{1}{2}$	24	18	17	38
Presence of goiter	0	0	0	Diffuse enlargement	Small nodule	Substernal	Small nodule bilateral	0	Diffuse enlargement	0
Eye signs	0	0	0	0	0	0	0	0	Exophthalmos 3+ Van Graef	0
Tremor	+	+	+	+	+	+	+	+	+	+
Fatigue	+	+	+	+	+	+	+	+	+	+
Sweating	+	+	+	+	+	+	+	+	+	+
Duration of treatment (months)	8	11	11	9	10	9	12	11	9	Prescription for 5 months thyroidectomy
Weight gain in pounds at end of treatment	10	18	16	3	3	$14\frac{1}{2}$	$8\frac{1}{2}$	$\frac{3}{4}$	0	6

TABLE 2.—CHANGES IN BASAL METABOLISM AND PULSE RATES BEFORE AND AFTER TREATMENT*

Case	Before Treatment			After Treatment		
Number	B.M.R.	B.P.R.	S.P.R.	B.M.R.	B.P.R.	S.P.R.
1	+44	66	72	+ 6	64	68
2	+42	60	76	+ 3	52	64
3	+32	80	80	+ 7	68	70
4	+27	60	80	+11	54	68
5	+22	52	68	+ 9	42	52
6	+29	72	80	+ 7	68	72
7	+36	60	77	−17	52	68
8	+32	80	84	+ 3	80	72
9	+31	80	80	− 1	72	72
10	+34	80	80	+ 6	70	70

* Key to abbreviations in table: B.M.R.—basal metabolic ate; B.P.R.—basal pulse rate; S.P.R.—sitting pulse rate.

tremor of the fingers; thyroid gland not enlarged; blood pressure 130/80; sitting pulse rate regular and 72 per minute.

Complete blood count, sedimentation rate, and urinalysis were normal. The basal metabolic rate was plus 44. The basal pulse rate was 66 per minute.

The diagnosis of hyperthyroidism without tachycardia was made and the patient was treated with propylthiouracil (Lilly) in dosage of 0.2 Gm. daily for eight months. All signs and symptoms subsided. The final basal metabolic rate was plus 6, the basal pulse rate was 64 per minute, and the sitting pulse rate was 66 per minute. He regained 10 pounds in weight.

Case 2.—M. Y. was a twenty-five-year-old married male. The referring physician suspected hyperthyroidism but "doubted it because the patient had a slow pulse." He complained of warm hands and feet, excessive perspiration, fatigue, and a weight loss of 75 pounds in one year. He had had an attack of rheumatic fever fifteen years before. The pertinent physical findings were as follows: He appeared restless and anxious, and his face was flushed. The blood pressure was 160/80; the sitting pulse rate was regular and 76 per minute. The cardiac status was that of inactive rheumatic mitral and aortic disease in full compensation. The hands were hot and moist, and a definite fine tremor of the fingers was present.

Complete blood count, urinalysis, and sedimentation rate were normal. The basal metabolic rate was plus 42, and the basal pulse rate was 60 per minute.

The diagnosis of hyperthyroidism without tachycardia was made, and the patient was given a preliminary trial on Lugol's solution for three weeks. Since considerable clinical improvement resulted, treatment was continued with 0.4 Gm. of thiouracil (Deracil, Lederle) daily for eleven months. Basal metabolism tests, repeated at one month and six months after this treatment was started, were plus 34 and plus 11 respectively. The loss of weight, excessive sweating, and sensation of warmth of the hands and feet had ceased. Nervousness had lessened but was still present. A final basal metabolism taken eleven months after the beginning of treatment was plus 3. The patient's sitting pulse rate was 64 per minute, and he had regained 16 pounds in weight.

Case 3.—M. K. was a thirty-five-year-old, white, female widow with known mitral insufficiency and mitral stenosis of rheumatic etiology. Her complaints of one year duration were nervousness and difficulty in breathing on lying down at night. She had been on a maintenance dose of digitalis daily, prescribed by a cardiologist who had repeatedly reassured her that her symptoms were to be expected in a patient with a rheumatic heart. The history further revealed that her "hands shook," and a loss of weight of 14.5 pounds had occurred, in spite of eating "four good meals a day."

Physical examination confirmed the existence of mitral insufficiency and stenosis. The blood pressure was 150/80 with a shock at the diastolic level. The sitting pulse rate was regular and 80 per minute There was a fullness in the suprasternal notch, and a small tumor mass was palpable in this area. The eyes were prominent, but no exophthalmos or lid lag was present. The skin was warm and moist, and there was a fine tremor of the fingers.

A complete blood count, urinalysis, and sedimentation rate were normal. The basal metabolic rate was plus 32 and the basal pulse rate 80 per minute. Roentgenograms of the chest revealed the presence of a substernal thyroid.

The patient was advised to have a thyroidectomy which was refused. She was treated, therefore, with 0.2 Gm. of propylthiouracil daily for the following twelve months. The results of treatment were excellent. Two months after therapy was started, she was free from symptoms. The sitting pulse rate had dropped to 70 per minute. It became necessary to discontinue digitalis therapy because of nausea, while her cardiac function remained in a state of full compensation. The blood pressure stabilized at 130/80. The final basal metabolic rate was plus 7 and the basal pulse rate 68 per minute. She had regained 14.5 pounds in weight, and she stated that she "felt the best she had in years."

Material

The ten clinical histories summarized were chosen from the files of patients seen in private office practice. In Table 1, the salient clinical features appear. Table 2 shows a comparison of the basal metabolic rates, the basal pulse rates, and the sitting pulse rates, before and after treatment, respectively.

It should be stated that the principle diagnostic criterion was a clinical evaluation of the patient's history and physical examination with the aid of a few laboratory procedures. Each patient had at least two basal metabolic rate determinations, a complete blood count and urinalysis prior to treatment, and frequent blood examinations from the beginning to the end of therapy. Eight of the patients were treated with propylthiouracil in dosages of 0.15 to 0.2 Gm. daily. Two were treated with thiouracil (Deracil) with dosages of 0.4 Gm. daily. The period of observation after the termination of treatment varied from six months to three years.

Analysis of Material and Comments

In one patient treated with propylthiouracil a decrease in the leukocyte count to 4,300 per cu. mm. occurred, and therapy was discontinued. Subsequently, the leukocyte count rose to 8,000 per cu. mm. In one patient receiving thiouracil (Deracil) a similar leukopenia ensued after five months of therapy. The medication was immediately discontinued. After due preparation of this patient with Lugol's solution, a thyroidectomy was performed. Histologic examination of the resected gland tissue revealed areas of focal hyperplasia. There were no relapses or recurrences of the symptoms and signs observed in any of the patients during the previously stated period of observation.

The most striking observation was that the basal pulse rates and the sitting pulse rates were within a normal range. The clinical histories include the major symptoms of hyperthyroidism, such as significant loss of weight in spite of increased appetite and an adequate diet, nervousness, fatigue, and sweating. All these patients exhibited involuntary fine tremor of the hands or fingers and a warm moist skin. Half of the cases had a diffuse enlargement of the thyroid gland or adenomata. Only one patient had exophthalmos. The basal metabolic rate was elevated above the accepted normal level in each of these patients and was considered confirmatory evidence of hyperthyroidism. Furthermore, response obtained from therapy was uniformly good, resulting in the disappearance of symptoms and signs, a lowering of the basal metabolic rate to within normal range, and a restoration of the patient's former sense of well-being. In all except one, a substantial increase in weight occurred. Thus, from a collective appraisal of all the aforementioned factors, the diagnosis of hyperthyroidism has been reasonably substantiated.

Attention is directed to a comparison of the basal pulse rates and the sitting pulse rates recorded before and after treatment. A consistent decrease of the basal pulse rates and a further relative decrease of the sitting pulse rates was noted after therapy. In other words, during the active, untreated stage of hyperthyroidism all of these patients had pulse rates within the accepted normal range, which were further decreased to a lower level of normalcy after treatment.

Complaints such as nervousness, fatigue, and sweating are common symptom denominators of many disease entities, often occurring in patients suffering from anxiety states, effort syndrome, or other functional disorders. In the functional group, loss of weight, when present, is usually proportional to the patient's degree of anorexia. Moreover, the neurotic individual frequently discloses the presence of tachycardia, transient hypertension, and cold, clammy hands associated with a coarse tremor. One observes a certain pattern of behavior which is recognizable as psychoneurotic. In principle the diagnosis of psychoneurosis can usually be made by a thorough clinical approach rather than by the method of exclusion. Additional supportive evidences, such as loss of weight in spite of good appetite and adequate diet, the presence of warm moist hands with a fine tremor, and an increased metabolic rate should be considered.

In a patient with a normal pulse rate, the clinical evaluation of these symptoms assumes even greater importance, since a failure to consider the additional evidences of hyperthyroidism may lead to an erroneous conclusion.

All of these patients described in this paper had been seen previously by one or more competent physicians. They had repeatedly but unsuccessfully sought medical aid for the relief of symptoms as described in the historical abstracts. However, in each instance, the cause was attributed to some psychologic situation, to the menopause, or to the presence of an irrelevant inactive chronic disease found on physical examination.

In none of these patients was the diagnosis of hyperthyroidism considered as a causative factor. I believe that the finding of a normal pulse rate in these patients was largely responsible for this oversight. My interest in this clinical group was thereby greatly stimulated. Furthermore, by stimulating an increased awareness of its existence on the part of the observer, fewer instances of hyperthyroidism without tachycardia would be overlooked.

By definition a normal pulse rate in the absence of pulse deficit is synchronous with the normal rhythm of the heart originating in the sinus node, casting a rate between 60 and 100 per minute at rest.[7] In sinus bradycardia the rate falls below 60, and in tachycardia it exceeds 100 or more per minute at rest. Sunderman and Boerner state that "in the normal adult male at rest the heart averages 70 to 72 beats per minute when all emotional factors are excluded. In women the rate is usually 8 to 10 beats higher per minute."[8]

The existence of hyperthyroidism with normal or slow heart rates has been noted before.[9,10] The reason for the occurrence of this clinical phenomenon is not clear. Under normal physiologic conditions the vagus nerve exerts a continuous restraining effect upon the heart rate, operating reflexly, and dependent upon afferent impulses flowing to the vagus center principally along the sinus and aortic nerves.[11] Individual variations of vagal tone in man probably account for differences in pulse rates within the range of normal. Thus, a patient with hyperthyroidism and high vagal tone may have a normal pulse rate, while another with low vagal tone may exhibit tachycardia. It is possible that other inhibiting reflex mechanisms may be active in slowing the heart rate.

Notwithstanding the lack of knowledge concerning the exact physiologic mechanisms, clinical experience bears out the fact that hyperthyroidism does occasionally occur without tachycardia. Unless this possibility is kept in mind, the diagnosis may be overlooked.

Summary

1. Clinical data on ten patients manifesting symptoms and signs of hyperthyroidism without the accompanying tachycardia are presented.

2. Acknowledgment is made of the fact that, in the large majority of patients with hyperthyroidism, tachycardia is one of the principle circulatory manifestations.

3. Emphasis is placed upon clinical judgment and evaluation in correctly diagnosing this disease.

4. It is the specific intent of the article to focus attention on those patients with hyperthyroidism who have average normal pulse rates.

5. It is stressed that, unless the possibility of its occurrence is kept in mind, the diagnosis of this clinical group may be overlooked.

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DEATHS FROM INFLUENZAL MENINGITIS ALMOST ELIMINATED BY DRUGS

A recovery rate from influenzal meningitis of 96 per cent following treatment with sulfadiazine and streptomycin is reported in the June 24 issue of the *Journal of the American Medical Association.*

Before the use of sulfa and antibiotic drugs, the mortality from the disease varied from 90 to 100 per cent, according to Drs. Emanuel Appelbaum and Jack Nelson of the New York City Health Department, authors of the article. This form of meningitis (an inflammation of the membranes that envelop the brain and spinal cord) is essentially a disease of infants and young children.

Of 90 patients treated, 87 recovered, and three died. In the vast majority of these patients, there was marked improvement in six days after treatment with streptomycin was begun, the doctors say.

Residual damage, including deafness and defective vision, occurred in nine of those who survived.

ELUSIVE MENTAL CASES: MARITAL CONFLICTS

B. Liber, M.D., F.A.P.A., New York City

(*From the Mental Hygiene Clinic, New York Polyclinic Hospital*)

MALADJUSTMENT, from whatever cause, is the most important factor in the development of mental disturbances. One may be unadjusted to society in general, to one's immediate group, or to the closest individuals among whom one lives. The two most outstanding relationships in which maladjustment is particularly frequent and which form the main sources of conflict are the parent-child and husband-wife associations. In fact, they are the acid test of a person's adaptability. There should be nothing astonishing in that, since all intimate contacts demand concessions which, being resented as intrusions, are often difficult to make.

Indeed, all partnerships, even the remotest, are based on give-and-take terms. That is why anyone who only slightly borders on the schizoid, the depressed, or the moody personality balks at them. He cannot consent to his side of the arrangement without feeling unhappy or deranged.

In the case of the child and his parents, we can expect one of the following results: either acceptance of the oppressive situation, or a rebellion against it, or a mental conditioning, the effect of which is a temporary or permanent inferior social position or again a psychotic breakdown. These consequences can at least be explained, and perhaps excused, by the inexorable hazard or the fatality of the parent-child situation. Neither the parents nor the children have any choice in the matter.

In married life, however, there is the added feeling of guilt for having selected one's undesirable companion. This, of course, complicates the trouble. The marital conflicts are, therefore, on the whole, the most important contributory factors—sometimes avoidable, sometimes inescapable—to mental disorders.

Such illnesses may amount to fully developed psychoses, or, in the most frequent cases, they may never go beyond the light or elusive forms of mental anomaly. Here are a few of the inexhaustible number of examples of the latter category.

Case 1.—A mother, whose own marriage was a failure to the extent that, although she lived with her husband for forty years, she did not speak to him for a quarter of a century, tried to influence her daughter as to whom to marry. The girl had been in love with a healthy, good-looking, joyous young man of the same age as hers. She saw him weekly or more often for half a year, and they were ready to apply for the license. But the mother claimed that the boy's earning capacity was too meager and finally succeeded in breaking the bond.

The mother quickly brought another candidate to the house. True, he had some capital, and his regular income was comparatively high, but he was fifteen years older than his future wife. The girl had but little to say to her highly respected mother whom she considered superior from all angles. Whenever an objection was timidly uttered, so-called wisdom and maturity had a reply.

"He never kisses," said the daughter.

"Sure, he is decent and well-behaved," replied the mother.

"He is bald."

"Who needs his hair? His face is all right and pleasant to anyone."

"He never smiles and never jokes."

"That means seriousness, depth, and intelligence."

At last the marriage took place, and complaints were rife from both sides. She failed to enjoy his presence and contact, and he grumbled about her "frigidity." He was always busy and had but little time for her. He gave her all the money she wanted, but she had no use for it, as she lost her sociability and all her previous interests. Within a few years she landed in a light depressive psychosis from which even the presence of her children did not free her. For all intents and purposes she was normal, but, like a dark veil, sadness covered her entire life. Happiness was forever chased from the family. Nobody dared to smile in that house.

Case 2.—In another case where an American woman was married to a Japanese, she, who hated him, was sure to find a solution by living secretly with another man. This proved, on the contrary, to complicate the situation. She began to feel guilty, and the more devoted her husband was to her, the more she condemned herself. Since his occupation often took him away for weeks at a time, she was free to do what she pleased. He never suspected her, always loved and admired her, which made her more miserable. At a given moment, she came to the psychiatrist to ask which of her two mates to give up. She had a gun ready in her room but never made use of it. She ended by rejecting the lover, but giving herself every week or so to another man, to people whom she forgot the next day and to whom she was indifferent. She also drank excessively. When her husband finally understood his misfortune, he was plunged into a melancholy which never became a real mental illness but which forced him to give up his work. Ostensibly he was the patient, but both were abnormal.

Case 3.—A writer and public speaker, whose success might have been compared to that of the preacher in Bernard Shaw's excellent play, "Candida," failed to treat his modest wife as kindly as that pastor did. He insulted her at each step, although always introducing each indignity with the word "sweetheart." When he became highly incensed against her, usually for some trifle, his eyes were wild, his face red, his lips opened and showed his gnashing teeth. Then he would utter a long and angry "dea-ea-rie." At the same time he did not despise her help in editing his work and acting as hostess to his numerous admirers.

She never raised her voice, never protested, but a few years after their marriage she lost her friendliness and rarely said a word. For some months she still typed his stuff, but soon she could not even do that for him. They had no children. She revived somewhat when he took her back to her parents. However, at her home, she fell into the same depressed state which contained the seeds of mental illness but which never degenerated into a psychosis.

He sent her to a psychiatrist, but the doctor found that she regarded herself as the nuisance in their life. As a proof of her incapacity to understand her husband, she brought letters of praise from his worshippers: "Your address has made many friends for you."—"Your talk was admirable." —"We want to hear you soon again."—"You have earned a lofty place for yourself," and many more of the same kind. One was written to her: "In our town we are still discussing your husband's grand work. What a man!" What could she say? He was so wonderful! Her eyes filled with tears.

Some of the reasons why a person chooses this or that mate will always remain puzzling. There are social, sexual, psychologic explanations. In many cases none are answers or solutions. Why does a tall and handsome man marry a short homely woman? How can a physically perfect female be happy with a hunchback? The key to the riddle may lie in the necessity of one to protect and of the other to be shielded, or in a subtle form of sadism and masochism, or in the relationship between a domineering and a dependent and submissive person, or in the connection between superiority and inferiority. Nor could anyone always predict which of the two will be the inferior and which the leading individual, or whether the prevalent or preferred qualities will be psychic or corporal. If they need each other and their symbiosis results in successful adaptation, there is happiness or, at any rate, a state of contentment.

Case 4.—One young man, whom almost everybody would consider normal from all points of view, married a woman five years his senior, a cripple with striking defects that were residues from her poliomyelitis in infancy. Her face was attractive, and her intellect was keen. But what really charmed him in her personality? And was his judgment correct? Whether he knew it or not, it was compassion and the need for a sort of self-sacrifice, both wrong motives for a marital union. He was exuberant with admiration for his own generosity, greatness, and saintliness.

However, he was not "big" enough to fit into the role of a savior. After a short time, the sentiments which he had mistaken for love evaporated, his enthusiasm faded. The first visible effect was a lack of sexual interest in the wife, and soon a true impotence ensued. She, of course, became cool to him and avoided all contacts with him.

His friendship for her changed into enmity and feelings of self-blame crept into his mind and from then on colored his entire behavior. He was never an outspoken psychopath, and he continued his work—indeed, the only thing he was able to do faultlessly was his job. But otherwise his mentality was forever stamped with venom and wretchedness. Unfortunately for both, they went on living under the same roof.

Case 5.—A Negress complained of a severe "hurtin' . . . a pain," she corrected herself—in the head. She indicated the left parietal region and energetically denied that it was a headache. Exceptionally for her race, she was not poor. Her husband, now away in some unknown place—in the West, she believed—had been in business, had made money, and, after many a quarrel and court procedure, had left her well provided.

"My memory is not good either, my mental alertment is not so clear," she stated in her own quaint, delightful way.

For several months she had submitted to all sorts of examinations elsewhere. The reports she brought showed that organically nothing was found abnormal. Nor were the treatments she received followed by the slightest improvement. She had no children and lived with her old mother.

Questions revealed that her attacks of "pain," which occurred frequently and, whenever present, were worse in the evening, apparently coincided with her husband's daily homecoming in the past years. She had been, she still was, very fond of him, while he had always been indifferent to her. And now, her unhappiness due to his absence, her mental suffering, had been transformed or converted into a somatic condition or symptom.

This was revealed to her, but at the advice not to love a person who did not care for her, she rebelled. The examiner, trying to be as practical as possible, suggested that she find some occupation. She did. She became interested in another woman's commerical pursuit, invested her money in it, and entered into a partnership with her. Then her "pains" disappeared completely.

We all know about artists with high aspirations and great achievements who were financially poor. Jean François Millet, who was always hungry and whose wife actually died of starvation, and van Gogh, whose mental illness was probably aggravated both by poverty and lack of recognition, were well-known instances.

In our own country Ralph Blakelock, the splendid landscape master, whose work is now in the best museums, broke down mentally after his inability to sell a single picture, while his family of ten were always famished.

Case 6.—One of our cases dealt with a less celebrated painter, who married a woman with a great desire for fame, or rather for reflected fame. Seeing how hard it was for this man to make a name for himself, she was badly disappointed. When she lost all hope, she began to abuse and discourage him, which was possible because of his weak character. Finally, she killed the last gasps of his talent and sent him to work as a common laborer. As he was entirely incompetent for such jobs, she called him lazy, parasite, and good-for-nothing, which, of course, crushed him more. The time came when she actually was the only breadwinner in the house, and he, staying at home, did the marketing, the cooking, and the house cleaning. He was able to do these things satisfactorily but otherwise lost his interest in life as a whole and in cultural matters in particular—never read, never spoke, never went anywhere. He was mentally a semicadaver.

Both wealth and indigence, success and failure may undermine a marriage and a mind.

65 West 95th Street

AORTIC EMBOLECTOMY IN "BUTTONHOLE" MITRAL STENOSIS

Jacob J. Silverman, M.D., F.A.C.P., Staten Island, New York, and
Elliott S. Hurwitt, M.D., F.A.C.S., New York City

(From the Medical and Surgical Services of the Staten Island Hospital and the Surgical Service of the Beth Israel Hospital)

An occlusion of the abdominal aorta by an embolus at the bifurcation into both iliac arteries is a dramatic event. The increasing number of successful aortic embolectomies in the last several years has focused attention on the early recognition and direct surgical approach to this condition. In spite of the many brilliant advances made in cardiovascular surgery, however, there have been only 26 successful aortic embolectomies reported in the medical literature to date.[1–5] In reviewing the subject of aortic embolectomy, one gathers the impression that the problem is basically a mechanical one, that the rapid removal of the obstructing embolus is the key to success. Actually, the problem is extremely complicated, as our case will testify. We have recently encountered a failure to restore the circulation after a successful surgical removal of a saddle embolus of the aorta, and as a result of this experience we are prompted to report this case and discuss some of the factors which we believe were responsible for failure.

The early recognition of a sudden occlusion due to a large embolus lodging at the bifurcation of the aorta is usually not difficult if the condition is kept in mind. The sudden cessation of pulsations in both femoral arteries is the best single aid in diagnosis. Acute arteriospasm complicating venous thrombosis, thrombosis in situ secondary to atherosclerosis, and dissecting aortic aneurysm should be considered in the differential diagnosis. In any patient with an arterial embolus there is almost always pre-existing left-sided heart disease, such as mitral stenosis with auricular fibrillation, endocarditis of the aortic or mitral valve, or a recent myocardial infarction with a mural thrombus. Depending on the size of the embolus and the secondary reactions, the onset of an aortic embolus may be ushered in with shock. Usually the patient complains of excruciating pain in the midabdomen or back followed by a severe ache in both lower extremities. There may be a complete loss of sensation and motor power of both legs. The affected limbs from the toes to several inches below Poupart's ligament become cold and blanched and later on present a mottled type of cyanosis. The findings at first are not necessarily symmetric, but, if the occlusion at the bifurcation of the aorta is complete, both affected limbs are similar. Once gangrene sets in, death usually ensues within a few days.

Case Report

The patient, a white man, aged forty-eight, entered the Staten Island Hospital on December 6, 1949, complaining of shortness of breath. The past history revealed exertional dyspnea of approximately eighteen months duration which had increased in the last two weeks. He was first told he had a cardiac condition ten years prior to entry, and for the past three years he had been taking one cat unit of whole leaf digitalis daily. There was no history of rheumatic fever or any of the allied illnesses. He was unmarried. He worked as a roofer and lost no time from his work. He smoked on the average of one package of cigarettes a day.

Physical examination on admission disclosed a dyspneic patient with obvious signs of congestive heart failure. The blood pressure measured 135/75; the pulse was totally irregular and averaged 100. The rhythm was auricular fibrillation. The heart was enlarged in its transverse diameter. The apical impulse was forceful and palpable in the fifth intercostal interspace 2 cm. outside the midclavicular line. There was a long, rough systolic murmur, grade IV intensity, loudest over the apical area, followed by a mid-diastolic rumble. The pulmonic second sound was accentuated and louder than the aortic second sound. Many medium crepitant rales were heard over both lung bases. The liver edge was palpable and tender four fingerbreadths below the costal margin. The neck veins were moderately engorged, and there was a positive hepatojugular reflex. There was some cyanosis to the fingernail beds and slight pretibial pitting edema. The dorsalis pedis, posterior tibial, and femoral pulsations were easily palpable bilaterally.

Laboratory studies disclosed a normal blood count and differential. The blood sedimentation rate was 7 mm. in one hour (normal less than 10 mm. in one hour). The blood Kahn test for syphilis was negative. Urinalyses disclosed a marked trace of albumin; otherwise the findings were not remarkable. An electrocardiogram revealed auricular fibrillation, right deviation of electrical axis, and depressed RS-T segments in leads 2 and 3, which were interpreted as indicating digitalis effects. The precordial study demonstrated high voltage R waves over the right side of the heart.

The patient was placed on a vigorous cardiac regimen. The digitalis was increased to 0.2 mg. of digitoxin daily; Thiomerin, 1 cc., was administered subcutaneously daily, and the diet was limited in its sodium content. Within forty-eight hours there was marked improvement; within a week he lost 15 pounds in weight, and there were no longer any signs indicating congestive heart failure.

At 10 A.M. on December 14, 1949, eight days after admission, while up and about, the patient suddenly experienced an excruciating pain across his lower lumbar region, associated with vomiting. A few minutes thereafter both legs felt numb and achy. At 11 A.M. both lower extremities were cold and presented a mottled cyanotic appearance, first in the left leg and later in the right. No pulsations were elicited over the dorsalis pedis, posterior tibial, popliteal, and femoral arteries. At 12 NOON, a line of demarcation developed in each lower extremity a few inches below Poupart's ligament. Above this line the normal warmth of the body was felt, and below it the extremity was cold, anesthetic, and cyanotic. Morphine and papavarine were prescribed in large doses, the latter intravenously, and the patient was prepared for operation. At 3:30 P.M., five and one-half hours after the onset of complaints, he was taken to the operating room, and a laparotomy was performed by Dr. Elliott Hurwitt and Dr. Leif Jensen, under ether-gas-oxygen anesthesia. The following is the operative note:

> The peritoneal cavity was entered through a liberal left paramedian lower abdominal incision. There was no bleeding from the abdominal wall, although the small vessels were engorged with dark purple blood. The loops of small and large bowel were packed into the upper abdomen. An incision was made through the posterior parietal peritoneum, exposing the terminal portion of the aorta and the common iliac arteries. A brisk pulsation was present in the aorta to a point about 3 cm. proximal to the bifurcation; below this the aorta was occupied by a firm fleshy mass, and pulsations stopped abruptly. There was extensive calcification in the posterior wall of the lower abdominal aorta, making mobilization of this segment difficult. The common iliac arteries felt firm and elastic in some areas but were rigidly calcified over most of their course. Soft rubber catheters were looped as tourniquets around both common iliac arteries distally and about the aorta proximal to the occluded portion. A vertical incision about 1 cm. in length was made in the anterior wall of the aorta just above the bifurcation, and a firm blood clot having the shape of a saddle was extruded. The clot was not adherent, and there was no detectable roughening of the inner wall of the aorta. Brisk bleeding from the aorta was controlled by tightening the proximal tourniquet. It was difficult to pass catheters into the common iliac arteries because of compromise of the lumen by the atherosclerosis; after irrigation with saline solution, back bleeding was obtained. Heparin solution was instilled into the aorta, and the incision closed with a continuous over-and-over suture of #00000 Deknatel braided silk. The tourniquets were released; there was no bleeding, and a faint but definite pulsation could be felt in both common iliac arteries. The abdominal wall was closed with buried mattress sutures of steel wire through fascia, muscle, and peritoneum; skin closure was effected with pincettes.

The patient was heparinized just prior to the end of the operation, and a slow transfusion of 500 cc. of whole blood was administered. The blood pressure was maintained at fair levels and averaged 120/60. The pulse was totally irregular and fluctuated from 110 to 120. The operation lasted less than two hours, and the general condition of the patient at the close of the operation seemed fair. The neck veins, however, were somewhat engorged, and there were some coarse rales over both lung bases. The lower extremities were carefully followed, and, although the obstruction at the bifurcation of the iliac arteries was removed, clinically, no appreciable improvement was noted in the circulation of the lower extremities. The same degree of coldness, mottled type of cyanosis, line of demaraction, and absence of pulsations as previously recorded were observed. Within a few hours the patient was conscious and relatively comfortable.

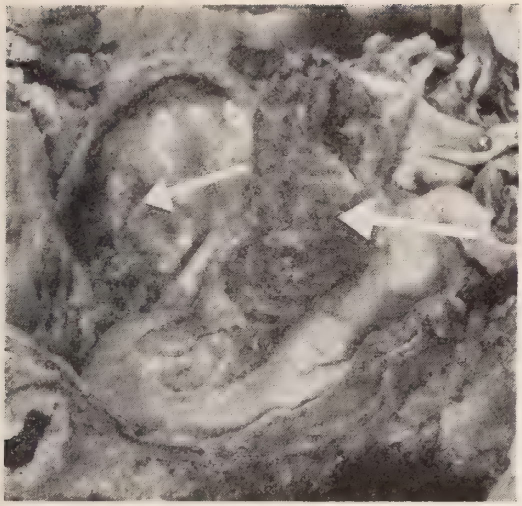

FIG. 1. Specimen of heart dissected to demonstrate the buttonhole type of mitral stenosis (left arrow) and large thrombus of the left auricular appendage (right arrow).

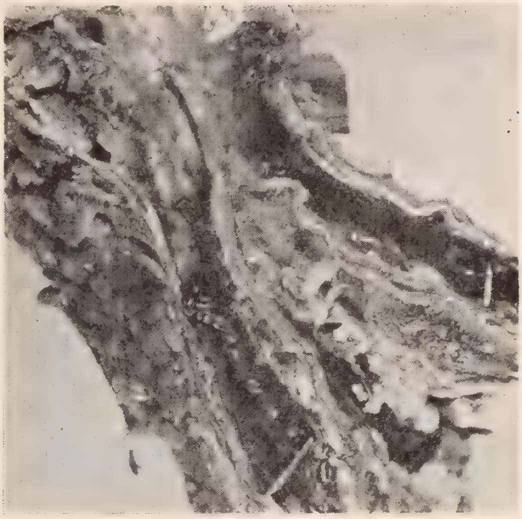

FIG. 2. Specimen demonstrating the aorta and both iliac arteries. Arteriosclerotic changes were noted in both iliac arteries.

That evening, seven hours postoperatively, the patient suddenly developed acute heart failure. Ouabaine was administered intravenously with only questionable improvement. His respiratory rate became extremely rapid, and there was a sharp rise of his rectal temperature to 105 F. Peripheral vascular collapse occurred, followed by intense nervous irritability, and he died in a convulsive seizure. It should be emphasized that throughout his postoperative course it was difficult, if not impossible, to obtain the femoral pulsations.

Autopsy.—The striking findings at autopsy were limited to the heart and blood vessels. The heart was moderately enlarged. There was sclerosis of the coronary arteries. There was no valvular pathology except for changes in the mitral valve. The cusps and valve ring were calcified. The chorda tendinae were thickened and fixed, producing a stenosis of the mitral valve of an extreme buttonhole slitlike variety (Fig. 1—left arrow). The cusps presented no vegetations, but the adjacent auricular wall showed large, soft, red adherent thrombi. The left auricular appendage was completely filled with a solid red thrombus (Fig. 1—right arrow). The aortic arch showed atherosclerosis with involvement of the intima. There were similar changes in the thoracic aorta. The vessels of the celiac axis and mesenteric arteries were clear. The abdominal aorta showed moderate sclerosis in its upper two thirds with marked medial calcification and intimal changes distally continuing on in the iliac and femoral arteries. The site of the removed embolus at the bifurcation of the iliac arteries showed slight roughening. The incision in this area was firmly sutured, and the lumen was not occluded (Fig. 2). The iliac and femoral arteries were patent throughout their extent, but there was marked narrowing in some areas due to the extensive arteriosclerotic changes. The lungs were slightly edematous. The peritoneal cavity contained a considerable amount of partly clotted blood. The kidneys were normal, and the liver showed evidence of passive congestion.

Comment

The surgical aspects of aortic embolectomy have been reviewed by McClure and Harkins.[6] In reviewing the successful cases that have been operated on one of the most important factors emphasized is promptness in diagnosis and correction of the obstruction. That other factors are also important, and even critical, is demonstrated by the failure in our case report. Our patient was operated on within six hours of the onset, and the obstruction was relieved without undue difficulty shortly thereafter. A six-hour period is usually considered a safe period, and most reports stress this time interval. Nevertheless, our patient failed to demonstrate an appreciable improvement of the circulation to the lower extremities within this period of time.

Several reasons may be advanced for the lack of immediate improvement in the circulation of our patient. Sclerotic changes were observed in both iliac arteries, both at operation and at autopsy, so that it is conceivable that when the obstruction occurred at the bifurcation irreversible changes easily took place within a brief time. An obstruction to an artery already diminished in caliber by atherosclerosis is obviously a more serious condition. Furthermore, in a patient with far-advanced valvular heart disease the critical time period may even be less. In advanced mitral stenosis, such as was encountered in our patient, the quantity of blood ejected from the left ventricle with each heart stroke is obviously reduced. Finally, with a drop in blood pressure, such as occurs in shock, the cardiac output is again compromised. Had this patient survived operation, in the presence of continued auricular fibrillation, the question of amputation of the left auricular appendage as a prophylaxis for recurrent embolization might have been raised. Madden has reported some degree of success with this procedure.[7] The autopsy findings in our case indicate that the operation would have accomplished little, because of the large thrombi adherent to the wall of the left auricle. It is obvious, therefore, that a successful embolectomy will depend not only on the mechanical relief of the obstruction but will depend to a larger extent, perhaps, on the status of the heart and circulation.*

The decision to attempt aortic embolectomy in a patient with such an advanced degree of cardiac pathology must be weighed carefully. Under medical management, Lund reported less than a 10 per cent survival with conservative treatment.[8] More recently, Reich reviewed 16 cases of saddle embolus and thrombosis of the abdominal aorta.[9] No operations were performed, and there were two survivals, attributed to "recanalization." According to Key, the expected survival rate of life and limb varies with the location of the embolus and is 17 per cent when the embolus is located at the bifurcation of the aorta.[10] As Fry has pointed out, to be successful, surgical interference in aortic obstruction is indicated in a selected type of patient, regardless of the promptness of diagnosis.[11] It is difficult to arrive at a valid appraisal of the results of aortic embolectomy, since most of the failures are not reported. Moreover, one cannot anticipate the extent of the valvular, myocardial, and vascular changes.* To withhold operation in a patient with a saddle embolus, even with a buttonhole type of mitral stenosis and a large mural thrombus in the left auricle, might be to deprive such a patient of his one chance for survival. A comparative study of anticoagulants and the newer methods of blocking the sympathetic impulses and of medical versus surgical management of aortic emboli in patients with mitral stenosis and mural thrombi should be revealing.

Summary

1. An aortic embolectomy for a saddle embolus in a patient with a buttonhole type of mitral stenosis is reported.

2. There was failure to restore the circulation in the lower extremities after the obstruction was successfully eliminated within six hours after the onset.

3. In a patient with far-advanced mitral stenosis, the opportunity for obtaining a successful aortic embolectomy is questionable.

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* ADDENDUM: Since the preparation of this manuscript, another saddle embolectomy has been performed by one of us (E. S. H.) at the Beth Israel Hospital, New York City. The source of embolization in this sixty-year-old man was a mural thrombus in an aneurysm of the left ventricle following a recent myocardial infarction.

At operation, performed about five hours after the acute episode, there was the same cadaverlike lack of bleeding and engorgement of small vessels in the abdominal wall. A similar approach and operative technic were employed, with the evacuation of a large blood clot through a short incision in the aorta just proximal to the bifurcation, followed by free bleeding from the aorta and back bleeding from the iliac arteries. Although vigorous pulsations were present in the aorta, there were no palpable pulsations in the mesentery of the small bowel, and signs of vascular compromise of loops of small intestine were evident.

Despite heparinization, intravenous procaine, spinal anesthesia, para-aortic infiltration with procaine, antispasmodics, and intensive supportive therapy, the patient died on the day after operation. Permission for postmortem examination was not obtained. In this patient there was also no detectable postoperative improvement in the circulation of the lower extremities. Embolization to branches of the superior mesenteric artery and shock were the presumptive causes of death. The aorta and large vessels were elastic and pliable; calcific changes, as reported in the case above, were not present.

Never take a thing for granted when it is in your power to reduce it to a certainty.

A man who cannot govern himself is but ill qualified to govern others.

TREATMENT OF PNEUMONIA WITH A SINGLE ORAL DOSE OF A PENICILLIN-SULFADIAZINE-SULFAMERAZINE COMBINATION

HERMANN VOLLMER, M.D., HERBERT H. POMERANCE, M.D., and IRA K. BRANDT, M.D.,
New York City

(*From the Department of Pediatrics of the Lincoln Hospital*)

NOT all micro-organisms are killed by exposure to an appropriate chemotherapeutic agent. Certain strains may survive because of natural resistance, i.e., the lack of an enzyme system which is susceptible to this agent. Others withstand even a prolonged exposure because of mutation into resistant forms which seems to be an adaptation to the antibacterial agent. The process of adaptation, while it increases resistance to one agent, may render the micro-organism more vulnerable to another. This can be compared with military forces which have been trained for tropical warfare but are sent to the arctic; they would be less able to resist the adverse climatic influences of the north than troops without such a preceding acclimatization to tropical conditions.

Attempts have been made to overcome natural resistance by the simultaneous use of two or more antibiotic agents which may attack the micro-organisms through other vulnerable enzyme systems. This combined chemotherapy aims at continuous effective blood levels of two or more different agents.

If one could administer different bactericidal agents in such a way that alternating peak concentrations result, this might constitute a method of preventing mutation. In this way, micro-organisms would be exposed to an ever-changing antibacterial milieu, and these continuous changes might preclude a proper adaptation. A strain surviving and adapting itself to the first agent could, by this very adaptation, become more vulnerable to a second, different agent and, while adapting itself to this, succumb more promptly to a third agent. This alternating exposure could simultaneously serve two purposes. It might overcome natural resistance through attacks at several enzyme systems and also prevent the development of resistance through interference with mutation.

If a combination of sulfadiazine, penicillin, and sulfamerazine is administered simultaneously by mouth, their different absorption times result in three peak concentrations following each other at short intervals in the blood stream. This has been demonstrated in as yet unpublished animal experiments. The first peak of sulfadiazine is closely followed by those of penicillin and sulfamerazine; the latter forms a plateau, rather than a peak, of high blood concentration, maintained for several hours. Besides these peak concentrations, the three agents are found simultaneously in the blood stream in effective individual concentrations for a period of at least two hours.

In proving clinically the comparative therapeutic value of such a combination, one is faced with the difficulty of matching one series of patients with a control group. Two groups which are equal in every respect are difficult to find. Therefore, only observations of large series or material differences in the therapeutic results may be regarded as significant.

A series of 25 children with pneumonia previously treated with single massive doses of sulfadiazine lent itself as a suitable control group for the present study.[1]

Material and Results

Thirty-three children, admitted to the Lincoln Hospital during the years 1948 and 1949 with the clinical diagnosis of pneumonia, were treated with a single oral dose of a combination of sulfadiazine, sulfamerazine, and penicillin. This medication was given on the day of admission. It was preceded in most cases by a routine blood count and urine analysis and followed by further clinical and laboratory workup, including an x-ray of the chest and bacteriologic studies. The bacteriologic examinations were technically not satisfactory and the results not tabulated. The sulfonamide level in the blood was determined in every case six hours following the medication. The blood counts and urine analyses were repeated three days after the medication. Rectal temperatures were taken every four hours during the day but not between 8 P.M. and 8 A.M.

The medication consisted of a single oral dose of the combination in tablet form.* Each tablet contained 0.25 Gm. sulfadiazine, 0.25 Gm. sulfamerazine, and 40,000 to 50,000 units of potassium penicillin G. The lower dose of penicillin, 40,000 units per each 0.5 Gm. of combined sulfonamides, was applied to Cases 1, 2, 4, 6, 7, 9, 13, 18, 20, and 24 and the somewhat higher proportion, 50,000 units per 0.5 Gm. of sulfonamides, to the rest of the cases.

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* Supplied by Sharp & Dohme, Philadelphia.

TABLE 1.—RESPONSE OF 26 CASES

Case	Age	Weight (Pounds)	Duration of Pneumonia (Days)	Dose of Drug (Tablets)*	Sulfa Blood Level (Mg.)	White Blood Cells on Admission	White Blood Cells Three Days Later	Clinical Diagnosis and Roentgen Findings	Duration of Fever After Medication (Hours)	Temperature on Admission (Degrees Fahrenheit)	Recurrence of Temperature	Urine on Admission	Urine Three Days Later
1	2 months	10	3	2	16.6	13,000 56% P.†	13,000 18% P.	Both upper lobes; bilateral otitis	18	100.8	No	Negative	Negative
2	4 months	8	5	2	15.4	21,000	18,000 34% P.	Bronchopneumonia	18	103.0	No	Negative	Negative
3	4 months	15	3	3	11.6	25,000 95% P.	...	Bronchopneumonia	4	99.5	Yes	Negative	Negative
4	9 months	17	2	3	9.6	18,800 46% P.	15,000 28% P.	Bronchopneumonia; bilateral otitis	28	103.0	No	Negative	...
5	10 months	15	5	3	14.8	14,000 76% P.	8,400 60% P.	Right upper lobe	14	104.2	No	Negative	...
6	10 months	22	1	3½	15.4	24,600 84% P.	...	Bronchopneumonia	12	101.5	No	Negative	Negative
7	13 months	14	3	2½	8.5	21,000 72% P.	18,000 65% P.	Bronchopneumonia; mongolism	12	104.0	Yes	Albumin positive	Negative
8	16 months	22	2	4	10.0	23,500 92% P.	...	Left lower lobe	16	103.0	No	Negative	Negative
9	1½ years	20	2	3½	15.5	24,400 80% P.	8,000 65% P.	Bilateral pneumonia	18	102.3	No	Occasional white blood cell	Negative
10	1½ years	26	2	4	7.0	28,000 84% P.	12,000 62% P.	Left upper lobe	4	104.0	No	Negative	Negative
11	1½ years	18	5	3	11.0	8,600 48% P.	...	Left lower lobe	16	105.0	No	...	Negative
12	2 years	38	5	5	20.0	...	5,100 18% P.	Left lower lobe	14	103.5	No	...	Negative
13	2½ years	31	4	4	7.4	10,000 80% P.	8,000 50% P.	Bronchopneumonia	5	103.0	No	Negative	Negative
14	3 years	30	1	4	9.6	24,400 84% P.	10,550 66% P.	Right upper lobe	14	103.3	No	Negative	Negative
15	5 years	55	1	5	7.1	20,000 88% P.	9,600 36% P.	Bronchopneumonia	16	104.2	No	Negative	Negative
16	6 years	44	2	4	8.3	26,000 92% P.	7,300 51% P.	Right middle lobe	12	104.6	No	1 red and 5 white blood cells	1 red and 1 white blood cell
17	6 years	44	1	4	16.8	34,000 80% P.	14,000 32% P.	Left upper lobe	12	102.6	No	1 white blood cell	Negative
18	7 years	50	..	5	5.6	...	15,000 71% P.	Right lower lobe; tonsillitis	24	103.0	No	Negative	Negative
19	8 years	57	5	5	11.0	9,000 70% P.	7,200 48% P.	Right lower lobe	8	100.3	No	1 white blood cell	Negative
20	8 years	50	7	6	12.6	30,700 86% P.	9,800 58% P.	Right lower lobe	17	103.0	No	Negative	Negative
21	8 years	58	3	5	9.4	25,000 88% P.	14,000 64% P.	Left lower lobe	16	103.5	No	Transient albumin	Negative
22	9 years	67	2	6	...	18,000 82% P.	11,000 55% P.	Left lower lobe	20	104.5	No	2 white and 5 red blood cells	Negative
23	9 years	48	2	5	9.7	...	...	Right lower lobe	15	103.5	No	...	Negative
24	9 years	78	5	6½	6.8	16,600 90% P.	...	Right and left lower lobes	20	105.0	No	...	Albumin positive
25	12 years	60	4	6	9.4	19,500 81% P.	...	Bronchopneumonia	16	104.5	Yes	...	Negative
26	12 years	58	3	5	14.5	...	6,400 36% P.	Left lower lobe	17	104.0	No	Negative	Negative

* Each tablet contains 0.25 Gm. sulfadiazine, 0.25 Gm. sulfamerazine, and 40,000 to 50,000 units potassium penicillin G.
† Polymorphonuclear leukocytes.

Children weighing up to 10 Kg. received 0.2 Gm. of combined sulfonamides per Kg. of body weight; children between 10 and 20 Kg., 0.15 Gm.; and children beyond 20 Kg., 0.1 Gm. of sulfonamides. The proportion of penicillin in the combination was 8,000 to 10,000 units per each 0.1 Gm. of combined sulfonamides. The medication was given one-half hour before or at least two hours after meals.

Of 33 children, one vomited the tablets and was eliminated from this group. Six children did not respond to this treatment within forty-eight hours. All of them were revealed by further diagnostic procedures not to be cases of pneumococcus pneumonia. Two cases had pulmonary tuberculosis, one primary atypical pneumonia, one staphylococcus empyema, one asthmatic bronchitis, and one bronchiectasis.

TABLE 2.—Comparative Effect of Different Treatments of Pneumonia

Number of Cases	Average Age (Years)	Medication	Dose	Average Duration of Pneumonia Before Treatment (Days)	Defervescence Within 24 Hours	48 Hours	>48 Hours	Average Duration of Fever (Hours)	Recurrence of Temperature (Number of Cases)	Response of Complications	Toxicity
26	4.5	Single oral dose of penicillin plus sulfadiazine plus sulfamerazine	0.1 to 0.2 Gm. sulfonamides per Kg. body weight plus 8,000 to 10,000 units penicillin per 0.1 Gm. combined sulfonamides	3.1	25	1	0	14.8	3	Prompt	None
25[1]	3.8	Single oral dose of sulfadiazine	0.15 to 0.3 Gm. per Kg. body weight	4.0	9	4	12	38.4 (average of 19 cases, excluding 6 cases which did not respond to treatment)	4 (not including 6 cases in which fever persisted beyond 3 days)	Poor	None
23[1]	4.0	Full course of oral sulfadiazine	0.2 Gm. per Kg. on first day, followed by 0.1 Gm. per Kg. daily	3.7	11	6	6	40.1	1	. . .	None
13	5.7	Intramuscular penicillin	150,000 to 600,000 units daily for 2 to 8 days	3.5	9	1	3	21.5	0	No complications	None
20	1.1	Full course of oral sulfadiazine plus intramuscular penicillin	0.2 to 0.1 Gm. per Kg. daily 50,000 to 400,000 units daily for 3 to 12 days	3.6	5	11	4	41.8	2	Prompt	None

In the remaining 26 cases the admission diagnosis of lobar pneumonia or bronchopneumonia could be corroborated. Two of these cases were complicated with bilateral otitis and one with tonsillitis.

All 26 cases responded to the single dose of the three combined agents within four to twenty-eight hours, or an average of fourteen and eight-tenths hours (Table 1). The average was only thirteen and three-tenths hours for 16 children receiving the somewhat higher penicillin doses, as compared with seventeen and two-tenths hours for ten children receiving the lower penicillin proportion. Only three cases showed a transitory secondary rise of temperature; two of them (Cases 7 and 25) did not require further treatment; the third (Case 3) was a young infant who had a relapse after five afebrile days and required renewed therapy. The cases (1, 4, and 18) complicated with otitis or tonsillitis responded as promptly as the uncomplicated cases.

The temperature of most of these children was normal at the 8 A.M. reading following the day the medication was given and remained normal thereafter. It is reasonable to assume that the average duration of fever would have been found shorter if temperatures had been taken throughout the night. In contrast, most children of the previously published series, treated with single doses of sulfadiazine, became afebrile during the day when the temperatures were taken every four hours, and the time of defervescence could be more exactly determined.[1]

No signs of toxicity were encountered. The white cell counts and the percentages of polymorphonuclear cells usually decreased after three days, and all urine examinations were essentially negative. The sulfa levels six hours after medication ranged between 5.6 and 20.0, averaging 10.9 mg. per cent.

Comment

The present series of patients was fairly equal to the previously reported group as to size, severity of the disease, sex, and racial distribution.[1] The average duration of the disease prior to treatment was three and one-tenth days in the present and four days in the previous series. There was a slight difference in the average age of the patients in favor of the present series in which it was four and five-tenths years as compared with three and eight-tenths years in the group treated with single doses of sulfadiazine. On the other hand, the present series comprised six infants less

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than one year old as compared with only two in the previous group; therefore, the difference in the average age is probably not significant.

The dose of combined sulfonamides in the present series was two-thirds of the single dose of sulfadiazine given in the previously reported group.[1] To this smaller dose of sulfonamides, penicillin was added in amounts which in themselves, as single oral doses, were inadequate for the treatment of pneumonia. Assuming a merely additive effect of the combined agents, one should have expected therapeutic effects about equal to those observed in the previous series in which single higher doses of sulfadiazine were given. However, the results in the present series were superior.

Table 2 illustrates the superiority of the single oral doses of the combined three agents. In this group, the average duration of fever was only fourteen and eight-tenths hours as compared with thirty-eight and four-tenths hours in the previous series treated with single, higher doses of sulfadiazine.[1] Pneumonias complicated with otitis media did not respond to single doses of sulfadiazine, while in the present series complications responded promptly. Moreover, in the present group 25 of 26 children became afebrile within twenty-four hours; in the previously reported series, the majority became afebrile after more than forty-eight hours.

Table 2 also includes a comparative group of pneumonias treated for two to eight days with repeated intramuscular injections of 150,000 to 600,000 units of penicillin daily. Although this group is too small to be significant, it seems to indicate that continued treatment with large parenteral doses of penicillin is not more effective than single oral doses of the three combined agents. The average duration of fever in the group treated with parenteral penicillin was twenty-one and five-tenths hours as compared with fourteen and eight-tenths hours in the present series.

The striking therapeutic results here reported can hardly be explained by merely additive effects; they rather indicate a synergistic effect of the three agents used in this study. The question remains whether the special chemotherapeutic approach outlined in the beginning of this paper is responsible for these gratifying results or whether simultaneous and continuous high blood levels of the same agents attained by repeated administration of the agents accomplish the same results.

The last group in Table 2 represents a group of 20 children with lobar pneumonia or bronchopneumonia treated for three to twelve days with a full course of oral sulfadiazine and continued intramuscular injections of penicillin. The average duration of fever in this group was forty-one and eight-tenths hours as compared with fourteen and eight-tenths hours in the present series. This significant difference seems to indicate that alternating peak concentrations of the three agents, as accomplished by our method, render chemotherapy effective beyond the synergistic effect of simultaneous effective levels of sulfadiazine and penicillin. However, the significant age difference of these two groups does not permit a comparison or a final conclusion. It remains noteworthy that the infants set apart in our present series still showed a better response to the single dose of our oral combination than the infants treated with a full course of oral sulfadiazine and intramuscular penicillin. Further investigation is required.

The combination of sulfadiazine, sulfamerazine, and penicillin for oral administration is not only suitable for the single dose treatment of pneumonia; it also can be given in repeated doses. A preliminary series of 20 children with tonsillitis, otitis media, lymphadenitis, scarlet fever, or pneumonia was treated in private practice with three doses a day of the same combination, for one to two days only. Treatment was started in all cases within twelve hours after the onset of the disease. The maximum dosage was 0.1 Gm. of combined sulfonamides plus 8,000 to 10,000 units of penicillin per Kg. of body weight per day, half of this amount being given as the first dose. Defervescence took place after from eight to thirty-three hours, or an average of twenty and two-tenths hours. Fever did not recur in any of these cases, and the clinical symptoms subsided promptly. This series is too small to be conclusive. However, in view of the small doses used and the convenience of this treatment which does not require medication during the night, the results are encouraging and deserve further study.

Summary

Twenty-six children with pneumonia were treated with a single oral dose of combined sulfadiazine, sulfamerazine, and penicillin. The dose consisted of 0.1 to 0.2 Gm. of combined sulfonamides per Kg. of body weight and 8,000 to 10,000 units of penicillin per 0.1 Gm. of sulfonamides.

The temperature became normal within four to twenty-eight hours, or an average of fourteen and eight-tenths hours as compared with an average of thirty-eight and four-tenths hours in a previously published group treated with single, higher doses of sulfadiazine alone.[1] With the three combined agents, the temperature became normal within twenty-four hours in 25 of 26 children; with the higher dose of sulfadiazine

alone, 12 of 25 children became afebrile after more than forty-eight hours.

The single-dose treatment with the three combined agents appeared to be superior not only to single, higher doses of sulfadiazine but also to the treatment with a full course of sulfadiazine; it seemed to be as effective as treatment with repeated intramuscular administration of large doses of penicillin as well as with a full course of sulfadiazine by mouth combined with repeated parenteral administration of penicillin. Confirmation of this comparative therapeutic value on larger series is required.

Twenty children with tonsillitis, otitis media, pneumonia, scarlet fever, or lymphadenitis were treated for one to two days with 0.1 Gm. of combined sulfonamides and 10,000 to 12,500 units of penicillin per Kg. of body weight per day, divided into three oral doses a day. Fever subsided and did not recur after from eight to thirty-three hours, or an average of twenty and two-tenths hours.

These favorable results are ascribed to a synergistic effect of the combined three agents. A theory is presented which may explain the special action of these three agents when simultaneously administered by mouth.

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EVALUATION OF PERAZIL, A NEW ANTIHISTAMINIC

Aaron D. Spielman, M.D., New York City

(*From the Allergy Clinic of Beekman-Downtown Hospital*)

IT IS the purpose of this communication to present the clinical effectiveness of a new antihistaminic agent in the treatment of 73 patients suffering from various allergic conditions.

Perazil (N-methyl-N′-(4 chlorobenzhydryl) piperazine dihydrochloride was studied pharmacologically by Jaros, Castillo, and de Beer.[1,*] This compound exhibited a marked ability to inhibit the histamine wheal response; a single oral dose imparted definite protection for over twenty-four hours. A very low incidence of toxic side-effects was shown. Massive single oral doses failed to elicit any deleterious effect on the circulation. Animal experiments further revealed the efficacy of the antihistaminic properties of this agent.[2]

Initial therapeutic trials confirmed that Perazil had a prolonged duration of action showing a potent effect for twenty-four hours after one oral dose.[3] In this group of patients, who were receiving concomitant specific allergic management, over 90 per cent were relieved of the most common allergic symptoms. An extremely low order of toxicity with no serious side-effects was reported.

Methods

One 50-mg. tablet was given orally to each patient daily before retiring throughout the course of this study, which extended over a period of twenty-six weeks. This group comprises patients from private practice and from the Allergy Clinic of the Beekman-Downtown Hospital. Each patient was seen at least twice a week by the author.

Clinically, the pollen season in New York City was quite severe due to the wide and precipitous variations in counts and climatologic conditions. Many days of unusually high peaks in pollen counts were seen in 1949, even though the average was lower than the previous year.

Of these 73 patients given Perazil, 35, or 49.3 per cent, were under adequate hyposensitization; the remainder were new subjects who were given this compound before other immunologic methods were effected.

In order to compare the acceptability and clinical effectiveness of this compound at irregular intervals, the subjects were given another antihistaminic agent or a placebo which simulated the product exactly. Subjective comments by the patients and objective findings of the observer were recorded.

Results

Seventy-three patients with 78 complaints were treated with Perazil. Of these, 63, or 81 per cent, showed marked improvement, while 10, or 12.8 per cent, were unimproved (Table 1).

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[*] Perazil brand Chlorcyclizine Hydrochloride, Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, New York.

TABLE 1.—Perazil Trials

Diagnosis	Total Cases	Improvement Marked	Slight	Unimproved	Toxicities
Hay fever	40	34	2	4	1—Dryness of nose
Vasomotor rhinitis	13	11	1	1	1—Drowsiness 1—Nausea
Urticaria	6	4	1	1	...
Contact dermatitis	4	2	...	2	...
Allergic dermatitis	3	1	1	1	...
Insulin allergy	2	2	...	...	...
Allergic conjunctivitis	2	2	...	...	...
Migraine	1	...	...	1	...
Allergic intermittent hydroarthrosis	1	1	...	...	...
Pruritis ani	1	1	...	...	...
Pollen asthma	5	5	...	...	...

Hay Fever.—Forty patients were treated during the 1949 hay fever season; of these, 33, or 82.5 per cent, had excellent relief; one, moderate relief; two, slight relief, and four, or 10 per cent, failed to benefit at all by the use of this drug. Of these 40 patients only one, or 2.5 per cent, showed any side-effect, and this consisted of excessive dryness of the nose.

Allergic Rhinitis.—Thirteen patients with this complaint were treated, and 11, or 84.6 per cent, obtained excellent relief; one, only slight relief, and one, no relief. Two patients noticed side-effects: one, slight drowsiness, and one, nausea.

Urticaria.—Six patients were treated for this complaint, and four, or 66.6 per cent, obtained excellent relief; one, slight relief, and one, no relief.

Contact Dermatitis.—Four patients were treated for this complaint, and two, or 50 per cent, obtained excellent results; an equal number failed to obtain relief.

Atopic Dermatitis.—Three cases were treated for this complaint with one showing marked improvement, one showing slight improvement, and one showing no improvement.

Insulin Allergy.—Two patients who had angioneurotic edema from protamine zinc insulin (Lilly) obtained excellent results with almost complete prevention of the reaction in one patient and cessation of the occurrence in the second patient.

Allergic Conjunctivitis.—Two patients who suffered from vernal catarrh were markedly benefited by the use of Perazil.

Migraine.—One patient was treated unsuccessfully.

Allergic Intermittent Hydroarthrosis.—One patient obtained marked relief.

Pollen Asthma.—Five patients of the hay fever group who had pollen asthma were markedly benefited.

Toxic Reactions

It appears very definitely that Perazil exhibits much fewer (three, or 4.1 per cent) toxic side-effects than other antihistaminic drugs, and, when seen, they are extremely mild. A great number of the patients had experienced severer toxic reactions with other antihistaminic drugs but tolerated Perazil with complete impunity.

Summary

Perazil was given to 73 patients in the course of treatment of the common allergic diseases with excellent results in 80.8 per cent and with some relief in an additional 6.9 per cent. The most outstanding benefits were obtained in the hay fever and allergic rhinitis groups with 82.5 per cent and 84.6 per cent success, respectively. Other treated groups number too few to draw any definite conclusions, but they also show considerable evidence of the effectiveness of Perazil as an antihistaminic drug.

Conclusions

1. Perazil is a clinically effective new antihistamine compound that exhibits a prolonged duration of action of twenty-four hours.

2. One oral dose of 50 mg. gives benefit in the majority of common allergic symptoms with a minimum of toxic side-effects.

3. Perazil is recommended as an adjuvant for the relief of allergic symptoms along with the well-substantiated allergic therapy of elimination of allergens and hyposensitization.

141 East 56th Street

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HEART DISEASE CONTINUES AS MAJOR CAUSE OF DEATH

Heart disease continues to be the major cause of death among policyholders of the Mutual Life Insurance Company of New York, Dr. R. L. Willis, medical director, stated recently in a report covering the company's 1949 mortality experience. They paid out more than $54,200,000 in death benefits.

Attributing many of the heart disease fatalities to continued emotional maladjustment, Dr. Willis said, "Many of the persons sacrificed to heart disease this past year would be alive today if they had been as considerate of themselves as they were of their automobiles."

Diseases of the heart and circulatory system accounted for 56.8 percent of fatalities in all age groups, cancer 15.8 per cent, and accidents 45 per cent.

PROPHYLACTIC VALUE OF PAPAVERINE IN INSULIN SHOCK THERAPY

Henry I. Russek, M.D., F.A.C.P., Staten Island, New York, and Burton L. Zohman, M.D., F.A.C.P., and Sidney L. Tamarin, M.D., Brooklyn, New York

(From the Brooklyn State Hospital)

IN A previous communication, the authors reported the effectiveness of papaverine in preventing recurrent cerebral episodes in a number of patients suffering from vascular encephalopathy.[1] These results were obtained from oral administration of the drug in doses varying from 12 to 18 grains per day. Inasmuch as focal cerebral angiospasm appeared to have been prevented by papaverine in these patients, a vasodilating action of the drug was suggested. Subsequent trial of this agent in several cases of epilepsy which failed to respond to the usual types of therapy for this disease resulted in striking clinical benefit.[2] Since the epileptic attack may be similarly linked to cerebral vasoconstriction and since large doses of sedatives were found ineffective in the cases responding to papaverine, it again seemed possible that a vascular action of the drug might account for its observed effects.[3]

Regardless of the underlying mechanism, therefore, papaverine does appear to exert anticonvulsant properties in both vascular encephalopathy and epilepsy. Similar therapeutic effect has been recorded from experimental observations in animals in which the drug successfully prevented convulsions and death arising from serum anaphylaxis.[4] In order to obtain further confirmation of the cerebral action of papaverine, it was decided to administer the drug prophylactically for convulsions attending insulin shock treatment in schizophrenia. Such administration in selected subjects in whom a convulsive response could be accurately predicted at a given time might provide conclusive data regarding the action of this drug.

Although the pathogenesis of the insulin convulsion is still under some dispute, most authorities now agree that the major factor is cerebral anoxia. Some are of the opinion that a change in the electrolyte balance plays a large role, while others contend that the convulsions are produced by cerebral vascular constriction and cerebral edema with resultant tissue damage and necrosis. Indeed, the occasional observation of transient hemiparesis, hemianesthesia, hemianopsia, conjugate deviation of the eyes, sensory aphasia, and other related symptoms strongly suggest an underlying mechanism of cerebral angiospasm.[5]

Inasmuch as current opinion considers the insulin convulsion a complication rather than a desirable phenomenon in the treatment of schizophrenia, effective measures are required to prevent such attacks in patients who manifest an epileptic pattern of hypoglycemia.[6,7] In order to suppress this tendency, $1^1/_2$ to 3 grains of luminal has been employed from one to two hours before each insulin treatment.[8] Such premedication have been found effective in the avoidance of epileptic reactions to insulin hypoglycemia. The possibility that papaverine may exert similar anticonvulsant action in insulin shock therapy seemed worthy of investigation inasmuch as the drug possesses certain additional actions which might render it especially desirable when used for this purpose. Thus, ectopic rhythms, frequently provoked during an insulin shock reaction, might well be averted by this drug.[9] The coronary vasodilating action of papaverine as reflected by objective clinical electrocardiographic studies would also appear to provide prophylactic effect against cardiovascular reactions.[10] A vasodilating action of papaverine upon cerebral vessels might similarly afford protection against cerebral angiospastic phenomena.[1]

Accordingly, the authors attempted to determine the efficacy of papaverine in suppressing epileptic attacks in patients consistently showing this pattern of response to hypoglycemia.

Material

Three patients were selected in whom repeated observations demonstrated the development of a grand mal seizure in response to a known quantity of insulin. After control data were accumulated on several consecutive days, 6 grains of papaverine were administered orally, in each case forty-five minutes before the usual injection of insulin. As in the control studies, no breakfast was taken on the day of treatment, and a fasting blood sugar was obtained at the same time each morning just before the administration of insulin and again one hour and fifteen minutes later. When no reaction to insulin was encountered following a dose of papaverine, the drug was again administered in the same manner on the following day with a significant increment in insulin dosage. Control studies were obtained intermittently at the higher dosage levels without papaverine and also with placebo medication. The reactions in each instance were carefully

TABLE 1.—Response to Various Doses of Insulin With and Without Premedication in Cases 1, 2, and 3

Date (1949)	Blood Sugar (Mg. Per Cent)	Medication	Insulin (Units)	Blood Sugar (Mg. Per Cent)	Reaction
		CASE 1			
May 15	103.5	None	10	33.2	Muscular twitching
16	100.2	None	10	36.4	Muscular twitching
17	102.2	None	10	39.4	Muscular twitching
18	106.4	Papaverine	10	33.6	None
19	100.4	Papaverine	11	26.2	None
20	104.6	Papaverine	12	41.5	None
21	102.3	Placebo	12	27.4	Muscular twitching
22	100.0	Papaverine	12	29.7	None
24	112.2	Papaverine	13	26.4	None
25	108.9	Papaverine	14	41.5	None
26	120.1	Placebo	14	26.4	Muscular twitching
28	105.6	Papaverine	15	25.7	None
31	78.5	Papaverine	16	41.5	None
June 1	120.7	Papaverine	17	55.4	None
2	110.2	Phenobarbital	15	33.6	None
3	102.3	Placebo	15	33.4	Muscular twitching
4	125.4	Papaverine	17	29.6	None
6	108.2	Papaverine	19	46.2	None
7	95.7	Papaverine	21	51.4	None
8	108.9	Papaverine	23	31.6	None
9	108.2	Papaverine	25	30.3	None
10	...	Papaverine	27	39.6	None
11	112.2	Papaverine	30	...	None
13	105.6	Placebo	30	31.6	Muscular twitching
14	...	Papaverine	30	42.9	None
15	...	Papaverine	33	25.7	None
16	...	Papaverine	37	50.1	None
17	...	Phenobarbital	37	31.6	None
18	...	Papaverine	40	25.7	Muscular twitching
		CASE 2			
June 23	83.1	None	50	34.3	Muscular twitching
24	102.2	None	50	47.5	Muscular twitching
26	102.3	None	50	31.0	Muscular twitching
27	107.5	None	50	41.9	Grand mal
28	93.7	Papaverine	50	42.9	None
31	105.6	Papaverine	55	55.4	None
July 1	104.6	Papaverine	60	31.8	None
2	97.6	Phenobarbital	60	47.5	"Wet" shock
3	102.9	Phenobarbital	65	34.6	"Wet" shock
4	105.6	Papaverine	70	31.9	None
5	95.7	Papaverine	75	38.5	None
6	102.3	Papaverine	80	41.7	None
		CASE 3			
May 23	107.8	None	35	39.6	Grand mal
24	102.3	None	35	46.2	Grand mal
25	92.4	Papaverine	35	35.6	None
26	99.0	Papaverine	40	39.6	None
27	104.9	Papaverine	45	33.0	None
28	111.3	Placebo	45	29.0	Grand mal
31	79.2	Papaverine	50	46.2	None
June 1	91.7	Papaverine	50	51.4	None
2	116.8	Papaverine	55	35.6	None
3	89.4	Papaverine	55	40.2	None
4	110.8	Phenobarbital	55	39.6	Petit mal
6	99.0	Papaverine	60	34.3	None
7	81.1	Phenobarbital	60	35.8	None
8	90.4	Papaverine	65	30.2	None
9	102.3	Phenobarbital	65	32.3	"Wet" shock
11	105.0	Papaverine	75	29.4	None
12	94.3	Papaverine	80	28.2	Muscular twitching

noted and recorded. Similar observations were made employing phenobarbital ($1^1/_2$ grains) in place of papaverine.

Results

In each of the three cases studied, the dosage of insulin capable of producing a grand mal seizure could be appreciably exceeded without reaction following the administration of papaverine. In case 1, 10 units of insulin repeatedly provoked muscular twitching and a preconvulsive state which was routinely terminated by glucose intravenously. When 6 grains of papaverine were administered forty-five minutes before each injection of insulin, it was found that the dosage of the latter could be progressively increased from day to day without the advent of a shock reaction. Thus it was possible to administer 37 units of insulin without untoward effect. Forty units of insulin, however, produced the same preconvulsive muscular twitching that was observed with 10 units in the control studies (Table 1). The administration of 6 grains of papaverine, therefore, quadrupled the tolerance for insulin in this case. Premedication with $1^1/_2$ grains of phenobarbital on two occasions was also effective in preventing preconvulsive phenomena. On the other hand, when placeboes were given in place of these drugs prior to the administration of 12, 14, and 30 units of insulin, respectively, preconvulsive muscular twitching subsequently developed in each instance.

In Case 2, 50 units of insulin resulted either in preconvulsive muscular twitching or in a grand mal seizure. The administration of papaverine, however, permitted progressive increase in the dosage of insulin (up to 80 units) without similar response (Table 1). Premedication on two occasions with $1^{1}/_{2}$ grains of phenobarbital resulted in the subsequent development of moderate "wet" shock which was terminated by glucose intravenously.

In Case 3, 35 units of insulin repeatedly caused an episode of grand mal. By the daily administration of papaverine in the usual manner, the dosage of insulin was increased progressively to 75 units without evidence of cerebral manifestations. At the dosage level of 80 units, however, muscular twitching developed. Thus, more than twice the dose of insulin was tolerated after papaverine than in the control studies (Table 1). The administration of phenobarbital ($1^{1}/_{2}$ grains) on three occasions with insulin dosage varying between 55 and 65 units was attended by mild reactions on two occasions.

Comment

These observations clearly demonstrate that papaverine changes the course of hypoglycemia induced by insulin. In the high dosage in which papaverine has been employed in this study, a mild sedative action cannot be denied. Moreover, phenobarbital was found similarly effective in preventing hypoglycemic reactions with insulin dosage above control levels. Although the anticonvulsant effect of papaverine in these cases may have been in some measure sedative in nature, a cerebral vascular action may also have been operative. Certainly the occasional observation of transient hemiparesis, hemianesthesia, hemianopsia, conjugate deviation of the eyes, and sensory aphasia during hypoglycemic shock strongly suggests an underlying vascular derangement. Moreover, it is precisely for such symptoms that papaverine has been shown to exert great benefit in cases of hypertensive and arteriosclerotic encephalopathy.[1] The drug would appear, therefore, to have value, not only in the prevention of the epileptic response to hypoglycemia but also as a prophylactic measure to avert cerebral vascular complications in patients with latent disturbance of the cerebral circulation. The influence of the drug in preventing ectopic beats by its quinidine-like action upon the myocardium would also seem desirable in insulin hypoglycemia in which cardiac irregularities are frequently encountered.[9] Similarly, the coronary vasodilatation produced by papaverine would appear to be of further value in averting other cardiovascular complications which occasionally arise during this form of therapy.[9,10]

From these considerations, it would seem that papaverine through its combination of effects is a unique drug for preventing undesirable reactions commonly observed in the course of insulin shock treatment for schizophrenia. In the dosage employed, no untoward side-reactions were encountered. Papaverine should be recognized as an effective anticonvulsant drug.

Summary and Conclusions

1. Inasmuch as the insulin convulsion is regarded as a complication rather than a desirable phenomenon in the treatment of schizophrenia, effective measures are required to prevent this form of response.
2. The anticonvulsant action of papaverine in vascular encephalopathy and epilepsy suggested its trial for the prevention of the epileptic pattern of response to hypoglycemia.
3. Three patients were studied in whom an established dose of insulin consistently precipitated an epileptic seizure. Papaverine, in a single dose of 6 grains orally, preceding the administration of insulin, was found to influence the course of hypoglycemia in all three cases significantly, greatly increasing the tolerance for insulin in each instance.
4. Although phenobarbital has been employed to prevent convulsive episodes in patients showing an epileptic response to hypoglycemia, papaverine would appear to be a considerably more desirable drug because of its combination of actions. Thus, in the dosage employed, papaverine is not only sedative and anticonvulsant but also appears to have value in preventing cerebral vasoconstriction, cardiac irregularities, and disturbances in coronary circulation, all of which have been observed in the course of hypoglycemia.
5. Papaverine should be recognized as an effective anticonvulsant drug for various disease states. It is not yet clear whether its main action upon the brain is that of sedation, vasodilatation, or both.

Thanks are due Dr. Clarence H. Bellinger and Dr. Christopher F. Terrence through whose cooperation this work was made possible.

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RAPID ADMINISTRATION OF BLOOD BY USE OF GRAVITY AND LARGE-BORE NEEDLES

VICTOR GINSBERG, M.D., and MEMOIR R. MARSH, M.D., Brooklyn, New York

(From the Blood Bank Department, Kings County Hospital)

THE obvious benefits derived by patients suffering some correctible defect of the blood have resulted in an ever-increasing use of blood transfusions. The greatest discovery in this chain of events was the classification by Landsteiner in 1900 into four main blood groups (the A-B-O system).[1] This system obviated most of the serious reactions. Technics for blood preservation, methods for transfusion, the explanation of pyrogenic reactions, and the discovery of the Rh factor have increased the safety with which blood can be administered.[2-6] With the advent of blood banks and the recent war, the utilization and the rate of administration of blood have become important factors.

Reports concerning large quantities of blood inserted into an individual in short periods of time are being described almost daily.[7] The rate of administration depends upon several factors in the patient. Most important of these are the indication and the presence or absence of heart or kidney condition. Cardiac and kidney disease are contraindications to speed transfusions because they result in overloading the circulation.[8] The need for restoring normal volume and circulating red cells is urgent in a patient in shock, and a simple method for the rapid administration of blood is important.

Procedures for rapid administration of blood have been devised.[9] The methods are sometimes difficult to use by the average intern during an emergency. These devices can be listed in two groups:

1. Pressure methods through the air vent.
    (*a*) Air is pumped into the air vent depressing the column of blood. This can be done by attaching a blood pressure bulb with a piece of rubber tubing to the needle in the air vent.
    (*b*) Oxygen from a tank attached to a needle in the air vent depresses the column of blood.
2. Pressure increased in the line of the rubber tubing presumably at the entrance of the needle into the vein.
    (*a*) Insert a three-way stopcock with a syringe.
    (*b*) Insert a two-way valve syringe so that, when the plunger is pulled out, the donor's blood fills the syringe which is forced into the recipient when the plunger is pushed.

These methods have many disadvantages. The rubber connections separate from their attachments by increasing the pressure through the air vent. Then the setup is rendered useless and contaminates the operator's field. Air embolism may occur if too much air is injected when there is a small amount of blood in the bottle. Rupture of the veins has occurred with the resultant large hematomas from excessive pressure. The injection of blood under pressure causes distension of the veins resulting in severe pain if the patient is awake. Extra personnel is required to pump the blood or hold the connections to prevent their separation.

The purpose of this study was to determine whether gravity pressure with the proper technics was sufficient to give a rapid blood transfusion.

Materials

The materials used in this series of cases were standard Baxter nonexpendable and expendable sets of the 18 R (54 inches long) and 18 L (87 inches long) type. Becton-Dickinson needles, varying from gauge 20 to gauge 15, were used. The patients in this series were in shock due to blood loss. They had low blood pressures, rapid pulses, and were cold and clammy. The veins in the upper extremities were utilized in all cases, except in one patient in which the needle was inserted in the femoral vein.

Results

Each bottle took approximately ten minutes to run through when the height of the bottle was elevated to $4^1/_2$ feet and the bore of the needle was 17 gauge. When the height of the bottle was increased to 7 feet and the bore of the needle was 17 gauge, blood flowed into the patient at the rate of 600 cc. in six minutes. The same result could be obtained by maintaining the blood at a level of $4^1/_2$ feet and changing the gauge of the needle to 15. When the bottle of blood was lowered to 2 feet above the patient with a 17 gauge needle, it took an average of thirty-three minutes for administration. The speed of blood did not increase appreciably when the height was increased and a 20-gauge needle was used. With

TABLE 1.—Summary of Results in 14 Patients Showing All Factors in Rate of Speed of Transfusions

Case Number	Diagnosis	Blood Pressure On Admission	Blood Pressure After Therapy	Pulse On Admission	Pulse After Therapy	Height (Feet)	Amount of Blood (Cc.)	Needle Gauge	Time in Minutes
1	Abortion	98/60	100/60	100	92	$4^1/_2$	900	17	21
2	Abortion	120/65	110/84	125	104	$4^1/_2$	1200	17	28
3	Abortion	60/40	92/50	100	90	$4^1/_2$	1100	17	18
4	Placenta previa	70/40	92/60	90	80	$4^1/_2$	600	17	10
5	Hemorrhage	74/50	124/80	106	96	$4^1/_2$	600	17	10
6	Postpartum hemorrhage	95/60	110/70	100	70	$4^1/_2$	600	17	9
7	Retained placenta	90/60	112/70	120	90	$4^1/_2$	1200	17	20
8	Placenta previa	90/60	100/60	120	110	$4^1/_2$	1200	17	20
9	Abortion	90/60	130/70	110	92	$4^1/_2$	600	17	10
10	Hemorrhage	...	...	...	...	$4^1/_2$	600	17	10
11	Retained placenta	105/60	110/60	120	120	$4^1/_2$	600	15	6
12	Abortion	60/30	102/78	140	120	$4^1/_2$	600	15	6
13	Abortion	100/60	118/72	90	90	7	600	17	6
14	Hemorrhage	60/40	...	110	...	7	600	17	5
15	Postpartum hemorrhage	120/70	120/70	132	100	2	1200	17	67

the expendable set, this setup hardly ran at all (Table 1).

The blood pressures in these patients returned to normal if they were low by the end of the administration of the blood. However, if the pressure were normal, their pressure remained normal. Similarly, the pulses which were rapid when the patients were admitted quickly returned to normal. The symptom of cold and clammy skin disappeared as quickly as the other findings (Table 1).

Transfusion reactions were limited to one patient who developed a chill following the rapid administration of cold blood, and in no cases were there signs of overloading the circulation, as would be evidenced by a rapid rise in blood pressure, neck vein distension, large liver, or pulmonary edema.

Comment

Brew and Dill, in 1949, republished the Poiseuille law expressing the flow of incompressible liquids through tubes of small bore.[10] It was expressed as the formula $q = pr^4/-8nl$ where q is flow in cubic centimeters per second, p is pressure in dynes per square centimeter, r is the radius of the tube, n is the viscosity, and l is the length in centimeters.

Therefore, the flow increases directly with the pressure and increases in a proportional way to the fourth power with the radius of the smallest opening of the tube which is the needle. If the needle bore is two times as large as another, the flow will be 16 times as great, and if it were three times as large, it would be 81 times as great. They found that increasing the pressure from 50 to 200 mm. of mercury increased the blood flow two to three times its original flow, but, if the needle gauge was changed from 22 to 13, the flow increased 18 times the original flow. Since Brew and Dill did not do this in patients, it was decided to see whether the same results could be obtained when transfusing an individual.

Gravity pressure replaced measured pressure through a sphygmomanometer. The head of pressure could be changed by raising or lowering the bottle of blood above the patient's arm into which the blood was flowing.

As the height of the bottle increased, the rate of flow was increased, and, as the bore of the needle increased, the speed of flow increased. Therefore, increasing both the bore of the needle and the height of the bottle together made a tremendous difference in the rate of flow of blood. By varying the height of the pressure and the gauges of the needles, it was found that $4^1/_2$ to 5 feet was the ideal height and that the gauge was 17 or larger for the needle. Time interval for the administration of 600 cc. of blood under those conditions was less than ten minutes. If more speed was desired, all one had to do was to raise the height of the bottle to 7 feet or place a 15-gauge needle into the vein, or both. The important idea is to get a steady stream of blood rather than a drop by drop flow.

The air vent played no important part in the rate of administration. It is sufficient to say that the air vent needles should be 17-gauge needles or larger. The filter square surface area was not too significant except that the flow of blood could be decreased if the air bubbles were not removed from the filter.[11] Air bubbles can be released by gently tapping the housing of the filter. The larger blood column in a housing above the filter, the faster the blood will flow. DeGowin states that velocities of as much as 49 cc. per minute have been obtained with a gravity system and a large needle when the blood viscosity was thinned.[9]

In our series of cases, we have attained the velocity of as much as 100 cc. per minute without modifying the viscosity of the blood. We feel that, in the conditions for which speed transfusions are indicated, blood should not be modified by dilution to decrease the viscosity.

A number of precautions must be taken in order to do this procedure. The blood must be warm, or the patient will develop a chill. The bottle must be shaken so that the sedimented cells will not pass through the tubing first, which results in an initial increase in viscosity, which will reduce blood flow. Blood with clots or fibrin precipitate will flow unsatisfactorily regardless of what is done. Fibrin precipitate usually occurs when blood is kept in a refrigerator which is too cold or when the blood is not thoroughly mixed with the anticoagulant during the collection process. These factors can be eliminated if necessary by prefiltration of the blood into a new container.

When gravity is used as the head of pressure and large bore needles are inserted into the veins, extra personnel is eliminated. The rupture of the connections in setup does not occur. Rupture or painful distention of the veins does not occur. Air embolism is prevented.

Conclusion

Gravity as the method of pressure with the proper technics is sufficient to give a rapid blood transfusion. At the height of $4^1/_2$ to 5 feet with 17-gauge needle inserted in the patient's vein, it will allow blood to flow in average of 60 cc. per minute.

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"DOCTOR JONES" SAYS—

Ray H. Everett, Washington, D.C.—by vocation he's executive head of the District of Columbia Social Hygiene Society, by avocation a poet. He's allergic to mathematics. On his annual report: to him, he said, "Pages tinted with statistic savor of the dim and mystic."

Well, statistical tables have their place. But you know what struck me as I read that: I don't know how many reports—nurses, health officers, and so on—I've seen 'em spoiled by filling 'em up with statistical tables when "mere words," interestingly arranged, would've made 'em readable and effective.

Here's a public health nurse, for example. She's working for a county, paid by the taxpayers. Her success and even the permanence of her job may depend on the public, as well as her board of supervisors being impressed with the value of her services. But her monthly report—the one they put in the paper—it's mainly a statistical table: home visits made, 85; maternity cases assisted, 15; calls made for health officers, 12; families assisted, 22, etc.

That kind of a report—if anybody read it what would they know when they got through? Of course, one thing I'd know: She hadn't learned how to make a telling report. But that nurse—she's all the time having experiences that're dramatic or unusual. A little girl, threatened with blindness, taken to a specialist in the city; eyesight restored. A State trooper discovers a woman, back in the hills, trying to have a baby; no doctor or nurse, husband off working, stove gone out. As nurse takes over, trooper finds doctor and rounds up father. A seven-pound boy is born.

A few little narratives from experience and the report'd be read. Most of 'em wouldn't care whether she had any figures—or any figure. "That's the kind of a nurse we need! You can see she's doing something." Yes, these nurses and all—they'd do well to take a cue from Mr. Everett: less statistics "dim and mystic" and better use of "mere words."—*Paul B. Brooks, M.D., June 19, 1950*

Case Reports

ADENOCARCINOMA OF THE CERVIX UTERI UNDERGOING SQUAMOUS METAPLASIA

Bruce A. Harris, M.D., Brooklyn, New York, and Paul I. Bookstaver, M.D., Teaneck, New Jersey

(*From the Department of Obstetrics and Gynecology, Norwegian Hospital*)

THE occurrence of a squamous cell metaplasia in an adenocarcinoma of the cervix is of sufficient rarity to justify this case report.

Case Report

M. C., a twenty-nine-year-old, white married woman, was admitted to the Norwegian Hospital on August 11, 1949, with a history of postcoital bleeding for one year and short scant menses for the past three months, occurring every two weeks. The last menstrual period was followed by an episode of ten days of slight vaginal bleeding. The patient had not noted any pain or fever. There had been a slight watery vaginal discharge for the past few months. A pregnancy with a low forceps delivery of a 7-pound, 2-ounce infant occurred in 1943.

On admission, the patient's temperature was 99.2 F., pulse 80, respirations 20, and the blood pressure 124/68. Positive physical findings were limited to the pelvic examination. The external genitalia showed a parous introitus with fair pelvic support. The uterus was normal in size and shape, anteverted, and freely mobile. The adenexae were normal to palpation with no tenderness or masses present. On speculum examination, a polypoid ulcerated mass about 2 cm. in diameter was seen on the anterior cervical lip. This mass was soft to palpation and bled easily on touch.

Laboratory tests revealed urinary findings within normal limits, a red count of 4,500,000 with 15 Gm. of hemoglobin, a white count of 9,750 with a normal differential.

On August 12, the above-described mass on the cervix was biopsied, and the raw areas cauterized with the electrocautery to provide hemostasis.

The pathologic report of the biopsy revealed the following:

Examination of the tissue fragments shows several glands with the characteristic architecture of cervical glands embedded in a fibrous stroma. Most of the section, however, shows numerous glands with loss of this architecture evidenced by the numerous scattered variations of glands lined by cuboidal to columnar to round and compressed epithelial cells of eosinophilic staining and basophilic vesicular nuclei (Fig. 1). Some of these nuclei are markedly hyperchromatic and others show distinct nucleoli. Part of the glands are dilated while others are compressed. In several areas, there is an infiltration of polymorphonuclear leukocytes, round cells, and a few plasma cells. In one region of the tumor mass the covering layer is stratified squamous epithelium from which are seen a few clublike projections extending into the adjoining stroma. In these projections, there is a transition with loss of the intercellular bridges and basement membrane. The nuclei here show distinct nucleoli; some are hyperchromatic, and a few show mitoses. Both nuclei and cells show varied sizes and shapes. In one area these cells are continuous with a gland.

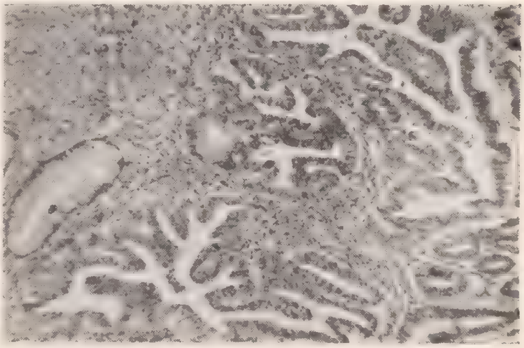

FIG. 1. Normal cervical glands are seen to the left. Carcinomatous glands of irregular shape, size, and staining characteristics occupy most of the field. A moderate lymphocytic infiltration of the stroma is evident. (100 ×)

Diagnosis: Adenocarcinoma of cervix, grade II, with squamous metaplasia.

Accordingly, on August 18, under Sodium Pentothal anesthesia, a dilatation and curettage was performed and 60 mg. of radium inserted in the following manner: 10 mg. each in three tubes tandem fashion in the uterine cavity, 10 mg. in a colpostat sewed to the cervix, and 10 mg. each in either end

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Presented at a meeting of the Brooklyn Gynecological Society, February 15, 1950.

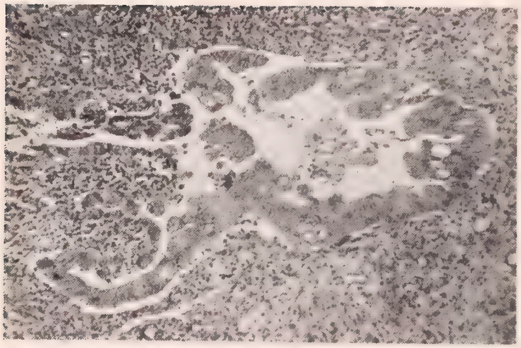

FIG. 2. Squamous cell metaplasia is seen here, occurring within the lumen of a carcinomatous gland. Note the large squamous cells with varied size, shape, and staining qualities. The basement membrane is lost, and a marked lymphocytic infiltration of the surrounding stroma is present. (100 ×)

of a colpostat in the lateral vaginal sulci. The radium was left in place for one hundred hours. The radiotherapist calculated a dosage of about 13,000 gamma r to the cervix and 4,000 gamma r to the parametria. On August 24, the patient was discharged with no complaints.

This patient was readmitted on September 19, 1949, and on the following day a modified Wertheim hysterectomy, as described by TeLinde, was performed under serial spinal anesthesia.[1] At operation the uterus was free, and there was no evidence of extrauterine metastases. Postoperatively, the patient's course was uneventful, and she was discharged on October 9 in good condition. At the time of this report she is without complaint, and there is no evidence of recurrence.

Comment

Epidermidalization or squamous metaplasia of an adenocarcinoma of the cervix is uncommon, and the literature contains few references to this subject. This might be termed an adenoacanthoma by some men, but most pathologists use this term to describe a similar tumor of the corpus uteri.

Various explanations have been advanced to explain the occurrence of this metaplastic process in an adenocarcinoma. Meyer has shown that in the first trimester of intrauterine life squamous epithelium extends high into the cervical canal before it is replaced with columnar epithelium about the sixth month of intrauterine life.[2] Meyer postulated, therefore, that basal cells of this squamous layer are left in nests buried beneath the glandular epithelium and may become activated at any time. Another theory, related to this one, is that all of the epithelial lining of the generative tract is derived from the same Müllerian duct epithelium. This epithelium has the potentialities to form either squamous or columnar epithelial cells and that cellular rests left behind could, therefore, when becoming malignant, form either type of cell, or both. Finally, it is well known that the glandular epithelium of the corpus uteri and cervix can undergo a genuine squamous metaplasia or epidermidalization under the influence of chronic irritation.

In an adenoacanthoma of the cervix uteri, any one of the above-mentioned mechanisms may operate. In this case, the adenomatous element predominated, and the metaplasia occurred producing this type of tumor. Figure 2 shows clearly the process of metaplasia occurring within the lining cells of a carcinomatous gland. This direct metaplasia of the glandular epithelium was the element in this tumor and is the mechanism that most authorities accept as being the most likely process in the formation of these types of tumors.

Skinner and McDonald in an excellent review of this subject in 1940 presented 17 cases of this tumor of the cervix occurring at the Mayo Clinic over a period of twenty-five years.[3] They gave the age incidence, symptomatology, and treatment of this condition, and their concluding statement was that the symptoms, growth, and prognosis do not differ from ordinary squamous cell carcinoma in the same location.

Since Skinner and McDonald's report, only one report has been found in the literature, that of Thiel.[4] The present case is the second such report.

174 CLINTON STREET
193 NORMA ROAD

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LEGION CLAIMS ONLY 19 PER CENT OF VA CASES STRICTLY NONSERVICE

In analyzing a report prepared for it by VA, the American Legion reaches the conclusion that only 19 per cent of VA's hospital cases are strictly nonservice-connected. It reports that 81 per cent of all VA hospital patients fall into the following classes: (1) established service-connected illness or injuries, (2) have at one time or another applied for pension or service-connected certification, (3) are not eligible to apply for such certification for various reasons, principally because they are mental cases. This analysis is in conflict with other studies of the VA hospital situation which place the percentage of nonservice-connected cases at 50 to 70 per cent.

The Legion also notes that many veterans, particularly mental and TB cases, are appealing from adverse rulings, and for this reason should not be listed as nonservice-connected cases. In addition, the Legion points out that experience shows many cases now considered nonservice later will be added to compensation or pension rolls after more study.

COMPLETE TORSION AND INCARCERATION OF THE OMENTUM THROUGH THE LOOP OF AN ANOMALOUS VEIN

MAX MICHAEL SIMON, M.D., F.A.C.S., Poughkeepsie, New York, and LEWIS SAIKEN, M.D., Pawling, New York

(*From the St. Francis Hospital*)

TORSION of the omentum is rare and produces an acute abdominal condition simulating appendicitis or peritonitis. Complete torsion and incarceration of the omentum through the loop of an anomalous vein must be even rarer, for a careful search of the literature fails to reveal a similar case. The anatomy and surgical pathology of the omentum are now pretty well understood; moreover, the incidence and mechanisms of primary and secondary torsions of the omentum have been well described in standard textbooks of surgery and in detail by Lipsett, Thorek, and others.[1-4] However, not all of the functions of the omentum are clearly understood. Crouse believes the function of the omentum is somewhat like that of the spleen.[5] In structure its peritoneal layers and cellular tissue, with many vessels capable of great distention and storage of blood, numerous glands, and large lymph channels embedded in and traversing its fatty structure, indicate that it is an organ of extensive absorbent capacity. It probably absorbs more through the blood stream than through the lymph channels. The fat seems to be deposited quickly and is as quickly given off. Without it the omentum may be quite insignificant and with it is often very large, weighing several pounds. The size and weight of this omentum along with the very large, tremendously engorged and tortuous blood vessels, which were encountered in this case similar to those in appearance seen in a placenta, would support the contention of Crouse.

The diagnosis of omental torsion is seldom, if ever, made preoperatively. Nearly all the reported cases were diagnosed as acute appendicitis.[2-4] Fusco reported two cases of volvulus of the omentum, both diagnosed preoperatively as acute appendicitis.[6] The signs and symptoms noted in the reported cases are chiefly pain, sudden, sharp and crampy, and occurring in spasms, with marked generalized abdominal tenderness.[2-4] The pain is usually relieved by lying down. These symptoms are accompanied by moderate leukocytosis with increased polymorphonuclear count and some rise in temperature, but nausea and vomiting are usually absent. Constipation, usually noted in acute appendicitis, is likewise absent. Rigidity appears to be voluntary, and rebound tenderness can usually be elicited. One outstanding symptom which was noted in the reported cases was hyperesthesia of the abdominal wall, most marked in the area of greatest pain and tenderness (Ligat's sign).[2-4] Some authors have reported a palpable mass, but this was not a consistent finding. Jeffries, commenting on the operative findings, states that, when serosanguinous fluid is noted on opening the peritoneum in a suspected case of acute appendicitis, examination should be made of the omentum for the possible presence of torsion, particularly if the appendix on gross examination appears normal or nearly so.[7] The symptoms in omental torsion progress less rapidly than in acute appendicitis.

Case Report

H. H., a nineteen-year-old male, was admitted to St. Francis Hospital on November 7, 1948, complaining of cramplike pain in the lower abdomen, most marked in the right lower quadrant. There was no nausea or vomiting; in fact, his appetite was good. There was no history of constipation. The patient stated that he had had mild intermittent lower abdominal cramps at weekly intervals for three months prior to his present illness. Each attack of pain lasted from one to several hours and was relieved by bed rest. He sought medical aid the day prior to his hospitalization only because the pain had localized in the right lower quadrant. Additional questioning revealed that he was a passenger in an automobile that turned over one week prior to admission. He was taken to a hospital where he was examined and sent home. He does not recall an abdominal injury at that time. He returned home on the day of the accident and went to work as usual the following day as a carpenter. He was able to work up to the time of his admission.

The patient was always well prior to onset of present illness. There were no operations and no accidents other than the one described above. There was no history of chronic familial disease.

Examination on admission revealed the following: a male of robust, stocky build, over six feet in height and weighing 205 pounds. Patient appeared to be in acute abdominal pain. Temperature was 101.2 F., pulse 90, respirations 18. The physical examination was essentially negative except for the abdominal findings. The abdomen was well padded with fat and was held rigid. No masses were felt. There was marked pain, tenderness, and hyperesthesia throughout the entire abdomen, most marked in the right lower quadrant. There was rebound tenderness present throughout the abdomen. The hernial orifices were normal. Rectal examination disclosed no abnormalities.

Under general narcosis (Pentothal-curare and nitrous oxide), the abdomen was opened through an adequate right rectus, muscle-splitting incision. Upon entering the peritoneal cavity a considerable amount of serosanguinous fluid was encountered. After this was aspirated a large, fat, angry red omentum presented itself in the incision. It was extremely long, tortuous, heavy, and edematous with markedly engorged vessels covering its surfaces. After the omentum was untwisted several times, a constriction was found at about its middle, which consisted of a large thrombotic vein (Figs. 1 and 2). This produced an hourglass constriction of the omentum with incarceration of most of the omentum through the loop formed by the unusually large vein. Since most of the omentum was nonviable, it was excised to within about an inch of its attachment to the stomach and colon. The omentum was

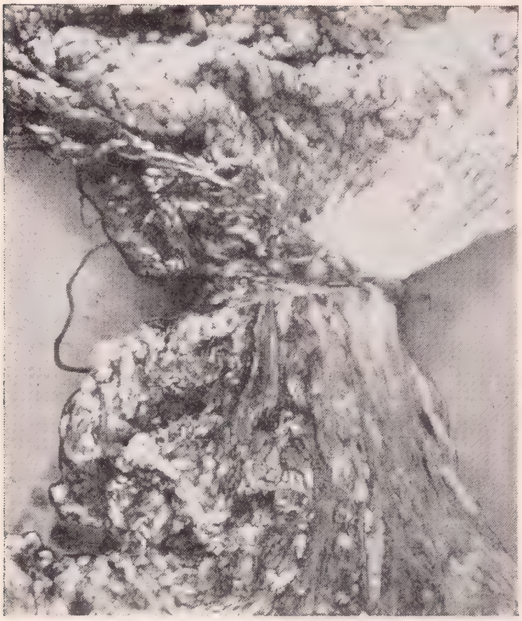

FIG. 1. Excised large omentum showing peculiar dumbbell-shaped constriction at its midportion.

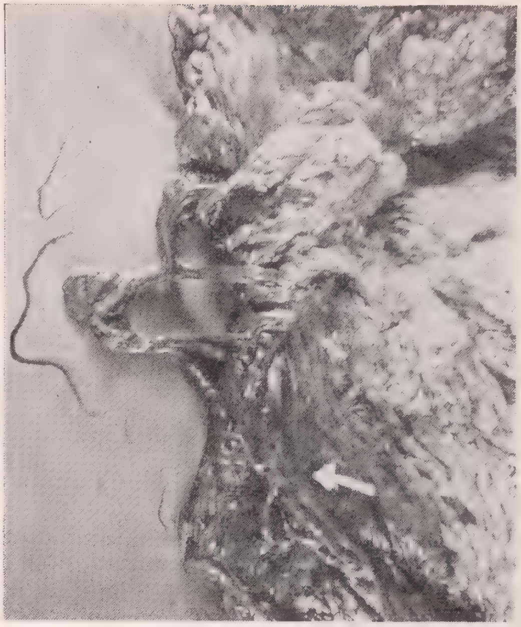

FIG. 2. Excised omentum showing anomalous vein which presented as an isolated, thickened, and encircling cord.

removed through normal tissue, leaving small pedicles doubly tied at the points of detachment. The appendix which was elongated and injected but otherwise normal was removed in the usual manner by the "drop stump" method. The abdominal wall was closed in layers without drainage.

The patient's postoperative condition was good, and convalescence was uneventful. He was out of bed on the first postoperative day and was discharged well from the hospital on the seventh day. The wound healed by primary union, and he resumed his work six weeks postoperatively. He has remained symptom-free and is working regularly as a carpenter one year later (December 23, 1949).

Pathologic Report (Dr. Louis R. Ferraro).—*Gross Examination:* Specimen consists of a large omentum measuring 15 inches in length and 9 inches in its greatest transverse diameter. It weighs 470 Gm. The omentum presents a peculiar dumbbell shape produced by a constriction at its midportion. The lower half of the omentum below the site of the constriction presents a dark, angry red appearance most pronounced on the posterior surface. The blood vessels in this area are tremendously engorged and tortuous and stand out very sharply, similar in appearance to those seen in a placenta. Just below the site of the constriction a group of elongated, thrombotic vessels are seen which measure 15 mm. in diameter. The surrounding omental sac is edematous and somewhat undulated.

The omental space between the two layers is continuous through the entire specimen so that fusion and obliteration of the lower half of the sac has not occurred.

On further investigation it is found that the cause of the constriction is produced by an anomalous vein of the omentum which presented as an isolated, thickened and encircling cord. The latter is free in space and not attached to omental tissue. It is through the loop formed by this vessel that torsion and incarceration of the omentum occurred.

The appendix is 6 cm. in length and of uniform caliber throughout. The serosal surface is not remarkable. On cut section the lumen is narrow, and the wall appears relatively normal.

Microscopic Examination: Numerous sections were taken from various portions of the omentum, and essential pathology was characterized by intense engorgement of the veins with marked recent interstitial hemorrhage. In many areas the red cells are so dense as to obliterate normal histologic markings. Sections taken through the thrombotic vessels reveal tremendously dilated veins completely filled by a blood clot which is recent in origin. There is no evidence of organization between the vessel wall and the clot. The capillaries in this region are intensely congested. There is no intrinsic pathology of the omentum.

The lumen of the appendix is slightly dilated, but the wall reveals a normal histologic pattern. There is no evidence of acute cellular infiltration.

Pathologic Diagnosis: Torsion and incarceration of the greater omentum through the loop of an anomalous vein.

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FATAL ECLAMPSIA ASSOCIATED WITH BILATERAL POLYCYSTIC KIDNEYS

Edward T. Callahan, M.D., Rochester, New York

(*From the Obstetric Service of St. Mary's Hospital*)

POLYCYSTIC disease of the kidneys is not a rarity. Various pathologists have reported an average incidence of one in each 600 autopsies. It is more frequent in women, usually bilateral, and there is a definite familial tendency. At autopsy it is usually found under the age of five and between the ages of thirty-five and fifty. Rarely does death occur from this disease in young adult life.

Pregnant women with polycystic kidneys might well be expected to show toxemia and renal failure, but large series of autopsies on fatal cases of eclampsia fail to note the presence of this disease. Burns reports an eclamptic death in which polycystic disease was found at postmortem examination.[1] The patient's mother and sister both died from the same renal pathology. Audebert and Daleas describe severe nephritic toxemia with recovery in two cases of polycystic disease.[2]

The author recently had referred to him a fulminating case of eclampsia which terminated fatally and in which bilateral polycystic disease of the kidneys was found at autopsy.

Case Report

The patient was a twenty-six-year-old white, gravida 3, Para 1, whose last menstrual period began November 26, 1948, and whose expected date of confinement was September 4, 1949.

She had had two previous pregnancies. The first terminated in 1944 with a spontaneous premature delivery of a stillborn anencephalic fetus at the sixth month. The second pregnancy terminated in 1945 as a spontaneous abortion of ten weeks gestation. No abnormalities were noted in her general physical condition at either of these hospital admissions. The patient was seen by the referring physician in 1947 with the complaint of headaches. Her blood pressure was 140/90, and the urinalysis was normal.

The family history was obtained in detail only after the patient's death and is relevant to the diagnosis. The father is living but has severe hypertension. One brother has recently had a severe heart attack at the age of thirty-nine. Six other siblings are apparently in good health. The patient's mother died postoperatively at the age of forty, sixteen years ago. Nephrectomy was done for polycystic disease of the right kidney. No autopsy was performed, but it seems likely that she too had bilateral kidney disease.

In the present pregnancy the patient was seen in the third month and had no complaints. Her blood pressure was 140/90, and no albuminuria was noted. She had a normal prenatal course until the thirty-second week of her pregnancy, four weeks before admission to the hospital. She then developed edema of the face and legs with moderate albuminuria. Her blood pressure remained at 140/90. She was treated by bed rest, sedation, and a salt-poor diet. In the next week, her blood pressure rose to 160/90; she still had a little albuminuria but less edema and no other toxic signs. She was examined the day before her admission to the hospital, and her condition was unchanged. In the next eight hours, she suddenly developed a severe headache with blurred vision and periorbital edema. She was promptly admitted to the hospital on August 4, 1949, with a diagnosis of acute pre-eclamptic toxemia.

Physical examination on admission showed an acutely ill woman of twenty-six in a semicomatose condition, with irregular twitching of her arms and legs. She responded vaguely to questioning. There was marked periorbital edema but little edema elsewhere in the body. The blood pressure was 240/160. The heart did not appear to be enlarged, and no murmurs were heard. The lungs were clear. The uterus was enlarged to the size of a thirty-six-week pregnancy, and the fetal heart tones were of good quality. No other abdominal masses were felt. The first urine specimen showed a 4 plus albumin with a few granular casts but no red blood cells.

On admission the patient complained of generalized abdominal pain but was not in labor. She received 0.016 Gm. of morphine sulfate and 5 cc. of 10 per cent magnesium sulfate intravenously immediately after admission to the hospital. Her blood pressure remained at the extremely high level noted for the next four hours, but her twitching stopped, and she remained well sedated. She then had a generalized convulsion and lapsed into unconsciousness for several minutes. An endotracheal tube was inserted, and oxygen improved her condition. After a second convulsion, 20 cc. of 10 per cent magnesium sulfate and 0.016 Gm. of morphine sulfate were given intravenously. The blood pressure dropped to 170/120, and uterine contractions began. A vaginal examination showed the cervix 3 cm. dilated, and the membranes were ruptured artificially. Rapid progress was made, and after ninety minutes of labor, a 5-pound, 6-ounce living infant was delivered by outlet forceps under light cyclopropane anesthesia. The baby's condition was good and showed no depression, in spite of the heavy maternal sedation.

Following delivery the patient's blood pressure remained at 180/140, but her general condition was fairly good until two hours postpartum when the patient suddenly went into complete circulatory collapse and no blood pressure could be obtained. Periods of apnea developed, and the patient appeared moribund. She received artificial respiration, 1,000 cc. of blood and 500 cc. of plasma, and continuous oxygen by endotracheal tube. After six hours in shock, she regained consciousness and began to improve. Her blood pressure at this time (110/-100) was notable because of the extremely small pulse pressure. In the next forty-eight hours, generalized anasarca and ascites developed. Almost complete anuria occurred, and a moderate degree of icterus was noted terminally. The patient expired sixty-four hours after delivery.

Laboratory Data.—The blood count taken after the patient had been transfused following her postpartum collapse showed a red blood cell count of 2,290,000, a hemoglobin of 7.6 Gm. per 100 cc., and a leukocyte count of 27,000 with a normal differential. The blood urea nitrogen on the day of admission was 14.1 mg. per cent, and further chemical studies of the blood twenty-four hours after delivery showed a

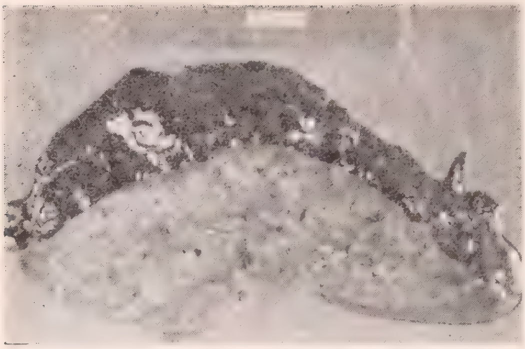

FIG. 1. Cut surface of liver, showing massive subcapsular hemorrhage, and extensive necrosis of parenchyma.

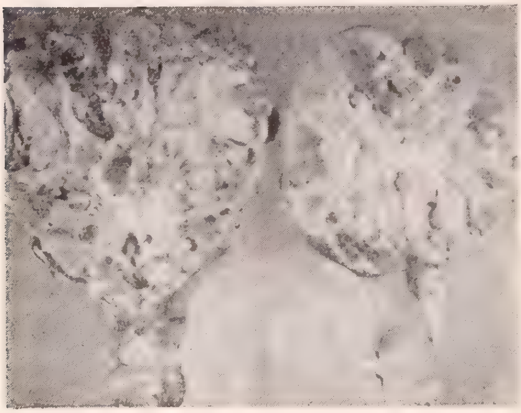

FIG. 2. Cut surface of kidneys, showing extensive cystic disease.

carbon dioxide combining power of 34 per cent, a nonprotein nitrogen of 33 mg. per cent, and blood chlorides of 510 mg. per cent. Total plasma proteins were 6.4 Gm. per cent with albumin of 4.2 and globulin of 2.2. Through an oversight, no blood uric acid level was determined. The urinalyses on several occasions, before and after delivery, showed a specific gravity of 1.024, 4 plus albumin, only occasional casts, and red and white cells. Just before death, hemoglobinuria was noted.

Pathologic Report.—The postmortem examination showed generalized icterus of the body. There was edema of the back and legs and marked ascites. The heart weighed 390 Gm., approximately 50 per cent more than normal, and showed left ventricular hypertrophy. There were no valvular or coronary lesions. The lungs showed atelectasis of both lower lobes and infarction of the right lower lobe, associated with occlusion of one large pulmonary vein. Both pleural cavities were partly filled with a clear, blood-tinged effusion. When the abdomen was opened, a large amount of bloody transudate was noted in the peritoneal cavity. The intestinal tract was distended but showed no pathology. The pelvic organs were in a normal early postpartum state. The liver weighed 2,700 Gm., about 50 per cent above normal. There was a huge subcapsular hemorrhage covering the entire superior surface of the liver. The cut surface of the liver showed extensive areas of hemorrhage and necrosis (Fig. 1). A moderate degree of acute splenic enlargement was present. Both kidneys were markedly enlarged and irregular, the left weighing 450 Gm. and the right weighing 350 Gm. The left kidney was composed of a mass of thin-walled transparent cysts containing clear fluid. Very little normal kidney parenchyma was present. The right kidney was cystic to a lesser degree (Fig. 2). The lower urinary tract showed no obstruction or pathology. The adrenals were normal.

Microscopic examination showed diffuse necrosis of almost the entire liver parenchyma with innumerable small hemorrhages. The kidneys, in addition to numerous cysts, showed the distal tubules filled with clumps of red blood cells and amorphous brownish material, probably hemoglobin.

Pathologic diagnoses were acute diffuse necrosis and hemorrhage of the liver with massive subcapsular hemorrhage and bilateral polycystic disease of the kidneys with acute lower nephron nephrosis.

Comment

Obviously, the principal cause of death in this case was the massive hepatic hemorrhage and necrosis. The large amount of blood destruction with the resultant block of the kidney tubules was a terminal factor in the case. It is felt that death would have occurred from the extensive liver damage alone, but undoubtedly the outcome was hastened by congenitally deficient kidney reserve and lowered filtration pressure resulting from the prolonged shock.

It would seem from the paucity of reports on polycystic disease in pregnancy that a fair number of women with this disease must tolerate pregnancy without developing toxemia. However, in patients with past history of toxemia, especially of the nephritic type, attention should be directed to the family history, and urologic investigation might more frequently reveal the presence of congenital kidney abnormalities.

200 RUTGERS STREET

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A man who vainly attempts to please everybody will at last find that he has pleased nobody.

The life of man is not so long as to induce him to take pains to shorten it.

APPENDICEAL CALCULUS WITH AN OPEN SAFETY PIN AS A NUCLEUS

Thomas C. Case, M.D., New York City

(From the Surgical Service of St. Vincent's Hospital)

A REVIEW of the literature on this subject reveals that cases of appendiceal calculus are quite unusual, although fecal concretions are commonly found. This particular case is of considerable interest, not only because of the rarity of the findings, but also because of the previous history of hematemesis and of the pathologic process found at operation.

Case Report

C. G., a forty-eight-year-old female, entered the hospital on November 14, 1949, with the chief complaint of indefinite pain in the right lower quadrant of four weeks duration. The history of gastrointestinal complaint dated back to May 15, 1949, at which time she felt "faint-like" and vomited. The vomitus contained bright red blood. She vomited once again that evening, but at this time it did not contain blood. The following day she again vomited some old blood and food that had been ingested the previous day. She felt well after that until one month prior to her admission. She had never had indigestion but did have occasional "gas." Her bowel habits had always been regular. The family history and other past history were noncontributory.

Physical examination revealed a thin white female, somewhat emaciated but not appearing ill. Temperature, pulse, and respirations were normal. The general physical examination was negative. The abdomen was scaphoid, soft, and slightly tender on deep palpation over the appendiceal area. There was no rebound tenderness. Rectal examination was negative. Laboratory studies in May, 1949, following the hematemesis revealed a white cell count of 16,300 with 77 per cent neutrophils and 23 per cent lymphocytes. The red cell count was 3,600,000 with 86 per cent hemoglobin. The gastric analysis after a test meal was normal. The stool was positive for occult blood. Roentgenography examination of the chest, gallbladder, stomach, and intestines was essentially negative. A review, however, of some of the large abdominal films revealed the presence of a suspicious shadow below the right iliac crest which later was proved to be a safety pin the patient had swallowed inadvertently.

The patient was told that the bleeding was caused by an erosion of a gastric blood vessel, and she was treated conservatively. There were occasional attacks of slight abdominal pain with some diarrhea from June, 1949, until October, 1949, at which time a gastrointestinal x-ray examination was done by Dr. A. M. Kasich, who reported the presence of an open safety pin in the appendix with no other abnormalities in the stomach or intestines (Fig. 1).

On November 14, 1949, a laparotomy was performed. About 200 cc. of turbid, straw-colored fluid were present in the pelvis. The appendix, measuring about 5 cm. in length and about 1.5 cm. in diameter, was found lying in the pelvis. It was thick, hard, somewhat edematous, and rigidly angulated at 90 degrees (Fig. 2). The tip of the appendix was adherent to the terminal ileum, and it was at this point of contact that the tip of the pin was perforating the appendiceal wall just through the serosa. An appendectomy was performed after abdominal exploration failed to reveal any other lesion in the gastrointestinal tract that may have caused her bleeding in May, 1949. The specimen was opened in the operating room in order to verify

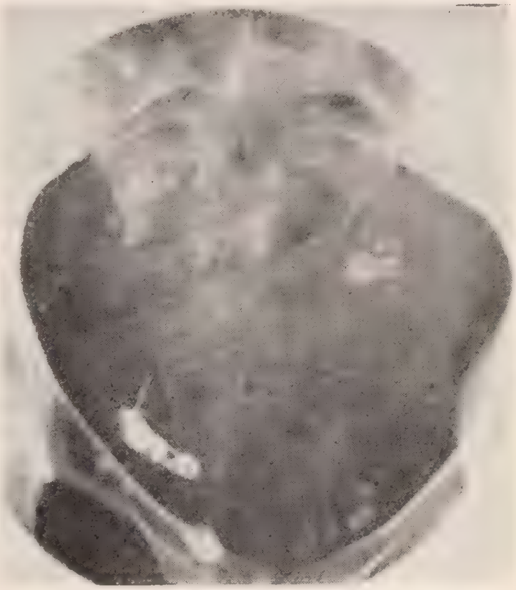

Fig. 1. X-ray visualization of the appendix.

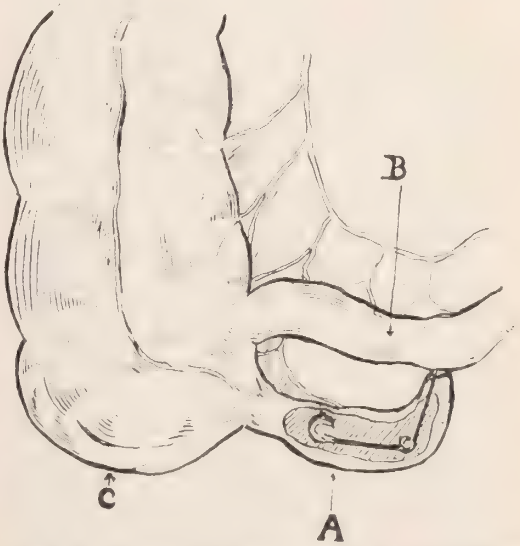

Fig. 2. Schematic representation of the findings at laparotomy: (*A*) appendix with safety pin incorporated in the calculus (shaded); (*B*) ileum; and (*C*) cecum.

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the presence of the pin which was incorporated in the solid calculus.

The postoperative course was uneventful, and the patient has had no complaints to date.

Comment

After a thorough examination of the gastrointestinal tract it seems quite logical to assume that the pin was the cause of the hematemesis. Even after the pin had arrived at what appeared to be its final resting place, the natural perversity of inanimate objects became more apparent when I noticed the point of the pin above the periphery of the calculus, perforating the wall of the appendix. The circulation and lymphatic drainage of the appendiceal wall was soon to be compromised, and the local condition would definitely have progressed on to complete perforation and possibly peritonitis or abscess formation. This is what has happened in 80 per cent of the reported cases, making the prognosis more serious.

Summary

1. A case of appendiceal calculus with an open safety pin in the appendix is reported.
2. The open safety pin was most probably the cause of the hematemesis in this case.
3. Repeated x-ray examinations of the gastrointestinal tract are definitely indicated in obscure cases of hematemesis.

530 Park Avenue

CONGENITAL BILATERAL APLASIA OF THE VAS DEFERENS—A FACTOR IN MALE STERILITY

Lester Narins, M.D., New York City

(*From the Male Sterility Clinic, Mount Sinai Hospital*)

CONGENITAL bilateral aplasia of the vas deferens is considered a rare anomaly and is infrequently thought of as a cause of male sterility. It is our impression that congenital absence of the vas deferens is more common than previously believed, and it may be a not infrequent cause of male sterility.

Nelson in a recent paper reviewed the known literature on the subject and concluded that this anomaly is a rare cause of male sterility.[1] Keshin and Pinck also state that the anomaly is extremely rare.[2] Anomalies of the genitourinary tract, in general, are not infrequent. Smith and Orkin state, "Malformations within the uropoietic system are no longer considered a rarity or anatomic curiosity... No other visceral system of the body is so frequently misformed... About 40 per cent of all pathologic conditions of the kidneys and ureters are due to congenital anomalies."[3] They conclude that there is a congenital anomaly of the kidney or ureter in about one out of every 27 admissions (3.7 per cent) to a urologic service. Considering the complicated embryologic derivation of the spermatogenic and collecting systems of the male generative tract, it is seemly to believe that aberrations in the development and coordination of these separate parts occur more than rarely.

The male gonad arises originally in the urogenital fold which contains both genital and mesonephric primordia.[4] From this primitive fold there arises on its ventromedial aspect a longitudinal enlargement in 5-mm. embryos (six weeks) which is the genital fold. This fold parallels the mesonephric fold but lies medial to it. In later embryonic life the genital fold becomes more compact, and its attachment to the mesonephros, which at the beginning was broad, becomes constricted to form the gonadal mesentery called the mesorchium. With the degeneration of the mesonephros, the male appropriates the mesonephric (wolffian) ducts and some of the tubules and converts them into sexual canals. At this time the embryologic development of the generative organs continues quite independently from the development of the future definitive kidney. The male gonad becomes more highly differentiated, and at the mesorchium the testis cords become organized into the rete testis. The upper mesonephric tubules unite with the testis cords at the rete and transform themselves into the efferent ductules and the lobules of the epididymis. The mesonephric duct continues from the upper mesonephric tubules (now the epididymis) and becomes the vas efferens and the vas deferens and ends in the urethra as the ejaculatory duct. The terminal portion of the mesonephric duct dilates to form the seminal vesicle.

In this complicated and basically separate manner, the spermatogenic and collecting systems of the male generative tract develop and unite. Thus, it is not difficult to postulate various aberrations of development in either or both of the systems. Embryologically, it is easy to understand the possibility of the complete development of the testis and its ultimate descent into the scrotum without the union of the mesonephric duct having taken place. This aberration would result in the clinical situation to be described in the following cases.

Case Reports

Case 1.—On April 4, 1949, a twenty-seven-year-old white, male, garage worker was referred to me by a gynecologist who was studying his wife and the patient for factors causing infertility in them. The couple had been married five years, and, for the first three years of the union, the husband had used condoms as a contraceptive measure. For two years prior to this study, conception had been attempted, but the couple remained barren. The wife was found to be essentially normal. The husband had a complete azoospermia on two separate occasions, whereupon he was referred for further study. This patient's past history was essentially negative. There was no history of venereal disease.

The patient was stocky and somewhat obese. There was beginning baldness, a heavy beard, and a normal growth of pubic and axillary hair. He presented no evidence of endocrinologic disturbance. The penis was normal in size. Both testes were normally placed, of good size and consistency, and had normal epididymes. Through the scrotal skin it was believed that the vas on each side could be felt. The prostate was soft, smooth, and not enlarged. The vesicles were not felt.

A third semen specimen was taken and again showed azoospermia. On April 7, 1949, under local anesthesia, a bilateral testicular biospy was done. This was reported as follows: "Two fragments (right and left) of normal testicular tissue showing no significant changes. Active spermatogenesis found."

Intravenous pyelogram done on April 12, 1949, showed normal upper urinary tracts bilaterally and a normal excretory cystogram. Urinalysis was completely negative.

The patient was admitted to the Mount Sinai Hospital for a possible vasoepididymostomy. On June 6, 1949, under spinal anesthesia, bilateral scrotofunicular exploration was done. The epididymes were found to be broad and flattened and had many sulci, resembling brain tissue. Minute and persistent exploration of the cord structures in the scrotum and well into the inguinal canals failed to reveal any structure resembling the vas deferens. Several thrombosed veins were present in the pampiniform plexus in the scrotum, and it was probably these structures which felt like the vasa when palpated through the intact scrotal skin.

Case 2.—On August 26, 1949, a thirty-two-year-old white businessman was referred for investigation regarding sterility. The patient had been married two years and had used no contraceptive device, yet his wife failed to conceive. She had been studied by a gynecologist who found her to be normal. The patient then had three separate semen analyses performed, and each time azoospermia was reported. The past history was essentially negative except for an attack of uncomplicated gonorrhea while the patient was with the Army in Europe.

On physical examination, the patient was seen to be tall and somewhat obese. He presented normal facial, anterior thoracic, and pubic hirsutes. There were no outward evidences of endocrine dysfunction. The penis was of normal size and structure. Both testes were of good size and consistency, and the epididymes felt normal. The prostate was soft, smooth, and not enlarged. The vesicles were not palpated. The vasa were not definitely felt through the intact scrotal skin.

Following the examination a bilateral testicular biopsy was done under local anesthesia. This was reported as follows: "Right and left testicular biopsy; normal structure with spermatogenesis." An intravenous pyelogram done shortly thereafter showed normal upper urinary tracts bilaterally and a normal excretory cystogram.

The patient was admitted to Mt. Sinai Hospital where, on October 21, 1949, under spinal anesthesia, a bilateral scrotofunicular exploration was done. As in the previous case, piecemeal dissection of the cord in the scrotum and well into the inguinal canal bilaterally failed to disclose any structure resembling a vas deferens. The epididymes appeared normal, but the tail of each ended blindly in a slightly cystic knob.

Comment

Both of these patients were referred because of sterility. They were apparently well-developed normal males with normal libido and normal secondary sex characteristics. In both, the external genitalia appeared normal to inspection and palpation. The excretory urogram showed no evidences of structural abnormality of the genitourinary tract. Testicular biopsies revealed normal structure with active spermatogenesis. In neither was there a history of testicular injury or swelling, although the second patient gave a history of uncomplicated gonorrhea. Preoperative endoscopy was not performed, since congenital absence of the vas deferens bilaterally was not suspected. It would be interesting to observe the verumontanum and posterior urethra in these cases for possible structural abnormalities.

Both patients were seen in a relatively short period of time. They presented a congenital abnormality heretofore considered extremely rare. It is my impression that this abnormality is not a rarity and may be a more frequent cause of "obstructive" sterility. This abnormality is more likely to be present when the testes and appendages are normal and if there is no history of testicular injury or infection. It is interesting that, even without being able to discharge the products of its manufacture, the testis continues to exhibit active spermatogenesis for long periods of time.

Unfortunately, there is no therapy available for bilateral absence of the vasa deferentia.

17 East 96th Street

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It is a great misfortune to have a restless inclination to know the concerns of other people.

Men do many things that they would not do if there was no difficulty interposed.

PRIMARY CARCINOMA OF THE MALE URETHRA

SAMUEL SOIFER, M.D., Forest Hills, New York, and CYRIL SOLOMON, M.D., New York City

PRIMARY carcinoma of the male urethra occurs infrequently, only 194 cases having been reported up to 1947.[1–3] Because this comparatively rare lesion presents a serious problem, the diagnosis having been missed or misinterpreted in the great majority of cases, additional case reports are warranted. The lesions occur with equal frequency in the anterior or posterior urethra, the former having a more favorable prognosis because of earlier discovery and treatment. The symptoms are confusing and may simulate those of prostatism, lues, tuberculosis, stricture of the urethra, or plastic induration of the penis. No final decision should be made until we have resorted to biopsy and x-ray of the urethra, two diagnostic aids of great importance. The treatment will depend on the location of the lesion and how far advanced the latter is, but it is the consensus of opinion among urologists that radical surgery is the best guarantee of a cure.

Case Report

A. F., a male patient, aged sixty-nine, was admitted to the hospital in August, 1949, with the complaint of difficulty on urination, hematuria, burning, marked frequency, nocturia, and a mass in the penis of one year duration.

The previous history was irrelevant; patient was always well except for gonorrhea fifty years previously.

The present history dated back one year, when patient first noticed a swelling at the base of the penis, which gradually increased in size until it reached its present dimensions. This was accompanied by increasing difficulty in starting the stream, hematuria, marked frequency, and dysuria. It is noteworthy that the patient justified his delay in seeking medical advice by the fact that he was a member of a faith healing sect and only saw a physician on the insistence of the leader, who realized the hopelessness of the situation.

Physical Examination.—The patient was a well-nourished male with no general abnormal findings except the local condition. This consisted of an irregular firm mass about 3 cm. in diameter on the ventral surface of the penis at the penoscrotal junction. The mass was incorporated with the urethra, but the skin was freely movable over it. There were some firm, discrete inguinal and femoral nodes.

Intravenous urography revealed well-functioning kidneys with evidence of intravesical enlargement of the prostate.

Cystoscopy was attempted, but the instrument met an obstruction in the bulbous urethra. The endoscope was then introduced up to the point of obstruction, and an irregular, friable, papillary mass was observed filling the entire lumen of the urethra. A piece of tissue was excised for examination. A urethrogram, using 50 per cent Diodrast as a medium, revealed an almost pathognomonic pattern for this type of lesion (Fig. 1).

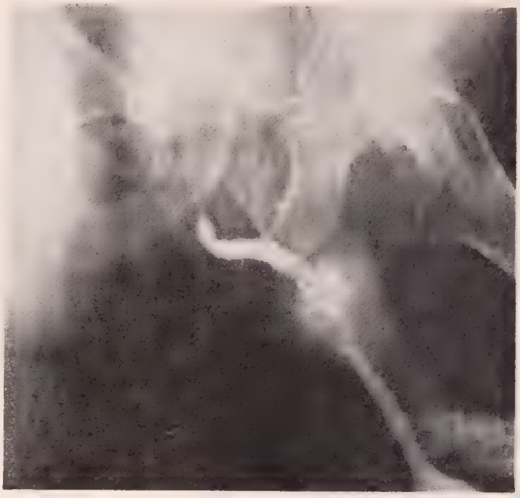

FIG. 1. Urethrogram showing typical diagnostic pattern for this type of lesion.

Operation.—Under spinal anesthesia block dissection of the inguinal and femoral nodes was attempted. Bilateral skin incisions were made over the inguinal regions, following the fold of the groin from the anterior spine to the other, dividing in the middle to encircle the base of the penis. Block dissection of the nodes was carried out, including several glands on the medial aspect of the femoral vein and femoral region. The incision around the base of the penis was continued backward until the scrotum was completely bisected and until it reached 1 inch in front of the anus. The urethra was freed to the triangular ligament and then divided about $1^1/_2$ inches in front of it. The suspensory ligament and the dorsal vessels were then divided and the crura exposed and separated from the pubic rami and ischium. The cut end of the urethra was then split for $^1/_2$ inch anteroposteriorly and sutured to the posterior margin of the skin. Drains were inserted into the dependent portion of the wound and the latter closed with interrupted black silk after a number 22 Foley catheter was inserted into the bladder for drainage. Postoperatively, the patient was placed on antibiotic therapy. The course in the hospital was uneventful, and the patient was discharged on the twenty-first postoperative day with the wound healed and the perineal urethra functioning well.

Pathological Report.—*Gross Anatomy:* The penis measures 9 cm. On opening the urethra a fungating mass is found 6 cm. from the meatus. The lesion extends 1 cm. proximally and into the soft tissue of the penis in an annular fashion for a distance of 1 cm. The proximal portion of the urethra has been taken off within 5 cm. of the tumor mass.

Microscopic Examination: A mild lymphocytic reaction is present extending from the area of fibrosis and inflammation into the adjacent medulla. Multiple sections of the penis lesion reveal a picture similar to that seen in the biopsy with heaped up transitional cells, differing markedly from one another in size, shape, and staining quality. Infiltration of the fibromuscular tissue by these atypical cells is present and marked. In areas where infiltration is most marked the cells begin to spindle out in bizarre shapes. Invasion of the areas adjacent to the original tumor mass is noted. The numerous fragments of tissue which accompany the specimen reveal a lymph node which shows no malignant infiltration.

Pathological Diagnosis: Transitional cell carcinoma of the penile urethra.

Follow-up.—The patient was seen on numerous occasions. He voided well with no difficulty. The wound healed in its entirety. The only complaint by the patient was the presence of burning in the area of operation with a "phantom" swelling in the region of the penile amputation. The possibility of erections in the small amount of erectile tissue left was entertained, and for the purpose of eradicating these sensations, deep x-ray therapy and estrogenic therapy were begun with some encouraging results.

Summary

It is our impression that radical surgery with femoral and inguinal gland resection and removal of both testicles presents the best chance for cure.

102-27 68th Avenue
109 East 61st Street

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LYMPHOSARCOMA OF THE LID AND CONJUNCTIVA

Jesse M. Levitt, M.D., F.A.C.S., Brooklyn, New York

(*From the Department of Ophthalmology, Jewish Hospital of Brooklyn*)

Lymphomatous infiltrations around the eye are uncommon. When unassociated with the usual stigmata of this group, they are impossible to diagnose without biopsy. Heath recently reviewed the general subject of ocular lymphomas from the standpoint of incidence, clinical classification, and pathologic structure.[1] Stansbury reported a case of lymphosarcoma of the eyelid, culminating fatally in forty days, and discussed every aspect of the subject.[2]

Case Report

R. D., a female, aged sixty-seven years, presented herself at the Eye Clinic of the Jewish Hospital of Brooklyn on November 29, 1949, because of a slowly increasing, painless swelling and drooping of the left upper eyelid (Fig. 1). There was no visual disturbance.

Past history revealed thyroidectomy for toxic goiter in 1937, pneumonia in 1941, and chronic ulcerative colitis and bronchitis in 1946.

The corrected vision of each eye was 20/20; Jaeger number 1. The right eye appeared normal. The left upper eyelid was puffy in its entire extent. Along the nasal half, below the brow, numerous subcutaneous, firm, irregular, wormlike masses were palpated. The left eyeball was not displaced. With the globe looking downward and the upper lid retracted, a large pinkish episcleral nodule was exposed (Fig. 2). The media of both eyes were clear. The fundi were normal.

Five weeks later, the masses of the left upper lid had spread throughout the length of the lid, and similar lesions appeared in the nasal half of the right upper lid. There was no preauricular or cervical adenopathy.

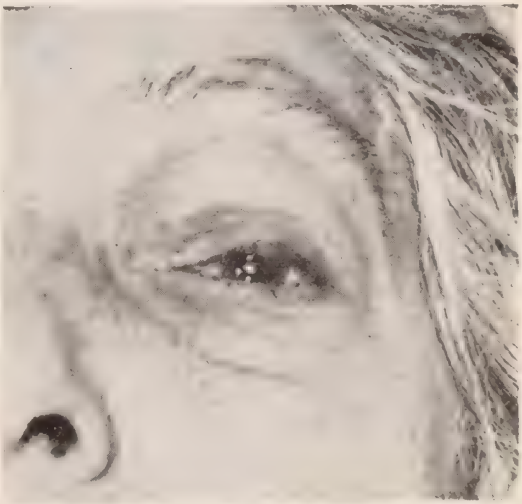

Fig. 1. Photograph of the patient showing edema of left upper lid.

The patient was hospitalized for study from January 11 to 26, 1950. General examination did not disclose any relevant findings. There was no adenopathy except for a few isolated nodules in the supraclavicular regions. There was no clinical evidence of thyroid dysfunction. Ear, nose, and throat consultation was negative. Blood pressure was 120/74. Basal metabolic rate was within normal range. Blood Mazzini test and urinalysis were negative. Routine hematologic studies and sternal marrow aspiration were normal. Mantoux test

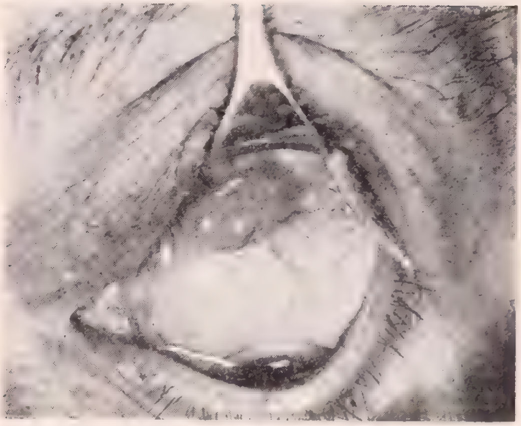

Fig. 2. Photograph of left eye with upper lid retracted showing large episcleral nodule.

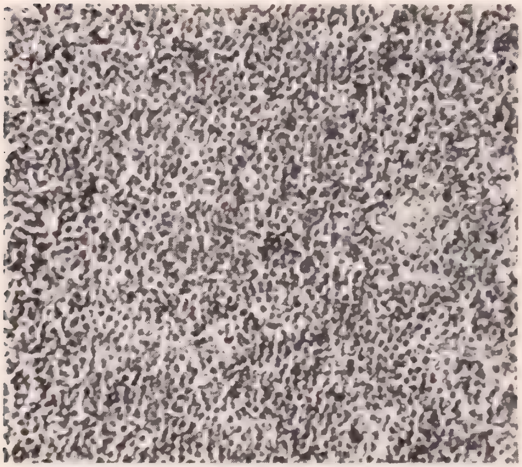

Fig. 3. Low power photomicrograph of section from biopsy specimen.

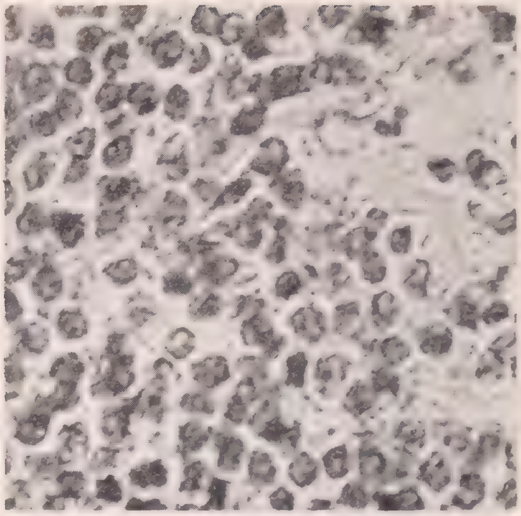

Fig. 4. High power photomicrograph of section of biopsy specimen.

(dilutions 1:1,000 and 1:100) was negative. Agglutination test for brucellosis was negative. Stool examination for ova and parasites was negative. Sedimentation rate was 27 minutes. The total cholesterol was elevated. Calcium, phosphorus, sugar, urea nitrogen, total protein, albumin-globulin ratio, and alkaline phosphatase were within normal limits. X-rays of the skull and sella turcica, paranasal sinuses, orbits and optic foramina, hands and feet were negative. A chest x-ray disclosed exaggerated hilar and basal markings and thickening of the interlobar fissure between the right upper and middle lobes. There was left ventricular enlargement with calcification at the aortic arch.

On January 16, under local novocaine infiltration, an incision was made along the nasal half of the left upper lid. Several lobular, pinkish, fatty-appearing masses extending the length of the lid were noted. Biopsy was taken. Healing was uneventful.

Dr. David Grayzel reported the biopsy specimen as follows: "The preparation consists of sheets of small and large round cells with round or ovoid nuclei and a narrow rim cytoplasm (Figs. 3 and 4). Some of the cells are in mitotic division. The cells vary somewhat in size; they assume no architectural pattern. The stroma is scanty in amount and contains a few engorged capillaries. Pathologic diagnosis: lymphocytic lymphosarcoma. Leukemia cannot be ruled out."

Summary

A case of lymphosarcoma, apparently localized to the eyelids and conjunctiva, is reported. Biopsy furnished the only clue to correct diagnosis.

991 Ocean Avenue

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Take away your expensive follies, and you will have little occasion to complain of hard times.

He is a foolish man who thinks he insults his understanding every time he makes a change in his opinion.

OBTURATOR HERNIA

Robert R. Yanover, M.D., W. Gordon Podolsky, M.D., and Charles R. Marks, M.D., Flushing, New York

CASES of obturator hernia have been reported in the literature from time to time. These cases have usually been diagnosed on the operating room table or at autopsy. Few, if any, have been diagnosed preoperatively. The case reported here is one of obturator hernia diagnosed before operation, which had as its underlying factor a congenital malposition of the sigmoid flexure of the colon.

Obturator hernia, as the name indicates, is a protusion into the obturator foramen and follows the course of the vessels into the canal. It is most common in old emaciated women. It is assumed that this is due to the relaxation of the pelvic lining following pregnancy, loss of retroperitoneal fat, and the shape of the pelvic floor. A review of the literature of the past twelve years discloses seven reported cases.[1-5] The average age was seventy years, the youngest being fifty-eight and the oldest eighty-three.

Case Report

J. P., a white male, thirty-one years of age, was admitted to Parsons Hospital on November 24, 1949, suffering from severe pain in the inner aspect of the left thigh radiating to the knee. The pain was intense, and he was unable to move. A tentative diagnosis was made of torsion of the testicle or vas deferens. Detailed history revealed that at approximately six o'clock that evening, while working at a die-casting machine, he strained forward to tighten a bolt with a wrench and immediately felt a sharp pain in the left groin. This subsided as he continued his work until eight o'clock. He was then seized with excruciating pain in the left groin, radiating to the left knee. These symptoms gradually increased in severity.

On arrival at the hospital, a urologic consultation was held. No portion of the testicle or the vas was found. There was no evidence of epididymitis. No hernias were found. There were no external signs such as ecchymosis, swelling, or other evidence of trauma. There were no palpable vessels. The left leg was held in slight flexion, internal rotation, and adduction. The patient resisted any attempt to lift the left limb or raise his body off the bed. The temperature on admission was 102 F., pulse 90, respiration 26, blood pressure 132/86. There were 4,900,000 red blood cells; hemoglobin was 14 Gm. and white blood cells 9,000, eosinophils 2, stabs 2, segmented 63, lymphocytes 25, and monocytes 5. The urine examination was negative. There was neither rigidity or tenderness in the abdomen nor palpable masses. In the absence of any definite diagnosis it was decided to keep the patient under observation. Some relief of the pain was obtained by repeated doses of morphine through the night.

Eight hours later, the patient was seen in consultation by the surgeon. The pain had not subsided, and the patient appeared extremely ill. Examination was difficult owing to the inability to move him without increasing the distress. At this time there was detected muscle-splinting and slight rebound tenderness in the left lower quadrant of the abdomen. There was no nausea or vomiting. The temperature was 102.2 F. The possibility of an obturator hernia was considered, and in view of the association of intestinal obstruction with his condition, a flat plate of the abdomen was ordered. This was found to be equivocal. In the absence of nausea or vomiting, it was decided to continue observation. The patient was told to try to take food.

At 3:00 P.M. he commenced to be nauseated after drinking a small quantity of fruit juice. By this time marked rigidity and rebound tenderness had developed over the left lower quadrant. The pain in the groin and down the inner aspect of the thigh continued to be very severe. The patient was catheterized in order to rule out a distended bladder. Following this, the pain seemed to be somewhat relieved but returned almost immediately with increased severity. In view of the findings, it was decided to operate for possible obturator hernia.

Under spinal-Pentothal anesthesia, a left rectus muscle-splitting incision was made and the pelvis explored with the patient in high Trendelenburg. The sigmoid colon was seen to be kinked in a V-shaped manner with the apex lying over the obturator canal. This was due to a thick adhesive band extending from the pelvic wall to this segment of the colon. About 2 inches of the antimesenteric border were involved. The serosa of the bowel was red and edematous. The peritoneum was thickened, and, when the adhesions were freed, two markedly congested swollen epiploicae were found sucked into a depression of the obturator canal. The bowel was freed and the normal position of the colon restored. No attempt was made to correct the defect in the canal. The abdomen was closed and the patient returned to bed. The temperature was 102.8 F. and the pulse 100.

The most striking aspect of the postoperative course was the immediate alleviation of the pain. The patient was able to move his left leg and sit up in bed as soon as he reacted from the anesthesia. On the morning following surgery the Howship-Romberg syndrome had completely disappeared. Miller Abbott tube drainage was required to control distention for forty-eight hours, and there was some abdominal discomfort requiring small doses of morphine. Fluids were administered intravenously for several days. The temperature continued to fluctuate until the eighth day. This was probably due to the epiploitis which persisted for several days. The patient was discharged from the hospital on the fourteenth postoperative day. He has been completely symptom free to this date.

Summary

This is a case of obturator hernia occurring in a relatively young adult male as a result of trauma incurred while working. The probable mechanism of production of the hernia in this instance appears to have been due to increased abdominal tension and concomitant relaxation of the obturator foramen resulting from the unusual position required of the patient. This was associated with a congenitally adherent bowel. The reason for the relative infrequency of this condition is due to the necessity of having a peculiar and unusual set of circumstances to produce this lesion such, as occurred in this patient.

Dr. Yanover was formerly associate attending surgeon at City Hospital, and Dr. Podolsky was clinical assistant, Department of Medicine, Queens General Hospital.

The characteristic finding in obturator hernia, the Howship-Romberg syndrome, was very dramatic in this case. This, accompanied by signs of involvement of the bowel, such as splinting of the left rectus muscle, rebound tenderness in the left lower quadrant, distention, fever, and, finally, nausea and vomiting, confirmed the diagnosis.

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SUBTOTAL GASTRECTOMY FACILITATED BY NONROTATION OF THE COLON

Leon S. Altman, M.D., and Benjamin Kogut, M.D., F.A.C.S., Brooklyn, New York

(From the Surgical Service of Beth-El Hospital)

CONGENITAL abnormalities, while fairly common, rarely facilitate surgery. In fact, they usually make surgery more difficult. In the case to be presented, however, several congenital abnormalities were present and actually facilitated the surgery on the patient.

Case Report

J. T., a male aged thirty-eight, an Italian-American, was seen on November 30, 1946, with the complaints of epigastric pain one hour after meals, heartburn, and sour eructations, all of ten years duration. The patient had been under medical management for duodenal ulcer since then and did well for a while but had been going downhill during the past year and for the past month had had almost constant pain radiating to the back and occasional vomiting. There was no history of hematemesis or melena.

His past history was noncontributory. He smoked and drank moderately.

Physical examination was entirely negative except in the abdomen, which revealed moderate tenderness and spasticity in the epigastrium. X-ray examination revealed a chronic stenosing ulcer of the duodenum with a diverticulum just distal to the pylorus.

The patient was operated upon on December 12, 1946. On opening the abdomen, a calloused duodenal ulcer with multiple adhesions to the colon, abdominal wall, and gallbladder was found. The entire colon was completely nonrotated, lying entirely on the left side. The cecum was completely mobile and twisted on itself.

The duodenum was severed distal to the ulcer and closed. The stomach was freed on its lesser curvature and severed above the incisure. The upper two thirds of the stomach were closed, and at this point nature was kind. There was no gastrocolic omentum to go through. The entire colon was completely out of the way on the left side, and, thus, the jejunum, 3 inches distal to the ligament of Trietz, was joined to the open end of the stomach by a four-layer anastomosis, thereby completing the operation (Fig. 1). The cecum had practically no mesentery and was completely mobile with only a vestigial appendix about 2 cm. long attached to it. This was removed in passing.

The patient did well and was discharged on the tenth postoperative day.

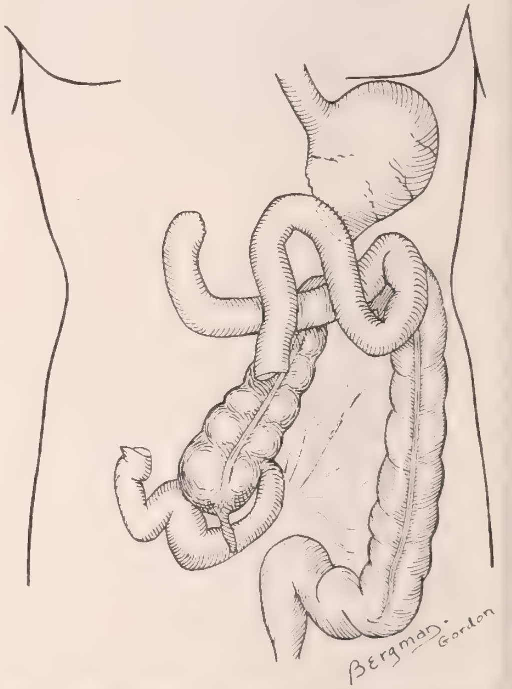


FIG. 1. Procedure as performed in the presence of nonrotation of the colon.

Two years later, the patient was suddenly seized with a severe headache followed by clonic convulsions, complete disorientation, and marked opisthotonos and hyperpyrexia. The diagnosis, confirmed by spinal tap, x-ray, and neurologic opinion, was rupture of a congenital aneurysm of the circle of Willis. The patient made a complete recovery except for residual ptosis of the right upper eyelid. The patient has been followed since at frequent intervals and is now in perfect health, having no symptoms from either his ulcer or his cerebral hemorrhage. One can truly say that nature has been extremely kind to this man with his varied congenital abnormalities.

Summary

The case presented has been that of a man with duodenal ulcer and diverticulum on whom subtotal gastrectomy was facilitated by nonrotation of the colon. This patient had the following congenital abnormalities: (1) nonrotation of the colon, (2) completely mobile cecum, (3) vestigial appendix, and (4) congenital aneurysm of the circle of Willis.

800 GREENWOOD AVENUE

Special Article

WHAT SHALL WE DO ABOUT MEDICAL INSURANCE?

MILTON SILLS LLOYD, M.D., New York City

(*Vice-President, United Medical Service, Inc.*)

THE United States has become, in its turn, the forum of a heated debate on the future of medical practice. Notwithstanding much that has been written and said on both sides, the subject is not clearly understood. This is partly because the many nuances of a question touching our lives so intimately and, in numerous aspects, so emotionally, are difficult to clarify. It is also because subterfuge, camouflage, and propaganda have been used to such an extent that the truth has been clouded in a flood of half-truth. Half-truth, of course, is more confusing than falsehood. In the current melee, "catch phrases" and "scare words" have been used, sometimes, it would seem, deliberately to confound the issues.

The decision in this, as in all questions of national character, is a public duty. The problem is of such importance and of such a nature that it should and can be understood by the people. The antagonists in this debate are the present administration in Washington and the American Medical Association. Two fundamentals of government are involved—one of philosophy and one of procedure.

Abraham Lincoln said, "The legitimate object of government is to do for a community of people whatever they need to have done but cannot do at all or cannot do so well for themselves in their separate and individual capacities. In all that the people can individually do as well for themselves, the government ought not to interfere."

Nikolay Lenin said, "Socialized medicine is the keystone to the arch of the socialist state."

There is no intention in this quotation to use "socialist" as a "scare word," as will be seen later. But there are many who look with concern upon the vast and rapid expansion of government into the field of human relations in this country in the last twenty years.

The caption around which the argument revolves is "Compulsory Health Insurance." This, in itself, is misleading. There is no dispute in respect to the value or the imminence of insurance for medical care. It is a part of the program of both parties. Neither is there any difference in the utilization of expendable funds in actual practice. They are to be used as a protection against hospital and medical expenses. It is, therefore, not "Health Insurance," but "Sickness Insurance." The "catch phrase" in the title, however, is a warning against opposition. There remains, then, only one factor of disagreement, and that is the question of compulsion—compulsion in the control of medical practice and compulsion in the collection and distribution of expendable funds. But we must remember, as Representative Donald L. Jackson recently put it (radio broadcast, May 7, 1949): "When a little bit of our freedom goes to Washington, it never seems to find its way back again."

Medical practice has a longer and purer tradition than any other human vocation. The oath of Hippocrates binds the physician of today, just as it did his counterpart twenty-five hundred years ago. Under this tradition the greatest physicians, the greatest research workers, and the highest standards of medical care have been nurtured.

The difference between a profession and a trade is one of ethics. A profession is bound by ethics. A trade is bound by a contract involving compensation. The medical profession cannot become a union without violating the oath of Hippocrates. It would have to deny its services to the sick on orders from a superior officer. This it will never do. Tradition prevents it. Its attitude, as an organization, toward certain fundamental questions may, consequently, be divided or even individualistic. This organizational weakness is, however, an evidence of the strength of attachment to its ideals, which is its greatest asset as a public servant. The people should not cast it aside lightly.

It is not difficult to prepare a packet of glib epithets, such as those contained in the report to the President by Oscar Ewing, Federal Security Administrator:

" . . . A satisfactory system of health insurance should provide:

1. That everyone should have access to adequate health and medical services.
2. That everyone should have the kind of services and all the services he needs to promote better health.
3. That everyone should be able to obtain these without regard for the level of his personal income."

We know, through the experience gleaned from many attempts made in many parts of the world, that to put these ideals into actual practice is as difficult as it is easy to talk about them.

The testimony given before some of the committees investigating medical needs and legislation reminds one of Hamlet when he said:

"The time is out of joint: O cursed spite,
That ever I was born to set it right!"

When we look about the world and listen to the jeremiads emanating from countries in which governments have intervened in medical practice, we can be sure that they have not "set it right."

This situation, however, need not drive us to a dubious madness, as it did in Hamlet's case. In medical circles we seek the answer to such a problem

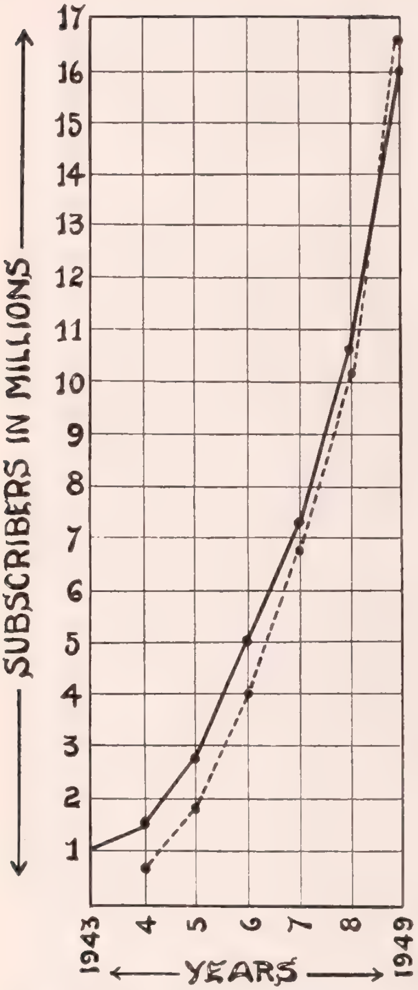


Fig. 1. The solid line indicates the actual number of subscribers enrolled each year in the United States under the voluntary insurance plans, beginning with the year 1943 when, for the first time, the total reached the one million level.

The broken line represents the acceleration in accretion of new subscribers from year to year, using the 1943-1944 increment (0.48 million) as a unit of measurement.

The impact upon the public mind of President Truman's message relating to compulsory health insurance may explain the 2:1 subscriber increase in 1948–1949 as compared with 1947–1948.

by research. By a series of circumstances, partly fortuitous and partly designed, this country is now a vast laboratory in which research and experimentation are going forward in the field of both government and privately operated sickness insurance plans. Unlike most research projects on so vast a scale, this one, so far as the share of private enterprise is concerned, costs the people nothing. These insurance plans are operated on a business basis. They must be financially solvent and self-liquidating in order to exist.

Within the framework of this great effort, almost every question of importance in the problem of medical insurance is being tested out. Among them are the following:

1. Free choice of physician and patient.
2. Can an actuarially sound complete coverage medical insurance policy be written?
3. Group practice.
4. Differences in insurability of different population segments.
5. Comparative efficiency and cost of government-operated and privately operated projects.
6. The importance of the incentive motive to the practicing physician.
7. Does private enterprise or government management of the "welfare state" sustain better the production of consumer goods?

What are the accomplishments to date of this voluntary effort?

A bird's-eye view of the sickness and hospital insurance situation in the United States at the present time is shown in Tables 1, 2, and 3.

TABLE 1.—Present Degree of Insurance Coverage of Population

Population Segments	Millions of People Insured Hospital Expense	 Medical Expense
Insured by private enterprise (group and individual basis)		
Hospital		
Voluntary (90 plans)	30	
Commercial	25	
Total	55	
Medical		
Voluntary (60 plans)		11
Commercial		26
Total		37
Covered by VA, U.S.P.H.S., military establishments, industry, labor, etc.	30	30
Indigent (underwritten by charity of the people for hospital services and of the doctors for medical services)	20	20
Totals	105	87

Thus we see that, on the basis of 140 million people in the United States, with 105 million protected against hospital expense and 87 million against medical expense, the unprotected portion of the population numbers 35 million in the hospital expense group and 53 million in the medical expense group.

TABLE 2.—Insurance Futurama

	—Millions of People— Hospital Insurance	 Medical Insurance
Rate of accretion of new subscribers (present annual)	5	5
Acceleration in accretion new subscribers (Fig. 1)		
Ratio of 1949 to 1948	2:1	2:1
Probable accretion of new subscribers in 1950	10	10
Probable time needed to absorb remaining population	3 years	5 years

TABLE 3.—Average Annual Cost of Voluntary Plans for a Family of Four with Income Ceiling up to $5,000

Combined Insurance for Hospital and Medical Care	Cost
Surgical (including maternity)	$65
Surgical-Medical (including maternity)	$75
General Medical (includes home and office visits)	$90–$95

Let us compare these figures with what government has done, or proposes to do.

In England, the cost of the National Health Service Act has rapidly risen from an estimated £152,000,000 to an actual £500,000,000 per year. This is equivalent to slightly more than £10 per person per year—in our money $45, or $180 for four people—a sum equal to twice the cost of the most expensive service policy listed above. Coverage is, of course, better and more complete under the N.H.S. Act in England. But, for twice the premium, their service could easily be outstripped by any of the voluntary or commercial plans in operation in this country.

According to the Ewing Report, the government of the United States proposes to levy taxes for three years in order to accumulate funds to launch its program. The present prospects are that at least two years would be required to get the necessary legislation through Congress and onto the statute books. Another year would be needed to put the plan into operation. This gives a total of at least six years. As shown above, within the lapse of this length of time, the prospects are good that the entire population of the United States will have some form of protection.

This brings us to the statement of the second choice which is faced by the people—that of experience or inexperience. The voluntary plans are operated upon a competitive, self-liquidating basis. In the long run, those which serve the people best will succeed; those offering poorer service will fail or will have to be modified to meet local requirements.

Perhaps the perfect answer to the problem of universal sickness insurance will never be found. There must, however, be one way which is best, and that way will, undoubtedly, emerge from the great wealth of actuarial data now being compiled. This is the method of research and experience in seeking an answer to our problem.

On the other hand, the Federal government proposes to put into operation a scheme which has the following remarkable features:

1. It was drawn up by a group of social welfare experts. Not a single physician or hospital director was consulted.
2. It has never been tried out, and, yet, it is intended to replace our present system of medical practice which has been developed through two thousand years of tradition and experience.
3. It would have to be effectuated by a reluctant and disgruntled medical profession which has loudly proclaimed its unalterable opposition to the entire philosophy of the plan.
4. It protects only those able to pay premiums (the employed).
5. It shirks its proper responsibility—"the uninsured needy"—and shifts the burden of their care to other "public agencies" which are required to make "equitable reimbursements" to the "Personal Health Services Account" of the Federal Security Administration.

This bill has been called by its opponents "the road to socialism," etc., etc. The government retorts that it is not. It certainly isn't. It is nothing more, as any child can see, than a program to put the Federal Government into the insurance business.

I am certain there is also a great deal of confusion as to how the bill is to fulfill Mr. Ewing's own cardinal requirement: "That everyone should have . . . . all the services he needs . . . . without regard for the level of his personal income."

In England, Lord Horder, who has been one of the fairest critics of the National Health Service Act, has cautioned from the beginning against plunging into the unknown. "Precipitate action," he says, "is easier than contemplation." Precipitate action, however, was taken, and as a result, in the words of Lord Horder, "The people of England seem likely to get not only the best government, but also the worst medicine that money can buy."

Roberts, in a careful analysis of the situation in England from the Lloyd George budget of 1912 up to the present time observes the rapidly accelerating cost of medical care in England under the N.H.S. Act. The ultimate cost is speculative, but he concludes, "Whatever the exact figure, I am firmly convinced that *at the present rate of expenditure* it will involve us in national ruin." "National ruin" and the prospect of nothing better coming out of it than the wails and lamentations emanating from other countries in which a government system has been tried.

Voluntary effort may not evolve the perfect solution to the problem of medical care, but I can think of nothing more reckless on the part of government, or any other agency, than to ignore the value or to destroy the progress of the great social experiment now being carried out in this country.

It is, therefore, important for us to avoid precipitate and ill-considered action, because legislative mistakes, once committed, are seldom, if ever, rectified.

The two principal complaints against present-day medical services are inequity of distribution and inordinately high cost.

To blame the lack of medical services in certain areas upon a shortage of doctors is a misstatement of the facts. There is a higher ratio of physicians to population in the United States than in any other country in the world (one physician to 750 people), with the exception of the new state of Israel.

The truth is that medical services are lacking where other services are lacking—in impoverished districts. We cannot expect to find an adequacy of doctors where there are no hospitals, any more than we can expect to find enough teachers where there are no schools. There is little doubt that, if the plant and facilities for medical services were put into these communities, they would be manned by physicians. In Kansas, the people are proving the truth

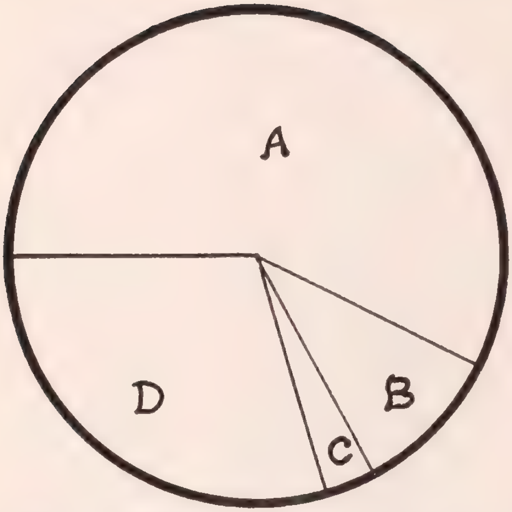


Fig. 2. Distribution of the cost of hospital care based upon the combined analysis of budgeting in two voluntary hospitals over a three-year period of relative national prosperity. During this period the average proportion of private to service cases was high (50 per cent plus). These figures do not include financing, capital expenditures, or research.
Legend: (A) actual cost of hospital care, private patients (57 per cent); (B) payments by private patients in excess of cost (10 per cent); A plus B—total income from private patients (67 per cent); (C) payment by government toward cost of care, service patients (3 per cent); (D) balance of cost of service patients' care. An unpredictable part of this sum is collected from the patients. The remainder becomes a hospital deficit. Thus, B plus C plus D is the actual cost of service patients' care (43 per cent).

of this by their own efforts (see *Coronet* magazine, September, 1949).

The high cost of medical care hits the middle income, the so-called "white collar," class hardest. A breakdown of the average bill for hospital and medical care reveals the following elements:

A. Hospital care (custodial):
  1. Basic cost of hospital care
  2. Loss in care of indigent charged against private patients (Fig. 2)
B. Medical care (professional):
  1. Basic cost of medical care
  2. Free care of indigent. (In this work, the doctor must be supported by his private patients)
C. Interest on investment and maintenance of plant

Notwithstanding the opinion popularly held that the local government pays for the care of the indigent in New York City, this is not the case. The present rate covers less than half the basic cost in the average voluntary hospital.

In view of the fact that charity, as we once knew it, is a thing of the past and can never be revived, an analysis of the above items in the light of present-day concepts is indicated.

The average cost of hospital construction is $14,000 per patient bed, or $2,800,000 for an institution of 200 beds. The average basic cost per patient day in voluntary hospitals is $15. The accompanying diagram illustrates the purposes for which this money is distributed (Fig. 2). It will be seen that approximately 43 per cent of operational cost is consumed by the care of the indigent service cases. The amount actually paid toward their own care by these patients varies with the times. But they must be cared for, whether they can pay or not. Their entire care, therefore, must be carried as a calculated risk. In actual practice, part of this burden is absorbed by transfer to the private patient's hospital bill. At the same time, the entire cost of medical care of the indigent must be transferred to the private patient. This form of "socialization" of medical practice has been carried on throughout the world for centuries, and, although it is "invisible," it is none the less real. The transfer of the load of medical costs is an important part of the burden to the middle income group. Physicians, themselves, have been slow to recognize this fact. They have consented, with the greatest reluctance, to the elevation of income "ceilings" in the voluntary plans to a level which would protect those who suffer most. A recent upward adjustment was made from annual incomes of $1,800 and $2,500 to $2,500 and $4,000 for individuals and families respectively. Physician representatives, after considerable opposition, admitted that the previous figures were "unrealistic" in view of the increase in the cost of living in New York City. As soon as the new levels were accepted, I submitted an actual case of both the individual and family groups to the social service departments in three New York hospitals. All three hospitals passed them as "marginal" and under extenuating circumstances, "eligible for free medical care." In this way the doctors, including those who profess to be, and are, donating much time and effort to the promotion of the voluntary insurance movement, expose themselves to criticism. They are accused of restricting the expansion of the plan to the limits of the field from which they expect to derive a reduced flow of income or, perhaps, no income at all.

The necessity for provident and constructive activities in medical insurance are, therefore, patent, and many opportunities are open to those groups which are in a position to act upon them.

If the claims of government at all levels are to be taken seriously, and if they actually desire to give the people better medical services, it would be a stroke of statesmanship to accomplish one or all of the following things:

1. To provide outright for the establishment of new hospital and medical facilities in depressed areas.

2. To increase the appropriations of "grants-in-aid" to voluntary hospitals for maintenance and essential improvements.

3. To provide for insurance under existing local

voluntary plans to cover the cost of hospital and medical care of the indigent.

The insurance companies (voluntary plans), to meet the intrinsic delegations of the role which they have assumed, must raise the income ceilings on their present issues for both hospital and medical care to at least $5,000 annually. In addition, they must issue new policies with ceilings up to ten or even twenty thousand dollars annually with higher premiums and higher indemnities to physicians. Medical care is not and cannot be made cheap, and the voluntary plans are doing a great disservice to their objectives, as far as public support is concerned, by confining their activities to the sale of cheap insurance.

The medical profession will never be fitted to direct the destinies and policies of an insurance company until it becomes insurance minded, instead of private practice minded. This means that it must learn to think in terms of receiving smaller amounts of remuneration from larger numbers of people on a sure pay basis, instead of larger amounts from smaller numbers on the basis of a calculated loss.

These are essentials which the people "cannot do at all—for themselves" and, therefore, according to the dictum of Lincoln, require government intervention. The insurance by the government of the indigent alone would reduce the private patient's hospital bill by 20 per cent and his doctor's bill by 25 per cent. On the basis of 20 million people requiring such care, at an average rate of $75 a year for four persons, this would cost the public a total of $375,000,000, or an average of $2.50 per citizen per year—less than many people spend on tobacco in a single week. This sum is so small that Federal action is unnecessary and, probably, undesirable. It could be handled at community and municipal levels where laws could be forged to fit into local requirements.

This single move would save the private patient nearly half his in-hospital medical expense. It would immediately remove this problem from the emergency category by lifting the threat of financial ruin from the "white collar" income groups.

The relief from financial pressure would allow the hospitals to reduce the cost of such common commodities as distilled water, oxygen, and the newer drugs (e.g., penicillin.)

Further economies could probably be made by more efficient dispensation of medical care. Some of the existing plans claim to have found the answer to this in group practice.

Of course, the problem will not be solved until all medical expenses are covered by means of insurance. This will require new policies with higher income ceilings, higher compensation to hospitals and doctors, and higher premiums. But time would be allowed for the infant industry to explore and document this field with practical experience.

There exists between the administrative and legislative branches of our government a state of conflict instead of cooperation. Most of our tax monies go to Washington. Regardless of whether medical insurance practice of the future is directed by the government or by private enterprise, nothing but good could come from the completed exploration of this field. Efforts have been made to enact legislation permitting the use of Federal funds for the construction of new or improved hospital facilities where needed and to extend sickness and hospital insurance to the unprotected. These efforts have either failed completely or are entirely inadequate to meet the sociologic and economic conditions of the country. The expenditure of thought (about half a dozen bills have been introduced) is great enough to show that Congress is aware both of the need and of the opportunity.

It is to be hoped that leadership and cooperation will be found to permit the public to assume its rightful responsibility and the insurance method to demonstrate its maximum value in both of these unexplored and unsatisfactory areas.

The world lives today in an era of clashing ideologies. Clear thinking is difficult, but change is inevitable. The late President Roosevelt attempted to placate the public mind by his famous dictum, "We have nothing to fear but fear itself." In spite of this reassurance, fear still governs our thinking to a large extent. In the changing concepts in the distribution of medical care, we see, on the one hand, fear that any change is the "opening wedge" to socialism or communism and, on the other, fear that unless change is effected hastily socialism or communism will be in advance of us in its "appeal" to the public mind.

Change can only take place by revolution or by evolution. Revolution is change brought about by the adaptation of theory from doctrine and its application to the masses from and by an organized agency, whether within or without the "government." Evolution is change brought about by "trial and error," the "survival of the fittest" and "adaptation to environment." Although the proponents of "state medicine" would, no doubt, loudly deny it, the revolutionary method has been used by every government which has intervened in medical practice. That is the reason why such attempts have consistently failed. And that is the reason why the proposal of the present Federal administration would fail here. For the first time in history, the evolutionary method is at work on a large scale. That work is being done by voluntary effort of the people in the United States. The public would be very foolish if it did not give this vast experiment time to present its offering.

667 Madison Avenue

Addendum: The figure for population of the United States used in this article was based upon an estimate made prior to the 1950 census.

Since this article was written, 13 new voluntary plans have begun operation, bringing the over-all total for the United States to 73 plans.

The English pound, in this article, is quoted at its predevaluation rate.

Like a good tradesman, at the end of the year balance your follies against your virtues.

Men who are prodigal of their promises are mostly misers of their performances.

DEPARTMENT OF MEDICAL CARE INSURANCE

CONDUCTED BY GEORGE P. FARRELL, DIRECTOR

Over Six Million Dollars Paid to Doctors During First Six Months of 1950

THE New York State Blue Shield Plans, as of June 30, 1950, paid $6,206,000 to doctors for services rendered to members, as compared to $4,297,529 for the same period in 1949, or an increase of $1,908,471.

Membership as of the above date was 2,449,948, an increase of 370,595 for the period ending June 30, 1950, as compared to 347,485 for the same period in 1949.

Statistical tables follow:

TABLE 1.—COMPARISON OF INCURRED CLAIM AND ADMINISTRATIVE EXPENSE RATIOS TO EARNED INCOME PREMIUM FOR SIX MONTHS ENDING JUNE 30, 1950 AND 1949

	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Totals
Earned Premium Income							
June 30, 1950	$6,167,197	$825,498	$332,186	$143,941	$542,642	$348,352	$8,359,816
June 30, 1949	4,606,806	613,132	255,677	116,088	469,616	238,522	6,299,841
Claim Expense							
June 30, 1950	$4,801,390	$694,692	$244,486	$117,101	$412,607	$290,705	$6,560,981
June 30, 1949	3,249,136	486,768	183,936	97,196	372,623	196,773	4,586,432
Administrative Expense							
June 30, 1950	$1,233,439	$ 64,809	$ 43,910	$ 17,119	$ 75,591	$ 36,807	$1,471,675
June 30, 1949	940,153	54,881	36,567	14,623	64,378	22,142	1,132,744
Claim Expense Ratio to Earned Premium Income							
June 30, 1950	77.85	84.15	73.59	81.35	76.03	83.45	78.48
June 30, 1949	70.53	79.39	71.50	83.73	79.34	82.50	72.80
Administrative Expense Ratio to Earned Premium Income							
June 30, 1950	20.00	7.85	13.22	11.89	13.93	10.56	17.60
June 30, 1949	20.41	8.95	14.20	12.60	13.70	9.28	17.97

TABLE 2.—COMPARATIVE CLAIM DATA FOR SIX MONTHS ENDING JUNE 30, 1950 AND 1949 (PAID BASIS)

	1949			1950		
Plan Location and Types of Contracts	Number of Claims	Amount	Ratio to Earned Premium	Number of Claims	Amount	Ratio to Earned Premium
New York						
Surgical	35,190	$2,079,996	74.35	47,408	$2,819,888	78.69
Surgical, In-Hospital Medical	14,184	748,284	54.57	24,483	1,295,678	65.36
General Medical	21,296	259,916	60.66	37,738	445,664	74.07
Total	70,670	$3,088,196	67.18	109,629	$4,561,230	74.02
Buffalo						
Surgical	12,441	$ 367,526	75.21	20,517	$ 570,867	80.31
Surgical, In-Hospital Medical	3,659	83,323	66.92	3,196	74,089	64.61
Total	16,100	$ 450,849	73.53	23,713	$ 644,956	78.13
Rochester						
Surgical	4,347	$ 153,054	59.86	6,272	$ 212,056	63.84
Syracuse						
Surgical	313	$ 9,981	97.88	433	$ 13,226	72.55
Surgical and Medical	4,353	82,603	94.94	5,776	102,099	81.22
Total	4,666	$ 92,584	95.25	6,209	$ 115,325	80.12
Utica						
Surgical (including Medical Call Riders)	13,588	$ 341,598	72.74	19,638	$ 423,938	78.12
Albany						
Surgical, In-Hospital Medical	4,047	$ 171,248	71.79	5,961	$ 248,495	71.48
Grand Total	113,413	$4,297,529	68.53	171,422	$6,206,000	74.24

TABLE 3.—MEMBERSHIP PROGRESS—QUARTER ENDING JUNE 30, 1950

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Totals
Surgical							
June 30, 1950	1,230,862	250,555	108,185	5,298	129,895		1,724,795
March 31, 1950	1,154,780	218,042	99,237	5,164	129,337		1,606,560
Increase	76,082	32,513	8,948	134	558		118,235
Surgical, In-Hospital Medical							
June 30, 1950	514,167	18,000				87,562	619,729
March 31, 1950	463,566	18,614				77,341	559,521
Increase	50,601	−614				10,221	60,208
Surgical-Medical (Home, Office, Hospital)							
June 30, 1950	83,448*			21,976			105,424
March 31, 1950	73,811			21,408			95,219
Increase	9,637			568			10,205
Grand Totals							
June 30, 1950	1,828,477	268,555	108,185	27,274	129,895	87,562	2,449,948
March 31, 1950	1,692,157	236,656	99,237	26,572	129,337	77,341	2,261,300
Increase	136,320	31,899	8,948	702	558	10,221	188,648

* Includes 11 members in the Medical Expense Fund of New York.

NOTE: 63,551 members in the Utica Plan are covered by Medical Call Riders as of June 30, 1950, an increase of 733 during the quarter.

TABLE 4.—COMPARATIVE STATEMENT OF MEMBERSHIP INCREASES FOR SIX MONTHS ENDING JUNE 30, 1949 AND 1950

By Types of Contracts	New York	Buffalo	Rochester	Syracuse	Utica	Albany	Totals
Surgical							
June 30, 1950	166,126	58,154	14,698	520	−2,139		237,359
June 30, 1949	176,934	33,254	15,371	432	9,470		235,461
Surgical, In-Hospital Medical							
June 30, 1950	98,796	−976				18,426	116,246
June 30, 1949	91,982	−1,266				6,296	97,012
Surgical-Medical (Home, Office, Hospital)							
June 30, 1950	15,883*			1,107			16,990
June 30, 1949	13,029*			1,983			15,012
Grand Totals							
June 30, 1950	280,805	57,178	14,698	1,627	−2,139	18,426	370,595
June 30, 1949	281,945	31,988	15,371	2,415	9,470	6,296	347,485

* Includes Medical Expense Fund members.

TABLE 5.—CLAIM DATA (PAID BASIS)—YEAR TO JUNE 30, 1950*

Plan Location	Number of Claims	Amount	Ratio to Earned Premium	Average Cost per Claim	Claim Incidence per 1,000 Partici-pants per Annum	Average Exposure Participants
New York						
Surgical	47,408	$2,819,888	78.69	$59.48	79.3	1,194,739
Surgical, In-Hospital Medical	24,483	1,295,678	65.36	52.92	100.4	487,718
General Medical	37,738	445,664	74.07	11.81	965.3	78,185
Total	109,629	$4,561,230	74.02	$41.61		
Buffalo						
Surgical	20,517	$ 570,867	80.31	$27.82	185.6	221,133
Surgical, In-Hospital Medical	3,196	74,089	64.61	23.18	344.7	18,545
Total	23.713	$ 644,956	78.13	$27.19		
Rochester						
Surgical	6,272	$ 212,056	63.84	$33.81	119.2	105,268
Syracuse						
Surgical	433	$ 13,226	72.55	$30.54	170.5	5,080
Surgical and Medical	5,776	102,099	81.22	17.68	539.3	21,418
Total	6,209	$ 115,325	80.12	$18.57		
Utica						
Surgical (including Medical Call Rider)	19,638	$ 423,938	78.12	$21.58	203.5	192,910
Albany						
Surgical, In-Hospital Medical	5,961	$ 248,495	71.48	$41.69	152.8	78,013
Grand Total	171,422	$6,206,000	74.24	$36.20		

* By types of contracts.

CORRESPONDENCE

NATIONAL MEDICAL WELFARE FUND

To the Editor:

Man has approached an era in which he is becoming more and more apprehensive concerning economic security during his retirement or in his advanced age. This problem is becoming more acute as the span of life is being prolonged.

The Federal government recognized the need for making some provision for the worker who passes his sixty-fifth birthday and inaugurated in 1936 the Social Security Act. Government employes, officials who are either elected or appointed, as well as teachers, all receive pensions upon retirement. Industrial corporations provide handsomely for their retiring officers even though they draw fabulous salaries. In recent years the trade unions have created welfare funds of millions of dollars to provide pensions for their members.

The medical profession, which is supposed to be well organized—in fact, it has been sued by the Federal government as being a trust—is conspicuous for having failed to give some thought to the retiring physician. "Where is the money to come from?" you ask. Let's see.

1. Every county society should assess its members an appropriate amount to be paid with the dues, which should be set aside for the welfare fund. The county societies should add to this a certain amount from their own treasuries. There is no particular need for our county societies to accumulate in their treasuries funds amounting to hundreds of thousands of dollars. The assessed money should go to a National Medical Welfare Fund (N.M.W.F.) to be used expressly for pensions after the fund has been allowed to accumulate to a workable amount.

2. Physicians who make important discoveries, as was the case with streptomycin and insulin, should assign the royalties to the N.M.W.F. instead of to institutions that can raise funds through other means.

3. Medical advertisements appearing in the numerous medical journals should pay a voluntary assessment toward this fund. It is doubtful whether any pharmaceutical concern would object to adding a modest assessment to the cost of the ad which is to be read by physicians.

4. Every doctor publishing a medical textbook should, as an adopted policy, assign part of the royalties to N.M.W.F. Such books or "ads" should bear some marking to show that they have complied with the N.M.W.F. requirements, in the same manner that a new potent drug bears the designation "Council Accepted."

5. Our wealthy colleagues should be stimulated to make outright donations to the fund, or make provisions in their wills that the N.M.W.F. should be one of the beneficiaries to some extent. About two years ago one of our famous New York surgeons donated to the New York Public Library a collection of rare books and manuscripts valued at two million dollars. When he died recently, his will provided nearly two million more to maintain and expand this collection. Realistically it means that these rare books were removed from the musty shelves of the former owners and placed in safety in the library under guard without doing any one any particular good. Can you visualize how much good he would have done if he had used half of that money to found a pension fund? I am certain that some of the would-be recipients of the pension fund have indirectly helped him to accumulate that vast fortune.

There ought to be many other ways to create such a fund. Its creation would bring every doctor into the fold of organized medicine. The National Medical Welfare Fund could be controlled by officers elected by the respective state societies. It is not an impossible undertaking, and I think there is a need for it, since doctors are not covered in any other way.

Abraham Strachstein, M.D.

138 East 58th Street
New York 22, New York
August 15, 1950

DURATION OF THE INFECTION IN SCARLET FEVER

After studying 163 cases of scarlet fever in the hospital, about half of whom returned to the clinic for follow-up, it was concluded that the assumption is unwarranted that termination of the legal isolation period marks the time at which the patient is no longer infectious. Most of these patients are carriers of hemolytic streptococci at the end of the quarantine period and for several weeks following. These patients can and do transmit the disease to others. Moreover, many of the well-known complications of scarlet fever appear after this time. The authors are of the opinion that it would be more logical to depend on negative cultures, rather than the calendar, for marking the end of isolation, keeping the patient under observation until hemolytic streptococci disappear and sedimentation rate is normal.

As for therapy, in the series reported, the only therapy that appeared to change the course of the disease and end the carrier state was daily intramuscular administration of a minimum of 160,000 units of penicillin. The dosage of convalescent serum was not sufficiently adequate (due to scarcity) to be significant. Antitoxin was not available and was not used.—*Paul S. Rhoads, M.D., Guy P. Youmans, M.D., Ph.D., and Reno Rosi, M.D., Annals of Internal Medicine, January, 1950*

FORTY-FOURTH ANNUAL MEETINGS
# of the
DISTRICT BRANCHES
# of the
MEDICAL SOCIETY OF THE STATE OF NEW YORK

PROGRAMS

EIGHTH DISTRICT BRANCH

Thursday, October 5, 1950
Hotel Statler
Buffalo, New York

Afternoon Session

1:30 P.M.—Registration

2:00 P.M.—"Observations Following Medical Treatment of Hyperthyroidism"
Ernest Perry McCullagh, M.D., Cleveland, Ohio, Cleveland Clinic, Western Reserve University

3:00 P.M.—"Problems of the Newborn Period"
Stewart H. Clifford, M.D., associate professor of pediatrics, Harvard Medical School, Boston, Massachusetts

4:00 P.M.—"Observations and Newer Treatments of the Arthritides"
Wallace Graham, M.D., Toronto, Ontario, Canada

5:00 P.M.—Business meeting

Evening Session

7:00 P.M.—Dinner

Introduction of officers of the Medical Society of the State of New York

Address by **J. Stanley Kenney, M.D.**, New York City, president-elect, Medical Society of the State of New York

Remarks by **Mrs. Hugh G. Henry**, president, Woman's Auxiliary to the Medical Society of the State of New York

"Observations and Impressions of Predisposing Factors Tending Toward Political Control of Medicine"
John Rankin MacElroy, M.D., Jonesville, New York

Ladies will join the members of the district branch for dinner.

The Woman's Auxiliary will hold a conference and panel discussion for the presidents and members of the Eighth District Branch auxiliaries beginning at 1:30 P.M. in the Iroquois Room of the Hotel Statler. From 5:30 to 6:30 P.M. there will be a cocktail party in honor of Mrs. Hugh G. Henry, president of the State Auxiliary.

Officers—Eighth District Branch

President	John C. Kinzly, M.D., North Tonawanda
First Vice-President	Henry S. Martin, M.D., Warsaw
Second Vice-President	Sydney L. McLouth, M.D., Corfu
Secretary	Henry W. Ingham, M.D., Jamestown
Treasurer	Lawrence C. Older, M.D., Cuba

Presidents of Component County Societies

Allegany	Edwin F. Comstock, M.D., Wellsville
Cattaraugus	William C. Goodlett, M.D., Olean
Chautauqua	Samuel R. Patti, M.D., Dunkirk
Erie	Stephen A. Graczyk, M.D., Buffalo
Genesee	Richard F. Davis, M.D., Batavia
Niagara	Ernest M. G. Rieger, M.D., Niagara Falls
Orleans	John G. Ellis, M.D., Albion
Wyoming	Bruno J. Tryka, M.D., Perry

NECROLOGY

John Birkenhauer, M.D., of the Bronx, died on September 4 after a brief illness, at the age of eighty-one. Dr. Birkenhauer received his medical degree from the New York Eclectic Medical School in 1910. During World War II he served on the medical draft board. Dr. Birkenhauer was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Julius Broder, M.D., of New York City, died on August 27 at his summer home in Long Beach, at the age of seventy-four. Dr. Broder received his medical degree from the New York University Medical College in 1894. A native of Russia, he came to the United States as a young boy and was the youngest member of his graduating class at medical school. Dr. Broder was honored recently by the Medical Society of the State of New York upon his completion of fifty years in practice. He was a member of the National Gastroenterological Association, the New York Cardiological Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Emmett Blaine Dunlay, M.D., of Watertown, died on August 16 after a long illness, at the age of fifty-six. Dr. Dunlay was graduated from the University of Buffalo School of Medicine in 1920 and interned at the Buffalo City Hospital and at the Peter Bent Bingham Hospital in Boston, Massachusetts. He opened his practice in Watertown in 1921 and was appointed medical school inspector for the Watertown public school system. At the time of his retirement five years ago because of ill health, Dr. Dunlay was chief of the x-ray department of the House of the Good Samaritan and a member of the x-ray department of the Mercy Hospital, both in Watertown. Dr. Dunlay was a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Delmer Dennis Durgin, M.D., of Central Islip, Long Island, died on August 6 at the Central Islip State Hospital at the age of sixty-four. Dr. Durgin received his medical degree from the University of Vermont Medical School in 1910. For the past thirty-five years he had been a member of the staff of the Central Islip State Hospital, being associate director at the time of his death. Dr. Durgin was a Diplomate of the American Board of Psychiatry and Neurology and a member of the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Thomas Enright, M.D., of the Bronx, died on August 6 in St. Francis Hospital at the age of thirty-nine. Dr. Enright was graduated from the Long Island College of Medicine in 1936. During World War II he served as a captain in the U.S. Army Medical Corps, with General Patton's forces in France. Dr. Enright was assistant attending surgeon at St. Francis Hospital and a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Daniel F. Hannon, M.D., of Rensselaer, died suddenly on August 17 at his home at the age of sixty-one. Dr. Hannon was graduated from the Albany Medical College in 1917 and served with the U.S. Army Medical Corps during World War I. For several years he was Rensselaer city health officer. Dr. Hannon was a member of the Rensselaer County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Sydney Louis Harris, M.D., of New Rochelle, died on August 16 at the Kingsbridge Veterans Hospital, the Bronx, at the age of fifty-one. Dr. Harris received his medical degree from the McGill University Medical School in Montreal, Canada, in 1925 and interned at the Montreal General Hospital. Before withdrawing from practice a year ago because of illness, he had been associate attending obstetrician at the New Rochelle Hospital. He served as assistant surgeon with the U.S. Naval Militia, with the rank of lieutenant, and was fleet surgeon to the 31st Fleet Division at New Rochelle. Dr. Harris had been a member of the Westchester County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

James B. Murphy, M.D., of New York City, died on August 24 at the Mount Desert Island Hospital in Bar Harbor, Maine, at the age of sixty-six. Dr. Murphy received his medical degree from the Johns Hopkins University Medical School in 1909. He had also received honorary degrees from the University of North Carolina, the University of Louvain, Belgium, and Oglethorpe University. Dr. Murphy, who retired in July as head of the Laboratory of Cancer Research of the Rockefeller Institute in New York City, joined the staff of the Institute in 1910 as an assistant in pathology and bacteriology.

A leader in the fight against cancer, Dr. Murphy was a member of the boards of scientific directors and trustees of the Jackson Memorial Laboratory in Bar Harbor, and a member of the boards of Memorial Hospital and the Sloan-Kettering Institute in New York City. He was also a member of the National Advisory Cancer Council, a director of the American Cancer Society, and a director of the American Association for Cancer Research. Dr. Murphy belonged to the New York Academy of Medicine, the American Society for Experimental Pathology, and the Association of American Physicians.

William Maxwell Patterson, M.D., of New York City, died on August 6 at St. Barnabas Hospital, the Bronx, at the age of seventy-one. Dr. Patterson received his medical degree from the Long Island College Hospital Medical School in 1912 and interned at City Hospital, where he was associate attending physician. Dr. Patterson was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Adolph Rostenberg, M.D., of the Bronx, died suddenly on September 5, while treating a patient at his home, at the age of seventy-four. A native of Russia, Dr. Rostenberg received his medical degree from the University of Konigsberg, Germany, in 1899 and came to the United States in 1900. He was consulting dermatologist at the Bronx Hospital and the Union Hospital, both in the Bronx. A Diplomate of the American Board of Dermatology and Syphilology, Dr. Rostenberg was a member of the New York Academy of Medicine, the Bronx Dermatological Society, the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Israel Zangwill Taub, M.D., of New York City, died on September 3 at the Kingsbridge Veterans Hospital, the Bronx, at the age of fifty-seven. Dr. Taub received his medical degree from the Northwestern University Medical School in 1927 and interned at the Metropolitan Hospital and the Neurological Institute of the Columbia-Presbyterian Medical Center, both in New York City. Dr. Taub, who organized the psychological therapy programs in several Veterans Administration hospitals, was cited by the U.S. Surgeon General for his work.

INVESTIGATIONS ON INFLUENZA

Common medical opinion that attacks of influenza can eventually cause lung cancer is questioned in experiments reported by two University of Chicago medical scientists in a recent issue of *Cancer Research.*

Dr. Paul Stiner, professor of pathology, and Dr. Clayton Loosli, professor of preventive medicine, reported on experiments in which various strains of mice were exposed to infection with the virus that causes type A, the commonest human form of influenza. The mice suffered the characteristic lung lesions of influenza, similar to those that develop in human beings. Although, on recovery, there was considerable regrowth of the cells of the lining of the lungs, the amount of cancer that resulted was no greater than normally expected, even in a strain of mice predisposed to lung cancer. While the extensive growth inside the lungs resulted from the virus infection, the wildly growing cells did not turn cancerous. This indicates, the scientists report, that cancer is not merely a simple problem in sudden and unusual growth.

While stressing that their investigations with mice may not directly apply to human beings, the Chicago investigators say their results tend to disprove theories held since the great influenza epidemic of 1919 that influenza predisposes its victims to lung cancer. In fact, there was even a suggestion in the results that influenza virus may in some way hinder the development of lung cancer, although this possibility requires further investigation.

ANTIHISTAMINIC AGENTS IN THE TREATMENT OF THE COMMON "COLD"

In an attempt to bring some order to the chaos of claims and counterclaims following in the wake of commercial exploitation of antihistaminics in self-medication of the common cold, the Council has made a critical evaluation of studies so far published. Basic criteria used in judging the reports are (1) establishment of diagnosis beyond reasonable doubt, (2) establishment of proper controls, and (3) logical interpretation of data for statistical significance. Reports by Brewster, Gordon, Murray, and Arminio and Sweet, which were studied by the Council, represent a total of 2,357 patients, half of whom were studied by Brewster alone. In its summary, the Council says, "Over half of the cases were investigated in studies with inadequate controls or without controls, and the interpretations of results obtained are open to question . . . . The antihistaminic agents apparently produce considerable subjective relief owing to inhibition of nasal discharge. Similar results may be obtained by use of ephedrine or atropine."

The report points out that the validity of diagnosis and cure must not be left to the discretion of patients, and interpretation of results should be unquestionable. So far, the Council says, material presented should be classified as the "honest opinion of the investigators, not as fact."—*Report of the Council on Pharmacy and Chemistry, American Medical Association, Journal of the American Medical Association, February 25, 1950*

MEDICAL NEWS

State Organizes Office of Medical Defense

ESTABLISHMENT of an Office of Medical Defense to draw up plans for the mobilization of medical resources of New York State in case of enemy attack has been announced by Dr. Herman E. Hilleboe, State commissioner of health. The new unit, to be responsible for developing various phases of the State's over-all medical defense plan, is headed by Dr. James H. Lade, Albany, a bureau chief in the Division of Medical Services of the State Department of Health.

Two special consultants to the Office of Medical Defense were appointed by Dr. Hilleboe, including Dr. George Baehr, New York City, and Dr. John J. Bourke, Unionville. In addition six department officials were assigned to medical defense units.

To act as a medical advisory committee on civilian defense, Dr. Hilleboe has appointed ten members of the Medical Society of the State to New York to a special committee, with representation from all sections of the State. Members of the committee are: Dr. Carlton E. Wertz, Buffalo, president of the State Society, chairman; Dr. Walter P. Anderton, New York City, secretary of the State Society; Dr. Louis H. Bauer, Hempstead, chairman of the board of trustees of the American Medical Association; Dr. Theodore J. Curphey, Garden City, chairman of the Council Committee on Public Health and Education; Dr. Thomas A. Gamble, Albany; Dr. J. G. Fred Hiss, Syracuse; Dr. Joe W. Howland, Rochester; Dr. J. Stanley Kenney, New York City, president-elect of the State Society; Dr. John J. Masterson, Brooklyn, chairman of the State Society's Committee on Emergency Medical Services, and Dr. Lester J. Unger, New York City, chairman of the State Society's Subcommittee on Blood Banks.

The State Department of Health and the Medical Society of the State of New York jointly announced plans for postgraduate training in medical defense for New York State physicians, dealing with the medical aspects of atomic explosion. Several of the courses have been held during the past month.

A curriculum committee, headed by Dr. Joe W. Howland, Rochester, chief of the Division of Medical Services, Atomic Energy Project, University of Rochester School of Medicine and Dentistry, planned six hours of instruction divided into two sessions of three hours each. The courses cover the early treatment of shock, burns, fractures, wounds, and radiation sickness.

In a letter to all county society presidents, Dr. Wertz urged every member of the State Society to participate in this postgraduate training program.

City Health Department Sponsors Seminar for General Practitioners

A FOURTEEN-WEEK series of meetings for physicians, designed to provide information on the latest developments in medical practice, began on September 9 under the auspices of the New York City Department of Health. Arranged especially to meet the needs of the general practitioner who desires to be kept informed about advances in diagnosis, treatment, and management of disease, the lectures are being held on Saturday mornings, at 10:30 A.M., in the auditorium of the Health Department building, 125 Worth Street, Manhattan. No registration or fee is required.

The complete schedule of lectures, including those already presented, is as follows:

September 9—"Present Status of Cortisone and ACTH," Dr. George A. Perera, associate professor of medicine, Columbia University College of Physicians and Surgeons.

September 16—"Newer Drugs in the Daily Treatment of Epilepsy," Dr. H. Houston Merritt, director of neurological service, Presbyterian Hospital.

September 23—"Antibiotics and BCG in the Treatment and Prevention of Tuberculosis," Dr. William H. Stearns, associate visiting physician, Bellevue Hospital.

September 30—"The Role of Vitamin B" in the Anemias and Growth," T. H. Jukes, nutrition and physiology research section, Lederle Laboratories.

October 7—"Immunization Procedures for Children and Adults," Dr. Morris Greenberg, director, Bureau of Preventable Diseases, City Department of Health.

October 14—"Treatment of Anemias in Childhood," Dr. Peter Vogel, Mount Sinai Hospital.

October 21—"Early Cancer Detection by the General Practitioner," Dr. Emerson Day, director, Strang Cancer Prevention Clinic, Memorial Hospital.

October 28—"Office Management of Syphilis, Gonorrhea, and the Minor Venereal Diseases," Dr. Theodore Rosenthal, director, Bureau of Adult Hygiene, City Department of Health.

November 4—"Modern Surgical Methods for the Treatment of Tuberculosis," Dr. Herbert C. Maier, Lenox Hill Hospital.

November 18—"Common Orthopedic Foot Problems of Childhood," Dr. Frederick Lee Liebolt, New York Hospital.

November 25—"Mental Health—A Basic Element of General Practice," Dr. Sol W. Ginsburg, associate attending psychiatrist, Vanderbilt Clinic.

December 2—"Laboratory Diagnosis of Venereal Disease," Dr. Daniel Widelock, assistant director, Bureau of Laboratories, City Department of Health.

December 9—"Diagnosis and Surgical Treatment of Congenital Heart Disease," Dr. Robert E. Gross, surgeon-in-chief, The Children's Hospital, Boston, Massachusetts.

December 16—"Diagnosis and Treatment of Viral Diseases," Dr. Herald R. Cox, director, Section of Viral and Rickettsial Research, Lederle Laboratories.

Midcentury White House Conference on Children and Youth

THE New York State Citizens' Committee of One Hundred for Children and Youth, appointed a short time ago by Governor Dewey, is preparing for the Midcentury White House Conference on Children and Youth to be held in Washington in December and for later follow-up. The Citizens' Committee has been divided into eight sections, each covering various aspects of care of children and youth for the attainment of "complete physical, mental, and social well-being."

The Child Care Section has undertaken an investigation of two projects, one on total health supervision of the presumably well child from birth through adolescence and the other on the needs of children with physically handicapping conditions. The Child Health Section is seeking to determine the progress made in these fields by voluntary and official agencies and individuals in the various professions. It also wishes to ascertain what agencies and individuals throughout the State think are reasonable steps to be taken within the next ten years to bring adequate health services to children. A body of informed opinion is sought regarding the current situation and needs in communities throughout the State.

Members of the Medical Society of the State of New York are working actively in the Child Health Section of the State Citizens' Committee. The Council Committee on Public Health and Education of the Medical Society of the State of New York has endorsed the distribution of questionnaires to presidents of all county medical societies on health supervision and on the needs of physically handicapped children. Distribution of the questionnaires is being made through the State Society.

It is urged that careful attention be given to the questionnaires as the expression of opinion of the local medical societies which are key groups in the provision of adequate health services for children throughout the State. The president of each county medical society may wish to answer the questionnaire himself or refer it to the chairman of the child welfare committee where such exists.

Dr. Carlton E. Wertz and Dr. John J. Masterson are the representatives of the State Society on the committee. Other members include: Dr. Ruth Morris Bakwin, New York City; Dr. Paul W. Beaven, Rochester; Dr. C. Douglas Darling, Ithaca; Dr. L. W. Ehegartner, Syracuse; Dr. Louis H. George, Watertown; Dr. Albert D. Kaiser, Rochester; Dr. Isabel S. Sainsbury, Canandaigua, and Dr. R. Plato Schwartz, Rochester.

MEDICALLY SPEAKING—

Announcement of Van Meter Prize Award—The American Goiter Association again offers the Van Meter Prize Award of Three Hundred Dollars and two honorable mentions for the best essays submitted concerning original work on problems related to the thyroid gland. The Award will be made at the annual meeting of the Association which will be held in Columbus, Ohio, May 24, 25, and 26, 1951, providing essays of sufficient merit are presented in competition.

The competing essays may cover either clinical or research investigations, should not exceed three thousand words in length, must be presented in English, and a typewritten double-spaced copy in duplicate sent to the corresponding secretary, Dr. George C. Shivers, 100 East Saint Vrain Street, Colorado Springs, Colorado, not later than March 1, 1951. The committee who will review the manuscripts is composed of men well qualified to judge the merits of the competing essays.

A place will be reserved on the program of the annual meeting for presentation of the Prize Award Essay by the author, if it is possible for him to attend. The essay will be published in the annual Proceedings of the Association.

Urology Award—The American Urological Association offers an annual award of $1,000 (first prize of $500, second prize $300, and third prize $200) for essays on the result of some clinical or laboratory research in urology. Competition shall be limited to urologists who have been in such specific practice for not more than five years and to men in training to become urologists.

The first prize essay will appear on the program of the forthcoming meeting of the American Urological Association, to be held at the Palmer House, Chicago, Illinois, May 21 to 24, 1951.

For full particulars write the secretary, Dr. Charles H. de T. Shivers, Boardwalk National Arcade Building, Atlantic City, New Jersey. Essays must be in his hands before February 10, 1951.

Postgraduate Course in Allergy—A postgraduate course in allergy will be offered by the American Academy of Allergy on October 26, 27, and 28, 1950. The course will be sponsored by McGill University and held in Montreal, Canada.

Sterling-Winthrop Research Institute—Invitations to visit the new Sterling-Winthrop Research Institute at Rensselaer have been sent to 175,000 doctors, druggists, veterinarians, and hospital personnel in the United States by Dr. Theodore G. Klumpp, president of Winthrop-Stearns, Inc. The new laboratories will be open for inspection by members of the profession every Friday during the next twelve months.

Chronic Disease Research Institute Established in Buffalo—The first development in a long range plan to provide a chronic disease hospital center for each region in New York State, a Chronic Disease Research Institute is being established in Buffalo. Three agencies have joined in the project. The U.S. Public Health Service is making the building available, and the New York State Department of Health is contributing the necessary funds. The project will be operated by the University of Buffalo through its medical school and with the cooperation of the teaching hospitals, the medical profession of the area, and many voluntary and official health agencies.

The new Institute plans a 50-bed inpatient service for research in specific projects in chronic disease. The outpatient service will include a unit for physical rehabilitation, a multiple screening unit equipped with a mobile truck, and a rehabilitation center for chronic alcoholics.

A.N.A. Elects Officers—At the seventy-fifth annual meeting of the American Neurological Association, held in Atlantic City, New Jersey, in June, the following officers were elected for 1950–1951: Dr. Wilder Penfield, president; Dr. S. Bernard Wortis, president-elect; Dr. Roland P. Mackay, first vice-president; Dr. Donald MacPherson, second vice-president; Dr. H. Houston Merritt, secretary-treasurer, and Dr. Charles Rupp, assistant secretary.

American College of Chest Physicians Offers Prize—The Board of Regents of the American College of Chest Physicians is offering a cash prize award of $250 to be given annually for the best original contribution, preferably by a young investigator, on any phase relating to chest disease. The prize is open to contestants of other countries as well as those residing in the United States. The award will be made at the annual meeting of the College to be held in Atlantic City, New Jersey, in June, 1951. The College reserves the right to invite the winner to present his contribution at the annual meeting and to publish the essay in its official journal, *Diseases of the Chest*. Further information may be obtained from the executive office of the College, 500 North Dearborn Street, Chicago 10, Illinois. Deadline for submitting contributions is April 1, 1951.

Rudolf Schoenheimer Memorial Lectureship—Dr. D. Rittenberg, professor of biochemistry, Columbia University College of Physicians and Surgeons, will deliver the first lecture of the Rudolf Schoenheimer Memorial Lectureship on October 5, 1950, at 8:30 P.M. in the auditorium of the New York Academy of Medicine, at a meeting of the American Society of European Chemists and Pharmacists. His topic will be "The Relation of Studies on the Metabolism of Cholesterol to Recent Developments of Biochemical Thought." Dr. Rittenberg was associated with Dr. Schoenheimer at Columbia University from 1934 to 1941, working on the application of isotope technic to problems of biochemistry.

Grievance Committee Established—A number of county medical societies in New York State have gone far in setting up mechanisms to implement such portions of the Alameda County Plan as they have officially adopted. Among the first to set up and advertise to the public a grievance committee was the Onondaga County Medical Society, which inserted a paid announcement in the *Syracuse Herald Journal* of June 27, 1950.

Telephone answering services are being established for handling emergency and night calls by numerous county societies throughout the State as a further public service under the plan.

Elect Officers for Rheumatic Fever Council—Election of officers for the American Council on Rheumatic Fever of the American Heart Association has been announced by Dr. Howard B. Sprague, president of the Association. They include: Dr. T. Duckett Jones, medical director of the Helen Hay Whitney Foundation, New York City, chairman; Dr. Arthur C. DeGraff, professor of therapeutics, New York University College of Medicine, vice-chairman; Dr. Rustin McIntosh, New York City, former chairman, to the executive board, and Dr. Francis F. Schwentker, Baltimore, Maryland; Dr. Hugh McCulloch, Chicago, and Dr. George M. Wheatley, New York City, to the executive committee.

Film Available on Arthritis and Rheumatism—The Arthritis and Rheumatism Foundation has completed a 16 mm. color film for the medical profession on arthritis and rheumatism. The film reviews the incidence, economic and social significance, the shocking lack of facilities for care, and the small sums available for medical research. Case histories of cortisone and ACTH treatments stress the fundamental importance of hormone therapy as a guidepost to a fuller understanding of the disease processes in rheumatoid arthritis and gout. The film, produced under the supervision of the Foundation's Medical and Scientific Committee, is available to state and county medical societies and other interested groups, without charge. The American Rheumatism Association, through its secretary, Dr. Charles Ragan, Presbyterian Hospital, New York City, will provide a speaker to talk in conjunction with showings of the film wherever its members are available.

To Conduct Seminar Series on Rheumatic Fever—A course of seminars on "Modern Concepts Regarding the Nature and Treatment of Rheumatic Fever and Rheumatic Heart Disease" will be conducted at the St. Francis Sanatorium for Cardiac Children, Roslyn, Long Island, on the second Tuesday of each month, beginning October 10 and ending May 8, 1951. The seminars will meet at 10:00 A.M. on the dates specified.

The schedule and topics include: October 10—"The Nature of Rheumatic Fever"; November 14—"Experimental Rheumatic-Like Disease"; December 12—"Present Concepts Regarding the Mechanism of Heart Failure"; January 9—"The Treatment of Rheumatic Fever with Cortisone and ACTH"; February 13—"Oxygen Therapy in Heart Disease"; March 13—"Salt Metabolism and Cardiovascular Disease"; April 10—"The Treatment of Congestive Failure in Rheumatic Heart Disease"; May 8—"Methods for Measuring Cardiodynamics."

The participating faculty will include: Dr. Leo M. Taran, medical director, St. Francis Sanatorium; Dr. George E. Murphy, Hospital of the Rockefeller Institute for Medical Research; Dr. William Dock, professor of medicine, Long Island College of Medicine; Dr. Currier McEwen, dean and associate professor of medicine, Bellevue Medical School; Dr. Alvan L. Barach, associate professor of clinical medicine, Columbia University College of Physicians and Surgeons; Dr. Alexander B. Gutman, professor of medicine, Columbia University College of Physicians and Surgeons; Dr. Harry Gold, professor of clinical pharmacology, Cornell University Medical College, and Dr. Andre Cournand, associate professor of medicine, Columbia University College of Physicians and Surgeons.

Sanitarium Marks Centennial—The Clifton Springs Sanitarium and Clinic celebrated its one hundredth anniversary on Wednesday, September 13, opening a five-day program which included the annual meeting of the Seventh District Branch of the Medical Society of the State of New York. The program included special meetings and a village-sponsored celebration with two parades.

Academy Plans Graduate Fortnight Program—The twenty-third graduate fortnight of the New York Academy of Medicine will be held from October 9 to 20 at the Academy, on the subject, "The Musculoskeletal System." The program will feature morning panel discussions, afternoon hospital clinics, evening addresses, and scientific exhibits and demonstrations.

Grant for Postgraduate Courses—The State Health Department has announced a $24,000 grant to the University of Buffalo School of Medicine to provide postgraduate courses for Western New York physicians. Dr. Herman E. Hilleboe, State health commissioner, said about 1,700 doctors in six counties could participate through local hospitals. Fields to be covered include: cancer control, maternal and child health, adult heart disease, medical rehabilitation, epidemiology, communicable disease control, rheumatic heart diseases, and premature infant care.

MEETINGS

FUTURE

Eastern New York Eye, Ear, Nose and Throat Association

The annual "Clinic Day" meeting of the Eastern New York Eye, Ear, Nose and Throat Association will be held Thursday, October 5, at the Albany Hospital Outpatient Department, Albany. Dr. John Cetner is in charge of the program.

National Gastroenterological Association

The fifteenth annual convention and scientific sessions of the National Gastroenterological Association will be held October 9 to 11 at the Hotel Statler, New York City. Among the guest speakers who will present papers is Dr. W. J. Merle Scott, Rochester.

At the annual banquet, to be held October 10, the winner of the Association's 1950 Prize Award Contest for the best unpublished contribution on gastroenterology and allied subjects will receive the prize of $100 and a certificate of merit.

Immediately following the convention, the Association is conducting a course in postgraduate gastroenterology at the Hotel Statler, on October 12, 13, and 14. Further information may be obtained from the secretary of the Association, 1819 Broadway, New York 23, New York.

American Association of Blood Banks

The third annual meeting of the American Association of Blood Banks will be held October 12, 13, and 14, at the Stevens Hotel, Chicago, Illinois.

New York State Academy of General Practice

The second annual scientific assembly of the New York State Academy of General Practice will be held October 16, 17, and 18, at the Hotel Seneca, Rochester.

The program includes the presentation of scientific papers and a banquet on Tuesday night, October 17, at which Dr. Rufus B. Robins, Camden, Arkansas, will be toastmaster, and Dr. Alan Stockdale will be guest speaker on the subject, "Courage of Freedom."

The program is as follows:

Monday, October 16—Dr. Jacob D. Goldstein, Rochester, "The Practical Use of Radioactive Iodine"; Dr. L. Maxwell Lockie, Buffalo, "Modern Aspects of Arthritis"; Dr. Lloyd D. Lewis, Washington, "Early Diagnosis of Carcinoma of the Genitourinary Tract"; Dr. Priscilla White, Boston, Massachusetts, "NPH-50 Insulin"; Dr. Eugene M. Regen, Nashville, Tennessee, "Common Fractures Suited for Ambulatory Treatment."

Tuesday, October 17—Dr. Isadore Snapper, New York City, "Metabolic Disorders of the Osseous System"; Dr. Jerome Glaser, Rochester, "The Classification of the Eczematoid Dermatoses"; Dr. Louis Wolff, Boston, Massachusetts, "Diagnosis and Treatment of Cardiac Emergencies"; Dr. Cyrus C. Sturgis, Ann Arbor, Michigan, "Recent Advances in Hematology"; Dr. Rufus B. Robins, Camden, Arkansas, "Group Practice for General Practitioners"; Dr. J. Stanley Kenney, New York City, president-elect, Medical Society of the State of New York; Dr. Richard Lyons, Syracuse, "Recent Aspects of Hypertension."

Wednesday, October 18—Dr. Paul Preu, Rochester, "Anxiety States"; Dr. John H. Garlock, New York City, "Gastrointestinal Bleeding"; Dr. Harry Gold, New York City, "Management of the Failing Heart"; Dr. Walter Reich, Chicago, Illinois, "Uterine Bleeding"; Dr. Philip Thorek, Chicago, Illinois, "Jaundice."

American College of Surgeons

The thirty-sixth clinical congress of the American College of Surgeons will be held October 23 to 27 at the Hotel Statler, Boston, Massachusetts. The program will include color television, clinics, postgraduate courses, forums, symposia, panel discussions, official meetings, films, hospital conferences, and scientific exhibits. The president-elect, who will be installed on Monday night, October 23, at the presidential meeting, is Dr. Henry W. Cave of New York City.

National Society for Crippled Children and Adults

The annual meeting of the National Society for Crippled Children and Adults will be held Thursday through Saturday, October 26, 27, and 28, at the Stevens Hotel, Chicago, Illinois, and will feature the presentation of scientific papers and demonstrations of technics.

American Public Health Association

The seventy-eighth annual meeting of the American Public Health Association and meetings of 32 related organizations in the field of public health and preventive medicine will be held in Kiel Auditorium, St. Louis, Missouri, October 30 to November 3. More than 400 speakers and discussants will participate in the scientific programs of the 13 sections, which include: dental health, engineering, epidemiology, food and nutrition, health officers, industrial hygiene, laboratory, maternal and child health, medical care, public health education, public health nursing, school health, and statistics.

On Tuesday night, October 31, the Lasker Awards for 1950 for outstanding contributions in medical research and public health administration will be presented. Further information may be obtained from Dr. Reginald M. Atwater, executive secretary, American Public Health Association, 1790 Broadway, New York 19, New York.

International College of Surgeons, United States Chapter

The fifteenth annual assembly of the United States Chapter of the International College of Surgeons will be held October 31 to November 3 in Cleveland, Ohio, with headquarters at the Cleveland Hotel. At the annual banquet on Thursday, November 2, Dr. Frank Lahey, Boston, Massachusetts, will speak on "Some of the Recent Advances in Surgery," and Dr. Elmer Henderson, president of the American Medical Association, will deliver an address on "The Importance of International Cooperation in Surgery."

Further information may be obtained from the central office, 1516 Lake Shore Drive, Chicago 10, Illinois.

Association of Military Surgeons of the United States

The annual meeting of the Association of Military Surgeons of the United States will be held November 9, 10, and 11, at the Hotel Statler, New York City.

Physicians desiring to enter a scientific exhibit are invited to contact Dr. Morris Weintrob, chairman of the Scientific Exhibits Committee, 1703 Avenue H, Brooklyn 30, New York.

American Society of Plastic and Reconstructive Surgery

A meeting of the American Society of Plastic and Reconstructive Surgery will be held November 27, 28, and 29, in Mexico City, immediately following the meeting of the Plastic Surgery Section of the IX Asamblea Nacional de Cirujanos, which will be November 19 to 25 at the Hospital Juarez in Mexico City.

American Medical Association

The fourth clinical session of the American Medical Association, designed primarily for the general practitioner, will be held December 5 through 8, in Cleveland, Ohio. The scientific sessions and the scientific and technical exhibits will be presented in the Cleveland Municipal Auditorium and meetings of the House of Delegates will be held in the Statler Hotel.

REPORT INCREASE OF 2,266 IN PHYSICIAN POPULATION FOR 1949

The net increase in the number of physicians in the United States and its territories and possessions in 1949 was 2,266, according to the 48th Annual Medical Licensure Report of the American Medical Association's Council on Medical Education and Hospitals.

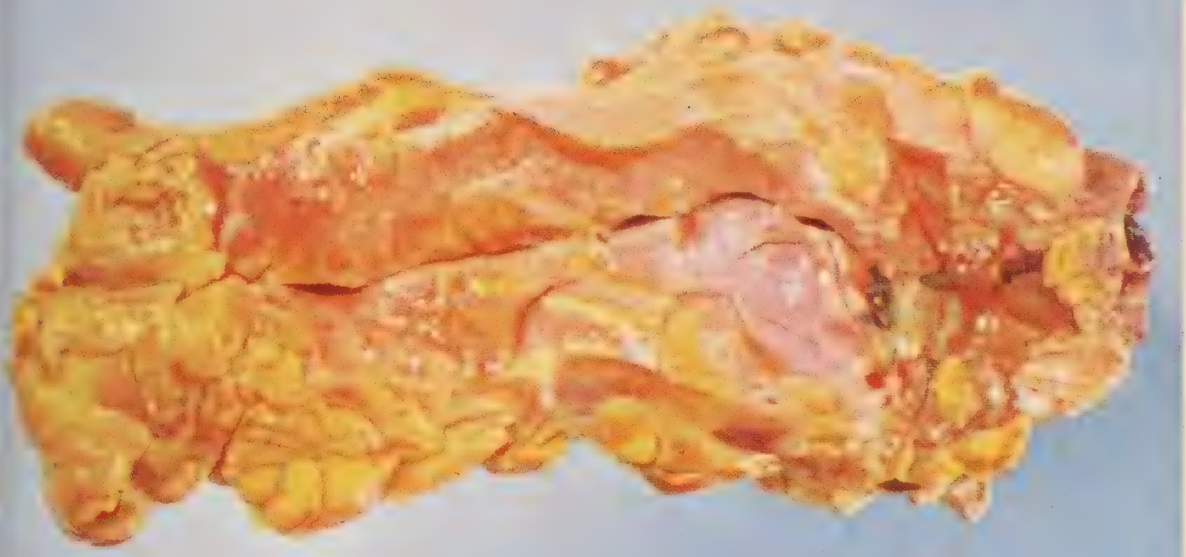
The report, presented by Dr. Donald G. Anderson, secretary of the council, and his assistant, Mrs. Anne Tipner, both of Chicago, appeared in the June 3 issue of the *Journal of the A.M.A.*

These official figures indicate that last year 5,866 physicians were licensed for the first time and thus represent the gross additions to the profession for that year. In 1949 there were 3,600 deaths of physicians reported to the offices of the A.M.A.

The greater number of physicians licensed for the first time in any one state was 973 in New York. California had more than 500 first licentiates and Pennsylvania more than 400.

During the year there were 12,181 licenses to practice medicine issued by the medical examining boards of the 48 states, the District of Columbia, and the territories and possessions.

California led in the number of physicians licensed with 1,511. New York State was second with 1,452, Rhode Island third with 644, and Illinois fourth with 590. Ohio licensed 568, Texas 437, Michigan 411, Massachusetts 389, and New Jersey 346. Florida followed with 325. Missouri licensed 316, Minnesota 312, and Maryland 301.



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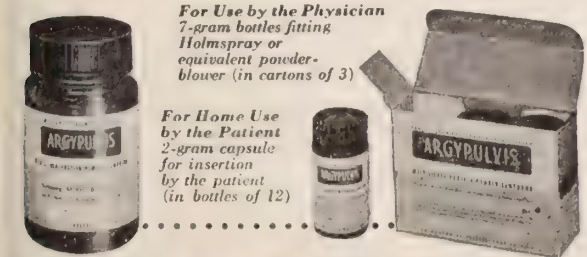

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BOOKS

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selections for review will be based on merit and interest to our readers.

BOOKS RECEIVED

A Guide to General Medical Practice. By Martin G. Vorhaus, M.D. Octavo of 244 pages. New York, Macmillan Co., 1950. Cloth, $3.50.

New Discoveries in Medicine. Their Effect on the Public Health. By Paul R. Hawley, M.D. Octavo of 134 pages, illustrated. New York, Columbia University Pr., 1950. Cloth, $2.50. (Bampton Lectures in America, #2.)

Fertility in Marriage. A Guide for the Childless. By Louis Portnoy, M.D., and Jules Saltman. Octavo of 250 pages. New York, Farrar, Straus & Co., 1950. Cloth, $3.00.

Handbook of Obstetrics and Diagnostic Gynecology. By Leo Doyle, M.D. Sextodecimo of 240 pages, illustrated. Palo Alto, Calif., University Medical Publishers, 1950. Stiff paper, $2.00.

Doctors Courageous. By Edward H. Hume, M.D. Octavo of 297 pages, illustrated. New York, Harper & Bros., 1950. Cloth, $3.50.

The ABC of Acid-Base Chemistry. The Elements of Physiological Blood-Gas Chemistry for Medical Students and Physicians. By Horace W. Davenport. Third edition. Octavo of 86 pages, illustrated. Chicago, University of Chicago Pr., 1950. Paper, $2.00.

The Law of Medicine. By Parnell Callahan, L.L.B., and Justin Callahan, M.D. Duodecimo of 80 pages, illustrated. New York, Oceana Publications, 1950. Paper, $1.00; Cloth, $2.00.

Oxford Loose-Leaf Medicine, Supplements. 17 reprints. Octavo. New York, Oxford University Pr., 1950. Available only to subscribers.

Textbook of Bacteriology. By Joseph M. Dougherty, Ph.D., and Anthony J. Lamberti, M.S. Second edition. Octavo of 491 pages, illustrated. St. Louis, C. V. Mosby Co., 1950. Cloth, $5.75.

Multiple Sclerosis and the Demyelinating Diseases. Res. Publ. Ass. Nerv. Ment. Dis. Volume 28. Proceedings of the Association December 10 and 11, 1948, New York. Ed. Bd., Henry W. Woltman, M.D., H. Houston Merritt, M.D., S. Bernard Wortis, M.D., and Clarence C. Hare, M.D. Octavo of 675 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $12.

Non-Valvular Heart Disease. By Henry A. Christian, M.D. Octavo. New York, Oxford University Press, 1948. Cloth, $2.00. (Reprinted from Oxford Loose-Leaf Medicine.)

Breast Deformities and Their Repair. By Jacques W. Maliniac, M.D. Octavo of 193 pages, illustrated. New York, Grune & Stratton, 1950. Cloth, $10.00.

Lipidoses. Diseases of the Cellular Lipid Metabolism. By Siegfried J. Thannhauser, M.D. Edited by Henry A. Christian, M.D. Octavo, illustrated. New York, Oxford University Press, 1949. Cloth, $12. (Reprinted from Oxford Loose-Leaf Medicine.)

You and Your Heart. A Clinic for Laymen on the Heart and Circulation. By H. M. Marvin, M.D., T. Duckett Jones, M.D., Irvine H. Page, M.D., Irving S. Wright, M.D., and David D. Rutstein, M.D. Octavo of 306 pages, illustrated. New York, Random House, 1950. Cloth, $3.00.

BOOKS REVIEWED

Length of Life. A Study of the Life Table. By Louis I. Dublin, Ph.D., Alfred J. Lotka, D.Sc., and Mortimer Spiegelman, F.S.A. Revised edition. Octavo of 379 pages, illustrated. New York, Ronald Pr. Co., 1949. Cloth, $7.00.

This volume is the completely revised edition of the authors' original work, published some years ago. Since that time advances in the medical and social sciences and an improvement in our standard of living have made it possible for the American people to live healthier, longer lives.

The book covers a wide range of material on the relation between longevity and family history, marital status, biologic influences, body build, physical condition, medical history, and occupation. It presents a discussion of the life table as a tool for measuring population trends. As a reference for students of longevity, the book contains the most extensive collection of life tables presented in any single volume.

The authors, all connected with the outstanding statistical office of the Metropolitan Life Insurance Company, have for years been in very practical contact with the phenomenon of human longevity and mortality and are well qualified to analyze the influence on longevity of such factors as heredity, weight, marriage, occupation, and medical history.

G. HOLBROOK BARBER

Elementary Anesthesia. By W. N. Kemp, M.D.C.M. Octavo of 289 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $5.00.

This book is apparently intended as a comprehensive manual of anesthesia for the beginner, but loses its value by including controversial technics which are interpreted unilaterally. The author presents a composite sketch of available information with no original contribution. Such statements as "Overdosage of nonvolatile narcotic agents need never prove fatal provided respiratory function is maintained," "Carbon dioxide is essential when cyclopropane is used for exodontia . . . to stimulate respiration," and "If blind intubation is to be attempted . . . passing is only made when the patient is in deep apnea" are examples of unacceptable statements which are generally considered erroneous.

IRVING M. PALLIN

[Continued on page 2338]

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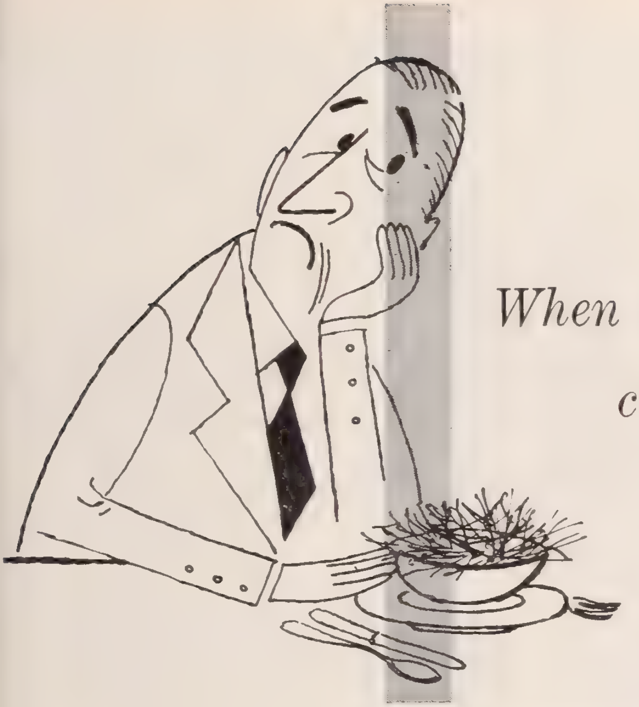

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[Continued from page 2336]

Physiology of the Uterus. By S. R. M. Reynolds, Ph.D. Second edition. Quarto of 611 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $12.50.

This reviewer had the pleasure of reading and reviewing the first edition of this excellent book some ten years ago. It is now gratifying to repeat the task for the second edition.

It is rather curious that with almost every other organ in the body the obvious was done; i.e., its physiology studied first, then its pathologic variants. Studies on the uterus, however, seemed for many decades to have taken the reverse course. We examined the aberrants and the deviations of the normal functions of the uterus before we were well conversant with its physiology. Dr. Reynold's book, therefore, ten years ago, filled a long-felt need. Not only did he give much experimental proof of the physiologic actions of the uterus in the pregnant and nonpregnant states, but he also brought together the bibliography on that subject in one volume.

The second edition is indeed a welcome addition to our gynecologic literature. The arrangement is somewhat different in that he divided the entire subject matter into eight parts and grouped the related phases of the studies. Most of the chapters were considerably revised to conform to the most recent advances of the experimental work by himself and others. New material has been added, the most notable chapter being: "Human Tokography during Labor." Here he describes the use of a newly-devised instrument, a strain-gauge multichannel tokodynamometer which records uterine contractions electrometrically at three abdominal sites simultaneously. It is certainly a great advance over Knaus' intrauterine balloon.

No one in the field of gynecologic research, or obstetrics and gynecology, can afford to be without this basic volume on the *Physiology of the Uterus*.

Jacob Halperin

Fundamentals of Otolaryngology. A Textbook of Ear, Nose and Throat Diseases. By Lawrence R. Boies, M.D., and associates, Charles E. Connor, M.D., Anderson C. Hilding, M.D., Jerome A. Hilger, M.D., John J. Hochfilzer, M.D., *et al.* Octavo of 443 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $6.50.

This text is primarily for undergraduate teaching but provides fundamental information for the medical practitioner. It is obviously the expression of developed experience in teaching, not only of the author but of a group of associate teachers, each of whom is highly capable in his own right.

The work encompasses applied anatomy and physiology, practical pathology, and a good general explanation of disease processes. Methods of examination and treatment are made especially clear and understandable. Bibliography is very complete in all instances, for further study or for verification by the more studious. The book is small and contains a wealth of information for its size, with none obsolete. It is certainly recommended.

Charles R. Weeth

The Child in Health and Disease. A Textbook for Students and Practitioners of Medicine. Edited by Clifford G. Grulee, M.D., and R. Cannon Eley, M.D. Quarto of 1,066 pages, illustrated. Baltimore, Williams & Wilkins Co., 1948. Cloth, $12.

This book bids fair to become one of the standard texts in pediatrics. It has a worthy list of contributors on the various topics and is written and edited so as to make for easy reading, especially with the double column formation. There are ample references with each chapter, to facilitate further reading if needed.

Mark J. Wallfield

Life Among the Doctors. By Paul de Kruif, in collaboration with Rhea de Kruif. Octavo of 470 pages. New York, Harcourt, Brace & Co., 1949. Cloth, $4.75.

First let us quote the expressive subtitle as it appears on the jacket: "How our doctors are combining new scientific miracles with the religion of the Good Samaritan, bringing great hope to mankind."

This book, a collection of biographical studies and histories, follows the type of De Kruif's numerous publications, a glorification of certain doctors and their deeds, with a bold lance against the incredulous or overconservative opposition. The table of contents lists fourteen episodes of medical history under five general headings. For the names of the doctors involved you must read the context, which is always interesting and, at times, somewhat spectacular. The credo of the author (while not a doctor of medicine, he has lived with them for thirty-six years) is best seen in the quotation, "At their best, medical men are the highest type yet reached by mankind. At their worst (and this is fortunately true of a small minority of them) they are little better than legalized murderers."

You will enjoy these medical adventures and, if we are not mistaken, you will acquire not a little information.

Joseph Raphael

Arterial Hypertension. Its Diagnosis and Treatment. By Irvine H. Page, M.D., and Arthur Curtis Corcoran, M.D. Second edition. Octavo of 400 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $5.75.

The second edition of this work shows many improvements over the first and can be recommended as an adequate and fair presentation of the state of our knowledge. It is not a reference work for investigators and was not so intended. The problem of hypertension due to unilateral renal disease is very well presented. In discussing the etiology of essential hypertension, the authors support the viewpoint that no single cause for this condition will probably be found.

In the opinion of this reviewer the sections on angina pectoris, myocardial infarction, and congestive failure do not belong in this work because their handling must necessarily be too much abbreviated. It is regrettable that the term "coronary occlusion" is used as a clinical diagnosis. The lesion that is responsible for the clinical picture is the infarction, not the coronary occlusion.

The authors give a reasoned and critical evaluation of the methods of treatment of essential hypertension in use today. They come to the conclusion that each is helpful in a small group of properly selected patients, and none constitutes a cure. The book is recommended as an accurate presentation of the status of our knowledge today.

Edwin P. Maynard, Jr.

An Atlas of Amputations. By Donald B. Slocum, M.D. Quarto of 562 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $20.

This new book is presented in a rather interesting fashion. It is divided into four parts—namely,

[Continued on page 2340]

now there are two strengths...

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(new low price)

Eskacillin 100

the unusually palatable
liquid penicillins for oral use

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[Continued from page 2338]

orientation, surgical considerations, surgical technics, and convalescent period.

Stress has been placed upon the importance of function in amputation at the various levels. The better technics of amputation are given and beautifully illustrated in pictorial form. Normal and amputee gait is discussed and illustrated. The mechanical principles involved in the fitting of prostheses are also stressed.

The book is highly recommended.

CARMELO C. VITALE

Limbo Tower. By William Lindsay Gresham. Octavo of 275 pages. New York, Rinehart & Co., 1949. Cloth, $3.00.

This is a novel, the story of the patients and staff of a hospital for tubercular patients. It deals with the patients in the ninth floor ward. What little action there is arises from the daily routines of the sick of many types and beliefs, from Abdullah, the Moslem, to the philosophical mastermind, called the Judge. The conversations and small talk of this cosmopolitan group of men suffering from the same disability and disease are at times somewhat too involved and verbose. It would seem that such a story would be all too depressing for the lay reader even with the spot of romance here and there and the references to hospital politics.

JOSEPH RAPHAEL

Malignant Disease and Its Treatment by Radium. By Sir Stanford Cade, F.R.C.S., M.R.C.P. Second edition. Volume II. Octavo of 430 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $12.50.

This volume deals with malignant disease of the mouth, pharynx, larynx, and neck, anatomical sites where radiotherapy has made large contributions both as to cure and palliation.

The photographs, including color plates and schematic drawings as well as tables of statistics, add a great deal to a clear understanding of exact methods of treatment and results to be expected.

The book is recommended both to the radiotherapist and to the general practitioner as a valuable reference work.

WILLIAM E. HOWES

Cancer. New Light on Its Causes, Detection, Treatments, Cures and the Brilliant Promise of Today's Research. By Beka Doherty. Octavo of 327 pages. New York, Random House, 1949. Cloth, $3.00.

There is an increasing desire among laymen to know more about cancer. This book was written to fill that need. It is divided into four parts, entitled: Cancer to the Patient, Cancer to the Physician, Cancer as a Research Problem, and Cancer as a Public Health Problem. It is a sincere and interesting analysis of the subjects indicated by the titles.

MORTIMER R. CAMIEL

The Medical Clinics of North America. Massachusetts General Hospital Number. September, 1949. Octavo. Philadelphia, W. B. Saunders Company, 1949. Published Bimonthly (six numbers a year). Cloth, $18 net; Paper, $15 net.

The Massachusetts General Hospital contributes for the most part to this number of the *Medical Clinics.* Especially good references concern thyroid disease, hypertension, endocrinology, and the "dumping" syndrome.

ANDREW BABEY

Vitaminology. The Chemistry and Function of the Vitamins. By Walter H. Eddy, Ph.D. Octavo of 365 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $6.00.

This book contains a workable description of each vitamin, its chemical composition and clinical application. It discusses the vitamin deficiencies and the present knowledge of their treatment and prevention. This is a moderate sized book with an interesting foreword by Casimir Funk who originated the term Vitamine (Vitamin).

The last chapter contains some facts about possibly new vitamins that may develop from studies on the animal protein factor, lactation factors, and summer butter factor, which deserve further chemical and clinical studies.

It is a good concise book for everyday reading and is recommended for the practicing physician.

MORRIS ANT

X-ray Treatment. Its Origin, Birth and Early History. By Emil H. Grubbé, M.D. Octavo of 153 pages, illustrated. St. Paul, Bruce Pub. Co., 1949. Cloth, $3.00.

This book is of value to those who are interested in the history of radiology. It is a strongly-biased polemic in defense of the author's claim to American priority in the use of x-rays in the treatment of disease. It contains many interesting reminiscences by one of the pioneers in radiology.

MORTIMER R. CAMIEL

Management of Allergy for the Patient. By Florence E. Sammis, M.D. with Pollen Charts, Maps and Photographs by Oren C. Durham. Quarto of 63 pages, illustrated. Ann Arbor, Edwards Brothers, 1949.

Dr. Sammis has written a very useful reference book for allergic patients. The material in it is, in some respects, technical, so that the booklet would be found useful not only to patients but to physicians as well.

ANDREW BABEY

Haemoglobin. A Symposium based on a Conference held at Cambridge in June, 1948, in Memory of Sir Joseph Barcroft. Edited by F. J. W. Roughton and J. C. Kendrew. Octavo of 279 pages, illustrated. London, Butterworths Scientific Publications, Ltd., (New York, Interscience Publishers) 1949. Cloth, $8.50.

This volume was prepared as a testimonial to Sir Joseph Barcroft who died in 1947 while still actively at work in research on hemoglobin, a field in which he had been a leader for a period of fifty years. The volume starts with a series of tributes prepared by Professors Adrian, Krough, Douglas, Hill, Peters, and Roughton, and by Sir Henry Dale and G. S. Adair. The succeeding chapters deal with various physiologic and biochemical studies on hemoglobin by outstanding workers in the field.

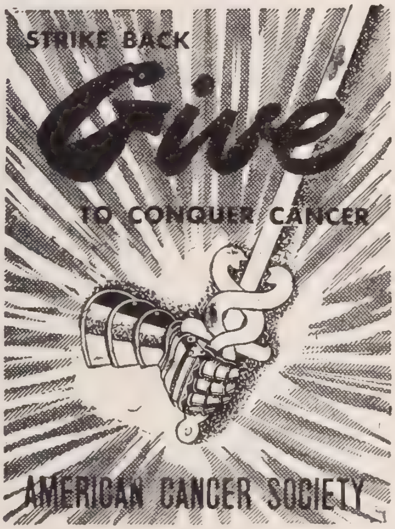
This is a volume that anyone interested in hemoglobin and its properties will wish to study, in order to gain an insight into the trend of current research on this subject.

A. S. WIENER

The Arthropathies. A Handbook of Roentgen Diagnosis. By Alfred A. de Lorimier, M.D. Second edition. Octavo of 335 pages, illustrated. Chicago, Year Book Pub. Co., 1949. Cloth, $7.00.

The second edition of the *Arthropathies* (first published in 1944) is an improvement of the original in

[Continued on page 2342]



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[Continued from page 2340]

its presentation and illustrations. This book was primarily compiled from ample material and lectures delivered at the Army Medical School, Memphis, Tennessee. It is a compendium that can be employed for its inherent knowledge as a handbook which should prove of value to the student and general practitioner. The style is didactic and the text informative. The various congenital and acquired pathologic states to which the joints and human skeleton may fall heir are chronicled and succinctly described.

The author states in his preface, "Too often the roentgen findings are not by themselves distinctive," a fact which the radiologist only too often learns to recognize. It is a book, however, that clinicians and radiologists will find worthy of possession.

Milton G. Wasch

Huang Ti Nei Ching Su Wen. The Yellow Emperor's Classic of Internal Medicine. Chapters 1 to 34 translated from the Chinese with an Introductory Study. By Ilza Veith, Ph.D. Octavo of 253 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

This volume is an English translation of a French translation by Lindau of an old Chinese medical classic. The author has written an introduction of 79 pages which could serve as an excellent review of ancient Chinese medical philosophy.

Any doctor who looks to this translation for information as to the actual handling of clinical entities in China will find it of very little use. The man who wishes some insight as to the philosophy of health and disease held in ancient China will find it here, especially in the introduction. If he finds it confusing, he may console himself with the fact that even native Chinese doctors also find it very confusing.

The author has made the translation fit modern concepts so far as possible. There are frequent references to "circulation of the blood," though the Chinese word so translated means merely "movement." One of the most interesting parts occurs on page 186. "I shall smear my mouth with blood and take an oath that I will not venture to receive this information were I to use it recklessly or neglect it." This, in tone, is not unlike the Hippocratic oath. It does emphasize the moral responsibility of the physician to make proper use of his information.

Phillips F. Greene

Textbook of Bacteriology (Eleventh edition of Muir & Ritchie's "Manual"). By C. H. Browning, M.D., and T. J. Mackie, M.D. Octavo of 907 pages, illustrated. New York, Oxford University Press, 1949. Cloth, $12.75.

Although designated as the eleventh edition of Muir and Ritchie's *Manual of Bacteriology*, this treatise is essentially a new textbook, for its entire contents have been rewritten and rearranged.

The authors have kept their book clear and comparatively simple by sticking to known facts and omitting much of what is entirely theoretical and controversial. Verbosity has been successfully avoided. The emphasis throughout the book is on diagnostic methods and the practical aspects of the subject. Over one third of the volume is devoted to viral and rickettsial agents, the pathogenic fungi, and an excellent chapter on the pathogenic protozoa. There is no discussion of the helminths.

The book is well written and well illustrated. It is admirably suited to the needs of medical students and practitioners, though perhaps not sufficiently detailed for advanced workers.

Arnold H. Eggerth

Handbook of Medical Management. By Milton Chatton, M.D., Sheldon Margen, M.D., and Henry D. Brainerd, M.D. Sextodecimo of 476 pages, illustrated. Palo Alto, California, University Medical Publishers, 1949. Paper, $3.00.

This little handbook from the University of California Medical School is a very helpful compendium of important medical disorders, both diagnosis and treatment. Every medical man would profit from a careful study of its contents. Andrew Babey

Operations of General Surgery. By Thomas G. Orr, M.D. Second edition. Quarto of 890 pages, illustrated. Philadelphia, W. B. Saunders Co., 1949. Cloth, $13.50.

In the second edition of this textbook, every chapter has been revised and many new illustrations of more modern technic have been added. Many important additions have been made in surgery of the digestive system, particularly in carcinoma of the esophagus and pancreas. The work of Blalock, Gross, and others in the treatment of anomalies of the heart and great vessels has been added. The book is well written and the illustrations are excellent and abundant. The volume is recommended for the experienced surgeon as well as for the beginner.

Edward P. Dunn

The Science and Art of Joint Manipulation. By James Mennell, M.D. Vol. 1—The Extremities. Second edition. Octavo of 215 pages, illustrated. Philadelphia, Blakiston Co., 1949. Cloth, $7.50.

Joint manipulation for the relief of local or remote conditions may seem to many practitioners to be on the borderline of regular medical practice. In this excellent book Mennell does much to correct this impression. The relationship of joint disabilities to the general welfare of the patient is clearly demonstrated, and measures to correct these difficulties are fully described.

The volume, the first of a projected series of two, is written in a most convincing manner and very clearly illustrated. It will well repay the time required for its study, and cannot fail to convey the enthusiasm of the author for his subject.

Jerome Weiss

Obstetrics and Gynaecology. A Synoptic Guide to Treatment. By Beatrice M. Willmott Dobbie, M.B. (Eng.). Octavo of 358 pages, illustrated. New York, Paul B. Hoeber, 1949. Cloth, $5.50.

Devoted mostly to treatment in both gynecology and obstetrics, this book should have a place in the library of all who have responsibility for patients falling in this category. The author has, in an interesting way, put into print much that is learned only by experience. Especially for the general practitioner, this should be a valuable guide. Preventative treatment is emphasized, and commonly accepted technics are described in great detail. Much benefit from reading this will be derived by those who do not have the advantage of modern hospital facilities. William C. Meagher

May's Manual of the Diseases of the Eye. For Students and General Practitioners. Revised and edited by Charles A. Perera, M.D. Twentieth edition. Duodecimo of 512 pages, illustrated, Baltimore, Williams & Wilkins Co., 1949. Cloth, $5.00.

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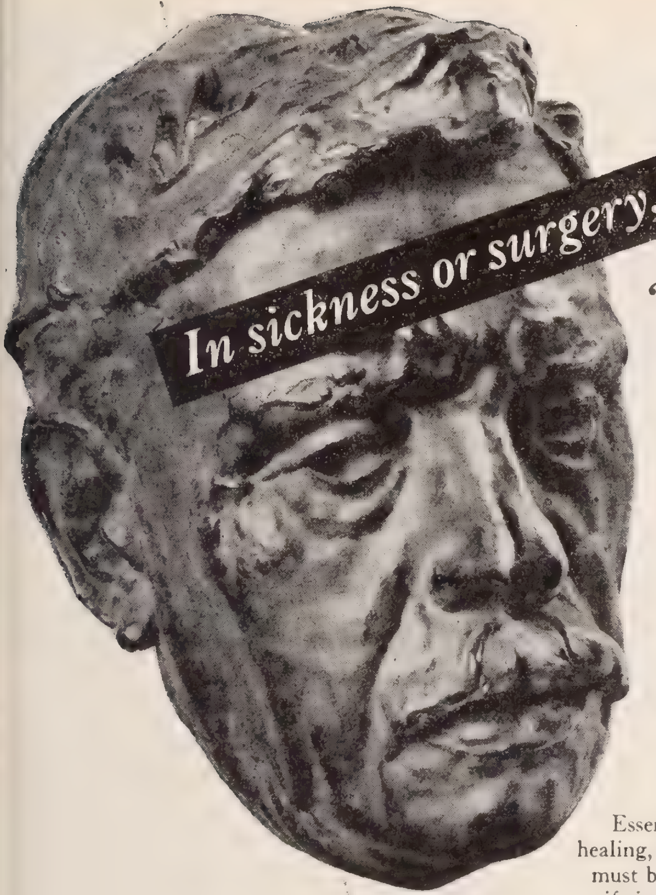

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REFERENCES: 1. Coller, F. A. and DeWeese, M. S.: Preoperative and Postoperative Care, J.A.M.A., 141:641, 1949. 2. Jolliffe, N. and Smith, J. J.: Med. Clin. North America, 27:567, 1943. 3. Kruse, H. D.: Proc. Conf. Convalescent Care, New York Acad. Med., 1940. 4. Spies, T. D.: Med. Clin. North America, 27:278, 1943.

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[Continued from page 2342]

The twentieth edition of this popular textbook has been brought up to date by its editor, Dr. Charles A. Perera, and maintains the high level and simple descriptions which were the principles to which Dr. May adhered.

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Your reviewer has reveiwed the last ten editions of this textbook, and each time feels that there has been no backsliding in presentation.

John N. Evans

Antibiotics. Edited by George W. Irving, Jr., Ph.D., and Horace T. Herrick. Octavo of 273 pages, illustrated. Brooklyn, Chemical Pub. Co., 1949. Cloth, $6.75.

This book is a collection of lectures sponsored by the United States Department of Agriculture Graduate School in Washington. There are fourteen chapters (lectures), each presented by an outstanding man working in the field. The story of penicillin, streptomycin, and the other antibiotics derived from actinomycetes is admirably told. The clinical use of these antibiotics is completely discussed. A fascinating lecture on the higher plants as well as the basidiomycetes as sources of antibiotics is also included. The mode of action of the antibiotics is well presented. A particularly interesting chapter is the one devoted to the government certification program of the antibiotics set up during the war and still in effect. Among the men who delivered these lectures are such names as Rene J. Dubois, Chester Keefer, H. T. Herrick, S. A. Waksman, Karl Folkers, Oscar Wintersteiner, and Henry Welch.

This book is recommended to all physicians for its comprehensive review of the antibiotics to date and for its glimpse into the future of antibiotics.

Felix Taubman

Essentials of Obstetrical and Gynecological Pathology. By Robert L. Faulkner, M.D., and Marion Douglass, M.D. Second edition. Octavo of 357 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.75.

This is the second edition of a text on obstetric and gynecologic pathology that owes its great value to its conciseness and simplicity. Discussion of controversial subjects is avoided. The book is profusely illustrated and contains knowledge that is essential to the gynecologic surgeon. It also has valuable suggestions for the proper handling of surgical specimens before they reach the laboratory. It is highly recommended. Alexander H. Rosenthal

More About Psychiatry. By Carl Binger, M.D. Octavo of 201 pages. Chicago, University of Chicago Pr., 1949. Cloth, $4.00.

What Dr. Binger writes generally proves both instructive and interesting, and this little volume of essays is no exception. Especially useful are his discussions of anxiety and mental health.

Andrew Babey

Rapid Microchemical Methods for Blood and CSF Examinations. By F. Rappaport, Ph.D. Octavo of 404 pages, illustrated. New York, Grune & Stratton, 1949. Cloth, $8.75.

With the increasing importance of clinical chemistry as an aid in the diagnosis and treatment of the ill, this book should find a valuable niche, especially for those who lack more expensive instruments. Most of the methods described are characterized by an ingenuity and elegance that the specialist in the field will fully appreciate. The procedures are simple, require small amounts of sample, and are rapid.

The contents of the book include a chapter on general properties of blood, gasometric methods, determination of anions (acids), cations (bases), protein and nonprotein nitrogen fractions, various sugars, organic acids, lipids, liver function, enzyme, vitamins, antibiotics, and preparation of solutions. Several alternate procedures are given in most cases. Although most of the colorimetric methods are described for the visual colorimeter, they could be readily adapted to the photoelectric colorimeter or spectrophotometer.

The book is recommended for those interested in quantitative blood and spinal fluid analyses and those who derive a cultural interest in the possibility of simple equipment in methodology.

Albert E. Sobel

Healthy Babies Are Happy Babies. A Complete Handbook for Modern Mothers. By Josephine Hemenway Kenyon, M.D., and Ruth Kenyon Russell, M.D. Fourth edition. Duodecimo of 310 pages. Boston, Little, Brown & Co., 1949. Cloth, $2.50.

This is one of the very best books of its kind. Its senior author, thoroughly trained before beginning private practice, has had very large experience and has kept up to date; the junior author is of the younger generation.

If the reviewer differs in a few places, he believes that, past or future, the author changes her mind and would not always stand for these things which now she recommends. Even so, in these matters, she is in line with present trends and her advice will not mislead.

The book gives more advice for the mother, prospective and actual, than is usual in such manuals. It is recommended without qualification.

W. D. Ludlum, Sr.

Chemotherapy of Leukemia and Leukosarcoma. By William Damashek, M.D., Marvin L. Bloom, M.D., Louis Weisfuse, M.D., Milton H. Freedman, M.D., and Miguel Layrisse, M.D. Quarto of 54 pages, illustrated. New York, Grune & Stratton, 1949. Paper, $4.75. (A reprint of an exhibit presented at the American Medical Association Convention, Atlantic City, June, 1949.)

Dr. Damashek and some of his associates have published their work on nitrogen mustard, urethane, and folic acid antagonists. It appears in chart form with numerous illustrations. It is recommended as interesting, helpful, and reliable. Andrew Babey

The Uses of Penicillin and Streptomycin. By Chester Scott Keefer, M.D. Octavo of 72 pages. Lawrence, Kansas, University of Kansas Press, 1949. Cloth, $2.00. (Porter Lectures, Series 15)

This short book is a reprint of three Porter Lectures delivered under the auspices of the University of Kansas Medical School. In the first two lectures Dr. Keefer succinctly summarizes the present knowledge concerning the uses of penicillin and streptomycin. The third lecture is historical, reviewing the high points in the development of antibacterial agents from the time of Koch to Waksman. This

[Continued on page 2346]

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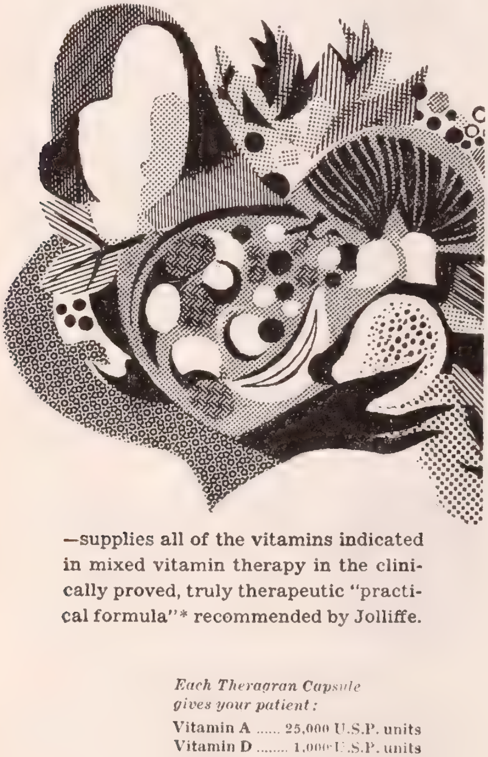

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book will serve as an adequate review of the two most widely used antibiotics. FELIX TAUBMAN

The Surgical Treatment of Facial Injuries. By Varaztad Hovhannes Kazanjian, M.D., and John Marquis Converse, M.D. Quarto of 574 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $10.

This is a timely and valuable contribution to the field of plastic and reconstructive surgery. Due to the fact that many phases of a complicated subject are condensed into a single fair-sized volume, the authors presume the reader to be well grounded in the material presented. The work is admirably supported by the inclusion of many photographs of actual cases, by clear illustrated diagrams of preferred surgical technics, and by an adequate bibliography. The procedures and plans, which are employed and advocated, are based upon many years of practical application. DAVID TEPLITSKY

Principles of Human Genetics. By Curt Stern. Octavo of 617 pages, illustrated. San Francisco, W. H. Freeman & Co., 1949. Cloth, $7.50.

Physicians are becoming more and more conscious of the role played by genetics in disease. For an understanding of the pathogenesis of many diseases such as hemophilia, erythroblastosis fetalis, Huntington's chorea, retinitis pigmentosa, etc., a knowledge of the principles of human genetics is indispensable. In addition, there is an hereditary predisposition that plays an important role in many diseases such as cancer, asthma, hay fever, and heart disease, depending upon the constitution of individuals.

Most genetics books in the past have emphasized animal and plant genetics, and there have been only a few books on human genetics abstracting the vast medical literature. Here, at last, is a book explaining the principles of human genetics in all its phases. Despite the thoroughness with which the author treats his subject, the presentation is clear and concise. Throughout one feels the effect of the author's piercing analysis and logical mind. As to be expected, this book has attained instantaneous widespread success and is already being used as a standard textbook in many universities. A study of this book will open up new vistas for physicians. It is a book not merely to be placed in one's library, but to be read over and over again. A. S. WIENER

Diagnosis and Treatment of Brain Tumors and Care of the Neurosurgical Patient. By Ernest Sachs, M.D. Second edition. Octavo of 552 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $15.

Dr. Ernest Sachs has been a leader in the field of neurosurgery. In 1931, he published a book on *Diagnosis and Treatment of Brain Tumors*, and in 1945 he published another book on *Care of the Neurosurgical Patient*. The present volume is a second edition and a combination of these two books, to which are added all the diagnostic and therapeutic data accumulated in the interval that has elapsed between the two editions.

The book is written in a simple and lucid style and presented in a pleasant and easily readable manner. It is thoroughly illustrated with 350 illustrations and ten color plates. It is written on the basis of a rich experience by one of America's foremost neurosurgeons and covers all the proved methods of diagnosis and therapeutics as well as the modern methods such as electroencephalography, angiography, and ventriculography. It will find a well deserved place among the most popular textbooks of the day. It is highly recommended to all who are interested in the subject. IRVING J. SANDS

A Twentieth Century Physician. Being the Reminiscences of Sir Arthur Hurst, D.M., F.R.C.P. Octavo of 200 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $3.50.

These reminiscences of Sir Arthur Hurst, a great British clinician, will provide entertaining reading for everyone. The story of the inner development of a thoughtful physician is always interesting, and the number of anecdotes concerning persons known to us only by name add considerable spice. The style is somewhat pedestrian but not enough so to deter the prospective reader. MILTON PLOTZ

Human Growth. The Story of How Life Begins and Goes on. By Lester F. Beck, Ph.D., with the assistance of Margie Robinson, M.A. Octavo of 124 pages, illustrated. New York, Harcourt, Brace & Co., 1949. Cloth, $2.00.

This is a product of research at the University of Oregon and is designed to present for adolescents information about "how life begins and goes on." It is sound, clear, and nonspectacular. It is recommended for young people's sex education.

ANDREW BABEY

Coagulation, Thrombosis, and Dicumarol. With an Appendix on Related Laboratory Procedures. By Shepard Shapiro, M.D., and Murray Weiner, M.D. Octavo of 127 pages, illustrated. New York, Brooklyn Medical Pr., 1949. Cloth, $5.50.

This is a well-written and comprehensive monograph on a subject of timely interest to practitioners in all fields of medicine and surgery. The authors deal adequately and clearly with both the experimental and practical aspects of anticoagulant therapy. Approximately one half of the monograph deals with the clinical use of Dicumarol. The authors stress that Dicumarol should not be used without adequate facilities for prothrombin time estimation. They demonstrate that the influence of each dose of Dicumarol extends over an unpredictable period of days and advocate the intermittent dosage method of administration.

This monograph is highly recommended to all clinicians as a source of information on the subject of coagulation and thrombosis and as a practical guide for the judicious administration of Dicumarol.

LEON M. LEVITT

The 1948 Year Book of Pathology and Clinical Pathology. Pathology edited by Howard T. Karsner, M.D. Assistant Editor, Herbert Z. Lund, M.D. Clinical Pathology edited by Arthur Hawley Sanford, M.D. Duodecimo of 538 pages, illustrated. Chicago, Year Book Publishers, 1949. Cloth, $4.50.

For a comprehensive appraisal of the year's contributions in pathology and clinical pathology, this volume cannot be surpassed. The editors are Karsner and Sanford. In addition, one is impressed with special articles by Foot on "Evaluation of Exfoliative Cytology," Heinle on "Vitamin B12," and Kinney, Hegsted, and Finch on "Iron Metabolism-Regulation of Iron Absorption."

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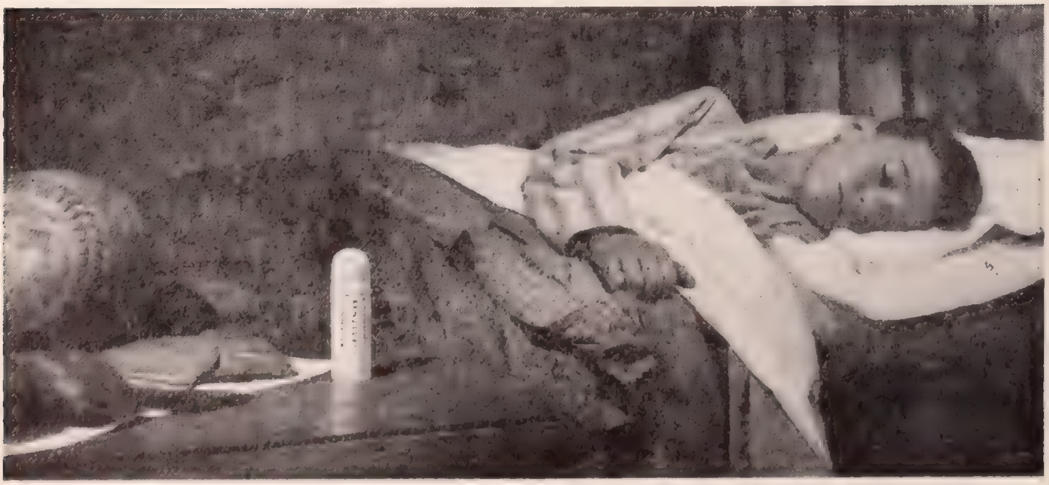

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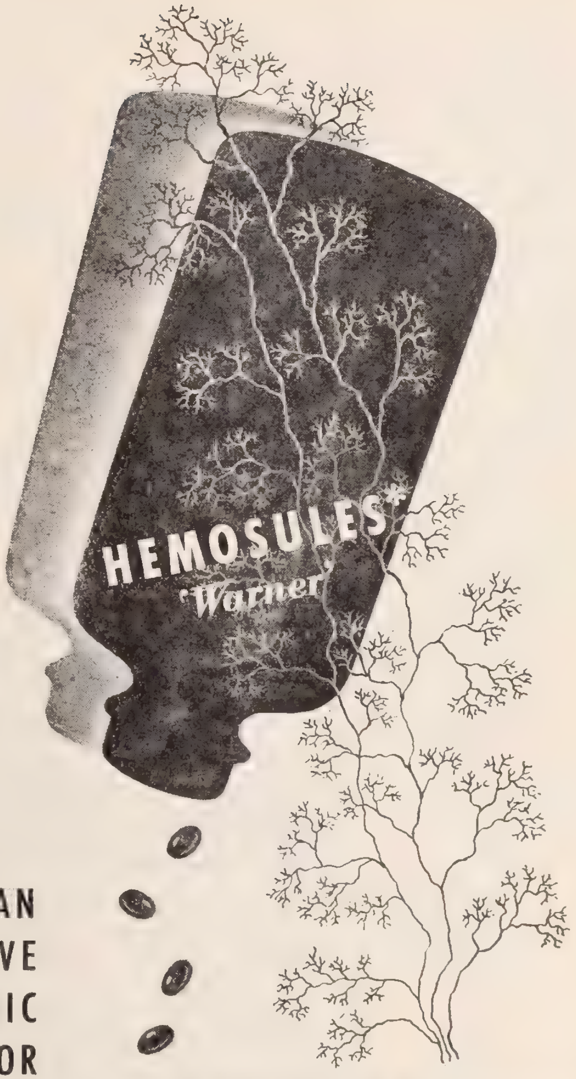

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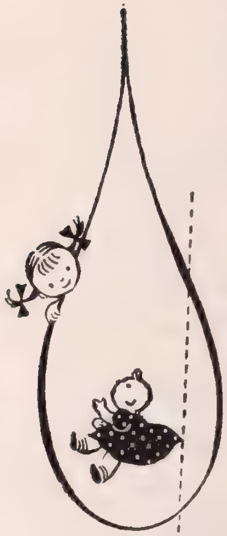

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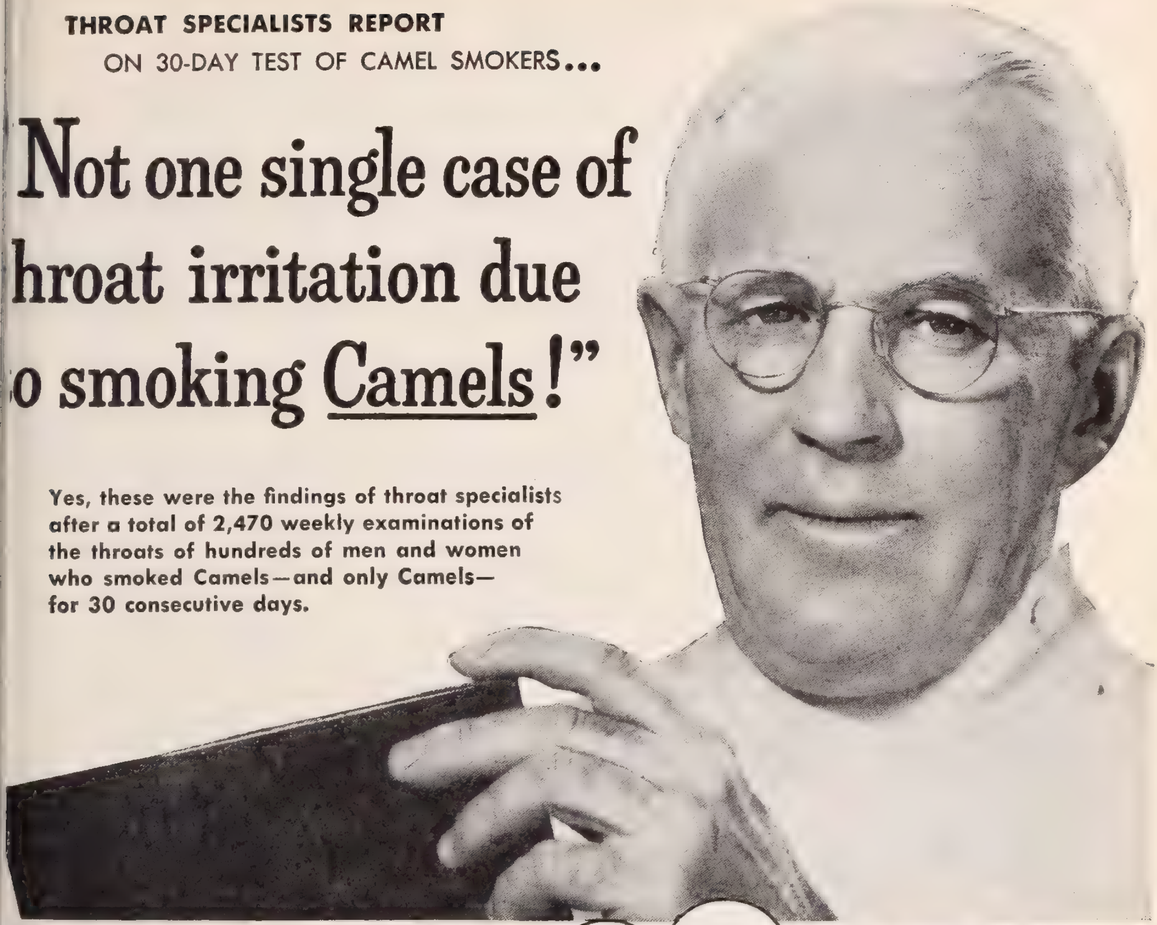

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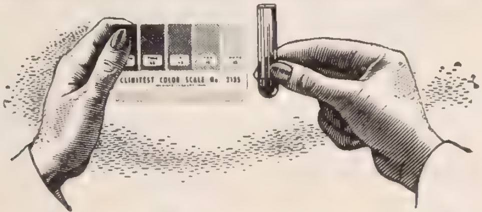

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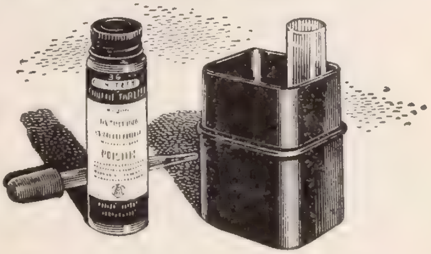

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1. WILLIAMS, V. P.: New England J. Med *236:* 322, 1947.
2. KARNOSH, L. J. and ZUCKER, E. N.: A Handbook of Psychiatry, St. Louis, Mosby, 1945.

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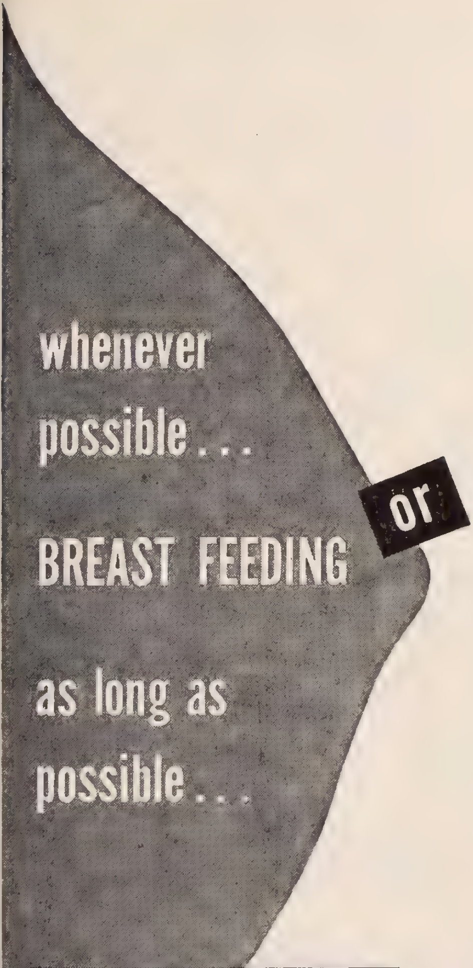
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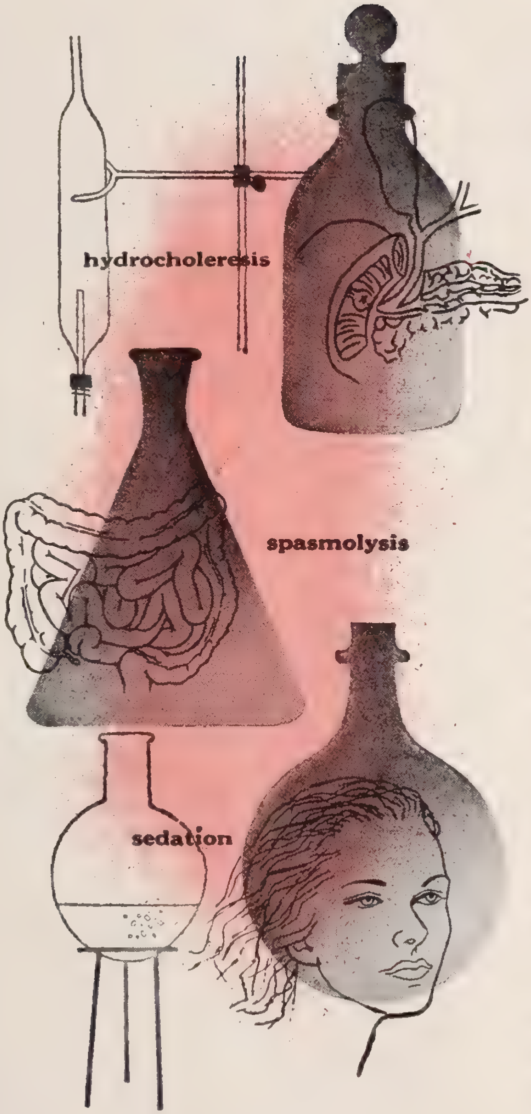

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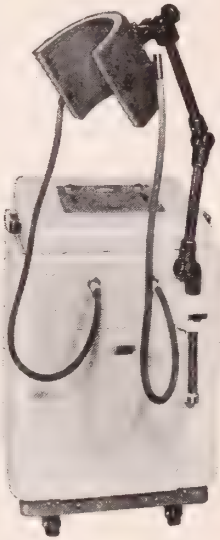

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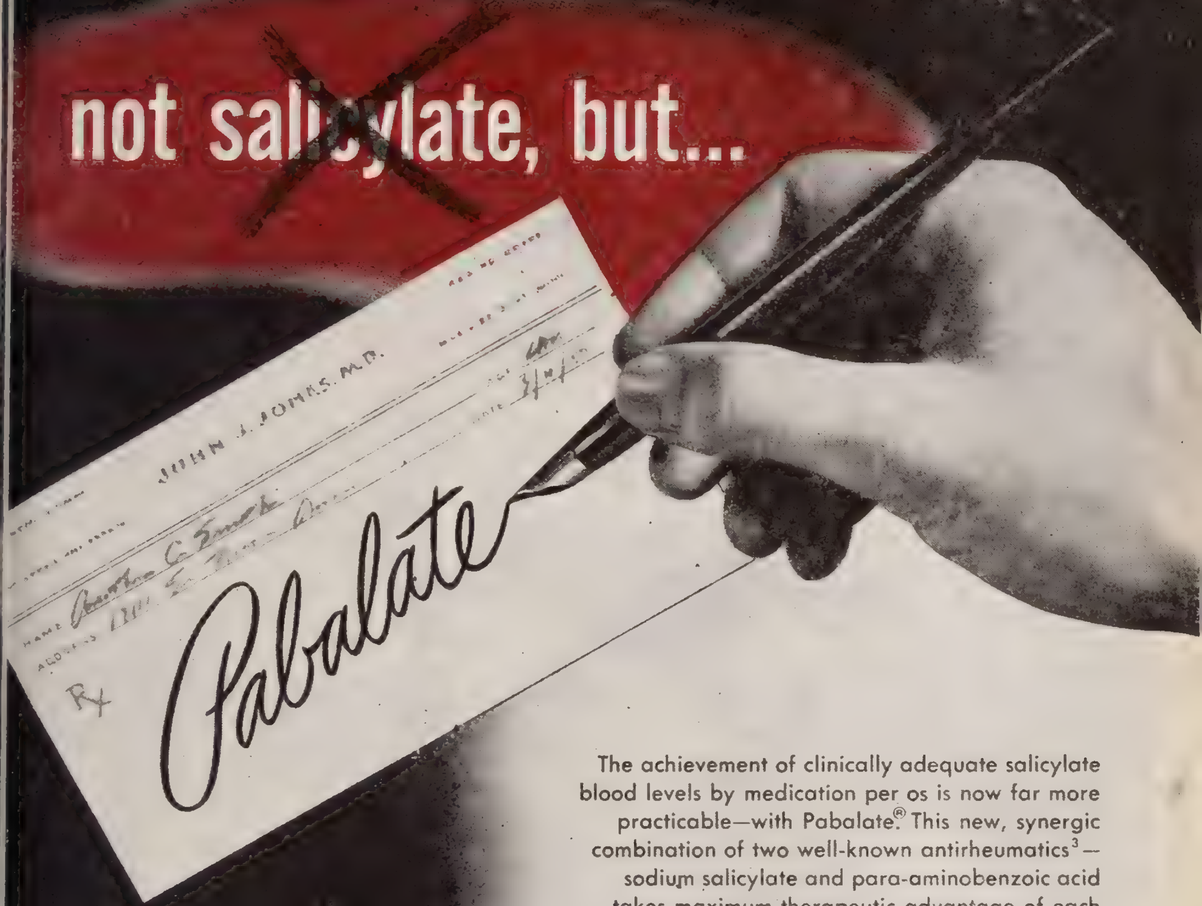

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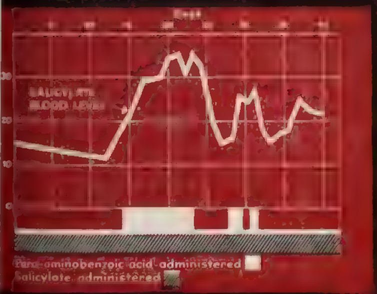

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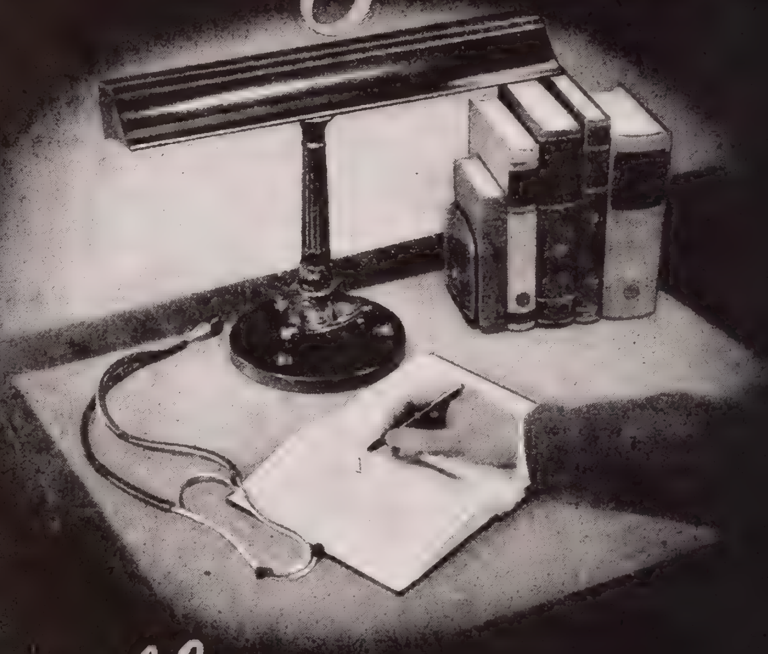

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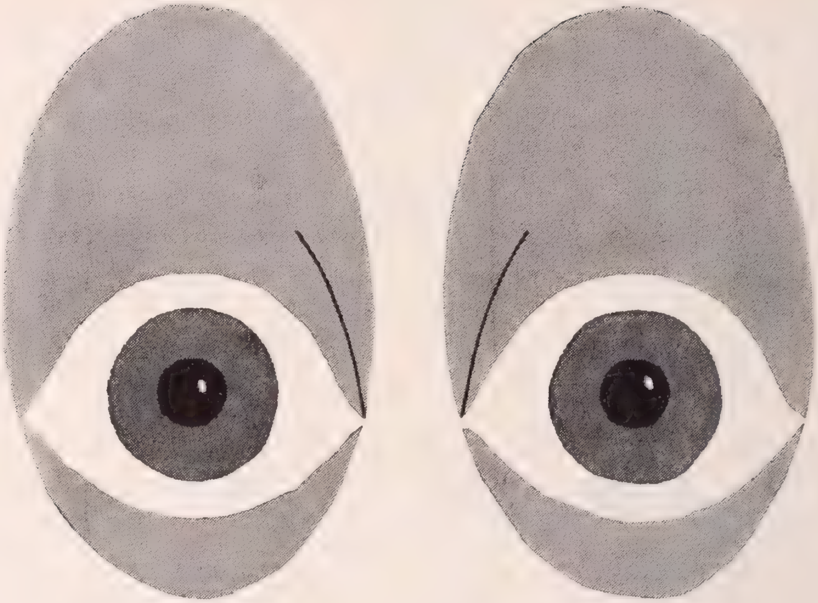

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1. King, E. Q.; Lewis, C. N.; Welch, H.; Clark, E. A., Jr.; Johnson, J. B.; Lyons, J. B.; Scott, R. B., and Cornely, P. B.: J. A. M. A. 143:1 (May 6) 1950.

2. Herrell, W. E.; Heilman, F. E.; Wellman, W. E., and Bartholomew, L. A.: Proc. Staff Meet. Mayo Clin. 25:183 (Apr. 12) 1950

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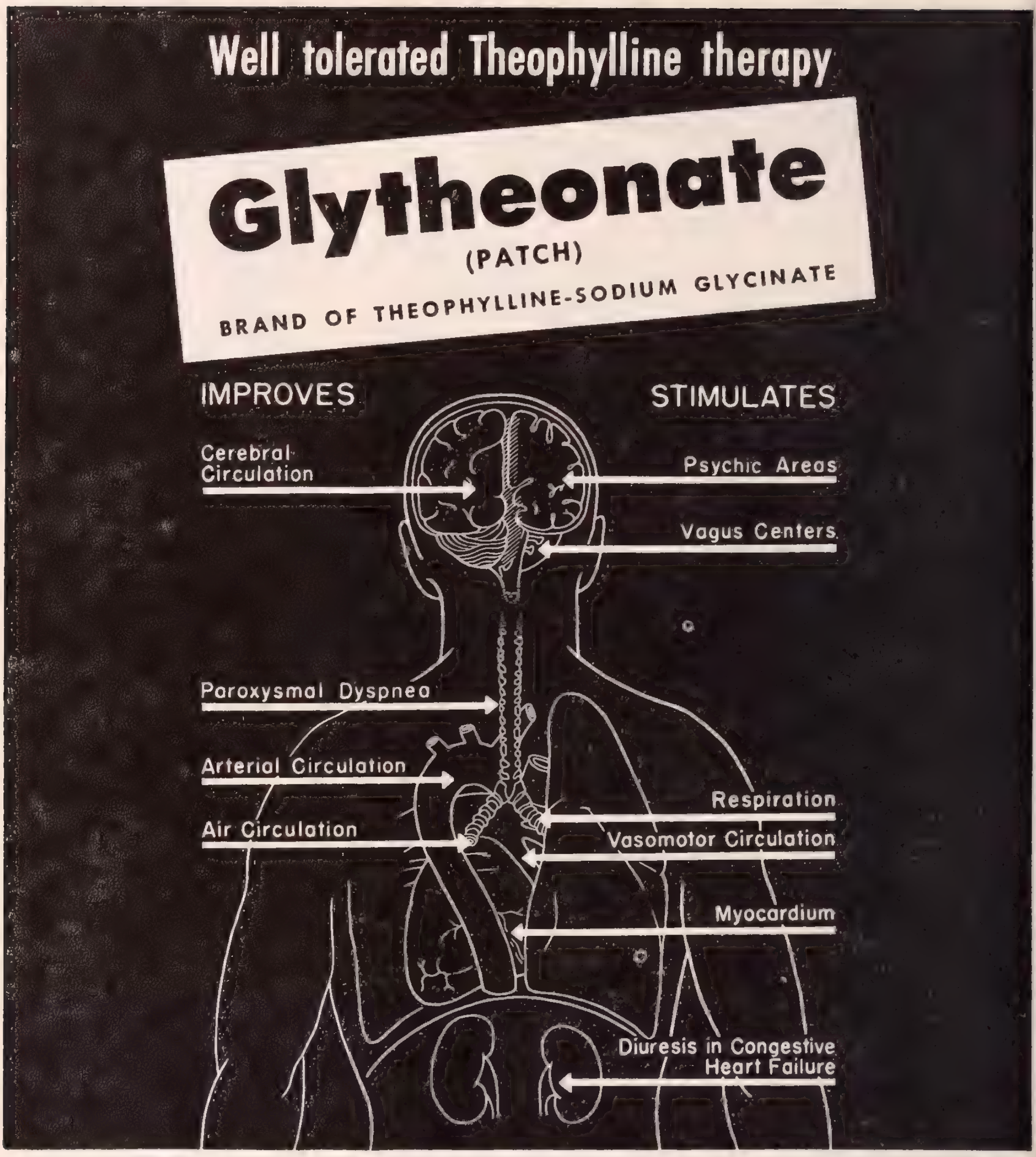
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BRAND OF THEOPHYLLINE-SODIUM GLYCINATE
IMPROVES
STIMULATES
Cerebral Circulation
Psychic Areas
Vagus Centers
Paroxysmal Dyspnea
Arterial Circulation
Respiration
Air Circulation
Vasomotor Circulation
Myocardium
Diuresis in Congestive Heart Failure

GLYTHEONATE is a combination of theophylline and sodium glycinate representing 50% theophylline U.S.P.

GLYTHEONATE permits intensive oral theophylline therapy with minimal gastric irritation[1, 2] in treating bronchial asthma and Cheyne-Stokes respiration, and in relieving paroxysmal attacks of cardiac dyspnea. Indicated in all cases where aminophylline is used.

Available as:

TABLETS Plain (Uncoated)—containing theophylline-sodium glycinate 325 mg. (5 grs.), representing theophylline U.S.P. 162 mg. (2½ grs.). In bottles of 100 and 500.

SYRUP—Each teaspoonful (5 cc.) contains theophylline-sodium glycinate 325 mg. (5 grs.) representing theophylline U.S.P. 162 mg. (2½ grs.). In pint and gallon bottles.

SUPPOSITORIES (Rectal)—containing theophylline-sodium glycinate 0.78 Gm. (12 grs.), representing theophylline U.S.P., 0.39 Gm. (6 grs.). Boxes of 12 suppositories.

Also tablets with Phenobarbital, tablets with Phenobarbital and Racephedrine and tablets with Phenobarbital and Rutin.

THE E. L. PATCH COMPANY, Stoneham, Mass.

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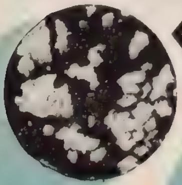
2. Bubert, H. M. and Cook, S.: S. Med. Journ. *41*:146 (Feb.) 1948.

RENNET-CUSTARDS . . . FOR ANY DIET . . . AT ANY AGE

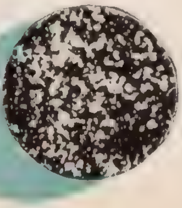
Younger Infants

Rennet-custards, made from uncooked milk with "Junket" Brand Rennet Powder or Tablets, are among the first desserts advised by pediatricians for young infants. These delicious, eggless milk desserts, more easily digested than milk itself, help to cater to the younger infant's developing preference for solid foods—thus permitting early spoon feeding of a pleasing new texture in a desirable variety of flavors and colors. Quickly prepared, and in no way changing the nutritive values of uncooked milk, rennet-custards afford a welcome diversity to, and heightened interest in, this all-important food for the younger infant. Mothers will appreciate your specific recommendation on your Diet Lists.

"JUNKET" BRAND FOODS
DIVISION
Chr. Hansen's Laboratory, Inc.
LITTLE FALLS, N. Y.
J-15-100



Untreated Milk—showing coarse, tough curds, often hard to digest.



Rennet Dessert Curds—milk with rennet added, showing fine readily digested curds.

"Junket" Rennet Powder—sweetened, six flavors.
"Junket" Rennet Tablets—unsweetened, unflavored (particularly for very young infants and diabetics).

"JUNKET" RENNET POWDER
makes MILK into RENNET-CUSTARDS
NET WT 1½ OZS
"JUNKET" RENNET TABLETS
for making RENNET-CUSTARDS ICE CREAM COTTAGE CHEESE

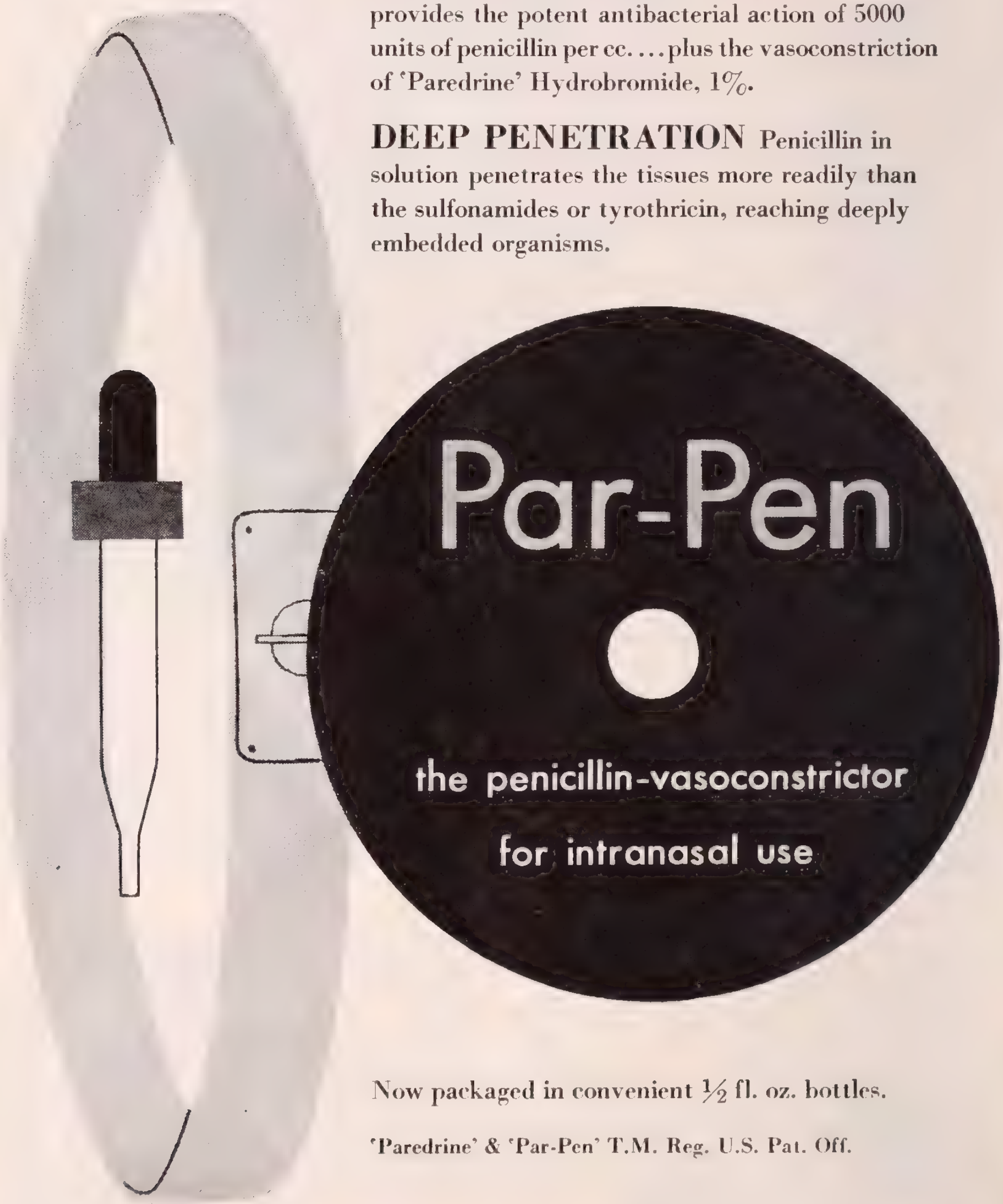
"JUNKET" *is the trade-mark of Chr. Hansen's Laboratory, Inc. for its rennet and other food products.*

"Of all the medications tried for treatment of the common cold during my thirteen years as Chief of Otolaryngology at this school*, [Par-Pen] has proved the most satisfactory."

Furlong, T.F., Jr.: Clinical Test of a New Spray, Arch. Otolaryng. 48:658.
**The Pennsylvania School for the Deaf, Philadelphia*

POTENT BACTERIOSTASIS Par-Pen provides the potent antibacterial action of 5000 units of penicillin per cc. . . . plus the vasoconstriction of 'Paredrine' Hydrobromide, 1%.

DEEP PENETRATION Penicillin in solution penetrates the tissues more readily than the sulfonamides or tyrothricin, reaching deeply embedded organisms.



Now packaged in convenient ½ fl. oz. bottles.

'Paredrine' & 'Par-Pen' T.M. Reg. U.S. Pat. Off.

Smith, Kline & French Laboratories, Philadelphia

CHODUCELL
Each tablet contains:
Methylcellulose ... 0.50 Gm
Cholic Acid-Maltbie ... 0.04 Gm
Activated bulk laxation for the relief of constipation.
Maltbie
MALTBIE LABORATORIES, INC.
NEWARK NEW JERSEY U.S.A.

NOW!

Activated

BULK FOR CONSTIPATION

CHODUCELL TABLETS

Choducell tablets stimulate the intestinal tract to give satisfactory results in more patients. In these new tablets the bulk-producing effect of methylcellulose is activated by pure Cholic Acid-Maltbie.

Experience has shown that bland bulk alone is often not enough to produce effective laxation. For that reason, while retaining all of the established benefits of methylcellulose, Choducell Tablets also contain pure Cholic Acid-Maltbie to stimulate gentle peristalsis.

Note the lower—hence economical—dosage!

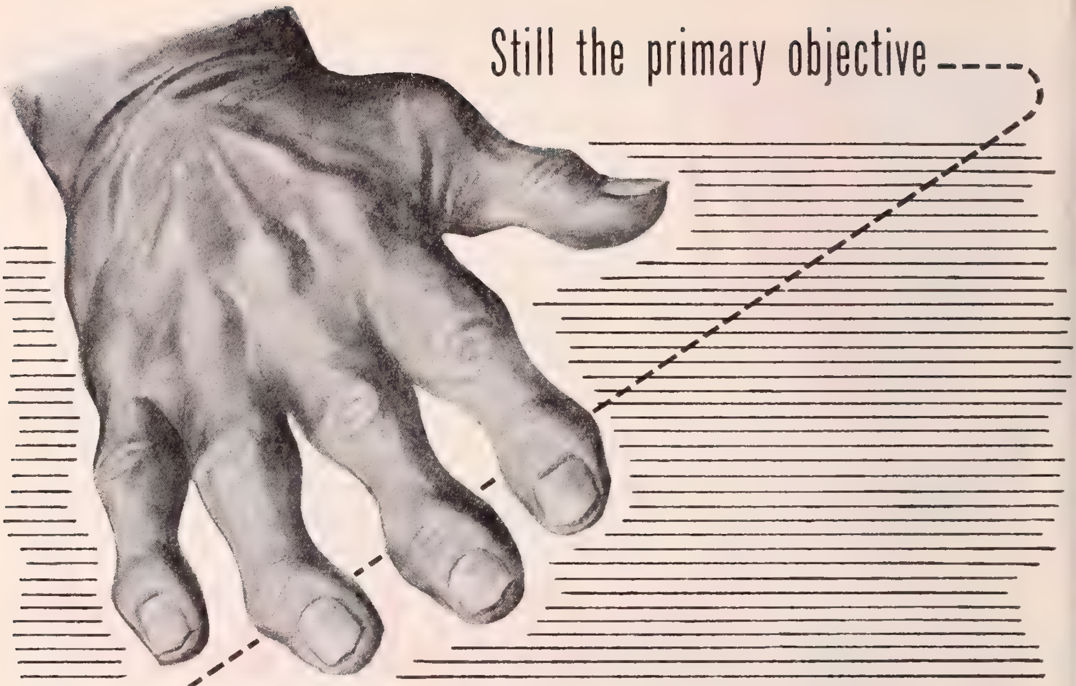
Each tablet contains:
Methylcellulose .....0.5 Gm.
Cholic Acid-Maltbie..0.04 Gm.

DOSAGE: The average dose is 2-3 tablets upon retiring accompanied by a full glass of water; in severe cases 2 or 3 tablets twice daily until normal stool is obtained.

MALTBIE

MALTBIE LABORATORIES, INC., Newark 1, New Jersey

Still the primary objective



Relief of arthritic pain

With Salcedrox, relief of arthritic pain is more positive than from salicylates alone.

Salcedrox may be given in adequate dosage to produce the high blood levels needed in the treatment of arthritis, rheumatic fever, neuritis, and allied conditions.

Because of the buffering agents present, Salcedrox is readily tolerated by the gastric mucosa. Its content of calcium reduces the systemic toxicity of sodium salicylate and the calcium ascorbate corrects the vitamin C deficiency frequently seen in rheumatic states.

Available on prescription through all pharmacies. Literature available on request.

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

SEMCo

Each Salcedrox Tablet supplies:

Sodium salicylate	5 gr.
Aluminum hydroxide gel, dried	2 gr.
Calcium ascorbate (equivalent to 50 mg. ascorbic acid)	1 gr.
Calcium carbonate	1 gr.

Salcedrox

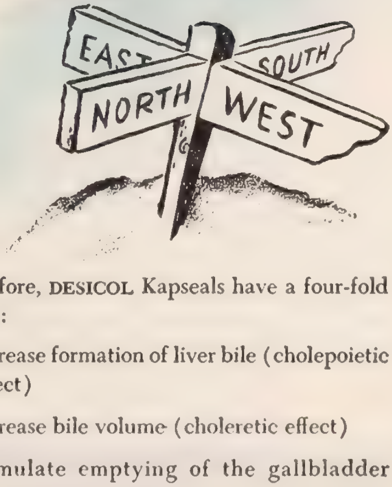
TABLETS

natural choice

DESICOL®

desiccated whole bile

for bile therapy



DESICOL medication is utilized in treatment of intestinal indigestion and putrefaction, of constipation, and of other conditions in which bile deficiency may be a factor.

DESICOL Kapseals® are a natural choice in management of disorders of the liver, gallbladder and biliary passages.

DESICOL, Kapseals, containing fresh whole bile with only the water removed, supply all the original bile factors. Action closely resembles that of natural whole bile in clinical effect.

Therefore, DESICOL Kapseals have a four-fold action:

increase formation of liver bile (cholepoietic effect)

increase bile volume (choleretic effect)

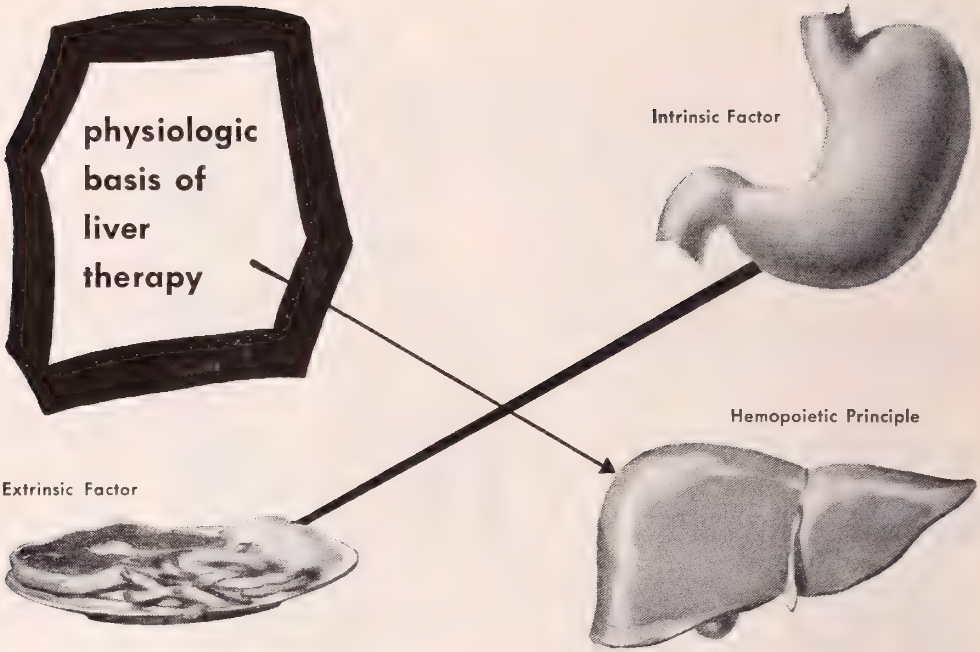
stimulate emptying of the gallbladder (cholagogic effect)

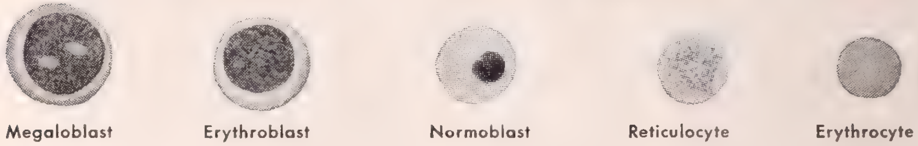
compensate for deficiencies of bile in the digestive process.

Kapseals DESICOL are supplied in bottles of 100 and 1000.

PARKE, DAVIS & COMPANY

MEDICAMENTA VERA





According to Castle, the hemopoietic principle in liver is a combination of an extrinsic factor derived from food and an intrinsic factor produced by the stomach. Liver Extract is also believed to contain certain secondary blood-building elements. Since the therapeutic properties of liver extracts vary widely, many failures in pernicious anemia therapy are reported due to the use of inert or deficient extracts.

Liver Preparations Armour

are carefully prepared to preserve the blood-regenerating, active constituents of the fresh liver. The finished extracts are carefully tested for therapeutic effectiveness on actual pernicious anemia patients in relapse.

Armour Liver Preparations

Liver Injection

2 U. S. P. Injectable Units per cc. (Crude.)

4 U. S. P. Injectable Units per cc.

Made from the unrefined 70% alcohol soluble fraction of liver extract in the manner described in the U. S. P. XIII for the preparation of Liver Injection (Crude.)

Liver Injection 2 U. S. P. units (Crude) (Armour) is available in 10 and 30 cc. rubber-capped vials.

Liver Injection 4 U. S. P. units (Armour) is available in 5, and 10 cc. rubber-capped vials.

10 U. S. P. Injectable Units per cc. in 1 cc., 5 cc., 10 cc., and 30 cc. rubber-capped vials.

15 U. S. P. Injectable units per cc. in 1 cc., 5 cc., and 10 cc. rubber-capped vials. A highly refined and concentrated preparation for massive dosage.

Solution Liver Extract—Oral

45 cc. equal 1 U. S. P. Oral Unit. A readily assimilable and therapeutically effective preparation for use when the oral route is indicated or preferred.

Liver Extract Concentrate—Capsules

9 capsules equal 1 U. S. P. Oral Unit. Odorless, tastless. Sealed gelatin capsules in boxes of 50, 100.

Have confidence in the preparation you prescribe — specify "Armour"

ARMOUR
Laboratories

HEADQUARTERS FOR MEDICINALS OF ANIMAL ORIGIN • CHICAGO 9, ILLINOIS

greater fall in blood pressure

decreased peripheral resistance

more efficient myocardial action

diminution of cardiac size

reversal of left ventricular strain patterns in the EKG

relief of palpitation dyspnea headache

clearing of hemorrhages and exudates in the optic fundi

PREDICTING RESPONSE

in essential hypertension

Striking objective improvement, in the individual case, can be obtained with veratrum viride Biologically Standardized in Craw Units, as available in VERATRITE and VERTAVIS.

A Therapeutic Alternative

In mild and moderate hypertension (Grades I and II), which accounts for more than 70 per cent of all hypertensive cases, VERATRITE is the choice of therapy and may be used routinely in everyday practice without undesirable side-effects. VERATRITE contains, in each tabule, veratrum viride (3 Craw Units) with sodium nitrite and phenobarbital.

In severe, resistant hypertension (Grade III) *and hypertension complicated by cardiac failure,* VERTAVIS can effect dramatic response. Adequate supervision of the patient and fine adjustment of dosage to the individual case are essential. VERTAVIS is a single agent, containing in each tablet veratrum viride (10 Craw Units).

Samples and literature on both VERATRITE and VERTAVIS, including clinical reports, are available on request.

Veratrite®

for mild and moderate hypertension

Vertavis®

for severe, resistant hypertension

IRWIN, NEISLER & CO. • DECATUR, ILLINOIS

Service while it's hot

GE MOTTO

And that's exactly what we mean. GE X-Ray service is on the spot as soon after your S O S as we can get to your office.

Take for instance the fire that put the x-ray department of a Long Island hospital out of commission . . . damaging beyond repair their diagnostic x-ray panel. Prepared for any contingency, the hospital pressed a mobile unit into action and called GE X-Ray service.

It took all night and two crews of servicemen to do it, but by dawn — the hospital's x-ray department was back in full operation.

This story is typical of the hundreds of documented GE service reports in our files. A service which proudly lends a new, broader conception to the guarantee that stands back of every GE installation.

GENERAL ELECTRIC
X-RAY CORPORATION

Direct Factory Branches:

ALBANY — 8 Elk St.
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ELMIRA — 100 Woodlawn Ave.
NEW YORK CITY — 205 E. 42nd St.
ROCHESTER — 66 Scio St.
SYRACUSE — 1020 Genesee St.

NOW, peak performance in non-narcotic COUGH CONTROL with ROBITUSSIN®

'ROBINS'

ONE PINT
ROBITUSSIN
A. H. ROBINS CO. INC.

In Robitussin, Robins now makes available a potent new and different therapeutic weapon for the relief of cough. Its major component is glyceryl guaiacolate, shown by recent dependable investigative techniques to be unexcelled for its intense and prolonged action in increasing R.T.F. (respiratory tract fluid).[1,2,3] Also included in the Robitussin formulation is desoxyephedrine—an adrenergic agent to prevent bronchial spasm[5]—which lifts mood and improves patient's sense of well-being.[4] Robitussin's highly palatable aromatic syrup vehicle appeals to young and old alike. Robitussin makes expectoration easier and freer and diminishes dry, irritating cough. It is non-toxic, non-narcotic.

USES: Acute colds of head and chest, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, influenza and measles. Helpful as a palliative of harmful cough in tuberculosis, asthma and paranasal sinusitis.

FORMULA: Each 5 cc. (1 teaspoonful) of Robitussin contains:

Glyceryl guaiacolate	100 mg.
Desoxyephedrine hydrochloride	1 mg.

In a palatable aromatic syrup

DOSAGE: Adults: 1 to 2 teaspoonfuls, repeated every 2 to 3 hours as necessary. Children: ½ to 1 teaspoonful according to age, 3 or more times daily.

SUPPLIED: In pints and gallons.

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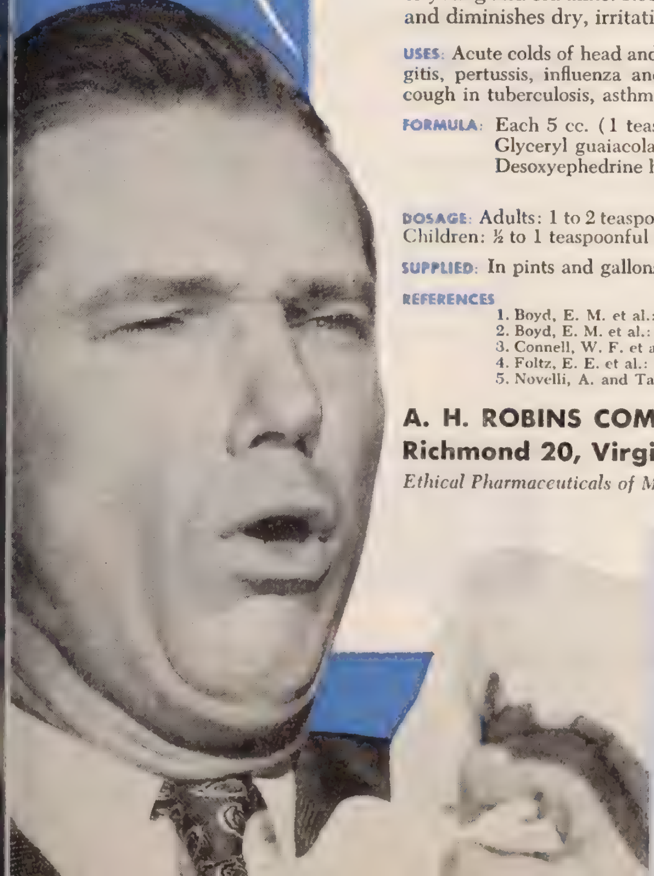
5. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.

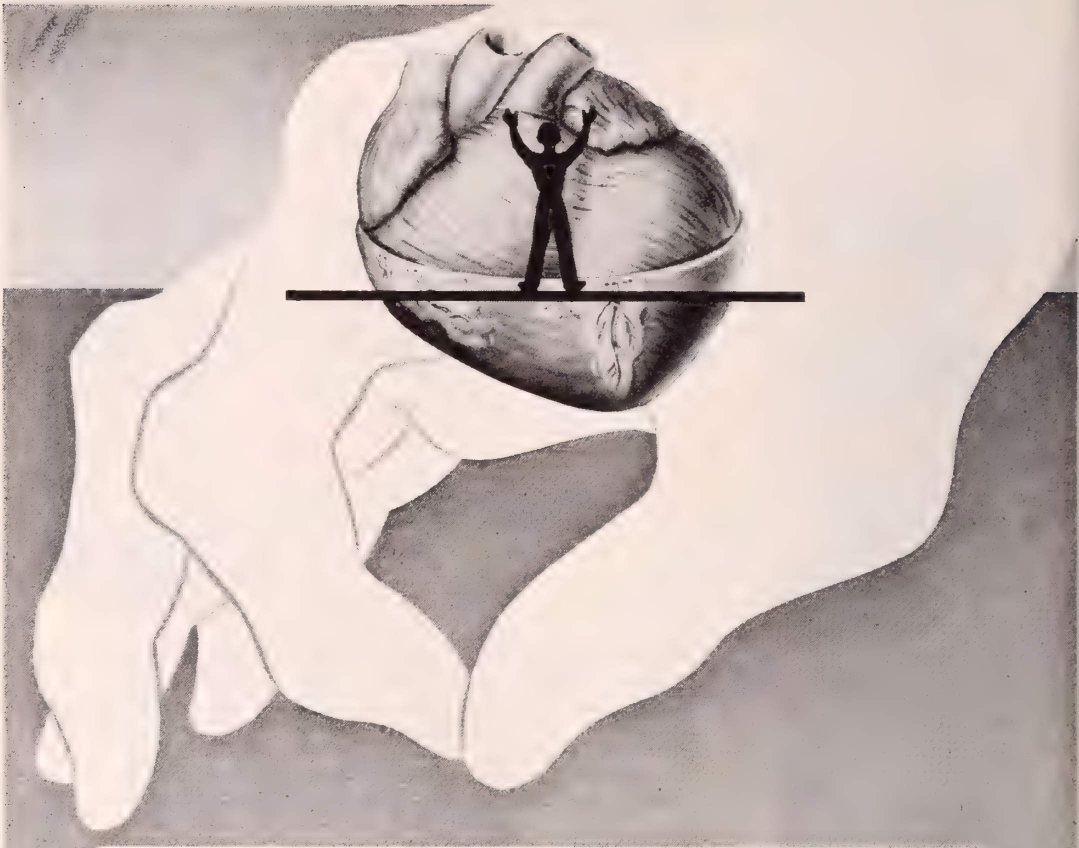
A. H. ROBINS COMPANY, INC.
Richmond 20, Virginia
Ethical Pharmaceuticals of Merit since 1878



to facilitate productive cough . . .
to minimize harmful cough

℞ Robitussin

Robins



HIGHER NEW ANTIRHEUMATIC THERAPY

SALICYLATE LEVELS

VITAMIN C PROTECTION

Pabasyl Tablets represent a new concept in antirheumatic therapy with the salicylates. Each enteric-coated tablet supplies:

Para-Aminobenzoic Acid* ...0.3 Gm. (5 grains)
Sodium Salicylate ....0.3 Gm. (5 grains)
Ascorbic Acid ....0.01 Gm. (10 mg.)

Pabasyl Tablets afford rapid relief of pain, fever and inflammation in many rheumatic diseases because they provide:

1. **HIGHER Salicylate Levels** — With simultaneous administration, Paba and salicylates have a reciprocal action that increases salicylate concentration in the blood.

**As the Sodium Salt.*

2. **LOWER Salicylate Dosage** — Paba not only boosts the salicylate level attainable with a given salicylate dose but also in itself contributes analgesic and antipyretic actions.

3. **Vitamin C Protection** — Ascorbic acid maintains Vitamin C levels often depleted by fever and salicylate therapy.

Enteric coating allays gastric irritation.

pabasyl

In Bottles of 100 Tablets.

Dosage adult: 2 tablets three times a day.

I.V.C®

IVES-CAMERON COMPANY, INC.
22 EAST 40th STREET, NEW YORK 16, N. Y.

Specifically for the Pregnant Patient

***For dietary supplementation, there is nothing better than White's* Mol-Iron with Calcium and Vitamin D**

Now for convenience in prescribing to pregnant and lactating patients, Mol-Iron—the most effective iron therapy known[1, 2, 3]—has been supplemented with generous amounts of calcium and phosphorus in an optimum ratio plus adequate vitamin D.

Each easily swallowed, soft gelatin capsule contains:

Mol-Iron	198 mg.
Dicalcium Phosphate (anhydrous)	869 mg.
Vitamin D_3	200 units

Prophylactic Dose: One capsule three times daily after meals.

Therapeutic Dose: Two capsules three times daily after meals (providing 240 mg. Fe daily).

Supplied: Soft gelatin capsules in bottles of 100.

Also: Mol-Iron Tablets in bottles of 100 and 1000; Mol-Iron Liquid in bottles of 12 fluid ounces; and Mol-Iron with Liver and Vitamins, capsules in bottles of 100.

White's **Mol-iron®**

WITH

CALCIUM AND VITAMIN D

WHITE LABORATORIES, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

1. Dieckmann, W. J., and Priddle, H. D.: Am. J. Obstet. & Gynec. *57*:541, 1949
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3. Dieckmann, W. J., et al.: Am. J. Gynec. *59*:442, 1950

let's not get in this fix!

You're hearing a lot about x-ray films getting tighter . . . but right now we don't see empty bins in prospect unless people lose their heads piling up films. That's the sure *quick* way to a return of rationing and all that.

What to do? *Put your trust in a reliable supply source and relax.* Past experience is a present comfort to the many who have learned that Picker is a staunchly dependable source for the films and supplies it takes to keep an x-ray department running.

Picker
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There are Picker Service Depots and Sales Offices in principal cities of the U.S. and Canada: all alertly at your service in providing x-ray apparatus, accessories, and supplies. Picker X-Ray Corp., 300 Fourth Ave., N.Y. 10

a *dependable* **source of supply**

Separate for Stability . . .

The lyophilized factors of *Lyo B-C*® are stable indefinitely under refrigeration; combined with water for injection, they present a potent grouping of the principal B-complex elements and vitamin C. Intravenous administration of *Lyo B-C* is indicated in treatment of deficiency states associated with surgery, increased metabolism, prolonged infusions and other circumstances tending to deplete stores of the vital water-soluble B-complex and vitamin C. *Lyo B-C* vitamins are rapidly and completely absorbed following intramuscular or intravenous injection, and are a valuable addition to infusions of glucose, plasma, saline, Ringer's or amino acid solutions.

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for

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Lyo B-C® (IMPROVED)

Principal B-Complex Factors and Ascorbic Acid

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Principal B Complex Factors and Ascorbic Acid
SHARP & DOHME
86452A2
WATER FOR INJECTION
Made in U.S.A.
SHARP & DOHME, Philadelphia
86058A1

Each *Vacule*® vial contains:

Thiamine hydrochloride (vitamin B_1)	100 mg.
Riboflavin (vitamin B_2)	10 mg.
Pyridoxine hydrochloride (vitamin B_6)	10 mg.
d-Panthenol (equivalent to 58 mg. of calcium pantothenate)	50 mg.
Niacinamide	500 mg.
Ascorbic acid (vitamin C)	500 mg.

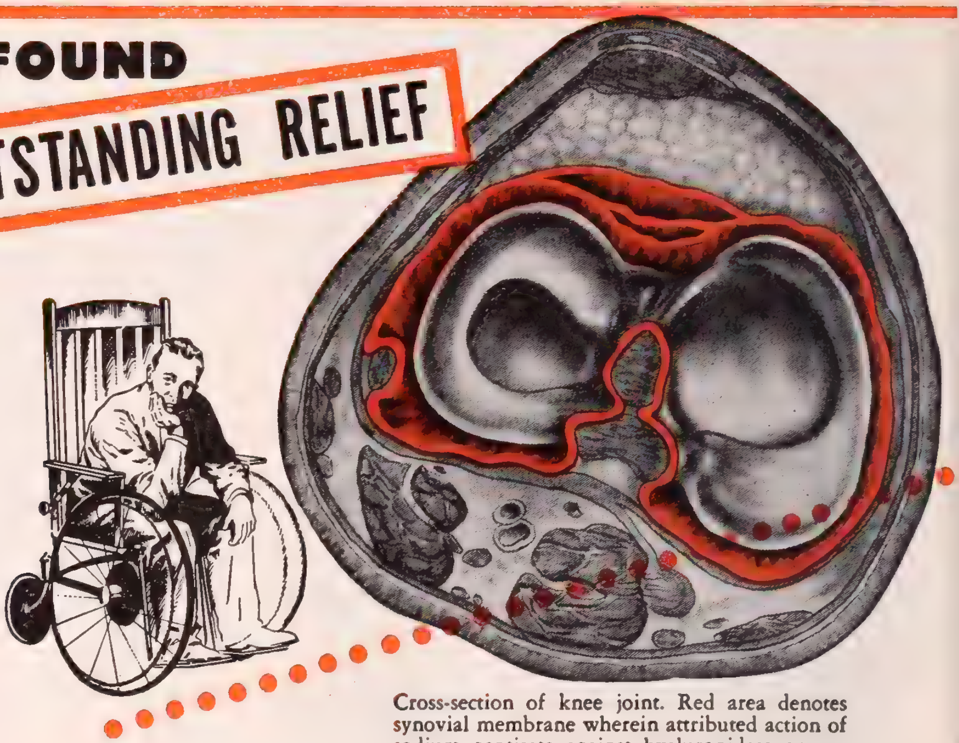
Supplied in 5-cc. *Vacule* vials.

Sharp & Dohme, Philadelphia 1, Pa.

RHEUMATIC CASES OF

FOUND

OUTSTANDING RELIEF



Cross-section of knee joint. Red area denotes synovial membrane wherein attributed action of sodium gentisate against hyaluronidase occurs.

Clinical work now being carried on with GENTARTH on arthritic patients, some of whom have been suffering for 30 to 35 years, reveals that this new Raymer formula gave relief beyond that ever experienced with any previous drug. *Not a single case of intolerance has been reported.* Furthermore, toxicologic reports indicate that on a weight-for-weight basis, GENTARTH is less toxic than aspirin.

GENTARTH *contains in each salol-coated tablet:*

Sodium Gentisate	*100 mg.*
Raysal *(representing 43% Salicylic Acid and 3% Iodine in a Calcium-Sodium Phosphate Buffer Salt Combination)*	*325 mg.*
Succinic Acid	*130 mg.*

Recommended dosage:

2 or more tablets, 3 or 4 times daily (after meals and before bedtime)

Available at all pharmacies on prescription

Nearly a Third of a Century Serving the Physician

RAYMER PHARMACAL COMPANY

Pharmaceutical Manufacturers

30-35 YEARS' STANDING

WITH GENTARTH

The New Gentisate-Containing Anti-rheumatic

GENTARTH INHIBITS SPREAD OF HYALURONIDASE

While the basis of GENTARTH is buffered salicylate, still the accepted stand-by in the arthritides, to it has been added sodium gentisate which Meyer and Ragan[1] have shown to bring favorable results in rheumatoid arthritis and acute rheumatic fever. Pain, swelling and joint inflammation disappeared. The action of sodium gentisate has been attributed to its inhibition of the spreading effect of hyaluronidase.[2, 3] *Raymer has pioneered in making sodium gentisate available to the medical profession.* Succinic acid, also present, protects against decrease in prothrombin time, a necessary precaution in continued salicylate therapy.

GENTARTH *Tablets are supplied in bottles of 100, 500, 1,000.*
Also Available Sodium Gentisate Tablets 325 mg.—bottles of 100. Sodium Gentisate (powder) for prescription formulation through leading pharmacies.

[1] Meyer, K. & Ragan, C.: Mod. Concepts of Card. Disp., 17:2 (1948)
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[3] Guerra, J.: J. Pharm. Exp. Ther., 87:1943 (1946)

TRY A CASE ON GENTARTH

Fill in the coupon. Let Raymer send you enough GENTARTH Tablets for one case for a week. Marked results in pain-relief should be demonstrated in that time. Reduction of swelling and/or inflammation usually follows.

N. E. Cor. Jasper & Willard Sts.
Philadelphia 34, Pa.

Literature available upon request

RAYMER PHARMACAL COMPANY Dept. NYS
N. E. Cor. Jasper & Willard Sts.,
Philadelphia 34, Pa.

Gentlemen:

Please send me free sufficient GENTARTH Tablets for a clinical trial for 1 week.

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TRADEMARK REG. U.S. PAT. OFF.
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JULIUS SCHMID, INC.
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AMERICAN MEDICAL ASSOCIATION

PROVIDES PROTECTION WITHOUT IRRITATION

Evidence obtained by direct-color photography shows that the cervix remains occluded for as long as ten hours after an application of "RAMSES"* Vaginal Jelly.

"RAMSES" Vaginal Jelly immobilizes sperm in the fastest time recognized under the authoritative Brown and Gamble method of measuring the spermatocidal power of vaginal jellies or creams. This has been established by repeated tests for spermatocidal activity conducted by an accredited independent laboratory.

Clinical observation of patients receiving daily applications of "RAMSES" Vaginal Jelly for three-week periods reveals no evidence of irritation or other untoward effect.

"RAMSES" Vaginal Jelly is acceptable to even the most fastidious patient because it provides efficient protection without leakage or excessive lubrication. It is available at all pharmacies in regular and large tubes; the regular tube is also available in a package containing a measured applicator.

ACTIVE INGREDIENTS: Dodecaethyleneglycol Monolaurate 5%, Boric Acid 1%, Alcohol 5%.

A MARK OF Ramses DEPENDABILITY

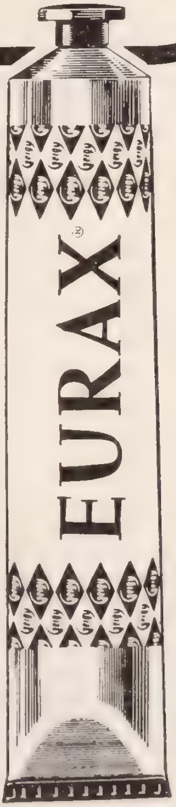
Julius Schmid, Inc. gynecological division
423 West 55th Street, New York 19, N. Y.
quality first since 1883

*The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

now to sleep—
perchance to dream
undisturbed
by night-time **itch**

EURAX®

ANTIPRURITIC CREAM



EURAX antipruritic cream, applied to the itching area before retiring, is your patient's best assurance of a full night of undisturbed sleep.

A totally new antipruritic . . . EURAX, original product of Geigy research . . . sets new standards in the treatment of pruritus. In a carefully controlled study[1] EURAX provided "excellent (complete) relief" in 66.2 per cent of cases, and "moderate (considerable) relief" in 27.4 per cent. In most instances a single application ensured relief for 6-8 hours or more. In no case did the cream lose its effectiveness on continued application.

Not an antihistaminic . . . not a -caine derivative . . . not a phenol preparation . . . EURAX gives quicker, longer-lasting itch control with notable absence of local irritation, sensitization or systemic toxicity.[3]

As a specific in the treatment of scabies EURAX Cream in a single application eradicates the infection in over 90% of cases.[2] A second application gives practically a 100% cure rate.[4] No prior bathing or scrubbing required. Bacteriostatic, EURAX accelerates healing in infected scabies.

1. Couperus, M.: J. Invest. Dermat. *13*:35, 1949.
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Geigy

EURAX (brand of crotamiton) Cream: 10% N-ethyl-o-crotonotoluide* in a vanishing cream base supplied in tubes of 20 Gm. and 60 Gm. and jars of 1 lb.

*U.S. Pats. # 2,505,681 2,505,682

E-19

GEIGY CO., INC., Pharmaceutical Division, 89-91 Barclay St. • New York 8, N. Y.

HABIT
TIME
OF BOWEL
MOVEMENT

ONE PINT
Petrogalar
Aqueous Suspension of Mineral Oil Plain
SHAKE WELL

SAFE . . .

Petrogalar, given at bedtime—not with meals—has no adverse effect on absorption of nutritive elements. It provides a relatively small but highly effective dose of mineral oil augmented by a bland, hydrophilic colloid base. The result is a soft-formed, easily passed stool, permitting comfortable bowel movement.

If preferred, Petrogalar may be given thinned with water, milk, or fruit juices—with which it mixes readily.

Wyeth®

Wyeth Incorporated, Phila. 3, Pa.

twice as safe...
twice as good...
FOR THE HEART

Foxalin advantages

1. Twice as safe as digitoxin.
2. No digitoxic heart punch.
3. Smooth, prolonged action.
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1. Stoll, Norman R.: Jrl. of Parasitology 33:1 No. 1 (Feb.) 1947.

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It is, therefore, concluded that the results obtained in the treatment of patients with carbon dioxide mineral water baths depend, in part, at least, on the absorption of carbon dioxide through the skin and its subsequent influence on the circulation and nervous system which occurs in the process of its natural elimination by way of the blood stream and the lungs.

As printed in American Heart Journal, Vol. 29, No. 1, Pages 44-61, January, 1945.

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Editorials

Warning

Dr. Vannevar Bush, one of this nation's leading atomic scientists and never one to speak at random, recently gave an ominous interview on enemy plans respecting the United States. A direct Soviet punch at this country in the near future, Dr. Bush thinks, is not likely. He believes the Kremlin will wait until it has a good-sized stockpile of atom bombs. Then, he forecasts a mass atomic raid on the nation's key points, with Washington and New York as the main targets. The Soviet aim would be to strike us a rapid series of blows from which we could not recover in time to keep Russia from taking us over for keeps—what was left of us, that is.

Dr. Bush sees no sense in trying to negotiate a treaty with the Kremlin to outlaw the atom bomb. You might just as well, he says, conclude a treaty with a wolf. The Communist overlords of Russia are as cold, calculating, and ruthless as any group of alleged humans ever seen in the world, and the United States is tops on their hate list.

This statement from one of our leading atomic scientists is certain to set a lot of Americans thinking afresh of the advisability of a preventive war—meaning to get in the first punch at Russia with our own atom bombs and the planes that can deliver them. Of such planes we have quite a number. Indeed, the current issue of the *Pilot*, official publication of the Roman Catholic Archdiocese of Boston, discusses preventive wars, and says such a thing may be necessary and entirely moral if and when we fail in all possible efforts to talk the Kremlin out of its world-conquest ideas.

How this argument will finally wind up, nobody can foresee just now. But it would seem sensible for Americans everywhere, and particularly those in the big city areas, to get going on civilian defense programs in earnest.

Careful reading of Korean news dispatches fails to indicate any considerable use of air potential by the Communist forces. Taken with Dr. Bush's views on the possibility of mass atomic raids, it seems highly likely that enemy air power is being conserved to that end. The atomic bomb is a weapon like any other, merely of more recent development than older arms. It is of limited military value without appropriate transport and seems particularly suited to the destruction of highly congested areas above ground and adjacent to water. This makes cities at both ends of the Empire State nearly ideal target areas.

Civilian defense organization, particularly of medical services, is complicated by the possibility of continuing contamination by radioactive substances and the care of refugees from large metropolitan areas. The State Department of Social Welfare will provide food, shelter, clothing, child care, and other necessities. The welfare plans call not only for services to those bombed out of their homes or those fleeing an anticipated attack, but also for the mobilization of the 32,000 professional social workers in public and private agencies in New York State. One interesting feature of the plan is the setting up of emergency rest shelters where victims may be cared for until they recover from the initial shock.

The problem of providing hospital care and medical services is one that will require the utilization of all of the medical manpower of the State, in some instances in several capacities. It is hoped that the training program for physicians of the State will have the enthusiastic support of all doctors. Some grim facts will have to be faced squarely. It is anticipated that the members of the Medical Society of the State of New York will heed the serious words of Dr. Vannevar Bush.

MEDICAL SOCIETY OF THE STATE OF NEW YORK

District Branch Meetings—1950

Date	District Branch	Place of Meeting	Time
October 18	Ninth	Hotel Thayer, West Point	Afternoon and evening (dinner)
November 1	Second	Garden City Hotel, Garden City	Afternoon and evening (dinner)

The President's Page

We have arrived at a most trying and critical period in our nation's history. An all-out effort and struggle is being made to preserve our freedom and that of many others throughout this world. It is going to mean sacrifices for all of us. Our standard of living will be greatly affected. Everyone will be asked to do his or her part, and we must all cooperate to the greatest degree in order to accomplish the great task.

This can be done, this must be done within the framework of our present system of government, but we will have gained little if we do not also fight to preserve within our own State and country the freedoms we inherited from our forefathers.

The spirit of initiative, pride of accomplishment, the will to do, and the assuming of one's own responsibilities must be revived, and, further, government paternalism must be stopped if we are to remain the greatest nation in the world.

The duties and obligations of the medical profession are many in ordinary times, but now, as we face this great national emergency, others are being added. We must not only provide the best of medical care to all our civilian population, but we must also provide sufficient doctors for our armed forces. This is imperative and will mean extreme sacrifices for many of our fellow members.

Another obligation and duty is for all of us to take an active part in civilian defense. We must be prepared at all times to render aid in any emergency regardless of location. All are urged to attend the courses in "Medical Aspects of Atomic Warfare," being given throughout the State by the Medical Society of the State of New York and the State Health Department. If another great war should break out, this country will not be spared from bombing attacks, and the possible magnitude of the number of casualties is truly alarming. We must be amply prepared!

Your State Society activities are many and varied. It would be amiss if I did not pay a tribute to the many men who give so freely of their time and knowledge for the welfare of the people of this great State as well as the medical profession.

I call your attention to the September 1 issue of your State Journal and ask you to read the proceedings of the House of Delegates of your great Society.

Just to mention a few of the important activities:

Public Relations—The Council Committee on Public Relations with Dr. Winslow as chairman has done an outstanding job, and we look forward to this year's accomplishments. We have now a new subcommittee of five active, enthusiastic workers to assist in the planning and carrying out of our public relations program. Public relations has two objectives: education at local, State, and Federal levels, and then, perhaps the most important of all, the improvement of personal physician-patient relationships.

Your attention is called again to the need for emergency medical care service in all areas. No locality should be left uncovered at any time. It is the duty of the medical profession to see that any individual needing medical care, regardless of economic status, should receive it. Grievance committees should be set up in all counties or groups of counties if they so wish. It is important that the medical profession correct any and all abuses that might arise through the activities of any of its members.

Voluntary Medical Care Insurance—This is one of the most important projects the medical profession has undertaken, and the success throughout the nation of these physician-sponsored plans has been a great surprise to many.

The plans in this State have done a tremendous job. The total membership as of June 30, 1950, was 2,449,948, but we have much more to do. All physicians must continue to cooperate and help their local insurance plans to expand and broaden their coverage within actuarial soundness. The service principle for the lower income group (that is income for a family up to at least $4,000) must be accepted if we are to do a more successful job and meet the challenge. Considerable progress has been made in developing a State-wide contract. This will provide a uniform contract throughout the State for those who wish one.

The American Medical Association is planning a nation-wide advertising campaign early in October for voluntary medical care insurance. This should give great impetus to the expansion of the voluntary medical care plan.

District Branches—The reactivation of the district branches into live working organizations through the whole year is a wholesome development and will mean much to the members of the county societies and the State Society. It is hoped that each branch will become so minded and concern itself with the many local problems as well as the scientific postgraduate lectures.

General Practitioners—Your State Society still believes that the general practitioner is the mainstay of American medicine and desires to do all in its power to help him in any way possible. It might point to our hope to create a Section on General Practice in connection with our Annual Meeting as an example of one of the steps being taken.

Good Citizenship—It is not only the duty of every physician and his or her family to register and vote, but it is also his or her duty as an American citizen to join forces with others who are opposed to any further socialization in this State or country and work and vote for the proper candidates. This is a most critical year, and you are asked to take an active part in this fall's campaign.

The strength of the medical profession is great when it is utilized to the fullest extent.

Woman's Auxiliary—I would like to pay a tribute to the wonderful work the ladies of the Woman's Auxiliary have done and are doing in each locality as well as State-wide. Their efforts on behalf of the medical profession in education, also in legislation, public health, and other projects throughout the State have been truly remarkable. What would we do without them? They deserve our deepest gratitude.

In closing, I beg all of you to support and to attend your local county society meetings. Take an active part. You owe it to yourself and your profession. Attend the Annual Meeting of the State Society; your Society needs you. You need the Society.

Carlton E. Wertz

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Scientific Articles

REHABILITATION: THE OTOLARYNGOLOGIST AND AUDIOLOGY

Francis L. Lederer, M.D., and Richard E. Marcus, M.D., Chicago, Illinois

(From the University of Illinois College of Medicine, Department of Otolaryngology, and the Illinois Eye and Ear Infirmary)

THE dictionary states that to "rehabilitate" implies the restoration to a former capacity or position; to reinstate; to re-establish in the esteem of others. We of the allopathic school of medicine are required to utilize every available method of treating disease and its resultant disturbances or deficiencies. The salvage rate is indeed very low when we fail to concern ourselves with the challenge of those states which are not easily corrected by the simple expedient of specific medication or surgical intervention. We thus join the ancients who, in some parts of the world, banned, ridiculed, tormented, and even destroyed those who were deformed, blind, or deaf.

Except for the lone efforts of a few otologists, notably Max A. Goldstein, Wendell Phillips, Horace Newhart, and Walter Hughson, the plight of the hearing handicapped was answered by the understanding educators in the field of the deaf. The otologists of that day, even as of the present period, tended to look upon those interested in the deaf and hard of hearing as some peculiar breed of man who had strayed from the straight and narrow path of medicine and surgery. It took a disastrous and devastating world conflagration to reveal the need for, and the possibilities of, well-organized coordinated programs of speech and hearing rehabilitation.

Whereas there had been but a few isolated instances of effort in behalf of the hard of hearing, the potential threat that a major portion of the population would be hearing casualties aroused both the Army and the Navy to establish programs for their personnel.[1] Apparently it took a war to bring home to a profession a definition of its responsibilities and a motivation sufficiently supported to be put into practice. From this effort, much was learned, and the potentialities of the field of audiology were clarified. The civilian counterparts were not difficult to find, but to the basic features of rehabilitation were added the problems of infants and children. Patterns had been set in these fields but were given impetus by the increased interest in the field of audiology by the general otolaryngologic group.

Audiology is defined as the science of hearing and, as such, is concerned with "the propagation of sound, its transmission to the ear, its fate within the human organism, the psychologic process based upon the interpretation of the perceived sound, the consequent reaction of the person to the mental concept engendered" (Canfield).[2,3] It is a term designed to integrate the important contributions to the development of the science of hearing which numerous special fields have made or can make. It is a field in which medicine, surgery, education, and electroacoustics are encompassed.

These special fields include, to name a few, aural physiology and pathology, acoustic physics, electronics, psychology, speech pathology, and education. A collateral group would be represented by prevocational counselors, occupational therapists, and medicosocial workers. With further integration and acceptance of a mutual interest in the science of hearing and the closely related function of speech, a vast body of fundamental knowledge will be accumulated in the years to come.

It should be clearly understood, however, that audiology, as defined above, is a basic science and is related to clinical otolaryngology in the same way as the basic sciences of anatomy or pathology are related to any branch of clinical medicine. This statement is made to clarify the existing con-

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Presented, by invitation, at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Ophthalmology and Otolaryngology, May 12, 1950.

fusion caused by an understanding in some quarters that audiology is a separate branch of the practice of medicine. Audiology is, and should be considered as, one of the basic sciences to be included in any course of study leading to the well-rounded practice of otolaryngology. This relationship was foreseen as a result of the experience of naval hearing rehabilitation.[4]

The otolaryngologist makes use of his knowledge of anatomy and pathology in the diagnosis and treatment of chronic suppurative sinus disease or carcinoma of the larynx. By the same token, he should utilize audiology in the diagnosis and treatment of the many ear diseases leading to hearing loss and the resultant deterioration of speech.

Hearing loss and associated speech and voice disturbances carry with them social, educational, vocational, and psychologic implications. It is clear then that the hearing or speech-handicapped patient is not adequately treated unless, and until, those profoundly disturbing aspects are managed, if medical or surgical measures are not available to restore the normal functions fully. It is also certain that the patient must be brought back to social and economic usefulness and that it is the otolaryngologist who must be concerned with the proper rehabilitative measures necessary to achieve that end. The otolaryngologist must join forces with his fellows in clinical medicine, the cardiologist, the orthopedist, the pediatrician —all of whom are obligated to do more for rheumatic fever, for poliomyelitis, for cerebral palsy than to administer medication or render surgical care. There are important areas in prosthetics, education, social and vocational guidance, in which the physician must give a qualifying interest and extend his responsibility to include counseling and active supervision of the complete process of rehabilitation.[5]

It is in the wide area of hearing and speech rehabilitation, therefore, that the otolaryngologist looks to the basic science of audiology for development and guidance. He does not practice audiology, he practices otolaryngology, and, as such, he is concerned with the millions of hearing and speech-handicapped children and adults for whom he must provide clinical service, including effective and orderly rehabilitation. His moral, ethical, and legal responsibility to those patients with disturbances of hearing or speech function does not terminate until he has counseled and supervised such rehabilitative processes as may be required. Since it is his total task, he should be held to account for failure to do so. It is the physician's responsibility, not the educator's. No otolaryngologist should find it necessary to evade such responsibility. It is, rather, a privilege and a station to be achieved, a station at which he becomes a physician to the fullest expression. After all, the otologist has studied the nature and causes of hearing loss; he must, therefore, concern himself with its effect upon the life of the individual and with the modern methods of helping his patient live in a normal, hearing world.

How shall the otolaryngologist accept his primary responsibility in hearing and speech rehabilitation?[6] He must first understand the social, educational, vocational, and psychologic implications of hearing and speech impairments. The child found to be deaf or to be developing profound hearing loss prior to the onset of speech will not be able to speak unless properly instructed. He will not be able to go to school or talk to his friends without special painstaking education. The child with some hearing before the development of speech will hear sounds imperfectly and reproduce them poorly in his imitation, so that his speech will be deficient or even unintelligible. He may be criticized by his family or taunted by his playmates and frequently may develop severe, reactive personality traits expressed as hostility, apathy, or variations thereof. It is apparent that the so-called "behavior" or "problem child" may in reality be a hearing-handicapped one. The adult, with sudden or gradually increasing hearing loss, finds himself at a disadvantage in ordinary social communication. Conversations with him become struggles accentuated by frequent interruptions and embarrassments. He loses confidence in a social situation and becomes aggressive or withdraws entirely. He frequently comes to regard himself as peculiar or eccentric and moves readily into the attitude of self-pity and antisociality. He worries about his job, or he may even be discharged for insubordination or noncompliance as a result of his hostility. Accidents in industry, slow work, or industrial problems of a medicolegal character may arise because of his faulty hearing. If aged, he is often doomed to a lonely frustrating existence, cast aside by his family, or excommunicated from ordinary social life. It is an undramatic, crippling disability, lacking the public appeal of a crutch or a cane. None of those with handicapping hearing loss can enjoy the radio, movies, or church services. Many of them are in actual danger of being unable to hear a warning bell, the telephone, an automobile horn, or an approaching streetcar.

When the otolaryngologist understands these implications, he can appreciate the importance of what he must be in a position to offer the patient with diseases of hearing or speech. He must first establish an accurate and comprehensive diagnosis with all differential diagnostic possibilities considered. This entails a careful history of local otologic symptoms and diseases, as well as constitutional data of importance. The history is of such importance, especially in young children, that a suggested outline for questioning the parents is offered:

A. Recent
  1. Hearing loss or speech delay first noted.
  2. Presence of response to any sounds.
  3. Variations in response and relation to upper respiratory infections.
  4. Frequency of colds, mouth breathing, nasal discharge, sneezing, asthma, eczema.
  5. Earaches or discharging ears.
  6. Previous irradiation of nasopharynx.
  7. High fevers, especially any associated with convulsions, apathy, coma, local or regional paralysis (meningitis, encephalitis, anterior poliomyelitis). Use of antibiotics prior to diagnosis. Type of meningitis, if diagnosed.
  8. Exanthemata (measles, scarlet fever, chickenpox), and other childhood diseases (mumps, whooping cough).
  9. Cranial trauma.
  10. Medications and toxic drugs; employment of streptomycin prior to onset of deafness.
  11. Chronic disease leading to malnutrition.
  12. Surgical procedures.
  13. Convulsions.
  14. Behavioral disturbances expressed as intense, constant activity, inattentiveness, temper tantrums, or nightmares.
  15. Allergies.

B. Prenatal
  1. German measles in the first trimester of pregnancy.
  2. Other virus disease (mumps, influenza).
  3. X-ray therapy or frequent exposures.
  4. High fevers.
  5. Medications and toxic drugs.
  6. Toxemia of pregnancy.
  7. Previous pregnancies and miscarriages.

C. Natal
  1. Spontaneous or induced labor.
  2. Unusual head position.
  3. Single or multiple delivery.
  4. Prematurity.
  5. Necessity for resuscitation (anoxia or asphyxia).
  6. Jaundice; condition of placenta.
  7. Duration of labor.
  8. Operative intervention.
  9. Placenta previa or hemorrhage.

D. Postnatal
  1. Feeding (choking, vomiting).
  2. Congenital anomalies.
  3. Jaundice.
  4. Syphilitic stigmata.

E. Developmental
  1. Held head up.
  2. Sat up.
  3. Crawling.
  4. Walking (type of gait).
  5. Voicing (delayed or unintelligible).
  6. Alertness of response.
  7. Gross intellectual capacity.
  8. Drooling.
  9. Feeding problems; sucking, etc.

F. Familial
  1. Other deafness or speech defect and *specific* type.
  2. Consanguinity.

Similarly, we offer an approach to history-taking in the adult in whom a hearing loss is a symptom and not a diagnosis. Questioning is to be carried out on the following basis:

A. Onset and course
  1. First noticed by self or others.
  2. Relation to other diseases, climate, or trauma.
  3. Gradual or sudden.
  4. One or both ears.
  5. Variations in hearing—intermittent or constant.
  6. How handicapping (socially or in business).

B. Tinnitus
  1. Description:
    (*a*) Duration.
    (*b*) Pulsating.
    (*c*) Intermittent or continuous.
    (*d*) Conditions which worsen it.
    (*e*) Pitch.
    (*f*) Comparison to other sounds.
    (*g*) One or both ears.
    (*h*) In ear or in the head.
    (*i*) Psychogenic influence.
  2. Diplacusis.

C. Dizziness or vertigo
  1. Duration; relation to hearing loss:
    (*a*) Before hearing loss.
    (*b*) After hearing loss.
  2. Description of sensation or attack:
    (*a*) Definite rotation of room.
    (*b*) Relation to position and movements of head or body.
    (*c*) Whether true whirling or unsteadiness.
    (*d*) Direction of rotation.
    (*e*) Direction of fall or tendency to fall.
    (*f*) Sweating.
    (*g*) Stertorous breathing.
  3. Severity:
    (*a*) Nausea or emesis.
    (*b*) Falling.
    (*c*) Effect of closing eyes.
    (*d*) Effect of fixing on an object.
    (*e*) Side on which they must lie for maximum comfort.

D. Discharge
  1. Onset; with or without pain.
  2. Relation to other diseases.
  3. Character:
    (*a*) Amount.
    (*b*) Duration.
    (*c*) Intermittent or continuous.

      - (*d*) Pulsating.
      - (*e*) Watery, pus, bloody, foul-smelling.
  - 4. One or both ears.
  - 5. Previous treatment.
- E. Pain
  - 1. Location.
  - 2. Duration.
  - 3. Severity.
  - 4. Intermittent or persistent.
  - 5. Relation to chewing or yawning.
  - 6. Relation to drainage.
- F. Headache
  - 1. Location and extent.
  - 2. Duration.
  - 3. Intermittent or constant.
  - 4. Nocturnal.
  - 5. Begins strong and eases up to a dull, boring type (abscess).
  - 6. Begins dull and increases to end sharply (meningitis).
  - 7. Relation to sensorium and other symptoms.
- G. Other otolaryngologic information
  - 1. Nasal (sinus trouble).
  - 2. Pharyngeal.
  - 3. Operative (tonsil and adenoid; nasal septum).
- H. General information
  - 1. Allergic:
    - (*a*) Hay fever.
    - (*b*) Hives.
    - (*c*) Eczema.
    - (*d*) Asthma.
  - 2. Miscellaneous:
    - (*a*) General health.
    - (*b*) Fever, chills, malaise.
    - (*c*) Operative.
    - (*d*) Sugar in urine.
    - (*e*) Previous treatments, such as "shots" in the hip.
  - 3. Occupational, marital, etc.
- I. Familial
  - 1. Deafness.
  - 2. Other noteworthy conditions.

A complete physical evaluation must be carried out; establishing and following a definite routine minimizes errors of omission. In the child, local ear disease must be differentiated from aphasia, mental retardation, and psychiatric and emotional disabilities, many of which masquerade as true cochlear disease.[7] Nasopharyngeal and eustachian tube disease, including respiratory allergies and infections, must be taken into consideration. Chronic otitis media, serous otitis media, foreign bodies, and wax impactions are frequent findings which are to be carefully differentiated. The otologist should rely on definitive tests of hearing in the young child and make full use of his tuning forks and the audiometer in the majority of children and in all adults.[8,9] With very young children, many of the tests may have to be carried out in a play situation so as to be able to quantitate the amount of hearing present. An objective attitude is to be encouraged, and the greatest patience must be exercised in the case of the so-called "uncooperative" child. A routine, embracing the examination of the infant, young child, and adult, is offered in the following comprehensive outline:

- I. Physical Examination
  - A. General appraisal
    - 1. Alertness.
    - 2. Interest.
    - 3. Response to gesture and attention.
    - 4. Gait (have child walk).
    - 5. Cranium.
    - 6. Extremities.
  - B. Eyes
    - 1. Oculorotatory defects.
    - 2. Congenital cataracts.
    - 3. Gross appraisal of vision.
    - 4. Reading disability.
    - 5. Other ocular defects:
      - (*a*) Syphilitic (interstitial keratitis).
      - (*b*) Congenital anomalies.
  - C. Nose
    - 1. External contour.
    - 2. Nasal septum.
    - 3. Mucosa (color).
    - 4. Discharge.
    - 5. Posterior choanae closure.
  - D. Mouth and teeth
    - 1. Cleft lip.
    - 2. Rhagades.
    - 3. Hutchinson's teeth.
    - 4. Palate.
  - E. Pharynx
    - 1. Tonsils.
    - 2. Tongue.
    - 3. Postpharyngeal wall.
  - F. Nasopharynx (indirect and direct)
    - 1. Adenoid vegetations.
    - 2. Eustachian orifices.
    - 3. Posterior choanae.
    - 4. Discharge.
  - G. Ears
    - 1. Auricles:
      - (*a*) Congenital anomalies.
      - (*b*) Acquired deformities.
    - 2. Branchial cleft fistulas.
    - 3. External canal.
    - 4. Tympanic membrane:
      - (*a*) Architecture.
      - (*b*) Translucency.
      - (*c*) Light reflex.
      - (*d*) Color of medial wall.
      - (*e*) Changes from normal.
  - H. Sinuses
    - 1. Transillumination.
    - 2. X-ray studies.
  - I. Larynx
    - 1. Indirect.
    - 2. Direct.
  - J. Neck

- II. Functional Tests—Tuning forks are not employed in the very young child. Keep the child's attention focused away from examiner; a play situation is best maintained.
  - A. Gross evaluation in infants and children
    - 1. Aural-palpebral reflex; head turning: Instruments used, such as the tom-tom, cowbell, clacker (cricket), cymbals, police whistle, and tambourine.
    - 2. Monitored speech in a free field in a soundproofed room.
    - 3. Adult procedures:
      - (*a*) Voice tests (whisper recommended).
      - (*b*) Tuning fork tests:
        - (1) Weber.
        - (2) Rinne.
        - (3) Schwabach.
        - (4) High tones.
        - (5) Low tones.
      - (*c*) Audiometry (before and after inflation):
        - (1) Pure tones.
        - (2) Speech reception and discrimination.
  - B. Labyrinthine tests
    - 1. Rotation.
    - 2. Caloric.
    - 3. Galvanic.
- III. Laboratory
  - A. Blood and serum
    - 1. Kahn.
    - 2. Rh factor (both of these first two for mother and child).
    - 3. Blood counts.
    - 4. Miscellaneous:
      - (*a*) Spinal fluid.
      - (*b*) Blood sugar.
      - (*c*) Urine.
  - B. X-rays
    - 1. Skull.
    - 2. Mastoid.
    - 3. Internal auditory meatus.
- IV. Educational, Social, and Psychologic Evaluation
- V. Speech Appraisal
- VI. Electroencephalography
  - A. Hearing evaluation
  - B. Intracranial changes

From his diagnosis, the otologist can reach some conclusions as to the possibilities for medical and surgical treatment. Encouraging parents to seek aid early in ear disease is a prime necessity. Wholesome respect and proper treatment of low-grade ear infections, as well as the recognition of the effect upon hearing and the life-endangering qualities of the chronic discharging ear, require emphasis. Remedial measures, medical as well as surgical, when applied early, may still be effective before irreparable damage is done. In a small percentage of patients who have bilateral hearing loss due to otosclerosis, the surgical measure of fenestration offers a possibility of a restoration to a practical hearing level. These cases, however, must be selected with exquisite care so as to avoid the further frustration that goes with the possible failure of the surgical procedure to achieve maximum results. After careful evaluation and consideration, when the otolaryngologist feels he is dealing with permanent, irreversible hearing loss, he turns to rehabilitative procedures, all of which are designed to make full use of the residual hearing by processes of education and retraining, using amplication where possible, in order to expand the capabilities of the deafened and hard of hearing to compensate in a complex world.[10-12] Vocational readjustment, psychosocial readaptation, resocialization, redirection of energies, and physical reconditioning are desirable goals in assessing and utilizing residual hearing and the personality assets (abilities and aptitudes) of each patient. To this end, the otolaryngologist avails himself of every modern device and of ancillary groups of specialists in the field of audiology.

What are the employed procedures? They include intelligibility testing to determine the extent of word discrimination possessed by the patient and also to evaluate the improvement in discrimination made possible with amplification in the presence of standardized noise. In addition, the selection and evaluation of hearing aids involves an inventory of all tests previously noted, such as voice tests, tuning fork tests, pure tone audiometry, speech reception tests, and the trial of a number of hearing aids under the same environmental conditions. No hearing aid restores normal hearing; it is, at its best, an aid. There is more adjustability present in the patient than in the hearing aid. He is taught as a hard-of-hearing person who wears a hearing aid and not as a normal person having to wear an aid. The patient receives a hearing aid selection under objective conditions in the sound-treated room and with his personal ear mold. A course in auditory training is given preparatory to the actual selection of the aid. In such a course he receives knowledge about his personal hearing loss; he is conditioned in the development of tolerance for amplified sound with explanations about psychologic effects of hearing loss (in group therapy principle), some instruction in speech reading and the use of auditory clues, and instructions in methods of practice at home and aid in the adjustment to life situations. He receives a psychologic survey, more detailed at the psychiatric center if necessary. For vocational and educational considerations in acquiring new skills, he is directed to local or state agencies concerned with the necessary type of counseling.

The patient with disease of the ear leading to hearing and speech dysfunction should be the

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ward of the otolaryngologist throughout these procedures and thereafter. The ears should be rechecked at needed intervals. Psychologic or vocational disturbances should be inquired into and immediate steps taken to see that proper counsel is given. Hearing testing with tuning forks and the audiometer are a part of the continuing follow-up, inasmuch as the hearing may vary considerably and other local or systemic disease may serve to alter the progress of the hearing loss.

Every otolaryngologist, if not most physicians, must not only have the knowledge of the problem which will permit the recognition of the hearing loss; he must also acquaint himself with the resources which are available to his patients. State departments of education and health, divisions and agencies organized for the care of the handicapped, local hearing societies, speech, hearing, and special education departments in universities or colleges, and hospitals having properly staffed departments of otolaryngology are in a position to offer counsel in the care of the deafened and hard-of-hearing children and adults.

What can be done to help the deaf and hard of hearing to conserve, train, and reinforce the hearing they have left (residual) may be expressed in medical and surgical care, audiologic training, and the utilization of electroacoustic aids. Actually, while some of these overlap, the treatment of the aurally handicapped to live and work successfully and happily in a hearing world divides itself into the approach which we have followed:

I. Preschool Child
  A. Parent education
    1. Individual explanation.
    2. Classes:
      (*a*) Jacksonville School for the Deaf institute.
      (*b*) Illinois Eye and Ear Infirmary evening classes.
      (*c*) Chicago Hearing Society.
      (*d*) Correspondence courses.
    3. Informative literature:
      (*a*) Facilities available in state.
      (*b*) "If You Have a Deaf Child."
      (*c*) Reading reference list.
  B. Supportive management
    1. Medical:
      (*a*) Vigilant otologic care.
      (*b*) Prevention of repeated infections.
      (*c*) Allergic.
      (*d*) Treatment of infections.
      (*e*) Irradiation treatment.
    2. Surgical:
      (*a*) Pharyngeal and nasopharyngeal.
      (*b*) Mastoid.
      (*c*) Middle ear (in bilateral microtia).
    3. Educational readiness:
      (*a*) Home teaching materials.
      (*b*) Social adjustment.
      (*c*) Family group adjustment.
  C. Multiple handicapped
    1. Aphasic:
      (*a*) General care.
      (*b*) Specialized education.
    2. Palsied:
      (*a*) General care.
      (*b*) Specialized rehabilitation.
    3. Blind:
      (*a*) General care.
      (*b*) Specialized rehabilitation.
    4. Cleft Palate.
II. School Child
  A. Parent-teacher education
    1. Conservation surveys.
    2. Proper seating arrangement.
    3. Seats equipped for amplification.
    4. Special speech reading classes.
    5. Special speech correction classes.
    6. Psychometric evaluation.
    7. Technics of home training.
    8. Understanding the handicapped.
  B. Special Education
    1. Residential school:
      (*a*) State.
      (*b*) Private.
    2. Public or day school:
      (*a*) No segregation, except for periods of special classes.
      (*b*) Educational placement.
      (*c*) Specially trained teachers to give audiologic rehabilitation in form of:
        (1) Arranging for hearing evaluation.
        (2) Auditory training:
          a. Knowledge of hearing aid and its use.
          b. Social adjustment to the aid.
          c. Speech reading.
        (3) Speech correction.
        (4) Psychosocial assessment and counseling.
        (5) Tutorial instruction to supplement classroom work.
  C. Supportive management
    1. Medical.
    2. Surgical.
III. Adult
  A. Treatment
    1. Medical:
      (*a*) Upper respiratory infections.
      (*b*) Allergic states.
      (*c*) Irradiation.
      (*d*) External otitis.
    2. Surgical:
      (*a*) Nose and nasopharynx.
      (*b*) Chronic suppuration.
      (*c*) Fenestration.
      (*d*) Congenital atresias.
    3. Rehabilitative:
      (*a*) Hearing aid evaluation and selection.

(*b*) Auditory training.
(*c*) Speech reading.
(*d*) Speech correction.
(*e*) Psychologic appraisal.
(*f*) Orientation and counseling.

How is this complete hearing and speech rehabilitation program to be supervised and achieved in actual practice? It is necessary, first of all, for the otolaryngologist himself to be educated in these procedures. Such education may be obtained at several rehabilitation centers in various university clinics where young otolaryngologists-in-training are already finding teaching available in clinical rehabilitation and its related basic science, audiology. After the otolaryngologist in practice has been adequately informed about rehabilitative procedures, what does he do then? It depends upon where he practices. Morissett has suggested possibilities of a cooperative technic.[12] In the larger metropolitan areas, hearing centers for clinical rehabilitation already exist. Patients may be sent there for retraining, hearing aid selection, counseling, etc. The family and the community have failed to answer the needs of the deaf and the hard of hearing—the family through lack of understanding of the person with the handicapping loss, and the community without realizing the economic load of improperly educated and trained members of its group. The physician may likewise be remiss in his duties if he fails to arouse the family and the community to the needs.

While certain areas in the United States have some coverage, there are many large communities that have either no facilities or inadequate facilities. Here some ingenious and imaginative otolaryngologists with a background of knowledge in rehabilitation may be able to arrange provision of some type of rehabilitation as an individual or in loose cooperation with others. It is important, however, in existing centers, or in programs yet to come, that the otolaryngologist take the leading part in the program in order to assure its success.[1,2,6,12,13] In the practice of clinical rehabilitation the otolaryngologist must be the responsible person. If necessary, one of the otolaryngologists must spend full time in the service of rehabilitation. It is exceedingly important that, in all university centers interested not only in clinical service to patients, but also in teaching undergraduates, postgraduates, and refresher courses, a full-time otolaryngologist conduct the program.

The otolaryngologist is concerned with a number of problems both in the practice of hearing and speech rehabilitation and in the basic science of audiology. Each will be considered separately for the purposes of this paper, although it is realized that some of the problems demand attention in both areas at the same time.

Problems in Hearing and Speech Rehabilitation

The otolaryngologist must first be aware of his debt to the military service experiences in rehabilitation.[14] He must accept the principles of that successful effort and then recognize that civilian rehabilitation will be similar in goals but completely different in practice. In the first place, neither he nor his patients act under compulsion on the basis of regimentation. Therefore, he educates himself and then his patients to the desirability of obtaining complete, organized, scientific rehabilitation. His education can come, or will come, from refresher courses or be a part of his regular residency training program. Secondly, the facilities for rehabilitation are yet to be satisfactorily organized, and technics for persuading patients to take advantage of those facilities are yet to be perfected. Civilian financial structures are quite different from military-supported centers. Domiciliary care is, or seems to be, economically impracticable, except in the care of the young deaf and hard-of-hearing population or where Veterans Administration patients are involved. Even here, the resistance to hospitalization is strong. Methods must be developed to provide the entire rehabilitation program within the framework of the patient's existing job schedule, school session, or nursery enrollment. We believe that we are on the way to solving that important problem at the Speech and Hearing Rehabilitation Unit, Illinois Eye and Ear Infirmary, University of Illinois College of Medicine.

The otolaryngologist must also apply himself to the complexities of the hearing aid problem if the future success of his part in rehabilitation is to be fulfilled. He should investigate and try to fathom the reasons why patients are unwilling to accept the fact that they do not hear normally and that they have a deep-rooted antagonism to the use of an artificial appliance. We need to know, too, why patients who suspect themselves of poor hearing wait so much longer to consult the physician than do patients who have failing vision, a limp, or some other defect unaccompanied by pain. In our experience these patients, in the majority, wait years before they consider consulting an otologist. We need to understand more about the otologic diagnosis and its relation to good or poor reception of the aid. For instance, does active labyrinthine alteration, which frequently accompanies the hearing loss, make for such distortion of sound that amplification becomes impossible or even harmful?

Inasmuch as the majority of patients must find assistance through hearing aids, the otolaryngologist must concern himself in all candor with the economic aspects of the instrument itself, its manufacture, wholesale distribution, retail sale and outlet, and upkeep problems, if he desires to render a complete service. From the patient's point of view, the selection of a hearing aid is based on the best sales talk provided by the most aggressive local dealer. The dealer is in business for a profit, which is to his credit, but he and the otologist have to get together on the best possible method of obtaining the proper hearing aid for the individual patient. Cost must be considered, but no favoritism must be shown, even though, admittedly, there is not too much difference between good aids. Too often, models of the hearing aid are quickly changed, the patient bears the brunt of the cost, and the referring otologist is embarrassed. The lack of commercial stability of the dealer is frequently the source of considerable concern. When, in one period of his business, he represents "X" aid and finds a better commercial advantage will accrue with the company making "Y" aid, he frequently leaves the patient and community no other choice than to change aids. Inasmuch as repair and replacement is a major item, local representation is a necessity and at times is the reason for the final choice of a given aid.

The otolaryngologist will want to extend his knowledge of psychosomatic medicine in order to understand instances of psychogenic deafness and to appreciate the profound psychologic disturbances that occur to the hearing- or speech-handicapped patient. He will, of course, realize that such knowledge will be kept in proper perspective and will not lead him into the trap of incomplete diagnosis, wherein occult physical factors are not looked for in the face of what seems to be obvious psychic change. There can be no greater danger than to categorize such patients as psychiatric disabilities without an unrelenting physical search, both by history and examination.

As an integral part of his task in rehabilitation, the otolaryngologist will be interested in school hearing surveys.[15,16] Here he may cooperate with local agencies such as the boards of health and education, hearing societies, Kiwanis, Lions, Rotary, Red Cross, Parent-Teacher Associations, etc., in an attempt to uncover instances of hearing loss in children that could not be found in any other way and to harness all available support working toward a common goal.[17,18] There is an increasing interest in school health programs, and the otolaryngologist will be called upon in his community to offer advice or assume leadership in the direction of a competent survey. There is a fertile field for the prevention, early diagnosis, and treatment of hearing loss in children. Industrial hearing surveys should also be instituted.

The need for a closer integration of the physician, the otologist, the educator, the public health official, the industrialist, the military services, the hearing aid manufacturers, and the community is apparent. Since there are overlapping dimensions of activity and interests, a gradual interdependence and reciprocal encouragement between the community, governmental agencies, medical and allied specialists is necessary. This demands a coordinated effort such as was demonstrated by teamwork in the Will County pilot hearing survey.[15]

The otolaryngologist must be concerned with the proper management of voice disorders, including the rehabilitation of the laryngectomized and cleft palate patient. He should understand the proper preoperative preparation of the patient who is to have his larynx removed, and he should be acquainted with the postoperative procedures followed in providing that patient with adequate means of voice communication.[19] The cleft palate patient is now receiving the attention of a coordinated group of specialists—oral and plastic surgeons, dentists, speech therapists, pediatricians, and otolaryngologists—and the varied needs of such a patient are considered from the over-all point of view.[20]

Problems in Audiology

Much basic otologic research falls within the realm of audiology. The otolaryngologist will be committed to any research program that will offer improved diagnostic aids or therapeutic advancements in the understanding and management of hearing and speech disorders. He needs to know more about the causes of hearing loss in the newborn and the effect of extra- and intrauterine influences on the developing otic capsule. His attention has already been focused upon the effect of rubella in the development of congenital deafness.[21,22] In addition, there has been a recent effort to emphasize the changes in hearing associated with Rh incompatibilities.[5,10] The otologist will want to know more about the neuropathology of these defects. He will also realize that there are investigations needed in cochlear changes associated with vascular disorders, nutritional deficiencies, and acoustic trauma. The true value of surgical and radiation treatment of lymphoid elements in the nasopharynx is not entirely determined. The otolaryngologist is not completely satisfied with the fenestration operation, and he will want to know about the use of new preoperative testing procedures as well as the desirability of having the rehabilitation programs used prior to the surgical intervention in otosclerosis. It would seem that surgical technics have developed far more efficiently and effectively than have the qualifying tests for an acceptable operable case and the additional knowledge of the etiology of the disease. In the meantime, exquisite care must be employed for the selection of an operable case, recommending for all prospective surgical otosclerotics a basic course in audiologic training to prepare them to receive better hearing or to be able to cope with possible failure.

Other problems in the basic science of audiology include the development of speech audiometry for rapid clinical determination of reception and discrimination levels; improvement of educational methods in auditory education; advancement of technics in parent education; tests to indicate speech-reading ability prior to training and the relation of such ability to visual competence; methods for conducting rapid, group tests for screening of speech defects in schools; an evaluation of the hearing aid for the very young and very old patient; and further integration of research with workers in electronics, physiology, acoustics, and education.[23]

Summary and Discussion

We have attempted to clarify terminology by defining audiology as the basic science of clinical hearing and speech rehabilitation. It is apparent that audiology is a relatively young science and has many areas in educational and acoustical research with which to keep itself occupied for many years to come. The otolaryngologist finds himself in a position of responsibility to the patient with a hearing or speech deficiency in which he must not only utilize his time-honored methods of diagnosis and treatment but must appreciate that his patient is not adequately treated unless rehabilitative procedures are carried out in their fullest meaning. To complete a proper responsibility of supervision and care, he needs training in audiology and in the clinical procedures of hearing and speech restitution. The otolaryngologist, furthermore, will be interested in finding ways and means to establish rehabilitative facilities in his community for which he should be prepared to assume primary responsibility. With medicine in general on trial and searching for methods to stave off the giant specter of national medicine, the otolaryngologist may do his utmost to provide services within the framework of present practice. In addition, clinical hearing and speech rehabilitation is in its infancy. It needs far-sighted leadership and active participation of those who are so intimately concerned with total care.

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Discussion

George M. Trainor, M.D., *Rochester.*—I have read this paper with a great deal of interest and enthusiasm, for I feel that it is a very timely presentation of an important subject. I imagine that the majority of us have felt that we have a responsibility in the rehabilitation of our handicapped patients, but it has been all too easy to tell them to go to the hearing society for auditory training or to be sure to have their child enrolled in a special class, without having the faintest idea of how these procedures are carried out. The authors' statement that the first step in the rehabilitation of our patients is to educate the otolaryngologist in the procedures of rehabilitation is particularly true and merits much thought by all of us.

Those of you who live in the metropolitan area have a golden opportunity for excellent instruction in the procedures of rehabilitation and audiology. The Veterans Administration has a center that covers all phases of this problem, and should serve as a model for other clinics. Papers and lectures are valuable, but a day spent in such a center would, I am sure, arouse your interest and make you better able both to aid in rehabilitating your patient personally and to advise him as to just what can be done for his handicap.

There is some good in all evil. World War II brought about advances in audiology that would have taken many years to develop under the tempo of peacetime living. We who finished our formal training before the war have much to learn about this subject, and it will require effort which, I am sure, will be amply rewarding. The technics of fitting hearing aids should be thoroughly understood by us, and our opinion of a certain aid should be based on firmer ground than the opinion of a satisfied or dissatisfied user. If we do not understand clearly all the phases of rehabilitation and audiology, the patient will not look to us for guidance and our patient-doctor relationship will be less effective.

The authors have outlined for us the approach for a comprehensive hearing survey, particularly for the young child. We are familiar with the great majority of the items covered, but I have never seen it presented in such an orderly and effective manner. I hope that all of you will have a copy of this presentation in your office for reference. How many times have you investigated the prenatal course of your young, hard-of-hearing patient? I would not like to have to answer that question truthfully, but I expect to do better in the future.

The authors have presented the challenge to us in a very able manner. The rest is up to us.

Alfred W. Doust, M.D., *Syracuse.*—The essayists' paper is certainly most complete and very well organized. In my opinion, this problem presents a very great challenge to us as physicians and otologists. The term rehabilitation has been much used and abused during the past few years. As the authors have mentioned, the term has come into much prominence since the war. Undoubtedly, we are all agreed that the mere diagnosis of defective hearing and the fitting with a hearing aid or surgical procedure is no longer sufficient in the correction of hearing loss. It is because of the neglect of these audiologic, social, and psychologic factors of hearing loss that so many of the aids have been relegated to bureau drawers and attics.

In Syracuse, since 1946, we have had a conservation of hearing center. It is staffed by members of the Department of Otolaryngology of the Syracuse University College of Medicine under the direction of Dr. Gordon Hoople and is directly related with the school of speech at the University. Employing the services of a full-time audiologist, whose duties also include postgraduate teaching in audiology, the center is also in close contact with the departments of psychology and school of speech. Thus far this has been a very satisfactory arrangement and one which we feel more closely approximates the system established by the armed services during the war.

By way of illustration of the problems, may I cite an example that recently came to our attention at the Conservation of Hearing Center. A young female war veteran who had been recently graduated from Syracuse University was found to have a marked hearing loss. During her career at the University she had majored in social studies and after graduation found employment in the local office of an insurance company. She was wearing a hearing aid at that time and had become an excellent lip reader. Shortly after starting her position, she found she had increasing difficulty with her work and felt that the aid was not entirely satisfactory and that her work was suffering because of it. As her work became increasingly more difficult because of her hearing loss, her nervous tension grew.

At about this same time she had a psychologic interview with the company psychologist, which showed that, although she was well-trained for her job, she was uncertain in her approach and hesitant in her recommendations, chiefly because of her own insecurity. The psychologist, among other things, criticized the fact that she gazed with rather fixed intensity at the lips and face of the client while conducting an interview and suggested that she gaze casually out of the window or look at an object on the desk to create the proper atmosphere. This may have been entirely satisfactory from the standpoint of the interviewee, but it only served to create more tension on her part because it further increased her hearing difficulty as it made lip reading impossible. In addition to this, she was rather a vain young woman and because of this fact was wearing a concealed, or so-called "invisible," earpiece. As a further indication of her vanity and her inability to face reality, she was in the habit of wearing contact lenses during the daytime. (This inability on the part of certain individuals to face the fact that they have a hearing loss has been emphasized in the essayists' paper. The correction of this hesitancy will require a considerable amount of re-education of the public, a program which we, as otologists, should be instituting at this time.)

Such was this girl's situation when she appeared at the Conservation of Hearing Center. Following an interview with the otologist and our audiologist, she was given a course in auditory training and an attempt made to readjust her psychologic approach to her hearing problem. She was advised that she should dispense with the hidden ear mold because it gave her a variation of 10 or 15 decibels in the efficiency of her aid. Her lip reading was found to be satisfactory, but her psychologic approach to the hearing loss required considerable readjustment. (Call it feminine vanity if you wish, but patients of this type must be taught to accept the hearing loss as a part of their life not only in the present but in the future.)

After a course in auditory training, approximately a 40 per cent improvement was shown in her discrimination score. In this particular instance, however, the psychologic readjustment and the improvement in the discrimination score are obviously not enough. There must also be some social readjustment. With that in mind, we have recommended that she find some more suitable employment and have informed several local agencies of her problem. The State employment bureau has been of considerable help in this connection.

It can thus be seen that complete rehabilitation requires a well-integrated program. That includes the work of the otologist, the audiologist, psychologist, and the social service worker, but the otologist is the key man in this entire program. It has been our custom to have the otologist take the history from the patient and establish the primary contact, and he is also the one who should conduct the final interview after the complete rehabilitation program has been outlined.

USE OF THE SUPERIOR RECTUS IN OPERATIONS FOR BLEPHAROPTOSIS

Loren P. Guy, M.D., New York City

WHERE there are so many operations for a malady as there are for blepharoptosis, few good results would be expected. Yet in many cases there can be obtained satisfactory cosmetic and functional effects by the choice of the proper surgical procedure for the individual case of drooped upper eyelids. The main cause of failure appears to be inadequate study of the case at hand and use of inappropriate operations. Selection of the type of operation too often is limited to the procedure that is done continually and habitually by an individual surgeon or by a group of surgeons in one institution or in a locality. The literature on the surgery of blepharoptosis is composed mainly of reports of series of cases operated on by one method regardless of the type of the individual case. Since study of individual patients shows several kinds of blepharoptosis, performing one routine surgical procedure on all types of cases is as illogical as treating all cases of fever alike without trying to break down each separate case into its proper classification.

The number of operations and modifications of operations for fallen upper eyelids are too numerous for one surgeon or even for a large clinic to test each technic in a sufficient number of selected cases, even were this desirable. What might better be done is to divide the surgical procedures into groups according to their anatomic and physiologic objectives and then test and criticize technics typical of the group. Most operations fall into one of the three following categories: (1) those that shorten the upper lid, (2) those that suspend the upper lid from the brow and which some think utilizes action of the frontalis, and (3) those that cause adhesion between the upper lid and the eyeball and depend for success on action of the superior rectus muscle. Typical of the first group are the Blaskovics and Eversbuch operations. The Reese, Hess, and Guyton-Freidenwald operations are examples of the second group. The operation of Motais is the pioneer procedure of the third group. It has been modified by at least fifteen other surgeons, Wheeler, Kirby, Berke, Jameson, Dickey, among others. The object of this paper is to attempt to appraise the relative value of these groups.

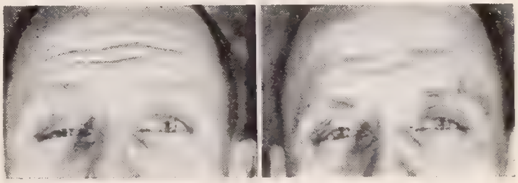

Fig. 1. A satisfactory result from resection of the tarsus and levator in a case where there was little action of the levator. Note in the left picture a wrinkling of the forehead and tilting back of head to obtain elevation of lid before operation.

Before any surgical procedure is considered it is hardly necessary to mention the need to rule out cases that will respond to medical treatment, such as those due to syphilis and those due to neurologic conditions such as myasthenia gravis and expanding intracranial lesions.

In surgical cases it is of primary importance to determine whether there is any action of the levator muscle of the affected eye. Even a little action makes the case eligible for a lid shortening operation, but complete paralysis means that such operations are not apt to be sufficient. Berke reports satisfactory action of the levator in 50 per cent of the cases he studied.[1] In the cases I observed nearly 80 per cent had a strong enough levator to warrant doing the Blaskovics operation. Figure 1 illustrates a satisfactory result in a case that had hardly any action of the levator.

Oculomotor balance should be studied as advocated by Duane and White. The action of the eye muscles in the primary and six cardinal positions should be measured. This is done primarily to determine whether the case is what White has called "pseudoptosis." In these patients the upper lid may appear to droop, but the palpebral fissures will be the same width in each eye, and the lid will cover the same amount of cornea in each eye. The lid appears fallen due to the downward gaze of the eye because of vertical oculomotor paresis. Many make measurements of the oculomotor balance to determine whether to do one of the third group of operations, the adhesion type. If the superior rectus muscle is normal, they favor utilizing it.

It should be determined whether jaw-winking is present.

Measurements of the length as well as the width of the palpebral fissures are needed to record phimosis of the lids. This is frequently

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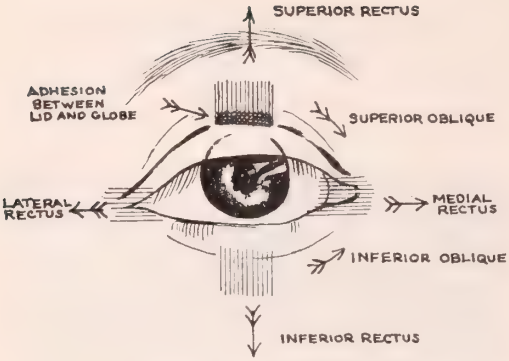

Fig. 2. Diagram illustrating how adhesion between the upper lid and the eyeball disturbs horizontal as well as vertical motions of the eyeball.

associated with epicanthus and calls for surgery of these conditions as well as for blepharoptosis.

If these examinations are made, a rational basis for selecting the type of surgery to be performed will have been provided, and specific applications can now be considered.

In those surgical cases where there is some action of the levator muscle and no jaw-winking phenomenon and where study of oculomotor balance has revealed no vertical defect sufficient to cause blepharoptosis, the operation of choice is shortening of the lid by resection of the levator and tarsus. In some patients where there is also blepharochalasis, excision of redundant skin may be added. Resection of the levator and tarsus is logical, because it comes close to restoring the anatomic and physiologic relations of the upper lid to the rest of the orbital structures. It attacks the primary weakness. It does not substitute one deformity for another as can one of the operations that weakens the vertical action of the superior rectus by cutting and by putting an added burden upon that muscle and impairing the horizontal action by adhesion with the lid (Fig. 2). It does not lead to development of secondary strabismus as was reported in a study of the Motais operation by Francis W. Shine in 1916 and which has been seen by many others.[2] If the operation is done correctly, so the new attachment of the levator to the tarsus is evenly distributed, no arching of the lid nor entropion should occur as Wheeler and others have observed in the Motais operation, even when done competently.[3] Closure of the lid should be normal both when awake and asleep, and the cornea should not be disturbed as was reported by Cordes in a study of the Dickey operation.[4]

In cases where there is no action of the levator, resection of the tarsus and levator will not give sufficient effect to be entirely satisfactory. Choice of a surgical procedure then is between one of the suspension group and one of the group that depends upon action of the superior rectus. In favor of the suspension group is the fact that the operation is sound structurally so far as elevating the upper lid is concerned. It is a direct attack on the problem. However, it may hinder closure of the eyes, and, if the eyeball is set deep in the orbit or if there is a heavy brow, the upper lid may be pulled away from the globe. It is an operation of fixation rather than of motion. However, in spite of the adverse possibilities Farina and Piza and Guyton and Freidenwald have reported good results with this group, and they present convincing photographic proof in their articles.[5,6] My own experience with this group has been limited to the Reese procedure, and in relation to the extent of the deformities needing correction the results have been satisfactory.

Spaeth and others have recommended that those patients having the jaw-winking phenomenon should first have tenotomy of the levator, producing complete inaction of that muscle, and then the blepharoptosis should be corrected. Resection of the levator and tarsus to correct the accompanying blepharoptosis usually aggravates the jaw-winking phenomenon.

Phimosis of the lids requires lengthening the palpebral fissure and repair of any epicanthus, in addition to surgery for the drooped lids. These cases are apt to be disappointing regardless of what is done. A suspension operation may be better than resection of the levator and tarsus.

The pseudoptosis cases should have the underlying oculomotor imbalance corrected.

The Motais or adhesion group usually gives a satisfactory immediate result as far as elevating the lid is concerned. The upper lid moves beautifully with vertical motion of the globe, and horizontal impairment is not noticeable unless especially sought. It is hoped the operation of Berke in which the superior rectus muscle is resected or that of Jameson in which the superior rectus muscle is tucked may make permanent the immediate good effects of this group.[1,7]

However, unfortunately, diplopia often is encountered. It is reported less frequently than it occurs, probably because it is subjective, one author reporting it in only four of 20 cases where there was vision in both eyes.[4] He gives no measurements of the oculomotor balance. In analyzing his reports it may be significant to note that the ages of those who complained of diplopia were nine, fifteen, twenty, and twenty-one years. One patient, sixteen years old, had

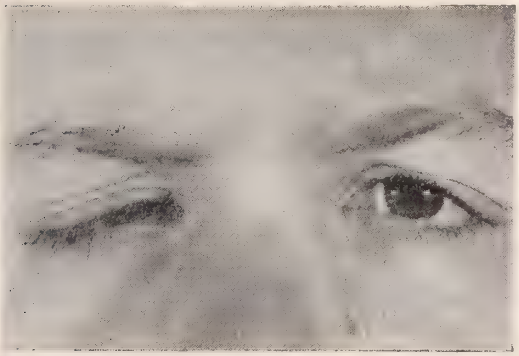

FIG. 3. The result eight years after the right superior rectus was used to correct blepharoptosis. The immediate result was good, but after a year the lid drooped again and there was paresis of the utilized superior rectus. After seven years horizontal strabismus was added to the vertical defect.

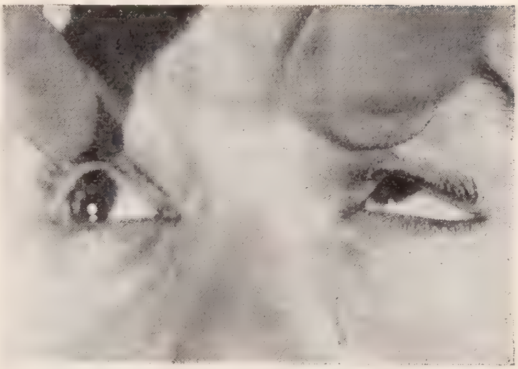

FIG. 4. Paresis of the superior rectus of the right eye with spasm of the inferior oblique of the left eye in a patient where the right superior rectus had been attached to the eyeball to overcome blepharoptosis.

scars of the cornea resulting from the operation, and this may have prevented diplopia. One patient, seventeen years old, did not complain of it. The rest of the patients were between thirteen months and ten years of age, and unless there is amblyopia there will be complaints of double vision as the patients grow old enough to be more observant.

Many patients who have had this operation do not close the operated eye completely when asleep, which is due to the tendency of the eyes to turn up and outward during sleep. The cornea is exposed, leading to discomfort and scars in as many as 15 per cent of a series of reported cases.

Angulation of the margin of the upper lid can be avoided in this group of operations if one of the procedures that distribute the burden of adhesion between the lid and eyeball, like that of Wheeler, is used.[3]

The following case illustrates the practical as well as the theoretic objections to the group of operations that utilize the superior rectus muscle.

Case 1.—When he was about two and a half years old, this boy had a Shoemaker-Kirby modification of the Motais operation done on his right eye. Motion pictures show the technic was near faultless. The surgeon who did the operation was well versed in oculomotor imbalances and he should have, and I am certain would have, noted any defect. The parents say the eye muscles looked normal, and the only defect was a slightly fallen lid. For over a year the operation was a great success, and then the upper lid again appeared to droop. I saw the case a little over two years after the operation. At that time there was little action of the superior rectus on the side where that muscle had been used in surgery. The inferior oblique of the other eye was spastic. Vision in the operated eye was 20/40 and in the fellow eye 20/20. A little hypermetropia was present. Four years later the eyes were unchanged, but during the seventh year after the operation amblyopia set in and marked convergence strabismus was added to the vertical errors and the blepharoptosis.

This development of a horizontal error adds further proof to the teaching of Duane and White and Brown that vertical errors cause horizontal defects and, therefore, should be sought and corrected.[8,9] The cause of wide horizontal deviation resulting from vertical defects was thought by White to be the attempt to avoid diplopia by aiding suppression in increasing the lateral displacement of the images. Figures 3 and 4 illustrate the case.

I have observed three other similar cases. Two had the Dickey operation, and one had a classic Motais. The latter case also had exposure of the cornea due to angulation of the upper lid, and the eye was nearly lost from a corneal ulcer. All four cases had been operated on by outstanding surgeons. The fault does not lie in imperfect technic but in selecting a bad type of operation. After these considerations and observations I am led to condemn use of the superior rectus in attempting to correct blepharoptosis.

Summary

The operations for blepharoptosis may be divided into three groups: (1) those that shorten the upper lid, (2) those that suspend the lid from the brow, and (3) those that adhere the lid to the globe and utilize the action of the superior rectus.

Cases of blepharoptosis that require surgery should be studied for (1) action of the levator, (2) oculomotor balance, (3) jaw-winking, and (4) phimosis of the lids.

Those cases having action of the levator and no jaw-winking are best treated surgically by resecting the levator and tarsus.

For those not having action of the levator, the choice of surgery lies between a suspension operation and an adhesion operation. The former is preferred as it has fewer complications than the latter.

40 East 62nd Street

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Discussion

Harold Whaley Brown, M.D., *New York City* (*By invitation*).—Dr. Guy has given us an interesting paper and is to be congratulated on his courage to condemn a time-honored surgical procedure. I feel that he is justified in severely criticizing the routine of utilizing the superior rectus to correct all types of blepharoptosis.

To the objections to this procedure that he has presented, I would like to add one that I think is important from personal experience, i.e., the complications that one encounters in trying to do a Blaskovics operation on a lid that has previously had one of the Motais type of operation. It was impossible to free the conjunctiva from the scar or to find the levator in the case that I attempted to do. In general, the commonly used procedures of attaching the upper lid to the eyeball will exclude or at least severely complicate a secondary levator resection operation, and, judging from Dr. Guy's statements and from a few cases that I have observed, it is not uncommon to have a recurrence of the ptosis a few years after a successful Motais operation.

These delayed failures are invariably due to a progressive increase of a pre-existing or induced vertical deviation and could be classed as "surgically produced pseudoptosis." It has been recognized by all writers on ptosis that the use of a weak superior rectus to elevate the lid is doomed to immediate failure. The test commonly used to rule out a paretic superior rectus, that is, its ability to elevate fully the eye in the temporal field, does not represent the vertical imbalance between it and its "yoke" muscle, the contralateral inferior oblique. The level of the eyes should be compared and measured, especially in this field of gaze. An existing vertical imbalance due to a relatively underacting superior rectus, unless corrected surgically, will, with the added load of raising the upper lid, further predispose the vertical imbalance to an increasing vertical divergence by the secondary contracture of the homolateral inferior rectus or secondary deviation of the unaffected eye or both, depending, of course, on which eye is used for fixation. Cases of a normal vertical balance in the upper temporal field of gaze of the affected eye often show a postoperative hypertropia, especially in the field of maximum vertical action of the superior rectus of the operated eye.

The two factors to be considered in causing the postoperative underaction of a previously normal superior rectus are, first, the degree of paralysis of the levator—the more paretic the levator is, the greater the load on the superior rectus—and, second, the mechanical weakening of the muscle incident to the surgery as adhesions between the muscle and sclera posterior to its scleral insertion or injury to the muscle itself.

A strong fusion ability will delay indefinitely the development of secondary deviations and contractions, especially in adults that avoid the troublesome diplopia field of gaze. In children, however, with normal fusion, who adapt themselves more easily to an acquired diplopia, a more rapid increase in the vertical divergence can be expected.

It is in this latter instance that a lateral strabismus may develop either by converting a lateral phoria into a tropia, or in the child's adjustment to an induced vertical diplopia the disjunctive function of convergence or divergence is excessively stimulated. Other factors of a mechanical nature, as too extensive adhesions of the lid to the eyeball limitating lateral rotations and the secondary lateral action of the overacting vertical muscles, may also play a part in producing a lateral strabismus. In Dr. Guy's case as illustrated in Figs. 3 and 4, he mentions the secondary deviation of the inferior oblique of the unoperated eye, but it seems to me that the more significant deviation, as far as the convergent deviation is concerned, would be the secondary contracture of the homolateral inferior rectus. The overacting inferior rectus would, as the convergence increased, become a more effective adductor.

The complication of ulceration and scarring of the cornea by exposure from incomplete closure of the lid can be avoided by proper pre- and postoperative management of the case. A crutch glass in a complete ptosis, if worn for a few months or, better still, for a year before surgery, will aid in conditioning the cornea for prolonged exposure. The immediate correction of a postoperative entropion produced by the redundant skin of the upper lid is imperative if damage to the cornea from the interned eyelashes is to be avoided. The most important preventive measure, however, is the careful postoperative care. The cornea should be studied with a slit lamp at frequent intervals and the amount, frequency, and duration of the patching determined in each individual case as the cornea shows evidence of tolerating prolonged exposure.

From the contraindications to the use of the superior rectus in ptosis operations mentioned by Dr. Guy and from my own experience, I feel that this operation should be confined to adult patients that have a complete levator paralysis but show a normal vertical muscle balance in the upper temporal field of gaze and in the operative treatment of the "jaw winking" cases.

TOPICAL MEDICATION IN OTOLOGY

Jules G. Waltner, M.D., and Wesley R. White, M.D., New York City

(From the Department of Otolaryngology of the College of Physicians and Surgeons, Columbia University, and Presbyterian Hospital)

THERE are four major indications for use of topical medication in otology. Otitis externa, both acute and chronic, forms a large group. Chronic purulent otitis media, postoperative sterilization of the radical mastoid cavity, and, finally, persistent or recurrent purulent infection in an old radical mastoid cavity form the other three major groups.

Numerous waves of enthusiasm have swept over us since the advent of chemotherapy and antibiotics only to give place to disappointment. Although the empiric clinical trial of our therapeutic procedures still is paramount, statistical demonstration of effectiveness of a procedure often seems to be misleading. Especially is this true in the chronic infections of the ear and in radical mastoid operations, where a great number of unknown factors play an important role in each individual case. They certainly do not represent a homogeneous group. (Careful analysis of each case and evaluation of the individual factors involved are more likely to explain our failures and direct our clinical investigation into proper channels than the statistical survey of a great number of cases.) Bacteriologic studies for instance show frequent occurrence of gram-negative organisms in chronic infections of the external and middle ear. Topical and systemic application of penicillin in these conditions is bound to cause only disappointment.

Method

Long follow-ups, possibly of several months or longer, seem to be an essential factor in the proper clinical evaluation of chronic infections of the ear. This is especially true in infections caused by Bacillus pyocyaneus and Bacterium coli which frequently recur after a dormant, asymptomatic period.

Only cases with positive bacteriologic cultures were studied in this series because of the great importance of bacteriologic identification of the pathogenic organisms. It is noteworthy, however, that a sizeable proportion of cases showing definite evidence of otitis externa failed to grow any bacteria. In a number of instances, but not invariably, cultures were made after clinical cure was obtained. It is realized that most microorganisms, with exception of pyocyaneus, coli, proteus, and a few others may be present in normal ear canals. Information obtained from cultures after completion of therapy may be valuable only in infections caused by the above-mentioned gram-negative organisms.

Sulfamylon, a water-soluble sulfonamide in 5 per cent solution, was selected in the present study. Sulfamylon is a 4-amino, 2-methyl benzene sulfonamide hydrochloride which is also called marfanil. After discussing the matter with Dr. E. P. Fowler, Jr., and Dr. E. Howes, this agent was selected for the following reasons[1,2]: (1) Its wide bactericidal range covers almost the entire bacterial spectrum. It is superior to streptomycin for streptococci which are relatively resistant to streptomycin and may develop fastness against streptomycin very rapidly. (2) Its bactericidal action is prompt. (3) Good solubility is another important factor because only the soluble portion of any antibacterial substance is active. (4) Sulfamylon was found to be the only drug which continues to be effective with markedly increased acidity of the media. Increased acidity is present in the majority of the cases after the first period of acute infection subsides. (5) Sulfamylon acts quickly in the presence of blood and pus. Most sulfonamides failed because all were slow to act and were inhibited by the presence of para-aminobenzoic acid. When used in powder form, sulfathiazole and sulfadiazine, less soluble compounds, acted as foreign bodies. Penicillin could not be used because it is destroyed in the presence of gram-negative bacteria, which frequently occur in infections of the ear. In addition, penicillin is not effective against gram-negative organisms.

Two parallel series of cases were treated with 5 per cent solution of sulfamylon. In one series the drug was dissolved in 1 per cent methylcellulose base, while in the other the watery solution contained 4 per cent gluconolactone and 5 per cent propylenglycol. The pH of the first solution ranged about 3.5, while the second was about 2.2. The theoretic consideration about running a series with a frankly acid solution was the known fact that leukocytes are destroyed in acid medium resulting in liberation of the ingested bacteria.[3] In addition, it was hoped that the acid vehicle would facilitate penetration of the drug into the tissues. It was suspected that a number of failures in chronic infections of the ear were due to the deep penetration of the bacteria

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This study was assisted by grants from the Philip Hanson Hiss Fund.

into the tissues where topical agents could not reach them. Frequent recurrences and outright therapeutic failures would be the direct results of this condition. Experiments of Hudack and McMaster gave us the idea of using a vehicle which would inflict a minimal amount of trauma to the skin.[4] Their studies showed that the slightest abrasion of the human skin greatly facilitated entrance of diffusible dyes into the lymphatics. Rapidity of absorption under such circumstances was extreme as compared with normal skin.

Otitis Externa

Otitis externa is an everyday problem in the otologist's office. While the acute infections in the external auditory canal represent a relatively lesser problem because of the frequently self-limiting nature of the disease, the chronic, recurrent type deserves more of our attention and many times resists all of our therapeutic efforts.

It is felt that simplification of the classification of otitis externa cases is necessary on account of the very frequent merging of one type into another. Etiologic factors, however, should be stressed as much as possible. Cases of otitis externa can be divided into two main groups: acute and chronic. Eczemas—seborrheic, allergic, or other systemic eczemas—and neurodermatitis do not strictly belong to our series because, in general, they are not amenable to topical antibacterial therapy.

In the acute group the furuncular type deserves special mention. It is usually caused by Staphylococcus aureus or albus and originates in the pilosebaceous follicles. Quite frequently we see these patients at an early stage of the disease when there is intense pain but no break of continuity of the skin of the canal or presence of pus. The above organisms are penicillin sensitive, and these patients do better on parenteral penicillin than on any topical therapy, because the deep lesion is often inaccessible to topical bactericidal agents. Incision and drainage are still necessary in some instances and shorten the period of morbidity.

In the larger group of acute diffuse otitis externa, prognosis and therapy largely depend on the cultured organisms. Swelling, reddening of the skin of the external auditory canal, pus, and possible involvement of the outer layer of the eardrum characterize this group.

Twenty-seven cases of acute diffuse otitis externa were treated by instillation of 5 per cent sulfamylon solution in the ear canal. Eight to ten drops, two to three times a day, were prescribed. Out of this series, four cases failed to clear up. In all four cases sensitivity to the medication developed which forced us to discontinue therapy five to fourteen days after commencement.

TABLE I—OTITIS EXTERNA*

	Pure Culture Sulfamylon		Mixed Culture Sulfamylon	
	Water pH 2.2	Methylcellulose pH 3.5	Water pH 2.2	Methylcellulose pH 3.5
Pyocyaneus	7G	3G, 2F	1G	2G
Proteus	4G	...	1G	3G
B. aerogenes	..	...	..	1G
B. coli	..	...	..	2F (S)
B. alkaligenes	..	...	..	1G
Staph. aureus	1G	2G	..	2G, 2F (S)
Staph. albus	1G	1G	..	...

Total 21 Ears	Total 16 Ears
B. pyocyaneus . . 12	B. pyocyaneus . . 3
B. proteus 4	B. proteus 4
—	B. aerogenes 1
Gram-negative . . 16	B. coli 2
	B. alkaligenes . . . 1
	—
	Gram-negative . . 11

* Key to table: G = Good
F = Failure
S = Sensitivity

In the chronic, recurrent type of otitis externa, we met three failures out of 12 cases. In all three the pathogenic organism was B. pyocyaneus.

Bacteriologic grouping of cases with otitis externa clearly indicated that infections caused by pure culture of bacteria responded much better to sulfamylon therapy than those from which mixed cultures were recovered (Table I). There were two failures out of 21 cases with pure culture, both of which grew B. pyocyaneus. Four out of 16 cases with mixed culture failed to respond, on the other hand. In the latter group B. coli (two cases) and Staph. aureus (two cases) were the dominant organisms. These failures were partially caused by sensitivity to the drug which developed after one week's application, thereby forcing discontinuance of the medication. In all four cases sulfamylon in methylcellulose solution was used.

Recurrences are especially likely to occur in infections caused by B. pyocyaneus. Such relapses are occasionally observed as late as one to two months after apparent cure of the original infection. It is noteworthy that persistent medication with sulfamylon may be necessary for four weeks or longer in order to obtain cure and forestall recurrence. It is a fair estimate to state that medication should continue for seven to ten days after all clinical signs of infection have subsided in B. pyocyaneus and B. proteus infections. Vitro studies and experience with contaminated wounds corroborate this statement. Regrowth from the periphery is frequently observed in pyocyaneus infections. Special attention paid to bacteriologic studies seems to be a good investment in time and money. The other alternative is to treat each case as if caused by B. pyocyaneus.

It is most important to point out that of 21 cases, 12 gave pure cultures of B. pyocyaneus (Table I). In the mixed culture group the same organism was predominant three times out of 16 cases. In over 40 per cent of all cases of otitis externa, B. pyocyaneus was the dominant pathogenic organism 15 times, proteus 8 times, B. coli twice, B. aerogenes once, alkaligenes once. Altogether, 28 out of 38 cases of otitis externa grew gram-negative organisms.

Three major conclusions can be drawn from this study on otitis externa: (1) The large proportion of cases caused by gram-negative bacteria indicates that only a small fraction of the cases would respond to penicillin even in optimal circumstances. (2) Frequent occurrence of B. pyocyaneus makes prolonged application of the local medication very important in order to forestall recurrences. An average continuation of medication seven to ten days beyond clinical cure seems to be desirable. Cure was obtained within a week in 30 cases, in two weeks in four cases, and in four or more weeks in three cases. (3) We did not meet failure in applying the solution of pH 2.2, while the methyl cellulose solution pH 3.5 failed to control infection in a small number of instances. This seems especially true for B. pyocyaneus infections. Better penetration of the acid solution may be the answer. Destruction of the leukocytes and exposure of the liberated bacteria to the drug may be another important factor.

Special consideration should be given to perichondritis caused by B. pyocyaneus. This condition was occasionally observed following radical mastoid operation and may result in marked deformity of the auricle and stenosis of the ear canal, in addition to causing severe pain. In three instances all our efforts failed for many months. All kinds of local and parenteral therapy, including streptomycin, bacitracin, parachlorophenol, were tried without success. In one instance sulfamylon solution pH 2.2 had to be applied for over two months before the infection cleared up. Surgical drainage of subperichondrial abscesses and splitting open of fistulous tracts of the canal and auricle, however, seem to be equally important in the therapy.

Chronic Purulent Otitis Media

This series includes cases of chronic purulent otitis media, most of which belong to benign, central tympanic membrane perforation group. A small number of chronic otitis medias with cholesteatoma formation were included in this study, although we were fully aware of the fact that we could possibly expect control of the suppuration but not a cure of the cholesteatoma. This type of chronic otitis media requires surgery just as much today as ever.

TABLE II.—CHRONIC PURULENT OTITIS MEDIA*

	Pure Culture		Mixed Culture	
	Sulfa mylon		Sulfamylon	
	Water pH 2.2	Methyl-cellulose pH 3.5	Water pH 2.2	Methyl-cellulose pH 3.5
Pyocyaneus	4G	...	3G	5G, 1F (S)
Proteus	1F	...	4G, 1F	...
B. coli	1G	...	..	...
B. alkaligenes	...	...	1G, 1F	...
Staph. aureus	4G, 1F (S)	5G	..	2G
Staph. albus	1G	2G	..	1F (S)
H. Staph. albus	...	1G, 1F (S)	..	...
	Total 21 Ears		Total 19 Ears	
	Pyocyaneus.........4		Pyocyaneus...... 9	
	Proteus.............1		Proteus.......... 5	
	–		Alkaligenes...... 2	
	Gram-negative......5		—	
			Gram-negative...16	

* Key to table:
G = Good
F = Failure
S = Sensitivity

The medication was prescribed in form of two or three instillations a day of 10 drops with the patient lying on the opposite side for ten minutes. Use of a cotton plug was suggested at the end of each medication.

There were altogether 21 chronic otitis media cases which grew pure cultures (Table II). We met three failures in this group, two of which were due to drug sensitivity. Six out of 21 in this group were caused by gram-negative organisms, with a predominance of B. pyocyaneus (four cases).

There were four failures among the 19 cases which grew mixed cultures. Two of the four failures were caused by drug sensitivity. Gram-negative bacteria predominated in all but three cases in this group. Nine out of the 19 cases grew B. pyocyaneus.

In over half of all the chronic otitis medias the pathogenic organism was gram-negative, which amply explains why we met with so much disappointment in penicillin therapy in this condition.

Administration over a long period of time rather than switching from one medication to another seems to be the logical procedure (Table III). Frequent presence of B. pyocyaneus and proteus which reoccur with peculiar frequency amply explains this opinion. Pyocyaneus and proteus infections invariably required medication over a longer period of time than the other organisms.

A small number of ears presenting a permanent small perforation required modification of the technic, because the solution hardly seeped

TABLE III.—CHRONIC PURULENT OTITIS MEDIA

Duration of Treatment (Number of Weeks)	Cure (Number of Cases)
1	10
2	13
3	8
4	5
6	3
8	1
Total	40

through into the middle ear. In order to obtain proper flooding of the entire middle ear cavity, the canal was first filled with solution, and pressure was then exerted by means of a Politzer bag. Pressure forced the fluid through the perforation and the Eustachian tube into the pharynx, and the patient recognized its passage by the biting taste of the fluid. This procedure is the method of choice in the so-called tubotympanic chronic infection of the middle ear in which recurrences often originate from the deep infection of the tubal mucosa.

It is noteworthy that some chronic ears producing viscid, mucoid secretion are allergic in origin and will resist any other treatment except that directed against allergy. Antihistaminic drugs gave dramatic results in a few instances of chronic otitis media and discharging radical mastoid cavities where both the viscid character of the exudate and positive history of the patient were suggestive of allergic response. All previous therapeutic efforts had failed in these cases.

Fourteen cases of chronically discharging mastoid cavities form another group in which sulfamylon was used topically. In most of them the operative cavity was not completely epithelized at the start of medication. Stoppage of discharge and complete epithelization were considered good results. Late recurrences caused by swimming, etc., were not considered failures.

Six cases out of the 14 cultured gram-negative organisms: proteus in two, pyocyaneus in one, aerogenes in two, and alkaligenes in one case.

Careful cleansing of the cavity, removal of epithelial debris, pus, and crusts, was the first and very important step. Results were satisfactory in all cases, but a rather long and persistent application seems to be necessary in this condition. The average duration of medication was three to four weeks in this group, and in two cases it had to be continued for over eight weeks. Complete epithelization was not invariably obtained, but discharge decreased a great deal, and the foul odor was controlled in all cases. Sensitivity developed in two instances. Although it is realized that very long follow-ups and a larger number of cases are necessary for reliable evaluation in this group, this type of medication seemed to give better results than any with which we have previously experimented.

Two fenestration cavities which failed to dry up were treated in the same way. One which cultured hemolytic Staph. aureus cleared up in four weeks; another which grew diphtheroids dried up in eight weeks.

The last and rather important group of cases to be discussed concerns the immediate postoperative sterilization of the radical mastoid cavity. The pathogenic organism is gram-negative in over half of all the cases of chronic purulent otitis media. One could hardly rely on penicillin alone in controlling the infection. Each of us is quite familiar with the large number of radical mastoid cavities which never dry up in spite of all kinds of therapeutic effort, including penicillin, repeated removal of granulations, cauterization, skin grafts, etc.

It was felt that the only real opportunity to sterilize the infected middle ear cavities was immediately after the operation. After the diseased bone, infected granulation tissue, and cholesteatoma are removed during the radical operation, bare bone forms the walls of the cavity which later on is covered by granulation tissue and skin. In order to sterilize the cavity a small rubber catheter was left in the cavity in addition to the usual gauze packing, and 5 cc. of sulfamylon solution slightly warmed were instilled through the catheter three times a day. This procedure was continued for seven consecutive days until the packing was removed. From here on our only concern was to keep the cavity sterile. Bandage was maintained for at least three to four weeks, and sterile technic, including gloves, was used for as long as six to seven weeks. While the time of complete epithelization was not shortened considerably, a dry cavity was obtained with solid epithelization in all the twenty-odd cases in this series. In no instance was it necessary to remove granulation tissue or use free grafts. Postoperative exudate and tissue fluids may continue quite profuse for as long as five to six weeks but taper off, and a dry cavity is obtained. Persistent infection in the cavity and recontamination of the cavity during after-care of the patient is the most important single factor leading to exuberant formation of granulation tissue and interference with epithelization. Another important point is to remove the diseased bone and not to make a very large retrofacial cavity. Infection rarely extends into the tip of the mastoid process. Large cavities on the other hand are much harder to epithelize.

In over 20 consecutive radical mastoid operations we obtained dry cavities. In some of them the follow-up was in excess of two years. One can predict control of suppuration and almost invariably expect dry, epithelized cavities. In this series the watery solution pH 2.2 was used.

The greatest drawback in sulfamylon therapy is the rather frequent occurrence of sensitivity to the solution. In over 10 per cent of the cases treated, sensitivity of such degree developed that medication had to be discontinued. Extensive vesiculation, swelling of the skin of the canal and auricle, and serous exudate characterized the reaction, which seemed to respond promptly to discontinuation of the medication.

Although no definite conclusion could be reached, it can be stated that patients tolerate the aqueous solution better than the methylcellulose solution. The ultimate proof would be application of pure methylcellulose in the same cases which showed sensitivity. This, however, was not possible for technical reasons.

Fourteen cases of sensitivity were observed. In seven cases it became manifest during the first week, in two cases during the second week, in three cases during the third week, and in two cases after six weeks.

Summary

1. Gram-negative organisms were cultured in 70 per cent of all cases of otitis externa in this series. Five per cent sulfamylon solution, pH 2.2 to 3.5, failed to control infection in six out of 37 cases.

2. Half of all cases of chronic purulent otitis media cultured gram-negative bacteria. Seven failures were met in a series of 40 cases.

3. Bacillus pyocyaneus was the most important pathogenic organism in the above two groups and was one of the major factors causing relapse.

4. Chronically discharging radical mastoid cavities cultured gram-negative organisms six times out of 14. A few complete cures were obtained in this group.

5. Dry epithelized radical mastoid cavities were obtained in 20 consecutive cases with immediate postoperative use of 5 per cent sulfamylon solution through an indwelling catheter.

180 Fort Washington Avenue
622 West 168th Street

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Discussion

Paul Gross, M.D., *New York City.*—Dr. Waltner deserves a vote of thanks from the otolaryngologist and dermatologist, the two specialties mostly concerned with the nosology and therapy of otitis externa. His presentation is based on a thorough clinical and bacteriologic research, and the most important result is the demonstration of the prevalence of gram-negative bacteria in the flora of the infected ear canal and the etiologic role the B. pyocyaneus plays in otitis.

The frequent failure of penicillin therapy in these cases is clearly explained by these findings. The bacteriologic results are quite similar to those obtained in the studies by Syverton, Hess and Krafchuk, Salvin and Lewis, and more recently by McLaurin.[a,b,c]

Dr. Waltner states that seborrheic, allergic dermatitis and neurodermatitis do not strictly belong to his series studied, but as a dermatologist I would like to raise the question from where the infectious eczematoid dermatitis known as otitis externa develops.

Of course, the classic form of the disease would be the one resulting from a chronic otitis media, but this is seen much less frequently since the introduction of modern chemotherapy.

I believe that many cases of infectious eczematoid dermatitis of the ear canal (and even the common furuncle) are grafted on a more or less pronounced seborrheic dermatitis of the ear canal.

This skin disease is a systemic disturbance related to faulty carbohydrate and fat metabolism, and successful control of the eczematous phase can be accomplished only by regulation of nutrition and use of vitamin therapy and topical remedies generally known as "antiseborrheics." This is true not only for the more severe cases of seborrheic dermatitis, but also for sycosis vulgaris (folliculitis barbae), furunculosis, and otitis externa.

Any slight skin affection of the ear canal can cause severe itching, and this leads either to lichenification (so-called neurodermatitis) or to a chronic and recurrent infectious eczematoid dermatitis, and/or recurrent erysipelas, because of the scratching and rubbing practiced by the patient.

The other point that I wish to stress in this discussion is the high incidence of sensitization by sulfamylon as shown by the presenter.

His figures are over 10 per cent sensitization, a percentage almost prohibitive of the use of a therapeutic agent. It exceeds the index of sensitization of sulfathiazole, penicillin, Nitrofurazone, and paraphenylendiamine hair dyes, which range between 4 and 6 per cent.

For the treatment of the seborrheic dermatitis of the ear canal, after the infectious phase has cleared up, I have found salicyclic acid, 2 per cent in petrolatum, and Vioform, 3 per cent in a washable cream, very helpful.

For prophylaxis I like the use of a 2 per cent alcoholic solution of resorcinol monoacetate best, since it is a simple, effective antipruritic and antisebor-

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[a] Syverton, J. T., Hess, W. R., and Krafchuk, J.: Arch. Otolaryng. 43: 213 (Mar.) 1946.

[b] Salvin, S. B., and Lewis, M. L.: J. Bact. 51: 495 (Apr.) 1946.

[c] McLaurin, J. W.: Laryngoscope 58: 1201 (1948).

rheic and is preferred by the patient to any ointment application.

Dr. Waltner has shown sulfamylon to be a valuable drug, and I believe that he should follow up his clues regarding the difference in sensitization between the methylcellulose base and the aqueous base by using dermatologic methods of patch testing and sensitizing patch tests commonly employed in such problems.

I wonder whether Dr. Waltner has found streptomycin effective against B. pyocyaneus. The use of an aqueous solution has been recommended for this type of otitis externa, and good results have been reported.

We have found bacitracin in a Carbowax base the most satisfactory topical antibiotic against staphylococcic and streptococcic dermatitis, and Miller and associates have found its index of sensitization to be about 0.5 per cent. This ointment is well tolerated even in the acute infectious eczematoid dermatitis of the ear canal and retroauricular fold.

I wonder whether a combination of streptomycin and bacitracin could overcome the difficulties referred to by the presenter.

In conclusion I wish to congratulate Dr. Waltner on the careful analysis of his results. He has made a definite contribution to the understanding and treatment of one of the most recalcitrant skin diseases–otitis externa.

Benjamin M. Volk, M.D., *Albany.*—In recent years, many papers have appeared in the literature, each one praising the excellent results obtained with a certain drug used topically in acute and chronic inflammatory conditions of the external auditory canal and middle ear. These have run the gamut from the older drugs, such as the sulfonamides and penicillin, to the more recent ones, such as streptomycin, Furacin, glycerite of hydrogen peroxide, Iso-par, and 1 per cent sulfamylon. Many of these have fallen by the wayside and have not stood the test of time. The multiplicity of drugs presented emphatically signifies that no satisfactory specific therapy exists for the pathologic conditions under discussion. As local medication appears to be the only practical treatment in these cases, continual search for the most effective drug is essential. The paper by Dr. Waltner is a step in this direction, and 5 per cent sulfamylon as described and used by him appears to be exceedingly effective.

We all agree that acute circumscribed external otitis is ordinarily a self-limited infection and one of short duration. It responds well to a variety of drugs. In refractory cases, in our experience, sulfdiazine orally has been more satisfactory than the use of parenteral penicillin. The latter drug quite frequently does not work well in staphyloccus infections. In chronic recurrent external otitis, most investigators have found that by far B. pyocyaneus is the most common offending organism. This condition is frequently recurrent and resistant to all forms of treatment. The paper under discussion made no mention of any fungi in chronic recurrent external otitis, although they may frequently complicate the existing bacterial infection. It is of interest to note that in the reported group of 12 cases of this disease three failures resulted, a percentage cure of 75 per cent. This is a most satisfactory result. In addition, all three failures were B. pyocyaneus in pure culture. This indicates that the organism is often difficult to eradicate and may need prolonged therapy.

It is difficult to evaluate topical therapy in the benign form of chronic purulent otitis media due to the great variability in pathology and its abuse at home by the patient. This condition often proves to be a challenge to the otologist. Bacteriologically, if we obtain a Staph. aureus or albus either in pure or mixed culture, can we be sure it is the offending organism or a normal skin inhabitant? Theoretically, if one gets a pure culture of one of these organisms, the sulfonamides, penicillin, or aureomycin should be effective. But the results of these drugs have been extremely disappointing.

In the group of chronic purulent otitis media with pure cultures, only six out of 21 cases were caused by gram-negative organisms, which incidentally seems to be a small percentage. Dr. Waltner, using 5 per cent sulfamylon, had only three failures, 14 per cent, in this group, and in this group of cases with mixed cultures, there were only four failures out of 19 cases, or about 18 per cent. These results are excellent.

We feel that the frequent daily use of topical application by the patient is extremely important. It should be stressed that the drug should remain in the ear for a minimum of ten minutes.

Dr. Waltner reported no failures with 5 per cent sulfamylon in 14 cases of chronically discharging mastoid cavities or in some twenty-odd cases of radical mastoid cavities with immediate postoperative wound sterilization. These are, indeed, commendable results.

Individual sensitivity to any drug, as in this series, precludes its continuation and frequently presents a problem to the physician.

It is impracticable, for many reasons, for most of us to do routine ear cultures in office practice. If 5 per cent sulfamylon is effective in vivo throughout almost all the bacterial spectrum, particularly for gram-negative organisms, and has the other essential pharmacologic qualities mentioned, then otologists will be able to add an extremely valuable adjunct to their therapeutic armamentarium.

When words are well chosen, brevity is clearness.

A young man, with a good disposition, is half educated.

OCULAR MANIFESTATIONS OF ANEURYSMS OF THE CIRCLE OF WILLIS

ELDRIDGE CAMPBELL, M.D., and C. W. BURKLUND, M.D.,* Albany, New York

(From the Department of Surgery, Albany Medical College)

THE berry aneurysm is a developmental anomaly which is almost entirely confined to intracranial arteries. Since the majority occur on or near the anterior half of the circle of Willis, disturbances of function of the extraocular and optic nerves are often early and prominent manifestations of their growth or rupture. The problem is, therefore, one of special interest to the ophthalmologist.

Many theories have been propounded as to the origin of these aneurysms, but the most popular one at this time is that first proposed by Doris Hegor Padget that they are the vestigial remnants of an incompletely absorbed embryonic syncytial circulation of the brain.[1,2] It has been shown by Mrs. Padget and others that these lesions occurred chiefly at the sites of bifurcation of vessels or at the sites of origin of some of the branches present in embryonic life. Formation of these tiny outpouchings results from the absence or weakness of the elastic membrane in loci of emergence of these previously existing vessels.

The frequency of occurrence of these aneurysms is not exactly known. Various estimates have been given. It is probably somewhere in the neighborhood of one to every 250 to 500 individuals. They are the commonest cause of spontaneous subarachnoid hemorrhage, and an increasingly larger percentage of cases of this disease are being found due to ruptured aneurysms as more careful search is made for them. Even in those cases in which hypertension is present, aneurysms are found in a large proportion; the hypertension merely predisposes to their rupture. An aneurysm may rupture in childhood, or dilate to produce symptoms, or may persist without symptoms throughout the patient's entire life and be an incidental finding on a routine postmortem examination. Approximately 15 per cent are multiple, and about 50 per cent of the multiple cases are bilateral. The prognosis in untreated cases of spontaneous subarachnoid hemorrhage due to aneurysms has been felt to be poor by most observers. Approximately half of all patients succumb as the result of the first bleeding. However, Richardson and Hyland have reported a very large series of cases in which, although the mortality from the initial hemorrhage was in agreement with all other observers, the percentage of recurrent episodes was extremely small.[3] These figures will require further verification. Should they be true, their significance would require serious consideration in planning subsequent surgical therapy.

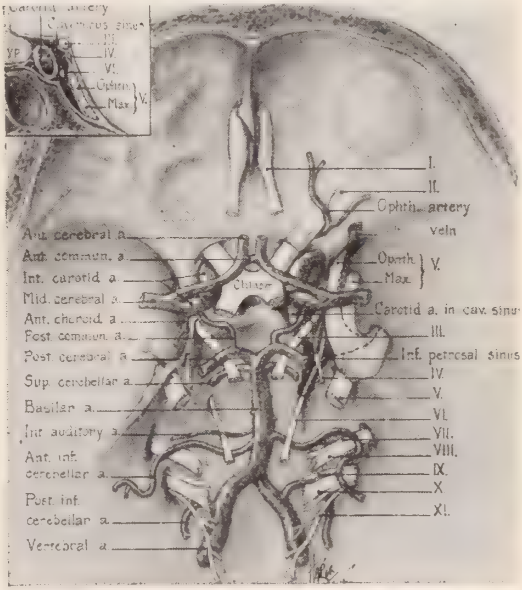

FIG. 1. Drawing to show anatomic relationships of cranial nerves to the arterial system at the base of the skull. (*Reproduced from Clinical Neuro-Ophthalmology, by Dr. Frank B. Walsh, through the courtesy of Williams and Wilkins Company, Baltimore.*)

Aneurysms which impinge upon the extraocular nerves can be divided into five groups according to their location: (1) internal carotid, (2) middle cerebral, (3) anterior cerebral and anterior communicating, (4) posterior communicating, and (5) basilar and posterior cerebral. Those occurring upon the internal carotid artery may be further subdivided into (1) those within the cavernous sinus, (2) those upon the intracranial portion of the internal carotid, and (3) those occurring at the bifurcation of the carotid (Fig. 1).

Aneurysms which develop within the cavernous sinus cannot, by virtue of their position,

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* By invitation.

Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Ophthalmology and Otolaryngology, May 11, 1950.

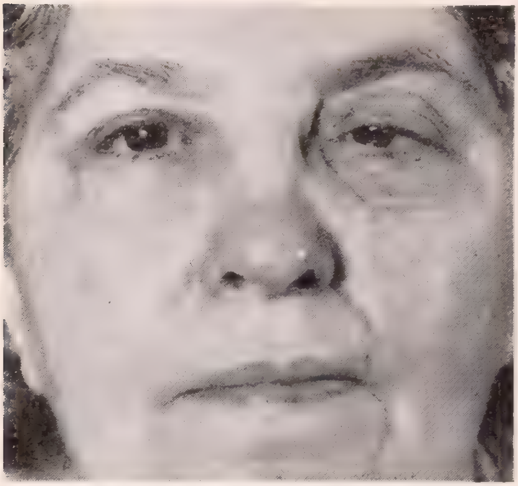

Fig. 2. Left third, fourth, and sixth nerve palsies in a patient with an aneurysm of the carotid in its intracavernous portion.

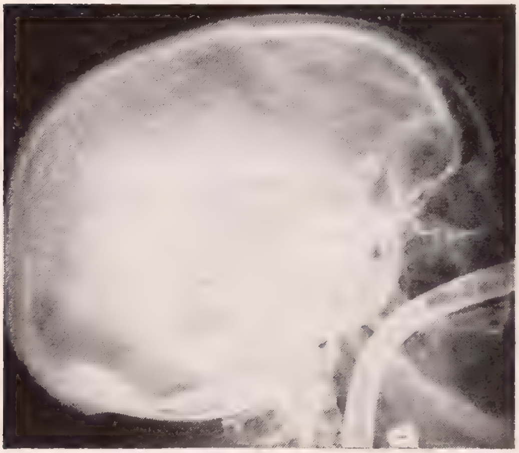

Fig. 3. Carotid arteriogram showing the aneurysm in the patient in Fig. 2.

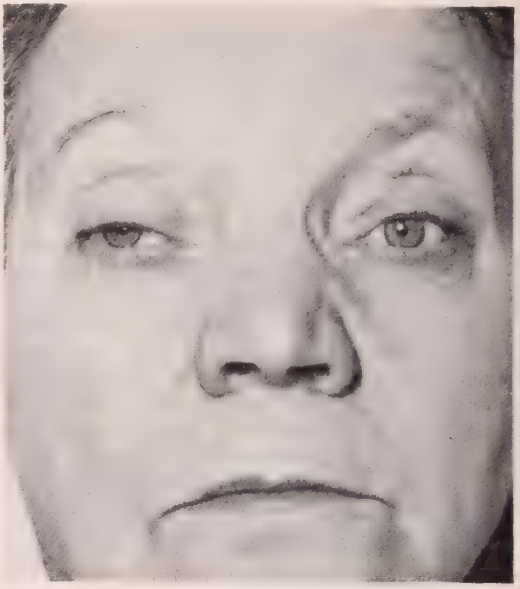

Fig. 4. Partial third nerve palsy manifested by marked ptosis and very slight weakness of adduction of the eye. Same lesion as in patient in Fig. 2.

produce subarachnoid hemorrhage and in the case of rupture result in a carotid cavernous fistula. In addition, they produce signs of compression of the sixth, third, and fourth nerves (Figs. 2 and 3). The oculomotor nerve is the most commonly involved, followed by the trochlear and lastly the abducens. The sixth nerve is involved only in those aneurysms which are very large or in those which occur in the first portion of the cavernous sinus. In combination with the compression of the extraocular nerves, various branches of the fifth nerve may also be involved. The ophthalmic division is most commonly compressed, resulting in pain behind or above the eye. The second branch of the fifth nerve is less frequently involved; the third branch, or mandibular division, is rarely involved, save in very large aneurysms or in those which are located in the first portion of the cavernous sinus.

Paralysis of the third nerve is evidenced by ptosis, dilatation of the pupil with absence or sluggishness of response to light, and an inability to elevate, depress, or adduct the eye (Fig. 4). If unopposed, the action of the abducens results in external rotation of the eye at rest. Attempts at depression of the eye result in a movement of internal rotation, abduction, and depression due to function of the fourth nerve. Diplopia is present, the false image being projected inward. Involvement of the fourth nerve usually results in no manifest strabismus but does result in diplopia in which the false image is projected downward and inward. Paralysis of the sixth nerve results in inability to abduct the eye with diplopia, the false image being projected outward. Various combinations of these paralyses may, as one would suppose, be present, and a complete external and internal ophthalmaplegia may be present with all three nerves involved.

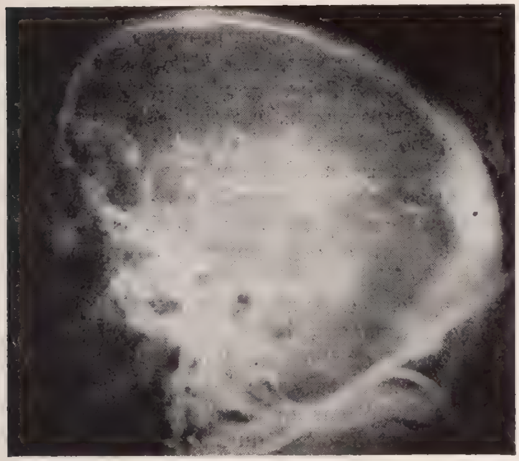

Fig. 5. Carotid arteriogram showing an aneurysm on the internal carotid at its bifurcation.

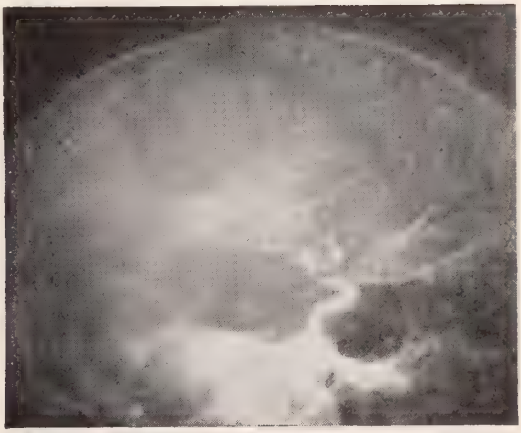

Fig. 6. Carotid arteriogram showing an aneurysm on the first portion of the anterior cerebral artery.

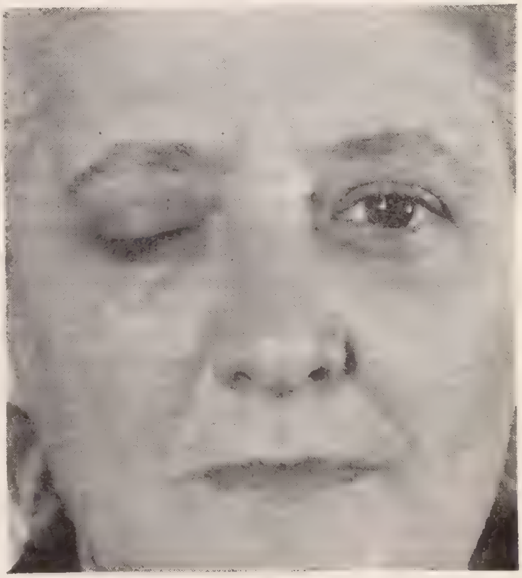

Fig. 7. Right, complete third nerve paralysis as a result of an aneurysm on the internal carotid artery at the posterior communicating artery.

Aneurysms which occur upon the intracranial portion of the internal carotid usually result in subarachnoid hemorrhage when they rupture (Fig. 5). In addition, they may compress the third and occasionally the fourth nerve. The first branch of the fifth nerve is quite frequently involved in this group. The sixth nerve and the third branch of the fifth nerve almost always escape. These lesions may, in addition, compress the adjacent optic nerve, resulting in visual loss, or may involve the lateral portion of the chiasm and produce homonymous hemianopsia. Rupture of aneurysms which are located at the bifurcation of the carotid artery most frequently result in subarachnoid hemorrhage. They, too, may compress the third nerve; on some occasions hemorrhage from this point may extend directly into the frontal or temporal lobe. Fifth nerve irritation resulting in pain behind and above the eye is not uncommon.

Those aneurysms which develop on the middle cerebral artery rarely produce more than partial oculomotor palsy; this is usually manifested by slight ptosis and dilation of the pupil. This effect is probably due not to direct compression by the aneurysm but by herniation of the swollen temporal lobe at the incisura. Contralateral hemiparesis is quite common, as are the usual manifestations of acutely increased intracranial pressure.

Aneurysms which originate from the anterior cerebral or anterior communicating artery very infrequently produce extraocular palsies; the oculomotor nerve may be partially paralyzed (Fig. 6). The commonest manifestations are spontaneous subarachnoid hemorrhage and signs of chiasmal compression. Bitemporal hemianopsia or peculiar combinations of hemianopsia and blindness frequently result from these lesions. These occur with sufficient frequency to put one on guard in all chiasmal lesions. Hemorrhage may penetrate the frontal or even the temporal lobe from such an aneurysm.

Aneurysms arising strictly from the posterior communicating artery and whose mouths involve

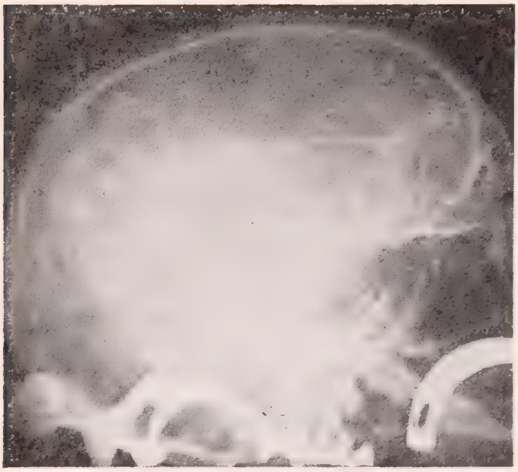

FIG. 8. Carotid arteriogram showing the lesion in the patient in Fig. 7. Note the posterior communicating artery entering the neck of the aneurysm inferiorly.

neither the internal carotid anteriorly nor the posterior cerebral posteriorly are quite rare (Figs. 7 and 8). The oculomotor nerve is first involved, the trigeminal (ophthalmic division) second, and the trochlear and abducens nerves are but rarely paralyzed. Jaeger has recently recorded the successful excision of such lesions.[4]

Aneurysms of the first portions of the posterior cerebral and most anterior segment of the basilar arteries readily compress the oculomotor nerve but, as in the case of the posterior communicating, rarely involve the trochlear, abducens, or even the trigeminal nerves. Their rupture usually leads to free extravasation into the subarachnoid space.

Aneurysms of the vertebral and basilar arteries compress the anterior surface of the pons and medulla, as well as any of the cranial nerves within the posterior fossa. In a recent case observed by us in which an aneurysm, approximately 1 cm. in size, arose from the right vertebral artery, there was right hemiplegia and subarachnoid hemorrhage but no cranial nerve palsy. Had its location been correctly diagnosed, it might well have been "trapped" by silver clips or excised.

Diagnosis

Spontaneous subarachnoid bleeding and/or rapidly developing unilateral extraocular nerve palsies usually connote an aneurysm of the homolateral carotid tree. Arteriography commonly, but by no means always, demonstrates the lesion. It is well to reserve this procedure until such a time as the patient's condition permits surgical intervention, provided the position of the lesion be suitable. Unless the lesion is quite large, ventriculography will be of little help. Electroencephalographic changes have proved inconsistent.

Good indication of the adequacy of collateral circulation from the opposite carotid artery may be ascertained by the Matas test, as well as at the time of angiography, by observing the presence of Diodrast in the opposite carotid tree when its cervical trunk is compressed.

The Matas test is accomplished by digital compression of the carotid artery in the neck for from ten to twenty minutes and noting any signs or symptoms, or the absence thereof, that the patient develops during the compression. It is determined whether or not the entire carotid is compressed by having an assistant palpate the temporal artery prior to the beginning of the compression. The assistant notes the time of disappearance of the pulse and keeps his fingers located in that spot to detect any sign of circulation getting through under the operator's fingers. This has been a very useful test, but, needless to mention, it does not establish the fact as to whether the collateral circulation is coming through the posterior communicating or the anterior communicating artery, which can be of a great deal of importance in attacking the lesion, particularly in those aneurysms which are occurring near the bifurcation or on the posterior communicating artery.

Treatment

All too frequently, the first indication of the presence of an aneurysm of the circle of Willis is its rupture. At such a time, even if the lesion be correctly localized, direct surgical attack is particularly difficult and hazardous. With better means of controlling intracranial pressure and of effecting hemostasis, it is possible that the future will bring a change in this attitude.

Approximately 50 per cent of patients with aneurysms die during the first hemorrhage. What is the outlook of the group which survives this initial episode? Opinions vary, the experience of most observers being that repeated hemorrhages with ever-increasing hazard are most common. On the other hand, Hyland had reason to believe that, once past the first attack, and kept at strict rest for two months, the outlook was quite favorable.[3,5] While the authors have had several such recoveries as reported by Hyland (one of our patients having survived an initial hemorrhage with oculomotor palsy twenty-seven years, succumbing in a similar episode which autopsy disclosed to have been due to ruptured aneurysm), the majority of our cases have had far less favorable outcomes.[6] It is believed, therefore, that, as a general rule, those aneurysms which are so disposed that they may, with reasonable safety, be "trapped" or excised should be treated surgically. Until such a time as a technic is developed by which the lesion may be removed or inactivated without destroying the parent artery, the remainder had best be left alone.

Surgical therapy of these lesions is contingent upon the establishment of two factors: first, the exact and precise localization of the lesion, and, second, the presence of adequate collateral circulation. The first group, those which occur upon the carotid artery within the cavernous sinus, are those which are most amenable to surgery, this being accomplished by clipping the carotid artery intracranially as it leaves the cavernous sinus and then ligating the internal carotid artery in the neck. A fairly large proportion of these cases may be cured by simply ligating the carotid within the neck. However, if this should fail, sufficient collateral circulation might then be established in some cases to prevent a cure being obtained by subsequent clipping of the carotid intracranially. In addition, the hazard of ascending thrombosis of the internal carotid is believed by Dandy to be more prevalent in those which are tied only in the neck, than those which are first clipped above and then tied below.[2] Aneurysms which occur on the intracranial internal carotid proximal to the posterior communicating likewise lend themselves to "trapping." Their walls are often friable, and surrounding adhesions may render exposure hazardous. They may sometimes be cured by clipping the neck of the sac. Surgical treatment of the group occurring at the bifurcation of the carotid is at present too dangerous. Should one be successful in trapping an aneurysm at this location, he will almost certainly leave the patient with a permanent hemiplegia due to the fact that no collateral circulation is able to reach the middle cerebral artery. Aneurysms on the posterior communicating artery are relatively rare, but, if they are not so large that great difficulty is encountered in exposing them, they may be easily cured by clips, one on either side of the neck, or by clipping the neck of the aneurysm itself.

Aneurysms situated upon the anterior cerebral artery prior to its junction with the anterior communicating artery are curable, provided they can be adequately exposed without rupturing the sac. Those on the anterior communicating artery itself are difficult to isolate without damaging both parent arteries.

Aneurysms of the posterior cerebral artery have been cured only by resection of the occipital lobe including the aneurysm in the resection. Should the lesion arise directly from the basilar artery, little could be done, albeit aneurysms of certain of its branches may be excised.

Recovery of the extraocular nerves themselves following therapy or spontaneous healing of these lesions varies with the individual. The sixth nerve recovers readily if the pressure has not been of long duration. The fourth nerve also recovers well. Both of these two above-mentioned may recover almost completely. The outlook for complete restoration of oculomotor function is not so hopeful. A large percentage of these patients continues to have some deficit, particularly in those cases in which there has been more or less complete paralysis of the entire nerve. When recovery does occur, it may be accompanied by a good deal of misdirection of fibers; the patient is frequently unable to perform third nerve functions with the involved eye, save for adduction.[7] Any attempt to elevate or depress the eye on that side merely results in adduction, constriction of the pupil, and elevation of the eyelid. Attempts at adduction of the eye on that side are quite successful, but, again, constriction of the pupil and elevation of the lid accompany the movement.

Summary

Aneurysms of the circle of Willis are the most frequent cause of spontaneous subarachnoid hemorrhages. Involvement of adjacent oculomotor, trochlear, and abducens, as well as optic and trigeminal, nerves is quite common and affords considerable help in diagnostic localization. The initial hemorrhage is fatal in approximately half the cases. The outlook for the survivors is grave because of the prospect of subsequent bleeding. Many of these aneurysms are so situated as to lend themselves to surgical cure.

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Discussion

Harold H. Joy, M.D., *Syracuse.*—It seems to me that this presentation is most appropriate. The nature of the anatomic arrangements of the circle of Willis in relation to the ocular nerves and the visual pathways provide the ophthalmologist with valuable data in diagnosing and localizing aneurysms. If we keep in mind the combination of ocular signs which such lesions produce, we not only can give the neurologist effectual aid in their accurate localization but may also pick up cases in our own office practice, for the ocular symptoms are pre-eminent and patients so afflicted may visit the ophthalmologist first or be referred to him by the attending physician.

Drs. Campbell and Burklund have presented their subject clearly and concisely. My discussion will be largely confined to emphasizing certain points which they have brought out. Inasmuch as anterior aneurysms are by far the more frequent and their ocular signs more characteristic, they alone will be considered.

The important ocular signs in these lesions are pain in or about the eye on the affected side, homolateral paralysis or paresis of the ocular nerves, particularly the third, field changes through pressure on the optic pathways, and the symptoms produced by subarachnoid hemorrhage.

Probably the most striking feature to the ophthalmologist is the onset of third nerve paralysis in a patient who has complained for a variable period of severe pain in or about the same eye. Whether or not all the external muscles innervated by this nerve are affected, the pupil is almost always dilated and sluggish or immobile to light. As noted by the authors, the fourth and sixth nerves are less often involved.

A diagrammatic study of the circle of Willis demonstrates the marked variation in field defects which may occur if the aneurysm is sufficiently large to exert pressure on the visual pathways, for it may involve the nerve, chiasm, or tract. Moreover, bizarre defects may be caused by the hemorrhage from a ruptured aneurysm or by the resultant increased intracranial pressure. Hence, I believe the essayists will agree that the field changes are sometimes quite inconsistent.

The authors have commented on the frequency of subarachnoid hemorrhage in this condition. The ocular signs of this are not constant. A visual defect of varying degree, usually accompanied by photophobia, occasionally occurs. In such cases the onset is apt to be sudden. The cause of the visual loss has not been definitely determined but is probably due to impaired blood supply to the optic nerve or chiasm. Intraocular changes when present may consist of small hemorrhages near the disk or, more characteristically, large subhyaloid extravasations.

It should be kept in mind that the ocular picture of aneurysms of the circle of Willis may be masked by the presence of increased intracranial pressure either due to the size of the lesion or, more likely, as the result of hemorrhage from its rupture.

I wish to report two proved cases of congenital aneurysm of the circle of Willis, both of which were anterior and on the right side involving the internal carotid artery near the junction of the posterior communicating artery. In the first case a twenty-eight-year-old male noted the onset of diplopia about six weeks after a sudden attack of neuralgic pain in the region of the right eye. After about three weeks the diplopia disappeared as the right upper lid began to droop. The pain which had been intermittent became excruciating, and the patient was admitted to the hospital twelve hours before I saw him. Ocular examination revealed a complete third nerve paralysis and a large central scotoma. His condition rapidly deteriorated, left hemiplegia appeared, and he died forty-eight hours later. Blood was found in the intraspinal fluid, and autopsy revealed a large ruptured aneurysm.

In the other case a thirty-four-year-old female had a sudden attack of severe pain in and about the right eye, which was followed two days later by diplopia and ptosis of the right upper lid. When the patient was seen by me six days after the onset, pain was still present and was accompanied by complete paralysis of the right third and fourth nerves. Visual acuity was unaffected, and no field changes were present. The symptoms almost entirely disappeared after ligation of the internal carotid artery.

It is probable that we see many cases of aneurysm of the circle of Willis without recognizing them, since the ocular signs are not always clear-cut and it is often easy to miss the obvious. It behooves all of us who are practicing ophthalmology to be constantly on our guard, for such cases are not uncommon.

FALSE POSITIVE REACTIONS TO THE SCHICK TEST

Comparison of Schick test results with circulating diphtheria antitoxin titer in a series of 114 young pregnant women indicates that many positive reactors, as judged by the standard method, are not truly susceptible to diphtheria. Such persons, when given a series of immunizing injections, undergo strong systemic reactions. The apparently high potential immunity may be due to initially adequate circulating antitoxin or to the stimulus of the Schick material alone in quickly developing antibodies. Characteristic features of this potential immunity are (1) a moderately positive reaction, (2) negative reaction to the control test, and (3) strong positive Moloney reaction. The authors feel that, although the negative reaction is significant, the percentage of error in positives suggests the desirability of changes in control materials or test materials to correct this error. Ideally, they are of the opinion that the test should be done with two controls, one of toxoid and the other of diphtheria material. Present heated toxin control material, they feel, should be discarded. An alternative would be use of a toxin solution so purified as to require no control. At present, such material needs further standardization before its use can be widespread.—*Philip Cohen, M.D., Herman Schneck, M.D., and Emanuel Dubow, M.D., Journal of the American Medical Association, February 11, 1950*

THE CAUSES OF BLINDNESS IN NEW YORK STATE IN THE YEARS 1946, 1947, AND 1948

RAYMOND E. MEEK, M.D., F.A.C.S., New York City

(From the Medical and Advisory Committee, New York State Commission for the Blind, Department of Social Welfare)

AS A forerunner to a completed study of causes of blindness in New York State, we bring to you the "highlights" of a study covering medical and other data on 5,848 persons registered with the Commission for the Blind and classified "blind" in the years 1946, 1947, and 1948.* The purposes of this paper are as follows:

1. To acquaint the public with the prevalence of blindness in our State by assembling data on the causes of blindness and the incidence of eye disease and other conditions according to the part of the eye affected, with major diagnoses and their etiology.
2. To stimulate eye physicians, general practitioners, and health, welfare, and educational agencies to a greater zeal in finding and treating eye affections.
3. To arouse the lay public to help prevent the loss of sight whereby the incidence of blindness may be reduced to a minimum.
4. To make a plea for more research in order to find what proportion of our present-day blindness can be prevented and how this can be accomplished.

Some improvement is being brought about by better and more careful living. Public health administration in the prevention and treatment of disease is progressively improving. Education in accident prevention is helping to reduce the amount of blindness.

Factors tending to increase blindness are above all the progressive aging and longevity of our population.

It is interesting to note here that the incidence of eye diseases caused by infection is becoming less and less as the result of the introduction of new methods of chemotherapy and antibiotics in their treatment. Trachoma as a cause of blindness in this State has practically disappeared from these statistics for a similar reason. Loss of sight from cataracts is one condition in which the incidence of blindness may be improved. Syphilis, manifested by interstitial keratitis and optic atrophy, is on its way out, as is ophthalmia neonatorum and other gonorrheal infections.

Blindness in this study was determined from medical findings in their relation to New York State's legal definition of blindness, which is found in the Unconsolidated Laws of April, 1945, Chapter 654, as follows:

> A blind person shall be defined as one who is totally blind or has impaired vision of not more than 20/200 visual acuity in the better eye and for whom a diagnosis and medical findings show that vision cannot be improved to better than 20/200; or who has loss of vision due wholly or in part to impairment of field vision or to other factors which affect the usefulness of vision to a like degree.

These data, dealing with primary causes of blindness, incidence of eye diseases, and etiologic factors, were based on the code system developed by the Committee on Statistics of the Blind. Where different diagnoses were given for each eye, the diagnosis of the eye most recently blinded was considered the primary cause of blindness.

Method

This study was limited to New York State. Data were collected from reports received from eye physicians. In this State blindness is a reportable condition, and much valuable data are thereby collected. Since the law carries no penalty, however, and lay referrals are not required, there is no doubt that many cases are missed.

At this point may I invite your attention to mandatory reporting of blindness, according to the laws of 1945, Chapter 654:

> It shall be the duty of this commission to cause to be maintained a complete register of the blind in the State of New York, which shall describe the condition, cause of blindness, capacity for education, and industrial training of each, with such other facts as may seem to the commission to be of value. It shall be the duty of every health and social agency, attending or consulting physician, or nurse to report to the State commission for the blind, in writing, the name, age, and residence of persons who are blind within the definition of blindness as hereafter set forth and in such cases to furnish such additional information as the commission shall request for registration or prevention of blindness.

Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Ophthalmology and Otolaryngology, May 11, 1950.

* Total blind population in New York State was 18,309 on December 31, 1948.

The hospitals are helpful in that they report their cases of blindness carefully. Physicians, however, are often remiss in this function, due in part to inertia, pure lack of interest, or to the reluctance of patients and their relatives to have this fact known. Oftentimes the physician feels that the family of the patient is not psychologically ready to accept blindness. Delays of this sort are usually temporary.

Distribution of the Blind Population

New York City had the higher incidence of blindness, 3,728 or 64 per cent of the cases, as compared with upstate New York figures of 2,120 or 36 per cent (Table I). The average population in New York City and upstate for the period of this study (1946, 1947, and 1948) was as follows: New York City, 7,895,077, and upstate, 6,378,288.

TABLE I.—Sex Incidence and Geographic Area

	1946	1947	1948	Total	Per Cent
Male	1,178	836	931	2,945	50.5
Female	1,175	854	874	2,903	49.5
New York City	1,486	1,122	1,120	3,728	64.0
Upstate	867	568	685	2,120	36.0
Total	2,353	1,690	1,805	5,848	100.0

In the metropolitan district the higher incidence of blindness may be attributed to larger manufacturing areas with accompanying greater hazard to eyesight, or it may be that the reporting of cases is better and more efficiently organized in the City. The high tension of living in New York City may be a factor in blindness arising from glaucoma. Racial factors may also be contributors.

Characteristics of the Blinded

The number of blinded persons was lowest in the age group of seven through seventeen years, 209 or 3.8 per cent, while in the group over sixty-five years there were 2,444 persons, or 42.2 per cent (Table II). With the aging of our population these latter figures are quite likely to grow.

TABLE II.—Age Groupings

Age	1946	1947	1948	Total	Per Cent
Birth through 6 years	98	87	88	273	4.5
7 through 17 years	103	46	60	209	3.8
18 through 49 years	482	338	399	1,219	21.0
50 through 64 years	568	432	485	1,485	25.0
65 and over	1,036	698	710	2,444	42.2
Age not given	66	89	63	218	3.5
Total	2,353	1,690	1,805	5,848	100.0

Two of the most frequent eye diseases were cataract and glaucoma. They were principally diseases of advancing age. Control of infectious diseases by our newer drugs and prevention of accidents among the young have made substantial progress in lowering the incidence of blindness among the young.

In this study the average median age at which blindness was reported was about fifty-seven years.

Race and color were not considered, partly because of the antidiscrimination laws of New York State.

The sexes were almost equally represented, with males numbering 2,945, or 50.5 per cent, and females 2,903, or 49.5 per cent. Among men the two reasons generally given for the higher incidence of blindness were the greater exposure of men to accidents in their work and in sports and also the alleged higher rate of syphilis infection in males. The reason here for the similarity of the incidence of blindness among both sexes may be the increased number of women in industry today and the great strides made in the obliteration of syphilis.

Degree of Blindness

Of the blindness reported, 58.4 per cent were almost totally blind. The range was from no perception of light to hand movements, or less than 1/200 (Table III). Those having better than 20/200 vision, but considered blind because of field loss, constituted 4.8 per cent of the total.

Because vision generally decreases as time goes on, repeated examinations would increase the percentage of total blindness. It should be noted that when the visual acuity falls below 1/200, the reported vision is of little value, as there is no conventional way of recording it.

Unfortunately, in this study we did not record the age of onset. This was impossible because of lack of information on diseases causing blindness. Fortunately, only 4.5 per cent were blind from birth through the sixth year. Loss of vision was usually not abrupt but was a gradual process taking several years to be completely lost.

TABLE III.—Visual Acuity

	1946	1947	1948	Total	Per Cent
Nil	718	676	444	1,838	31.4
Light perception, objects, hand movements, fingers	798	292	479	1,569	27.0
1/200 or better but not including 20/200	471	353	487	1,311	22.4
20/200	255	285	305	845	14.4
Better than 20/200 (with field loss)	111	84	90	285	4.8
Total	2,353	1,690	1,805	5,848	100.0

Classification of Causes

It was stated earlier in this paper that the standard classification of causes of blindness prepared by the Committee on Statistics of the Blind was used in this study. One member of our Committee, Dr. Conrad Berens, was also a member of that group. The standard classification is expressed in terms generally used by eye physicians and makes use of three items of information: the site of the condition which prevents or reduces sight, the type or nature of the disease in the affected part of the eye, and the underlying cause of the condition. Where the cause differed in both eyes, the last eye blinded became the primary cause of blindness in our statistics. In the case of multiple diagnoses, such as glaucoma, optic atrophy, and cataract, we used the primary diagnosis and the primary etiology. Glaucoma, in the above instance, was tabulated as the cause of blindness. The total incidence of eye disease in a given blind group has always been challenging. In this study we used two sets of tables, one dealing with the primary cause of blindness and the second with the total incidence of eye disease and conditions. The second set of tables, the tabulation of primary, secondary, and coexisting diagnoses, showed at a glance the actual prevalence of a given diagnosis or condition.

Tissues Affected and the Kind of Affections

Cataracts, or affections of the lens, appeared to be the chief cause of blindness, comprising 1,492 cases, or 26 per cent of the total, according to our statistics (Table IV). Thus, one out of every four persons showed cataracts as the primary cause of blindness. Of the individuals with an initial diagnosis of cataract, 532, or approximately 35 per cent, underwent surgery for the extraction of cataracts. These cataracts were removed from both eyes in 233 cases and one eye only in 299 cases.

TABLE IV.—CLASSIFICATION ACCORDING TO TOPOGRAPHY OR PART OF EYE AFFECTED

	1946	1947	1948	Total	Per Cent
Glaucoma	394	300	308	1,002*	17.3
Myopia	139	126	128	393	7.0
Eyeball, other	106	50	66	222	4.0
Cornea	131	90	80	301	5.1
Iris and ciliary body	127	76	70	273	5.0
Lens—cataract (all types)	646	414	432	1,492†	26.0
Lens—other	5	6	3	14	
Retrolental fibroplasia	16	23	23	62	1.0
Choroid, retina	462	375	461	1,298	21.0
Optic nerve	290	207	211	708	12.1
Vitreous	4	0	0	4	1.5
Miscellaneous	33	23	23	79	
Total	2,353	1,690	1,805	5,848	100.0

* Approximately one out of every 5½ persons is blind because of primary glaucoma.

† Approximately one out of every 4 persons is blind because of cataracts.

Visual restoration for these individuals was insufficient to take them out of the category of the blind. Such information is important, because this is one area where blindness may be reduced by more and better surgery.

The incidence of cataract per capita is increased to one out of every two and one-half persons when primary, secondary, and coexisting diagnoses of cataract were tabulated. Among this group of 5,848 individuals, cataract was responsible for the blindness of 2,200 persons, or 38 per cent. Of these, cataract was the primary diagnosis in 1,492 cases, whereas it was the secondary or coexisting diagnosis in 708 cases.

Affections of the choroid and retina blinded 1,298, or 21 per cent, and glaucoma 1,002, or 17.3 per cent. Thus, one in every five and one-half blind persons lost his sight from primary glaucoma. In the total group of 5,848 individuals, 1,318, or 23.5 per cent, were diagnosed as either primary or secondary glaucoma, thereby increasing the incidence of this disease per capita to approximately one out of every four and one-half persons. Here glaucoma was the primary diagnosis in 1,002 cases, secondary and coexisting in 316. Enucleations in cases of glaucoma are numerous. The eyes of 534 individuals were removed: both eyes in 47 persons and one eye in 487.

The other 35.7 per cent comprised myopia, corneal lesions, diseases of the iris and ciliary body, retrolental fibroplasia, optic nerve, and vitreous affections.

A newcomer to this field of statistics is retrolental fibroplasia, which made up 1 per cent of the cases. This condition, usually occurring in premature babies, has probably emerged because incubators sustain babies who would not have survived formerly or because such cases were not recognized formerly.

Etiology

Causes of blindness which were "unknown to science" amounted to 46.5 per cent (Table V). By saying "unknown to science" we simply

TABLE V.—ETIOLOGY

	1946	1947	1948	Total	Per Cent
Infectious disease	191	144	110	445	8.0
Trauma	119	59	65	243	4.1
Poisoning	15	5	5	25	*
Neoplasm	24	11	27	62	1.0
General disease	336	246	303	885	15.1
Prenatal influence	248	203	242	693	12.0
Unknown to science	1,075	816	825	2,717	46.5
Undetermined	157	77	116	350	6.0
Not specified	187	129	112	428	7.3
Total	2,353	1,690	1,805	5,848	100.0

* Percentage was so small that it was not recorded.

state that as yet we do not know what causes glaucoma, senile types of cataract, some types of uveitis, and many other affections. Infectious diseases accounted for only 8 per cent, and these causes are rapidly disappearing. Trauma, covering 4.1 per cent, may be further curtailed by preventive measures. General disease was responsible for 15.1 per cent and prenatal influence 12 per cent. Prenatal influence may be further reduced when we can better cope with German measles in young mothers, which seems to be a very positive cause of congenital cataracts. Retinitis pigmentosa is probably of prenatal origin, but this is being given further study.

Conclusions

The interesting inferences we have drawn from this study may be listed as follows:

1. There is a definite need for more research along the lines of all causes of blindness. This might give us a clue to the amount of blindness that can be or cannot be prevented.
2. There is need for a National Health Institute to provide for research in causes of blindness and eye disease, patterned after the existing National Health Institutes for cancer, mental hygiene, and heart disease, under the supervision of the United States Public Health Service. So far as we know, no comparable bill on blindness and eye diseases has been introduced in the Congress. At the House hearing on a proposed bill, one witness testified that in 1948 the Federal government spent $38,000,000 on blind relief, but it could be said that only $70,000 was spent for research along lines that might help in preventing blindness (*Guildcraft,* **23:** 35, July, 1949).
3. We should have more forceful educational programs for better eye health through better and more careful living.
4. Periodic eye examinations by an eye physician are a *must,* beginning in the preschool age or earlier if possible.
5. Attention should be focused on the need for research in the field "unknown to science," such as senile cataract, glaucoma, myopia, and retinitis pigmentosa.
6. Broader utilization of known medical, surgical, and other resources for the maintenance of good eye health, conservation of remaining vision, and restoration of vision in the first eye blinded as the result of cataracts or from other causes.
7. Emphasis on the need for more satisfactory eye reports, particularly with reference to complete diagnoses and etiologic factors.

729 Park Avenue

Discussion

Everet H. Wood, M.D., *Auburn.*—First I wish to congratulate Dr. Meek for his excellent analysis of the causes of blindness in our State and also for his appeal to all of us for greater vigilance in our daily work so that we may detect earlier some of the disastrous scourges that affect our eyes.

It was rather difficult to find a satisfactory means of discussion for a paper based on definite facts about which there can be no controversy. I have chosen to discuss the paper from the standpoint of possible prevention of some of the conditions that give rise to the statistics presented.

In order to do this I have surveyed the blind patients in my own private practice. Blindness was determined in the same way as in Dr. Meek's paper. Over the past ten years I have had 53 blind individuals in about 10,000 patients.

The analysis of cause in these patients is remarkably close to the distribution in New York State and in the nation. For example, 20.7 per cent of them were blind from glaucoma, 22.6 per cent from cataract primarily, and 37.7 per cent from some choroidal or retinal disturbance. Dr. Meek's figures show glaucoma 17.3 per cent, cataract 26 per cent. The figures for 20,000 blind individuals covering 20 states, studied by the National Society for Prevention of Blindness, show glaucoma 11 per cent, cataract 23 per cent, and choroidal and retinal disease 12 per cent. I am indebted to Dr. Franklin Foote for the national figures.

Another interesting comparison is in the age groups. If I had been asked, without consulting any records, I should have hazarded a guess that by far the majority of blind patients would be in the over sixty-five age group. However, this is not true. In Dr. Meek's study only 42.2 per cent and of my 53 patients only 28, or 52.8 per cent, were over sixty-five years of age. Dr. Meek reports 3.8 per cent in the group seven to seventeen. I have taken birth to seventeen years as an age group and found 3, or 5.7 per cent.

From the standpoint of prevention several things become obvious. First of all, many glaucoma patients do not get to the ophthalmologist in time to have what treatment we now have at our disposal started. Many of these blind individuals could be spared their blindness or at least have it greatly delayed by treatment. Of course, it is obvious to all of us that research is most important in order to find the cause of this insidious sight destroyer. It might be well to state again that the diagnosis of glaucoma is not made easily in early cases. It takes more than simply taking tension. Many other tests, such as visual fields, blind spots, provocative tests, and a careful history of the patient's complaints, past medical history, and his mental and emotional status, are required.

Of the cataract patients on my list of 53, there

Material for this paper was taken from studies prepared by Isabel Norkewicz, welfare eye classification analyst, Commission for the Blind, New York State Department of Social Welfare.

were 12 in whom the cataracts were the primary cause of blindness. There were nine of these who presumably could have been helped by operation, but whether any of them were operated on, I do not know. Presumably some of them were while I was away in the Army, but I have not seen them since. There was only one case which had been unsatisfactorily operated on in both eyes and one who had had a single eye unsuccessfully operated with a cataract on the other. One case of blindness resulted from sympathetic ophthalmia following a cataract extraction. It was questionable whether or not this blindness could have been prevented because of extenuating circumstances in the individual's family and general physical condition.

In the cases blinded by choroidal and retinal conditions, the majority were diabetic and hypertensives. Here certainly is a field in which we need further research along preventive lines. Diagnosis of these conditions is relatively simple, but therapy is discouragingly unrewarding. In this group of 53 there were one retrolental fibroplasia, two traumatic cases, and one of trachoma. I am not familiar with the type of trauma in one case, but, in the other, if the individual had used better sense in the handling of dynamite, he would have his eyes today.

On the basis of this study, I am in agreement with all of Dr. Meek's conclusions. I should like to emphasize particularly the third one, in which he advocates "more forceful educational programs for better eye health through better and more careful living," for it would seem that, if more careful living were practiced by all of us, we would have not only less blindness but less morbidity in general.

REPORT ON BCG VACCINATION

Considerable attention has recently been given in the public press to BCG vaccination. From this publicity the impression might be gained that this procedure alone holds promise of real control of tuberculosis. Since such an impression might postpone indefinitely the establishment and extension of accepted control measures, this statement of the status of vaccination in tuberculosis control programs is issued.

(1) Control measures in tuberculosis should be directed at eradication of the disease as a major cause of death or disability.

(2) The marked improvement in tuberculosis mortality figures, particularly for the ages under thirty, demonstrates the effectiveness of the present control program.

(3) The low rate in children and the continuing high rates in adults over fifty emphasize the location of the problem at the older age levels rather than in children. Under these circumstances, the efficiency of a method of tuberculosis control would be measured by its effect on the mortality from tuberculosis in the older age group, rather than in children.

(4) The addition of a vaccine to the present control program requires both careful and adequate consideration. Of the vaccines proposed, BCG has been used most widely and is the one most often discussed.

(5) This has been used for more than twenty-five years, and recently many millions of people have been vaccinated. However, it must be stated that there is no evidence that meets strict scientific requirements demonstrating that BCG affects the control of tuberculosis, despite the very suggestive results of a few studies.

(6) Because of the above fact and because there is no general agreement among investigators anywhere in the world on such fundamental matters as the preparation of vaccine, the method of vaccination, what constitutes a successful vaccination, how resulting immunity may be measured, how long such immunity lasts, etc., the procedure would seem to be still in the investigational period.

(7) It is therefore recommended that investigation of vaccination in tuberculosis be continued and increased under standard and stringently controlled conditions. This investigation should be designed to determine if the vaccine is indeed effective and what the limitations of its use might be. It would seem desirable that in each country, one agency, preferably the official health agency, should have control of the investigation.

(8) Until this has been determined and until these controlled studies are completed, the use of BCG vaccine should be limited to such studies.

(9) At the present time the methods which have been proved effective in tuberculosis control should be increasingly applied to all segments of the population, regardless of decreasing mortality figures, so long as tuberculosis remains an important cause of death. These measures include mass x-ray case finding, early diagnosis, rapid institution of treatment, isolation of open cases, and the restoration of the patient to normal life.—*Report from the Council on the Management and Treatment of Diseases of the Chest, American College of Chest Physicians*

SOME PRACTICAL USES OF SUTURES IN OPHTHALMIC SURGERY

CHARLES A. PERERA, M.D., New York City

(From the Department of Ophthalmology, Columbia University College of Physicians and Surgeons, and the Institute of Ophthalmology of the Presbyterian Hospital)

OPHTHALMIC surgeons, operating in a confined and often limited anatomic area, must develop and improve their surgical skill by attention to the details of operative procedures. The late John M. Wheeler, great surgeon and teacher, emphasized avoidance of unnecessary manipulation of tissues and elimination of needless movements of the operator's hands and body. Efficiency in surgical maneuvers increases the speed of operations, reduces tissue trauma, and improves the postoperative results.

Practice and experience lead toward perfection. The ophthalmic surgeon must be willing to change his technic if he sees ways of improving his skill. Theoretic considerations and experimental trials of new maneuvers and of different instruments may lead him to replace, modify, or maintain his customary methods. What may appeal to one surgeon may not seem advantageous to another.

On some occasions, the use of fixation, traction, and retraction instruments may obstruct or reduce the field of operation. In such cases the surgeon may well consider the use of effective sutures for the same purposes. On other occasions, theoretic and practical considerations may stimulate the operator to employ different sutures. I propose to illustrate and discuss some sutures which I have found useful. Most of these sutures have been in use for many years. The one which I employ in the Blaskovics operation for blepharoptosis has not been published as far as I am aware.

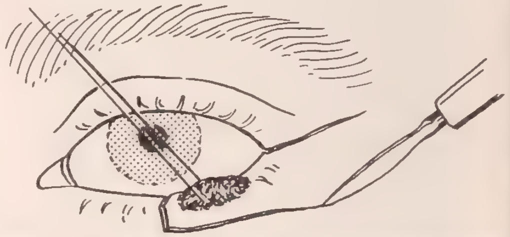

FIG. 1. Fixation and traction suture for excision of tumor of lid.

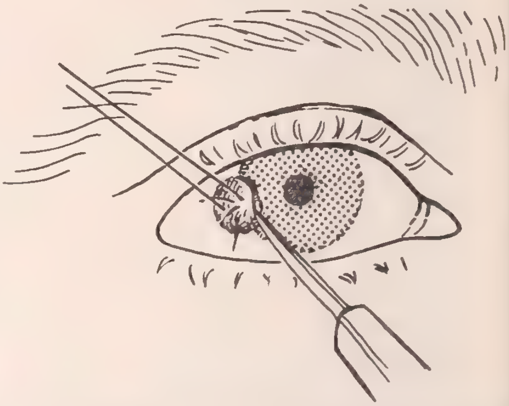

FIG. 2. Fixation and traction suture for removal of dermoid tumor of limbus.

In the surgical removal of tumors of the eyelids, caruncle, conjunctiva, and cornea, the tissue to be excised may be held and manipulated by transfixing it with one or more silk sutures. These sutures may be held by a clamp or by the fingers of the operator or his assistant as the dissection is carried out. In this manner the excised tumor is held more securely than would be the case if it were grasped with forceps, tenaculum, or clamp, and the tissue is less damaged for later pathologic study. The field of operation is made more accessible for photographic or cinematographic studies and for the instruction of observers. The accompanying sketches of a tumor of the lower eyelid and of a dermoid tumor of the limbus illustrate this use of sutures (Figs. 1 and 2). This method is also applicable in the dissection of pterygium, pseudopterygium, and symblepharon. McGavic, writing on the treatment of recurrent pterygium, stated that a black silk suture placed through the head of the pterygium is useful for fixation and retraction during the keratectomy.[1]

Sutures may often be advantageously employed instead of a speculum to maintain an open palpebral fissure during operations upon the eyeball after thorough akinesia by local or general anesthesia. The sutures are passed through a 4 or 5-mm. wide strip of the skin and anterior tarsus just behind the cilia. One to three sutures are used in the upper and lower eyelid. O'Connor, in 1934, advised the use of two upper lid sutures.[2] Horner employed two sutures in the upper lid and one in the lower lid (Fig. 3).[3] Wiener described a technic making use of three sutures in each eyelid.[4] These lid sutures are held by the assistant or clamped by hemostats to the towels surrounding

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the operative field. The sutures hold the eyelids away from the eyeball and permit rapid closure of the palpebral fissure at the end of the operation.

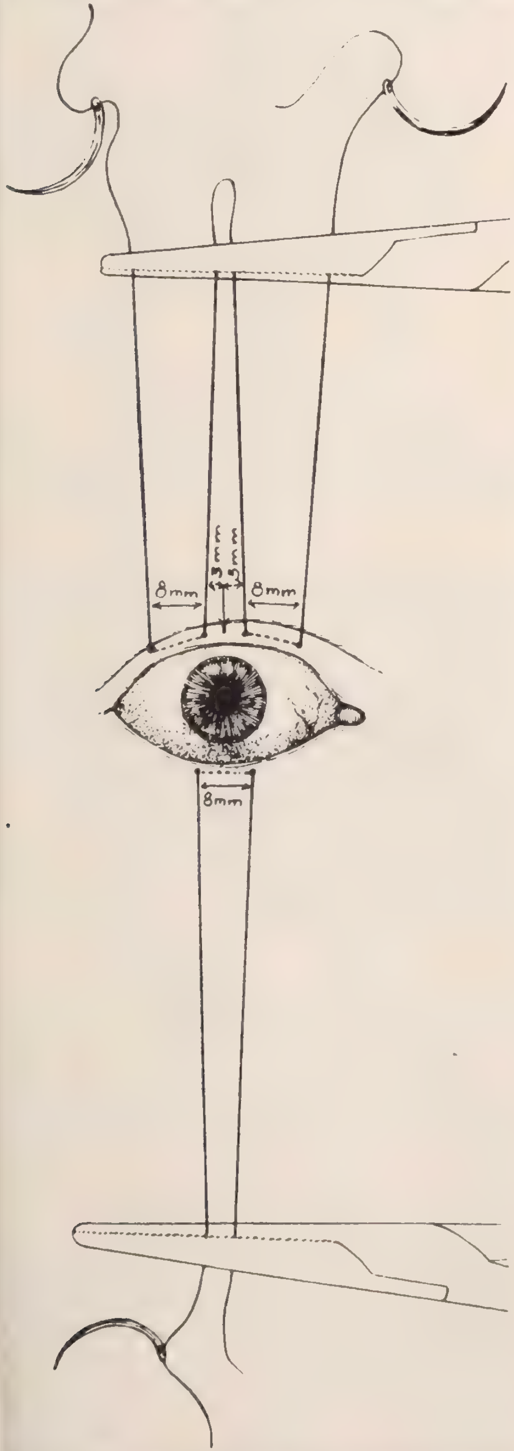

FIG. 3. Sutures for lid control in cataract operation as described by Horner.[3]

Quinn and Stansbury have recently reported their use of an ingenious sling retraction suture for the upper lid.[6] This consists of two sling sutures which pass through the entire thickness of the upper lid, just above the tarsal plate, and are tied together to form a sling. There are no instruments to remove at the termination of the surgical procedure. The upper lid may be lifted over the operative incision of the globe and may be held down by attaching the sutures to the cheek by adhesive. In subsequent dressings, the sutures may be used to elevate the upper lid gently and safely for inspection purposes. In operations for the repair of retinal separation, the use of lid traction sutures instead of a speculum allows more adequate exposure of the eyeball (Fig. 4). This also applies to operations for removal of intraocular foreign bodies, particularly those which lie in the posterior globe.

A silk traction or bridle suture through the superior rectus muscle behind its insertion is used by many surgeons as a valuable adjunct in operations for the removal of a cataract. Traction upon this suture keeps the eyeball depressed and does not press or pull upon the globe. In examples of postoperative prolapse of the iris, when pressure upon the eye must be avoided, the superior rectus suture alone, after complete anesthesia and akinesia, gives adequate exposure for the necessary dissection and iridectomy (Fig. 5). The eyeball is kept depressed, the upper lid is sup-

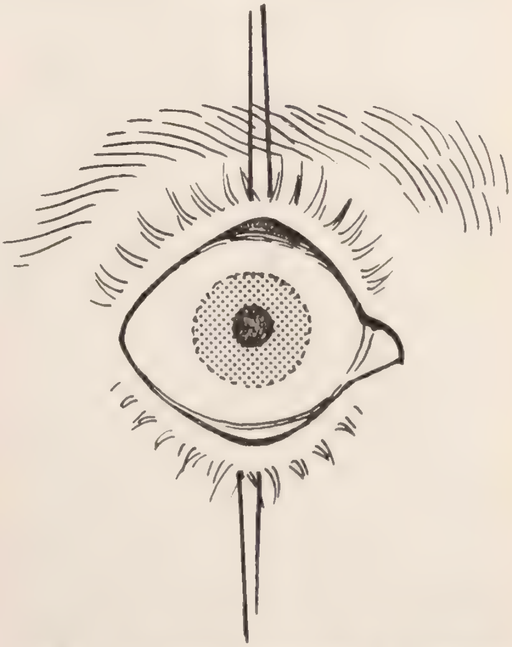

FIG. 4. Lid traction sutures useful in operations for retinal separation and for removal of intraocular foreign bodies.

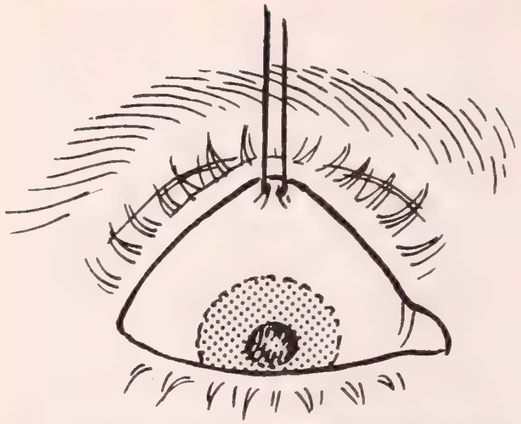

FIG. 5. Bridle suture through superior rectus muscle.

ported and retracted by the suture, the lower lid remains flaccidly in place or may be retracted by a lid suture, and the wound is exposed. Castroviejo in a chapter on trends in cataract surgery has presented an excellent discussion of methods of lid retraction and of the bridle suture of the superior rectus muscle.[6]

Traction sutures through or beneath the tendons of the rectus muscles are valuable in operations for separation of the retina. When exposure of the upper or lower portion of the eyeball is desired, a combination of lid and rectus sutures gives good exposure and allows plenty of space for the use of the Arruga or a similar speculum to treat the sclera in the areas of the retinal tears. In the case of operation upon a superior quadrant, the suture through the upper lid is pulled up and the superior rectus suture is pulled down (Fig. 6). The lower lid is held down by the rectus suture, and the cornea is protected and kept moist beneath the lower lid. When the inferior sclera is to be exposed, sutures through the lower lid and the inferior rectus are used. For ophthalmoscopic control during the operation the rectus suture is relaxed. It is often not necessary to sever a rectus muscle in primary operations for retinal separation, except when the region of the macula requires treatment. Exposure of the sclera by the use of lid and rectus sutures may be of service in the extraction of intraocular foreign bodies which are located in the posterior globe.

Recession of the inferior oblique muscle without temporary severance of the lateral rectus muscle is facilitated by a suture passed through the tendon of the lateral rectus and clamped to the towel above the bridge of the nose (Fig. 7). This traction adducts the eyeball and helps to bring the insertion of the inferior oblique muscle into view, aided by a muscle hook around this muscle. Exposure of the muscle is effected by an

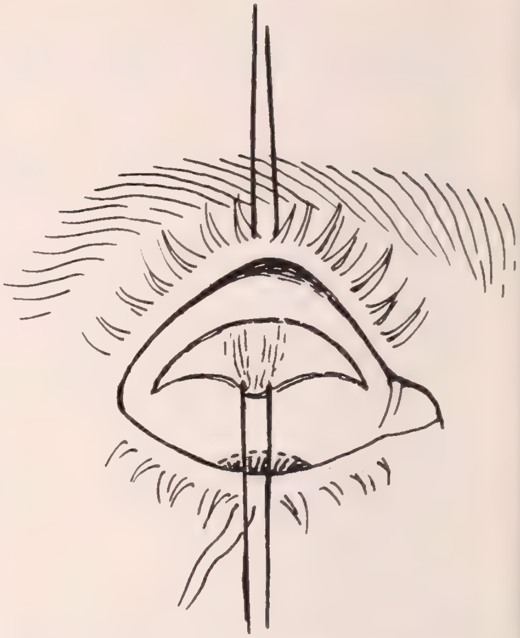

FIG. 6. Use of upper lid suture and suture beneath superior rectus tendon to expose upper eyeball and protect cornea.

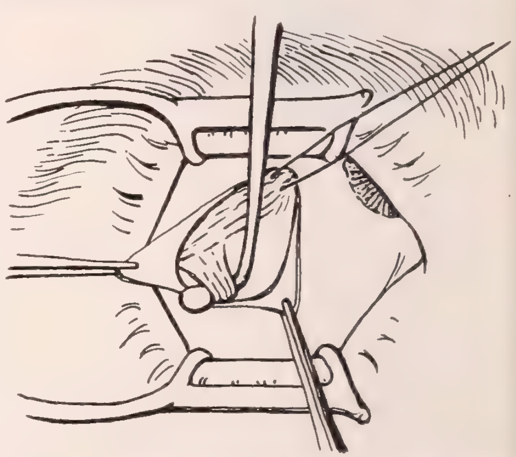

FIG. 7. Traction suture through lateral rectus tendon to expose insertion of inferior oblique muscle.

incision through the conjunctiva and Tenon's capsule.

In the treatment of blepharoptosis by the Blaskovics operation for resection of the levator palpebrae, for over ten years I have been using a chromic gut suture through the conjunctiva and the underlying tendon of the superior rectus muscle (Fig. 8). The suture is tied with a square knot to lock conjunctiva to muscle tendon. The ends of the suture distal to the knot are used for traction and clamped to the towel below the field of operation. At the close of the operation, the

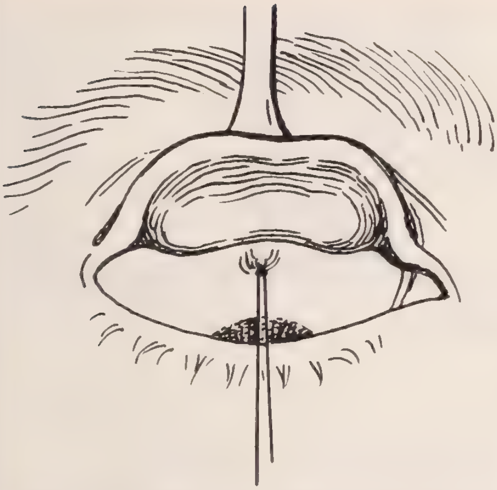

FIG. 8. Superior rectus traction suture used in resection of the levator palpebrae. Conjunctiva and muscle are tied together, and suture ends are employed for traction, to be cut off near knot at completion of operation.

suture is cut distal to the knot, leaving the bulbar conjunctiva firmly attached to the superior rectus tendon. The use of this suture, in addition to its main function of keeping the globe depressed and the superior rectus muscle taut against the eyeball, serves two other purposes: It prevents needless dissection of the bulbar conjunctiva below the region of the superior rectus insertion, and it helps to prevent postoperative prolapse of the superior bulbar conjunctiva. Berke, who has published the results of his anatomic studies of the levator muscle and of his surgical experiences in the treatment of blepharoptosis, has used the traction suture described above with satisfaction.[7]

The problem of applying a dressing and protecting the cornea following operation for blepharoptosis has been solved by the use of the Frost suture (Fig. 9). The suture originally described by Frost passed through the margins of both upper and lower eyelids, but the simplified version, shown in the illustration, is equally effective.[8] This silk suture pulls up the lower eyelid toward the eyebrow and is adjusted and tied so that the palpebral opening is closed. Some surgeons use two Frost sutures. A pressure dressing is then applied to maintain immobility of the operated tissues and to prevent postoperative edema.

Operations to recede and advance the rectus muscles of the eyeball involve the use of sutures to fix the muscle tendons in their new positions. In resections, the shortened muscles are usually attached to the original insertions by mattress sutures. The evaluation of the effects to be obtained by these surgical procedures is inexact. The surgeon, after a thorough preoperative study of the patient, can usually predict the approximate result on the basis of his previous experience with the technics he employs. Operative factors which affect the outcome of these operations include the amount of retroplacement, advancement, and resection of the muscles, hemorrhage during the operation and its resulting cicatricial organization, the degree of trauma inflicted upon Tenon's capsule during the operation, the degree to which the check ligaments and strands are severed, and the cleanness of the dissection with avoidance of unnecessary trauma to muscle sheath and adjacent structures. A large resection of a lateral rectus muscle, when performed in conjunction with a recession of the opposite medial rectus muscle for esotropia, may result in an overcorrection associated with an apparent weakness of adduction. Many of these cases actually show that the resected muscle and adjacent scar are bound to the lateral orbital wall or margin, forming an inelastic band which limits the adduction of the globe. In receding or advancing the insertion of a rectus muscle, its new attachment ideally should lie on a line parallel to the original insertion at the desired distance from it. Bunching of the muscle fibers theoretically affects the result and reduces the possibility of estimating the exact outcome. Methods of suturing such as those shown in Fig. 10 serve to reattach the muscles stretched out parallel to their original insertions. These sutures may also include the conjunctiva. They produce an anatomically correct retroplacement or advancement and permit the surgeon to make comparable studies of operations upon a series of patients.

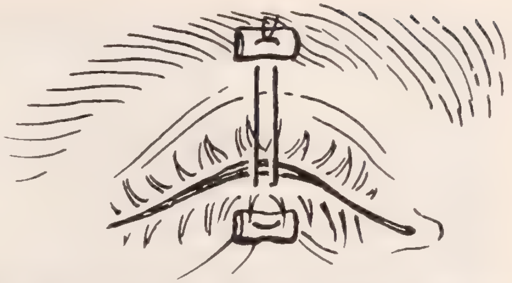

FIG. 9. Modified Frost suture following operations for blepharoptosis.

Summary

The ophthalmic surgeon may profitably consider the use of sutures for fixation, traction, and retraction. The author presents some examples employed in the removal of tumors and pterygia, in cataract surgery, and in operations for retinal separation. Uses of lid sutures, the superior rectus bridle suture, and traction sutures through or beneath the tendons of the rectus muscles are

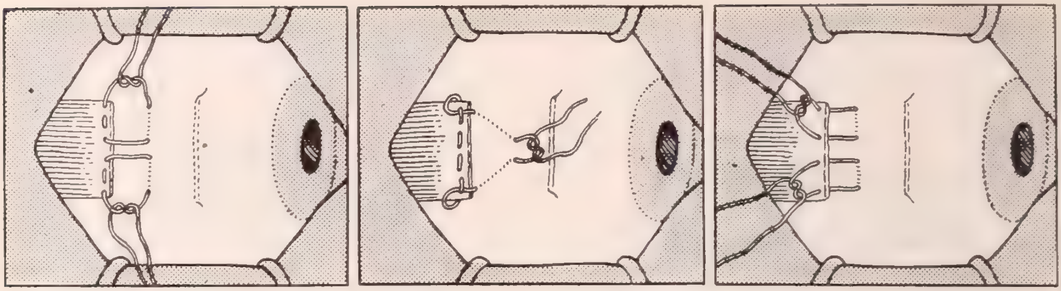

FIG. 10. Methods of reattaching retroplaced rectus muscle by the use of two single-armed, one double-armed, or two double-armed sutures through the sclera.

outlined in different surgical procedures. A new traction suture, tying conjunctiva to superior rectus muscle, is described for use in resection of the levator palpebrae (Blaskovic's operation). Theoretic considerations in the suturing of retroplaced and advanced rectus muscles are presented.

70 EAST 66TH STREET

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Discussion

Walter S. Atkinson, M.D., *Watertown.*—Dr. Perera, in his excellent and practical paper, wisely emphasizes the importance of practice and close attention to details in order to attain perfection. Practice was also emphasized by Dr. Arnold Knapp in his introduction to "Surgery of the Eye" by Török and Grout, in which he said, "Operations on the eye demand first of all much practical exercise to acquire the proper technic in the manipulation of the instruments. This can only be accomplished by practice, observation, and suitable instruction." Practice is essential, not only for the tyro but also for the experienced surgeon who continually strives for perfection in each maneuver.

I agree with Dr. Perera that the efficient use of instruments and sutures reduces trauma and facilitates the operation.

The introduction of sutures is one surgical maneuver which is often clumsily executed. This procedure can be perfected by simple practice methods without the use of animal or human eyes.

Deft handling of the needle-holder so that the thumb or finger is always in the proper position to release the catch without a snap or movement of the instrument can be accomplished by practice with nothing but the needle holder.

The ability to hold the lip of the wound without exerting traction or pressure is desirable. This may be practiced by suturing delicate tissue which tears easily, such as paper handkerchiefs. To practice corneoscleral suturing, a small rubber ball may be used.

The traction sutures that Dr. Perera mentioned are excellent. A traction suture that I have found useful for cyclodialysis is one introduced in the anterior lip of the scleral incision. It is inserted after an initial incision is made in the sclera before the sclera is penetrated. This suture simplifies the operation.

Similar traction sutures on both lips of the scleral incision for the removal of intraocular foreign bodies by the scleral route serves several purposes. The sutures may be introduced after an initial nonpenetrating incision is made. The loops are then pulled out of the way. Traction on both lips of the scleral wound makes completion of the scleral section easier and allows the vitreous to settle back so that it is less likely to prolapse. With the suture or sutures already in place, the wound can be closed quickly and securely following the extraction of the foreign body.

My objection to lid sutures placed near the margin is that they tend to evert the lid so that the upper edge of the tarsus may exert pressure on the globe. If lid sutures are to be used instead of a speculum, a type of sling suture introduced through the lid just above the tarsus avoids this complication.

There are two points relative to the so-called "bridle suture," commonly used under the superior rectus for cataract extractions, that might be emphasized. The first is that it be introduced well back so that the traction is on the origin of the muscle at the apex of the orbit and not on its insertion to the globe which would be dangerous. The second point is that the "bridle suture" need not be limited to the superior rectus muscle but may be used for any rectus muscle which remains active following a cone injection or other procedures used to produce akinesia of the rectus muscles.

Dr. Perera has given us some excellent and practical suggestions in regard to sutures. The superior rectus suture that he has described for use in resection of the levator for blepharoptosis is a most helpful safeguard. It alone makes his paper a valuable contribution.

Symposium*
LUPUS ERYTHEMATOSUS

Several of the papers in this symposium have already been published in the June, 1950, issue of the Archives of Dermatology and Syphilology. However, to make the symposium complete, abstracts of these have been included in the following pages, along with those papers which are being published for the first time.—Editor

NUCLEIC ACID DEPOLYMERIZATION IN LUPUS (Abstract)

Boris Gueft, M.D., New York City

(From the Mount Sinai Hospital)

A REINVESTIGATION of previously collected cases of lupus was undertaken after noticing the most severe nuclear degenerative changes in the more recently observed cases. Large and small aggregates of hematoxylin-staining material were found in 31 of 34 cases. Cytochemical analyses by specific reactions demonstrated that these hematoxylin-stained bodies contained greatly depolymerized nuclear nucleic acid (desoxyribose-nucleic acid). Only mesenchymal tissues showed this change, and it was specific in these tissues for lupus. The relation of these nuclear changes to the well-known connective tissue changes is under investigation.

LUPUS ERYTHEMATOSUS—PHYSIOLOGIC ASPECTS (Abstract)

Norman B. Kanof, M.D., New York City

(From the Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School and the Skin and Cancer Unit of University Hospital)

INVESTIGATIONS into the physiologic or functional alterations which occur in lupus erythematosus must not be neglected, for they may further the work in other aspects of this disease.

New staining technics may indicate what lies behind the pathology of lupus erythematosus. Altshuler and Angevine of the University of Wisconsin and many others feel the essential feature of fibrinous degeneration is the precipitation of acid mucopolysaccharide from the amorphous ground substance of connective tissue, a homogeneous gel-like structure rich in this compound.[1] Hyaluronic acid, the most familiar compound of this group, is a large and structurally asymmetric compound, highly viscous even in low concentrations. Altshuler and Angevine feel that the most likely mechanism for this precipitation is the combination of the acid mucopolysaccharide with an alkaline protein.

Functional changes in lupus erythematosus have also been approached from the vascular point of view. At the last meeting of the Society for Investigative Dermatology, Taylor and Huff reported on a study of the peripheral circulation in lupus erythematosus.[2] They compared the vasodilatation in the fingers of persons afflicted with lupus erythematosus with that of a "normal" group. They found that the elapsed time between the immersing of the feet in warm water and the attaining of the highest reflex finger temperature was significantly longer in patients with lupus erythematosus than in normal persons.

Taylor and Huff also found that the pulse tracings of lupus erythematosus patients showed a more gradual rise of the ascending limb, i.e., a prolonged crest time, a rounding of the peak of the curve, and an obliteration of the dicrotic notch on the descending limb. Similar changes have been noted in arteriosclerosis, hypertension, and pseudoxanthoma elasticum and have been ascribed to impaired arterial elasticity.

There is also some evidence that there is an alteration of the fluid exchange between the vessels and tissue spaces in lupus erythematosus. Herrmann and I, using the dye fluorescein as an indicator, found areas of increased capillary permeability and fluid exchange in lupus erythematosus lesions.[3]

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*Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Dermatology and Syphilology, May 11, 1950.

Milberg and Carney, using the passive hyperemia test, found that it takes longer to produce erythema, and the erythema takes much longer to clear (normal 1:1.2; lupus erythematosus 1.6:3) in lupus erythematosus than in controls.[4] This is attributed to poor elasticity of the vessel walls and/or an imbalance between vasodilator and vasoconstrictor substances.

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LUPUS ERYTHEMATOSUS—SEROLOGIC AND CHEMICAL ASPECTS (Abstract)

Charles R. Rein, M.D., and George H. Kostant, M.D., New York City

(From the Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School and the Skin and Cancer Unit of the New York University Hospital)

IT IS the purpose of this paper to discuss the problem of the biologic false positive serologic test for syphilis in lupus erythematosus and to report the results of a study of this problem. The serum protein changes in lupus erythematosus will be considered, and their possible relationship to the production of biologic false positive reactions will be discussed.

It is evident from a review of the literature that widely divergent reports exist regarding the incidence of false positive serologic tests for syphilis in lupus erythematosus. They range from zero in the series of Boas and With to 44 per cent in Montgomery and McCreight's review of the Mayo Clinic cases of acute disseminated lupus erythematosus. In an evaluation of a study such as this the following factors must be considered: (1) the sensitivity of the tests performed, (2) the number of tests done on each sample of serum, (3) the frequency of repetition of tests, and (4) the stage of the disease. Unless these four factors are considered, comparisons are inaccurate.

Results of Study

During the past three years we have studied the incidence of biologic false positive reactions in serums of patients with lupus erythematosus. The first part of the study consisted of the examination of serums of patients diagnosed as lupus erythematosus, at the Skin and Cancer Unit, plus patients from private practice. The second part of the study consisted of the examination of serums of patients with lupus erythematosus sent to us by mail in merthiolated test tubes from dermatologic centers throughout the country. Each specimen of serum was subjected to a battery of six serologic tests for syphilis including the Mazzini, V.D.R.L., Kline Exclusion and Rein-Bossak flocculation tests, and the Kolmer and cardiolipin complement fixation tests. As far as possible, syphilitic infections were ruled out by history and physical examination. Of a total of 178 such serums obtained from 176 patients with lupus erythematosus, 35 per cent gave positive serologic reactions with one or more of the tests in the battery.

In the Skin and Cancer Unit series, 20 per cent of 92 serums examined gave positive reactions. This series consisted of 70 per cent chronic localized discoid lupus erythematosus cases, 12 per cent chronic disseminated discoid lupus erythematosus, and 15 per cent subacute disseminated lupus erythematosus. Of the cases of chronic localized discoid lupus erythematosus, 15 per cent gave positive serologic tests for syphilis; of the cases of chronic disseminated discoid lupus erythematosus, 18 per cent gave positive reactions; and of the cases of subacute disseminated lupus erythematosus, 36 per cent gave positive tests. No cases of acute disseminated lupus erythematosus were studied in the Skin and Cancer Unit series.

In the series of serums examined in the field study, 52 per cent of 86 showed positive serologic tests for syphilis in one or more tests. The breakdown of this series comprises 57 per cent cases of chronic localized discoid lupus erythematosus, 5 per cent chronic disseminated discoid lupus erythematosus, 28 per cent subacute disseminated lupus erythematosus, and 8 per cent acute disseminated lupus erythematosus. Of the cases of chronic localized discoid lupus erythematosus, 57 per cent showed positive serologic tests for syphilis; of the cases of chronic disseminated discoid lupus erythematosus, 75 per cent showed positive reactions; of the cases of subacute disseminated lupus erythematosus, 37.5 per cent showed positive tests; of the cases of acute disseminated lupus erythematosus, 43 per cent showed positive serologic tests for syphilis.

A significant finding in the tests done on the field series was the fact that 83 per cent of the serums showed anticomplementary activity with one or both of the complement fixation tests performed.

In the analysis of the incidence of false positive serologic tests for syphilis in these series, it should be mentioned that in 83 per cent of the serums found positive, the titers of positivity were low, ranging from plus-minus to 2 plus. Where higher titers were obtained, the serums were usually those from cases of subacute disseminated lupus erythematosus.

Serum Protein Changes in Lupus Erythematosus

Many workers in the past have recognized the fact that lupus erythematosus is often associated with a rise in the globulin fraction of the serum with a reversal of the albumin-globulin ratio. Coburn and Moore concluded that hypergammaglobulinemia was a constant characteristic of disseminated lupus erythematosus and was responsible for false positive serologic tests for syphilis. Keil, however, observed many instances of disseminated lupus erythematosus where the globulin level in the serum was normal. He concluded that there was no correlation between the serologic phenomena and the globulin values. In an analysis of protein changes of the cases of disseminated lupus erythematosus at the Mayo Clinic between 1938 and 1947, Montgomery and McCreight found that 84 per cent of the cases of subacute disseminated lupus erythematosus and 94 per cent of the cases of acute disseminated lupus erythematosus showed reversals of the serum albumin-globulin ratios.

A recent study of the electrophoretic patterns of serums of lupus erythematosus has been accomplished by Walker and Benditt. These workers observed a tendency toward a drop in serum albumin and a rise in gamma globulin even in chronic discoid lupus erythematosus. In subacute and acute disseminated lupus erythematosus this tendency became statistically more significant. In addition, in acute disseminated lupus erythematosus, there was a drop in the beta globulin concentration. No significant change occurred in the total protein value.

Comments

The high incidence of biologic false positive reactions found in this study as compared with most other investigators is a reflection of the sensitivity, variety, and number of the serologic tests employed. Whereas in the Skin and Cancer study the percentage of positive findings reflected the activity of the state of the disease, in the field study there was no relationship between the state of the disease and the incidence of false positive serologic tests for syphilis. The high percentage of false positive serologic reactions, even in those cases clinically diagnosed as chronic localized discoid lupus erythematosus, suggests that some systemic disturbance occurs, even when the visible changes are localized to limited areas of the skin. There is some evidence, moreover, that such serologic phenomena may be the first and only sign of lupus erythematosus and may warn of impending clinical activity.

Conclusions

1. Serologic tests for syphilis performed on 178 serums of patients with lupus erythematosus revealed an over-all incidence of 35 per cent biologic false positive reactions in one or more of a battery of six serologic tests for syphilis.
2. It should be emphasized that 83 per cent of those serums found positive showed low titers or reactivity.
3. Those serums manifesting higher titers were, in the majority, those of patients with subacute lupus erythematosus.
4. The high incidence of biologic false positive reactions, even in those cases clinically diagnosed as chronic localized discoid lupus erythematosus, as well as the hypergammaglobulinemia in these cases, suggests some systemic disturbance even when the visible changes are limited to isolated areas of the skin.

BLOOD FACTOR IN ACUTE DISSEMINATED LUPUS ERYTHEMATOSUS; THE "L.E." TEST (Abstract)

JOHN R. HASERICK, M.D.,* Cleveland, Ohio

(From the Department of Dermatology, Cleveland Clinic)

THE diagnosis of acute disseminated lupus erythematosus can be aided by adding the suspected patient's plasma to other human or dog bone marrow or to the buffy coat of concentrated peripheral blood. Collections of polymorphonuclear leukocytes and L.E. cells are produced when the L.E. test is positive. This procedure thus establishes the presence of a substance, the so-called "L.E." factor, in L.E. plasma. Detection of the factor has provided a useful means of investigation of systemic lupus erythematosus. For example, after fractionation of whole L.E. plasma on the Tiselius electrophoretic apparatus, it was found that only the gamma globulin portion contained the L.E. factor.[1] Using the L.E. gamma globulin as an antigen, antibodies were developed against both the L.E. factor and the gamma globulin, indicating at least an immunologic difference between the two.[2]

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* By invitation.

The L.E. test was positive in 22 patients. Fifteen had no skin eruption at the time of the positive test, although six of these later developed the typical erythema of lupus erythematosus. Other clinical findings of particular interest included protracted epileptic attacks in six and false positive tests for syphilis in five.

The L.E. test indicates that systemic lupus erythematosus is a relatively prevalent disease Any patient with atypical rheumatoid arthritis and epilepsy, positive serologic tests for syphilis albuminuria, and persistent leukopenia merits suspicion as a possible case of systemic lupus erythematosus which may be detected with an L.E. test.

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THE EFFECT OF CORTISONE AND ADRENOCORTICOTROPIC HORMONE (ACTH) ON DISSEMINATED LUPUS ERYTHEMATOSUS AND THE MESENCHYMAL TISSUES (Abstract)*

Charles M. Plotz, M.D.,**,† Edward L. Howes, M.D., J. Wallace Blunt, M.D.,†
Karl Meyer, M.D., and Charles Ragan, M.D., New York City

(From the Departments of Medicine and Surgery of the College of Physicians and Surgeons, Columbia University, and the Edward Daniels Faulkner Arthritis Clinic of the Presbyterian Hospital)

THE beneficial effects of cortisone and pituitary adrenocorticotropic hormone (ACTH) on patients with rheumatoid arthritis have been amply confirmed and extended to a variety of connective tissue or mesenchymal diseases. In three cases of disseminated lupus erythematosus treated with ACTH such beneficial effects occurred as prompt disappearance of fever and pain, decrease in inflammatory reaction of serous surfaces, general improvement in well-being, and a return to normal of such abnormal laboratory findings as hyperglobulinemia, elevated erythrocyte sedimentation rate, and positive cephalin flocculation. One of the patients developed hypertension, and treatment was discontinued following a subarachnoid hemorrhage. Another patient developed parotitis and parotid abscess requiring incision and drainage; no granulation tissue was noted for three weeks, but the wound healed well when ACTH was discontinued. The third patient suffered a fatal pulmonary infarction while under treatment. In the two patients who survived symptoms returned promptly when ACTH was withdrawn, and both subsequently died.

The failure of wound healing noted here and in other patients treated with ACTH and cortisone prompted an experimental evaluation of the effect of these hormones on connective tissue growth in animals. In a series of controlled experiments, it was found that cortisone administered in such doses as to produce a hyperadrena effect caused delay in formation of granulations in rabbit ear wounds with loss of substance, delay in callus formation and cellular differentiation in experimental rabbit femur fractures, delay in healing of incised wounds in rabbits and humans, and other delays in healing in rats and guinea pigs. A variety of other steroids tested had no such suppressive effect on the connective tissue.

As a result of these experiments and clinical observations, it is postulated that the hyperadrenal state induced by cortisone and ACTH leads to a decrease in the reaction of the connective tissue to trauma. It is this connective tissue reactivity which is responsible for the symptoms of the mesenchymal diseases, and these abate when cortisone and ACTH are administered However, since the etiologic agents are unaffected the connective tissue of the host reacts once again on withdrawal of the hormones, and disease activity resumes.

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* Cortisone was obtained from Merck & Company, Inc., through the Committee on Cortisone Research of the National Academy of Sciences and was purchased with funds from the United States Public Health Service. ACTH was supplied through the courtesy of Dr. John R. Mote, medical director of Armour & Company, Chicago, Illinois.

** Postdoctorate Research Fellow, National Institutes of Health.

† By invitation.

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BISMUTH SODIUM TRIGLYCOLLAMATE, SODIUM PARA-AMINOBENZOATE, AND THE TOCOPHEROLS—VITAMIN E (Abstract)

HERMAN H. SAWICKY, M.D., New York City

(From the Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School and the Skin and Cancer Unit of the New York University Hospital)

THERE is no uniformly satisfactory treatment for any type of lupus erythematosus, although enthusiastic reports praising one drug or another frequently have appeared in the literature. My associates and I have attempted to evaluate some of these newer remedies.

BISMUTH SODIUM TRIGLYCOLLAMATE (BISTRIMATE).[1]—Bismuth is widely employed in the treatment of discoid lupus erythematosus and is generally accepted as a valuable agent in the management of this disease. Each tablet of Bistrimate contains 410 mg. of bismuth sodium triglycollamate, equivalent to 75 mg. of metallic bismuth. Forty-three patients with discoid lupus erythematosus and two persons with subacute disseminated lupus erythematosus were treated with this drug for periods ranging from four to twenty-six weeks. The drug was administered three times daily in doses of 1 tablet after each meal for the first three days and 2 tablets after each meal thereafter.

A gingival bismuth line, mild gastrointestinal upsets, and headache were observed with some frequency but were not considered contraindications to continuation of therapy. In two patients there developed a stomatitis with trigeminal neuralgia severe enough to warrant cessation of therapy. Four others presented a stomatitis but tolerated reduced doses of the drug. Transient leukopenia was observed in about 20 per cent of the cases, but the blood pictures returned to normal in spite of continuation of treatment.

In the cases in which there was a favorable response to administration of Bistrimate, improvement usually became apparent in approximately four to six weeks after treatment was started. Two to three months were generally required for the maximum therapeutic effect. Definite improvement in the lesions was noted in 50 per cent of the cases treated, some improvement in 25 per cent, and no improvement in 25 per cent. The best response was seen in cases of less than six months duration. The results in the two cases of subacute disseminated lupus erythematosus were not satisfactory.

We are of the opinion that bismuth sodium triglycollamate is at least as effective as bismuth preparations given parenterally in the treatment of chronic discoid lupus erythematosus and is of particular value in the early case.

SODIUM PARA-AMINOBENZOATE.[2]—Sodium para-aminobenzoate (specially prepared and supplied by Bristol Laboratories, Inc.) in 0.5-Gm. tablets was administered in doses of 5 tablets (2.5 Gm.) every two hours from 8 A.M. to 12 MIDNIGHT for a total daily dose of 45 tablets (22.5 Gm.). Thirteen patients with chronic discoid lupus erythematosus were subjected to this regimen for periods ranging from one to five weeks.

Five patients presented a significant reduction in the white blood cells (3,200 to 3,000 white blood cells) with a beginning depression of the granulocytes during the second and third weeks of treatment. One of these had repeated attacks of epistaxis. In all instances the blood pictures returned to normal within two to four weeks after the cessation of therapy.

One male patient experienced a widespread dissemination of lesions on the eighth day of treatment. The disseminated lesions cleared within two weeks after cessation of therapy. One woman exhibited a generalized pruritic erythema on the tenth day of treatment. One tablet (0.5 Gm.) of the drug, when administered one week later, caused a similar reaction. One woman, during the third week of therapy, found it difficult to carry on with her daily chores because of excessive tiredness and weakness. She refused further treatment or testing with the drug.

Results were rated poor in all 13 subjects, there being no appreciable improvement in the cutaneous manifestations. In eight cases it was considered advisable to discontinue the drug during the second or third week of therapy because of one or another of the side-reactions described. We could not substantiate the reported benefits of administration of sodium para-aminobenzoate in the treatment of chronic discoid lupus erythematosus and found that the drug was relatively toxic in the dosage employed in this study.[3]

TOCOPHEROLS (VITAMIN E).—Vitamin E in 200-mg. capsules, taken by mouth three times daily, was given over a period extending from two to nine months.* The average time was three and a half months.

In addition, vitamin E in doses of 400 mg. was given intramuscularly twice weekly over the same period.† The number of injections received by each of the patients varied between two and 60; the average number was 20. A total of 45 patients with chronic discoid lupus erythematosus was placed on this regimen.

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* E. R. Squibb and Sons supplied the Tocophorex high potency (capsules of distilled mixed natural tocopherols containing 68 mg. of *d*, α-tocopheryl acetate).

The oral preparations of vitamin E were well tolerated. Repeated blood counts and results of urinalysis showed no abnormality attributable to the therapy. Six patients exhibited a severe local reaction at the site of the intramuscular injection of vitamin E, accompanied by a transient rise in temperature, chills, nausea, and vomiting. Four of these reactions occurred after the first injection, one after the second, and one after the third. Subsequent injections were well tolerated. Two patients experienced a recurrence of distress because of an old peptic ulcer while receiving the orally administered vitamin E; one could not tolerate the drug because of nausea and vomiting. One patient complained of severe flushing after each injection.

Of the 45 persons treated, five showed some improvement, and one improved but promptly relapsed while receiving this therapy. The results in the remaining 39 cases were considered therapeutic failures.

We failed to substantiate the reported benefits of vitamin E therapy in the treatment of patients with chronic discoid lupus erythematosus.[4]

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† U.S. Vitamin Corporation supplied the ampules of 400 mg. of distilled mixed natural tocopherols containing 100 mg. of *d*, α-tocopheryl acetate.

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VITAMIN, ANTIBIOTIC, AND GOLD THERAPY FOR LUPUS ERYTHEMATOSUS (Abstract)

Frances Pascher, M.D., Brooklyn, New York

(From the Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School and the Skin and Cancer Unit of the New York University Hospital)

SOME vitamins have been used extensively enough in the treatment of lupus erythematosus to be evaluated therapeutically, while others merit further investigation because of promising preliminary trials. Crude liver extract is of definite value in the treatment of lupus erythematosus and in the management of the cutaneous and the hematologic complications of heavy metal therapy.[1] The optimum dose is approximately 2 to 3 cc. administered intramuscularly once or twice a week.

In view of the serious untoward side-effects following oral sodium para-aminobenzoate and para-aminobenzoic acid (PABA) and the lack of uniformity in the results obtained with the sodium salt, it would seem best not to employ either of these agents systemically in the management of lupus erythematosus. Para-aminobenzoic acid, however, when applied topically, is useful because it serves as an effective "sunburn preventative" agent.[2] It may be used in a 10 to 15 per cent concentration in a water-washable cream (hydrophilic ointment, U.S.P.) or lotion.

Experience with calciferol (D_2) in the treatment of lupus erythematosus has been limited to a few therapeutic trials. Charpy, who, with Dowling and Thomas, was one of the first proponents of calciferol (D_2) therapy, found this agent ineffective in lupus erythematosus.[3] Popoff and Ivanov likewise found calciferol (D_2) of no benefit in three cases of lupus erythematosus of the mucous membranes.[4]

More recently, the tocopherols (vitamin E) have been heralded in the treatment of this disease. Burgess and Pritchard reported good results particularly in superficial lesions with mixed tocopherols administered orally and parenterally.[5] Forty-five cases of chronic discoid and chronic disseminated lupus erythematosus were treated at the New York Skin and Cancer Unit. We were unable to duplicate their results.[6]

There have been surprisingly few publications dealing with antibiotic therapy. The consensus of opinion is that penicillin is of little or no value in the management of either the acute or chronic forms of lupus erythematosus. The limited experience with streptomycin and aureomycin is neither encouraging nor conclusive. Robinson treated 13 cases of chronic discoid lupus erythematosus.[7] Five regressed completely, six improved, one remained unchanged, and one disseminated while under treatment. The results in three cases of acute lupus erythematous disseminatus, on the other hand, were uniformly poor.[8]

Undoubtedly, gold remains one of the best therapeutic agents for chronic discoid and chronic disseminated lupus erythematosus. Many different preparations have been advocated: gold chloride, ammonium succinimido-aurate, gold and sodium thiosulfate, solganol B, and, more recently, 2 per cent colloidal gold sulfide combined with nicotinic acid. American dermatologists are still somewhat at variance as to which of these is the most efficacious and the least toxic.

Results with Aurol-Sulfide (Hille) and nicotinic acid in a total of 46 cases were as follows:[9]

Healed	9 (19+%)
Striking improvement	15 (34+%)
Moderate improvement	11 (23+%)
Some improvement	3 (6+%)
Unimproved	8 (17+%)
Relapse	0

Comparison of results in 46 cases treated with Aurol-Sulfide (Hille) and 45 cases treated with Bistrimate (Smith) were as follows:[10]

	Aurol-Sulfide	Bistrimate
Healed	9 (19+%)	5 (11+%)
Improved	29 (63+%)	30 (67+%)
Unimproved	8 (17+%)	8 (17+%)
Relapse	0	2 (4%)

Comparison of results in 46 cases treated with Aurol-Sulfide (Hille) and nicotinic acid and of 76 cases treated with gold and sodium thiosulfate were as follows:[11]

	Aurol-Sulfide and Nicotinic Acid	Gold and Sodium Thiosulfate
Healed	9 (19+%)	28 (37%)
Greatly improved	15 (34+%)	26 (34%)
Improved	14 (30+%)	13 (17%)
Unimproved	8 (17+%)	9 (12%)
Untoward reactions*	22 (49+%)	19 (24%)

* Blood counts were not done which probably accounts for the striking difference in percentage of untoward reactions.

Hematologic manifestations of toxicity occurred in 40+ per cent and renal manifestations in 9+ per cent of the cases treated with Aurol-Sulfide (Hille) combined with nicotinic acid. A depression in the leukocyte count was the outstanding untoward effect. The administration of Aurol-Sulfide (Hille) as well as the administration of any other gold preparation should be controlled by repeated leukocyte counts and urinalyses.

Gold used with a background of dermatologic knowledge and with care is probably the best therapeutic agent today for the chronic forms of lupus erythematosus, but much remains to be desired. The therapeutic failures, the relapses, and the many possible untoward effects compel us to search for a better form of therapy.[12]

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RELATIONSHIP OF CHRONIC DISCOID AND DISSEMINATED LUPUS ERYTHEMATOSUS

A. Patrick Wilson, M.D.,* and James W. Jordon, M.D., Buffalo, New York

(From the Department of Dermatology and Syphilology, University of Buffalo School of Medicine)

KAPOSI first established a fairly definite relationship between chronic discoid and acute disseminated lupus erythematosus, noting that in some cases of the chronic discoid type acute dissemination supervened, while in some cases of the acute disseminated type of the disease chronic discoid lesions developed.[1] Most subsequent observers have accepted this relationship, although others have stated that the two types are unrelated. Montgomery and Montgomery and McCreight have presented convincing evidence in support of the former viewpoint in a large series of cases in which the onset was of the chronic discoid type in approximately 25 per cent of 121 subacute disseminated cases and in approximately 20 per cent of 62 acute disseminated cases.[2-4] The clinical interrelationships between chronic discoid and acute and subacute disseminated lupus erythematosus have been worked out in detail in an excellent paper on this subject by Keil.[5] There have been many other valuable contributions to this particular phase of the problem in papers by Scholtz, Madden, Rose and Pillsbury, and Allen.[6–9]

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* By invitation.

Montgomery and McCreight and Montgomery have shown that all gradations between chronic, subacute, and acute lupus erythematosus may be seen histopathologically and that the histologic picture is not necessarily related to the type of clinical involvement.[10] The variation seems to be dependent more on the age of the individual lesion than the type of disease present. An early lesion of chronic discoid lupus erythematosus may have the same histologic appearance as a well-developed lesion from acute disseminated lupus erythematosus.

More recently Huff, Taylor, and Keys have demonstrated abnormalities of peripheral blood flow in the fingers in patients with chronic discoid lupus erythematosus and similar alterations, differing only in degree, in patients with acute and subacute disseminated forms of the disease.[11] Walker and Benditt have demonstrated similar serum protein electrophoretic patterns, and Stoughton and Wells have shown similar alterations in polysaccharide materials in the corium using the McManus periodic stain in the chronic discoid and acute and subacute disseminated types.[12–14] These fundamentally similar physiologic alterations in the chronic discoid and disseminated forms of lupus erythematosus tend to confirm the clinical impression that they are variants of the same underlying disease process and may also suggest that chronic discoid lupus erythematosus may be a systemic disease from its inception in all cases and that present methods of investigation are not sufficiently sensitive to detect the systemic component readily.

It is our impression that, in a certain percentage of cases of chronic discoid lupus erythematosus which ultimately undergo acute or subacute dissemination, a definite leukopenia develops during the interval between the appearance of chronic discoid lesions and dissemination. This undoubtedly occurs with greater frequency than we have been led to believe in our analysis of these cases, for leukocyte counts are not done routinely in cases of this type, and, if they are done initially, are not usually repeated in the absence of clinical symptoms and signs of systemic involvement. It is further suggested that, during the same interval, there may be a comparable group of chronic discoid cases in which Hargraves L.E. cells are present or in which the blood plasma has undergone those alterations as a result of which L.E. cells may be induced in normal marrow as described by Hargraves and Haserick and Bortz and/or in normal peripheral blood as demonstrated by Moffatt, Barnes, and Weiss.[15–18] We have been unable to induce L.E. cells in normal marrow using plasma from ten cases of chronic discoid lupus erythematosus studied so far, none of which cases has subsequently undergone dissemination. Many more leukocyte counts and tests for L.E. cells must be done in these cases in order to draw more definite conclusions.

The purpose of this paper is to investigate the mode of onset of subacute and acute disseminated lupus erythematosus with particular reference to the interrelationship of the various morphologic cutaneous types and their relation to the underlying systemic disease process. The following information is based on an analysis of 265 cases of disseminated lupus erythematosus with associated cutaneous manifestations, among which there were 96 cases of the subacute and 169 cases of the acute type. Of these cases, 22 subacute and 22 acute were seen in the private practice or on the hospital services of Drs. Osborne and Jordon and have not been previously reported. The remainder were selected mainly from papers and society transactions appearing in the *Journal of Cutaneous Diseases* and the *Archives of Dermatology and Syphilology* between the years 1900 and 1950.

The classification proposed by O'Leary has been followed in this analysis, as follows:[3]

1. Chronic discoid
    - (*a*) Localized
    - (*b*) Generalized—systemic symptoms and signs usually mild to absent
2. Subacute disseminate
3. Acute disseminate

For the purposes of this analysis we have, however, found it necessary to subdivide further the cutaneous picture on a purely morphologic basis and entirely independently of the systemic status of the patient in an attempt to facilitate the demonstration of the interrelationships of the various combinations seen clinically. The morphologic subdivision of cutaneous lesions we used was as follows:

1. Acute to subacute diffuse superficial types—a heterogeneous group including macular, maculopapular, purpuric, erythema multiforme-like, symmetric erythema centrifugum, and erysipelas perstans faciei types
2. Subacute localized—frequently discoid
3. Chronic discoid

As in the subdivision of the systemic disease into acute and subacute types, the cutaneous subdivisions outlined above are necessarily quite arbi-

TABLE I.—Analysis of Mode of Onset of 96 Cases of Subacute Disseminated Lupus Erythematosus and 169 Cases of Acute Disseminated Lupus Erythematosus

	Subacute Disseminated	Acute Disseminated	Average Interval	Longest Interval (Years)	Shortest Interval (Weeks)
Systemic symptoms and signs preceding cutaneous (per cent)	14	12	70 to 75% develop cutaneous lesions within 12 months	5	3
Simultaneous onset of systemic and cutaneous (per cent)	11	12	. . .	. .	. .
Acute diffuse cutaneous preceding systemic (per cent)	26	39	70 to 80% disseminate within 3 months of onset	5	. .
Subacute localized cutaneous preceding systemic (per cent)	23	17	70 to 80% disseminate within 6 months of onset	9	. .
Chronic localized (discoid) preceding systemic (per cent)	26	20	70 to 75% disseminate within 2 years	17	3

trary. The existence of intermediate forms not readily fitting into a given group, the coexistence of cutaneous lesions of two or even three types, and the frequency of interconversion of the various types all contribute to the difficulty of such a classification. In any event, in analyzing this series of cases of disseminated lupus erythematosus it was found that most cases fell more or less readily into one of these three groups (Table I).

In group 1 of the subdivision we found that, in general, the lesions were acutely inflammatory, superficial, poorly defined, labile in configuration and distribution, often widely disseminated, usually not associated with atrophy, and having the shortest (average three months) interval between the cutaneous onset and the development of systemic involvement.

In group 3 the lesions were of a chronic inflammatory type, more deeply seated, well-demarcated, discoid, stable in configuration and distribution, usually showing follicular plugging, adherent scale and atrophy, and associated with a considerably longer (average two years) interval between the cutaneous onset and systemic involvement.

In group 2 the lesions were of an intermediate type: subacutely inflammatory, fairly well defined, more or less fixed, frequently discoid in type, occasionally showing atrophy, and associated with an interval of intermediate (average six months) duration between the cutaneous onset and systemic involvement.

Summary and Conclusions

1. Patients with chronic discoid lupus erythematosus may at any time undergo acute or subacute dissemination. In the majority of cases dissemination occurred independently, but in a significantly large proportion of these patients dissemination followed overexposure to sunlight or ultraviolet radiation, therapeutic administration of roentgen rays, interference with a chronic focus of infection, and medication, especially with gold compounds. Therapeutic administration of ultraviolet radiation to patients who have, or are suspected of having, lupus erythematosus should be absolutely contraindicated.

2. Chronic discoid lesions preceded the systemic onset in subacute disseminated lupus erythematosus in approximately 26 per cent of cases and in acute disseminated lupus erythematosus in approximately 20 per cent of cases. In approximately 12 to 14 per cent of cases of acute and subacute disseminated lupus erythematosus, systemic symptoms and signs antedated the onset of cutaneous lesions, and in a similar percentage they occurred simultaneously.

3. It has been stated that, in the lesions of the acute form of disseminated lupus erythematosus, one never sees atrophy developing. While this statement applies to the great majority of cases, it is certainly not true of all, for, in addition to pseudoatrophy due to thinning of the epidermis and stretching due to underlying edema, chronic discoid lesions with true atrophy were seen developing on sites of previously acute lesions in at least five cases.

4. It has been stated that acute disseminated engrafted upon chronic discoid lupus erythematosus has a milder course and a better prognosis than the d'emblée type. From the series of cases studied there was no evidence to support this contention. Once subacute or acute systemic involvement has occurred, the course and mortality rate seemed to be quite unrelated to the character of the preceding cutaneous picture.

5. Three fairly well-defined morphologic types of cutaneous involvement were seen in acute and subacute disseminated lupus erythematosus. These were graded according to their degree of acuity or chronicity, lability, extent, presence or absence of atrophy, frequency of systemic involvement, and the length of the interval between their appearance and the development of

systemic involvement. These three types were mutually interconvertible and in some cases were present in the same patient simultaneously.

6. The frequency of occurrence of acute or subacute dissemination and the interval between cutaneous and systemic involvement may be correlated fairly well with these three morphologic types. However, while the subacute localized and acute superficial types were far more frequently associated with acute and subacute dissemination, cases with only chronic discoid lesions were not infrequently associated with mild systemic involvement and occasionally with severe systemic involvement. On the other hand, cases with extensive acute superficial cutaneous involvement were seen and followed for variable periods with no evidence whatever of systemic disease.

7. All gradations between chronic, subacute, and acute types may be seen histopathologically, and an early chronic discoid lesion may be indistinguishable histologically from a well-developed lesion of acute disseminated lupus erythematosus.

8. Clinical evidence of interrelationship is supported by experimental evidence which indicates that fundamentally similar alterations in peripheral blood flow, serum protein electrophoretic patterns, and polysaccharide materials in the corium as shown by the McManus stain occur in the chronic localized and the disseminated forms of the disease. This evidence also suggests that chronic discoid lupus erythematosus may be a systemic disease from its inception in all cases.

9. Classification and analysis of reported cases of lupus erythematosus is exceedingly difficult, mainly because a standard system of classification has not been followed in the past. The terms "acute" and "disseminated" which now imply systemic involvement have been applied in the past as descriptive terms to cutaneous lesions in many cases in which there was no evidence whatever of systemic disease. It is suggested that in the future an accepted classification, such as that of O'Leary, be rigidly applied to all cases.

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LUPUS ERYTHEMATOSUS DISSEMINATUS ACUTUM: REPORT AND COMMENT ON TWO UNUSUAL CASES

MAURICE J. COSTELLO, M.D., RAYMOND A. HAVRILLA, M.D., and ANNETTE BOUQUETTE, M.D.,*
New York City

(From the Dermatologic Service of Lenox Hill Hospital and the Fourth Post-Graduate Division of Bellevue Hospital, New York University-Bellevue Medical Center)

THE purpose of this paper is to present the case reports with the clinical laboratory and postmortem findings of two patients suffering with acute lupus erythematosus of the disseminate type of unusual interest with respect to onset, duration, clinical course, cutaneous manifestations, and eventual outcome.

The first patient, a young woman, passed through a six-year period of phases of rheumatoid arthritis, acute thrombocytopenic purpura, cutaneous manifestations of dermatitis herpetiformis, acute lupus erythematosus, and erythema multiforme bullosum (malignans type) in which state she died.[1,2]

The other patient, a middle-aged man, presented, through a ten-year period, cutaneous manifestations of discoid lupus erythematosus, subacute lupus erythematosus, and acute lupus erythematosus disseminatus associated with acute miliary tuberculosis which of itself could have been the actual cause of his demise.

Case Reports

Case 1.—M. N., white, married, childless American teacher of Irish descent, aged thirty-one, weighing 122 pounds, first came under my observation on

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* By invitation.

August 26, 1947, at which time she was suffering from a generalized pruritic erythematovesicular eruption of the posterior elbow regions, anterior knees, and the torso of two years seven months duration. This eruption began one month after a splenectomy was performed on December 19, 1944. The thin-walled vesicles were buckshot size on an erythematous base, and they contained a straw-colored fluid. Areas of hyperpigmentation replaced the above type of lesions after they had undergone involution. On the sides of the distal phalanges of the hands were present at all times during observation so-called splinter hemorrhages which the patient claimed had been present since she had a splenectomy for purpura hemorrhagica (thrombocytopenic purpura) on December 19, 1944.

The eruption at this time (August, 1947) was diagnosed as dermatitis herpetiformis (Duhring's disease) and responded well to small doses of liquor potassae arsenitis (Fowler's solution). Sulfapyridine, although more effective, was not prescribed at this time because of the probable toxic effects on a patient who could ill afford to receive them.[3]

The thrombocytopenic purpura (purpura hemorrhagica) began with menorrhagia in August, 1944, for which she received her first transfusion of blood on October 9, 1944. During that time she developed scattered purpuric lesions over the body. Her temperature was 99.4 F., pulse 100, respiration 19, and blood pressure 115/70. There were purpuric macules on the hands, abdomen, feet, and chin.

Laboratory tests gave the following results: Kahn test negative; red blood cells 2,500,000; hemoglobin 9.6 Gm.; hematocrit 25 mm.; platelet count 235,450 per cu. mm.; erythrocyte sedimentation rate 23 mm.; prothrombin time 43 seconds.

She had received 500 cc. of blood by transfusion eight times between November 5, 1944, and December 19, 1944. Rumpel-Leede test had been positive. Because of continued hemorrhage and a falling blood platelet count which finally reached 60,000 thrombocytes, a splenectomy had been performed on December 19, 1944.

On September 10, 1947, when the patient was relatively well, the laboratory reports were as follows: bleeding time three and one-half minutes; coagulation time two minutes; clotting time one hour; clot retraction three and one-half hours; erythrocyte sedimentation rate 8 mm. in one hour (Wintrobe); platelet count 120,000; hemoglobin 84 per cent; erythrocytes 4,240,000; leukocytes 8,100; polymorphonuclears 55 per cent; lymphocytes 38 per cent; monocytes 2 per cent, and eosinophils 5 per cent. The urinalysis showed a good trace of albumin. The specific gravity was 1.030.

The patient was advised to avoid sunlight but in September, 1947, accidentally exposed the V of her chest for twenty minutes while she covered her face. She promptly developed a roughly triangular 2- by 1.5-cm., dull red, edematous lesion in the center of the V of the chest. Within the next two weeks a half dozen similar but smaller lesions appeared on the V of the chest. The diagnosis of subacute lupus erythematosus of the disseminate type was made on the appearance, localization, and behavior of the lesions. The occurrence of acute lupus erythematosus and dermatitis herpetiformis in the same patient was unique in my experience.

The lupus erythematosus lesions then involved the face, chest, back, and the extensor surfaces of the arms, forearms, dorsal aspect of the hands, and the oral cavity.

The patient stated that she had been feeling well until December 8, 1947, when the left lower second molar tooth was extracted because of peridontal abscess. Following this there was an exacerbation of her symptoms, especially her joint pains and an increase in swelling of her finger joints which had been present to a moderate degree since April, 1945.

About the middle of January, 1948, she developed cardiac palpitation and extrasystoles. On January 20, 1948, she experienced pain in the sternal region, and temperature of 102 F. She then had a continuous elevation of temperature: 99, 100, and 101 F. in the latter part of February of that year with symptoms at the time which were diagnosed by her physician as grippe. I had not seen the patient between November 26, 1947, and March 10, 1948. She was admitted to Lenox Hill Hospital on March 13, 1948. She had persistent increasing fever and developed cardiac complications and restlessness. On March 22, 1948, the temperature rose to 104.4 F.; pulse was 120, and there was severe pain in the right knee joint. At this point she developed a scaly, diffuse, papular eruption. A number of pellicle-like erythematous, edematous lesions, grayish in color and resembling leukoplakia, appeared on the gingivae. Edema of the face, neck, chest, and upper extremities ensued. The papulosquamous lesions later became moist and crusted.

Dr. Clarence de la Chapelle saw the patient on March 24, 1950, and agreed that the patient presented classic acute lupus erythematosus of the disseminate type with diffuse serous involvement, including the pericardium, and probable atypical verrucous endocarditis and myocarditis. There was a precordial friction rub. The heart was enlarged with a blowing systolic murmur at the apex blending with the first sound. There was a to-and-fro friction murmur. Dr. de la Chapelle thought that the extraction of a molar tooth in December was of interest and possible importance because of the possibility of having initiated an acute bacterial endocarditis. Penicillin and streptomycin were administered without avail about March 26, 1948. The precordial friction rub could still be heard. A hard painful, loud, nonproductive cough developed. There were moist rales at the base of the lungs posteriorly. The cutaneous manifestations became worse, the lesions of the skin becoming edematous, crusted, and vividly erythematous.

On March 26, 1948, the eruption was severe, the lesions becoming extensively vesiculopustular and crusted, especially on the face. The deep-seated, thick-walled vesicles and bullae on the palms became hemorrhagic, and discrete hemorrhagic punctae occurred on the palms and dorsa of hands. The milky white, firmly attached membranes on the gingivae were increasing in extent. The crusting disappeared from the face, leaving the skin in the

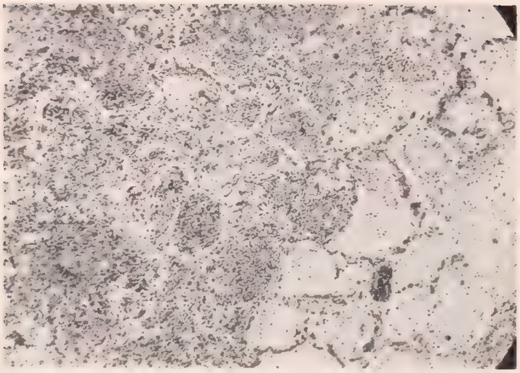

FIG. 1. Microscopic section of lung. Alveolar spaces in center of field are completely filled with cells that cannot be identified under high power (Case 1).

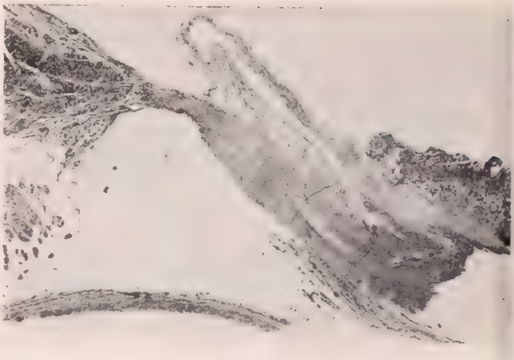

FIG. 2. Section through aortic verruca shows the greater mass to be composed of amorphous eosinophilic stained material with a surrounding area of fibroblastic proliferation (Case 1).

areas of the malar prominences clear and pink. The eruption which showed a predilection for the extensor surfaces began to take on the aspects of erythema multiforme bullosum of the Steven-Johnson type. Blood pressure was 96/48. On March 30, 1948, the temperature was 106, pulse 124, and respirations 24.

On April 1, the bullous eruption spread to the legs, and punctate petechial hemorrhages were present on the hands and the palmar surfaces of the distal phalanges. The denuded areas in the oral cavity extended to involve the pharynx, causing great difficulty in deglutition. This was followed by sordes of the nose, lips, and tongue as seen in typhoid fever. On April 4, 1948, larger areas of the skin were denuded of epidermis, leaving raw, magenta-colored surfaces as seen in pemphigus vulgaris or erythema multiforme bullosum.

The gangrenous lesions on the legs appeared different in the sense that the dark blood crusts, having been removed, left a crater-like denudation of the skin with a yellowish pellicle and a surrounding area of erythema. Definite, clear, fluid-filled bullae were observed on the legs with accompanying edema of the legs and feet. The conjunctivae became injected. There was a pellicle-like exudation on the margins of the eyelids of purulent character on April 5, 1948. The following note was entered by me (M.J.C.) on her chart: "If one did not know the history of the acute lupus erythematosus in this patient, the cutaneous manifestations in her present state would strongly suggest erythema bullosum malignans of the pluriorificial type. There were numerous vesicles and flaccid various sized bullae on the weight-bearing surface of the feet."

On April 8, 1948, Dr. de la Chapelle stated that the precordial rub had disappeared as a result of organization of the exudate or effusion. He stated, "Personally I consider the prognosis in this case as totally hopeless. We have had a few remissions at Bellevue Hospital, but all the patients have died within six to eighteen months after the apparent recovery." On April 11, 1948, the eruption had continued to spread; the borders of the advancing lesions were more edematous and red than the center of the lesions. These borders bled easily, and the blood dried and formed adherent crusts. Advancing beyond this, the epidermis was elevated by the underlying accumulation of fluid. The skin was wrinkled and pellicle-like in this zone.

Roentgen ray studies, reported by Dr. G. H. Ghiselin, showed moderate enlargement of cardiac shadow on March 15, and on April 12, diffuse infiltration throughout the right lung field as well as a more localized patch of infiltration at the left hilum were recorded.

Dr. C. Kossmann reported the results of the electrocardiogram as follows: normal sinus rhythm and minor abnormalities of T wave, the significance of which will depend on clinical findings.

Urinalyses were performed every other day. The albumin varied from 1 to 4 plus and red blood cells 2 to 25; white blood cells, one or two to many, were present.

The hemoglobin, beginning at 109 per cent (16.4) on March 15, 1948, gradually fell to 71 per cent (10.6) by April 10 and the red blood cells from 4,800,000 to 3,400,000. The leukocyte counts varied from 6,000 to 17,700, with a corresponding differential. The eosinophil count was never above 5 per cent. Three turk cells were found on April 12. On March 15, 1948, the erythrocyte sedimentation rate was 68 mm. at 1 hour. Blood culture was sterile on March 26, 1948. The Rh factor was positive. Serum protein measured 6.5 Gm. per cent, albumin 3.9 Gm. per cent, and globulin 2.6 Gm. per cent.

The patient ran a septic type of temperature, ranging as follows: first week, between 99.6 and 102 F.; second week, between 98.6 and 106 F.; third week, between 99.4 and 106 F.; and the fourth week between 98 and 106 F.

The patient died on April 14, 1948.

Treatment, although unavailing, consisted of penicillin and streptomycin injections; frequent smal transfusions of whole blood; testosterone proprionate, 50 mg. by injection daily; large doses of the salicylates; oxygen inhalation; Rutorbin; panvitamin preparations; sedation; crude liver extract, 2 cc. twice a week; and protein hydrolysates. Local treatment consisted of potassium permanganate bed baths and the application of vaselinized gauze to the extensive lesions on the body and extremities.

NECROPSY REPORT.—Necropsy report on April 15, 1948, was as follows:

Primary: Acute lupus erythematosus, disseminatus.

Secondary: *Trachea*—advanced tracheitis with sclerosis of the mucosa; *Lungs*—chronic and acute adhesive pleuritis, pleuritis, emphysema, focal necrosis of lung parenchyma, and necrosis and thrombus of medium-sized pulmonary vessels (Fig. 1); *Kidneys*—postmortem autolysis; *Accessory*—accessory spleen; *Liver*—mild chronic passive congestion; *Esophagus*—esophagitis; *Heart*—fibrinous pericarditis and aseptic aortic verruca (Fig. 2).

Skin—Section taken from skin from the right breast shows an epidermis which is greatly distorted. The changes vary within the microscopic field. In one area, for example, the stratum corneum has been carried away and its position marked by a few red blood cells. The stratum germinativum exists as parallel bands of what appears to be fibrous tissue. The papillae of the epidermis are entirely irregular and extend in some cases as long finger-like projections deep into the corium. In between these long projections there are shorter, clublike projections. The basal cells of the stratum germinativum show in some areas a regular, palisade-like structure. For the most part, however, this cell layer is diffuse, and only a suggestion of elongated nuclei is noted. The maturing cells of the stratum germinativum are indefinite in outline. In another area the stratum corneum is prominent and shows many parallel fibers of hyalinized layers of cornified tissue. The stratum germinativum is normal in width and shows many large maturing squamous cells. The basal layer as before is irregular. Its cytologic detail is distorted and indistinct. Cross section of a sweat gland is noted which shows swollen, irregularly shaped luminal cells. A hair follicle is not noted, but a segment of normal appearing sebaceous gland is seen. The entire corium is composed of heavy acellular avascular segments of hyalinized tissue. The deeper subcutaneous fat is normal in appearance, and the blood vessels of this layer, especially the veins, show a peculiar hyalinization of the wall elements. The arteries are approximately normal. Diagnosis was disseminated lupus erythematosus.

Section through the skin from abdomen shows loose strands of corium hanging free from the surface. In the layer of squamous epithelium present, the cells appear to be squeezed by strands of fibrous tissue. Instead of normal, large, plump squamous cells, oval hypochromatic nuclei are seen which are supported by heavy strands of hyalinized fibrous tissue. The basal layer is entirely absent and forklike; distorted papillary projections extend into the corium. The papillary stratum of the corium shows a loose fibrous pattern, enmeshed in which are large, irregularly shaped hypochromatic nuclei. These cells do not belong to the inflammatory series, and their origin is obscured. Beneath this in the reticular stratum of the corium there is segmentation and fragmentation of the elastic and collagenous elements so that chunks of completely amorphous, eosinophilic stained tissue remains (Fig. 3). The subcutaneous fat is unremarkable. An artery is noted in which a peculiar degeneration has taken place in the walls. The intima is wrinkled, still lined by a single cell layer. The adjacent intima shows vacuolization. The media shows only fragments of normal elastic structure. The surrounding adventitia is loose and edematous appearing. One would imagine that such a vessel goes very well with Baehr and Klemperer's description of fibrinocollagenous degeneration. Diagnosis was disseminated lupus erythematosus.

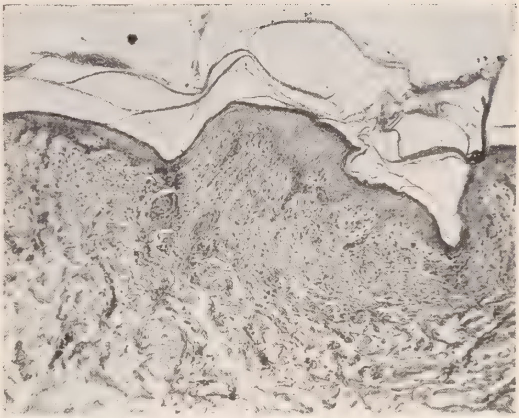

FIG. 3. Microscopic section of skin from abdomen, showing, in the papillary portion of the corium, cells, the origin of which is obscure. The elastic and collagen elements are fragmented and segmented (Case 1).

General—Conjunctivae showed punctate hemorrhage, and there was bilateral hydrothorax.

Case 2.—S. N., a thirty-five-year-old debilitated white man of Polish descent, was admitted to the dermatologic wards of Bellevue Hospital on April 1, 1949, complaining of fever, malaise, anorexia, and an exacerbation of his cutaneous disease, lupus erythematosus (Fig. 4).

The eruption had appeared for the first time nine years previously and was localized to the malar prominences at that time. Two years later, the eruption developed on his chest, arms, forearms, and hands after exposure to the sunlight while at the beach. He had been previously admitted to a hospital other than Bellevue where a diagnosis of lupus erythematosus was made and injections of gold salt were administered with some improvement.

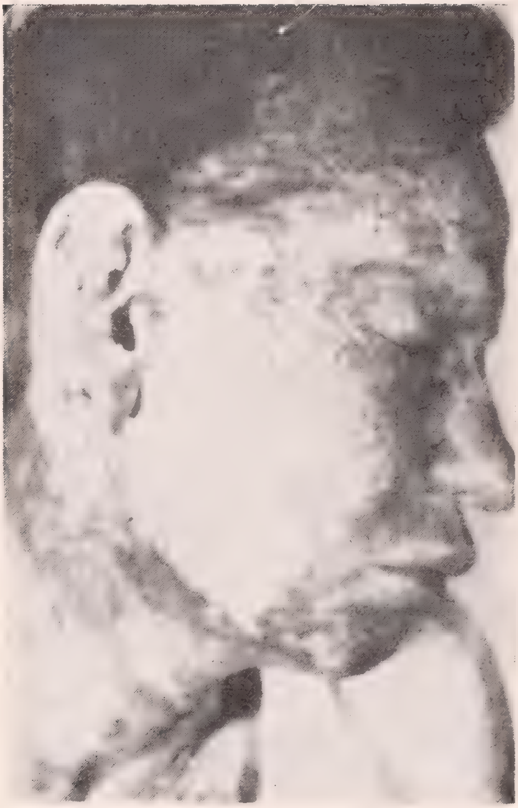

FIG. 4. Extensive involvement of face with discoid and erythema multiforme-like lesions with hypo- and hyperpigmentation and scarring (Case 2).

In May, 1943, the patient was hospitalized for two weeks. The electrocardiogram was reported as "minor changes consistent with the diagnosis of lupus erythematosus." A biopsy of a lymph node taken from the left axilla and guinea pig inoculation from a piece of tissue was negative for tuberculosis and Mycobacterium tuberculosis. A roentgenogram of the chest in 1943 showed a childhood type of central tubercle foci and scars. The complement fixation test for syphilis was negative.

A biopsy on April 23, 1949, showed changes consistent with the diagnosis of lupus erythematosus. Bone marrow studies revealed no lupus erythematosus (Hargrave) cells. A roentgenogram of the chest on May 16, 1949, revealed evidence of disseminated nodules throughout the parenchyma of both lung fields (Fig. 5). The heart was uniformly enlarged. Another roentgenogram of the chest on September 1, 1949, showed bilateral perihilar nodular infiltrations. Roentgenograms of the hands and feet revealed no radiolucent areas of the terminal phalanges. A gastrointestinal series was performed on September 23, 1949, and no intrinsic organic lesions of the stomach or duodenum were found.

The patient's stay on the dermatologic wards at Bellevue was his final hospitalization which terminated fatally after seven months of observation and treatment. During this time his temperature ranged between 99 and 101 F. with no characteristic fever pattern. During the last two months of his life his temperature was higher, elevated to 103 F. The blood examinations revealed secondary anemia and a consistent leukopenia. The albumin-globulin ratio was not reversed. The erythrocyte sedimentation rate consistently remained elevated, measuring 27, 29, 30, 35, and 40 mm. per hour. In addition to the above areas, the cutaneous manifestations were also seen on the vertex, occipital, and parietal regions of the scalp where there was scarring and permanent alopecia. The conchae of the ears, the palms, soles, lips, and oral mucous membranes were involved. The spleen was readily palpable, and cough of moderate degree indicated pulmonary involvement.

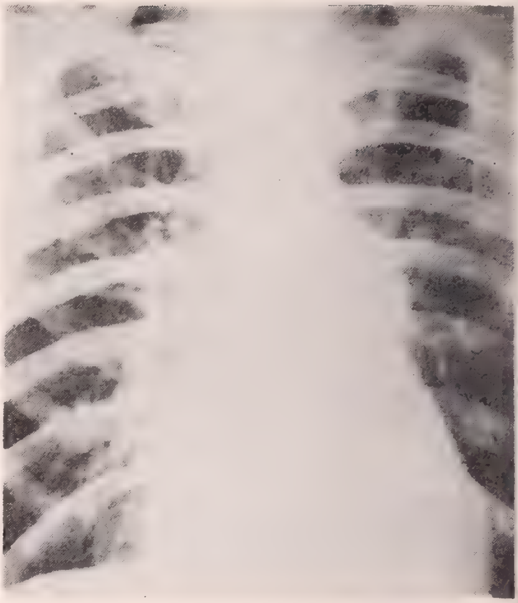

FIG. 5. Roentgenograms of heart and lungs showing evidence of disseminated miliary tuberculosis nodules (Case 2).

Ophthalmoscopic examination revealed the following: The fundi revealed multiple, round to oval, yellowish-white exudates lying between the vessels near the disks. The size was about one-fourth of the disk diameter. Some were smaller. They were fluffy with indistinct margins. These probably represented tuberculous infiltrations.

Therapy consisted of gold sodium thiosulfate, bismuth subsalicylate, penicillin, streptomycin, vitamin E, and autogenous vaccine. During aureomycin therapy there was an exacerbation of the eruption, a bullous eruption appearing on his thighs. Frequent blood transfusions, calcium pantothenate, and testosterone propionate, 10 mg., were administered every other day.

Therapy did not favorably influence the patient's condition or his fever, and he died on October 19, five days after the last blood transfusion.

NECROPSY REPORT.—Necropsy report on October

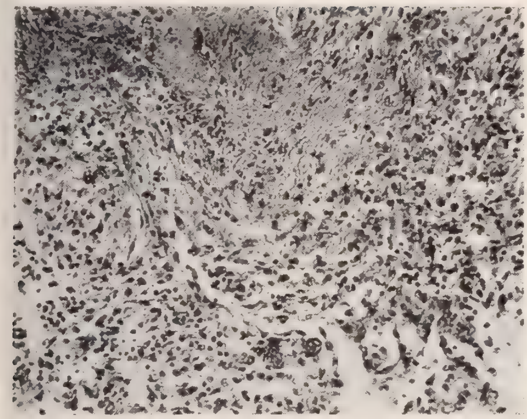

FIG. 6. Microscopic section of the lung showing a poorly encapsulated nodule with a caseous central mass and surrounding granulation tissue (Case 2).

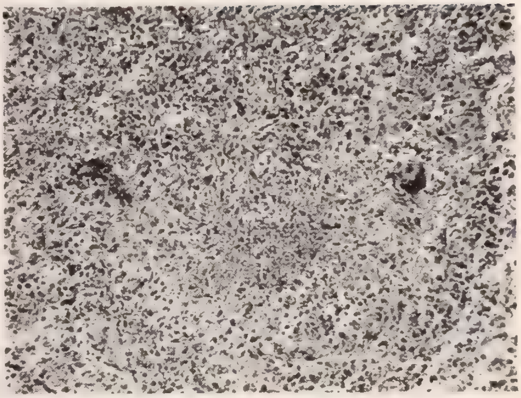

FIG. 7. Microsopic section of spleen showing congested pulp and a caseous area surrounded by plasma cells, epitheloid cells, and multinucleated giant cells (Case 2).

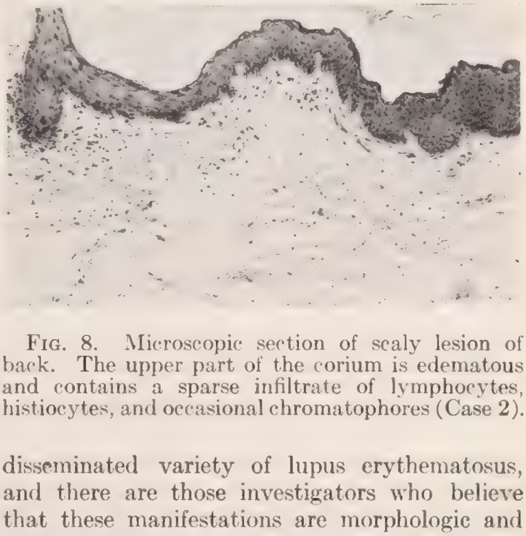

FIG. 8. Microscopic section of scaly lesion of back. The upper part of the corium is edematous and contains a sparse infiltrate of lymphocytes, histiocytes, and occasional chromatophores (Case 2).

20, 1949, by Drs. Moreno, McGimsey, and Worcester, pathologists, was as follows:

> *Clinical Diagnosis:* Bilateral bronchopneumonia and lupus erythematosus disseminatus acutum.
>
> *Anatomic Diagnosis:* Tuberculosis of mediastinal lymph nodes; miliary tuberculosis of lungs, liver, spleen, kidneys, and lymph nodes (generalized); tuberculous pericarditis; perinephric abscess due to tuberculosis; and acute lupus erythematosus of skin (generalized) (Figs. 6 and 7).

A biopsy specimen from the back, reported by Drs. William Director and S. L. Wilens, revealed the following on microscopic examination:

> The epidermis is thinned and flattened with granular layer. There are two areas which show hyperkeratosis of follicular opening. The upper corium is edematous and contains a very sparse infiltrate of lymphocytes, histiocytes, and occasional chromatophores (Fig. 8). There is a moderate number of dilated blood vessels, a few being irregular; changes are consistent with those of subacute lupus erythematosus.

This man died of generalized tuberculosis, including a miliary spread, pericarditis, and perinephric abscess. There was no evidence however of the presence of the lesions caused by disseminated lupus erythematosus in any of the organs. It would seem, therefore, that this patient had two distinct diseases: (1) lupus erythematosus confined to the skin and (2) tuberculosis involving many viscera.

Comment

Acute thrombocytopenic purpura in association with acute lupus erythematosus of the disseminate type has been observed by the senior author on several occasions. In one patient it was thought that the severe acute fatal thrombocytopenic purpura was precipitated by the administration of gold salts. Thrombocytopenic purpura has been described with the acute disseminated variety of lupus erythematosus, and there are those investigators who believe that these manifestations are morphologic and chronologic representations or variants of the same disease.[1,4,5] The appearance of thrombocytopenic purpura offers a graver prognosis than the occurrence of leukopenia. Unless remedied promptly, the disease becomes rapidly fatal.

The multiphasic character of the case of the young woman and the variety of her symptoms broadens the "id" conception of lupus erythematosus and of erythema multiforme.

We agree with Stokes *et al.* that the "complex misnamed lupus erythematosus is a syndrome of multiform character with lesions ranging from insignificant local cutaneous manifestations to the fatal polystructural systemic manifestations."[6]

We are in accord with Rose and Pillsbury that "disseminate lupus erythematosus is a longstanding disease of the vascular system" before cutaneous manifestations on typical exposed areas ensue.[7] The terminal allergic cutaneous response occurs before the eventual lethal outcome.

It has also been our experience that the disseminate cutaneous lesions, although present for months, may disappear without trace several weeks before death in blondes or red-headed, blue-eyed individuals. In those who tan well, the dark-haired, brown-eyed brunettes, faint pigmentation at the sites of former lesions may escape observation. This fact may account in part for the statement of certain authors that an absence of skin lesions is not uncommon. It follows, therefore, that the diagnosis of acute lupus erythematosus in the absence of skin lesions during some period in the course of the disease must be made only after a thorough appraisal of the skin.

The "infection-allergic" concept should not be abandoned in explaining the exacerbation of lupus erythematosus of the discoid type or of the subacute variety of lupus erythematosus. We have observed a patient who developed an acute sudden exacerbation of her lupus erythematosus in which she formerly presented lesions of the discoid type, the subacute type, and other lesions on her elbows suggesting papulonecrotic tuberculide immediately following the intradermal injection of tuberculin for diagnostic purposes. We also believe that removal of foci of infection in a patient with lupus erythematosus is fraught with danger, as was evidenced in the woman in Case 1 here reported.

The exacerbation of the disease of acute disseminate lupus erythematosus in the man (Case 2) reported in this paper about the time that he developed a generalized miliary spread of his tuberculosis is an example in point.[8-11]

We recall a woman patient who had a fatal reactivity of her lupus erythematosus of the subacute variety following the administration of the sulfathiazole, even though she had not been exposed to sunlight, and another who developed lupus erythematosus after the administration of sulfanilamide for a Neisserian infection, in spite of the fact that she obeyed the warning not to expose herself to sunlight for three months after the administration of this sulfonamide.

Photosensitivity probably stands first in the external noxae in explanation of allergic phenomena associated with this complex disease. The role played by the porphyrins is still under debate, some claiming that they are coincidentally present in body excretions, such as the feces and urine, and in the blood. The argument of this group is supported by the fact that the appearance of the manifestations of the various types of lupus erythematosus occur in some cases without relation to season and sunlight. In our own experience and in both cases here reported sunlight played a conspicuous role.

In the recurrent, seasonal, localized types of congestive lupus erythematosus, consisting of small oval erythematous edematous lesions on the forehead and malar prominences, sunlight is of outstanding importance as to causal relationship. We have observed a number of such cases that pass under the appellation of dermatosis due to photosensitivity, erythema multiforme, etc.

Summary and Conclusions

1. Two cases of acute lupus erythematosus of the disseminate type with fatal outcome are presented.

2. One occurred in a young woman four years after a splenectomy for thrombocytopenic purpura and passed through the cutaneous manifestations of dermatitis herpetiformis (Duhring) and acute lupus erythematosus of the disseminate type and erythema multiforme bullosum before her demise.

3. The second case was that of a man who had an associated acute miliary tuberculosis, probably the cause of the exacerbation of his acute lupus erythematosus and of his death.

4. The appearance of multiform, fairly well circumscribed erythematous lesions on the areas usually exposed to sunlight, primarily or secondarily as a complication of the discoid type of lupus erythematosus, is of bad prognostic import. It usually indicates the complete loss of resistance to the circulating toxins. Thrombocytopenic purpura, leukopenia, fever, negative blood cultures, serous effusions, pulmonary signs, albuminuria and renal glomerular changes, pains in muscles and joints, and muscular weakness suggestive of that occurring in dermatomyositis are indicative of the disseminate type occasioned by deep constitutional systemic vascular and visceral injury.

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Discussion of Symposium

Herbert J. Spoor, M.D., *New York City.*—The classification of lupus erythematosus as one of the so-called collagen or mesenchymal diseases has done a great deal to accentuate basic research. Demonstration that the fibrinoid degeneration may be due to precipitation of mucopolysaccharides from collagen ground substance does not explain the pathogenesis of the disease, but it does offer anatomic support for the clinical mesenchymal classification.

The "L.E." cell, now established as a diagnostic test for the acute forms of the disease, not only aids identification but also permits an objective evaluation of therapy. Recent extensive histologic studies of the skin lesions by the Mayo group also stress vascular involvement in all stages of the disease and support the report here that there is demonstrable interference with fluid exchange between vessels and tissue spaces. The mesenchymal classification, although questioned by some investigators, has received tremendous support through the clinical use of adrenal cortical products or stimulation.

Objective criteria of the disease are more sketchy. In the absence of cutaneous lesions diagnosis becomes difficult. The characteristic lesions of the skin at areas exposed to sunlight and trauma are apparently not the primary manifestation of lupus erythematosus. They certainly do not account for the systemic pathology although they well may "mirror" it. Beyond the demonstration of the "L.E." cell there are several systemic findings, not symptoms, which may be leads. The major one of these is the high serum globulin, characterized by an elevated gamma globulin and possibly leading to the high incidence of false positive syphilitic serology. The less understood systemic changes include lability of cholesterol and its esters and an altered purine metabolism, which is indicated by changes in uric acid. Added to these we have the suggestive steroid hormone relationship demonstrated by the strong sex link of the disease, amelioration of symptoms during pregnancy, and, finally, response to adrenal cortical therapy.

It is this adrenal cortical response that I would like to discuss in more detail. Does the disease actually represent a malfunction of the adrenal, or is the hormone therapy a pharmacologic blocking or possibly temporary reversal of an existing pathology? The latter seems to be the case. The disease certainly does not fit the known functions of the purified adrenal sterols. These are (1) electrolyte, the regulation of sodium and potassium excretion, best expressed as DOCA action; (2) carbohydrate, the stimulation of gluconeogenesis and inhibition of carbohydrate utilization, namely, the response of the corticosterone series; and (3) androgenic function leading to nitrogen retention and increased excretion of 17-ketosteroids.

Nor does it comply with the physiologic activity of the other adrenal steroids: estrogenic, progestational, and so-called inactive. However, the point to remember here is that these functions do not represent the whole activity of the adrenal cortex. Physiologically, the action is much more extensive than the isolated sterols indicate, even though, at the height of adrenal cortical extraction chemistry, ten years ago, we had a score of crystalline fractions and now according to Selye have some 28. Nevertheless, none of these fragments equals the activity of an equivalent weight of highly purified amorphous material, nor is any accepted as *the* hormone of the adrenal cortex. For example, DOCA, the most active electrolyte hormone, can scarcely be obtained from adrenal tissue even by drastic chemical fractionation, and the corticosterone series all have a much less potent effect on carbohydrate metabolism than cortin itself.

Thus, in the adrenal there are more potent hormones than any of the isolated products, and also there is present something with physiologic activity so far not duplicated by any crystalline fraction. Something therein influences fat utilization and transport; something else has regulatory effects on the immune status of the body, and within the whole is a force capable of building resistance to fatigue—vascular, muscular, and mental.

Therefore, one cannot state unequivocally that the pathology of lupus erythematosus is not an adrenal malfunction just because it does not fit known functions, nor can one maintain that pharmacologic blocking of a disease process is endocrine substitution therapy.

We can say this: If the disease is an adrenal cortical malfunction of one of the lesser known mechanisms, then the results of therapy with ACTH should be more satisfactory than with cortisone or any other carbohydrate active fraction. This thought has been suggested, and, if the newer ACTH preparations eliminate both protein refractoriness and overstimulation phenomena, it may well be established. Therefore, although the recent emphasis has been stimulating, especially to the adrenal physiologists, it is gratifying to see that the older more established regimes continue to be well favored.

J. Gardner Hopkins, M.D., *New York City.*—The basic question as to the identity of the discoid and the acute or subacute forms of this disease has been discussed by Drs. Wilson and Jordon. It seems insoluble on present evidence. When so astute an observer as Baehr says categorically that the two groups are unrelated and so careful a student as Montgomery states that about one third of his acute and subacute cases developed from chronic discoid lupus erythematosus, we who have made no special study of the problem are confused.[a,b] The fever, anemia, leukopenia, elevated erythrocyte sedimentation rate, and reversed albumin-globulin ratio, so characteristic of the acute cases, are not found in the discoid types, nor apparently is the fibrinoid degeneration on which Klemperer has laid emphasis.[c] Almost by definition the arthralgias and signs of visceral involvement are not present. Moreover, the Hargraves cell, the production of which has been discussed by Dr. Hasrick, which seems more specifically characteristic of the acute disease, is not found in the discoid type, even when widely disseminated over the skin, or so I understand. It may well be that these phenomena depend, not on the existence of the disease per se, but on visceral involvement, and that they do not appear until lesions develop in organs other than the skin. Two bits of evidence indicative of systemic disease were discussed by Dr. Kanof: his own observation of increased vascular permeability in two discoid cases and, perhaps more significant, abnormalities in the circulation of the fingers in a number of localized cases reported by Huff, Taylor, and Keys.[d] The report of Kostant and Rein of positive serum tests for syphilis in both types of this disease seems evidence that similar processes are involved in both.

Belief in the identity of the two types depends not on morphologic or chemical evidence, but on the sudden development of dissemination in discoid cases previously running a chronic course. This is mentioned by most writers on this disease as an event too well known to need discussion. Ferguson, for example, in discussing L.E. in the tropics states, "Conversion of a chronic discoid state to one of acute dissemination is often a rapid and frightening event."[e] Unfortunately, such remarks are seldom well documented. I venture to say that few of us have seen this occur with the frequency indicated by Montgomery or Fergusson. Most, however, probably know of individual cases which were considered discoid lupus both on account of their typical morphology and of the absence of clinical or laboratory evidence of the disseminated disease, cases which later developed not only scattered skin lesions but all essential features of the subacute disease and died from this cause. One may, of course, question the original diagnosis. However, it seems necessary to conclude either that the two groups form one disease entity or that there are cases of the acute-subacute disease that begin with local signs which we cannot distinguish from discoid L.E. by any means now at our disposal.

Studies such as these throw light on mechanisms involved in the production of lupus lesions. They also point to a similarity among the cases which we call acute or subacute, but they are evidence of similarity in pathologic effect, and only by inference are they evidence of a single etiologic factor. Until that is demonstrated we cannot be certain that the two groups form one disease or even that either one is an etiologic entity. Each might be a pattern of reaction to differing etiologic factors.

Evidence as to etiology seems clearest in those cases associated with tuberculous cervical adenitis. You all know them: patients with typical discoid L.E. of the face and active tuberculosis of the cervical nodes who are exquisitely sensitive to tuberculin. They are rare and must form but a fractional percentage of all cases of discoid L.E., but in them it is hard to believe that lupus on the face and tuberculosis of the adjacent nodes is mere coincidence. Nor should we forget that the recovery of tubercle bacilli from discoid lesions has been reported by Bloch and Fuchs, Cannon and Ornstein, Gougerot, and others.[f,g] It is hard to escape the conclusion that some cases of the discoid type are manifestations of allergy to the tubercle bacillus. In the majority of cases there is no clear evidence as to causation. Statistics as to the presence of inactive tuberculosis in patients with each type of L.E. have been variously interpreted. Barber believed his finding of streptococci in dental or tonsillar lesions or in the intestines to be significant.[h] He noted improvement after the use of vaccines or removal of infected foci, focal reactions to streptococcus toxoid, and febrile reactions followed by improvement after giving sulfonamides. Dawson found agglutinins for group A streptococci in a few cases, and we have observed striking skin reactions to streptococcus toxin.[i] Certainly, no one has presented firm evidence that streptococci can cause this disease picture. However, if we can accept some cases as caused by the tubercle bacillus, Barber's hypothesis that some are tuberculous and others are of streptococcal origin would explain many of the known facts, including the great variation in the clinical course of different cases.

As to ACTH and cortisone, the diversity of diseases which can be arrested by this therapy is bewildering. One seeks for some one action of these hormones that might explain all their clinical effects. The experiments reported by Dr. Plotz contribute one sound building stone to our knowledge. It seems, however, that one must go back further in the branching chain of effects produced by these hormones to explain all the observed results. Pemphigus, for example, seems pretty much an epithelial disease. At least little damage to connective tissue can be demonstrated. It would seem improbable that depression of the activity of mesenchymal tissue would explain the dramatic effect of these hormones in this disease.

Most important was Dr. Plotz's comment on the failure of these hormones to affect the basic etiology of lupus. This might be said of most, if not all, of the diseases in which they have been employed. Dramatic improvement and failure to cure has been the almost universal experience. Can we hope to cure anything by their use? Perhaps some forms of acute poisoning or the damage caused by some infection which has ceased. Are we moving in the right direction in our use of them? We speak of seeking a maintenance dose, but maintenance of what? There is little evidence that this is replacement therapy, i.e., that we are dealing with endocrine deficiency. The very fact that ACTH is effective in most diseases benefited by cortisone seems evidence that the adrenals are not deficient. As far as I can find, there is no clear evidence of pituitary deficiency. The eosinophil drop observed after injection of adrenaline indicates normal pituitary function. If Selye is right, we are invoking a mechanism adapted to correcting an emergency and by continued use of these hormones are attempting maintenance of an emergency status. Perhaps this is the proper course, but it seems like trying to drive a car with the self-starter.

Treatment of patients with these hormones alone enables us to evaluate their effects; it should teach us something about the mechanism of the diseases treated, but it does not seem to be curing our patients. Would it not seem more hopeful to use the hormones to put the patient in a condition, to establish a climate if you will, in which we might cure the disease by other means, perhaps in an infection by antibiotics, in a deficiency by vitamins or other food factors, or in an allergy, in which group many of these diseases seem to fall, by desensitization? In the last group the hormones might well protect against disastrous effects of attempted desensitization. Combined therapy is always suspect and difficult to evaluate, but in use of the hormones it would seem logical and may well be necessary for success.

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MODIFICATION OF DIGITOXIN ACTION BY SODIUM CARBOXYMETHYLCELLULOSE

HENRY M. FEINBLATT, M.D., F.A.C.P., THEODORE M. FEINBLATT, M.D., and EDGAR A. FERGUSON, JR., Brooklyn, New York

(From the Medical Service of Kings County Hospital)

SINGLE-DOSE administration of a 1.2-mg. digitalization dose of digitoxin and high maintenance doses of 0.2 mg. have exaggerated the danger of poisoning. An effort has been made to eliminate the danger of too acute and rapid onset of action by modifying digitoxin with synthetic colloids.

Procedure

Two groups of cases were treated. One group was treated with plain digitoxin. The other group was treated with digitoxin plus carboxymethylcellulose. Most of the cases were the same for the first and second groups. The whole procedure was repeated with both types of medication.

Electrocardiograms were taken before medication and at three, six, twelve, twenty, twenty-four, and thirty-six hours. In addition, comparisons were made on a twenty-day basis.

Clinical observations of therapeutic efficiency and toxic side-effects were made in every case.

Method of Analysis of Electrocardiograms

Strict quantitative assay is not possible with the electrocardiogram. However, from a clinical standpoint, the time and acuteness of action may be judged. Robinson and Wilson have shown that an altered T wave occurs with 25 per cent lethal dose, lengthened P-R interval with 50 per cent, idioventricular complexes at 70 per cent, slowing of the heart rate at 70 per cent, and auriculoventricular dissociation at 80 per cent.[1]

These experiments are based on cat studies. The percentages are not exactly applicable to the human but form a convenient basis for comparison.

Slowing of the Heart Rate.—Reduction of heart rate is one of the indications of digitoxin action. Cross-circulation experiments on animals have shown that digitoxin causes characteristic bradycardia when the drug has access to the carotid body. The caroticoaortic vasoreceptor system is stimulated by digitoxin to cause reflex vagal slowing of the heart rate.

PR_2 Interval.—Clinical doses of digitoxin cause slowing of conduction rate between auricle and ventricle. This effect is noted by increased PR interval in the electrocardiograms.

QRS Voltage.—Characteristic voltage changes in the QRS complex are caused by digitoxin. These changes are not quantitative but may form a basis of comparison in the same individual for different types of medication.

T Wave.—T wave alterations in the electrocardiogram showing a change of direction are usually indicative of digitoxin effect.[1]

ST-T Segment.—Characteristic changes in RST and ST-T segments occur after digitoxin therapy. These changes must be carefully distinguished, as they may simulate those resulting from coronary artery disease or coronary occlusion. Changes in the ST-T levels are due to direct action of digitoxin on the heart muscle and are not affected by atropine.

Arrhythmia.—Sinus arrhythmia is an early and minor effect of digitoxin; it may also be abolished by digitoxin. Ventricular tachycardia and alternans, characterized by alternation of direction of QRS complexes, is pathognomonic of digitoxin poisoning. This may occur more readily in injured hearts but is specifically produced by digitoxin.

The following is a typical case illustrating the poisoning effect of plain digitoxin, contrasted with the effect of digitoxin plus carboxymethylcellulose.

Case Report

Case 22.—A thirty-nine-year-old man complained of shortness of breath and anginal pain on exertion. Nitroglycerine was used constantly to relieve pain. He was 67 inches tall and weighed 204 pounds. Symptoms had been becoming worse gradually during the past five years. Palpitation was felt at all times. Shortness of breath was somewhat relieved by digitalis.

On occasion, there were periods of acute shortness of breath, suggestion of gallop rhythm, and poor heart sounds. There were loud diastolic and systolic murmurs. Acute episodes were controlled by full digitalization and bed rest.

There was a history of chorea at the age of six years, followed by confinement to bed for many months. There was rheumatic pain in the joints (especially knees and hips) from the age of eight to thirteen. Since the age of sixteen he had been classified as having a "rheumatic heart."

Physical examination revealed a well-nourished,

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barrel-chested individual. There were increased A_2 sounds with enlargement of the heart to the left and to the right. The veins of the neck were full, and an aortic thrill was present. The heart beat caused a rocking to-and-fro motion of torso and head. There was aortic insufficiency. There were no other physical findings.

Teleoroentgenograms showed enlargement of heart to left and right, the heart occupying 70 per cent of the chest cavity. Chest was clear.

Electrocardiogram revealed an auricular rate of 60 with occasional ventricular extrasystoles. PR_2 interval was 0.24, QRS_2 0.9. There was left axis deviation, and ST-T level was depressed. T_1 was down, T_2 was diphasic, T_3 upright, and T_4 upright.

Digitoxin Plain.—This patient was digitalized with 1.2 mg. of plain digitoxin taken orally.* Four hours after digitalization, the electrocardiogram revealed an auricular and ventricular rate of 71. All other constants were the same except for the more sharply pointed T wave in lead 4 and an increase in the height of T_3.

At eight hours the electrocardiogram revealed a rather sharp depression of ST-T_1 and T_1. The auricular rate was 50, ventricular rate 70, PR_2 interval 0.21, and QRS_2 0.10. All leads showed trigeminal rhythm with numerous ventricular extrasystoles.

The electrocardiogram represented the sharply acute effect of digitoxin. The trigeminal rhythm was pathognomonic.

At the time that this trigeminal rhythm occurred, the patient felt extremely ill at ease, very depressed, and was unable to do any work. There were pains in the extremities, knees, and back. Soon after, he was able to walk about and felt a little better. There was a period, however, during which he felt extremely ill. The acute action of plain digitoxin was demonstrated most clearly at this eight-hour point.

At eleven hours the electrocardiogram revealed an increased ventricular rate (80). PR_2 interval was 0.21, QRS_2 0.10. The first lead showed ventricular extrasystoles, while the second, third, and fourth leads showed many ventricular extrasystoles with a suggestion of trigeminal rhythm. T_1 was depressed, and all other T waves were upright. At this point, the patient felt fairly well but was still uneasy. Some of the acute effects had been dissipated at the eleven-hour point.

At the twenty-three-hour point the ventricular rate was 73. PR_2 interval had increased to 0.23, QRS_2 0.10. Ventricular extrasystoles were present, but trigeminal rhythm was not apparent.

At about thirty hours the trigeminal rhythm returned together with acute clinical manifestations. The patient felt depressed, nervous, and sick. The trigeminal rhythm was not as constant as at eight hours. Forty-eight hours later the trigeminal rhythm had disappeared, but numerous ventricular extrasystoles occurred.

The patient continued taking 0.15 mg. plain digitoxin daily for one week, but medication was discontinued because no improvement was evident, the constant result of plain digitoxin being a condition of uneasiness and subjective instability.

Digitoxin plus Carboxymethylcellulose.—After a period of three weeks during which no medication was given, this same patient was digitalized with 1.2 mg. digitoxin plus carboxymethylcellulose.

The electrocardiogram, taken four hours after administration of 1.2 mg. digitoxin plus carboxymethylcellulose, showed an auricular rate of 77 and a ventricular rate of 77. PR_2 was 0.21, QRS_2 0.10. Axis was left and rate regular. ST-T_1 was depressed slightly. T_1 and T_4 were down. In leads 2 and 3, T was upright. The over-all number of premature ventricular beats was less at the four-hour point.

The electrocardiogram taken after eight hours showed auricular rate of 60 and a ventricular rate of 74. PR_2 was 0.23, QRS_2 0.10. T_1 was more depressed than before medication. All leads showed extrasystoles, and T was upright in all except the first lead.

The electrocardiogram taken at twenty-four hours showed an auricular rate of 60 and a ventricular rate of 80. PR_2 was 0.21 and QRS_2 0.10. Axis was left, and rate (exclusive of premature ventricular beats) was regular. ST-T and T in the first lead were depressed. There was one premature ventricular extrasystole present in lead 1. There were no others, and T was upright in all other leads.

This electrocardiogram demonstrates the myocardial action of digitoxin in that the T waves were made more sharply pointed, and T_4 was slightly depressed. In addition, the number of premature ventricular beats was markedly reduced.

The electrocardiogram taken at thirty-five hours showed a ventricular rate of 80. PR_2 was 0.21, QRS_2 0.10. There was left axis deviation, and the rate (exclusive of ventricular extrasystoles) was regular. T_1 and ST-T_1 were depressed, and T was more sharply pointed downward than it was without medication. T_3 was sharply pointed downward, and T_4 became diphasic.

This series of electrocardiograms demonstrates the action of digitoxin plus carboxymethylcellulose. This action was exhibited continuously all during the period of thirty-five hours.

The patient continued taking 0.15 mg. digitoxin plus carboxymethylcellulose daily for a week. At the end of a week no symptoms of toxic effect had developed.

Tabulation of Cases

Out of the series of 50 cases observed carefully for poisoning effects, 11 showed unmistakable evidence of digitoxin intoxication. Clinical manifestations ranged from green vision with nausea to a subjective sense of instability. While clinical findings were of interest in this group, it is more important to note the mechanism of action as demonstrated by the various electrocardiographic elements.

The following review takes up the elements one by one with reference to a comparison of the

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* All digitoxin used was U.S.P. XIII.

TABLE I.—Cases of Myocardial Impairment Demonstrating Poisoning Effect of Plain Digitoxin Contrasted with Effect of Digitoxin plus Carboxymethylcellulose

Case Number	Rate	T Wave	PR_2 Interval	Rhythm
Peak of Activity (Hours) of Plain Digitoxin				
22*	6	3	8	6-8
30	3	3	8	None
28	24	12	6	None
16	12-24	6	8	None
14	3	3	3-6	None
3	6	6	6	None
9†	6	6	12	None
27	6	24	12-24	6-12
5	6	3	6	8
26	8	8	12	6
27	6	8	6	None
Average	8.4	7.5	8.6	4 Cases
Peak of Activity (Hours) of Digitoxin Plus Carboxymethylcellulose‡				
22	12	6	12-24	None
20†	6	12	3	None
19†	24	12	12	None
16	6	6	12	None
14	6	3	6	None
3	6	6	8	None
7	3	6	12	None
27	6	24	24	None
5	12	3	12	None
26	8	6	12	None
27	6	6	6	None
Average	8.6	8.2	11.4	None

* Fully reported in text.

† Paired with case on same line in other section.

‡ All showed subjective manifestations of nausea and changes in vision on plain digitoxin. This was not shown on digitoxin plus carboxymethylcellulose.

effect of plain digitoxin with that of digitoxin plus carboxymethylcellulose (Table I). Since none of these cases showed any poisoning symptoms when digitoxin plus carboxymethylcellulose was used, it is of interest to compare the time of peak activity of each of the electrocardiographic elements.

Rate.—Reduction of heart rate is one of the pathognomonic indications of digitalis action. The peak activity for plain digitoxin was eight and four-tenths hours, while that of digitoxin plus carboxymethylcellulose was eight and six-tenths hours. This small difference is not considered to be significant, and it is also of interest to note that reduction of heart rate is not one of the acute toxic effects of digitoxin.

In most cases after the peak effect was shown, the effect of slowing continued from thirty-six to forty hours with digitoxin plus carboxymethylcellulose, while this effect was sustained for about thirty hours on plain digitoxin.

When digitoxin plus carboxymethylcellulose was used, the reduction of heart rate usually proceeded more smoothly and was less acute in its initial effect.

T Wave Change.—Within three hours after large oral doses of digitalis, the electrocardiogram often shows definite alterations. It is often true that the T wave shows the first change. Normally, upright T waves may become diminished in amplitude or may become flat or inverted. An alteration in T wave direction is usually indicative of digitoxin effect.

Peak activity of plain digitoxin occurred in seven and one-half hours, while peak activity of digitoxin plus carboxymethylcellulose occurred in eight and two-tenths hours. This difference is slightly more significant than the difference in peak activity time of the rate. It is significant to note further that after twenty days the effect from digitoxin plus carboxymethylcellulose became greater, although this occurred more gradually.

PR_2 Interval.—Digitalis causes slowing of conduction between auricle and ventricle. This effect is demonstrated by an increased PR_2 interval in the electrocardiogram. The PR_2 interval reached its peak effect in eight and six-tenths hours with plain digitoxin. This is contrasted with digitoxin plus carboxymethylcellulose, which reached its peak in eleven and four-tenths hours. This difference is even more significant than T wave change or rate. It is interesting to note that in our series the effect of a single dose of plain digitoxin on the PR_2 interval was lost in thirty-six hours. Plain digitoxin effected a much quicker result on the conduction wave, but this effect was not evident after thirty-six hours, while the effect of digitoxin plus carboxymethylcellulose was smoother and the over-all effect greater. In addition, digitoxin plus carboxymethylcellulose persisted in its effect after the thirty-hour point.

Degree of Arrhythmia.—Although sinus arrhythmia may occur as an early and minor effect of digitalis, this early effect is not significant. Arrhythmia has been noted more particularly with plain digitoxin than with older digitalis tincture.

Ventricular tachycardia from plain digitalis is always serious. A particularly ominous type which is thought to signal the beginning of fibrillation of the ventricles is characterized by alteration in direction of QRS complexes. In our cases none showed disturbance of rhythm when digitoxin plus carboxymethylcellulose was used, while, with the same dose, four cases out of the clinical group showing some poisoning effect had disturbance of rhythm when plain digitoxin was used. The greatest disturbance in rhythm was trigeminal pace demonstrated in the detailed case history.

Results

The study revealed that sharp decreases in ventricular rate as measured on lead 1 were noticed at three, six, or twelve hours and that these decreases did not occur after thirty hours.

In each case compared, digitoxin plus carboxymethylcellulose did not show these acute peaks of activity.

The auriculoventricular conduction rate measured by the PR interval at lead 2 showed an effect within six hours and usually diminished after thirty-six hours. With digitoxin plus carboxymethylcellulose this effect was not pronounced until after twenty-four hours and was still evident at thirty and thirty-six hours.

QRS voltage measured on lead 1 was the same for plain digitoxin and for digitoxin plus carboxymethylcellulose. Increase in voltage became evident at three hours. Somewhat slower onset was noted for digitoxin plus carboxymethylcellulose.

T wave change was evident within three hours for both types of medication. The effect on the ST-T segment was evident at three hours with plain digitoxin and at thirty hours with digitoxin plus carboxymethylcellulose. While changes were similar, a different time of activity was evident for each type of medication. The curve of onset of effect was steeper for T wave changes with plain digitoxin.

Toxic arrhythmia was induced in one case with plain digitoxin. This same case responded without arrhythmia when digitoxin plus carboxymethylcellulose was used.

Two cases showed toxic clinical manifestations with relatively small doses of plain digitoxin. These cases showed evidence of rheumatic heart disease with mitral configuration. Digitoxin plus carboxymethylcellulose did not induce these toxic clinical manifestations until the medication had been given for a much longer period of time (one week later).

Conclusions

The full digitalization dose showed no toxic effect in any case when digitoxin was combined with carboxymethylcellulose. Toxic effects were noted with 1.2 mg. of plain digitoxin. Initial onset of action was more intense when plain digitoxin was used. We concluded on the basis of clinical and electrocardiographic studies that carboxymethylcellulose minimizes the acute toxicity of digitoxin.

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BIRTH AND DEATH RATES IN NEW YORK STATE

The number of births during the first six months of 1950 in New York State was 2,300 less than in the same period in 1949. With the exception of 1947, however, the number of births exceeded the number in the first half of any other year on record.

The birth rate, 20.2 per 1,000 population, was, with the exception of the three preceding years, the highest in a quarter of a century. The death rate, 11.1, was slightly higher than the figure for January–June last year, but with that exception was the lowest ever experienced.

Infant mortality, 26 deaths under one year per 1,000 live births, and maternal mortality, six deaths per 10,000 live and stillbirths, have never been lower.

Among childhood diseases, new low records were established by whooping cough with 11 deaths and streptococcal sore throat with 12. There were 16 deaths from measles and eight from diphtheria.

New low records were also set by the death rates from tuberculosis, 28.9 per 100,000 population, appendicitis, 2.2, and hernia, 6.5. The death rate from pneumonia, 35.7, was slightly higher than last year, but with that one exception has never been lower.

Mortality from cancer, 184.0, increased to a new high point, while there was a slight increase in the death rate from diabetes, 21.3, and a five per cent increase in mortality from the cardiovascular renal diseases (diseases of the heart, blood vessels, and kidneys), 631.3 per 100,000 population.

In the group of external causes of death, the rate of automobile fatalities, 12.2, showed a slight increase, while the death rate from all other types of accidents, 32.2, has never been lower. The suicide rate, 12.1, was the highest since 1943, and the homicide rate, 3.0 per 100,000 population, increased slightly.

Case Report

PHYSICAL AND LABORATORY FINDINGS PRECEDING A CASE OF SUDDEN CARDIAC DEATH

AARON FEDER, M.D., Jackson Heights, New York

THERE is nothing unusual about sudden death. However, on October 15, 1948, a sudden and unexpected death occurred a few minutes after the patient had been thoroughly examined and a roentgenographic examination of the chest and an electrocardiogram recorded. It is felt that the record of these examinations, obtained so close to the time of death, lends unusual interest to this case.

Case Report

A sixty-nine-year-old, white, married woman of Italian birth first came to this office on September 28, 1948. She complained of weight loss and abdominal pain of four months duration. The pain was sharp, localized just below the xyphoid, and radiated through to her back. It occurred frequently, always immediately after eating, but had always subsided spontaneously within five minutes. Belching always seemed to give her relief. Since the onset of these episodes she developed a fear of eating and a very real loss of appetite. With her reduced food intake during the four-month period of her illness, she had recorded a weight loss of 40 pounds.

Under the direction of her previous physician, an electrocardiogram and careful roentgenographic examination of her alimentary tract had been performed, and at the time of her first consultation in this office, she brought along these films and the tracing. These x-ray studies did not reveal any organic disease of her intestinal tract, and her electrocardiogram, taken on July 31, 1948, had been reported as normal (Fig. 1). However, a deep Q_3, not further amplified nor commented upon, was present. She reported that, during the month preceding her initial visit to this office, she had had no pain, but her fear of eating still existed. At the same time she was concerned about her weight loss She stated that at no time had she noticed any relationship between effort and her pain. Her past history revealed the removal of a left breast tumor without mastectomy twenty-five years before. The pathology of this tumor was not known. Her mother had died of arteriosclerosis and her father of "heart trouble."

Physical examination at the time of this first visit revealed the patient to be a markedly undernourished woman who otherwise did not appear chronically ill. The recent great weight loss was in evidence. Her tongue was beefy red, and there was an associated bilateral labial cheilitis. Her fundic vessels showed marked sclerotic changes. Her heart appeared clinically to be somewhat enlarged to the left. The sounds were in normal sinus rhythm and were of good quality. No murmurs or other adventitious sounds were heard, and the second aortic sound was louder than the second pulmonic. Blood pressure was 140/90. Examination of her abdomen was essentially negative, and nothing remarkable was noted concerning the remainder of her physical examination. Her urinalysis was negative. The hemoglobin was 14.0 Gm. (Sahli), and her Mazzini test was negative. Fluoroscopic examination of the chest revealed only a widened aorta and did not confirm the existence of cardiac enlargement.

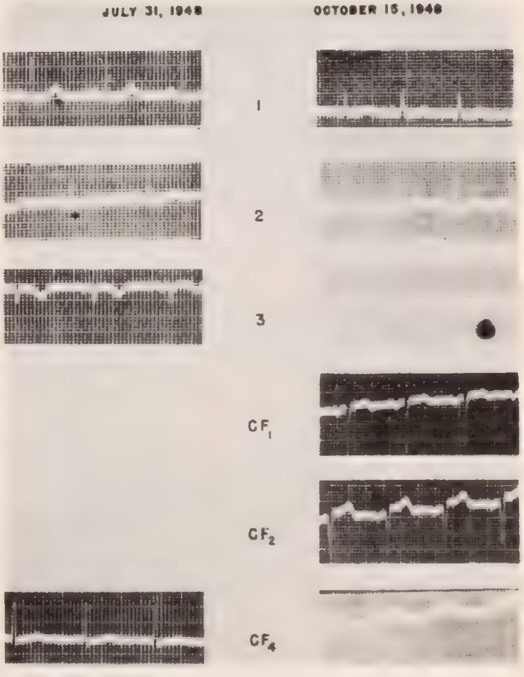

FIG. 1. Electrocardiogram taken on July 31, 1948, is the tracing presented by the patient at the time of her first examination. The tracing of October 15, 1948, was taken a few minutes before her sudden death.

It was felt that, aside from the obvious generalized arteriosclerosis, the problem at that time was largely

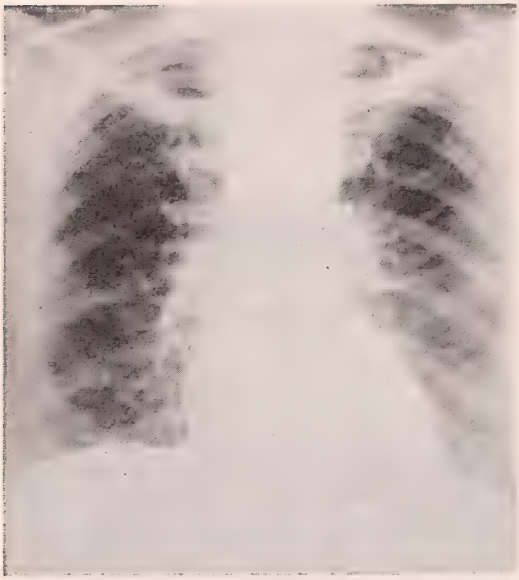

FIG. 2. Teleoroentgenogram of the chest taken during the examination just preceding death.

undernourishment from self-deprivation, motivated by fear of eating. The patient was reassured and advised to resume a regular diet, and supplementary vitamins and belladonna were prescribed. She was asked to return for re-examination in one month. A note was made at that time that consideration should again be given in the future regarding the advisability of repeating the x-ray examination of her gastrointestinal tract.

On October 15, 1948, the patient called at this office at 7:15 P.M., several days in advance of her next appointment. She stated that, although she had been completely free of pain during the interval, had eaten well, and had apparently gained weight, she had a return of her symptoms of abdominal pain that morning when she became very excited over having accidentally locked herself out of her home. The only difference noted in the pain at this time was that it had not subsided in five minutes, as it had done in the past. Walking seemed to aggravate the pain, but she had not been sufficiently uncomfortable to permit this to interfere with her marketing and household activities that day. She noted no radiation of the pain nor any associated weakness, syncope, dyspnea, palpitation, or cough. The character of the pain was the same as always, and at no time had it been pressing or viselike. Physical examination revealed the patient to be neither dyspneic, orthopneic, nor presenting other evidence of acute distress. In reply to direct questioning she stated that she was only mildly distressed and had come to the office only upon the insistence of her family. Her skin was warm and dry, and her color was good. She was generally apprehensive but no more so than she had been during the visit before. Her radial pulses were slow, equally regular, and of good quality with a rate of 80. Her blood pressure was 140/90. Examination of her heart revealed nothing different from that recorded during her previous examination. Her heart sounds were of good quality. No gallop or friction rub was heard.

Fluoroscopic examination of the chest revealed the silhouette of the heart and great vessels to be not different from that previously observed. During the fluoroscopy of the chest, attention was directed to what was thought might be a nodule in the left apex behind the clavicle. In spite of an intervening weight gain of 6 pounds, the possibility that this might be a metastatic nodule was entertained. To elucidate this further, a film of the chest was taken (Fig. 2). Examination of this film demonstrated that what had been thought might be a nodule was in reality an artefact created at the crossing of the first rib and clavicle. An electrocardiographic tracing was then obtained, following which the patient was directed to dress and wait in the consulting room where her daughter was sitting.

Just a few minutes later, the examiner, who had just begun to process the film, was urgently summoned from the darkroom by the patient's daughter who exclaimed that her mother was fainting. The patient was found lying on the floor. She was ashen in color and pulseless; her skin was cold and clammy, and her eyeballs were directed upward. She gasped once or twice and expired. Artificial respiration and adrenaline were of no avail.

Following the demise of the patient, the electrocardiogram was developed and revealed changes in the precordial leads indicative of acute anterior myocardial infarction. Postmortem examination was not performed.

Summary

Sudden and unexpected death from acute anterior myocardial infarction is reported in a patient who, just a few minutes preceding her demise, had had a careful physical examination, fluoroscopy, and x-ray examination of the chest and electrocardiogram. It is presumed that her attack of pain, occurring coincidentally with a severe emotional upset, was symptomatic of coronary closure, the record of which was obtained electrocardiographically prior to the sudden episode which resulted in her death.

40-42 75TH STREET

BOSTON MEDICAL LIBRARY ANNIVERSARY

On October 18, 1950, the Boston Medical Library will celebrate the seventy-fifth anniversary of its foundation. Two ground floor rooms were opened as a library on Hamilton Place, for the use of Boston physicians, on Monday, October 18, 1875, with James Read Chadwick as librarian, E. H. Brigham as assistant librarian in charge, and Oliver Wendell Holmes as president of the new association. The present building was occupied in 1900. Long associated with the Library is *The New England Journal of Medicine*, formerly the *Boston Medical and Surgical Journal*, and, more recently the *Journal of Bone and Joint Surgery*. The Massachusetts Medical Society is housed in the present building and this year has acquired the adjacent property as a permanent home.

To mark its birthday, the Library will hold "open house" on October 18, with a special program.

Special Article

CIVILIAN MEDICAL BATTALIONS

Howard J. Hutter, Col. (MC), U.S.A. Ret., Huntington, New York

(*Formerly Military Medical Adviser to General Douglas MacArthur's Military Mission to the Philippines*)

WHATEVER medical agencies are set up under the present State-wide authority to plan for civilian defense and protection, in order to round out any well-balanced medical program fully, there must be basically organized, mobile, flexible medical units with police power to perform (1) collection, evacuation, and temporary hospitalization of casualties, and (2) any necessary and approved methods of preventive medicine, hygiene, and sanitation. Such medical organizations should be commanded by and key-positioned with physicians and should operate directly under the constituted civilian authorities through a chain of command—State, county, city, and township.

In everyday life fire companies and fire battalions are thoroughly organized and equipped for their particular emergencies. So are police companies and police battalions. Both can expand readily within their own framework. In this connection I recommend, for study and consideration for adoption, civilian medical battalions with approved tables of organization for (1) personnel, (2) equipment, supply, and transportation, and (3) operating procedure and routine.

The proposed civilian medical battalions should be organized into effective field units, organized and trained so as to be able to cope with maximum emergencies of casualty aid, collection, clearance, evacuation, and control and to assist in large-scale emergency sanitation, preventive medicine, and sanitary engineering. Units should be so arranged in their composition as to be able to follow through with convalescence, reconditioning, and rehabilitation after the emergency. In short, these units should also have the purpose of conservation and medical salvage of civilians to protect and keep essential production in vital industries.

No matter how well-intentioned or how well-planned, effective care, treatment, movement, transfer, evacuation, and hospitalization of civilian casualties cannot be accomplished properly without trained organizations, inured to field conditions and strategically and tactically placed, ready to take the field. This also holds true for efficient field sanitation. The outcome of all hastily levied, loosely organized, improvised, and partially trained units is always the same: bad sanitation, marked rise in sickness, terrific disability, high mortality, and severe loss in morale.

The armed forces have their various medical units for times of maximum effort and engagement; the civilian authorities should have theirs—units actually in being and trained for the purpose. Modern war is no respecter of soldier or civilian. Indeed, both are coequal in its effect, and both are equal recipients of enemy capabilities. At certain points there should be complete interchangeability of medical resources and medical organizations. What is more natural than to model them after already existing units of the armed forces which have proved themselves through experience of emergencies?

Enemy action and enemy capabilities can make useless air, water, and food supplies, can deny for protracted periods parts of our essential and vital environment, can deprive us of our normal sanitation and sanitary engineering, and can impose a myriad of casualties and multiplicity of sanitary problems. To muddle through on medical defense is not enough.

The civilian medical battalions would utilize components of a thorough cross section of all groups, societies, and agencies now in existence and functioning in one form or another in our present community life and all those which have any potential function herein. None should be left out; all can become active participants. It is not desirable that any of them lose their identity, but, rather, they should be incorporated into and coordinated and trained in these medical units for effective and concerted action according to approved plan and necessity. For example, among the groups to which I refer are the following: (1) the medical, dental, veterinary, and nursing professions and their assistants and pharmacy and laboratory workers, (2) the Red Cross and allied groups, (3) chaplains and religious organizations (all religions, all denominations), (4) recognized and approved civic and local organizations, groups, clubs, and societies, and (5) the schools and their respective organizations.

For this work and this action there are today superabundant resources and material existent in all our environs. Nothing is more wasteful than large groups of women, quite capable of effective and far-reaching action for the common good, sitting around tables monotonously making bandages and dressings when full scope can be given to their energies along the lines indicated. With this tremendous backlog of potential medical reserve, all that is required is mobilization for concerted action in the most economical way with the idea of applying that which is everywhere at hand. In other words, it is necessary and would be simple to gear our present economy and status to handle imposed wartime or warlike medical problems. It would be most difficult to do so after a series of major cataclysms. When confusion and chaos exist, then is no time for preparation. As it now stands, with little or no distinction between combatant and civilian, the need will be for more medicine, preventive medicine, and sanitation.

A simple medical organization would comprise 500 effectives to a civilian medical battalion divided into five 100-man companies consisting of headquarters and service company; three collecting companies, broken down into platoons, sections, and squads; and one hospital company. Functions and duties would include first aid; collection and transportation of casualties; casualty aid, dressing, and clearing stations; dispensary, clinic, and hospital stations; vaccination and vaccination stations; laboratory and x-ray work; general sanitation; insect, pest, and rodent control; insuring a safe water supply; satisfactory waste and sewage disposal; reconditioning and physiotherapy, and physical medicine and rehabilitation. These units would be able to move quickly into stricken areas and function in close liaison with the police and firemen for protracted periods of time. Dry runs and demonstrations in the field, the making and keeping of adequate reports, records, and returns, coordinated evacuation of patients by litter carry, ambulance, convoy, trains, air, and ship to specifically designated hospitals or hospital centers for medical, surgical, orthopedic, or radiologic conditions—all are recommended practices.

War, disaster, and catastrophe produce traumatic or medical epidemics at once. Modern war is carried right to the cities and civilian populations. To rely on our present fixed hospitals without alternate provisions and sites would be a tragic mistake. A vast effort in preventive medicine and sanitation will be required. The results, whether good or bad, will be in direct proportion to the amount of previous planning, organization, training, rigid action, and execution, using all available resources and, above all, personnel willing and ready for their duties. A major element in victory will be the conservation, retrieving, and salvaging of civilian strength, the productive human power, and the medical protection and rehabilitation of those who are producing.

380 Park Avenue

A civilian medical battalion was organized and demonstrated by the author on the grounds of Converse College, Spartanburg, South Carolina, on July 6, 1945, using medical troops from the Station Hospital, Camp Croft, South Carolina, for presentation.

NEW MEDICAL FILMS AVAILABLE

Three new films in the medical field are announced by Sturgis-Grant Productions, Inc., 314 East 46th Street, New York 17, New York, producers of medical films and filmstrips. All three are 16 mm., color and sound.

"The Male Sex Hormone," second of a series on endocrinology which this company has produced for Schering Corporation, Bloomfield, New Jersey, presents the physiology and the clinical aspects concerned with hormone interaction in the male. Running time is twenty-four minutes. Like its predecessor, "The Physiology of Normal Menstruation," the film will be available to medical schools and colleges throughout the country. Application should be made to: Medical Service Department, Schering Corporation, 2 Broad Street, Bloomfield, New Jersey. A Spanish-language version of the film is also available for distribution in Latin-American countries.

"The Bone Bank" shows how a bank for the preservation of bone by refrigeration is organized, how such bone is used, and the advantages of this procedure. Philip D. Wilson, M.D., surgeon-in-chief, the Hospital for Special Surgery, New York City, directed the production of this film, which is intended for orthopedic surgeons and hospitals. Dr. Wilson presented the film recently as part of the Sir Robert Jones Memorial Lecture before the Royal College of Surgeons, London, England. The sponsor is the New York Society for the Relief of the Ruptured and Crippled. Running time is twenty-eight minutes.

"From One Cell" is a biology film for high school and college students. In simple terms it explains the normal process of cell division and human development and its relation to cancer growth. The aim of the film is to clarify the biologic processes involved and to interest students in cancer research. The American Cancer Society, sponsor of the film, is distributing prints to educational institutions throughout the country by means of its 61 local chapters. Running time is thirteen minutes.

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# of the
MEDICAL SOCIETY OF THE STATE OF NEW YORK

PROGRAMS

NINTH DISTRICT BRANCH

Wednesday, October 18, 1950
U.S. Hotel Thayer
West Point, New York

Afternoon Session

2:30 P.M.—"Symposium on ACTH and Cortisone"
Moderator—**A. Gibson, M.D.,** Rahway, New Jersey
Dermatology—**George C. Andrews, M.D.,** Columbia - Presbyterian Medical Center, New York City
Ophthalmology—**F. Philip Koch, M.D.,** Manhattan Eye, Ear, and Throat Hospital, New York City
Arthritis and Rheumatic Fever—**William B. Rawls, M.D.,** Polyclinic Hospital, New York City
Leukemia and Lymphoblastoma—**L. P. Eliel, M.D.,** and **O. H. Pearson, M.D.,** Memorial Hospital, New York City
Allergy—**Horace S. Baldwin, M.D.,** New York Hospital and Cornell University Medical College, New York City
Chronic Ulcerative Colitis—**Z. Taylor Bercovitz, M.D.,** New York Post-Graduate Hospital, New York City

4:30 P.M.—"New York State Disability Benefits Law"
Miss Mary Donlon, chairman, State Workmen's Compensation Board (Question and answer period will follow.)

Business meeting and election of officers.

Evening Session

6:30 P.M.—Social hour
7:00 P.M.—Dinner
Introduction of officers of the Medical Society of the State of New York
Address by **Carleton E. Wertz, M.D.,** president, Medical Society of the State of New York
Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York

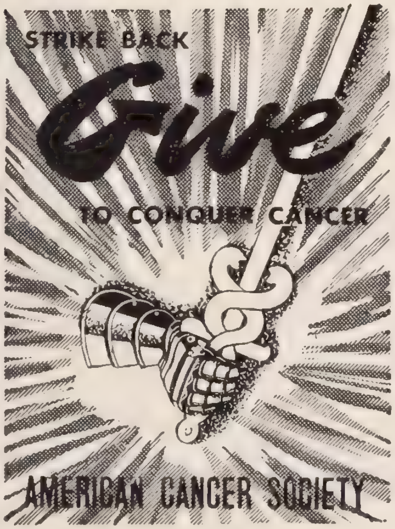
Ladies will join the members of the district branch for dinner.

Officers—Ninth District Branch

President (acting)	John F. Rogers, M.D., Poughkeepsie
First Vice-President (acting)	Reid R. Heffner, M.D., New Rochelle

Presidents of Component County Societies

Dutchess	E. Gordon MacKenzie, M.D., Millbrook
Orange	Nathaniel T. Keys, M.D., Goshen
Putnam	William P. Kelly, Jr., M.D., Carmel
Rockland	Alan J. Maged, M.D., Suffern
Westchester	Christopher Wood, M.D., White Plains



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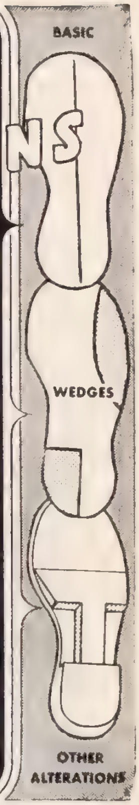

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BOOKS

REVIEWED

Clinical Diagnosis by Laboratory Examinations. By John A. Kolmer, M.D. Second edition. Octavo of 1,212 pages, illustrated. New York, Appleton-Century-Crofts, 1949. Cloth, $12.

About six years ago this reviewer had the pleasure of reviewing the first edition of this book. His opinion of the present edition is no less than that of the first; indeed, it is even higher. As in the preceding edition, the subject matter is treated in three parts: I. The Clinical Interpretation of Laboratory Examinations; II. The Practical Applications of Laboratory Examinations in Clinical Diagnosis; III. The Technic of Laboratory Examinations.

The purpose of the author is admirably executed and well presented. It embodies a modernized presentation of clinical pathology, clinical (bedside) medicine, and laboratory technic for ready understanding by the clinician (laboratory or bedside), student, and technician. This book in its improved and enhanced edition is a must and is recommended as such to every physician, be he a general practitioner or a specialist. MAX LEDERER

Oral Histology and Embryology. Edited by Balint Orban, D.D.S. Second edition. Quarto of 364 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $8.00.

To improve a good text is a difficult job. To improve one which has had universal commendation seems almost impossible. Still, in the second edition of *Oral Histology and Embryology*, Dr. Orban, acting as editor, has arranged fifteen chapters, written by seventeen authorities, so that the manuscript surpasses the previous edition in organization and information.

These chapters, which include histology, embryology, morphology, etiology, and physiology of the oral structures, are highly integrated, enabling the reader to follow and grasp the ideas and thoughts which are advanced. When pertinent information is lacking, a hypothesis is set up which is both logical and elastic. This elasticity takes into account the lack of information, showing that the editor and his collaborators are cognizant of the fact that works of the future may necessitate changes.

The morphologic study of the structure of the oral chamber in the embryo, followed by a histologic study of the formation of these same structures, provides valuable information regarding many pathologic conditions. STANLEY NEWHOUSE

Treatment in Proctology. By Robert Turell, M.D. With a Chapter on Psychosomatic Problems by Louis Linn, M.D. Octavo of 248 pages, illustrated. Baltimore, Williams & Wilkins Co., 1949. Cloth, $7.00.

This is a fairly well-organized text for the student and practitioner of proctology. It contains all the basic elements of the specialty. There is ample proof in the book that the author has gone to great lengths to obtain all the references available and included them at the end of each chapter. A good deal of the material written in the book is a repetition of work done by others and found in other texts of proctology.

The author makes good use of the book to demonstrate his own instruments and methods, some of which are not accepted by experienced proctologists, such as the removal of polyps of the rectum with a biopsy forceps. There are excellent chapters on diets, summary of drugs, pediatric, and geriatric proctology. These are not found in some of the other textbooks on this subject. The illustrations used, especially the colored photographs, are good and demonstrate the large amount of effort that the author has expended in putting the book together.

A. J. Caliendo

From the Hills. An Autobiography of a Pediatrician. By John Zahorsky, M.D. Octavo of 387 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $4.00.

In the life of any individual who has reached the age of nearly eighty years and whose activities have been constant and varied, there occur many incidents worth recording. The life of Dr. Zahorsky is another illustration inherent in this great democracy, that the door of opportunity is open to the poorest among us when industry, ability, and integrity are in the makeup of the individual. It is also startling to observe how frequently the lives of those who have made good run parallel in many of their experiences. And from these lives much of interest and value can be garnered.

Men familiar with pediatric literature will readily recall some of the author's contributions. While not a star of the first magnitude in the pediatric firmament, his vast and varied experience and humaneness make an absorbing narrative. As to the character of his writing, I quote: "No, I am not proud of my style of writing; I only wish to be understood."

For the doctor, student as well as practitioner, many a period of relaxation can be accentuated by a perusal of this volume.

S. R. Blatteis

Oral Bacterial Infection. Diagnosis & Treatment. By Lyon P. Strean, D.D.S. Octavo of 185 pages, illustrated. Brooklyn, Dental Items of Interest Publishing Co., 1949. Cloth, $5.50.

This book is well printed. The illustrations are excellent, and it has a good index, all of which make it a valuable reference book for the dental profession. Various types of oral infection are discussed with short descriptions covering morphology and staining, cultural characteristics, specific biologic products of organisms, immunity, etc. This book should prove a welcome addition to the dentist's reference library.

Lawrence Joseph Dunn

Industrial Toxicology. By Alice Hamilton, M.D. and Harriet L. Hardy, M.D. Second edition. Octavo of 574 pages. New York, Paul B. Hoeber, 1949. Cloth, $7.50.

This second edition appears fifteen years after its primary presentation in a field which has expanded markedly in that period of time. New knowledge as to recognized poisons of long standing and the increase in solvents, metals, and radioactive substances requires up-to-date consideration.

The extensive bibliography is an important part of the volume.

A. E. Shipley

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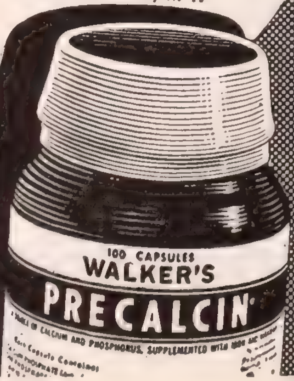

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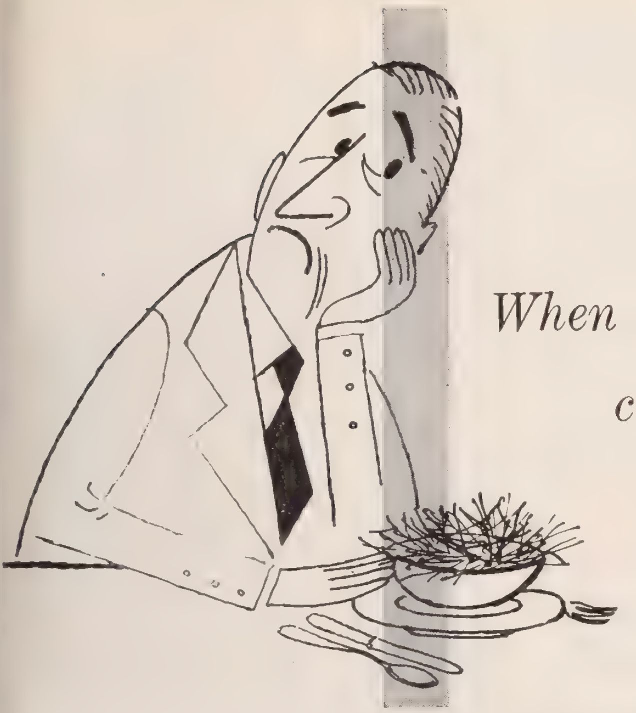

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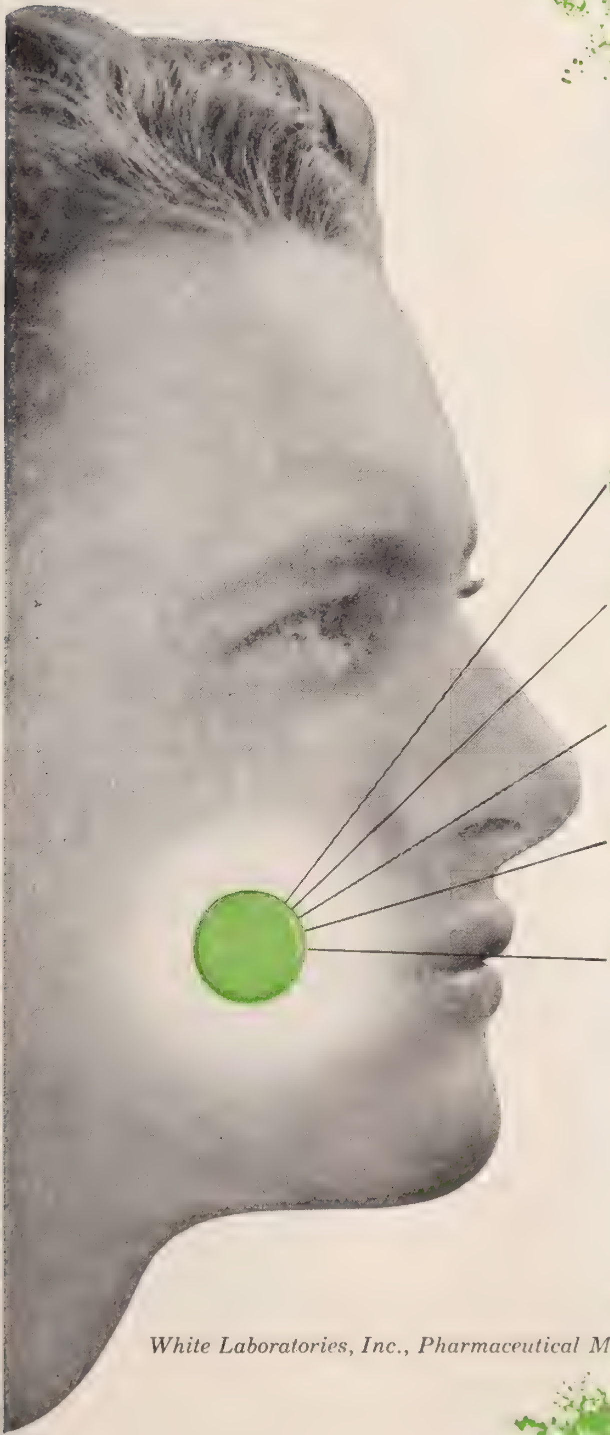

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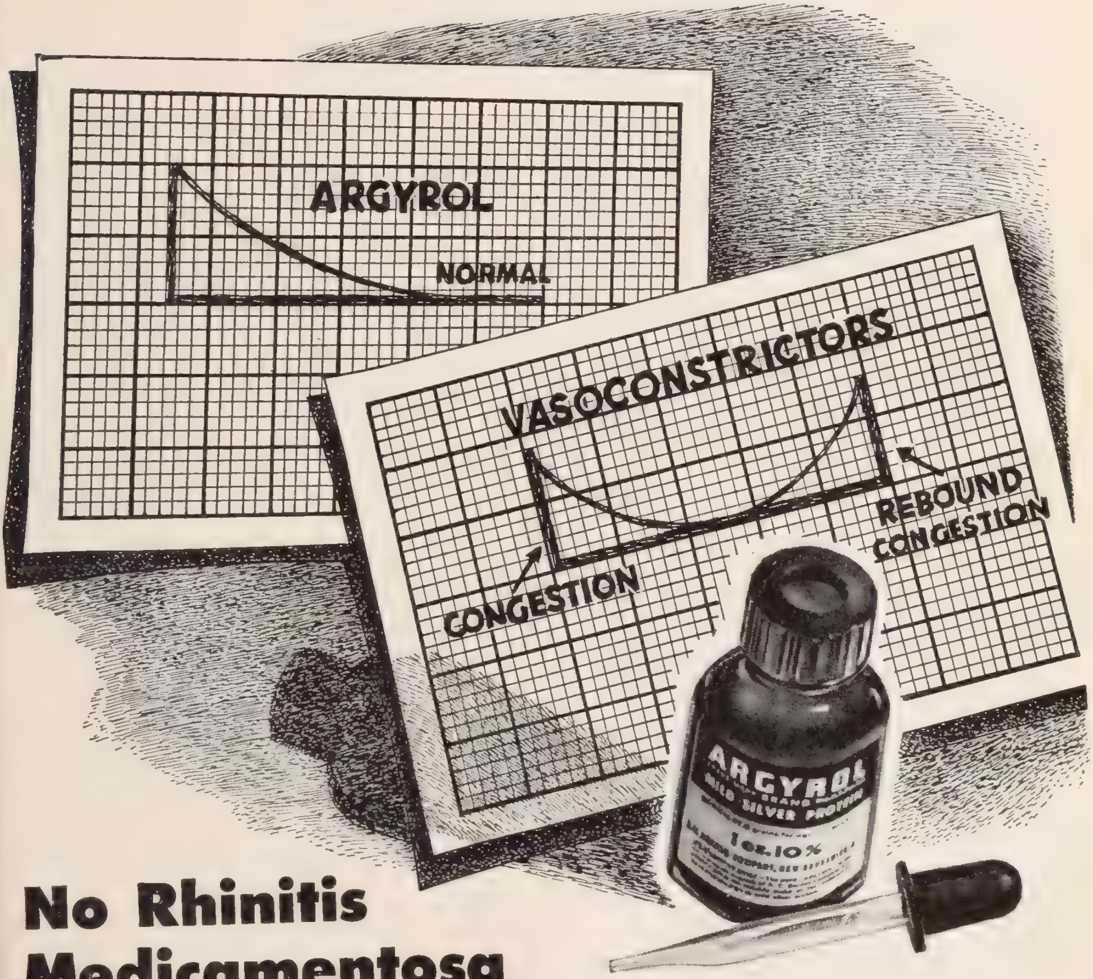

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Theocalcin

Theobromine-calcium salicylate   Council accepted.

Diuretic and Myocardial Stimulant

7½ grain tablets and powder.   Dose: 1 to 3 tablets, repeated.

THEOCALCIN
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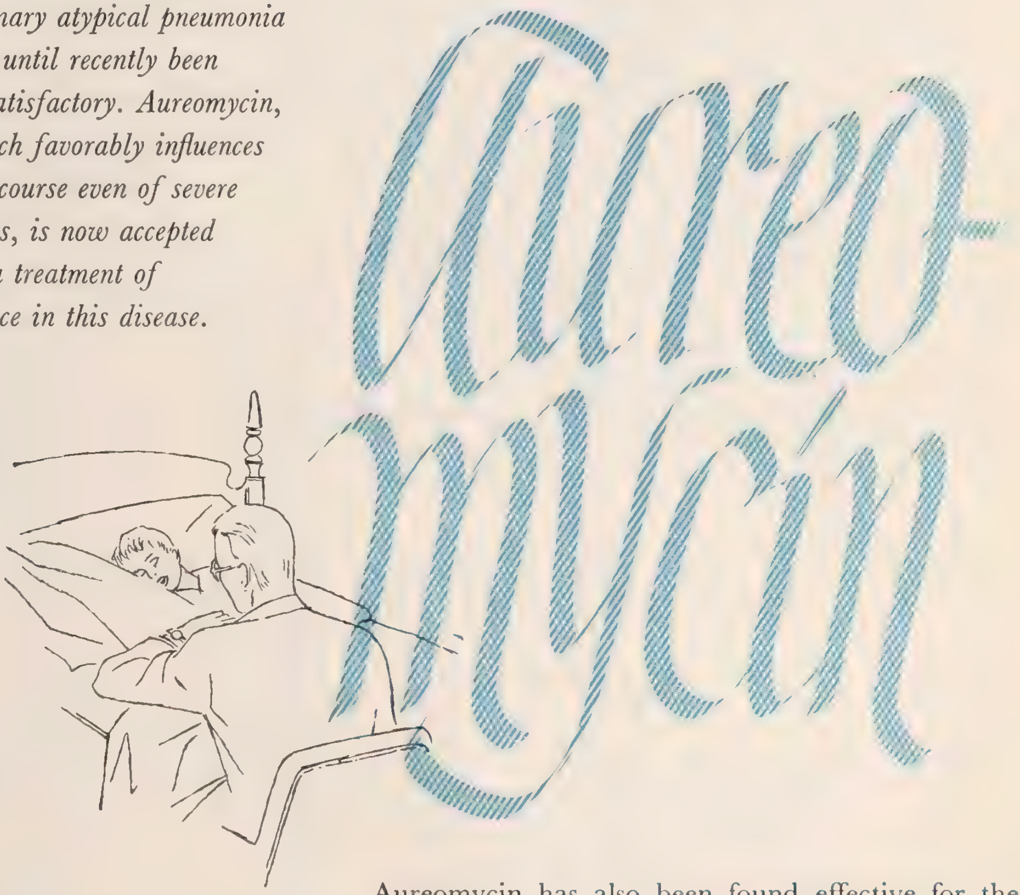
AUREOMYCIN

CRYSTALLINE

in Primary Atypical Pneumonia

The chemotherapy of primary atypical pneumonia has until recently been unsatisfactory. Aureomycin, which favorably influences the course even of severe cases, is now accepted as a treatment of choice in this disease.

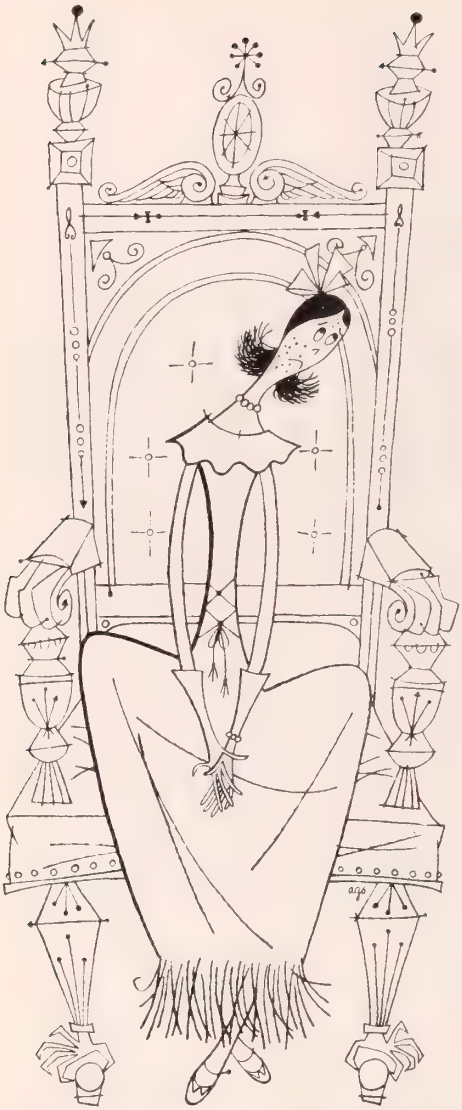


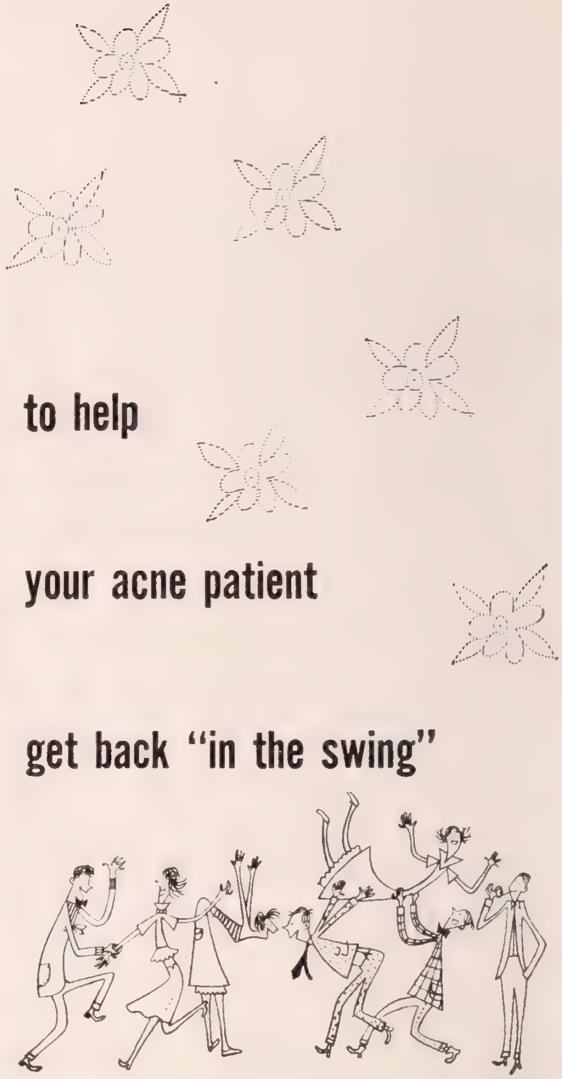
Aureomycin has also been found effective for the control of the following infections: acute amebiasis, bacterial and virus-like infections of the eye, bacteroides septicemia, boutonneuse fever, acute brucellosis, common infections of the uterus and adnexa, resistant gonorrhea, Gram-positive infections (including those caused by streptococci, staphylococci, and pneumococci), Gram-negative infections (including those caused by the coli-aerogenes group), granuloma inguinale, *H. influenzae* infections, lymphogranuloma venereum, psittacosis (parrot fever), Q fever, rickettsialpox, Rocky Mountain spotted fever, subacute bacterial endocarditis resistant to penicillin, surgical infections, tick-bite fever (African), tularemia and typhus.

Capsules: Bottles of 25, 50 mg. each capsule. Bottles of 16, 250 mg. each capsule.

Ophthalmic: Vials of 25 mg. with dropper; solution prepared by adding 5 cc. of distilled water.

LEDERLE LABORATORIES DIVISION AMERICAN *Cyanamid* COMPANY 30 Rockefeller Plaza, New York 20, N. Y.





to help

your acne patient

get back "in the swing"

Your complexion-conscious young acne patient regains her self-confidence when you write 'ACNOMEL'. Because ACNOMEL is:

1 *Immediately effective cosmetically.* ACNOMEL is delicately flesh-tinted. It masks the acne lesions, yet is virtually invisible when applied.

2 *Rapidly effective therapeutically.* ACNOMEL ordinarily brings definite improvement—not in months or weeks, but in a matter of days.

Formula: Resorcinol, 2%; and sulfur, 8%; in a stable, grease-free, flesh-tinted vehicle.

Smith, Kline & French Laboratories, Philadelphia

Acnomel

'Acnomel' T.M. Reg. U.S. Pat. Off.

a significant advance, clinical and cosmetic, in acne therapy

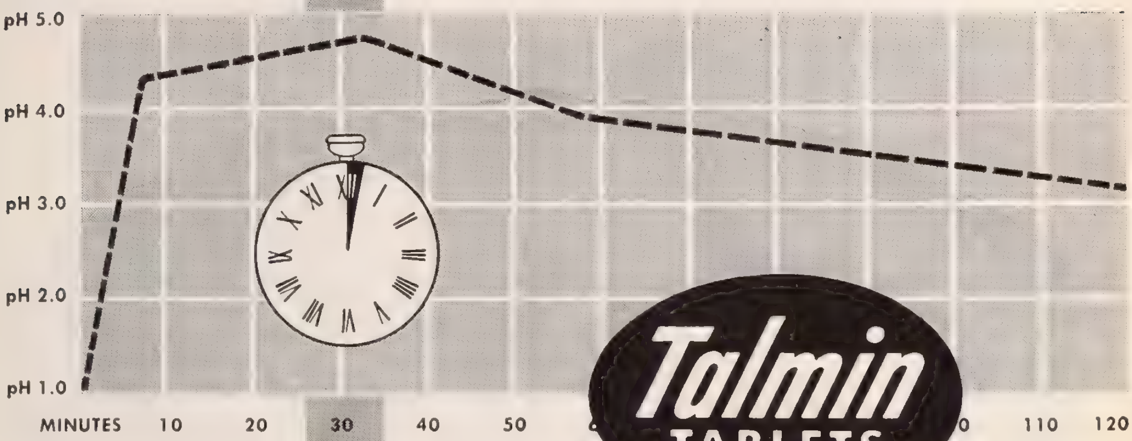


Chart shows the quick, lasting action under conditions simulating those of the stomach.

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TABLETS

FOR

Prompt, Prolonged Action* in treatment of peptic ulcer and gastric hyperacidity

Talmin will raise the pH of the gastric contents to approximately pH 4.0 within 2 minutes, and maintain it above pH 3.0 for 120 minutes.

Each tablet contains Dihydroxy Aluminum Aminoacetate 5 gr., Magnesium Carbonate 2 gr. Also available: Talmin Compound Tablets, containing per tablet: Above ingredients, plus Phenobarbital ¼ gr., and Extract of Belladonna ⅛ gr.

*

OTHER CHARACTERISTICS

- Quick solubility
- Pleasant taste
- High acid buffer capacity
- Non-alkalinizing
- No acid rebound
- No digestive disturbance
- Low aluminum content
- Non-constipating

AT MOST PHARMACIES

In 100's Individually Wrapped; 500's for Dispensing.

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Los Angeles 64, California • Since 1934

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A Real American Breakfast

That a nutritious breakfast providing generous amounts of high quality protein prevents late morning hypoglycemia has been amply demonstrated. As shown by Thorn and co-workers,[1] and later confirmed by Orent-Keiles,[2] "... breakfast high in protein and low in fat and carbohydrate was followed by an improved sense of well-being and no symptoms of hypoglycemia."

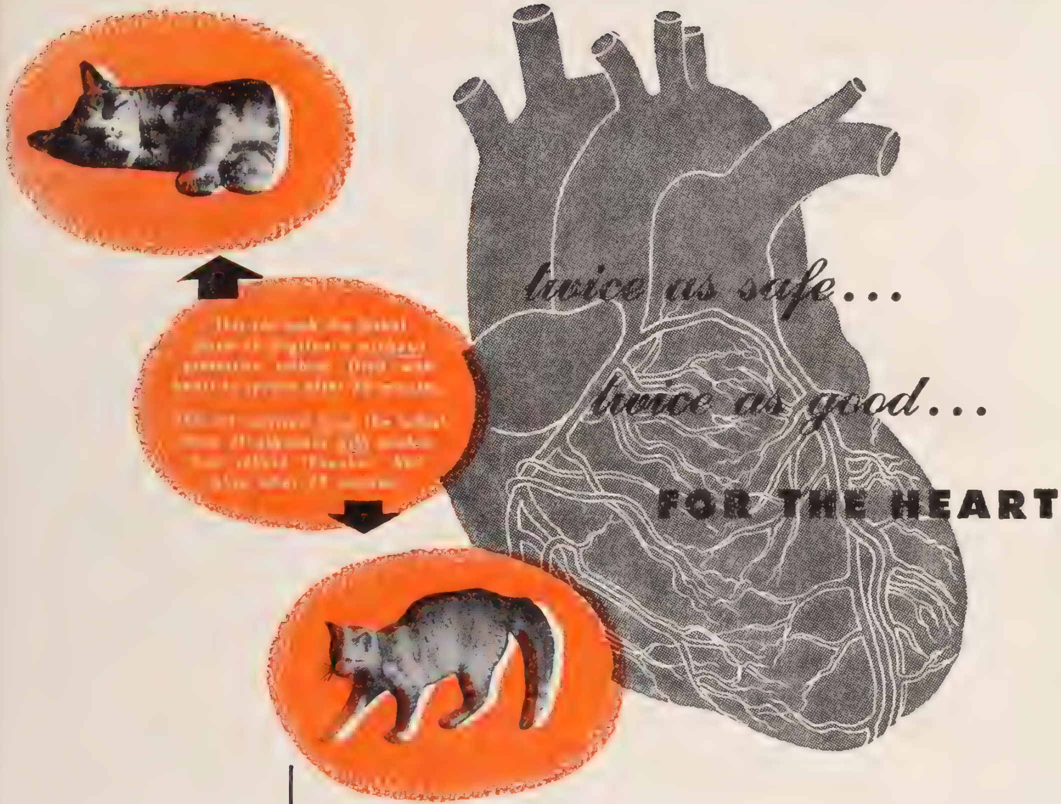
Meat for breakfast—ham, sausage, bacon, breakfast steaks—is an appetizing means of increasing the protein content of the morning meal. Its biologically complete protein contains all essential amino acids, and serves well in complementing less complete proteins from other sources. Furthermore, muscle meat is an outstanding source of B complex vitamins and of iron.

The Seal of Acceptance denotes that the nutritional statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medica Association.

---

(1) Thorn, G.W.; Quinby, J.T., and Marshall, C., Jr., Ann. Int. Med. 18:913 (June) 1943.
(2) Orent-Keiles, E., and Hallman, L. F., Circular No. 827, United States Department of Agriculture, Bureau of Human Nutrition and Home Economics, Agricultural Research Administration, Dec., 1949.

American Meat Institute
Main Office, Chicago... Members Throughout the United States


twice as safe...
twice as good...
FOR THE HEART

Foxalin advantages

1. Twice as safe as digitoxin.
2. No digitoxic heart punch.
3. Smooth, prolonged action.
4. Maximum cardiac response.
5. No nausea or vomiting.

Clinical and pharmacological studies prove that digitoxin U.S.P. compounded with sodium carboxymethylcellulose (Foxalin) exerts a steady and prolonged therapeutic effect on the heart with a much wider margin of safety than digitoxin alone.

Foxalin is a new discovery* of demonstrated value for congestive heart failure, myocardial insufficiency, cardiac decompensation, and auricular fibrillation or flutter.

Foxalin contains digitoxin U.S.P. 0.1 mg. combined with the protective colloid, sodium carboxymethylcellulose. Supplied in bottles of 100 tablets.

The maintenance dose of Foxalin is 1 tablet daily. For quick digitalization, 6 tablets divided into three doses, *for one day only.*

WRITE FOR PROFESSIONAL LITERATURE AND SAMPLE.

Foxalin

COLLOID PROTECTED DIGITOXIN U. S. P.

GRANT CHEMICAL COMPANY, INC.
95 MADISON AVENUE, NEW YORK 16, N. Y.

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*U. S. Patent No. 2,486,937

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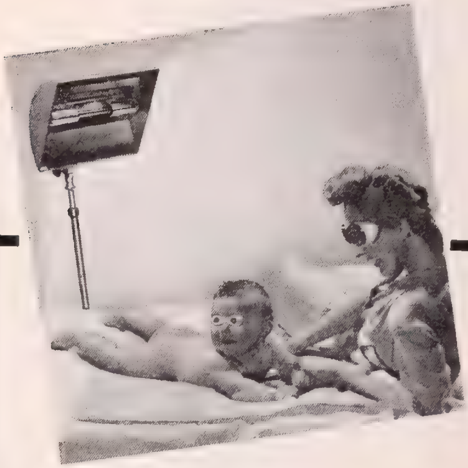

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- Invaluable for prenatal care and to nursing mothers.
- Prophylactic and curative effect on rickets.
- Assists children in the growth of sturdy limbs and sound teeth.
- Stimulates the blood-building centers of the body.
- Helps keep the hemoglobin and red blood cells at the full healthful level.

Ideal for post-operative recuperation and Convalescence.

Available through your local surgical supply house.

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Chatham
KOAGAMIN
PARENTERAL COAGULANT
CHATHAM PHARMACEUTICALS, INC

ACTS IN MINUTES

to control most forms of hemorrhage

KOAGAMIN®

PREOPERATIVELY—prevents oozing, provides a clearer field of operation, minimizes cauterization and need for local hemostatics.

POSTOPERATIVELY—to control secondary bleeding.

THERAPEUTICALLY—aids in control of bleeding in gastric and duodenal ulcers, hematemesis, hematuria, uterine bleeding, epistaxis, blood dyscrasias, etc.

KOAGAMIN* ACTS IN MINUTES, regardless of the cause of bleeding. Vitamin K is slow in action and indicated only where prolonged prothrombin time is a factor. In such cases, Koagamin may be used in conjunction with Vitamin K to effect more rapid control of bleeding.

**aqueous solution of oxalic and malonic acids for parenteral use.*

Supplied in 10 cc. diaphragm-stoppered vials.
Comprehensive dosage chart and literature on request.

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DEPENDABLE *Quality . . .*
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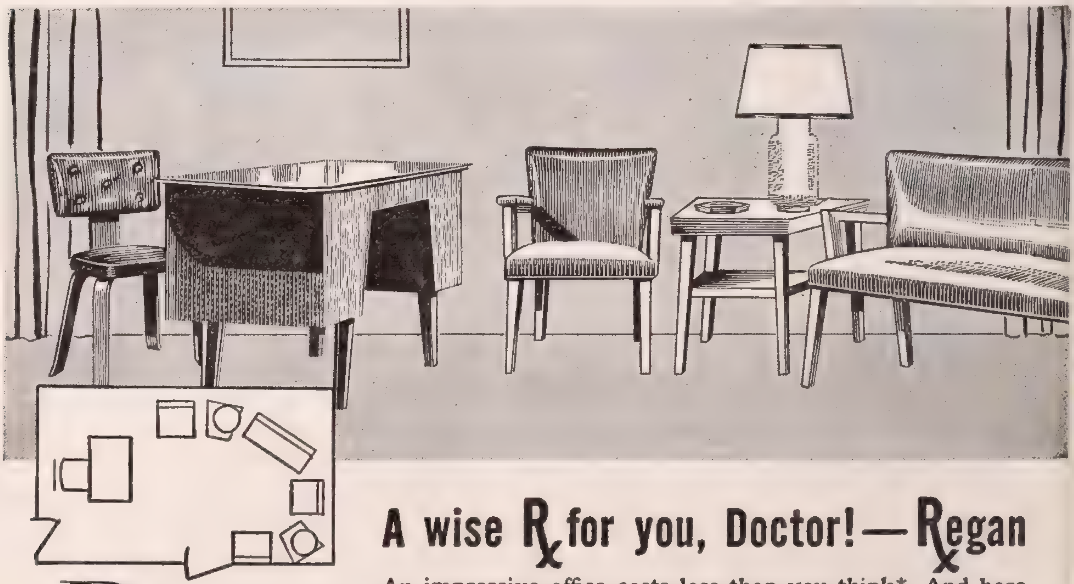

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A wise ℞ for you, Doctor!—Regan

An impressive office costs less than you think*. And here at Regan, under one roof, is the finest, the most tasteful in office equipment, in modern and period furniture, in floor coverings, in draperies, *and* the authorities in office planning who can adapt these resources to your needs, whether large or small.

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WATER-MISCIBLE • NON-ALCOHOLIC

In one inexpensive drop-dosage preparation—all essential vitamins for prevention and treatment of multiple vitamin deficiencies in infants and children—

Formula: Each 0.6 cc. contains:

Vitamin A 5000 U.S.P. units • Vitamin D_3 1000 U.S.P. units
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Riboflavin 0.4 milligram
Pyridoxine Hydrochloride 1.0 milligram
Panthenol* 2.0 milligrams • Nicotinamide 10.0 milligrams
Ascorbic Acid 50.0 milligrams
*a specially-prepared, more stable analogue of pantothenic acid.

White Laboratories, Inc., Pharmaceutical Manufacturers, Newark 7, N. J.

announcing

'ESKACILLIN-SULFAS'

an exceptionally palatable fluid presentation of penicillin and the sulfonamides

'ESKACILLIN-SULFAS' is for the prevention and treatment of infections caused by organisms sensitive to the action of penicillin or the sulfonamides.

Exceptionally palatable, each teaspoonful (5 cc.) of 'ESKACILLIN-SULFAS' supplies *100,000 units* of crystalline potassium penicillin G and a total of 0.5 Gm. (0.167 Gm. each) of the following *three* sulfonamides:
sulfadiazine, sulfamerazine and sulfamethazine.

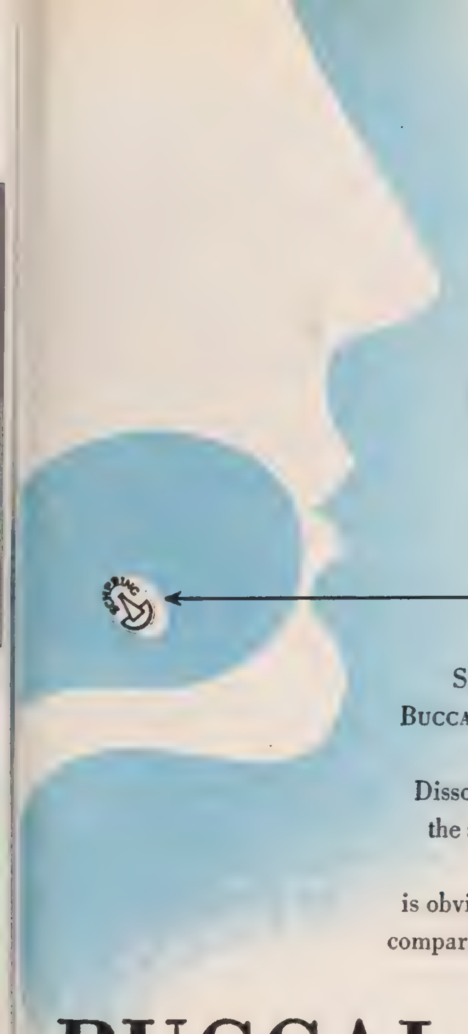
'ESKACILLIN-SULFAS' *has 5 outstanding advantages:*

1. **Wider antibacterial spectrum**
2. **Additive and synergistic action**
3. **Relative safety of triple sulfonamide therapy**
4. **Proven effectiveness of oral penicillin**
5. **Lessened chance of developing drug-resistant organisms**

'ESKACILLIN-SULFAS' *is not a bulky compound tablet.*
It is an easy-to-take fluid—available in 2 fl. oz. bottles.

Smith, Kline & French Laboratories, Philadelphia

'Eskacillin' T. M. Reg. U. S. Pat. Off.



comparable with an intramuscular injection

Simple, practical and convenient, Schering's Buccal Tablets offer "parenteral hormone therapy by mouth" with little sacrifice of potency. Dissolved in Polyhydrol* base, a solid solvent, the steroid hormones are absorbed directly from the oral mucosa. Early hepatic inactivation is obviated permitting a clinical effect "by mouth" comparable with that of an intramuscular injection.

BUCCAL TABLETS

Indicated in adrenal insufficiency—**Cortate®** Buccal Tablets;
in male hypogonadism—**Oreton®** Buccal Tablets;
in the menopausal syndrome—**Progynon®** Buccal Tablets;
in habitual abortion—**Proluton®** Buccal Tablets.

Packaging: Cortate Buccal Tablets (Desoxycorticosterone Acetate U.S.P.) 2 mg.; Oreton Buccal Tablets (Testosterone Propionate U.S.P.) 2.5 and 5 mg.; Progynon Buccal Tablets (Estradiol U.S.P.) 0.125 and 0.25 mg. and Proluton Buccal Tablets (Progesterone U.S.P.) 10 mg. — in bottles of 30 and 100.

*T.M

Schering CORPORATION
BLOOMFIELD, N. J.

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Readily soluble in water.
Buro-sol Solution is therapeutically equivalent to Burows Solution (Liq. Al. Acet.)

The powder is a convenient method of preparing a solution when needed.

Compresses saturated in Buro-sol Solution prevents a sudden change in the pH value of the skin and will neutralize alkalinity.

Applied on inflamed surfaces, weeping eczema, the inflammatory process will be mitigated.

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NYLON SURGICAL ELASTIC STOCKINGS

Unconditionally Guaranteed!
For varicose veins, lymph stasis and other swollen or flabby leg conditions.
At reliable surgical appliance, drug and dept. stores everywhere.

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To Curb the Appetite
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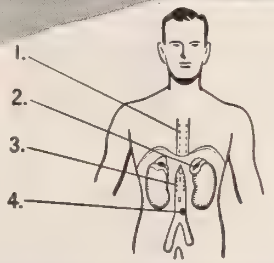

Fig. 1. Typical locations of epinephrine-producing tumors.
1. Thoracic Paraganglia.
2. Adrenal Medulla (10 per cent of tumors bilateral).
3. Abdominal Paraganglia.
4. Organ of Zuckerkandl.

Fig. 2.

Pathologic specimen of a pheochromocytoma. (*Courtesy of Becker, Bass, and Robbins, Beth Israel Hospital, Newark, N. J.*)

For the detection of Hypertension-producing

PHEOCHROMOCYTOMAS

Intravenous tests with Saline Solution of Benodaine* Hydrochloride indicate whether or not elevated blood pressure is caused by an epinephrine-producing pheochromocytoma.

This new Merck diagnostic aid, when administered intravenously in suitable doses, is adrenolytic but not sympatholytic.

In patients with hypertension caused by a pheochromocytoma, Benodaine produces a brief but significant decrease in blood pressure. In hypertensive patients who do not have this tumor, it produces either no significant change in blood pressure or a moderate elevation of short duration.

Complete literature is available upon request.

*Benodaine is the trade-mark of Merck & Co., Inc. for its brand of piperoxane.

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

SALINE SOLUTION OF

Trade Benodaine Mark

HYDROCHLORIDE

(Brand of Piperoxan Hydrochloride)

(2-(1-Piperidylmethyl)-1, 4-Benzodioxan Hydrochloride Merck)

the fluid sulfadiazine that's

. . . better tasting

. . . faster acting

Eskadiazine is exceptionally palatable, and pleasing in consistency. It is willingly accepted by all types of patients—especially the young and the very young.

Another advantage: Eskadiazine, an aqueous suspension of microcrystalline sulfadiazine for oral use, is absorbed 3 to 5 times more quickly than sulfadiazine in tablet form.

Those are reasons why Eskadiazine is foremost among sulfadiazine preparations.

Smith, Kline & French Laboratories, Philadelphia

Eskadiazine

the outstandingly palatable fluid sulfadiazine

Each 5 cc. (one teaspoonful) of Eskadiazine contains 0.5 Gm. (7.7 gr.) sulfadiazine—the dosage equivalent of the standard sulfadiazine tablet.

'Eskadiazine' T.M. Reg. U.S. Pat. Off.

NEW!

PHYSIOLOGICAL!

SELF-REGULATORY!

"cagos"

VAGINAL SUPPOSITORIES

for Leukorrhea
Vaginitis
Cervicitis
of non-gonococcal origin

The greater the infection, the more immediate . . . and more pronounced . . . is the therapeutic action

• "cagos" are a significant advance in the therapy of vaginal infections because their pectin content regulates the speed and intensity of their action to the therapeutic need as represented by the severity of the infection. The greater the degree of infection, the more rapidly and completely "cagos" dissolve as the result of pectin-liquefying enzymes released by pathogenic organisms as well as the abnormal vaginal pH caused by the infection.

ACIDIFYING influence inhibits growth of Trichomonas, Monilia, and other vaginal pathogens, and also promotes growth of normal flora.

DETOXIFYING effect neutralizes toxic substances produced by infecting organisms.

"INTERNAL DOUCHING" — result of the osmotic power of glycerin in causing a copious flow of fluid from the mucosa — helps keep the vaginal vault cleansed of discharges.

"cagos" are designed for the patient's use to maintain continuous therapy between visits to the physician.

"cagos" are greaseless, colorless, stainless, esthetically desirable, free from harmful antiseptics and from objectionable, tell-tale odors.

FORMULA:

Pectin	3% to 5%
Boroglycerin	10%
Glycerin	q.s.ad100%

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Jars of 7 available at pharmacies

Please write for free trial supply and professional information

an ethical product of
JOHN PECK LABORATORIES, INC.
60 East 42nd Street • New York 17, N. Y.

Today's trend is to liquid

oral penicillin

"...it has been demonstrated repeatedly that the oral route is as effective as the parenteral route when adequate doses of penicillin are used."

Keefer, Chester S.: Am. J. Med. 7:216

Eskacillin 100

Eskacillin 50

The unusually palatable liquid penicillins for oral use

In keeping with today's trend to oral penicillin, S.K.F. now offers, for your convenience, Eskacillin in 2 strengths: 'Eskacillin 100', containing 100,000 units of penicillin per 5 cc. (one teaspoonful). 'Eskacillin 50', containing 50,000 units of penicillin per 5 cc. (one teaspoonful).

Among the many indications are:

- Acute sinusitis
- Bronchitis
- Tonsillitis
- Otitis media
- Pneumonia
- Cellulitis
- Gonorrhea
- Certain skin infections

Smith, Kline & French Laboratories, Philadelphia

'Eskacillin' T.M. Reg. U.S. Pat. Off.

MORE THAN A FALL IN BLOOD PRESSURE

IN SEVERE HYPERTENSION

"A decline of the blood pressure level is not to be interpreted as reversal of the underlying cause of the disease"[1] . . . therapy in severe, resistant hypertension must do more than lower blood pressure.

VERTAVIS, in the treatment of severe, resistant hypertension, maintains the patient in a state of circulatory equilibrium with normal cardiac output and blood flow to the vital organs, despite the lowering of arterial pressure. Vertavis was responsible for more normal and efficient myocardial action, diminution in cardiac size, occasional reversal of electrocardiographic changes toward normal, clearing of hemorrhages and exudates in the optic fundi . . . and the most marked reduction of blood pressure of all drugs previously used in essential hypertension.[2,3,4,5]

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(1) Missal, M. E.: New York St. J. Med. 50: 173-178, 1950; (2) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (3) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (4) Freis, E. D., et al.: J. Clin. Investig. 28: 353-368, 1949; (5) Wilkins, R. W., et al.: J.A.M.A. 140: 261-265, 1949.

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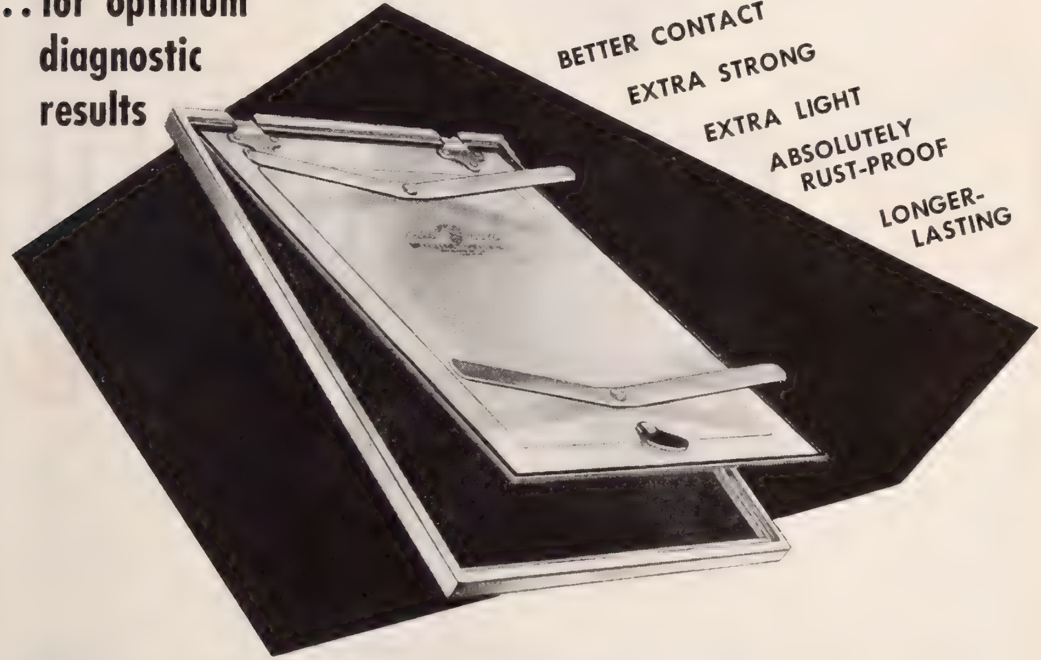

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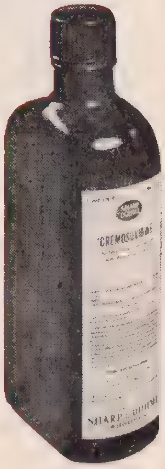

*Gray, A. L.: Southern Med. J., 43:320, April, 1950.

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VOLUME 50 NOVEMBER 1, 1950 NUMBER 21

Editorials

It's Your Duty to Vote

Addressing the Fourth District Branch meeting of the Medical Society of the State of New York at Cambridge, September 27, 1950, Assemblyman R. Judson Morhouse, of Essex County, hit hard from the shoulder at those citizens who fail to exercise their franchise. His remarks deserve the careful attention of our membership if they have the desire to preserve our form of government. We bespeak the earnest attention of our readers to his comments.

Mr. Morhouse called attention to the failure of professional and business groups to register and to vote. He cited statistics showing that a surprisingly large percentage of physicians, druggists, teachers, bank employes, ministers, retail grocers, and other groups had failed to exercise the privilege. He then called for a poll of the meeting and asked the doctors present to show by holding up their hands:

1. How many voted in the last presidential election?
2. How many voted in the last primary?
3. How many had attended a purely political meeting within the last two years?
4. How many had made a contribution to a political party within the last two years?
5. How many individuals made a deliberate effort to influence public opinion on political issues in their daily affairs whenever the opportunity offered?
6. How many had made a speech on a political issue within the last two years?

Mr. Morhouse complimented the members of the nine county groups on a better percentage-wise showing than indicated by the statistics previously read.

"We are all in the same boat together," said Mr. Morhouse, "and that boat is the ship of state. You cannot complain about the course it may take if all you want is a free ride. You must help to set the course unless you are perfectly willing to take the consequences of leaving it to someone else.

"If you want a certain type of person in public office who will stand for a certain type of platform, then you must expect to get out and fight to elect him. If you feel it's undignified to get into a political fracas, there are plenty of other persons who will be glad to take over. They can hardly wait to get their hand on the helm now.

"The course of our government in the world today is the concern of every citizen. If we fail to recognize our obligations, then we lose control of our own destiny by default. It has taken the lives of countless millions to build what we have here. Let's not give it away."

We can add nothing to these remarks. Action is up to you who read this.

The A.M.A. Advertising Campaign

News reports of the American Hospital Association's fifty-second annual convention at Atlantic City in September quote Dr. Howard L. Childs, professor of politics at Princeton University who addressed some 3,000 people at the meeting as saying:[1]

> The American Medical Association's projected million-dollar advertising campaign to combat national compulsory health insurance proposals was "a waste of time and money."

He said further

> that the health insurance issue would be settled finally by the people themselves "not on the basis of whether the program is labeled socialism or not but on the basis of whether they believe the government can, or cannot, meet their needs more satisfactorily than private enterprise."
>
> "The people know what they want and I doubt whether the government or the medical profession can do much to change those desires," he said. "The American people do not need to be told what they should or should not want."

He also remarked

> that the final decision of the American people on the health insurance question would not be swayed by "propaganda." Instead, he said, they would be influenced by whether or not their health needs are being met adequately by private enterprise.
>
> Dr. Childs asserted that it was "unrealistic" for the A.M.A. to maintain that those needs are being met fully at present. Rather than expend talents and funds and initiative trying to sway public opinion, he said, the A.M.A. should endeavor to appreciate the health wants of the public and "accept them as a basis for action."

Dr. Childs is unquestionably entitled to his views. As a professor of politics, he would be against the use of propaganda, and quite naturally would deprecate its use by the A.M.A. This is understandable, even a month in advance of the commencement of the projected million-dollar advertising campaign to combat national compulsory health insurance proposals. No one apparently had informed the professor that the advertising campaign of the American Medical Association is for the purpose of informing the public of the *facts* about such proposals, so that folks can make up their minds about them. By inference, the professor seems to abridge the right of the American Medical Association to use its funds in whatever legitimate way it deems best. He calls the forthcoming campaign a "waste of time and money," if correctly quoted.

A positive, aggressive attitude by the doctors' national association in behalf of its members and the public seems to have provoked numerous reactions. Why the doctors should be criticized for the legitimate use of the public prints, available to all citizens for the purpose of advertising if they so wish, remains a mystery. It may be a "waste of time and money" in the opinion of the good professor, but it is not *his* time nor *his* money. Many reputable American enterprises use the advertising medium to tell the interested public the facts about their manufactures, their products, and their ideas. Why not medicine?

In addition to the campaign being "a waste of time and money," the professor, if correctly quoted, believes that the A.M.A. is "unrealistic" respecting the health needs of the public. He is again apparently unaware of the fact that these needs have been the subject of study by the A.M.A. since it was founded in 1847 and were among the reasons for its founding.

---

[1] New York Herald Tribune, September 19, 1950.

We hope the advertising campaign presently under criticism reaches into the academic surroundings in which the good professor carries on his political teaching. It is apparently sadly needed there. The American Hospital Association is to be congratulated on pointing out, through the professor's good offices, the quite urgent need for the A.M.A.'s advertising campaign and indicating at least one of the backward areas to which it should be directed.

The Security Peddler

The Federal Security Administrator, Mr. Oscar Ewing, is no man to do things by halves. Speaking before the American Jewish Congress on September 28, 1950, he said, according to the Associated Press, "Everybody is for Federal aid (to education) 'except for one single organization—the American Medical Association' . . . . ."

Administering security must do something insidious to a man. In subtle ways likely it undermines his sense of caution, for in security what need is there for prudence? Thus Mr. Ewing evidently feels justified in speaking for everybody in the genial, paternal manner of a beloved dispenser of public moneys to the dependent multitudes. Such power brooks no restraint, or let, or hindrance for long. Hence, we sense Mr. Ewing's annoyance, his impatience with the implied stupidity of one single organization that would stand out independently against everybody's acceptance of Federal aid.

We can almost hear Mr. Ewing's foot tapping the floor as he said: "We have been trying—against the wishes of a single entrenched professional organization—to provide Federal aid to medical education at a time when private society has been unable to make it possible for the medical schools of this country to turn out as many doctors as we need. . . . ."

Again the hurt tone of frustrated philanthropy, of the dispenser of good things unable to choke down the throat of the scholastic needy the Federal nutrients everybody is said to be for. "We have been trying to provide Federal aid. . . . ." Note the pathos, the patience in face of great provocation, the editorial "we"—and this corny performance in an address to the dignified American Jewish Congress representing perhaps the greatest givers of real, private philanthropy the world has known throughout history!

The American Medical Association, in a blistering indictment of Mr. Ewing, which stated that he had twice been given a vote of "no confidence" in Congress, characterized him as "a disappointed, embittered bureaucrat, who should be removed from office before he does further harm to the country."

Dr. George F. Lull, general manager of the A.M.A., who issued the statement, declared:

> Mr. Ewing, in his speech yesterday before the American Jewish Congress, descended to the depths of political demagoguery when he falsely implied that the American Medical Association was practicing discrimination against Jews.
>
> He has long been a fomenter of class hatreds, and he is now attempting to incite religious and racial hatreds in the manner of Hitler's Germany.
>
> Mr. Ewing is a case of arrested political development, and his irrational statements undoubtedly are a consequence of thwarted ambitions and a growing persecution complex, but he is wholly unfit for public office.
>
> The two Houses of Congress, in successive years, have given Mr. Ewing a decisive vote of "no confidence," by rejecting his attempts to gain Cabinet stature and control over the medical profession through the creation of a Department of Health, Education, and Security.

Mr. Ewing appears not to be so much interested in increasing the supply of really good doctors, which is the aim of the American Medical Association and we hope that also of the American Jewish Congress, as in peddling his rubber security dollars to the expanding dependency of the American voters and their institutions.

Good Public Relations

The well-thought out and medically well-implemented adaptation of the Alameda County plan of California now in operation in increasing numbers of the counties of the Empire State has demonstrated once again the eagerness of medical men to seek out and fulfill every legitimate need of the public for medical service, in addition to that already available in many instances.

Press comment and news stories have been numerous and commendatory. As an example of improved public relations in the legitimate sense of improved mutual understanding, the plan gives promise of fulfilling every expectation, in spite of the considerable difficulties to be anticipated in its initial stages of operation, especially in the larger cities.

Formal medicine, through its county and state societies and with its sometimes limited facilities for study, is undertaking the fulfillment of its obligations with a seriousness and thoroughness commensurate with the gravity of the problems presented.

It is necessary to appreciate the extent to which medicine, its institutions, and its practitioners have become enmeshed with the enormously complex web of politico-social developments in the past fifty years, in order to have a proper perspective respecting its position in a modern civilization. In fifty years, the telephone, the automobile, the x-ray, the concept of workmen's compensation and public welfare as a function of state and Federal governments, the individual hospital and its consolidation into medical centers, often in conjunction with medical schools, have developed with incredible rapidity, merely to mention a few examples. Those developments, together with recent antibiotics, innumerable improvements in anesthesia, radium, company welfare projects, and union medical services, have created a welter of medical, legal, and service problems almost beyond belief. From inability to solve some of these satisfactorily to all parties at interest, some of medicine's less happy public relations have arisen.

Yearly, formal medicine is under the necessity to bring before the legislature certain bills and to support or oppose certain bills brought in by other organizations or departments of government, these measures having to do with many phases of medical care, medical practice, and the health of the public. We raise the question: Is not this activity by formal medicine as much a part of our public relations program as the Alameda County plan, for example? If it is not, then what rational guide is there in shaping our policy respecting medical legislation? If it is, on the other hand, an integral part of our public relations program, do we not fail frequently to evaluate it as such? Our attitude toward measures considered yearly at the meeting of officers of the Medical Society of the State of New York and county legislative chairmen at Albany has, it would seem, a very definite effect upon public reaction to what we do or do not do, respecting them.

Possibly this fact is not always foremost in the minds of our committees as they debate the desirability or undesirability of certain measures. The matter is worth some thought. In the growth of the organization of the Medical Society of the State of New York it has become inevitable that departmentalization should occur. True, the Council of the Society acts as a clearing house and as a coordinator of the activities of the various departments, but, in the limited time available for debate, it seems at least open to question whether sufficient emphasis and consideration is ordinarily given to the question of public reaction to the measures debated.

Our public relations program deserves to be integrated with the activity of all departments of the Society. Particularly, in view of the 1951 session of the Legislature, would it not be well to review carefully what measures we propose to submit to that body in the light of good public relations? Only by so doing can we pursue a logical, well-integrated program of progressive character.

Current Editorial Comment

Things Move Fast. A comprehensive plan of operations for civil defense has been prepared by the National Security Resources Board for presentation to states and cities. At the same time, President Truman called on Congress to enact legislation to get the plan under way, including creation of a Federal Civil Defense Administration, with "power and authority to plan, review, and coordinate the civil defense activities of the Federal government and to coordinate the same with the civil defense activities of the states . . . . ."

Whatever happens in Congress, there are strong indications that Mr. Truman will designate NSRB as the agency responsible for allocating physicians on a civilian-military basis. One proposal is to set up a Procurement and Assignment Service under Dr. Howard Rusk's Health Resources Advisory Committee within NSRB. This could work closely with the Defense Department's Office of Medical Services, which already has control over the total numbers of medical officers the services may call up.

Here are medical highlights of the new defense program. FSA health personnel at FSA regional offices will staff Federal civil defense central and regional offices at the outset, to be replaced by PHS personnel. Red Cross will have major responsibility for blood supplies, but transportation of blood within a state is the responsibility of the state. Maps showing 140 critical target areas have been prepared and will be sent to governors. The United States probably will purchase all regional medical stockpile supplies. Minimum state and local obligations are spelled out in such activities as first aid and ambulance services, emergency hospital systems, casualty services, health supplies, laboratory services, sanitation services, medical services, morgue services, records, etc.

It is the hope that states and cities will work out mutual assistance plans; if they don't, the CD Administration would be empowered to require such assistance in time of emergency. It places full medical and other responsibilities on existing civilian agencies and individuals.

If Congress does not create the new agency before recess, the over-all plan will not be allowed to lie dormant. An NSRB spokesman said the President has sufficient executive funds to start the program without new appropriations and sufficient authority to change NSRB from a planning to an operating agency. If it receives this power, NSRB could administer the program while awaiting creation of the new administration.

In view of public interest in the rate of draftee rejections, the Army has explained its procedures and standards. It mentions two important changes from World War II practices which might contribute significantly to increased rejections. Now a registrant must have a minimum of 16 teeth in proper occlusion to be acceptable, with suitable dentures and bridges included. During part of World War II inductees with fewer teeth were accepted, and Army dentists made necessary restorations. Also, illiterates and marginal literates, who were taught to read and write after induction in World War II, now are not accepted. This, the Army says, "is based on the assumption that the services cannot undertake at this point to administer specialized educational training or to accept individuals who can render . . . . limited type of service."

The Budget Bureau, acting on order of President Truman to cut nondefense spending half a billion dollars, has sliced in half the fund Congress approved for Hill-Burton Act hospital construction. The reduction was from $150,000,000 to $75,000,000.

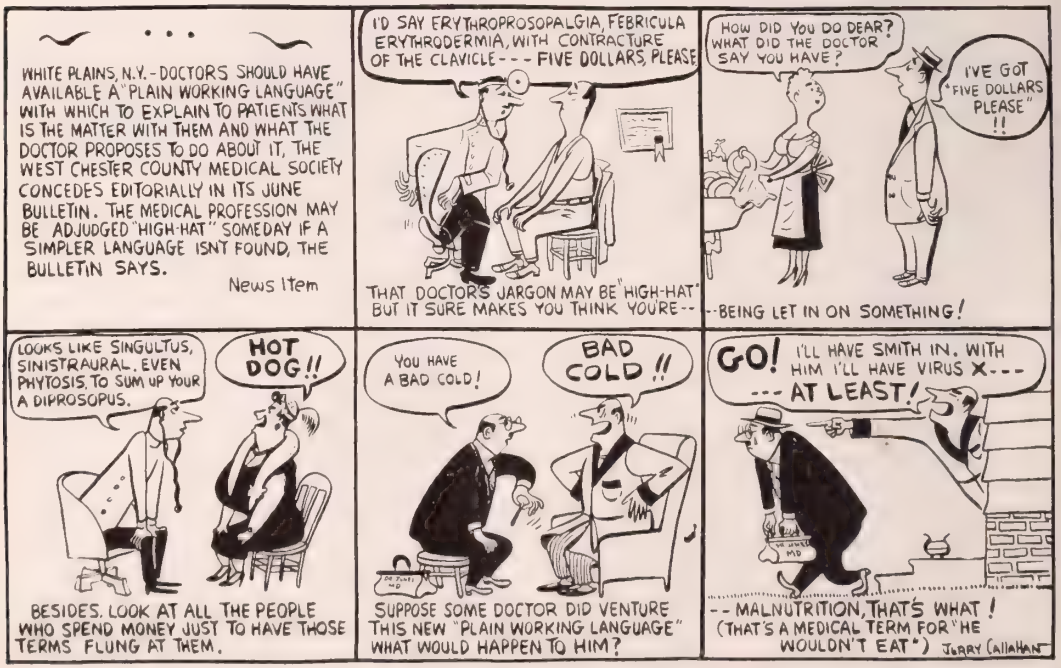
The Budget Bureau's action in cutting funds followed passage of the law and was in addition to any congressional reductions. In addition to the $75,000,000 cut in hospital funds ordered by the Budget Bureau, FSA will have to pare off another $14,000,000. Most of this will be absorbed without too much disruption by eliminating proposed expansions and purchases and not filling vacant positions. PHS will stand about $7,000,000 of the cut.

In approving appropriation bills, the House and Senate cut funds for FSA health programs an average of 11 per cent under figures originally recommended by the Budget Bureau. For all such services (excluding such items as Office of Education and Social Security payments), the Budget Bureau authorized FSA to ask Congress for $345,380,000. The figure finally approved by Congress was $308,306,930. In individual items, one of the most drastic reductions came in the budget for Federal employe health programs. This wound up at $50,000, or only about one third of the amount asked. Other differences between amounts asked and amounts granted included hospital salaries, expenses and planning, $2,807,000 and $1,357,000; and office of the administrator, $2,508,000 and $2,383,100. Congress also refused to appropriate money for the start of several major construction projects, including a Dental Research Center, an Arctic Health Institute, and a Communicable Disease Center.

Congress increased a few appropriations over Budget Bureau recommendations. These included venereal disease work, up half a million dollars; tuberculosis control, up $200,000; National Institutes of Health and National Cancer Institute, both increased about half a million and mental health activities, upped to $10,000,000.

The appropriations bill authorizes $3,000,000 for research grants in cortisone and ACTH. PHS will allocate the grant funds to nonfederal institutions and scientists for projects which offer the greatest possibility for advancement. Drugs are available for hospitals with proper facilities. In the last six months, the price has dropped about 50 per cent—cortisone from $100 to $50 a gram and ACTH from $200 to $100 per gram.

Good teeth are not only a beauty but a comfort. When they are neglected, two great sources of happiness are lost forever.


WHITE PLAINS, N.Y. - DOCTORS SHOULD HAVE AVAILABLE A "PLAIN WORKING LANGUAGE" WITH WHICH TO EXPLAIN TO PATIENTS WHAT IS THE MATTER WITH THEM AND WHAT THE DOCTOR PROPOSES TO DO ABOUT IT, THE WEST CHESTER COUNTY MEDICAL SOCIETY CONCEDES EDITORIALLY IN ITS JUNE BULLETIN. THE MEDICAL PROFESSION MAY BE ADJUDGED "HIGH-HAT" SOMEDAY IF A SIMPLER LANGUAGE ISN'T FOUND, THE BULLETIN SAYS.
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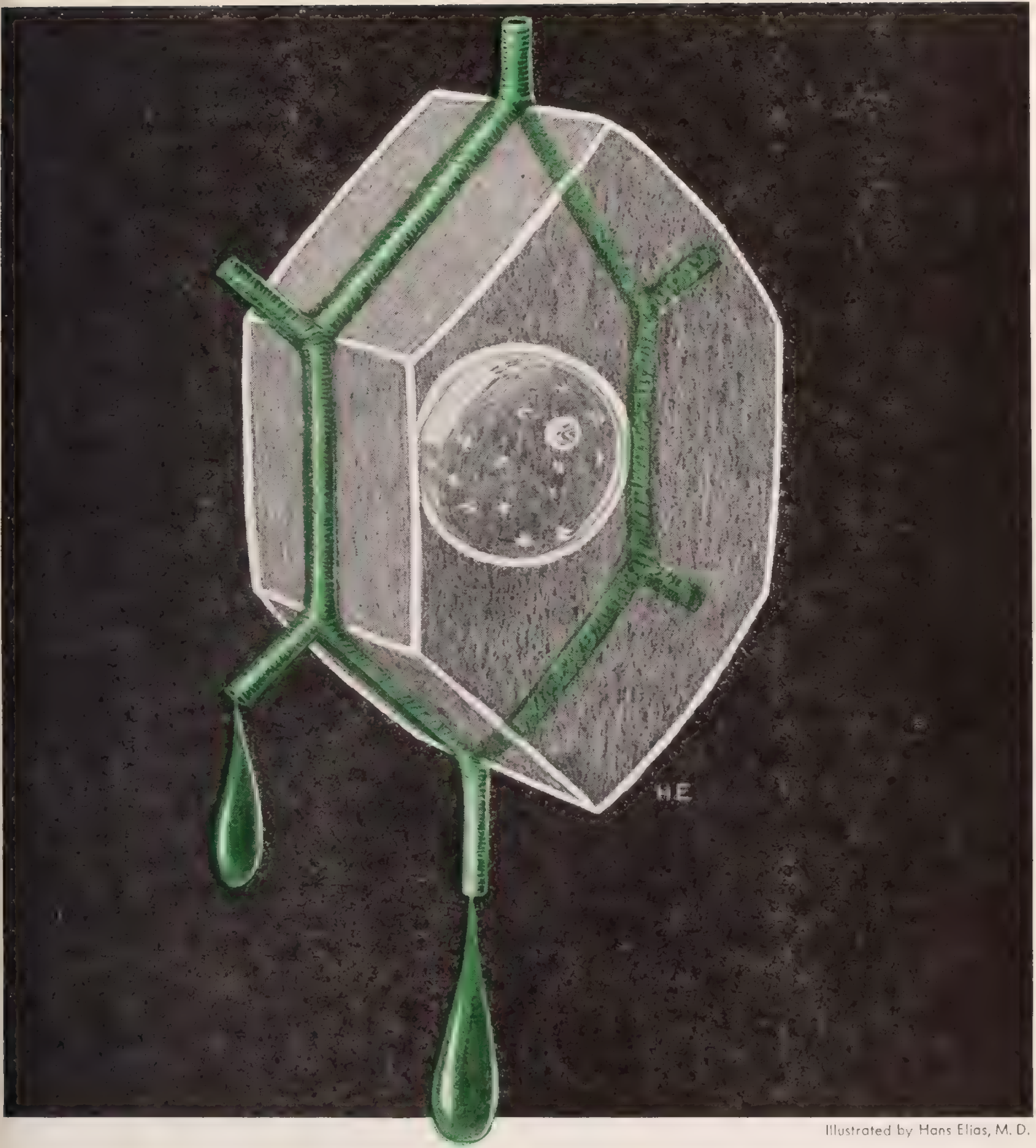
I'D SAY ERYTHROPROSOPALGIA, FEBRICULA ERYTHRODERMIA, WITH CONTRACTURE OF THE CLAVICLE - - - FIVE DOLLARS, PLEASE
THAT DOCTOR'S JARGON MAY BE "HIGH-HAT" BUT IT SURE MAKES YOU THINK YOU'RE - -
HOW DID YOU DO DEAR? WHAT DID THE DOCTOR SAY YOU HAVE?
I'VE GOT "FIVE DOLLARS PLEASE" !!
- - BEING LET IN ON SOMETHING!
LOOKS LIKE SINGULTUS, SINISTRAURAL. EVEN PHYTOSIS. TO SUM UP YOUR A DIPROSOPUS.
HOT DOG!!
BESIDES. LOOK AT ALL THE PEOPLE WHO SPEND MONEY JUST TO HAVE THOSE TERMS FLUNG AT THEM.
YOU HAVE A BAD COLD!
BAD COLD!!
SUPPOSE SOME DOCTOR DID VENTURE THIS NEW "PLAIN WORKING LANGUAGE" WHAT WOULD HAPPEN TO HIM?
GO! I'LL HAVE SMITH IN. WITH HIM I'LL HAVE VIRUS X - - - - - - AT LEAST!
MD
- - MALNUTRITION, THAT'S WHAT! (THAT'S A MEDICAL TERM FOR "HE WOULDN'T EAT")
JERRY CALLAHAN

(*Reprinted, by permission, from the Evening Bulletin, Philadelphia, June 21, 1950.*)



Illustrated by Hans Elias, M. D.

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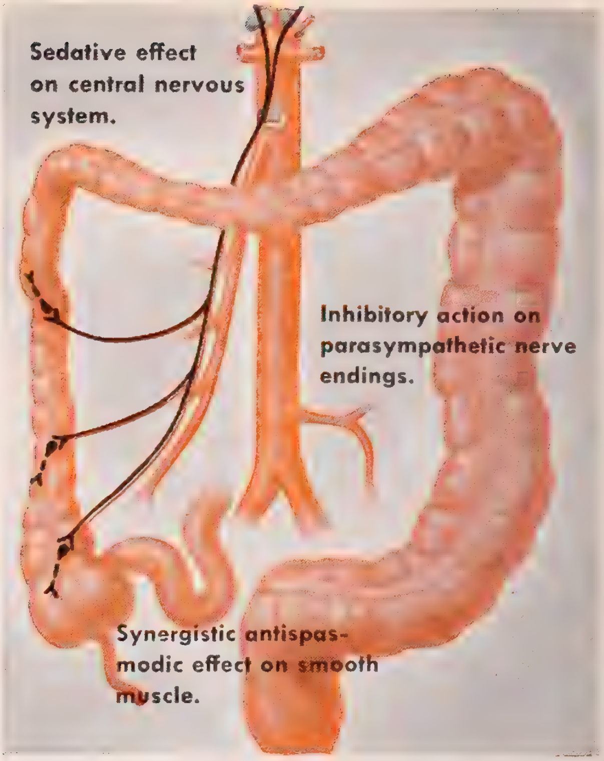
To the cells constituting the secretory portion of the liver lobule is allotted the task of secreting bile to flow through the biliary tree and remove the products of congestion.

Acting on the hepatic cells, KETOCHOL®, containing the four unconjugated bile acids, stimulates the secretion of a thin, free-flowing bile which assists in promoting drainage of the hepatic tree. G. D. Searle & Co., Chicago 80, Illinois.

RESEARCH IN THE SERVICE OF MEDICINE **SEARLE**


Sedative effect on central nervous system.
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Trasentine-Phenobarbital

An ideal antispasmodic for prolonged use

Trasentine-Phenobarbital is singularly free of side effects such as dryness of the mouth, pupillary dilatation and palpitation of the heart. Trasentine has very little cumulative effect even in large doses over a long period of time, although it is a powerful antispasmodic. Thus Trasentine-Phenobarbital is an ideal spasmolytic agent for patients who must be treated over many months.

Prolonged illness produces an anxiety state in many patients which may noticeably retard improvement. Trasentine-Phenobarbital relieves psychic tension and speeds recovery of these patients.

Wide use is being made of Trasentine-Phenobarbital in daily practice to relieve pain and spastic conditions of the abdominal viscera associated with hyper-excitability of the autonomic system.

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Scientific Articles

THE EARLY DIAGNOSIS AND TREATMENT OF EARLY CANCER OF THE CERVIX

Paul A. Younge, M.D., Brookline, Massachusetts

(From the Free Hospital for Women)

IN SPITE of the recent advances in exfoliative cytology and the recognition of carcinoma in situ as the early stage of squamous cell carcinoma of the cervix, it still remains a fact that the great majority of women who are treated today for cancer of the cervix already have symptoms for which they seek medical aid. When cancer of the cervix first produces its classic symptoms of abnormal bleeding and a change in the type of vaginal secretion, it almost invariably is an invasive lesion and not infrequently a fairly advanced one. Even though the symptom-producing cancer may be confined to the limits of the cervix and classified as a favorable, stage I, or early case, it very definitely is *not* an early lesion. Pund and his associates believe that cancer of the cervix does not become obvious for as long as six years after microscopic invasion takes place and that carcinoma in situ exists for nearly six and one-half years before it invades microscopically.[1] The probable validity of their ideas is substantiated by our observations at the Free Hospital for Women.[2] We have found that the average age of patients with carcinoma in situ is ten years less than those with clinical cancer. Four cases of carcinoma in situ have progressed to clinically obvious cancer in two and one-half to six and one-half years, and a fifth patient, a deliberate experiment, developed microscopically invasive cancer in eleven months. The last case was asymptomatic and is alive and well now thirteen years after treatment. A sixth patient had obvious cancer twelve years after a biopsy showed carcinoma in situ.[3]

As we accumulate experience, it becomes obvious that patients with so-called early cervical cancer, that is the stage I cases, have had their cancers in an easily detectable location for at least one to three years or probably much longer, as Pund believes. During this symptomless stage in the development of cervical cancer, Papanicolaou smears and selective cervical biopsies with the help of the Schiller test will reveal the disease when it is nearly 100 per cent curable. Consequently, women must have adequate pelvic examination *routinely* and not just because of symptoms. Also, such routine examinations should begin in the early twenties or before then if the patient has symptoms or has had children. Twenty-three (17 per cent) out of 135 cases with carcinoma in situ of the cervix were in patients under the age of thirty.[2]

Physicians must learn when to suspect the benign-appearing, symptomless early stage of cervical cancer. If we wait until the cervix is suspicious before taking a biopsy, as we have been taught for generations, we will find only about 6 per cent of the preinvasive cases.[2] Since 1936 in the Outpatient Clinic of the Free Hospital for Women, all cervices showing the slightest degree of pathology, even innocent congenital erosions in teen-aged girls, have been biopsied routinely, and 1.2 per cent have shown carcinoma in situ.[2] Only 11 cervices out of 183 cases of definite carcinoma in situ observed at the Free Hospital for Women through 1949 were regarded as suspicious of cancer clinically. The great majority of these cases were discovered by rigidly adhering to the rule of routine biopsy of all pathologic cervices.

Achenbach, Johnstone, and Hertig of the Free Hospital for Women have shown that the first vaginal smear was positive in 70 per cent of 60 cases of unequivocal carcinoma in situ.[4] Twelve of those 60 cases were discovered primarily by the Papanicolaou test, which definitely establishes its value for detecting the curable stage of cervical cancer. In this clinic, however, selective cer-

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Presented, by invitation, at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Obstetrics and Gynecology, May 11, 1950.

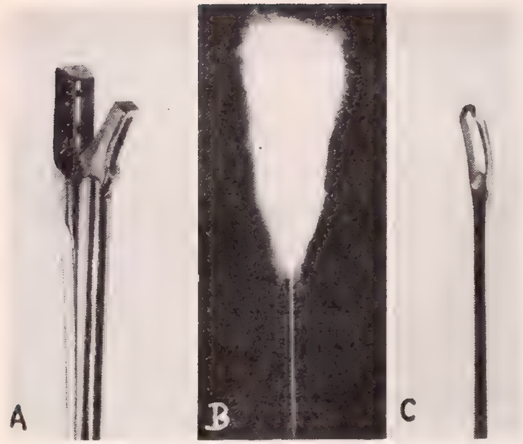

Fig. 1. Essential instruments for selective cervical biopsy: (*A*) Punch biopsy forceps. (*B*) Metal cotton applicator for cleansing and staining cervix. (*C*) Duncan curet for endocervical and endometrial biopsy. (All these instruments may be obtained from the Crowley & Gardner Company, Boston, Massachusetts.)

vical biopsy with the help of the Schiller test is more accurate than the vaginal smear for carcinoma in situ. Ideally, both procedures should be done routinely, which we have found economically practicable for the patient both in the clinic and in our office practice.

Routine Clinic or Office Procedures

A vaginal smear is taken routinely on all new patients admitted to the Outpatient Department and once a year on old patients. The cervix is inspected after careful cleansing with a large cotton applicator soaked in Alkalol (Fig. 1). Any exposure of the glandular epithelium due to lacerations is regarded the same as eversions, ectropions, or erosions, and the contours of these lesions are carefully noted. Then the cervix, after being dried with a second cotton applicator, is stained with Gram's iodine solution. Squamous epithelium at the periphery of the erosion which fails to stain a dark brown constitutes a positive Schiller test, and that is the area to biopsy (selective cervical biopsy). The biopsy specimen must contain both glandular and squamous epithelium because squamous cell carcinoma usually begins at their junction. A biopsy which contains only one type is inadequate, and the pathologist should make the note that the specimen contained only glandular or squamous epithelium and, therefore, is an inadequate biopsy. In 10 per cent of the cases of carcinoma in situ the Schiller test is negative. In these cases the malignant epithelium is confined to the limits of what appears to be the glandular or squamous metaplastic epithelium of the erosion, and in such cases at least two biopsies from the erosion should be taken.

If there is no erosion or exposed glandular epithelium and the Schiller test is negative, in other words an absolutely normal cervix clinically, at least two strokes are taken with a small, sharp curet in the cervical canal. The clotted blood produced by this procedure is saved as well as any tissue obtained. By submitting the blood clots to the pathologist two definite carcinomas in situ with questionable early invasion were found in the past two years from symptomless patients whose endocervical curettage was thought to be negative.

With the proper instruments and a little experience adequate evaluation of a cervix seldom requires hospitalization in our clinic where we do well over 1,000 cervical biopsies per year on ambulatory patients. A punch such as is illustrated in Fig. 1 can obtain a thick or thin piece of tissue depending upon the amount of pressure exerted against the cervix. For years Hertig has heckled me for submitting such superficial biopsies in cases of carcinoma in situ. Two years ago one of his postgraduate students, Hu Chih-Yuan, came to my rescue by observing that even in the sections of the whole cervix the surface cancer frequently was detached from its underlying stroma due to a lack of cohesiveness. The manner in which carcinoma in situ peels off the cervix is now referred to by us as Hu's sign. We have predicted carcinoma in situ in at least five cases in the past year by this sign before the positive tissue diagnosis was obtained.

The biopsy wounds are not cauterized except in rare instances when bleeding is too profuse to control with Gelfoam or Oxycel and a tampon. Cauterizing the wound destroys the surrounding epithelium which may be wanted for further evaluation. An untreated wound heals in seven to ten days, whereas a cauterized wound takes at least three to four weeks to heal. Specimens obtained with the high-frequency cutting current are not satisfactory because the histology frequently is altered, making accurate interpretation impossible. A cervix should not be treated by cauterization, electrocoagulation, conization, or trachelectomy until a biopsy has been examined or at least until a vaginal smear has been interpreted and one or preferably both reported negative.

When the pathologist makes the diagnosis of carcinoma in situ or intraepithelial carcinoma from a biopsy specimen, or a vaginal smear is reported positive for cancer, the next step is to evaluate carefully the location and extent of the disease. Invasive cancer must be ruled out by repeat biopsies around the clock and endocervical curettage. This secondary evaluation also is an ambulatory procedure. In all cases the clinician should consult personally with the pathologist to make certain that the biopsies have been adequate and to determine exactly the extent and type of carcinoma in situ with which he is dealing. Of utmost importance is a careful and deliberate evaluation of the disease by at least two or three sets of biopsies rather than an immediate hysterectomy after the first report. The reasons for such a deliberate and somewhat slow approach are as follows: (1) The disease may have been removed completely by the first or second set of biopsies and no further treatment is necessary other than careful follow-up examinations. (2) The carcinoma in situ obtained in the first biopsy may represent the surface coating of malignancy at the periphery of an invasive cancer which must be treated more radically than preinvasive carcinoma. (3) Although the microscopic criteria for carcinoma in situ have been described fully in the literature, there are many variations of squamous epithelium of the cervix which are atypical and frequently confused with it. Even squamous metaplasia and benign epidermidization of the cervix have been called invasive cancer by pathologists of limited gynecologic experience. When it is important to be conservative and there is no other justifiable reason for a hysterectomy, the biopsy slides should be examined by other pathologists for more experienced opinions.

Treatment of Carcinoma In Situ of the Cervix

The treatment of preinvasive cancer of the cervix depends upon a very accurate evaluation of the type and extent of the lesion for each individual case. Many needless total hysterectomies and occasional radical hysterectomies are being performed for alleged carcinoma in situ with negative findings in the extirpated cervix. First of all, it should be emphasized that less than 25 cases which have been observed to progress to invasive cancer have been reported in the literature. A calm and deliberate appraisal of each case should always be made by at least a second set of biopsies in order to determine that you are actually dealing with true carcinoma in situ and, of greater importance, that you are not dealing with invasive cancer.

In regard to treatment of this disease a paradoxic situation exists. For years the Free Hospital for Women group has preached the fact that carcinoma in situ is, indeed, the early stage of invasive cancer. Now we are being criticized for our conservative attitude or rather our occasional success in the conservative treatment of it. Just a year ago Gardner took us to task for our "twenty years of therapeutic experimentation" and hoped that we would do more total hysterectomies so as to obtain "better specimens for study" and a "larger series of cured patients."[2]

Through 1949, 117 complete cervices from 183 cases of unequivocal carcinoma in situ have been studied in our laboratory. Of the entire group of patients not one who was adequately studied or in whom the disease was recognized at the time of or immediately after treatment has died of cancer of the cervix or has even had a recurrence.* Seventy-five patients of this group were treated before January 1, 1945.

In our laboratory we divide carcinoma in situ into three groups: (1) cases with surface involvement only and (2) those in whose cervices the malignant epithelium is growing into and replacing the epithelium of the cervical glands. The latter cases are referred to as showing glandular involvement and comprise about 50 per cent of the group. Glandular involvement is a more advanced stage of carcinoma in situ. (3) There is a third group comprised of patients with possible or probable stromal invasion, yet the lesion is so small that most pathologists will not accept them as cases of truly invasive cancer. We retain these questionable cases in the group of carcinomas in situ because as yet we have not seen one recurrence after simple total hysterectomy, and to include them with our clinical cancer group (truly invasive) would overload our statistics for the result of treatment of frank cancer of the cervix.

Multiple punch biopsies "around the clock" and endocervical curettage will show quite accurately whether or not there is glandular involvement and will rule out invasive cancer. If there is glandular involvement and/or the disease has spread up into the cervical canal, a possibility pointed out by Ewing twenty-one years ago, no attempt should be made to treat the disease conservatively. In such a case a simple total hysterectomy should be done, removing as much vaginal cuff as is indicated by the Schiller test.

When the second or third set of biopsies shows surface involvement only and the cervical canal is free of disease, conservative treatment may be attempted if preservation of reproductive function is important to the patient. Twenty-seven patients in this category have been treated by cauterization of the cervix, and the disease persisted in only four, a cure rate of 85 per cent. Of the 23 remaining patients two have had one spontaneous abortion each, three have had one child, and one has had two children.

The disease has regressed without treatment or was cured by the biopsies in four patients, two of

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* Cases in whose cervices carcinoma in situ was found incidentally after total hysterectomy, amputation of the cervix, or in a biopsy taken at the time of cauterization.

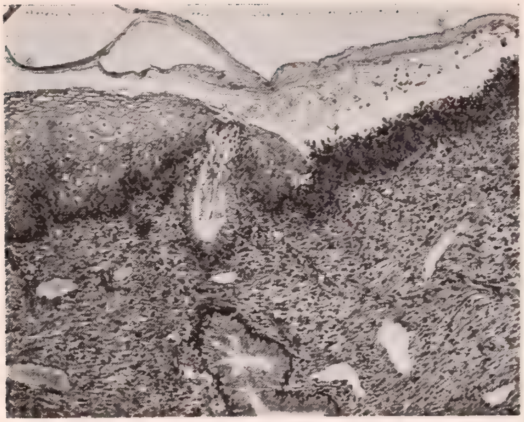

FIG. 2. Hysterectomy specimen showing junction of the normal squamous epithelium on the left and carcinoma in situ on the right (Case 1). This slide demonstrates the usual origin of carcinoma in situ and the reason for a cervical biopsy taken from the junction of the two types of cervical epithelium. (S50-1480).

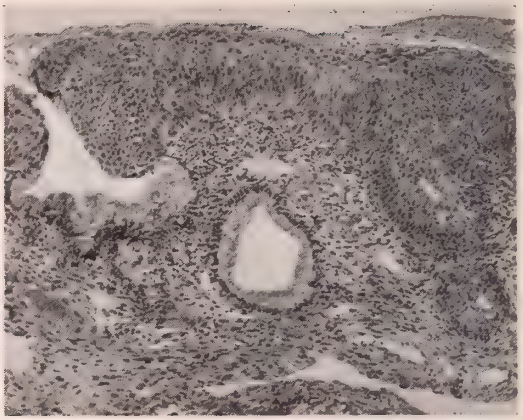

FIG. 3. Same slide as in Fig. 2 showing partial replacement of the glandular epithelium on the left and complete replacement of a gland on the right (Case 1). Compare this picture with Fig. 5. This malignant epithelium is less anaplastic (more differentiated) than that in Fig. 5 which explains why it was possible to follow this patient for over three years and through her third and fourth pregnancies before treatment. (S50-1480).

whom subsequently have had one and two children respectively. These four cases emphasize the need for a slow and cautious evaluation of each patient. They also demonstrate the reason for a new rule we have adopted in the past year of requiring a positive Papanicolaou smear after the last biopsy before performing a hysterectomy for carcinoma in situ with surface involvement only.

At the present time, if conservative treatment is elected, we advocate sharp conization of the cervix rather than cauterization or electrocoagulation, because the specimen will reveal the complete or incomplete removal of the disease. However, if electrocoagulation is elected as the treatment and the lesion is not destroyed completely, it is possible to recognize this fact by careful follow-up examinations within one year, and then a hysterectomy should be performed. Such conservative treatment was a failure in ten out of 16 of our cases (all had glandular involvement), a cure rate of only 37 per cent. The ten failures have had subsequent treatment, usually hysterectomy, and all are now free of disease four to ten years postoperatively. Thus, conservative attempts did not jeopardize the final outcome. From this group of unsuccessfully conservatively treated cases we have learned that it should never be attempted when there is glandular involvement.

The following three cases are illustrative of the thorough and deliberate study before treating carcinoma in situ as is being done now at the Free Hospital for Women.

Case Reports

Case 1.—L. R. G., a twenty-four-year-old mother of two children, came to the Outpatient Clinic on November 19, 1946, because of slight intermittent bleeding of one month duration. Her last normal period occurred six weeks previously. There was an innocent-appearing erosion of the cervix, and the Schiller test was positive at the periphery of the erosion. A biopsy at 12 o'clock showed anaplasia (possible carcinoma in situ). Three weeks later three biopsies at 5, 7, and 11 o'clock and a Papanicolaou smear were negative. Because of the anaplasia in the original biopsy the patient was examined at monthly intervals and successfully delivered her third child July 21, 1947. On September 4, 1947, a vaginal smear was suspicious of malignancy. Six weeks later the vaginal smear was again reported suspicious, and a biopsy from a positive Schiller test at 11 o'clock showed probable carcinoma in situ.

From October, 1947, to November, 1949, monthly vaginal and cervical smears varied from normal to definitely positive for cancer, but biopsies from the anterior lip of the cervix showed nothing more alarming than a disturbing anaplasia (possible carcinoma in situ). Her fourth child was delivered March 19, 1949.

On March 23, 1950, she returned to the clinic two and one-half months pregnant, and a biopsy from 12 o'clock showed carcinoma in situ with gland involvement. Vaginal and cervical smears were definitely positive for cancer then and two weeks later. A simple total hysterectomy without oöphorectomy was performed. Serial block sections of the cervix showed carcinoma in situ with gland involvement but no stromal invasion (Figs. 2 and 3). This

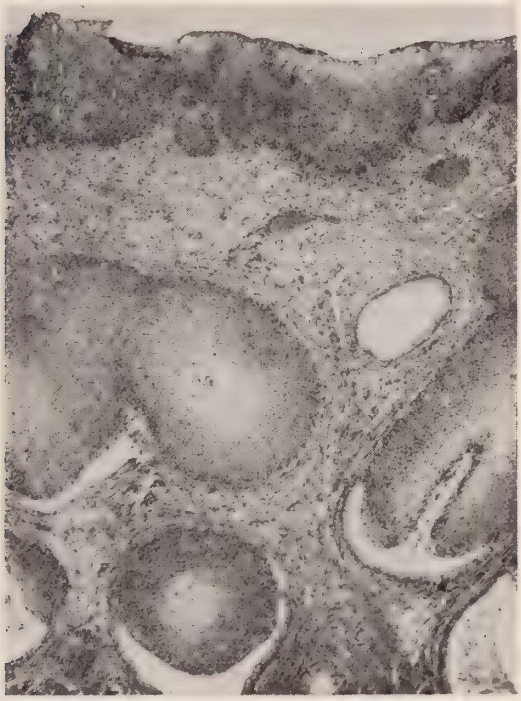

FIG. 4. This represents the greatest extent of deep gland involvement by carcinoma in situ in the serial block study of this case (Case 2). The scalloped basal border of the malignant surface epithelium suggests possible or early stromal invasion. The large masses of neoplastic epithelium in the lower two thirds of the picture represent partial and in one case complete replacement of the glandular epithelium and not invasion of the stroma. (S50-825).

patient had been followed three years and three months through her third and fourth pregnancies, and during this time the squamous epithelium of her cervix progressed steadily from anaplasia or possible malignancy to definite carcinoma in situ. Thorough study of the extirpated cervix showed that the disease had been accurately evaluated by ambulatory biopsies. It is of interest to note that the first unequivocally positive Papanicolaou smear was obtained exactly two years before the hysterectomy.

We are certain that the disease could have been cured by thorough cauterization after her third pregnancy in 1947, but the experience gained by being able to watch anaplasia develop into carcinoma in situ has been invaluable. It demonstrates graphically the prophylactic value of routine cauterization of all cervices six weeks postpartum.

Case 2.—P. R., a twenty-six-year-old mother of three children, was referred to us February 9, 1950, from a suburban hospital along with the microscopic slides of three large cervical biopsies. She was three and one-half months pregnant, and her only complaint was an increase in the amount of a yellow vaginal discharge. The biopsies had been performed because her physician thought her cervix was suspicious, although there was no bleeding or friable tissue present. Actually the chronically inflamed eversion did look suspicious, but microscopically it was benign. Fortunately, the biopsies at 4 and 8 o'clock included the positive Schiller test squamous epithelium at the periphery of the eversion. It was here that carcinoma in situ with deep gland involvement was found. The anterior lip was negative. Vaginal and cervical smears were unequivocally positive for cancer. Because adequate biopsies showed no stromal invasion a simple total hysterectomy without oöphorectomy was performed when she was four months pregnant. Serial block study of the cervix showed that the lesion was confined to the periphery of the eversion between 4 and 8 o'clock on the posterior lip. There was deep gland involvement and questionable early stromal invasion (**Fig. 4**).

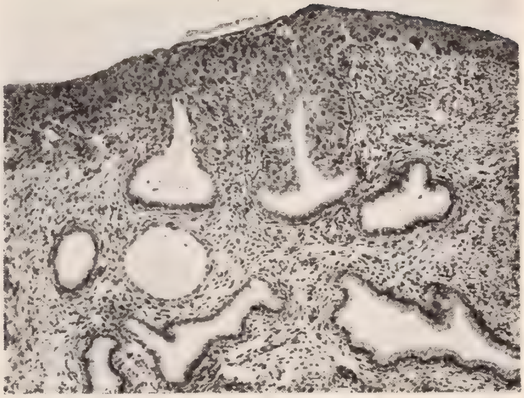

FIG. 5. A more malignant variety of carcinoma in situ with gland involvement. Compare with Fig. 3, and note that in this case there is less differentiation, greater pleomorphism, more hyperchromatism, and many more mitotic figures. (S50-1217)

Case 3.—A forty-five-year-old woman, pregnant three times, came to the clinic October 25, 1949, complaining of backache. There had been no abnormal bleeding, and she denied having leukorrhea. The cervix was enlarged and cystic with irregular areas of so-called erosion, none of which was suspicious of malignancy except that the Schiller test was positive at 11 and 6 o'clock. The routine vaginal smear was reported probably positive for cancer (Papanicolaou number 4), and biopsies at 11 and 6 o'clock showed marked anaplasia (probable carcinoma in situ). One week later the vaginal smear was "probably positive" (number 4), the cervical smear definitely positive (number 5), and biopsies at 1, 6, and 8 o'clock again showed "probable carcinoma in situ." The lesion was regarded as equivocal because of some surface differentiation which on occasion we have found to be a reversible lesion or perhaps cured by biopsy. One week later the vaginal smear was a number 4 and the cervical smear a number 5. Four months later, March 2, 1950, the smears were the same, and biopsies from 5, 7, and 12 o'clock and endocervical curettings showed definite carcinoma in situ with gland involvement and possible early stromal invasion. Two weeks later, March 18, 1950, a simple panhysterectomy was performed. Serial block studies showed extensive and typical carcinoma in situ with gland involvement and questionable early stromal invasion (Fig. 5).

Conclusions

1. Carcinoma in situ of the cervix can be recognized only by routine diagnostic procedures rather than by waiting for clinical signs and symptoms.

2. Accurate evaluation of the type and extent of carcinoma in situ is usually an ambulatory procedure, thereby eliminating costly hospitalization.

3. When carcinoma in situ involves the cervical glands, a total hysterectomy should be performed.

4. If adequate evaluation demonstrates no gland involvement (surface involvement only) and the disease does not extend up into the cervical canal, conservative treatment may be attempted if the patient understands the need for careful follow-up tests.

1101 Beacon Street

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Discussion

Frank R. Smith, M.D., *New York City.*—There is little to differ with in Dr. Younge's splendid presentation.

Methods of Diagnosis.—1. Smears are valuable in screening in a cancer prevention clinic or for the private office, but the smears must be examined by a pathologist experienced in smears. The final diagnosis must be made by examination of tissue.

2. Clinically, pathologic cervices do require multiple and repeated biopsies for proper evaluation of the case, whether Schiller's test (which gives a false positive for any young reparative epithelium) is used or not.

3. Convincing evidence has been presented of the value of cautious and careful evaluation of each individual case before starting therapy.

4. Many statistical reports today have lost much of their value because of careless inclusion of precancerous cases as true cancer.

5. The classification of the three types of in situ lesions and the quoted 50 per cent incidence of the glandular down-growth type explain many of the errors in diagnosis of true invasive cases.

Methods of Treatment.—1. Most timely is Dr. Younge's warning that no treatment should be started before proved pathology indicates the proper treatment.

2. His evidence of the behavior of the glandular down-growth type seems to warrant total hysterectomy with ovarian conservation in this group.

3. I have treated no cases of in situ lesions with cauterization. I doubt whether it is justifiable on the evidence presented.

My chief disagreement is with the title of this paper, which deals mainly with so-called carcinoma in situ, because I believe this title is a misnomer. In my estimation so-called "carcinoma in situ" is a precancerous stage, which may become cancer, just as leukoplakia is a forerunner of carcinoma of the vulva but is not cancer.

At Memorial, New York, and Roosevelt Hospitals, I personally treat in situ lesions or any other suspicious lesions by extensive trachelectomy with adequate pathologic sectioning of the specimen to see whether there is evidence of true cancer. To date the incidence of invasive cancer has been very low.

To do radical surgery or irradiation of in situ lesions and to include them as treated cancer cases will give the recorder a high percentage of cures but will retard our knowledge of the proper treatment of true cancer. Dr. Younge does not include these cases in his cancer statistics.

The recognition of the precancerous lesion and the institution of proper treatment will prevent cancer development.

NAVY WOMAN PHYSICIAN

Lieut. Comdr. Bernice R. Walters, MC, USNR, first woman doctor ever assigned to duty aboard a Navy ship, is a member of the medical staff of the *U.S.S. Consolation.*

Dr. Walters, one of 31 women medical officers on active duty in the Navy, recently reported aboard the *Consolation* after being detached from duty at the naval hospital in Pensacola, Florida. She is medical officer in charge of the Sick Officers Quarters.

Navy women doctors were originally commissioned in the women's reserve (WAVES) in 1942. Since the first, Dr. Cornelia Jane Gaskill, of Peekskill, New York, was commissioned on September 1, 1942, 98 other women doctors have served in the Navy Medical Corps. Of the total, 80 now hold either regular or reserve commissions. Three of the 31 women doctors on active duty hold regular Navy commissions, and 28 are in the naval reserve. Another 49 reserve women physicians are on inactive duty.—*J.A.M.A., August 26, 1950.*

THE EFFECT OF TREATMENT ON THE INCIDENCE OF ABORTION

Clyde L. Randall, M.D., Richard W. Baetz, M.D., Donald W. Hall, M.D., and
Paul K. Birtch, M.D., Buffalo, New York
(From the University of Buffalo School of Medicine and the Buffalo General Hospital)

FOR the purposes of this report, abortion is considered the spontaneous interruption of pregnancy before the twentieth week of gestation. Such instances terminate more lives than gynecologic malignancies and the hazards of childbirth combined. If we assume the desirability of avoiding this loss, the results of treatment seem to warrant continued interest and repeated survey.

Incidence of Abortion

Spontaneous abortion is thought to occur frequently, but the actual loss is difficult to determine. Several reports have suggested that 20 per cent of pregnancies terminate before the child is viable. This impression has, undoubtedly, been aided by repetition of the somewhat related statement that 20 per cent of women who conceive experience an abortion (but 20 per cent of the conceptions do not abort!). Even if such estimates could be substantiated, an average figure gives little indication of the risk of abortion in any given pregnancy, for, in the single instance, a number of individual factors must be taken into consideration. Tietze, Guttmacher, and Rubin have recently reported an over-all incidence of 7 per cent abortions among 1,497 successive pregnancies observed in their practice.[1] From their interesting data they conclude that the incidence of abortion is significantly increased in older women, particularly when they give a history of previous abortion or a period of infertility preceding conception.

We have observed that, after once visiting the office, 285 (13.9 per cent) of 2,050 women threatened to abort, and 113 or 5.5 per cent actually aborted. In calculating the incidence of abortion in our experience, we have not taken into consideration women who were aborting the first time we saw them. Such cases have been excluded because, for the most part, they were referred from physicians attending an undetermined number of other prenatal patients who did not abort. Their exclusion raises a question as to the validity of reporting that only 5.5 per cent of the women arranging for prenatal care aborted during the past five years. However, Tietze's figures and our observations seem to agree with the incidence in metropolitan New York, where all instances of pregnancy are reportable. In the five years 1944 to 1948 inclusive, of 708,045 pregnancies recorded by the Health Department, 33,554, or 4.7 per cent, terminated before the twentieth week of gestation.[2] Since Baumgartner recently estimated that 50 per cent of the pregnancies occurring in the City of New York are not officially recorded, it seems reasonable to estimate that at the present time not more than 10 per cent of conceptions are terminating in abortion.[3]

Etiology of Abortion

Extrapelvic Factors.—There are few conditions in the woman's systemic health that actively cause abortion, but many factors may interfere with decidual, fetal, or placental development and in a more passive manner eventually terminate pregnancy. The possibilities have been given adequate consideration in the literature, and no enumeration will be repeated. However, a few commonly considered factors deserve comment.

We do not believe that serologic incompatibility is a factor in the causation of early abortion, but it is important to remember that an Rh-negative mother may become sensitized, even by an early aborted pregnancy, to a degree that will endanger the outcome of future childbearing. Occasionally, abortion is due to industrial or home-acquired toxicity, and the possibility must be kept in mind. On the other hand, it seems remarkable in the allergic sensitized generation in which we live that such factors seem to play so small a part in the etiology of abortion. There is no time to discuss the evidence that emotion and nervous tension exert a profound effect on fertility and abortion. As a rule, to be convinced, one need only to witness the childless couple both realize offspring in second marriages or to see the childless couple become fertile after adopting a child.

A variety of other events may profoundly affect the welfare of the conceptus. For instance, the site of implantation is important and, unfortunately, cannot be controlled. Among other possible or accidental etiologic factors is the actual time of fertilization. The age of the ovum and sperm when union occurs is most important but within a period of hours is also unpredictable and uncontrollable. Either an ovum or sperm, accidentally old at the time of fertilization, may result in a conceptus incapable of normal development by the time it reaches the endometrium.

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In this connection, Rubin has suggested that increased peristaltic action of the tube is an important and desirable effect of the preovulatory administration of small amounts of estrogen.[4] The importance of such tubal activity is evident, for prolonged transportation time may result in devitalization of the early conceptus, impaired development, and inevitable abortion.

Pelvic Pathology.—Pathology of the cervix may be more important than is generally recognized. Many would agree that cervicitis and thickened cervical leukorrhea interfere with conception, but few consider that a widely patulous cervix in a woman with a history of repeated abortion may indicate an incompetent internal os. Lash has called attention to the importance of cervical repair when irregularity of the internal os suggests an incompetent uterine sphincter as well as when laceration distorts the visible cervix.[5] Danforth has suggested that roentgen visualization of the cervicouterine canal by suitable opaque media is the best means of recognizing defects of the "incompetent cervix" which should be repaired.[6]

Neoplasms are frequent in the pelvis and, therefore, often complicate pregnancy. While fibroids are often associated with infertility, they do not prevent conception, nor do they prevent pregnancy from progressing to term and the spontaneous delivery of a normal infant. Nevertheless, fibroids in the uterus increase the incidence of late abortion and premature labor. In a woman in which other possible causes for abortion seem to be eliminated, we believe myomectomy is indicated if she is anxious to have a child. On the other hand, ovarian cystomas are not likely to cause abortion, and their removal is usually indicated to prevent the complication of torsion during pregnancy.

Uterine displacement, like fibroids, should be considered innocent unless circumstances suggest guilt. When we find a retroverted uterus in a patient who has aborted and is anxious to conceive again, we believe it good practice to replace her uterus and maintain it in an anterior position by the use of a vaginal pessary from the time conception is desired until the pregnant fundus becomes too large to retrovert back into the cul-de-sac.

Tubal pathology is not often considered a cause of spontaneous abortion. Endometriosis and chronic salpingitis are usually considered in relation to sterility; yet, whenever tubal pathology does not actually occlude the tube, fixation of the fimbria or decreased ciliary action may be responsible for materially prolonging the time it takes a fertilized ovum to reach the endometrium.

The congenitally incompetent uterus is often difficult to recognize. We know that some genital abnormalities are incompatible with conception and gestation, but women with a bicornuate uterus often conceive and deliver without difficulty. On the other hand, the much maligned infantile uterus merely reflects the hypogonadal status of a woman in whom abortion, after a period of apparent sterility, is not surprising.

The Conceptus and Developing Decidua.—In the strictest sense, many abortions are inevitable. It is generally agreed that one third to one half of the conceptions that are lost abort because of defects that are irreparable by the time the woman first suspects that she is pregnant. We need means of determining whether impending abortion is or is not due to defects that are incompatible with fetal survival. Until such criteria are recognized by methods readily available, we are faced with the choice of treating all women threatening to abort or with a history of habitual abortion or treating none of them without means of determining in which instance our efforts could possibly succeed.

For the greater part of our knowledge of abortion, we are indebted to Mall, Streeter, Rock, and Hertig, whose studies enable us to estimate that 30 to 40 per cent of spontaneous abortions are due to malformations of the embryo or decidua.[7-10] Hertig's detailed studies imply that as many as 60 to 70 per cent of aborted pregnancies might have been salvaged by proper treatment. His observations also suggest that, in the vast majority of instances in which the conceptus is abnormal, abortion is truly inevitable. There seems little danger that more effective treatment of abortion will bring more abnormal children into the world as a result of our efforts.

Power repeatedly observed decidual separation and external vaginal bleeding in early pregnancy without appreciable damage to the surviving fetus.[11] His observations provide additional evidence that, when abortion threatens but does not occur, there is no increased possibility of a malformed or inferior child. On the other hand, many clinicians have learned that supplementary hormone therapy in physiologically adequate amounts will prove effective to a point of inhibiting the progress of what eventually proves to have been an inevitable abortion. Admitting that we are unable to recognize defective germ plasm before it aborts, it is reassuring to learn that, when the conceptus is abnormal and we employ measures adequate to inhibit abortion, we only increase the incidence of clinically "missed abortions." More often there are chagrined doctors and disappointed would-be parents perhaps, but no increased incidence of abnormal or defective children.

It is not our purpose to consider defects of spermatozoa or ovum nor to evaluate a deficient maternal environment. All three are etiologic factors frequently responsible for spontaneous abortion and from a practical standpoint are often so interrelated as to appear inseparable. For instance, the conceptus might be normal at the time of fertilization, but a deficiency of the endometrium may limit vascularization at the site of implantation. Such inadequate decidual development, resulting in serious impairment of embryonic nutrition, may cause early irreparable damage of the conceptus. When aborted, the appearance of the embryo will probably be blamed on defective germ plasm, whereas the maternal environment was really at fault.

Hughes has shown endometrial deficiencies accounting for inadequate nutrition in the critical stages of implantation with resulting abnormalities of decidual and embryonic development.[12] In cases of habitual abortion, he has emphasized the effectiveness of treatment before conception by preovulatory administration of 0.1 mg. of stilbestrol daily from the first to twelfth day after the onset of a period. Hughes believes such small amounts of stilbesterol are beneficial because of two demonstrable effects: first, the proliferating endometrium becomes more vascular by the time of ovulation and, second, the output of luteinizing hormone is increased and a more active corpus luteum thereby assured.

It is also evident that inadequacies of the placenta may prove disastrous to the fetus during the middle or last trimester as well as in early pregnancy. Hence, both dietary and hormonal means of assuring placental nutrition are necessary throughout the entire period of gestation. In a recent review of the factors accounting for fetal death among 29,339 deliveries in Buffalo hospitals during 1948 and 1949, Baetz noted that early abortion and the factors resulting in premature labor or fetal death tend to occur and reoccur in the same individual.[13]

Habitual Abortion.—To the man and woman anxious to have a child, repeated abortion is particularly disheartening. While abortions are frequent and people have many children, mere hope that the law of averages will eventually bring them a child does not increase the probability of parenthood for the childless couple. According to the statistics of Eastman and Malpas, their chance of having a child decreases each time conception fails to go to term.[14,15]

Table I indicates that after two successive abortions, unless adequate study and treatment are provided, the chance for a third pregnancy to go to term is usually considered to approximate three in five (60 per cent). After three successive abortions ("habitual aborters"), the chance of a fourth to go to term without treatment is decreased to not more than one in five (16 to 27 per cent), and after four successive abortions, the chance of a live child from a fifth pregnancy is reported to be less than one in 20.

TABLE I.—Probable Incidence of Spontaneous Abortion Without Treatment

History	Chance of Abortion (Per Cent)
First pregnancy	5-6
Gravida 2—after one abortion	10-15
Gravida 3—two successive abortions	Apx. 40
Gravida 4—three successive abortions	73-84
Gravida 5—four successive abortions	Apx. 95

When we advise the couple who have experienced repeated abortion, we should remember that apparently nothing is gained by an arbitrary period of mere waiting between pregnancies. Factors possibly predisposing to abortion should be corrected, and preconceptional preparation—be it removal of pathology, the use of hormones, psychologic measures, or a dietary regimen—may require a few menstrual cycles. On the other hand, merely "waiting a while" accomplishes nothing for the habitual aborter, and we should not recommend so ineffective a measure to the couple anxious to have a child.

The Treatment of Abortion

General Considerations.—A brief review of current literature indicates a number of therapeutic measures both available and capable of preventing abortion. Undoubtedly, we fail in many instances because of the difficulty in recognizing the management which would be most effective for the individual patient. How then can we improve our perception of the problem? There appears, as yet, no means of testing for the viability and integrity of early fetal and decidual development in vivo. Pelvic pathology or the psychiatric or the nutritional factors accounting for abortion may be detected clinically and should be recognized by the physician. Effort may be necessary to improve the environment and systemic health of either or both parents. Apparently a large group abort because of factors effectively eliminated by adequate diet and hormone therapy. However, even optimal hormonal therapy is not a cure-all, and glandular therapy is not indicated in many instances.

The importance of adequate diet and good prenatal management has recently been emphasized by Javert, Finn, and Stander.[16] In the absence of a demonstrable deficiency of corpus luteum effect, we may well question the indication for the stilbestrol or progesterone therapy so frequently employed today as a prophylactic measure in the management of early pregnancy.

Indications for Endocrines.—While endocrine factors are receiving adequate consideration in this generation, we still see instances in which an empiric dosage of thyroid seems to increase fertility and decrease the incidence of abortion. The patient's record of daily basal temperature not only provides evidence of ovulation but may also indicate inadequate corpus luteum function. The importance of this observation has been repeatedly confirmed by endometrial biopsy. When a period of infertility has preceded an abortion, increasing the vascularity of the preovulatory endometrium and stimulating corpus luteum function by small amounts of stilbestrol for several months, as recommended by Hughes, should precede the next conception.[12]

Karnaky deserves credit for years of effort to interest the profession in the uses and effectiveness of stilbestrol as a means of reducing the incidence of abortion.[17] The use of estrogen and progesterone in apparently massive but really physiologic amounts throughout the prenatal period continues to appear logical for the habitual aborter (3 plus consecutive abortions). Both intramuscular progesterone and stilbestrol by mouth have been reported to provide adequate prophylactic or replacement therapy. More study is necessary before we can interpret and evaluate the reported results, but the risk of abortion seems greatly reduced when women with a history of habitual abortion receive stilbestrol by the "Smith regimen" or estrogen plus progesterone in the physiologic dosage recommended by Davis, Fugo, or Rakoff.[18–20] However, both involve considerable expense, and there is little reason to believe that either is beneficial unless an actual deficiency is present.

Recognition of Progesterone Deficiency.—The clinician is not wholly dependent upon the laboratory for guidance as to the indications for replacement therapy. The apprehensive woman anxious to be pregnant is certainly more likely to abort than the happier, less tense mother who expects no trouble. The painful and large corpus luteum should suggest more than a poor tolerance of discomfort. A large painful adnexa suggests cystic dysfunction and may indicate an inadequate progesterone level. On the other hand, we have repeatedly observed that the woman with vomiting of pregnancy rarely aborts. Not only can the patient be assured that her child will not be harmed by her illness or by her temporary malnutrition, but we feel her physician can also be assured that the vomiting of early pregnancy indicates an active corpus luteum or, at least, is observed when there is no deficiency of chorionic gonadotropin and progesterone.

The methods of hormone assay necessary to determine whether stilbestrol or progesterone are indicated are expensive to employ and not generally available. The need for less expensive, simpler, and more readily available means of determining hormone levels in pregnancy is generally recognized. In 1939, Fletcher called attention to changes in the histomorphology of vaginal smears, which seemed to characterize incomplete abortion.[21] When the significance of abnormal bleeding was questioned, he believed the changes observed might prove a reliable means of recognizing an incomplete abortion. However, the varied factors influencing the cytology of vaginal debris make it necessary to depend largely upon a cytologist's interpretation and make it difficult to insist upon definite cellular patterns as diagnostic criteria.

In 1942 and 1944, Hall observed a definite relationship between progesterone secretion and the phases of vaginal cornification during pregnancy.[22] He also noted that the cytologic findings suggesting a corpus luteum deficiency could, by the administration of progesterone, be returned to the picture regarded as normal during pregnancy. In 1943, Schneider believed vaginal smears had proved a reliable indicator of the need for estrogen or progesterone therapy in the management of habitual or threatened abortion.[23] Such reports were apparently based on the study of rather small groups of patients, and the possibilities seem to warrant further trial.

In 1949, while studying genital tract cytology, it occurred to Birtch and Hall that cervical scrapings might provide reliable prognostic criteria when abortion threatens. To date, they have studied the cervical smears from 340 women during early pregnancy. We are convinced that cervical cytology provides a reliable measure of corpus luteum effect during early pregnancy. Such stained smears also provide an inexpensive, readily available method of identifying the pregnant woman who needs progesterone or, if we accept the Smith's thesis, the progesterone-stimulating effect of their recommended schedule of stilbestrol dosage.

It is evident that women may abort because of a defective sperm or ovum, even though the hormone levels are optimal and smears fail to indicate an impending, inevitable loss. However, in actual practice we have been impressed by the frequency with which the smears have predicted impending abortion before clinically appreciable symptoms or signs. Moreover, cytologic study often gives no indication of progesterone deficiency in women apparently threatening to abort who do not do so and in whom vaginal bleeding eventually appears to have been of no prognostic significance as far as continuation of the pregnancy was concerned. The cervical smears help us decide which patient threatening to abort can safely be permitted restricted activity and which patient should remain at absolute rest until a full progesterone effect is evident as a result of indicated replacement therapy. Cervical cytology also appears to be a reliable means of detecting "missed abortion" before the clinical manifestations of this unfortunate situation are definite enough to justify the diagnosis.

Reducing the Incidence of Abortion

The treatment we have employed usually involves several considerations, and figures calculated to evaluate a specific procedure do not appear to offer anything reliable in the way of comparative data. While the "habitual aborter" remains the chief problem, there is an increasing tendency to regard the woman with a history of one abortion as a "potential aborter," and prophylactic measures are indicated in her next pregnancy. We have become convinced that we must recognize and adequately treat, preferably before the desired conception occurs, all conditions which might seem to predispose the individual couple to abortion. Factors that account for infertility are particularly important, for they often persist and predispose to spontaneous abortion. Even the discouraging incidence of irreparable developmental defects of the conceptus may be reducible if preconceptional measures assure the health of both parents as well as optimal vascularization and nutrition of the endometrium at the time of fertilization and implantation.

After conception, it is obviously necessary to have patients report for examination and the inauguration of possible treatment very early in pregnancy—ten days to two weeks over the first missed period. When there is increased risk of abortion, efforts should be made to improve the mother's environment and her nutrition. Exertion and fatigue should be avoided, especially "when a period is due." Supplementary hormones when indicated must be given in adequate dosage. We are convinced that the anticipated incidence of spontaneous or unintentional abortion can thus be materially reduced—by the employment of well-known measures that are readily available to the profession.

Summary

The occurrence of spontaneous or unintentional early abortion is affected by a number of preconceptional as well as prenatal influences. Observation that 5 per cent of a number of conceptions terminated before the twentieth week of gestation does not provide a figure indicating the risk of abortion in any given instance.

The best possible results will be realized only when preconceptional study and good prenatal management take into account the many factors that may predispose the individual couple to abortion, and, when indicated therapy has been inaugurated at the time, it is most effective. Recent literature indicates that the over-all incidence of abortion in any sizable series of cases should approximate 5 to 7 per cent and should not exceed 10 per cent. Among groups of "habitual aborters" available therapy reduces the incidence of abortion from an expected loss of eight out of ten untreated cases to an actual loss of only two or three per ten conceptions.

When the conceptus is abnormal and we employ measures adequate to inhibit expulsion of the uterine contents, we only increase the incidence of clinically "missed abortion." We do not increase the incidence of abnormal or defective children.

The so-called prophylactic use of large amounts of stilbestrol or progesterone during early pregnancy in an effort to reduce the incidence of abortion appears justified only when there is a demonstrable deficiency of corpus luteum effect.

We believe the cytology of cervical scrapings provides a reliable and readily available means of recognizing the woman threatening to abort on the basis of a corpus luteum deficiency.

We would emphasize that the treatment of abortion requires individualized study, for it appears unlikely that any single cure-all can be anticipated.

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Discussion

Ward L. Ekas, M.D., *Rochester.*—Dr. Randall has brought to our attention a new method to use in the treatment of abortion. We all have had patients who have had repeated abortions and then went through a subsequent pregnancy with little or no therapy. Such cases make us stop and ask ourselves just how much effect some of our treatment may have. The differences of opinion expressed by various writers make us doubt the efficacy of the medications used. Nevertheless, each of us has a certain procedure which he believes to be more effective than others.

Figures vary on the incidence of abortion. The incidence of 5 per cent seems to be rather low. Most writers report a higher incidence. It is agreed that many abortions are due to malformations of the conceptus, but the one question that we have to decide is when does a given pregnancy become abnormal? Is the influence from within or without the conceptus? Is it something in the maternal organism? Is it some effect of the paternal organism? It is not the feeling in our clinic that the lack of the Rh factor has an appreciable influence, if any, on the incidence of abortion. Other writers concur in this opinion.

In the treatment of a woman who has had repeated abortions so that she may be considered an habitual aborter, one should make an exhaustive study of her physical condition in regards to metabolism and endocrine status and should seek the presence of any general physical condition, as well as a local one, such as a myoma in the uterus, a retroverted uterus, a chronic cervicitis, or laceration of the cervix. Her psychic and mental condition is also important. Any pathology found should be corrected. Furthermore, the condition of the husband should be studied as well, for it has not been shown that he may not be at fault.

If the patient is pregnant when first seen, one must treat her without the benefit of the above. In other words, one will not have had the opportunity to improve her physical health, nor her husband's. It has always been my feeling that one of the most important factors in the treatment of these patients is complete bed rest away from much nervous stimuli. I believe that they should be in bed for a minimum of one week after all bleeding has stopped, and not a few should be kept in bed for a number of weeks or months or until after the time of quickening. The second important factor in the treatment is the use of thyroid extract. It should be given in sufficient dosage as indicated by the basal metabolic rate, and at times a larger dosage is needed.

Certainly, the diet should contain all the food values that are considered necessary in pregnancy in addition to extra vitamin K and C. Although there may be conflicting evidence concerning the use of vitamin E, we believe that it should be given, and its use may influence the course of the pregnancy favorably at times.

Stilbestrol in the dosages used by some writers is not used in our clinic, but stilbestrol in moderate dosage with progesterone is used at times. The patients selected have been, in general, the ones in whom progesterone therapy alone did not give satisfactory results. According to the reports of certain writers it certainly deserves a trial.

Our clinic was one of the first to use progesterone, and for the most part we still have considerable faith in its use. The reason for this is, of course, the fact that Allen and Corner, as well as Elden, did their original work in our clinic. It is my feeling that the dose should be large, perhaps up to 40 mg. or more. One of our problems is to determine the proper dose of the hormones. Many times the use of the hormones is more or less empiric unless much laboratory work is possible. Another limiting factor is the cost of the hormone itself.

About four years ago a series of cases was followed in our clinic in which a modification of the Guterman test was done as a control for the Friedman test for pregnancy. I am referring to the paper written by Miss Grace McCormack. This is a chemical test that can be done in about three hours or less and is a pregnandiol determination by a color reaction. Before the series was completed, it was obvious that in most of the cases it could be used as an index for the amount of progesterone that the patient needed. When the test was negative or weakly positive, by increasing the progesterone dosage certain pregnancies could be continued. Those that did not give a definite positive reaction sooner or later aborted.

The use of the cervical smear, as reported in this paper by Dr. Randall, gives us another means of determining the amount of progesterone needed. This method has not been used by us, and I have had no experience with it. However, I have no doubt but that it is one that will be used much more as doctors and technicians are trained in the cytology of vaginal smears.

In addition, patients who have had abortions should not have pelvic examinations in early pregnancy. I am sure you have had patients who aborted or at least had symptoms of abortion after even a gentle pelvic in early pregnancy. Marital relations should also be forbidden during the pregnancy.

In summary then, I wish to say that every effort must be made to preserve the pregnancies in these women who habitually abort, and only by these various studies are we able to make any real progress. We all know that, if the conceptus is really abnormal, eventually an abortion will be the result; since so far we do not have tests to determine the ones that are abnormal, we should make every attempt to salvage each one.

Forget nothing but the injuries done to you.

Public danger creates unanimity.

MANAGEMENT OF THE PREGNANT CARDIAC PATIENT

J. Thornton Wallace, M.D., F.A.C.S., Brooklyn, New York

(From the Department of Obstetrics and Gynecology of the Brooklyn Hospital and the Long Island College of Medicine)

As MATERNAL mortality from hemorrhage and infection has decreased as the result of improved facilities for transfusion and the discovery and use of chemotherapeutic drugs and antibiotics, cardiac disease in pregnancy has forged more and more to the fore as a cause of such deaths. By the year 1947 it ranked third as a cause of maternal deaths in the greater New York area.[1] Very little attention was devoted to this problem before 1900. In 1921, Hamilton's Clinic for pregnant cardiac patients was established in the Boston Lying-In Hospital, and that of the Brooklyn Hospital was organized in 1926. Mortality among these patients prior to 1922 was 9.38 per cent; in the decade 1936 to 1946 it had been reduced to 3.24 per cent.

So much attention has been focused on this subject in recent years that a tendency has developed on the part of some obstetricians to leave the matter of caring for the cardiac aspects entirely in the hands of the cardiologist. Good care for such patients depends upon the closest cooperation between the two and is their joint responsibility. The obstetrician should learn from the internist all that he can about heart disease in pregnancy in general and the individual patient at hand in particular.

The incidence of heart disease among pregnant women in our clinic is approximately 2 per cent. Of these 93 per cent are of rheumatic origin. The remainder are made up of congenital, syphilitic, and arteriosclerotic types. A correct diagnosis is essential for proper care of these patients. This should include the following:

1. A careful history, including age at onset of rheumatic infection, duration of the heart disease, history of previous failures, and ability of the patient to carry on ordinary activities.
2. Physical examination, including x-ray or fluoroscopic study or both.
3. Electrocardiogram to detect abnormal rhythms, block, or RST segment changes.
4. All of the above should be correlated to arrive at a complete diagnosis, etiologic, anatomic, and physiologic, along with an estimate of functional capacity as outlined by the American Heart Association.

A relatively accurate prognosis as to the ultimate outcome may also be arrived at from the above data. While mortality is increased only slightly (0.5 to 1.0 per cent in favorable cases), this is not true in the unfavorable cases. Factors which affect the outlook unfavorably are as follows:

1. A history of previous failure or presence of failure at the time of examination, since a large majority will fail again.
2. Auricular fibrillation—This increases the risk of death three to four times.
3. Age—In those patients over thirty-five the failure rate increases at times to as high as 35 per cent.
4. Duration of the disease—generally speaking, the longer the duration, the greater the risk, for the nearer she is to the end of her disease.
5. A functional classification of III C or worse.
6. Evidence of great structural damage—a very large heart.
7. Active rheumatic fever within one year of the pregnancy.
8. Presence of acute carditis.

The above-listed unfavorable factors may likewise be used as criteria for advising against pregnancy in the nonpregnant and interruption for those already pregnant. Final decision in these matters must rest with husband and wife, and, if the decision is contrary to medical advice, the physician should do the very best that he can under existing circumstances.

It is seldom, we feel, that interruption should be done without accompanying sterilization. Exceptions to this rule may be found in those cases where the condition of the patient is too serious to permit the added hazard of laparotomy over interruption from below and in those rare instances of acute illness such as active rheumatic fever or chorea, where there is sufficient hope of subsequent improvement to permit further pregnancies.

Medical treatment should be directed largely toward prevention of failure or other cardiac catastrophe. Prenatal visits should be so spaced and alternated that the patient is being seen by either the internist or obstetrician every two weeks during early pregnancy and every week during later pregnancy. Advice as to exertion, rest, diet, and care of infection should be given. The avoidance of weight gain and toxemia are particularly important. If heart failure develops, strict bed rest, low sodium diet with adequate protein, diuretics as indicated, and digi-

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talis should be used. Once having failed, the patient should remain in the hospital or under strict care at home until delivered.

Even mild respiratory infections in cardiacs at any and all stages of pregnancy are dangerous. The obstetrician is likely to be the first to know of such complications, and he should lose no time in seeking the advice of the internist when such infections occur, for even early pregnancy increases the load on the heart. Three of the last five cardiac deaths that have occurred in the Obstetrical Department at the Brooklyn Hospital were in women four and five months pregnant who had acute respiratory infections. In an analysis of maternal deaths from heart disease which occurred in the Borough of Brooklyn during the five-year period 1944 through 1948, Acken reported a total of 25 deaths.[2] Of these, 15, or three fifths of the total number, died before delivery. Further breakdown revealed that one died at three months gestation, one at four, five at six, one at seven, two at eight months, and five at term. Thus, it is seen that nearly half of these patients died during the first six months of pregnancy before viability had been reached.

One should not be lulled into a sense of false security because the heart lesion is minimal rather than severe. Any organic heart lesion in a pregnant woman deserves careful consideration. It is becoming common practice to hospitalize all severe cardiacs two weeks before the date of expected confinement. Some are beginning to believe that all patients with heart disease should receive this precautionary treatment. Acken's figures would seem to strengthen this belief, since all the patients in his series who died at term were in labor and none had been admitted to the hospital until after labor had begun. In a series of 110 patients with heart disease complicating pregnancy cared for at the Brooklyn Hospital in the years 1926 through 1936, two of nine deaths, roughly 22 per cent, were in class I, the least severe cases. The great value of good prenatal care is evidenced by the fact that in this group the mortality among patients who had not had such was just three times as great as in those who had.[3] In a similar series of 102 cases cared for at the same hospital in the years 1937 through 1941, due to better education of patients and increased medical skill, there was only one death as compared to the nine in 110 cases reported above.[4]

The blood volume in pregnancy gradually increases until about the end of the eighth or beginning of the ninth month. From this point on there is no further increase, thus relieving the heart of any further added load from this source. Hence, during the last two or three weeks of pregnancy, the heart has an opportunity to accustom itself to a stable volume of blood and build up its reserve to an optimum point. One should, therefore, strive to delay induction of labor, if there are indications for such, until this point has been passed. Caution should be exercised in the use of dehydration regimens which depend upon deprivation of sodium and diuresis in the routine management of the pregnant cardiac patient, particularly during the last week or two of pregnancy when labor may begin at any time. Patients treated in this way, because of electrolyte depletion, are more prone to go into shock from even moderate exhaustion, blood loss, or trauma.

It has been clearly shown by Hamilton and others that cesarean section should be done in cardiac patients only for obstetric indications. It should be pointed out, however, that these indications are somewhat different in the pregnant cardiac. It is the very strong feeling of our staff, both medical and obstetric, that cesarean section should be done in cardiac patients who are faced with long and exhausting labors, whereas such would certainly *not* be an indication for section in the normal woman. Experience indicates that the danger of cardiocirculatory collapse and death is much greater after such labors in cardiacs than is the danger of death from cesarean section done as soon as the probability of a long labor can be foreseen. Further there is one heart condition which, if seen in a pregnant woman, some at least would consider an indication for cesarean section, namely, coarctation of the aorta. The danger here lies in rupture of the attenuated, thinned-out aortic wall resulting from the increased intra-aortic pressure caused by the pains of labor. It has likewise been recommended that such patients be sterilized by tubal ligation at the time of cesarean section unless corrective cardiac surgery is to be carried out later.

As to the actual management of labor in cardiac patients, certain cardinal principles are well established. The first of these is use of the orthopneic position during both labor and delivery. Another is that good sedation be maintained throughout labor in order to prevent undue strain from the pain and apprehension associated with uterine contractions. This may usually be accomplished most satisfactorily by the combined use of Demerol or morphine and an amnesic. Since scopolamine is prone to produce an undesirable tachycardia by its action on the vagus and with the inability in most instances to obtain satisfactory analgesia with either Demerol or morphine alone, this desirable state may be attained by the use of a small dose of a barbiturate with these drugs. Careful observation of pulse and respiratory rate should be maintained throughout labor in these patients. Pardee has pointed out that a persistent pulse rate of 110 and respiratory rate of 24 is an indication of impending decompensation and should receive immediate attention and vigorous treatment. If this situation cannot be brought under control by further sedation or rapid digitalization in the incompletely digitalized patient, termination of the labor by the least shocking means must be seriously considered. If evidence of transient tachycardia and heart strain develop during labor, it may sometimes be ameliorated by the use of 50 per cent glucose intravenously and oxygen by face mask.

A cardinal principle in the management of the second stage is that it be shortened as much as is commensurate with safety to mother and baby. Good judgment must be exercised as to just when and how much it should be shortened. It is better to subject the mother to a little additional strain from expulsive efforts to bring the presenting part low enough for an easy extraction than it is to subject her to the shock and strain of a difficult delivery solely for the purpose of shortening the second stage. Another important phase of the second stage is selection of anesthesia. Here there is often difference of opinion among cardiologist, obstetrician, and anesthesiologist. The psychic and emotional strain to which a cardiac patient is subjected by delivery under local is sometimes greater than the danger of general anesthesia. Such emotional strain may at times cause sudden pulmonary edema. Local anesthesia should, therefore, be used only in those patients who are of phlegmatic temperament and in whom there is good basal analgesia from analgesic drugs administered during labor. Ether with 100 per cent oxygen has been and is still in the opinion of many the anesthetic of choice in cardiac patients. One of the newer anesthetic agents, cyclopropane, is gaining increasing popularity in some clinics, among which is our own. Its advantages are twofold: first, the rapid, smooth induction with and recovery from cyclopropane as contrasted with the prolonged induction and reaction from ether, both of which are so frequently accompanied by retching and vomiting and, second, the high percentage of oxygen administered with cyclopropane is, it is felt, of distinct advantage to the cardiac patient. Cyclopropane is, however, contraindicated in those with arrhythmias or those who have had digitalis because of its tendency to aggravate or even create arrhythmias. If arrhythmia develops, the use of cyclopropane should be abandoned, for it cannot be foretold when such arrhythmias may lead to sudden ventricular fibrillation and death. Neither whole pituitary extract nor adrenaline should be used when cyclopropane is being administered, but Pitocin may be given. Avertin and Sodium Pentothal might in some ways seem ideal for the cardiac, but most authorities feel that, because of their tendency to depress both respiratory rate and excursion with consequent poor oxygenation, they should not be used. Chloroform and nitrous oxide are mentioned only to be condemned, the first because of the direct toxic effect of chloroform on the myocardium and the second because of the marked degree of hypoxia necessary for anesthesia.

Opinion varies widely about spinal anesthesia. While some feel that the cardiac condition, particularly when complicated by pregnancy, is in itself a definite contraindication to its use, others are of the opinion that certainly, in decompensated cardiacs, it is the anesthetic of choice. In most other cardiacs, it is as good as, if not better than, other forms of anesthesia. One of the chief objections to its use lies in the cardiocirculatory disturbance caused by the drop in blood pressure so commonly accompanying this form of anesthesia. This may usually be safely and easily prevented or controlled by the use of vasopressor drugs. Its great advantage in decompensation comes from its tendency to cause pooling of blood in the lower abdomen and extremities which in turn serves to relieve the strain on the right heart much as would a phlebotomy. Where proper facilities for use of caudal anesthesia are available, it will accomplish much the same thing. The fractional spinal technic of using small repeated doses of procaine gives as good if not better relaxation in cesarean section than would general anesthesia and, because of the small doses used, is not so likely to cause the profound drop in blood pressure often seen with single-dose spinals.

After delivery of the cardiac patient, there is often a tendency to relax vigilant observation of the patient. This is a mistake, as many of these patients will withstand the rigors of labor and delivery only to collapse afterwards. Acken's figures are again of interest in that, of the ten deaths occurring after delivery, four, nearly half of them, died the day of delivery.

The third stage in cardiacs should be handled somewhat differently than in the normal woman. If Pituitrin is to be used, only the oxytoxic fraction, Pitocin, should be given. It has been found both experimentally and clinically that in patients of the more elderly group and those with arteriosclerotic changes, Ergotrate will at times cause spasm and even thrombosis of the coronary vessels.[5] If bleeding reaches proportions requiring transfusion, this should be undertaken with due caution. The blood should be infused at a slow rate and in not too great quantity in order to avoid overloading an already embarrassed circulation. It has been suggested that splanchnic dilatation from sudden release of intra-abdominal pressure caused by emptying the uterus of its contents may be avoided by the use of a sandbag placed across the abdomen. If this does not cause restlessness and discomfort to the patient, it will probably do no harm and may possibly be of benefit. Unless sedation and narcosis have been profound preceding delivery, a dose of morphine soon after will usually have a desirable stabilizing effect.

Early ambulation has no place in the care of the parturient cardiac patient. A sufficient period of bed rest should be maintained, seven to ten days, for the cardiocirculatory system to become thoroughly stabilized and its reserve restored. The cardiac patient should likewise remain longer in the hospital to enable her to regain as much of her strength and reserve as possible as a protective measure against the strain, both physical and emotional, which is in store for her when she arrives home with a new baby. She should not be subjected to the strain of nursing her baby in any but the most exceptional circumstances.

There is an occasional cardiac patient who even after her first pregnancy should not become pregnant again and many who should not do so after their second or third babies. There are various methods in vogue for its prevention. The only 100 per cent effectual method is complete abstinence. The next most reliable is probably hysterectomy. Most gynecologists and obstetricians would, I think, consider this procedure more dangerous and only slightly more reliable than the simpler procedure of tubal ligation. I believe most will agree that the so-called natural methods of contraception, such as the use of rhythm alone or checked by temperature recordings and even urinary hormonal studies, are far from reliable. Except in those instances where religious tenets preclude other methods, these are much too unreliable to warrant their use in these patients where the prevention of pregnancy is so important. Where artificial means of contraception are to be used, the condom together with the diaphragm and jelly will give greater safety than either alone. Generally speaking, the lower the scale of intelligence of patients, the more unreliable are contraceptive devices of all kinds and consequently the higher the incidence of surgical sterilizations necessary.

In the very occasional patient who is a prohibitive operative risk and in those approaching menopausal age, x-ray castration as a means of sterilization may be employed. Its simplicity and virtues must be weighed against the hazards of the emotional disturbances sometimes created by it.

Lastly, it may well be asked what effect repeated pregnancies may have on the life expectancy of women suffering from cardiac disease. This, so far as my knowledge goes, is at the present time a question that cannot be answered with certainty as I have seen no series of cases comprising sufficiently large numbers or adequate follow-up to warrant accurate conclusions. It would seem reasonable to assume, and impressions would indicate, that the greater the number of pregnancies with the increased burden of caring for the additional children, the more would life expectancy be shortened. An extensive survey of this situation is being carried out in the cardiac clinic of the Brooklyn Hospital through a grant obtained from the New York Heart Association by Dr. E. P. Maynard, Jr., which upon its completion should give the answer to this question.

Summary

Heart disease of even the mildest type, when complicated by pregnancy, is fraught with hazard more serious than is often realized and is never to be regarded lightly. Good care for these patients requires the closest cooperation between internist and obstetrician. They should be seen at frequent intervals by each. Careful history, physical examination aided by x-ray and electrocardiography, and functional classification will provide a basis for prognosis. Infection, toxemia, and excessive weight gain should be avoided and, if present, promptly treated during the prenatal period. The strain of the first stage of labor may be lessened by good analgesia; the second stage should be shortened as much as is commensurate with safety to mother and baby. Selection of anesthesia is of great importance in the delivery of these patients. The third stage of labor should be handled somewhat differently than in the normal woman. Only the oxytoxic fraction of Pituitrin should be used, and Ergotrate should be avoided in the elderly and arteriosclerotic. The puerperium should be characterized by a longer period of bed rest and hospitalization than is at present the vogue for normal women. Adequate help should be provided for the cardiac patient when she returns to her home with a newborn baby. Indications for prevention of pregnancy and therapeutic interruption are presented and methods for their accomplishment discussed.

80 Hanson Place

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Discussion

Edwin P. Maynard, Jr., M.D., *Brooklyn.*—Dr. Wallace's paper is so full of important and practical observations that it is difficult to choose which ones to discuss. As an internist I am especially concerned with the medical aspects of heart disease and pregnancy, particularly those that have to do with prognosis. I should like to elaborate on what Dr. Wallace said concerning the natural history of rheumatic heart disease. The course of this disease can be divided into four phases. The first begins with the first attack of rheumatic fever, usually when the patient is about eight years old. This is the period of invasion when there may be several recurrences of active infection. The second phase is one of quiescence when rheumatic fever is no longer active and when there are no cardiac symptoms. This period often coincides with adolescence and early adult life and the beginning of childbearing. The third phase is characterized by the appearance of cardiac symptoms, shortness of breath, palpitation, and fatigue. The fourth and final phase is ushered in by the appearance of heart failure. This may be repeated many times until death finally ensues. A thorough history, including the date of the first attack of rheumatic fever, and a careful physical examination will enable the physician to decide in which phase his patient belongs. Bunim has pointed out that this is a useful guide to prognosis because it tells us how far along in the course of her disease the patient is. For example, if she has had one or more episodes of heart failure, we know that she is in the fourth or final phase. We cannot say exactly how many years this will last, but we can be sure that the rheumatic heart disease is far advanced.

Further information of prognostic value can be obtained from the classification of functional capacity as outlined by the New York Heart Association. By and large the worse the classification, the worse the prognosis.

In discussing the question as to whether a patient should undertake pregnancy or, if pregnant, whether or not interruption should be performed, the risks involved should be thoroughly explained to both husband and wife so that they can come to an intelligent decision. If the patient has had previous heart failures or has great structural damage or poor functional capacity, the risk of death is increased three times. If auricular fibrillation is present, it is increased four times. It may be that the patient is willing to take the added risk for the sake of having a child or for religious reasons. If so, it is the physician's duty to accede and to do everything in his power to bring the case to a successful termination, even though his advice is not accepted.

When examining the patient, the physician must not be alarmed by the presence of a systolic murmur at the pulmonic area. Unless there are other confirmatory signs of organic heart disease this means nothing. Even a systolic murmur of moderate intensity at the apex has little significance unless there is a history of rheumatic fever or evidence of cardiac enlargement. In that case a diagnosis of rheumatic heart disease with mitral insufficiency should be made. These cases should have careful supervision. In our experience they all do well.

Dr. Wallace mentioned the dangers of too vigorous desalting and dehydration in the treatment of congestive heart failure. In this I agree, but I would not have you think that the proper use of the low sodium diet and mercurial diuretics is not extremely useful in treatment of circulatory failure in pregnancy. The danger signals are excessive weakness, a feeling of dryness, and leg cramps in a patient in whom all signs of fluid retention have disappeared. Liberal ingestion of water during dehydration therapy should be stressed.

I agree with Dr. Wallace that the indications for cesarean section in heart disease and pregnancy are mainly obstetric. An exception to this rule is the congenital malformation, coarctation of the aorta. In this condition rupture of the aorta during labor is a real hazard. However, I am a little skeptical about including in the group for cesarean section those patients in whom the condition of the cervix seems to indicate a long, hard labor; in so many cases the expectation proves wrong and the labor goes through without difficulty.

EXPECTATION OF LIFE

Among American wage earners and their families, expectation of life increased in 1949 to a new high of 67.7 years. This is based upon the experience among the millions of industrial policyholders of the Metropolitan Life Insurance Company.

The 1949 figure represents a gain of one half year over that for 1948 and of fully five years over the 1939 figure. Average length of life is now about double that recorded among the insured during the period of 1879–1889.

Both sexes shared in the increase in expectation of life between 1948 and 1949, with the gains slightly greater for females than males.

"Females have consistently done better than males in adding to length of life," the Metropolitan's statisticians report. "In consequence white girls at age five, for example, now have an advantage of 5.3 years in expectation of life over white males of the same age."

The improvement in longevity during recent decades has been substantially greater in the industrial population than in the population as a whole. In 1911–1912 the expectation of life at birth among the industrial policyholders was six and one-half years below that for the general population; at present, both are on a par.

PREGNANCY WITH TUBERCULOSIS—MANAGEMENT AND PROGNOSIS

JAMES M. BLAKE, M.D., Schenectady, New York

(From the Glenridge Sanatorium and the Department of Medicine, Ellis Hospital)

THE physician interested in the care and treatment of tuberculosis of the lungs and, therefore, of necessity concerned with the combined problem of pregnancy with tuberculosis has long been concerned about and has recognized the potential seriousness to the individual patient of this physiologic and pathologic combination. He does not today, however, necessarily concern himself with the management of this problem. He realizes that, if the patient receives adequate treatment, the prognosis is unaltered by this complication. Although he knows of the seriousness of this combination, the physician who is interested primarily in obstetrics, on the other hand, often either becomes unduly concerned or does not become concerned at all.

There have been a number of studies regarding this subject presented in the medical literature in recent years, and the conclusions from these studies are essentially the same, namely, that pregnancy and tuberculosis are not incompatible and tuberculosis need not preclude pregnancy.

Material

The conclusions arrived at in this discussion are based on our study of 100 cases of tuberculosis with pregnancy observed over a period of fifteen years. In this group of cases comprising all stages of tuberculosis with pregnancy, there were four deaths. One patient died of pulmonary embolism following elective cesarean section. Two patients died of untreated progressive tuberculosis. The fourth death was due to progressive tuberculosis following interruption of pregnancy at six weeks.

There were five patients in whom the diagnosis of active tuberculosis was made reasonably early in the pregnancy but who did not have treatment for the tuberculosis. In these instances the disease progressed, and all have been treated subsequently. The disease has been arrested in two, and three are under treatment at present.

In those with active tuberculosis diagnosed and treated early there was no recognizable change in the course of the tuberculosis that would not have been expected in the nonpregnant individual.

In those with inactive tuberculosis we have been fortunate in not having any instance of reactivation of the disease.

Four patients were delivered by elective cesarean section. There is no evidence in these instances to indicate that delivery by this method influenced the tuberculosis either favorably or unfavorably. Barone and his coworkers in Pittsburgh in their survey of tuberculosis in pregnancy found a gross mortality rate of 33.8 per cent and a corrected final mortality rate of 30.6 per cent.[1] The mortality rate for patients who delivered spontaneously was 19.2 per cent and for those delivered by cesarean section 36.3 per cent. Finally, for the patients in whom pregnancy was terminated in the first trimester of pregnancy the mortality rate was 38.5 per cent.

Certain established facts in relation to tuberculosis in pregnancy seem quite definite:

1. Early diagnosis and adequate therapy primarily determine the prognosis of tuberculosis with pregnancy.
2. Pregnancy does not necessarily have a deleterious effect upon tuberculosis, either active or inactive.
3. Tuberculosis with pregnancy is not an indication for the interruption of pregnancy.
4. Tuberculosis with pregnancy is not necessarily an indication for cesarean section.
5. A normal child can be expected from a woman with either active or inactive tuberculosis.
6. X-ray examination of the chest should be a part of the routine obstetric examination of every pregnant woman.

Even though the death rate in tuberculosis has continued to decline over the period of years, tuberculosis of the lungs continues to have a high incidence in young females. Tuberculosis complicated by pregnancy makes for a truly significant problem. This problem and its management has varied over the period of years from the extreme in ancient days, "pregnancy is the best cure for consumption," to the equally extreme position of therapeutic abortion in all pregnant females with tuberculosis.[2,3] Today, certainly, no well-informed physician believes either of these theories.

Some authors do believe that pregnancy influences the course of tuberculosis adversely, re-

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sulting in frequent exacerbations of the disease. Others, on the other hand, believe that pregnancy does not influence the course of tuberculosis and that the prognosis and outcome are influenced chiefly by the nature of the disease and the institution of adequate therapy.[4]

Our observation in this series of patients tends to confirm the latter thought. There seem to be definite indications that exacerbation and adverse influence are highly probable when early, adequate therapy is not carried out.

It is also our belief, along with others, that the satisfactory results being obtained today with the management of tuberculosis with pregnancy are being achieved by a closer relationship between the obstetrician and the chest physician and with the use of more effective therapeutic and preventive measures.[5,6]

Prenatal Examination

The first step in the management of pregnancy with tuberculosis obviously rests with the obstetrician. If tuberculosis with pregnancy is to be controlled, as it can be, if we are to avoid those adverse results from progressive tuberculosis in the postpartum period, if we are to prevent tuberculosis in the newborn infant, then a considerable degree of responsibility must become that of the obstetrician and of the subsequent cooperation between the obstetrician and the tuberculosis physician.

The primary step in the management of tuberculosis with pregnancy, therefore, is a satisfactory chest x-ray examination of every pregnant woman. This must be a routine procedure during the first trimester of pregnancy. It is now becoming more and more common practice in hospitals in the State of New York as well as throughout the country to chest x-ray routinely all individuals admitted to the hospital for treatment. In addition, essentially all communities in New York State and many other communities throughout the country have x-ray facilities available for chest x-ray examination, irrespective of the individual's ability to pay. The tuberculosis control program in New York State calls for x-ray examination of every resident of the State. If we are to control tuberculosis, obviously we must attack it from all fronts. Tuberculosis in the pregnant woman is one of these fronts where it can be most easily attacked, and it behooves every practicing obstetrician to avail himself of the facilities in his community to control tuberculosis in this particular group of individuals.

In an attempt to carry out this phase of tuberculosis control in our community, the Ellis Hospital in Schenectady some three years ago instituted a routine chest x-ray admission program. In addition, in cooperation with the Health Department and the Obstetric Department of the Hospital there has been established a routine prenatal x-ray program whereby any physician may refer a pregnant woman for x-ray examination during the prenatal period.

It might be pointed out here that as a part of the general community program there also is a second community survey clinic in which individuals who are to be delivered elsewhere than in the Ellis Hospital may have chest x-ray examination.

Results

It is of interest to observe that during 1949 in the Ellis Hospital 1,760 prenatal x-ray examinations were made in the chest clinic. Of this group, 16 cases of tuberculosis were discovered. Six of these were definitely inactive tuberculosis requiring little or no immediate observation and treatment. Ten cases were suspicious of active tuberculosis requiring close supervision or immediate treatment. Two of these patients required immediate hospitalization. It is to be observed also that in this group there were, in addition, seven patients with obvious heart disease and 16 patients with miscellaneous pathology of the lungs, including one case of Hodgkin's disease. It is our belief and, I think, is also the belief of the obstetricians who are cooperating that this prenatal x-ray program is a very satisfactory adjunct to the obstetric and tuberculosis care in our community. We feel reasonably sure that by early diagnosis and adequate observation and treatment we have prevented progressive tuberculosis of the lungs in a number of instances. We can wholeheartedly recommend the establishment of this type of prenatal care where it does not now exist.

The proper approach to the problem, therefore, seems to be the earliest possible diagnosis of disease in all pregnant women. This cannot be accomplished by routine physical examination as it is unfortunately practiced by too many. It is necessary for us as physicians to recognize, as well as for us to teach medical students, the limitations as well as the advantages of physical examination of the chest. We have accepted the Wassermann test for syphilis as routine in all prenatal clinics. It has been shown in groups studied that active tuberculosis is more frequently found than is syphilis.[7,8] With the facilities available throughout the State of New York, the incidence and the opportunity to prevent, control, and treat tuberculosis with pregnancy would seem to be sufficient to establish x-ray examination of the chest as a must in all pregnant women.

Inactive Tuberculosis

The specific management of tuberculosis with pregnancy poses two distinct problems: first, the conservative management on the part of the obstetrician and, second, diligent, sound therapy on the part of the physician. There should be a close cooperation between the obstetrician and the physician. The actual management we divide into two phases: first, the care of the patient with inactive tuberculosis with pregnancy and, second, the care of the patient with active tuberculosis. These are two distinct problems and must be approached somewhat differently.

The problem of inactive tuberculosis with pregnancy is primarily one of medical observation plus the observance of a few simple rules associated with tuberculosis therapy. In the first place, there is no contraindication for the patient with inactive tuberculosis to be married, live a normal life, have children, and care for them. The pregnancy is treated in the same manner as in the nontuberculous woman. From the point of view of tuberculosis it is advisable that the patient secure some additional rest during the pregnancy and most important for a period of about six months following. We usually suggest two-hour rest periods in the afternoon and reasonably early retirement.

Delivery may be normal, with the aid of low forceps as indicated. The mother should not be permitted to nurse the baby, first, because of the remote chance of transferring infection and, second, because of the ill effect of lactation as regards tuberculosis. It must be remembered that here as in all phases of medicine the application of therapy depends upon a careful evaluation of each case on an individual basis.

Active Tuberculosis

When active tuberculosis is diagnosed after pregnancy, the patient should, in general, be treated as if no pregnancy existed, the primary difference being the time element involved, inasmuch as it is desirable to have the disease as well under control as possible at the time of delivery. Hospitalization in a tuberculosis hospital is usually indicated. Oftentimes bed rest alone is sufficient, but frequently during the course of the disease supplementary therapy is necessary. Therapeutic pneumothorax, either unilateral or bilateral, pneumonolysis, phrenic nerve interruption may all be done with safety during pregnancy. We have not found major surgery necessary with pregnancy, although we have followed delivery with thoracoplasty operation, both unilateral and bilateral collapse.

From our observations in this group of patients the diagnosis of active tuberculosis in the pregnant female does not mean interruption of pregnancy. It simply means the application of certain proved principles in the treatment of active tuberculosis with subsequent normal delivery of a normal child with no greater risk than in a nontuberculous woman. In general, this management should not present any special problems.

The arrangements for care should be well established and of such type as to meet any possible emergency. The delivery should be normal with perhaps low forceps and/or episiotomy if indicated. Cesarean section may be utilized if there is an obstetric indication present for such or occasionally desirable in the advanced case of tuberculosis. Ether anesthesia should generally be avoided, but all other types of anesthesia seem satisfactory. The child should be immediately separated from the mother, thus eliminating the possibility of infection. Nursing should never be permitted in either active or inactive tuberculosis.

It is now a well-established fact that, even though there may be a remote possibility of the transfer of infection by way of the placenta from the mother to the fetus, such is indeed rare and need not be considered a serious problem in the management of pregnancy with tuberculosis. It can be expected that a live child will ensue and that the child will be normal in all respects including a negative tuberculin reaction.

Streptomycin

Since the advent of streptomycin we are now in an even better position to control active tuberculosis complicating pregnancy. We have seen no ill effects from its use in four cases of tuberculosis with pregnancy. In each instance the drug was indicated and used as it might have been in the nonpregnant woman. The response was essentially the same, and in no instance have we noted any ill effect in the children. All children were normal and tuberculin negative.

Control Measures

It seems to be well established from our study, as well as from those of others, that pregnancy is compatible with tuberculosis and that with inactive disease one need not be too concerned if simple rules are followed. When pregnancy occurs with active tuberculosis, it can be managed safely with a healthy child in the average instance. We must not, however, regard such current impressions too lightly to the extent that pregnancy should be permitted at any time during the course of tuberculosis.

It is desirable that pregnancy should be advised against in a woman with tuberculosis until the disease has been arrested for two years. Such waiting period provides an opportunity to determine the stability of the disease with increasing burden of normal living and makes for a better prognosis.

Successive pregnancies with approximately two- to three-year intervals would seem satisfactory, although there is some evidence to suggest a greater chance of reactivation and progressive disease after three or more pregnancies.[9]

BCG Vaccination

A discussion of tuberculosis associated with pregnancy would not be complete at this time unless some reference was made to the vaccination of the newborn child using BCG vaccine. The use of this vaccine seems to be now well beyond the so-called experimental phase, and the advantages and the results which can be expected from it seem to be established. It is reasonable to assume that the time is drawing near when routine vaccination for an ever-increasing number of newborn children and the childhood population will be done. Although our experience has been too limited for definite conclusions, it is our feeling that BCG vaccination is definitely indicated in children of tuberculous mothers, particularly where there is any chance of subsequent infection.

The successful management of pregnancy and tuberculosis means complete cooperation between the chest physician and the obstetrician in the care of these two distinct problems—shall we say above and below the diaphragm. With such, the results of a living mother and a healthy child can be most gratifying.

Summary

In reviewing a series of 100 cases of pregnancy and tuberculosis observed over a period of fifteen years, it is concluded that pregnancy and tuberculosis are not incompatible and that the pregnant woman with inactive disease presents a comparatively minor problem calling for medical observation, whereas the woman with active tuberculosis complicated by pregnancy needs more specific therapy directed toward the tuberculosis. A normal child can be expected, and the tuberculosis in the mother can also be expected to continue its normal course. The problem of prenatal x-ray is discussed with strong indications for its routine use in the obstetric examination of a pregnant woman. BCG vaccination of the newborn infant is discussed.

Conclusions

1. Early diagnosis and adequate therapy primarily determine the prognosis in tuberculosis complicated by pregnancy.
2. Pregnancy does not necessarily have a deleterious effect upon tuberculosis of the lungs, either active or inactive.
3. Tuberculosis in pregnancy is not an indication for the interruption of pregnancy.
4. Tuberculosis in pregnancy is not an indication necessarily for cesarean section.
5. A normal child can be expected from a pregnant woman with either active or inactive tuberculosis.
6. Routine x-ray examination of the chest should be a *must* as a part of the obstetric examination of every pregnant woman.

GLENRIDGE ROAD

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Discussion

William G. Childress, M.D., *White Plains.*—Dr. Blake is to be congratulated upon the clarity and completeness with which he has covered this important subject. He has emphasized the fact that early diagnosis of tuberculosis is of prime importance and that pregnancy and tuberculosis are not necessarily incompatible if the diagnosis of tuberculosis is made in time and if the disease is properly treated and the pregnancy properly managed.

It is perhaps significant that, in five cases where the diagnosis of tuberculosis was made reasonably early in the pregnancy and not treated, all developed progressive disease. Whether progression was influenced by the pregnancy seems unanswerable at this time. However, in those with active tuberculosis diagnosed and treated early, no recognizable change was noted in the course of the tuberculosis that would not have been expected in the nonpregnant individual. This implies, of course, that tuberculosis during pregnancy tends to follow the same pattern that it does when uncomplicated by pregnancy if treatment and diagnosis are properly carried out.

In the literature and textbooks on tuberculosis it has been generally held that pregnancy per se endangers the trend of tuberculosis, and the opinion is held by many, perhaps with reason, that tuberculosis is more unstable when complicated by pregnancy. On the other hand, claims have been made that tuberculosis progresses more favorably during uncomplicated pregnancy than at any other time due to improved nutrition and diminished diaphragmatic function resulting from increasing intra-abdominal pressure and restricted activity imposed upon the patient during pregnancy. Supporting the arguments advanced for instability have been the drain on the mother's physical resources following delivery, especially if nursing the infant, disturbed rest due to demands of the infant, and the ill effects resulting from increased intrathoracic and intrapulmonary pressures during delivery. Others hold that pregnancy results in a change of the permeability of the cell membrane, which in turn favors tuberculosis extension or spread.

None of these claims has been wholly proved or disproved. Some observers have held that pregnancy affects only certain types of disease, such as pneumonic, caseous-pneumonic, or exudative. To one thing we will all agree—that it is not uncommon to find active tuberculosis in pregnant women and that poorly managed pregnancy and poorly treated disease may unfavorably influence the tuberculosis. Therefore, it would seem wise to avoid the extremes in applying rules of management and treatment of the coexisting conditions, as brought out by Dr. Blake.

One of the most vexing problems in dealing with pregnancy and active tuberculosis is that of interference with the normal course of pregnancy by interruption. There seems a definite trend based on sound experience, especially where proper treatment and management can be carried out—preferably in the hospital—to allow uncomplicated pregnancy to continue, especially if it has gone beyond the first trimester. There is no reason to suspect unalterable complications in either condition. For instance, toxemia in pregnancy with vomiting and malnutrition may well influence a course of tuberculosis unfavorably, and the combined conditions may constitute indications for interruption. Also, such complications as generalized miliary tuberculosis and meningitis, as well as hemorrhage that may not be controlled by simple procedures, may constitute indications for interruption. For tuberculosis that is amenable to treatment by any conventional method, regardless of the stage of disease, there is no acceptable reason for interruption. As Dr. Blake has mentioned, unless there are other reasons indicating the need for cesarean section, patients may be allowed to deliver normally.

With reference to streptomycin, it would seem that a number of years must elapse before final opinion as to the effects of the drug on the offspring can be conclusive. Streptomycin was not in general use before 1947. Therefore, opinion regarding its final effect must be witheld until such children can be observed for a longer period of time—perhaps years.

Our experience with tuberculosis and pregnancy during the past five years at Grasslands may be briefly summarized as follows: There were 24 patients with coexisting active tuberculosis and pregnancy treated on the tuberculosis service. Twelve had far-advanced disease; six had moderately advanced disease; five had minimal disease, and one had tuberculous meningitis. Sixteen were allowed to go to term (nine of these primipara, seven multipara). Two resulted in breech presentation, one in low forceps delivery, and 13 had spontaneous deliveries.

One patient died in the sixth month of pregnancy undelivered. Of the 17 in the uninterrupted group, there were three deaths from progressive tuberculosis; two are now curing, and 12 have arrested tuberculosis. All of these cured for a period of six to twelve months following delivery. Three of the group reactivated after reaching a stage of quiescence or arrest, and in no instance was the reactivation accompanied by pregnancy.

Pregnancy was interrupted in seven of the 24 for the following reasons: One had meningitis and following two courses of streptomycin is now living and well. Three had moderately advanced disease. All are living and well, the average length of cure being more than six months. Three had far-advanced disease. One is well, cured for eight months; one is apparently arrested after two years cured, and one is ambulant after six months cured.

These figures are, of course, meaningless in this small series except that, whether interrupted or not, patients did well for the most part with the proper management of the pregnancy and the proper treatment of the tuberculosis. There were no deaths in the interrupted group of seven, and two are curing; three deaths occurred in the uninterrupted group, and, in addition two of this group are now curing.

LAMENT

There's nothing less exact, suh,
  Than a faulty Rh factor,
'Less it's urine dumped discreetly in a sink,
Or a complement-fixation
Done entirely by dictation,
Or a liver-flocculation done with little drops of ink.

It happens every time, suh,
There is water in my Giemsa,
And my hemoglobinometer has a big fat chink:
My Benedict solution
Has a spectral evolution
Which registers, consistently, a vivid off-pink.

It really is a crime, suh,
With no reason or no rhyme, suh,
For a patient asking neighbors what they think.
When you diagnose "rigidity"
And her friend says, "What stupidity,"
I could twist her neck into an akinetic kink.

But these are but distractions,
Next that dame with marked contractions,
Coming regularly in fifteen-minute links,
Who claims, "It's from the tractor,"
And she's a true "virgo intacta":
She's one reason I seek solace in those alcoholic drinks.

—*Joseph H. Werk, M.D., Port Jefferson, New York*

THE ROLE OF A STERILIZING SOLUTION IN THE CAUDA EQUINA SYNDROME FOLLOWING SPINAL ANESTHESIA

Paul W. Searles, M.D., and William K. Nowill, M.D., Buffalo, New York

(From the Millard Fillmore Hospital, Research Institute, and the Department of Anesthesia, University of Buffalo School of Medicine)

ONE of the complications of spinal anesthesia is the cauda equina syndrome. This is characterized by the continuance of anesthesia of the lower extremities beyond the usual time for return of normal function. Sensory and motor paralysis of the extremities and lack of control of urinary bladder and bowel sphincters occur. Occasionally, there is a period of return of function for hours or months, either partial or complete, following the administration of the spinal anesthetic drug. Occasionally the involvement is only partial, producing, for example, a unilateral foot drop or perianal anesthesia. However, frequently the involvement is total, permanent, and produces severe disability. The incidence of this complication varies with different authors. Thorsen reported 11 severe cases in a total of 2,493 spinal anesthetics, or an approximate incidence of 1 : 200.[1] Schildt estimates the incidence as 1 : 10,000.[2] Nicholson and Eversole reported three cases of equina syndrome in 21,000 patients, but two of these had spinal fluid block due to metastatic carcinoma.[3]

In the Buffalo, New York, area three cases of cauda equina syndrome in the past five years have been brought to our attention. Two of these were thought to be due to contamination of the spinal anesthetic ampules with Bard-Parker solution.

The exact cause of the cauda equina syndrome in each case is difficult to assess, but the following factors have been incriminated:

1. *Specific toxic effect of the spinal anesthetic agent:* All agents including procaine have been incriminated. Lundy was able to show degenerative changes in the nervous structure of dogs after exposure to 5 cc. of 20 per cent concentrations of procaine but not with 5 cc. of 17.5 per cent; 2.5 cc. of 50 per cent procaine also produced no permanent damage.[4]

Ferguson reports 14 cases of which 13 were associated with "heavy durocaine" (procaine, gliadin, glycerine in 15 per cent ethyl alcohol) spinal anesthesia.[5]

2. *Direct trauma:* This is largely eliminated by the thousands of diagnostic lumbar punctures without mishap, although a traumatic spinal puncture associated with pain down one leg has been reported to produce localized nerve palsies.

3. *Inflammatory reaction:* This factor is largely eliminated by the rapid onset of the paralysis but may be incriminated in a case of delayed paralysis, especially if associated with a spinal fluid pleocytosis and evidence of arachnoiditis on exploratory laminectomy. Davis, using dogs, showed that there is a temporary, mild, inflammatory reaction of the arachnoid and a Wallerian degeneration in the spinal cord during the first week after the spinal anesthesia.[6] This reaction was seen to disappear after ninety days.

4. *Idiosyncrasy to drug:* There has been little, if any, evidence of an allergic reaction to support such a hypothesis.

5. *Neurologic disease of spinal cord:* Many cases of cauda equina syndrome have been shown to be due to spinal fluid block due to primary or metastatic carcinoma of the cord. The apparent lack of dilution of the spinal anesthetic solution seems to allow for prolonged contact of the cauda equina with high concentrations of the drug. Other diseases implicated in precipitating this disorder are pernicious anemia with combined sclerosis, multiple sclerosis, tabes, general paresis, lead intoxication, and viral diseases, such as chickenpox. Infantile paralysis, even though known to have occurred many years before, also appears to be a contraindication to spinal anesthesia. Previous spinal meningitis may have produced an adhesive arachnoiditis preventing dispersion of the anesthetic drug and is, therefore, also a contraindication.

6. *Contamination of spinal anesthetic apparatus and drugs with antiseptic solutions:* This is mentioned by many authors as a possibility, and most of these authors recommend that corrosive solutions not be used to sterilize ampules of anesthetic drugs. Most authors also recommend coloring the sterilizing solution with a dye such as methylene blue in order to detect any contamination of the ampule with the sterilizing solution. We became interested in this problem when we could find very little in the literature concerning the relative toxicity of various sterilizing solutions to spinal cord structures. MacDonald and Watkins injected 0.5 cc. of a mixture of glycerine and 15 per cent alcohol into the sixth and seventh lumbar interspaces of cats, producing no gross damage to

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TABLE I.—Relative Toxicity of Various Antiseptic Solutions to the Spinal Cord of Rabbits and Dogs

Solution	Dilution Producing — No Motor Paralysis —		Dilution Producing —Permanent Paralysis—	
	Rabbit	Dog	Rabbit	Dog
70% alcohol	2:100	2 to 3:100	3:100	3 to 4:100
Benzalkonium chloride (Zepharin)	1:2,000	1:1,000	1:1,000	None
Phenol	10%	10%	None	None
Chlorophenyl	1 to 2:100	2:100	2 to 3:100	3 to 4:100
Bard-Parker solution	1:100	2:100	2:100	3:100
Argyrol	0.1%	1%	1%	1 to 2%
Mercuric potassium iodide 1:1,000	...	.	1:10	1:10
Mercurochrome	...	2%	1%	3%

the spinal cord.[7] Dogliotti was able to produce only hypoesthesia and temporary motor paralysis by the intrathecal injection of absolute alcohol in dogs.[8] Lundy found that coloring his solutions of procaine with trypan blue or methylene blue seemed to increase the toxicity of the solution.[4] Our research is concerned with, first, the possible contamination of spinal anesthetic apparatus and drugs with antiseptic solutions and, second, the determination of the degree of safety afforded by coloring the antiseptic solutions with dyes.

Procedure

We decided to study the effect of various dilutions of commonly used antiseptic solutions, such as ethyl alcohol, aqueous benzalkonium chloride (Zepharin), phenol, chlorophenyl (sodium salt of bis-(2-hydroxy 3, 5, 6, trichlorophenyl, methene 1 per cent, isopropanol 8.75 per cent), Bard-Parker solution (methanol 2.75, chlorophenyl 0.5 per cent, isopropanol 65.26 per cent, formaldehyde 8, water 23.49), argyrol, mercurochrome, and a mixture of mercuric iodide and potassium iodide, on the spinal cord of rabbits and dogs.

The original technic used was to introduce a needle through the fifth to seventh lumbar interspaces into the subdural space. However, it was felt that trauma to the spinal cord or cauda equina structure might occur. At times, it was found technically impossible to introduce the needle correctly into the subdural space. Pathologic studies showed evidence of direct trauma to the cord in some cases. In others, by the addition of India ink to the solution, it was found that the test solution was being placed into the cord parenchyma. In dogs and rabbits the dural membrane closely invests the spinal cord. It was felt that this technic was faulty. Therefore, the technic was modified as follows: Under intravenous Nembutal anesthesia, the spinal dura was exposed at the seventh lumbar interspace.* A 19-gauge polyethylene catheter was then introduced into the subdural space until the tip lay in the lower thoracic region. Twenty-four hours later, with the animal showing no adverse effects of the procedure, 2 cc. of the test solution was injected through the catheter.

Interpretation of Data

It was found that three parts per 100 of 70 per cent ethyl alcohol consistently produced motor paralysis of the lower extremities in rabbits and four parts per 100 in dogs (Table I). Benzalkonium chloride (Zepharin) in dilutions of 1 : 1,000 produced paralysis in rabbits but not in dogs. Benzalkonium chloride (Zepharin) produced no apparent damage in concentrations of 1 : 100,000 to 1 : 2,000 in rabbits. Phenol in concentrations of 1 to 10 per cent produced no apparent adverse effect in either species of animal. Chlorophenyl, Bard-Parker solution, and argyrol had a toxicity similar to alcohol. The mercuric and potassium iodide preparation is produced in tablet form. The latter, when properly dissolved, is used in a 1 : 1,000 dilution for cold sterilization. Dilutions of 1 : 10 of this solution (1 : 10,000 concentration) produced immediate generalized convulsions and death of the animal in both species in three to five minutes. Mercurochrome in concentrations as low as 1 per cent produced convulsions and death in rabbits. In dogs, a concentration of 2 per cent mercurochrome appeared to produce no permanent cord damage but did produce mild muscle tremors; 3 per cent produced permanent cauda equina syndrome.

We were interested, also, in determining how much protection was given by coloring the sterilizing solution with dyes such as methylene blue. Various dilutions ranging from 1 : 10 to 1 : 100,000 were made of methylene blue, tincture Zepharin, and merthiolate. Dilutions of 1 : 1,000 of methylene blue, of 1 : 100 of tincture Zepharin, and 1 : 10 of merthiolate were found to give a barely discernible color. Toxicity studies were not made of various coloring agents such as methylene blue.

Toxicity

Preliminary studies concerning the toxicity of

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* This surgical procedure was performed with the cooperation of Dr. Raymond G. Bondi, surgical research resident, Millard Fillmore Hospital.

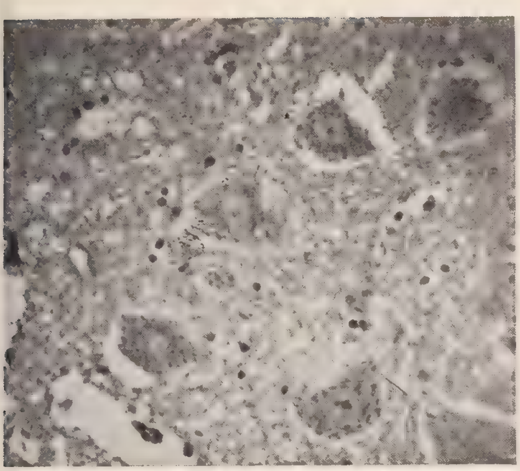

FIG. 1. Essentially normal neural elements of the spinal cord. (Hematoxylin and eosin stain.)

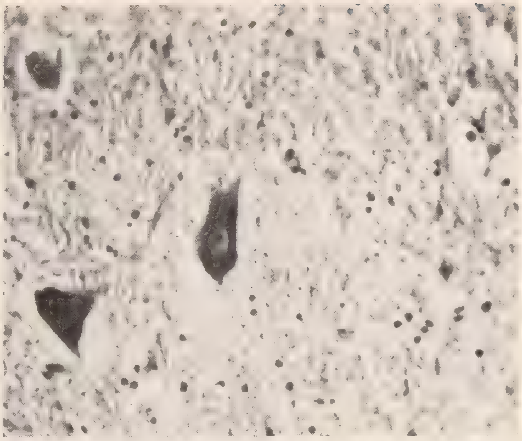

FIG. 2. Pyknosis of nerve cells of spinal cord four days after injection of 3:100 dilution of 70 per cent ethyl alcohol. (Cresyl violet stain, high power magnification.)

combinations of the above antiseptics and various spinal anesthetic agents have not shown any increase in toxicity. However, this work is, as yet, incompletely studied.

Although this study has shown benzalkonium chloride and phenol to be the least toxic of the antiseptic solutions studied, we feel that heat sterilization of spinal anesthetic ampules and equipment is preferable to chemical sterilization.

It should be noted that contamination of an ampule of spinal anesthetic drug of three to four parts per 100 would constitute only 0.06 to 0.08 of antiseptic solution in a 2-cc. ampule. This is obviously a very minute amount of fluid. Similarly, contamination of spinal needles and syringes with antiseptic solutions should be vigorously avoided. Coloring of the antiseptic solution with methylene blue or similar dyes probably gives inadequate protection and a false sense of security and may even increase the toxicity of the spinal anesthetic solution if inadvertently used.

Conclusions as to the toxicity of these antiseptic solutions to the human spinal cord cannot be drawn from this experiment.

Pathology

The pathologic examination of the spinal cords of these animals with the cauda equina syndrome was essentially that seen in humans, i.e., a mild meningeal inflammatory reaction and a degeneration and loss of nerve cells and fiber tracts of the spinal cord. Animals sacrificed immediately after injection of the test solution showed little change in cord structures (Fig. 1). After three days, the cells of the anterior and posterior horns showed pyknosis of nuclei and loss of Nissl substance (Fig. 2). Somewhat later, these cells became just "smudge" or "ghost cells," and their number was decreased. At this time there was only a mild inflammatory reaction in the meninges. At the end of one to two months, there was evidence of chronic adhesive arachnoiditis and the occasional formation of granulomas in the subdural space (Fig. 3). At times the destruction of the cord was so great as to cause liquefaction so that the microscopic examination of the cord showed nearly complete loss of neural structures.

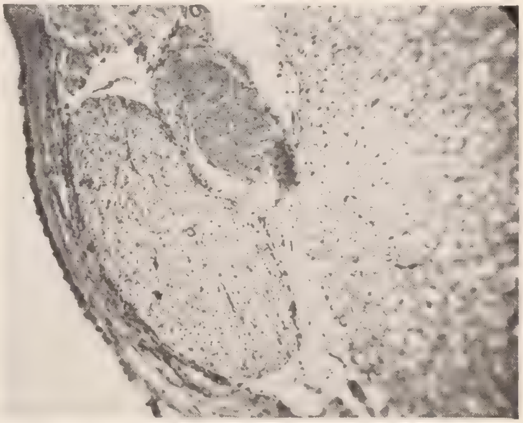

FIG. 3. Thickened meninges containing chronic inflammatory cells. A granulomatous formation is present between a nerve root and spinal cord substance. (Hematoxylin and eosin stain, low power magnification).

Summary

1. The etiology and incidence of postspinal cauda equina syndrome have been discussed.

2. The toxicity to the spinal cord of rabbits and dogs of a variety of antiseptic solutions has been studied.

3. Benzalkonium chloride (Zepharin) and phenol were found to have least harmful effect on the spinal cord of dogs and rabbits. Concentrations of 1 : 2,000 of Zepharin appeared to have no destructive effect on the spinal cords of rabbits, while dogs were unaffected by concentrations of 1:1,000. Phenol, in concentrations up to 10 per cent, appeared to have no adverse effect on the spinal cords of either animal. Concentrations of two to four parts per 100 of 70 per cent alcohol, chlorophenyl, Bard-Parker solution, argyrol, mercuric potassium iodide, and mercurochrome in our experiments produced definite adverse effects on the spinal cord of rabbits and dogs.

We are indebted to Dr. Anthony Postoloff for the pathologic examinations. In addition, his willingness to help with the various problems concerned in this study was greatly appreciated.

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Discussion

Samuel I. Guest, M.D., *Buffalo* (*By invitation*).—The authors have attempted to show the relationship of the cauda equina syndrome to the contamination of the ampules by various antiseptic solutions. Their supposition is logical, and so is their experimental approach to the subject. Although the exact etiology and pathogenesis of this syndrome are still subject to conflicting opinions, there is, however, no doubt in my mind that some of the neurologic complications following spinal anesthesia are due to this contamination. In the past four years I have actually seen six ampules that were grossly contaminated by colored antiseptic solution, although no obvious break in the ampule could be seen with the naked eye. Steinberg cites four similar personal experiences.[a]

The authors have very well shown that antiseptics which we ordinarily consider extremely mild on the skin and mucous membranes and even on open wounds are injurious when placed on nerve tissue. On the other hand, agents usually accepted as strong antiseptics, such as 10 per cent phenol, are well tolerated when introduced into the spinal canal. In this connection Goodman and Gilman have noted that 5 per cent solution of phenol on the unabraded epithelial surface produces a feeling of warmth and tingling and eventually complete local anesthesia, whereas on exposed tissue or mucous membrane it may cause extensive tissue necrosis.[b] Could this perhaps be due to the fact that, while usual topical antiseptics are used in an acid medium such as is found on the skin, here they were used in neutral or alkaline spinal fluid? Pulaski in his *Collective Review on Antiseptics* states that mercurochrome is a quite effective disinfectant in an acid medium and ineffective as an antiseptic in a neutral or alkaline medium.

A point which deserves further discussion is that Dogliotti was able to produce only hypoesthesia and temporary motor paralysis by the intrathecal injection of absolute alcohol in dogs, whereas the authors found that four parts per 100 of 70 per cent ethyl alcohol consistently produced motor paralysis in the same type of experimental animal.

The authors, in determining how much protection was given by coloring the sterilizing solution with dyes, found a barely discernible color was produced even by strong dilutions. Because of the small margin of safety between solutions grossly contaminated with colored antiseptic and those contaminated with practically imperceptible amounts, but nevertheless toxic, a definite danger is present when this type of sterilization is used. Therefore, it seems logical and important that heat sterilization be used routinely, especially when one considers the seriousness and finality of the complications listed by the authors.

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[a] Steinberg, R.: Anesthesiology **2:** 257 (Mar.) 1950.

[b] Goodman, L., and Gelman, A.: The Pharmacological Basis of Therapeutics, New York, Macmillan Co., 1941, p. 48, 828.

CENSUS OF PUBLIC HEALTH NURSES

According to a census made January 1, 1950, by the Public Health Service, 25,081 public health nurses were in public health work in 1950, which was 1,708 more than the number reported in 1949. The three states reporting the largest number of nurses in public health work are New York (3,572), Pennsylvania (2,184), and California (2,118). Fifteen states had some type of full-time public health nursing service in every county and city. The 715 counties lacking public health nurses represent 23.2 per cent of all counties and are in sparsely populated areas in the majority of cases. The average population load per staff public health nurses throughout continental United States, the territories, and island possessions in 1950 was 6,769. This year 60 per cent of the 24,241 state and local public health nurses who reported on their qualifications had some academic preparation in public health nursing, and more than 20 per cent of all the nurses had one or more college degrees.

THE EFFECT OF EARLY AMBULATION ON THE RECURRENCE RATE OF McVAY HERNIOPLASTY

Frank Richard Cole, M.D., Flushing, New York

(From the Harlem Hospital)

WATSON and Iason describe the recurrences in indirect inguinal hernia as ranging from 5 to 10 per cent.[1,2] Direct hernia has a recurrence rate of from 10 to 20 per cent. This high recurrence rate and the fact that hernia occurs more frequently in hard-working individuals results in a major problem in industrial medicine. If, however, a method of dealing with this problem can be worked out, it would result in an important salvage of time lost, a decrease in hospital stay, and a boon to the industrial worker. Thus, this study was undertaken.

For the reason that they could be watched more adequately and because they were operated on by one surgeon with the same technic and idiosyncracies in pre- and postoperative care, private patients were observed. The study was to ascertain the value of the McVay type of repair and the early ambulation of patients having this type of operation.

The reconstruction is effected by suturing the transversalis fascia to Cooper's ligament, and, according to Brunkow, this "pulls the curtain to the base of the window."[3] Anderson states that, when the transversalis is attached to the Poupart's ligament, a trough is the result, since the normal insertion is to the iliopectineal ligament.[4] It must be mentioned that all of these repairs must be to the iliopectineal line and not to fascia overlying the great vessels. The latter prolongation of Cooper's fascia does not give the rigidity and fixation that the iliopectineal line does. Most of the time, the surgeon used the former tissues to avoid a difficult repair. We have used Burton's classification for those hernias that are suitable for the McVay repair which include the following: all femoral types of hernias, inadequacy of inguinal ligament, arborization of sac, laxity of the inguinal wall, widening of the interligamentous space, refractory hernias, and all direct hernias.[5] It must be mentioned that in infants the type of reconstruction that is preferable is high ligation of sac only.

With the McVay repair, we considered we had an ideal technic to use with early ambulation, especially since all these cases were done with unabsorbable suture of either silk or cotton.

Early ambulation is not new. Leithauser and Bergo reported 464 cases of major surgical procedures that were out of bed in twenty-four hours.[6] They reported 179 hernias that were done with silk with only one recurrence. Leithauser showed that prolonged recumbency reduces the vital capacity of the lungs because of reflex inhibition of the diaphragm following major procedures.[7] The erect patient gets better aeration and breathes deeper, and forced coughing rids the bronchioles of mucous plugs. Churchill and McNeill stated that the vital capacity following operation is reduced at times to 30 per cent of normal.[8] Cutler and Hoerr claimed that 4 per cent of patients having lower abdominal operations develop pulmonary complications.[9]

Other beneficial results are increased morale, increased feeling of well-being, less nursing care, and shorter hospitalization. The complications of phlebothrombosis resulting from pelvic stagnation with increased clotting and increased viscosity of the blood have been so well reviewed in surgical literature as to require no comment. From clinical work and from experimental evidence Newberger concluded that wound healing is increased in early ambulation which is the result of increased blood supply and improved lymphatic drainage, with a decrease in disuse atrophy.[10] However, there are certain contraindications to early ambulation which must be recognized, as Bell emphasizes, and which may be listed as follows: shock, bleeding, peritonitis, pneumonia, thyroid disease, cardiac failure, infected wounds, and debility.[11]

Kimbarovsky, cited by Ashkins, noted only one recurrence in 122 cases of hernia.[12] Blodgett and Beattie, analyzing 174 cases of hernia of all types, found that the recurrence rate was not increased by early ambulation.[13] In all of these cases cited by the authors I received the impression that the hernia repairs were not followed intensively postoperatively after hospital

TABLE I.—Data on 41 Cases of Hernia Treated with McVay Hernioplasty with Early Ambulation

Number of Patients	Average Age (Years)	Return to Work	Total Length of Follow-Up
1	10	. . .	3 years
1	22	4 weeks	9 months
4	20 to 30	3 to 4 weeks	2 1/2 years
5	30 to 40	4 weeks	1 year
12	30 to 40	3 weeks	1 1/2 years
11	40 to 50	2 to 4 weeks	1 to 2 years
4	50 to 60	4 weeks	10 months
4	60 to 70	4 weeks	18 to 24 months

discharge, but that their recurrences occurred during hospital stay.

We are presenting 41 cases of hernia which were done over a three-year period on our private services at Wickersham Hospital, New York City, and Horace Harding and Flushing Hospitals in Queens. These were of the inguinal or femoral variety only, and results are shown in Table I.

Out of 41 cases, 28 were direct hernias, and two were femoral. There were no complications or recurrences. In all of these cases the transversalis fascia and/or conjoint tendon were sutured to Cooper's ligament and then the external oblique to Poupart's ligament with the cord subcutaneous.

144-21 Sanford Avenue

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CONCERNING NEUROLOGIC COMPLICATIONS FOLLOWING SPINAL ANESTHESIA

A. M. Rabiner, M.D., Brooklyn, New York

(*From the Neurologic Service of Kings County Hospital*)

AN APPARENT increase in the incidence of neurologic sequelae of spinal anesthesia has stimulated this survey.

Case Reports

Multiple root pathology initiated (?) by needle at time of insertion for induction of spinal anesthesia with persistence of residual sensory and lower motor neutron symptomatology.

Case 1.—R. F., a sixty-three-year-old housewife, was examined on April 4, 1949. In June, 1948, spinal anesthesia had been administered for a gallbladder operation. There was no pain, but she stated that, as the needle was introduced, she saw her left leg "jump." Immediately after operation, she could not move the entire left lower extremity from the hip down. In the next ten months there was some improvement. She could not walk for some months. Examination revealed the cranial nerves and upper extremities negative. There was atrophy of the left thigh and calf muscles. The left knee and ankle jerks were not elicited. Dorsi and plantar flexion of the left foot were markedly impaired. No Babinski sign was noted. Below the eighth thoracic segments, only deep muscle sense was preserved. Sphincter functions were intact.

It was concluded that she had a left thoracolumbosacral radicular syndrome with no evidence of spinal cord involvement. She refused permission for spinal fluid study. Subsequent examination six weeks later revealed no change in her status.

Case 2.—F. M., a fifty-five-year-old housewife, was examined on December 11, 1947. On October 16, 1944, spinal anesthesia had been administered for a gallbladder operation. With introduction of the needle, she experienced sharp pain radiating from the left hip region down the thigh to the foot. She was then given a general anesthetic. On regaining full consciousness, there was pain in the left thigh and leg, and no movement of any part of this extremity was possible. These motor and sensory symptoms have persisted. Organic sphincter control has not been impaired. Examination revealed paralysis of the dorsiflexors with left foot drop; the left ankle jerk was absent, and all modalities of sensation were not perceived in the fourth and fifth lumbar segment innervation.

In Cases 1 and 2 onset of symptoms was acute and immediately related to the needle insertion for administration of the anesthetic. The involvement of several nerve roots suggests that their dysfunction resulted from hemorrhage, rather than direct injury by the needle.

Following caudal anesthesia for childbirth, acute development of sensory and motor impairment in both lower extremities ensued. The lower motor neutron form of paralysis, the presence of radicular and peripheral types of sensory impairment, and the absence of organic sphinchter symp-

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toms warranted the diagnosis of a radiculo-neuritis or neuropathy of virus, toxic, or chemical origin, rather than hemorrhage or direct trauma to the roots by the needle at the time of administration of the anesthetic.

Case 3.—G. S., a twenty-eight-year-old housewife, was examined on May 8, 1948. Eight weeks previously, she gave birth under caudal anesthesia. Immediately after delivery, she was numb from the hips down but had no pain. Later, when she attempted to get out of bed, she could not stand or walk. Five weeks later, normal sensation returned to the right thigh, but at times she had sharp pain radiating from the right hip to the spine and pain of the lower spine. Examination revealed the cranial nerves and upper extremities negative. There was marked weakness in both lower limbs with resulting gait impairment. The thigh and calf muscles were affected, as were also the dorsiflexors of both feet, more so on the left. All deep tendon reflexes were diminished but present. Pain, temperature, touch, vibration, and deep muscle senses were not perceived in the left lower extremity below the twelfth thoracic root segment. On the right side, however, these modalities of sensation were affected only distally below the knee. Although all sensory stimuli to the sacral segments in the left lower extremity were not felt, perception was preserved in the sacral saddle area bilaterally. She was given large doses of vitamins, and her physician reported on January 6, 1950, that she has made what he regards as a 90 per cent recovery.

Case 4.—B. H., a twenty-nine-year-old housewife, was examined on February 15, 1947. In September, 1946, she had her third cesarean section under spinal anesthesia. Immediately on return to her bed, she had pain across the lower back which persisted two or three days. In the next seven days, she was quite comfortable and was discharged from the hospital.

Two days later, however, the pain recurred and affected the entire back so that she could not walk unless "stooped forward." She was bedridden for several weeks, and the pain seemed to include the gluteal region and thighs bilaterally. For one month, she was relatively free of complaints; then the thighs and legs fatigued easily, and this increased in severity despite vitamin therapy. More recently, she cannot stand and at times falls without warning, and on occasion she cannot control the urinary flow. Examination revealed marked paraparesis, more so in the right lower limb with hyperreflexia of both lower limbs and sustained ankle clonus and bilateral Babinski signs. Below the third and fourth thoracic levels, all forms of sensation were impaired. It was evident that she had localized pathology of the thoracic segments of the spinal cord. She was subsequently studied on the neurologic service of Dr. I. S. Wechsler at Mount Sinai Hospital from June 24, 1947, to July 10, 1947. The clinical abstract revealed that spinal fluid examination showed 2 white blood cells, many red blood cells, negative Pandy test, and total protein of 33 mg. per cent. Blood serology was negative. Urine and blood count were normal. X-rays of the dorsal and lumbosacral spine were essentially normal. Pantopaque myelography revealed an almost complete obstruction to the downward flow of the cisternally injected pantopaque at the level of the third dorsal body. The margin at the obstructed site was irregular but absolutely constant. A few small droplets passed a few centimeters lower on the right side but could go no further. Subsequent follow-up examinations revealed little if any improvement.

Case 5.—J. S., age twenty-five, was examined on March 22, 1948. Three and a half months prior to examination, she had a cesarean section under spinal anesthesia and was delivered of a normal baby. Pain across the back occurred several weeks after leaving the hospital, although she vaguely recalled having some discomfort in the back when she began to walk. Two months after the operation, numbness in the legs developed and quickly spread up the thighs to the hips. Later, there occurred urgency on urination and some incontinence, and, more recently, she had at times no control of defecation.

Examination revealed motor power impairment in both lower extremities, with hyperactive tendon reflexes, impaired perception of pain, temperature, deep muscle sense, and vibration below the eighth dorsal vertebra, and a zone of hyperalgesia just above this. She was admitted to Kings County Hospital on March 23, 1948. On spinal tap, no cerebrospinal fluid was obtained. Exploratory laminectomy was performed on April 23, 1948.

Findings.—The dura appeared normal, as did the extradural fat. The arachnoid was greatly thickened and slightly adherent by slender threads to the undersurface of the dura. The arachnoid was adherent to the spinal cord opposite the sixth and seventh thoracic vertebrae, and just above and below this point the thickened arachnoid appeared bluish and translucent. These translucent areas were incised, allowing the contained spinal fluid to escape. The spinal cord was then seen to be about one half to two thirds its normal size, displaced to the left, and irregularly adherent to the thickened arachnoid.

Postoperative convalescence was uneventful, and in the succeeding months she received vitamins and physical therapy. When last examined on October 27, 1949, she revealed remarkable return of all motor and sensory function, and the neurologic status revealed no residual abnormal findings. She was again pregnant in the third month.

Procedure.—Through a midline incision the spinous processes of the fourth to eighth thoracic vertebrae and the lamina of the fifth to eighth vertebrae were exposed. The lamina were removed, exposing normal appearing extradural fat and dura. The dura was incised and retracted, exposing the thickened arachnoid. The arachnoid was incised as above and the exposed areas inspected. No attempt was made to separate the adhesions between the cord and arachnoid. The dura was closed with silk. The muscles were closed in layers with chromic catgut and the skin closed in layers with silk.

Case 6.—D. M. K., aged twenty-nine, was examined July 12, 1947. Eight weeks previously, she had been delivered by cesarean section under continuous spinal anesthesia supplemented with Pentothal. On awakening from the anesthesia, she had low back pain radiating into both sacroiliac regions, the buttocks, back of thighs, calves, and ankles. The pain was modified slightly by medication and was intermittent; some days were worse than others. On the ninth postpartum day, she was out of bed and developed excruciating throbbing pain in the lower spine with radiation down the thighs and up into the head. The pain disappeared when she assumed the recumbent position but became severe when she was upright. In the next few weeks, there was less pain, but she could not bend forward. Seven weeks postpartum, she squatted down to pick something up and fell to the right. She arose with extreme difficulty. The following day, both lower extremities felt weak, and in the succeeding days there ensued a feeling as though she were walking on cushions with awkwardness and unsteadiness in walking. At this examination, the only findings were ataxic gait.

She was re-examined July 24, 1947. She had developed numbness of the lower portions of the body below the umbilicus, and weakness and ataxia were so severe she used a cane as a support in walking. Examination revealed moderate weakness of both lower extremities but no atrophy. All tendon reflexes were obtained. The upper abdominal reflexes were barely elicited, but the lower abdominals were absent. There were bilateral Babinski, Rossollimo and Mendel Bechterew signs. Pain, temperature, and touch were impaired below the twelfth dorsal on the left and tenth dorsal vertebra on the right. Sensation in the sacral saddle area was, however, preserved. There was no definite zone of hyperalgesia above the level of impairment. However, she had areas of hyperalgesia in both lower extremities, and deep muscle sense was markedly impaired in the big toes of both feet. Vibratory sense was not perceived below the costal margins. Later, several attempts to perform lumbar puncture were unsuccessful. She refused to permit myelography. Despite vitamins in large doses and physical therapy, the subsequent course has been marked by little change in the neurologic status.

Comment

Cases 4, 5, and 6 seem similar in the clinicopathologic picture. Following laminectomy which revealed adhesive arachnoiditis, Case 5 improved considerably. Clinically, the evidences of spinal cord and root involvement were on a par with those present in Cases 4 and 6. In all three cases no spinal fluid could be obtained on lumbar puncture, and they presented definite symptoms and signs of cord involvement. It seems obvious that the cord pathology was secondary to strangulation by the adhesive arachnoiditis.

Through the years, I have personally observed numerous patients who, following spinal anesthesia, have developed neurologic complications. There have been instances of definite cerebral involvement, viz., transient increased or impaired cerebral functioning, irritability, sluggish cerebration, apathy, indifference, and irrational behavior. I do not recall any instances of permanent residuals in this group. Palsies of one or several cranial nerves have not been frequent but do occur. Headaches, dizziness, and visual impairment are not infrequent. A few instances of metabolic, vegetative, or endocrinologic disorders have occurred, such as menstrual irregularity, increase or loss of weight, and one patient developed excessive hirsutism. Some patients exhibit evidences of spinal cord and nerve root disease. A review of the literature reveals numerous reports of similar experiences. Regarding these, opinions have varied, and explanations of the basis for these complications have been controversial.

Soon after the introduction of spinal anesthesia, with the use of earlier anesthetics such as cocaine and stovaine, and even after the introduction of newer anesthetic substances, there were reports of injuries to the central nervous system. Orth stated that "persisting headaches, paraplegia, and medullary lesions which are attributed to spinal anesthesia are unknown to us but may be due to syphilis or to faulty technic."[1] Babcock doubted the existence of medullary paralysis from the proper use of spinal anesthesia.[2] Foss and Schwalm maintained that, among 3,000 procaine anesthesias, they never observed any patients complaining of or manifesting the slightest signs of peripheral neuritis or of disturbances in sensibility or of motor functions.[3] Others also maintained that they had not noticed any serious complication.[4] Forgue believed that all nervous injuries, with the exception of the abducens palsy, are due to faulty technic.[5] Pitkin reported secondary complications directly attributable to the method.[6] He mentioned persisting, intense, throbbing, unbearable headache or a dull headache that occurred only when the patient sat up. Occasionally, there occurred paralysis of the sphincters, vertigo, areas of anesthesia or paresthesia, stiffness of the muscles of the back of the neck, and innumerable cases of temporary blindness. Lindemulder described acute myelitis following spinal anesthesia.[7] Minnit and Gillies state, "To say that one has not seen them, is only half an answer because one has probably not looked for them."[8]

A review of the reported cases reveals a cross section of neurologic and psychiatric clinical syndromes. All the cranial nerves can be affected separately or in combination. Sixth nerve palsy with internal strabismus and diplopia develops fairly rapidly from one day to three weeks after spinal anesthesia. This I have observed even after a diagnostic lumbar puncture. The paresis may persist from several days to several months. In most instances, there is complete recovery. Among the other cranial nerves affected are paresthesias and numbness of the face in the distribution of the trigeminal nerve with reduced corneal reflexes, hyperacusis, and even permanent reduction of hearing, disturbances of smell function and of visual acuity, temporarily and at times with optic atrophy, extraocular muscle weakness due to third and fourth nerve palsies, facial palsies, and twelfth nerve involvement with resulting paralysis of the tongue.

Arachnitis or arachnoiditis following spinal anesthesia has been described. The clinical syndrome has a characteristic type of sequence. There is usually complete or relative freedom from symptoms for a time after spinal anesthesia. This interval may be a few days to a few months. At first, there are symptoms of irritation with pains and paresthesias. Later, there is anesthesia of a dissociated type, or it may be total. The patient complains of or then develops paresis or complete paralysis which may be flaccid or spastic. The lower parts of the body are more commonly affected. The symptoms may be unilateral or bilateral. Bladder and rectal sphincteric paresis occurs. After a primary progressive stage, the condition becomes stationary with regression, especially of the motor symptoms. Complete recovery is uncommon. There is usually total obliteration of the subarachnoid space. Pathologic study reveals chronic proliferative arachnitis, myelomalacia, changes in the roots, and degeneration of the long fiber tracts. In experimental work in animals the most common reaction to anesthetic agents has been a leptomeningeal response with secondary fibrosis. This led Wilson to suggest the term "pachymeningitis spinalis hypertrophica."[9]

Attention has also been directed to the fact that the epidural vascular network is most developed in the ventral region. Dorsally, the vessels are mainly collected within the areas covered by the spinal arches and are consequently protected against puncture trauma. That many of these postspinal neurologic complications are vascular is, therefore, unlikely. The basis for the symptomatology has been attributed to injuries of the membranes of the spinal cord or to the periosteum ligaments and nerve roots. Hematoma of the cauda equina is mentioned. Many factors have been discussed as playing a role in these neurologic complications. These include wrong technic, puncture hemorrhage, decomposed products from the anesthetic substance, alkaline and old anesthetic solutions, solvents and the boiling of syringes and needles in unsuitable water, deficient isotonia and neutrality of the anesthetic fluid, lack of calcium in the fluid, iodine on the skin, idiosyncrasy to the anesthetic substance, heavy anesthetic solutions, and vasomotor disturbances.

Conclusion

It may be concluded, then, that spinal anesthesia is not a harmless procedure. Although they occur, the instances of cranial nerve and even cerebral involvement should not occasion too great concern. Careful attention to technic of the spinal puncture should lessen such occurrences. I believe these disorders result from a sudden change of subarachnoid dynamics, producing alterations of intracranial and intravascular pressure with cerebral anoxia, diminished blood pressure, and impaired biochemical and metabolic functions. Similar symptoms may result from a diagnostic lumbar puncture.

On the other hand, the complication that has been called myelitis is obviously not a primary affection of the spinal cord. There is an initial reaction of the meninges—a mechanical meningitis—which causes local pain in the back, and then there ensues the chronic stage of adhesive arachnitis or localized pachymeningitis which strangulates the cord and, by interference with its blood supply, causes myelomalacia and the clinical picture of myelitis. This is not a systemic or toxic disorder. It is localized at definite levels of the cord and does not behave like an infection. It appears to be due to local irritation of the meninges and justifies focusing attention on the nature of the anesthetic material, either the drug itself or its fluid media.

When attention is directed to all phases of the procedure, the technic of the spinal tap, possible pre-existing contraindications, and the preparation and quality of the anesthetic material and its fluid medium, then spinal anesthesia should be available without the hazard of neurologic complications.

890 Park Place

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PATELLA ADVANCEMENT FOR SPASTIC FLEXION CONTRACTURE OF THE KNEE

ARTHUR A. MICHELE, M.D., Brooklyn, New York, and FREDERICK J. KRUEGER, M.D., Staten Island, New York

(From the Department of Orthopedic Surgery, New York Medical College, and the U. S. Marine Hospital, Staten Island)

THERE are certain types of spastic paralysis in which we have found that posterior capsulotomy, lengthening of the "ham strings," and partial resection of their nerves still do not permit full active extension of the knee.[1] Passive motion may be complete, yet active extension is limited to 200 degrees. The gait is difficult, limited, and tiring with the individual walking with the knees in the flexed position.

We are concerned primarily with the more common situation where an increased laxity or elongation of the quadriceps tendon exists. There are a few instances also where the patella may be found at a high level on the shaft of the femur and an increased length of the patella tendon is present. In the former situation one finds the relationship of the patella to the tibial tubercle to be normal and also in regular relevancy with the growth at the age. It is noted that because of the elongation of the quadriceps apparatus, whether it was in the quadriceps or the patella tendon, the motor value is absent for the production of the last few degrees of extension. We have found that, in order to obtain normal focal leverage, the transplantation of the quadriceps tendon into the patella or, if the elongation is in the patella tendon, the transference of the tendon into the patella produces sufficient purchase to insure full motor value of the quadriceps apparatus, producing full powerful extension of the articulation. If necessary, the "ham string" muscles must be lengthened if they are contracted, and oftentimes a posterior capsulotomy must be done in order to permit the active quadriceps pull of the knee into full extension.

Technic

A medial parapatellar incision is made in the region of the left knee. Exposure of the quadriceps apparatus from the suprapatellar pouch and from the musculotendinous region distal to and including the tibial tubercle site is effected. The tendinous broad expansion is dissected free up to and including the patella. Where the tendon inserts on the superior pole of the patella, great care is taken not to disturb the articular surface of the patella. By means of an amputation saw or a fine hack saw, a U-shaped trough is made into the patella (Fig. 1). The depth of the furrow is determined by the extent of relaxation of the quadriceps tendon and the extent of the tension or advancement of the quadriceps on the patella. The quadriceps tendon is left intact with the block. The block is then removed from the patella with the intact tendon, and sufficient bone is removed from the block so that approximately $^1/_4$ inch of the bone is left intact on the quadriceps tendon. The advancement is carried with the lesser bone attached to the quadriceps tendon at the distal pole. It is maintained in position with a loop of steel wire. The capsular structures are then sutured.

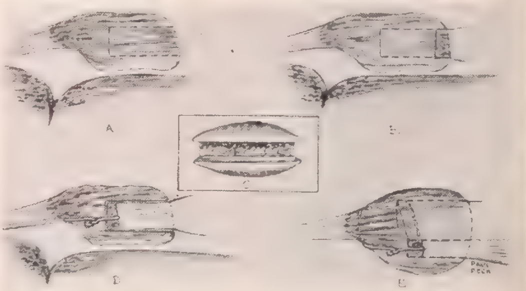

FIG. 1. Method of advancement of quadriceps tendon to gain extension of the knee.

In the less common situation of elongation of the patella tendon, the alternate procedure is employed, using the block. The reverse is carried out with the patella tendon advanced into the patella towards the superior pole.

After-treatment

The knee is kept in full extension and is immobilized in a hip spica. The cast is split with a window extending from the knee up to the groin at the end of five weeks. Physical therapy, in the form of Sine stimulation, deep heat, and active exercises of the quadriceps apparatus, is carried out. A long hip spica type of splint is used for two to three months. A dial knee support is provided for a period of at least three to four months following the removal of the hip spica.

Summary

A method is presented to provide for quadriceps tendon advancements with secure bony fixation and to ensure a powerful action with greater range of extension for a normal gait. The procedure is often used in conjunction with posterior knee compartment release surgery.

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A NEEDLE FOR USE IN GENERAL SURGERY

Harold Elcaness, M.D., Bronx, New York

(From the Fordham Hospital)

A NEEDLE with an L-shaped slot at the front or pointed end instead of the usual type with an eye at the back end is proposed for general use in surgery (Fig. 1). There are many advantages to be gained with the use of such a needle, the main ones being increased speed in suturing and greater ease of maneuverability. The principle of the needle is one of crocheting rather than sewing. The needle is thrust through the tissues, a suture is slipped into the slot, and then the needle is withdrawn carrying the thread back through the tissues much in the manner of a ligature carrier.

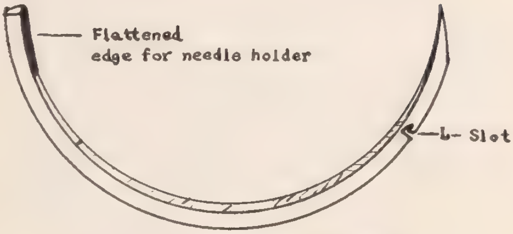

Fig. 1. Appearance of needle.

Although any type of suture can be made with this needle, such as the continuous suture, its main advantage is in making the interrupted suture. The interrupted suture, as is well known, is technically safer than the continuous suture and more in keeping with physiologic principles, because less foreign material is present in the wound. Therefore, since suturing is simpler and more rapid with the slotted needle, the usual period of time taken in making interrupted sutures is compensated for by the slotted needle, and better technic is gained. There are also real minor advantages which accrue. For example, since the needle is never released by the operator from the needle-holder, there is no chance of accidentally dropping the needle into the peritoneal cavity, while handing it to the nurse to be rethreaded. Further, the nurse is relieved of the responsibility of threading the needle, and, therefore, this element of time consumption is reduced.

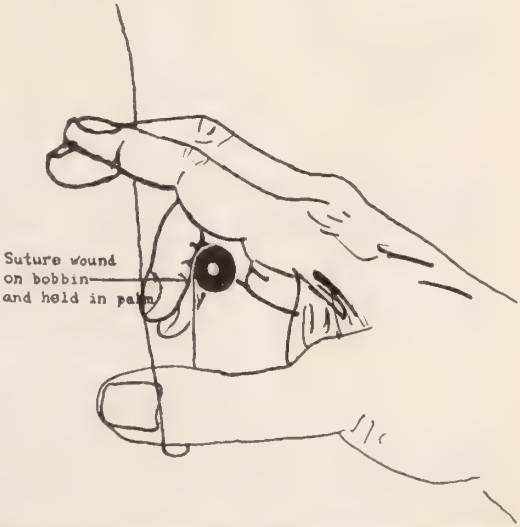
Suture wound on bobbin and held in palm

Fig. 2. One method of holding suture for rapid threading of slot.

Reference to the drawings reveals the makeup and manner of use of the needle. Since threading the suture is an integral part of the procedure, it is essential to hold the suture in some such manner as illustrated so that it may be threaded rapidly (Fig. 2). The dimensions of the needle are necessarily of the same order of magnitude as the diameters of the ordinary needles used in general surgery, except that, since the slot weakens the shaft, advantage is taken by making the widest dimension of the needle correspond to that between the concave and convex portions of the curved needle so that the appearance of the needle is somewhat like that of the Hagedorn needle.

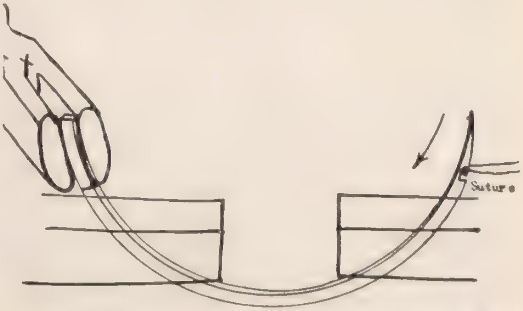

Fig. 3. The needle is thrust through tissues, the suture snapped into the slot, and the needle then withdrawn, the suture following through.

The needle, when originally made, had the L-shaped slot on the concave portion of the curve, but this resulted in catching tissue in the slot. When one considers that, in placing a curved needle through tissue, the motion is performed by making the concave portion of the needle ride against the tissues while the undersurface of the needle or convex portion rides clear of the tissues, the solution to avoiding the catching of tissue is that of placing the slot on the undersurface of the needle (Fig. 3).

Although the principle of a slot at the front end of the needle was new to the author, it soon became apparent in a search of the literature that the principle is indeed old. As early as 1868 such a needle was made for sewing machines. The boomerang needle closely resembles the author's needle, and the old Cleveland ligature carrier is more or less based on the same principle. However, the author's needle is intended for general use and not for any restricted purpose, and, if any advantage was derived from these instruments, so much the more is to be gained in general usage.

Since the needle is not pulled through the entire length, as long as the needle conforms to the dimensions of the average needle so that a larger hole is not made, it may be made longer for convenience in handling. The suture also need not be pulled through its entire length, and, thus, less trauma to the tissues results.

3500 De Kalb Avenue

The needle is manufactured by The Diamond Company, Long Island City.

SURVEYS OF RAGWEED POLLINATION IN THE NEW YORK METROPOLITAN DISTRICT IN 1948 AND 1949

Richard D. Wiseman, M.D., Bernard B. Siegel, M.D., Israel Glazer, M.D., Robert A. Chait, M.D., and Matthew Walzer, M.D., Brooklyn, New York

(From the Division of Allergy, Jewish Hospital of Brooklyn)

In 1946, the Allergy Division of the Jewish Hospital of Brooklyn undertook the first extensive ragweed pollen survey of the New York metropolitan area. This and subsequent surveys were coordinated with those conducted annually on a national scale by the Pollen Committee of the Research Council of the American Academy of Allergy. New York surveys were repeated in 1947, 1948, and 1949. The results of the 1946 and 1947 studies have been previously reported.[1,2] In the present communication, the findings of 1948 and 1949 are presented.

Technic

The technics employed for slide exposure and for counting were those recommended by the Pollen Survey Committee of the American Academy of Allergy. Slides were exposed at all stations from August 1 through September 30. Pollen counts were recorded as the number of ragweed pollen granules found on a square centimeter of greased slide after a twenty-four-hour exposure in a Durham instrument. Approximately 1,200 slides were counted in each ragweed survey.

Location of Exposure Stations

As in previous years, stations were located within a 50-mile radius of Columbus Circle (near Station E on Fig. 1). The stations surveyed in 1948 and 1949 are listed in Table I, and the letters corresponding to these stations appear in Fig. 1. The unlettered dots on this figure show stations surveyed in previous years and not included in the present report.

Results

The daily pollen counts at representative stations in the 1948 and 1949 surveys are graphically presented in Fig. 2. The points plotted on the graphs correspond to the number of pollen granules found each day on a square centimeter of slide exposed in a standard shelter for twenty-four hours. Circles indicate days on which pollen counts were incomplete because of rain. On a few days, the slide was broken accidentally or was not changed at the end of twenty-four hours. When such accidents occurred, the

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TABLE I.—STATIONS SURVEYED IN 1948 AND 1949

New York City Stations	1948	1949
A. Jewish Hospital of Brooklyn	x	x
B. Brooklyn College	x	. .
C. Fort Hamilton, Brooklyn	. .	x
D. U.S. Weather Bureau, Battery, Manhattan	x	x
E. U.S. Weather Station, Central Park, Manhattan	x	x
F. Flushing Chamber of Commerce Building, Queens	x	x
G. Rockaway Beach Hospital, Queens	x	x
H. Sea View Hospital, Staten Island	x	x
I. Montefiore Hospital, Bronx	x	x
Surrounding Area		
J. Ambrose Lightship, at the entrance to New York Harbor	. .	x
K. U.S. Coast Guard Weather Station, Sandy Hook, N.J.	x	x
L. N.J. State Hospital, Marlboro, N.J.	. .	x
M. Monmouth County Welfare Home, Freehold, N.J.	x	. .
N. St. Peter's General Hospital, New Brunswick, N.J	x	x
O. Fire station building, Maplewood, N.J.	x	x
P. Five-story apartment building, Verona, N.J.	x	x
Q. Dover Hospital, Dover, N.J.	x	. .
R. Borough Hall, Westwood, N.J.	x	. .
S. White Plains Hospital, White Plains, N.Y.	x	x
T. Adelphi College, Garden City, N.Y.	x	x

counts were estimated by averaging the counts obtained on those days at the surrounding stations. This procedure was resorted to in order to minimize the statistical error which would have resulted from the complete omission of counts on those days. Counts estimated in this manner are represented on the graph by an x. Only the period of active ragweed pollination from August 18 through September 20 is recorded in the graphs in Fig. 2.

NEW YORK CITY.—The averages of the daily pollen counts for the eight stations in New York City are plotted as a single curve to present the picture for the entire city (Fig. 2). In 1948, significant increases in pollen concentration occurred on August 25 and August 29. By August 31, the major portion of the ragweed pollination for 1948 had taken place. In 1949, the first significant pollen shower did not occur until September 1, and most of the ragweed pollinated in September. The seasonal totals of the daily counts for each of the stations surveyed in 1948 and 1949 are presented in Fig. 3. In New York City, Brooklyn and the Bronx had the lowest totals and Rockaway the highest each year. The total counts at the Battery and at Central Park, in Manhattan, were the closest to the average for

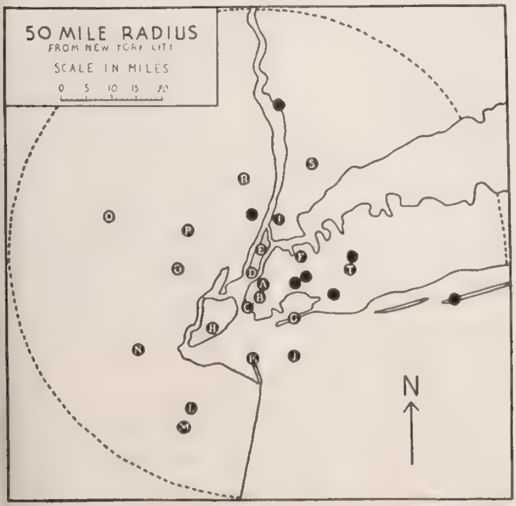

FIG. 1. Lettered stations were studied in 1948 and 1949. Unlettered stations were studied in previous surveys.

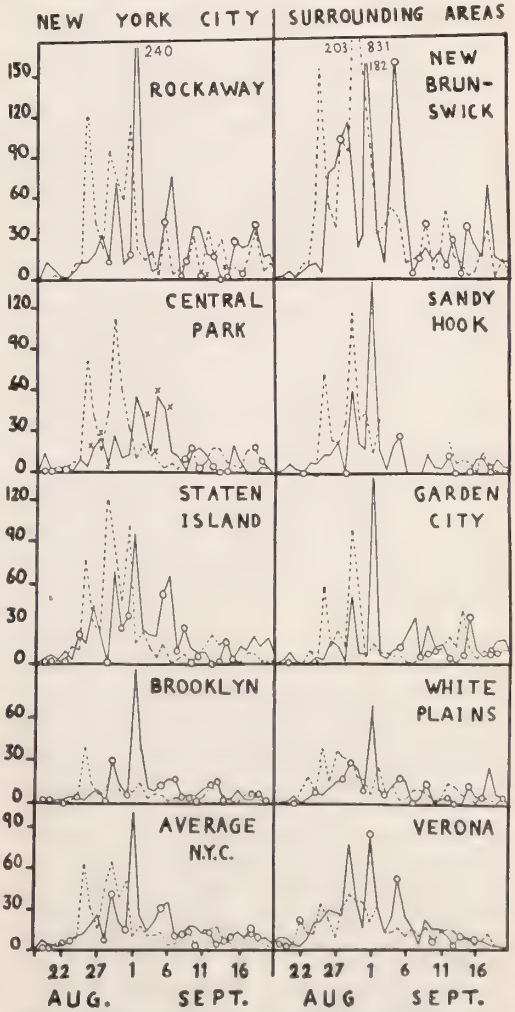

FIG. 2. Representative pollen graphs of stations in New York City and in surrounding areas: 1948 solid line; 1949—broken line.

New York City. As in previous years, seasonal totals at Flushing and in Staten Island were consistently higher than the average for New York City.

Localities in the Surrounding Area.—*New York State.*—The seasonal totals at White Plains and Garden City approximated the average for New York City. On the Ambrose Lightship, the seasonal total was lower than at any of the New York City stations.

New Jersey.—New Brunswick, which is southwest of New York City, continued to show the highest ragweed pollen counts in the New York metropolitan area. In 1948, a seasonal total of 2,116 recorded at that station represented the largest total obtained at any station during the four years of surveying. Marlboro and Freehold, New Jersey, also situated southwest of New York City, showed high totals but were lower than those of New Brunswick. The seasonal totals at Sandy Hook in 1948 and 1949 approximated those of the average for New York City.

Dover, Westwood, and Maplewood, in northern New Jersey, had consistently low counts. In the same district, Verona yielded a seasonal total which more closely approximated the average for New York City. The lowest seasonal total recorded in the metropolitan district during 1948 and 1949 was 252, obtained in Westwood, New Jersey.

Counts Obtained with the Old Technic in Brooklyn in 1948 and 1949.—At the station on the roof of the Jewish Hospital of Brooklyn, slides were coincidently exposed in the old shelter, which had been used since 1936, as well as in the newer Durham instrument. Using the old shelter, a seasonal total of 1,156 was obtained for 1948. This was 67.8 per cent of the thirteen-year seasonal average with this technic. The 1949 seasonal total was 1,200 which was 72 per cent of the fourteen-year seasonal average.

Comment

At most of the stations in New York City, only minor differences were noted between the seasonal totals of 1948 and 1949. The same may be said of the seasonal totals representing the average for New York City. On the basis of relative pollen density, each station maintained more or less the same relationship with respect to the other city stations in the 1948 and 1949 surveys. In the order of increasing density the five boroughs of New York City were arranged as follows: Bronx, Brooklyn, Manhattan, Staten Island, and Queens.

In the stations around New York City, only New Brunswick seasonal totals showed a pronounced difference in seasonal totals for 1948 and 1949. In the former year, there was a seasonal total of 2,116 pollen granules; in the latter year, it was 1,313 granules. The unusually high 1948 total was primarily due to the excessive pollination which occurred on August 31, 1948. The count of 831 on this day was the highest recorded for any twenty-four-hour period during the four-year survey of the New York metropolitan area.

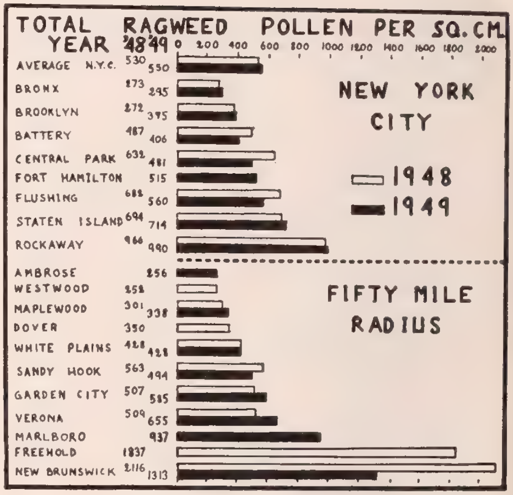

Fig. 3. Seasonal totals of all stations surveyed in 1948 and 1949.

In 1948 and 1949, as in previous years, the areas of greatest ragweed pollen density in the New York metroplitan district were found in New Jersey southwest and west of New York City. This is in accord with the statement made by Durham in 1931 that "New York City obtains its pollen from New Jersey."[3]

It is interesting to note that Sandy Hook, a peninsula almost completely surrounded by water and relatively free of ragweed growth, had pollen counts in 1948 and 1949 which approximated those of New York City. Similarly, an appreciable seasonal ragweed pollen total had been obtained in the 1947 survey of Fire Island, supposedly a hay fever haven situated about six miles off the southern shore of Long Island.[2] At the Ambrose Lightship in New York Harbor, about nine miles from land, a significant ragweed seasonal total was obtained in the 1949 survey. The importance of these findings will be the subject of another communication.

Although the seasonal totals in 1948 and 1949 for New York City were almost the same, there was a definite difference in the timing of maximum pollination each year. In 1948, two distinct peaks of intense pollination were recorded at most of the New York City stations late in August. In 1949, the only significant peak occurred on

September 1. It is likely that, in 1949, the major part of the seasonal total was contributed by dwarf ragweed plants, whereas, in 1948, most of the pollen was that of giant ragweed.

Pollen counts have been made at the Jewish Hospital of Brooklyn for the past fourteen years. In order to determine whether these counts were truly representative of the Borough of Brooklyn, a station was set up at Brooklyn College in 1948 and at Fort Hamilton in 1949. The counts obtained at both these stations were found to approximate closely those obtained at the Jewish Hospital station.

Meteorologic conditions may have contributed to the low New York City pollen counts in 1948. During both August and September, wind velocity was low, and, in August of that year, the amount of sunshine was less than average. In 1949, a drought during the summer months retarded the growth of the ragweed plants. Meteorologic conditions undoubtedly accounted for the high pollen count for New York City on September 1, 1949. On that day, a wind of high velocity blew from the west and carried in pollen from areas of high pollen density in New Jersey. Hence, despite a less than average ragweed crop, favorable meteorologic conditions at a time when the pollen was ready for dissemination resulted in a high atmospheric concentration of pollen on that day.

The New York City Department of Health has conducted ragweed eradication campaigns during the past four years. Despite this campaign, the seasonal totals representing the average for New York City have been increasing rather than decreasing during this period. It is obvious that the amount of local ragweed growth is only one of the determinants of the atmospheric pollen concentrations in any area. Other important factors include the amount of ragweed growth in surrounding areas and the daily meteorologic conditions which may favor or retard the transport of pollen from one district to another. Data accumulated in these studies as they relate to the effectiveness of ragweed extermination campaigns will be presented in a future communication.

Summary

1. The results of the ragweed pollen survey of the New York metropolitan area for 1948 and 1949 are presented.

2. Although the seasonal pollen totals for both years were approximately the same, the time of maximum pollen dissemination was quite different each season.

3. The Borough of Queens showed the highest average pollen concentration during the ragweed seasons in New York City in 1948 and 1949. In order of diminishing intensity, the boroughs occupied the following positions: Queens, Staten Island, Manhattan, Brooklyn, and the Bronx.

4. The area of New Jersey west and southwest of New York City continued to show the greatest pollen density within the metropolitan area, while the counts in New Jersey northwest of New York City and in New York State north and east of the city remained relatively low.

The authors are indebted to the following individuals for their assistance and kind cooperation: Mr. J. Daniels and Dr. E. Grossman, Jewish Hospital of Brooklyn; Mr. A. Kline, U.S. Weather Bureau Station, Central Park, New York City; Misses Harris and Buchanan and Dr. L. Brandt, Montefiore Hospital, Bronx; Dr. S. Senior Sack, Flushing; Dr. A. Gordon and Dr. J. W. Bashe, Jr., Sea View Hospital, Staten Island; Miss M. Arnold and Mrs. M. Kasden, Rockaway Beach Hospital, Rockaway Beach; Miss C. Beckwith and Mr. J. McGuire, U.S. Weather Bureau, Battery; Corp. De Marco, Fort Hamilton Station Hospital, Brooklyn; Dr. H. G. Albaum, Brooklyn College; Dr. R. Jeffrey, Garden City; Dr. E. Gaillard and Mr. S. Purdy, White Plains Hospital, White Plains; Mr. Logan, Cmdr. Rohnke, and Lt. Mason, Aids to Navigation Division, U.S. Coast Guard, New York City; BM/1 E. Henfy, U.S. Coast Guard Station, Sandy Hook, New Jersey; Mr. A. Smith, St. Peter's General Hospital, New Brunswick, New Jersey; laboratory staff, New Jersey State Hospital, Marlboro, New Jersey; Mr. C. Wendell, Maplewood, New Jersey; Mr. F. Hodgson, Verona, New Jersey; Mr. F. Gemmel, U.S. Weather Bureau, Newark Airport; Miss M. Crawford, Monmouth County Welfare Home, Freehold, New Jersey; Mr. T. Bassett and Miss V. Ellis, Dover Hospital, Dover, New Jersey; and Mr. C. Bowen, Westwood, New Jersey.

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A hypochondriac man consults the weathercock oftener than he does his physician.

When your memory begins to leave you, learn to make memorandums.

DICUMAROL AND THE SEDIMENTATION RATE

William Hoffman, M.D., and Albert E. Welberry, B.S., Brooklyn, New York

(*From the Horace Harding Hospital, Queens*)

OUR attention was first drawn to the possibility that Dicumarol might alter the blood sedimentation rate when an unusually high figure—beyond all expectations according to the clinical picture—was reported in a subsiding case of iliofemoral thrombophlebitis. Careful clinical and laboratory study failed to give any clue other than the administration of Dicumarol as a possible explanation. This led us to examine the laboratory reports of other cases treated with Dicumarol, and in a number of these the rates were likewise higher than expected. Therefore, we compared these sedimentation rates with those obtained in a similar group of cases without Dicumarol therapy.

Literature

The reports on this subject are contradictory. Litwins and his coworkers concluded that "Dicumarol has no effect on the sedimentation rate whether given in therapeutic or somewhat larger doses."[1] Their work was based on a small series of patients that included 12 normals, seven coronary thromboses, and eight other unassociated medical conditions, all of whom were given Dicumarol in therapeutic or larger doses. Wright and Prandoni have stated that "prolongation of the prothrombin time and the clotting mechanism due to Dicumarol administration. . . .was not accompanied by an increased sedimentation rate."[2] Cosgriff has also reported that the sedimentation rate is not affected by Dicumarol in normal persons.[3]

On the other hand, Peters, Guyther, and Brambel stated that in coronary thrombosis under Dicumarol therapy the sedimentation rate is increased to such an extent that it cannot be used as an index of healing.[4] Falk, while stating that Dicumarol may influence the sedimentation rate to some extent, nevertheless believes the test is still useful and worth observing.[5] Allen and Barker and their coworkers originally held that the sedimentation rate was increased by Dicumarol but have since denied this.[6,7]

Method and Material

Our data were derived from cases of coronary thrombosis and thrombophlebitis. Each disease was divided into two groups: those that were treated with Dicumarol and those that did not receive this anticoagulant. The sedimentation rates reported in cases of each disease treated without Dicumarol during 1948 and 1949 were listed to indicate the expected range of this figure, and the highest reading was taken as an arbitrary base line in each disease. This was then compared with the findings in the cases treated with Dicumarol. Only cases showing rates higher than the highest in the base line group were selected as indicating an unusual sedimentation rate.

The sedimentation rate was determined by the Westergren method using a tube 200 mm. long. The prothrombin times were done by the Quick procedure on blood drawn the same day that the sedimentation rate was performed. Dicumarol dosage is not given inasmuch as the prothrombin time is a better indicator of the effect of this drug. Many of the cases in each disease category were in the hospital at the same time, thereby eliminating the factors of time, season, geography, and changing laboratory workers.

Findings

In 54 cases of coronary thrombosis entering the hospital during 1948 and 1949, and treated without anticoagulants, the sedimentation rates ranged from 12 to 48. The figure 48 was taken, therefore, as a base line for comparison with the rates in the series treated with Dicumarol. Fifty-six cases of coronary thrombosis in 1949 received this drug during the course of therapy. Of these, ten, or 18 per cent, exhibited readings at one time or another in excess of 48 mm. per hour. The highest result obtained was 97, with many readings in excess of 60 and 70 mm. per hour (Table I).

A total of 42 cases of thrombophlebitis involving the lower extremities of varying etiology was treated in 1949, 18 without Dicumarol and 24 with this anticoagulant. There were cases exhibiting evidence of embolic phenomena in both groups. The sedimentation rate in the series treated without Dicumarol ranged from 4 to 66 mm. per hour. This gave a figure of 66 as a base line for comparison with the group receiving Dicumarol. In this latter series, four cases, or 17 per cent, gave readings that were higher than this base line, five in excess of 80, with the highest reading reaching 110 mm. per hour (Table II).

An attempt was made to correlate sedimentation rate with prothrombin time, but no discernible relationship could be deduced from the graph drawn. It can likewise be seen from the tables

TABLE I.—CORONARY THROMBOSIS TREATED WITH DICUMAROL*

Number of Case	Day of Disease	Sedimentation Rate (Mm. per Hour)	Prothrombin Time (Per Cent)
1	8	65	13
2	2	61	17
3	6	72	50
	12	86	30
4	3	65	30
	18	36	13
	34	50	22
5	2	11	29
	5	60	17
	14	32	9
	19	46	9
6	2	88	48
	17	30	12
7	8	40	24
	19	54	16
8	2	55	27
	6	86	3
	10	36	18
	18	71	15
	21	75	16
	27	61	40
9	10	62	19
	28	75	48
	32	97	43
	39	56	10
	42	64	30
10	2	12	..
	9	84	14

* The highest sedimentation rate in the group without Dicumarol therapy was 48 mm. per hour.

TABLE II.—THROMBOPHLEBITIS TREATED WITH DICUMAROL*

Number of Case	Day of Disease	Sedimentation Rate (Mm. per Hour)	Prothrombin Time (Per Cent)
1	21	110	46
	45	108	20
2	8	98	12
	11	91	7
3	5	38	30
	22	67	16
4	Indefinite	78	8
	Indefinite	76	10

* The highest sedimentation rate in the group without Dicumarol therapy was 66 mm. per hour.

that many high rates were obtained with relatively lower prothrombin times and vice versa.

Comment

It might reasonably be postulated that the high sedimentation rates obtained in these cases were still the true values, with or without the use of Dicumarol. It is well known that the sedimentation rate varies according to many factors, including drugs, temperature, shock, pulse rate, age, pulmonary pathology, and numerous other conditions. One may argue that one or a number of these factors was instrumental in raising the sedimentation rate.

It should be borne in mind, however, that the use of parallel groups of cases tends to equalize these variables. Furthermore, these cases were in the hospital at the same or closely related times, and the unusual rates were much higher than usually encountered in these diseases. Finally, a survey of the serial sedimentation rates of some of these cases taken individually discloses a bizarre course that is entirely at variance with the actual clinical facts as determined from an examination of the patients involved. The following are illustrations of this last point.

Coronary Thrombosis

Case 5 (*Table I*).—This was a fifty-three-year-old white male entering the hospital with a history of twenty-four hours of severe chest pain relieved only by injections of morphine. This man had had a coronary attack eighteen months before plus several anginal episodes during the year preceding admission to the hospital. His temperature on admission was 101.4 F. The patient was sweating and appeared ill. Blood count disclosed 10,600 white cells with 68 per cent polymorphonuclear leukocytes. The blood pressure was 150/100, and there were dullness and rales at both lung bases. The sedimentation rate on the second day of Dicumarol therapy was 11 mm. per hour, the prothrombin time 29 per cent. Three days later, with the temperature flat for the first time, although lung signs persisted, the rate was 60 mm. per hour, prothrombin time 17 per cent. Nine days later, the temperature continuing normal, the sedimentation rate was 36 mm. per hour. Five days later it was 46 mm. per hour, prothrombin time 9 per cent, and the patient apparently improving clinically. The sedimentation rate was of no help to the attending physician.

Case 10 (*Table I*).—This patient was a forty-eight-year-old white female entering the hospital with a history of severe substernal pain beginning five and one-half hours before admission. Electrocardiographic findings disclosed the configuration of a typical acute anterior coronary thrombosis. The next day (approximately twenty-four hours after the onset of severe pain) the sedimentation rate was 12 mm. per hour. At this time her urine showed 4 plus acetone, and the white count was 14,800, with 79 per cent polymorphonuclear leukocytes. On the following day she received 300 mg. of Dicumarol and two days later another 200 mg. of the drug. A sedimentation rate taken seven days after the initial dose of Dicumarol was 84 mm. per hour. The prothrombin time was 14 per cent. Her temperature had been normal for five days at this time, and there was nothing in the clinical picture to suggest pulmonary or other complications.

Thrombophlebitis

Case 2 (*Table II*).—This was a thirty-one-year old white female, eighteen days postpartum, who was well until three days before admission to the hospital at which time she developed slight swelling of the left leg and thigh associated with mild pain in the leg and pinkish discoloration of the limb. Her temperature ranged from 99 to 101 F. Examination disclosed the same findings plus tenderness over the course of the femoral vessels in the upper thigh. A diagnosis of iliofemoral thrombophlebitis was made and the patient placed on anticoagulant therapy beginning with heparin and following with Dicumarol. On the fifth day of hospitalization, with the temperature normal for the first time and the patient clinically better, the sedimentation rate was 98 mm. per hour, prothrombin time 12 per cent. Three days later and with the patient further improved, the sedimentation rate was 91 mm. per hour, prothrombin time 7 per cent. Liver function was normal and the blood count within normal limits. In this case, the sedimentation rate could obviously not be used to guide the attending physician.

Summary

1. In a series of 56 cases of coronary thrombosis treated with Dicumarol, the sedimentation rate in at least ten, or 18 per cent, appeared to be increased beyond the expected rate as determined by the clinical picture and by a control series of cases that did not receive the drug.

2. In a series of 24 cases of thrombophlebitis that received this drug, four, or 17 per cent, likewise gave sedimentation rates that were higher than expected clinically or from the control group.

3. No correlation between the prothrombin time and the increased sedimentation rates could be established.

4. From these results, one may reasonably question the worth of this test in many cases where Dicumarol is administered.

We wish to thank Dr. Alfred Angrist, pathologist of Horace Harding Hospital, for his advice and assistance in preparing this paper.

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CORNELL CONFERENCES ON THERAPY

Departments of Pharmacology and Medicine, Cornell University Medical College and New York Hospital

THESE are stenographic reports of conferences by the members of the Departments of Pharmacology and of Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy*, by the Macmillan Company.

Medical Management of Hypertension

Dr. Harry Gold: The treatment of hypertension by nonsurgical means is the topic of the conference today. Dr. William Goldring of New York University College of Medicine, who has for many years pursued this subject as a clinician and investigator, will give us the benefit of some of his extensive observations and rich experience.

Dr. William Goldring: The cause of hypertension is not known. There is no known cure. The management of the disease at the present time involves the use of measures that are essentially empiric. These fall into three categories on the basis of the objectives: to reduce the level of the blood pressure, to alleviate symptoms, and to eliminate one or another of the supposed causes. Claims for therapeutic value in essential hypertension have been advanced for large numbers and highly diversified agents and methods, such as sympathectomy, psychotherapy, salt-restricted diets, thiocyanate, and a host of others. Such a state of affairs in the therapy of any condition gives rise to the question whether any of the measures have any substantial utility.

Under these circumstances, it becomes a matter of some importance to decide which objectives are worth pursuing. It is probable that no one would doubt the desirability of eliminating the cause, if the cause were known. There is also a legitimate place for measures which exert no other effect than to control distressing symptoms. But the position is not quite so clear in the matter of lowering the blood pressure.

Opinion is sharply divided on the question whether measures, with a primary action only that of lowering the blood pressure, have any substantial merit in control of hypertensive disease. Arteriolar disease is the factor which ultimately brings about disability and death in these cases, and to prevent or retard its development would clearly represent a sound therapeutic objective. There are, however, no measures which are known to act directly to interrupt or reverse the degenerative process in the arterioles. Attempts to approach this indirectly by lowering the blood pressure involve an assumption concerning a causal relation between high blood pressure and arteriolar disease. In spite of all that has been said and written on this subject, the degree of dependence of vascular disease on the level of the blood pressure remains without sufficient proof. There is no convincing proof that prolonged lowering of the blood pressure by means of sympathectomy or other measures reduces vascular accidents, but it should be stated that there is also no proof that it fails to protect the vessels against such accidents. With our knowledge being what it is at the present time, measures designed to lower the blood pressure may be viewed as experiments worthy of pursuit and further study.

Sodium thiocyanate has achieved some prominence for the purpose of lowering the blood pressure in hypertensive disease. After a preliminary wave of enthusiasm for this drug, interest in it waned, presumably by reason of a high incidence of toxic effects. The use of the drug was revived by the suggestion that repeated determinations of the concentration of thiocyanate in the blood would prevent overdosage, and that toxic effects would be infrequent if the concentration were maintained at levels between 6 and 12 mg. per cent.

Dr. Chasis and I re-examined the problem of thiocyanate in a group of hypertensive patients. Instead of measuring the blood level, we determined the amount excreted daily in the urine, which, when subtracted from the daily dose, yielded information regarding the daily retention in the body. We did not escape toxic and even fatal effects. Susceptibility between patients varied so widely that a fatal case showed less of the drug in the tissues than some without any toxic effects. Some patients showed toxic reactions with doses which produced no lowering of the blood pressure. While a lowering of the pressure may be anticipated in about one third of hypertensive patients receiving suitable doses, the fleeting nature of the effect and the high incidence of serious poisoning leave little to recommend thiocyanate in hypertensive disease.

Continuous mild sedation and reduction of body weight have been extensively employed for lowering the blood pressure. Both measures have proved ineffectual in our experience. Sodium restriction is the most recent revival in this category. Ambard and Volhard, who suggested salt restriction as a therapeutic measure in hypertension, seemed to have considered the elevated pressure as the essential factor in hypertensive disease. That view has long been abandoned, the elevated pressure being regarded as only one manifestation of a disease beginning in a manner that is unknown and ending in vascular degeneration with its varied consequences. Significant reduction of the blood pressure by salt restriction has not been generally confirmed. From the standpoint of mechanism, the restriction of salt intake could reduce blood pressure if the elevated pressure were due to increased blood volume with increased cardiac output, but neither of these factors is concerned in the mechanism of the rise in diastolic pressure.

The so-called rice diet, which is enjoying considerable popularity at the present time, appears to be no more than another method for restricting the intake of sodium. There is no evidence that the low protein content of this diet in any way influences the level of the blood pressure. Our observations with the rice diet at Bellevue Hospital are still in progress, but the preliminary data indicate that this diet is without effect on the blood pressure leevl. I am familiar with unpublished data from various clinics throughout the country, which are in agreement in showing that results with the rice diet are either negative or equivocal.

Therapeutic measures in the category of those designed to eliminate the cause of hypertension are based on the assumption that human essential hypertension has a renal origin. The most extensive data bearing on this point relate to observations with renal extract, tyrosinase, and vitamin A.

Experiments in animals pointed to the possibility that the normal kidney elaborates a substance which lowers the blood pressure. This suggestion arose from the observation that, when the blood pressure was elevated as the result of impairment of the circulation to one kidney, the removal of the normal kidney sent the blood pressure higher. The intramuscular injection of a material isolated from normal renal tissue then lowered the pressure. Similar results were obtained in man, but their significance was open to question, because of the possibility of a nonspecific effect. Since foreign proteins administered parenterally in man exert a hypotensive effect, we used the oral route for kidney extract in patients with hypertension. In these we failed to secure a reduction of the blood pressure even though the dose was equivalent to 50 Kg. of kidney. Thus far, the use of renal extract in human hypertension has proved unsuccessful. It has not been possible to demonstrate a specific action. The effect appears to be a nonspecific pyrogenic action with undesirable changes in cardiovascular dynamics.

Another formulation on the renal origin of hypertension relates to the use of tyrosinase. It involves the assumption that hypertensive amines enter the systemic circulation when the kidneys are deprived of adequate oxygen supply. It is based on the observation that decarboxylation of amino acids may occur anaerobically while deamination of amines requires the presence of oxygen. Hypertension might be expected to result from inadequate supply of oxygen to the kidneys. However, it has not proved possible to lower the blood pressure significantly in patients with hypertension on this basis except when the injection of tyrosinase produced a pyrogenic reaction characterized by a chill and fever. In these cases, following a short pressor phase, both the systolic and diastolic pressures declined to lower levels and remained there for twelve to twenty-four hours. Such a reaction differs in no way from that following the parenteral injection of other foreign proteins such as triple typhoid vaccine. The administration of tyrosinase inactivated by heat produces a comparable decline of the blood pressure, a fact which suggests that the fall of the blood pressure after tyrosinase is not the result of a specific antipressor agent but of a nonspecific protein material.

Vitamin A has been found to increase renal blood flow, filtration rate, and maximal tubular excretory capacity in hypertensive patients. Several investigators have administered vitamin A orally in doses as much as 400,000 international units a day for periods of three months, but, in spite of these changes in the kidney, no significant effect on the blood pressure has been observed. I believe that experimental and human hypertension are not alike and that treatment of human hypertension based on the assumption that they are similar is ineffective.

Finally, there is the therapy designed to alleviate distressing symptoms without regard to the level of the blood pressure. For this purpose, I know of no more potent measure than psychotherapy. By this term I do not refer to any particular technic. Many of these patients are obsessed with fear and anxiety in the knowledge that they have high blood pressure. Any method which succeeds in assuring them that not all cases of high blood pressure are alike and that they do not necessarily stand on the brink of disaster is often successful in allaying their fears and anxiety and is apt to go a long way in controlling the most distressing discomforts. It is sometimes astonishing to note the extent of rehabilitation that is possible by simple psychologic measures.

This approach to the problems of the hypertensive patient does not influence the course of the disease. At the present time, hypertension is not curable, except for the rare case of pheochromocytoma and the very rare instance of unilateral renal disease. I have discussed only the matter of how to eliminate certain clinical manifestations of hypertensive disease: the subjective symptoms and the lowering of the blood pressure. I believe that, when both of these can be accomplished, there still remains the danger that the patient and doctor are lulled into a false sense of security, for it is extremely doubtful whether either of these measures, of any others available at the present time, actually retard the progress of the hypertensive disease. The attitude which I have expressed toward the present-day treatment for hypertension is pessimistic indeed, but I am fully convinced that it represents the true state of the current therapy. I also believe that we are more apt to achieve a solution of the problem by facing these facts squarely than by concealing them behind a mass of questionable therapies, for the value of which not a vestige of evidence exists at present.

Dr. Gold: Are there any in the audience who think differently about this?

Dr. Harold Stewart: I should like to ask Dr. Goldring what he does with a patient with hypertension who consults him.

Dr. Goldring: I think there is apt to be no disagreement as to what to tell the hypertensive patient whose complaints are due to the complications of hypertension, cardiac and cerebral. These are fairly clear-cut. Perhaps it is not necessary to consider these aspects, for there is likely to be no important difference in our approach to these phases of the therapeutic problem. I assume that your question relates to the hypertensive patient who consults us for advice, but who has no disability related to specific organs. It is in relation to the treatment of such patients that the attitude of the doctor counts for so much. If the doctor believes he has means for eliminating renal ischemia and he treats the patient with one or another kidney extracts, or assures the patient that one or another operation to increase the blood flow in the kidney is likely to bring about a cure, I am quite confident that he is on the wrong track and that the patient has nothing but disappointment in store for him. If the physician believes that lowering the blood pressure is an important objective, he may prescribe thiocyanate, nitrites, sedatives, or other agents intended to produce the same effects. In this case I also think that the physician is on a track unworthy of his efforts.

You asked me what I would do for the patient with hypertension who consults me. Clearly, what I would do would depend on what kind of problem the patient presents. My treatment would, in all probability, not differ materially from that of anyone else if the patient presented cardiac or cerebral complications. I would not prescribe measures for the purpose of eliminating renal ischemia, since I believe that such measures as are available are ineffectual. Also, I would not prescribe any measures for the supposed purpose of lowering the blood pressure, for, as I have indicated, these are also without evidence of benefit. If the patient is apprehensive, if his knowledge of having high blood pressure interferes with his capacity to carry on, I would do what I could to reassure him that matters are not as bad as he thinks they are, in the hope of restoring his confidence. I have applied the term "psychotherapy" to this treatment. I should emphasize that I do not have in mind the detailed methods of the psychoanalyst. Sympathetic understanding and reassurance accomplish amazing results.

Visitor: If there are no special symptoms, do you prescribe any medication?

Dr. Goldring: Sometimes I do and sometimes I do not. It all depends on what I judge to be necessary in the particular individual to establish confidence that his elevated blood pressure is not as serious as he believes it to be and that, in spite of his blood pressure trouble, a long and useful life is in store for him.

Dr. Walter Modell: What does Dr. Goldring think of the value of sympatholytic drugs such as tetraethyl ammonium or dibenamine?

Dr. Goldring: These agents have been disappointing. Their early promise to produce persistent lowering of the blood pressure has not materialized. I believe they have no practical place in the management of hypertensive disease.

Dr. Gold: Do you ever put these patients to bed?

Dr. Goldring: Bed rest is useful for an impending crisis. It is often valuable for the patient with repeated anginal seizures on the slightest effort and for those with signs of serious encephalopathy. Otherwise, I see no benefit to be derived from confinement to bed. I do not put patients to bed simply because their blood pressure is high.

Dr. McKeen Cattell: Since vascular accidents are apt to occur in association with high blood pressure, I should like to ask Dr. Goldring whether he would not concede some value in a treatment that lowers the blood pressure.

Dr. Goldring: Perhaps that is where our points of view differ. I am not convinced that the level of the blood pressure has anything to do with the occurrence of cerebral accidents. It is my opinion that cerebral accidents which occur in hypertensive disease are the result of the vascular disease itself, but, as I have already indicated, there is not yet sufficient evidence to decide the question, and the possibility that high blood pressure may predispose to cerebral accidents remains unsettled.

Dr. Harold E. B. Pardee: I hesitate to express my views since they cannot be supported by scientific evidence which meets the highest standards. Nevertheless, I have some opinions which are in my belief without reasonable doubt. I believe that the persistent high blood pressure produces intimal changes in the arterioles and perhaps the larger vessels, with thickening and weakening of the wall of the vessels. I am in agreement with others in these views, and so I believe that any measures which will reduce the level of the blood pressure for any appreciable time should prove useful in the management of hypertensive disease. By the use of thiocyanate, some of my patients have maintained a systolic pressure of about 30 mm. lower and a diastolic pressure of about 20 mm. lower than would otherwise have been the case. These effects maintained over a number of years seem to me to have yielded favorable experience. I have encountered some toxic results, but no fatalities.

I agree with Dr. Goldring on the importance of anxiety in hypertensive patients. They are often greatly relieved by interviews which allay their fears and establish confidence in the position that their hypertensive trouble is not necessarily a disastrous disease. It is my observation, however, that these very measures serve not only to control the apprehension but also to lower the blood pressure and in that way also retard the development of the hypertensive disease itself. There is in the daily life of everyone experience which tends to cause temporary increase in the blood pressure. Believing, as I do, that an elevated blood pressure is harmful, I pursue the plan of discussing with patients ways and means for avoiding extremes of physical effort and exposures to emotional stress and strain, such as are often encountered in both play and work. I now refer only to patients with hypertensive disease in the early stages. I have no doubt that the treatment of patients with arterial and hypertensive disease in the advanced stages would not differ materially in the hands of Dr. Goldring or myself.

Just a word about the use of phenobarbital. I believe it is often more than psychotherapy. I have the impression that it often exerts beneficial effects through direct lowering of the blood pressure and producing similar results by its action in allaying nervous tension and emotional turmoil.

Dr. Gold: Dr. Pardee, I should like to ask you the same question: Do you ever put these patients to bed?

Dr. Pardee: Yes, I sometimes do. I put to bed the same kind of patients who are treated in a similar manner by Dr. Goldring, namely, those with serious cardiac symptoms and those with serious cerebral symptoms. I go a bit further, however, for I sometimes put to bed patients who have given indication that prolonged rest will produce substantial lowering of the blood pressure. I do this because I believe that lowering of the blood pressure is in itself an important measure in patients with hypertensive disease.

I should state that by the term "prolonged" bed rest I do not refer to a few days or a week. I have in mind much longer periods than that as effective in bringing the pressures down to significantly lower levels.

Visitor: May we have an expression of view on the point whether it is wise to let patients know the level of their blood pressure? Is it advisable to tell them just what it is or to keep them in the dark about it?

Dr. Goldring: There is no fixed rule about that. Some patients are better off when they know the level of their blood pressure. Others are better off when they are kept completely in the dark about it.

Visitor: Are there any methods of choice in treating the sudden attack of headache which sometimes occurs in hypertensive patients? Are any spasmolytic drugs of value?

Dr. Goldring: I know of no drugs which are of specific value in the attacks of headaches of the hypertensive patient. These headaches often fail to respond to all the common analgesic agents. They tend to subside spontaneously. In those in whom the headaches persist for days, it is stated that relief is sometimes obtained by the intravenous injection of hypertonic solutions, such as solutions of magnesium sulfate or hypertonic glucose. There is need for better proof that these measures are effective. These headaches subside after the slow removal of spinal fluid in some cases. I know of no measures which can be relied upon with assurance of relief in the majority of cases.

Visitor: What do you consider the cause of these headaches in hypertension?

Dr. Goldring: I do not know the cause.

Increased intracranial pressure is a possibility, but, in many of them, the spinal fluid pressure is not increased. There may be more than one mechanism.

Dr. Modell: How would you feel about more systematic and more intensive psychotherapy than that which you outlined? What is the experience with those treated by psychiatrists?

Dr. Goldring: The method of the psychiatrist is long drawn-out, tedious, and expensive. The results are not one bit better than those of any physician familiar with hypertensive disease, who has insight and is acquainted with the simple methods of dealing with the emotional problems of his patients.

Visitor: Would Dr. Goldring comment on capillary fragility in hypertension?

Dr. Goldring: I have no figures of my own on the incidence of increased capillary fragility. Most observers who have examined this matter have found capillary fragility higher in these than in the normal population. I am inclined to agree. But I know of no treatment for it. Those agents that have been used, vitamin C and rutin, are of no value.

Dr. Stewart: I recently reviewed the chart of a patient with advanced hypertensive disease, who had received intensive treatment in the psychosomatic clinic over a period of six or seven months. She stated that she had improved and that she was able to handle her problems much better than previously. However, the blood pressure was at the same level as that when she was being managed in the cardiac clinic. This is an example of the fact that the level of the blood pressure is not necessarily related to the discomforts which these patients describe. Nevertheless, I agree with Dr. Pardee that sustained hypertension causes damage in the heart and the blood vessels and that it is desirable to put to use any measure which offers reasonable possibility of lowering the blood pressure.

A word should also be said about tobacco. Acute changes in the blood pressure can be traced to smoking one or two cigarets. If this is continued throughout the day, it is reasonable to assume that the results may cause damage, even though tobacco may not be the basic cause of hypertensive disease.

Dr. Gold: Dr. Pardee, how about smoking by hypertensive patients?

Dr. Pardee: I agree with Dr. Stewart. It is not good for them.

Dr. Gold: Dr. Goldring, do you instruct your patients to discontinue smoking?

Dr. Goldring: I do. The reason is the same as that mentioned by Dr. Stewart. I must confess that I offer this advice without deep conviction that it is necessary. I do so because there is want for things to do for hypertensive patients, and this is a measure that seems reasonable.

Intern: What would Dr. Goldring think about alcohol?

Dr. Goldring: I am very much in favor of any vasodilating agent, and alcohol in particular.

Dr. Pardee: How would Dr. Goldring prescribe alcohol? Would it be a medication to be taken a fixed number of times daily? What would be the dose, and why?

Dr. Goldring: I can answer all the questions except the "why." I prescribe it as I do any medication. The amount depends on the patient's tolerance. Some can tolerate no more than a thimbleful three times daily; others seem to show no limit. The amount required is that which will produce a more or less continuous state of vasodilation throughout the day.

Dr. Gold: I would have suspected that, if Dr. Goldring favors alcohol, he would do so by reason of its action in controlling emotional tension rather than by reason of its action in lowering blood pressure, since he holds in so low esteem the reduction of blood pressure in the treatment of hypertensive disease. It may well be, however, that the cerebral effect of alcohol is partly due to a vasodilator action.

Dr. Goldring has clearly stated the principles he pursues in the treatment of hypertensive disease. I wonder if we might come somewhat closer to the details by the account of a specific case. Consider, if you will, a forty-seven-year-old man who discovered he had hypertension at the age of forty-five. In the two years that have elapsed, the blood pressure has varied considerably in the range of 230 to 280 systolic and 130 to 140 diastolic, the diastolic having reached as high as 180 on two or three occasions. He has continued fairly active in business. He has developed troublesome headaches, a few retinal hemorrhages, moderate enlargement of the heart, and the electrocardiogram has developed a negative T wave in leads 1 and 2. On the advice of his family physician he has had several periods of complete bed rest at home, each for two or three weeks. He has had abundant reassuring advice, and he has so adjusted his responsibilities in his business as to curtail both physical and emotional stress to a very considerable degree.

There was no improvement in terms of his symptoms and signs, and before long surgical sympathectomy was advised. How would you have tackled that problem?

Dr. Goldring: I would try to find out why the patient was disabled and what particular symptom or state of mind was in need of attention, and I would do what I could to correct it. There is nothing that I know, however, even sympathectomy, that would halt the progress of the disease which has reached that point.

Dr. Modell: Would you say something about the use of dehydration in that kind of patient?

Dr. Gold: I am glad to have the opportunity to discuss dehydration as a measure in the treatment of hypertension. Dr. Goldring has already alluded to simple salt restriction and the so-called rice diet in the treatment of hypertension. There are some recent publications which support the position that salt restriction lowers the pressure in hypertensive patients. During the use of dehydrating measures against congestive failure which had developed in hypertensive patients, I was struck by the fact that in many the blood pressure declined to levels that were normal or almost so. They were levels much below those which prevailed long before any suspicion of congestive failure. These observations suggested the desirability of a trial of dehydration in essential hypertension. Our experience up to the present time leaves us with no doubt that a regimen of dehydration such as we employ in congestive failure produces favorable results in hypertensive patients who present no symptoms or signs of congestive failure. The proportion of hypertensive patients who show a conspicuous response is not large, and as yet we have discovered no means for sifting out in advance those who are likely to respond.

The patient whose history I have just described was subjected to this treatment. He was placed at complete bed rest in the hospital. His diet was restricted to six glasses of milk daily, representing 1.5 Gm. of salt, and he received six glasses of water daily. He also received a daily intramuscular injection of 2 cc. of Mercuhydrin. Within two weeks a radical change was in evidence: He lost six pounds of body weight and remained at the new level; the blood pressure declined to a level of about 180/100; the headaches subsided; and the negative T waves in leads 1 and 2 returned to positive T waves. After six weeks he was discharged from the hospital and continued the regimen at home in a modified form and, with gradual lifting of restrictions during the ensuing twelve months, before return to work, progressive increase in activities from complete bed rest to being up and about the major part of the day; liberal diet with salt restricted to approximately 2 Gm. daily; 2 cc. of Mercuhydrin once a week. He returned to work and eighteen months after the hospital experience, his condition was still essentially similar to that on the day of discharge.

This was the case of a fairly young man with advanced but uncomplicated hypertensive disease. I have here the account of a somewhat different case, an obese woman, sixty-six years of age, with a ten-year history of hypertension, with a systolic blood pressure around 260 during recent months of observation as an ambulant patient. She had a markedly enlarged heart, gallop rhythm, and some shortness of breath. Various doctors whom she consulted had advised surgical sympathectomy. She was also placed at complete bed rest in the hospital on a dehydrating regimen similar to the one I just described. Her body weight leveled off after a loss of 20 pounds and the systolic blood pressure after a decline to approximately 160. The gains were still there several months after discharge from the hospital.

Dr. Goldring, do you have any experience of this kind with rest and dehydration? Have you any opinion about it?

Dr. Goldring: My first objection to the notion that these cases indicate dehydration to be a valuable measure in the treatment of hypertension is the fact that the blood pressure level was the sole criterion.

Dr. Gold: But in the one, fairly severe headaches subsided, and in the other, shortness of breath.

Dr. Goldring: However, symptoms are so susceptible to all kinds of treatment that their disappearance cannot be used as an index of a specific action. The regimen you described could only lead to sodium and water depletion. Sodium depletion by restricting the diet produces no such effects on the blood pressure; water depletion by mercurial diuretics is only a temporary expedient and could not account for the prolonged effects. I would therefore be inclined to regard it as another form of psychotherapy.

Dr. Gold: I should state that I do not know what factors in this regimen account for the results. There is rest in bed, loss of body weight, salt and water depletion, a daily injection of the mercurial, and a systematic plan of treatment. Psychic influences are conveyed by any and all of these factors. However, the fact that the blood pressure showed a marked decline, that the electrocardiogram returned to normal, that severe headaches subsided, and that these changes persisted during the year and a half of treatment makes it difficult to assign the results to the psychic effect of the treatment.

Dr. Pardee: Was there any evidence of heart failure in these patients in the form of diminished vital capacity or increased venous pressure?

Dr. Gold: Neither vital capacity nor venous pressures were determined. The elderly woman with a gallop rhythm and shortness of breath may well have had heart failure, although there were none of the classic signs, no pulmonary rales, no enlargement of the liver, and no edema of the extremities. The man of forty-seven, however, presented no signs or symptoms of a failing heart.

Dr. Goldring: Would you be willing to admit that a chart similar to the one you described could be drawn from the files of a long-term follow-up clinic with patients who have had no dehydration treatment?

Dr. Gold: I suppose one could, but I believe that the number which would present the essentials of the case I described would be very small. There are many cases of hypertension with spontaneous remission. But you will recall that the case I described was that of a relatively young man with a very high blood pressure, retinal hemorrhages, and severe headaches, whose condition was growing progressively worse, who showed no improvement during several periods of bed rest, and whose resistance to treatment led to the recommendation of surgical sympathectomy. It was in a person with that history in whom prompt improvement appeared during bed rest and dehydration. I have a notion that histories of that kind will not be easy to find among patients who have not been subjected to the regimen of dehydration.

Dr. Stewart: Many years ago Dr. Alfred Cohen pointed out that, in some patients who develop heart failure, the blood pressure rises, while in others it falls, and that with recovery the pressure tends to return to its normal level. The second patient who had shortness of breath and a gallop rhythm, who improved with hospitalization and a diuretic regimen, would have to be eliminated as a case of lowering of the blood pressure as the specific result of dehydration.

Dr. Gold: The point which Dr. Stewart made regarding Dr. Cohen's observation on the relation between heart failure and change in blood pressure is sound and has been amply confirmed. However, it might be well to mention the fact that this person is a patient of a member of our staff who discovered she had hypertension about ten years ago, long before any complaints suggesting heart failure. It is, therefore, a case of arteriosclerotic and hypertensive heart disease followed by failure rather than failure resulting in elevated blood pressure.

Dr. Stewart: I note that in the first case the treatment involved a restriction of salt to only about 2 Gm. a day, and the use of the mercurial diuretic which would tend to pull out salt. I would attribute the effects in that case to salt privation since the changes are those which one would expect in patients who show some response to low salt.

Dr. Gold: I agree with that. Shall I then assume that you also regard dehydration as a satisfactory measure for the treatment of some cases of hypertension?

Dr. Stewart: No, I do not believe in dehydrating patients. I believe in keeping them free of any excess fluids they may have, but, when dehydration is produced, the result is carried to the pathologic side.

Dr. Gold: Time is so short that I am eager to avoid what may seem to be merely a play on words. However, since the matter is raised, it might be worth pointing out that the term dehydrate is a useful device in the English language for expressing in the broadest sense the notion of the loss of water. When the term is used in relation to a particular entity, a special definition is required to avoid confusion, such as the removal of the constitutional water from a salt, a pathologic state of excessive fluid loss characterized by a particular group of symptoms and signs, or a form of treatment of congestive failure in which the optimum amount of extracellular fluid is allowed to remain.

Visitor: I wonder whether Dr. Goldring is acquainted with any studies which relate the blood volume to the blood pressure?

Dr. Goldring: There have been many studies on blood volume, blood viscosity, and cardiac output, but in no instance, as far as I know, has a relationship been found between these factors and the level of the blood pressure.

Visitor: Do you prescribe any special diet for your hypertensive patients? I have in mind especially protein and fat restriction.

Dr. Goldring: I do not think there is any point in restricting the diet in any way for the purpose of reducing blood pressure. I not only allow a patient to eat as much meat as he wants, but I urge him to do so. Until we know more about this disease, its treatment will have to consist of treating the patient, and not only the symptom—the hypertension. I think it is there that most of the treatments at the present time bog down; the patient is disregarded, and a symptom is treated. The consequences are either no effects at all or unpleasant ones.

Summary

Dr. Gold: A large proportion of the measures which have received attention for the treatment of hypertension in recent years were discussed in the conference this afternoon. There were phenobarbital, thiocyanate, the rice diet, salt restriction, weight loss, renal extracts, tyrosinase, the diet limited in protein and fat, vitamin A, vitamin C, rutin, tobacco, alcohol, tetraethyl ammonium, dibenamine, bed rest, and a regimen of dehydration. One of the speakers with an extensive clinical and scientific experience in this field elaborated his belief that nearly all of these measures not only are without value, but promote, by their use, the failure to face squarely the limitations of our knowledge, thereby retarding scientific investigation. He was inclined to discourage smoking, but regarded alcohol with some favor. He stressed the points that the high blood pressure in so-called essential hypertension is only one of the many manifestations of hypertensive disease and not the disease itself, that the cause of the disease is not yet known, that the basic factor which ultimately leads to disaster is arteriolar degeneration, and that the persistent effort to lower the blood pressure as a primary therapeutic measure is without satisfactory evidence as a means for retarding the progress of the arteriolar trouble or protecting against vascular accidents. He expressed his position without compromise that psychotherapy is the most effective assurance against disability in the hypertensive patient.

Although the value of the control of physical and emotional stress is quite generally appreciated, views concerning treatment in other respects differed widely, and, in these, contrary opinions were voiced with similar conviction. There was the point that the current medical treatment of hypertension represents much more than psychotherapy, that the mere lowering of the pressure by a drug, such, for example, as thiocyanate, not merely enhances the sense of well-being through reassurance and allaying anxiety, but, by removing physical stress on the heart it retards its enlargement with the consequent tendency to failure, and slows the process of arteriolar degeneration, reducing the hazard of vascular accidents. Also, experiences were cited favoring the view that a regimen of dehydration with a milk and water diet and the mercurial diuretic given in frequent intramusuclar injections, a program similar to that employed in congestive failure, produces in some hypertensive patients free of congestive failure striking and protracted results indicative of essential improvement represented by such changes as loss of weight, very large decline of the level of the systolic and diastolic pressure, subsidence of severe headaches, discontinuance of repetition of fundal hemorrhages, and change of the negative T_1 and T_2 to positive T_1 and T_2 in the electrocardiogram. These observations also failed to pass without vigorous disagreement.

It is fortunate that this conference is intended for the profession and is not likely to reach any considerable number of nonmedical readers. For the victim of hypertension, or for the prospective one, it can hardly be considered a source of encouragement. There is also the fact that the patients receiving predominantly psychotherapy are apt to lose a fair share of their response when the precise nature of the treatment becomes known to them.

The results of this conference point sharply to what is wanting. It is clearly neither more pessimism nor more optimism regarding the treatment of hypertension, but more facts. These should be fairly easy to secure from investigations so designed as to yield statistically valid answers. For the present, it might even suffice to confine such studies to the drugs and measures mentioned in this conference for, concerning these, the discussion revealed little more than impressions and opinions.

THE EFFECT OF MINERAL DEFICIENCY STATES UPON THE CARDIOVASCULAR SYSTEM

Many patients undergoing attacks of clinical tetany following thyroid surgery have high blood pressure, and in the older groups many develop angina. Characteristically, these give histories of leg cramps, weakness, muscular irritability, and laryngospasm relieved by giving calcium and parathyroid extract. The fact that numerous cardiovascular patients who did not have thyroid surgery complained of the same symptoms brought up the question of whether mineral deficiency states might reasonably be considered as a causative factor, particularly since in many of these latter cases symptoms were relieved by addition of 1 to 3 Gm. of calcium added to a balanced diet. Some received dihydrotachysterol as well. Consequent on these observations, a study has been initiated for investigation of the relationship of mineral metabolism to vasospastic phenomena. The general plan of investigation includes both animal experimentation and clinical observation. The laboratory studies are concentrated chiefly on methods of measurement of serum calcium in the ionized state, since this is the only fraction that can affect neuromuscular irritability.

Although these determinations so far are too few for statistical analysis, many cases of subclinical tetany with vasospastic phenomena have been found with considerably less than 50 per cent of their total serum calcium in the dialyzable state. —*Mary C. Colglazier, M.D., Medical Women's Journal, January, 1949*

Case Reports

STEVEN-JOHNSON SYNDROME TREATED WITH AUREOMYCIN

E. Khayat, M.D., and M. G. Jacoby, M.B., Jamaica, New York

(*From the Jamaica Hospital*)

STEVEN-JOHNSON syndrome, erythema multiforme exudativum, is a specific disease characterized by high fever, bullous umbilicated skin lesions, conjunctivitis, and involvement of the mucous membranes. The mucosa of the mouth is always involved and the lining of the genital tract occasionally. Rarely, the lower respiratory tract is affected. There are prodromal symptoms of common cold, malaise, sore throat, grippe, and slight temperature for up to one week. The disease is self-limiting, usually resulting in complete recovery. Occasionally, blindness results from keratitis and panophthalmitis and, rarely, death.

Case Report

This is a case of a nineteen-year-old white female whose chief complaints were conjunctivitis, a bullous skin eruption, sore mouth and throat, herpes on the lips, and a severe vulvovaginal pruritis with a purulent vaginal discharge.

Previous history included measles, mumps, chickenpox, recurrent bronchitis until the age of six, tonsillectomy at nine, and infectious mononucleosis three years before the present examination. For the last four or five years she had suffered from recurrent herpes labialis. This was treated by yearly series of smallpox vaccinations at one-week intervals, resulting in periods of eight months to a year of complete freedom of symptoms. The last vaccination was given in June, 1949.

She had lost 8 pounds in the last month. She had had a bad cold and cough and had been feeling run down for the last three weeks.

The patient was first seen on October 29, 1949, complaining of a dry cough, a sore throat, and a continuous feeling of tiredness. At that time she had a slight fever, her throat was moderately injected, and sparse herpes vesicles were noted on the upper lip and chin. No skin lesions were present, and no vesicles were seen in the mouth. She was given elixir of terpin hydrate and aspirin and advised to stay in bed for twenty-four hours.

Two days later, she developed a severe bilateral conjunctivitis and a sore mouth. She had a loose cough and appeared to be acutely ill. Temperature was 104 F. Examination showed the conjunctivae to be congested with a mucopurulent discharge, but the corneas were clear without evidence of ulceration. There were scattered vesicles on the cheeks.

The nares were patent, and the anterior nose showed no evidence of involvement. The lips were swollen, crusted, and fissured. Numerous macules and vesicles were scattered over the lips and chin. The buccal and gingival mucous membrane and the mucosa of the pharynx and the hard and soft palates showed a vesicular eruption and innumerable aphthous ulcers. The tongue was coated, and its undersurface was fetid. There was a marked fetor oris. The mandibular joints were extremely painful, and the mouth was difficult to examine because of this. The cervical nodes were tender and enlarged bilaterally.

Examination of the chest revealed no significant findings except for scattered rales and a cough which had become loose in character. The heart was normal and the blood pressure 110/80. The abdomen was essentially negative, and the reflexes were normal.

Laboratory findings were as follows: Blood count showed red blood cells 4,300,000, hemoglobin 90 per cent (13.2 Gm.), white blood cells 12,800 with polymorphonuclear leukocytes 80 per cent, lymphocytes 14 per cent, monocytes 5 per cent, and eosinophils 1 per cent. Urine was cloudy with traces of albumin, no sugar, eight to ten pus cells per high power field, an occasional red blood cell, no casts, abundant epithelial cells, mucous threads, and some amorphous material.

On the following day, the body was covered with scattered macular and vesicular lesions which varied in size from a pinhead to about 0.8 cm. in diameter. There were some present on the upper extremities and chest, but they were more numerous on the abdomen and lower extremities. The eruption was more prominent on the flexor than the extensor surfaces, and was extremely itchy. There was a purulent vaginal discharge, and numerous herpetiform lesions were present over the perineum and vulva. Pruritus was extreme.

A throat swab was negative for diphtheria and showed abundant leukocytes and gram-negative diplococci. A smear from the gums showed Vincent's organisms. A vaginal smear showed innumerable pus cells but no specific organisms. The Wassermann was negative.

Treatment.—Aureomycin therapy was instituted in a dosage of 500 mg. in tablet form every four hours. The fluid intake was adequate in spite of the difficulty the patient had in opening her mouth and swallowing. The skin lesions were treated conservatively with Calmitol ointment. The eyes were treated with boric acid compresses and eyewash and the stomatitis with a sodium perborate mouthwash.

Progress.—On the second day of treatment the temperature, which had gone up to 104.8 F. came down to 100 F. The headache and general symptoms subsided. The swelling of the eyelids and the conjunctivitis improved. The mouth remained very sore, but fluids were taken with less difficulty, and the patient could open her mouth. The whole oropharynx was covered with aphthous ulcers. The tongue was still swollen and dark red, and the dorsum was heavily coated. The fetor oris was still marked. The cervical lymph nodes were smaller and not tender. The skin vesicles were dry and umbilicated but were still dull red in color and remained itchy.

The vaginal discharge had diminished. The vulvovaginal and perineal lesions had improved. The pruritus was less distressing. No inguinal lymph nodes were felt at any time.

On the third day the temperature was 97.6 F. All general symptoms had completely disappeared. The local symptoms were on the downward trend.

On the fourth day the skin lesions disappeared. The stomatitis had greatly improved, and the patient could now open her mouth and take semisolid foods without difficulty.

The treatment was discontinued on the fifth day.

The patient was discharged on the seventh day after commencing treatment with aureomycin, the tenth day after she was first seen.

Follow-up.—Two weeks after discharge she was seen again. She had regained her normal weight and presented an occasional herpes lesion on the lip and chin.

A new series of smallpox vaccinations was instituted. After the second vaccination she was completely free from skin lesions and has since remained symptomless.

A TRACTION DIVERTICULUM OF THE THORACIC ESOPHAGUS CAUSED BY SUPPURATIVE LUNG ABSCESS

Walter F. Bugden, M.D., Syracuse, New York

(From the Department of Surgery, Syracuse University Medical College)

TRACTION diverticulum of the thoracic esophagus is commonly regarded as an asymptomatic, incidental roentgenographic finding, or as an autopsy curiosity. Schatzki reported a traction diverticulum with a calcified gland close to the fundus and another within a mass of actinomycotic inflammatory tissue.[1] Hawes has said, "The best known example of the effect of an adhesion on the esophagus is the traction diverticulum, which is frequently seen in adults roentgenoscopically."[2]

Herewith is reported a case of traction diverticulum of the middle portion of the thoracic esophagus, caused by a chronic inflammatory lesion, which necessitated esophageal surgery incidental to pulmonary resection. Pulmonary suppuration occurs not infrequently as a result of aspirated food regurgitated from pulsion esophageal diverticulum. This case reverses that sequence in that a traction diverticulum, caused by adhesion of the esophagus to a chronic lung abscess, was encountered at thoracotomy. There had been no esophageal symptoms elicited preoperatively nor could any be suggested to the patient in retrospect. The pulmonary surgery was difficult because of the longstanding suppurative disease, and it became necessary to open into the esophageal lumen and then do an esophagoplasty, because the diverticulum was inseparable from the involved lobe. Esophageal surgery in the face of pulmonary resection for chronic suppurative disease is not particularly desirable, but no alternative step was available. It would seem that this patient might have gone on to develop an esophagobronchial fistula. Careful preoperative studies would undoubtedly have revealed the presence of the diverticulum, but the surgical approach would have been no different.

Case Report

A Polish woman, fifty years of age, was admitted

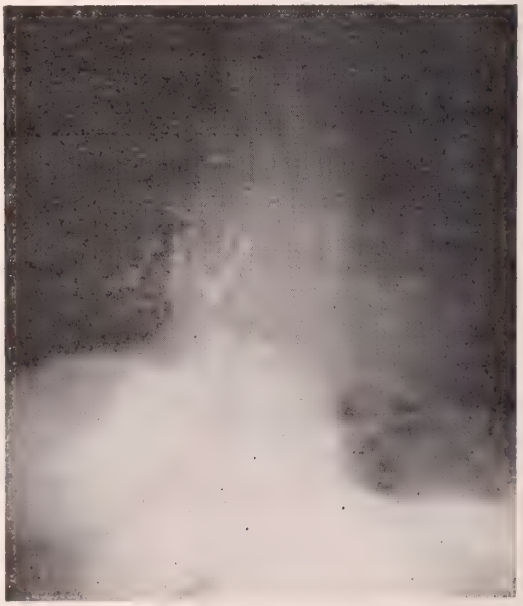

Fig. 1. Lipiodol bronchogram demonstrating bronchiectasis of right lower lobe, posteroanterior view.

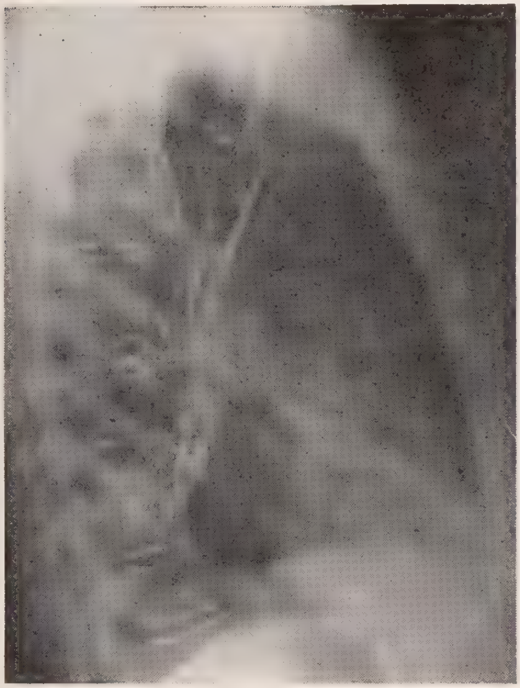

FIG. 2. Lipiodol bronchogram demonstrating bronchiectasis of right lower lobe, lateral view.

to the Syracuse Memorial Hospital on September 11, 1947. Nine months before this admission, a lung abscess was drained at another hospital. After the tube was removed, she did well for several months but then again developed a productive cough. The sputum was green, nonodorous, and varying in amount from one-half to three ounces daily. She also complained of general malaise. Her physical examination was essentially noncontributory. Bronchogram with iodized oil revealed definite bronchiectasis of the right lower lobe (Figs. 1 and 2).

At operation on September 17 an indurated chronically infected right lower lobe was encountered. Individual ligation dissection was begun. While dissecting the lung from the posterior chest wall in the region of the previous rib resection, a chronic abscess was inadvertently opened. Further dissection revealed that the esophagus was pulled up out of the mediastinum by and attached to the posterior portion of the lower lobe. A traction diverticulum 2 cm. wide and 4 cm. long was inseparably attached to the lung. The diverticulum was opened, resected, and the esophagus closed longitudinally with two layers of interrupted fine silk sutures. The muscularis was so frayed and thinned out that this layer of sutures was not very satisfactory. The vein was ligated and divided; the artery and bronchus were ligated and divided together because of technical difficulties.

Postoperative care was routine, except that feedings by mouth were restricted in the same fashion as for esophageal resections. On the nineteenth postoperative day a small bronchopleural fistula became apparent. Within four weeks this was closed and the wound completely healed.

Summary

A case of traction diverticulum of the esophagus associated with and caused by chronic suppurative pulmonary disease is reported. The discovery of the diverticulum was incidental at surgery but added a serious step to the surgical procedure. A small bronchopleural fistula developed on the nineteenth post-operative day but healed readily. The patient is well at this time (three years postoperatively) and has neither pulmonary nor esophageal symptoms.

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PHYSICIANS' INCOME SURVEY MAY BE MOST ACCURATE EVER MADE

Commerce Department officials continue enthusiastic over cooperation on the physicians' income survey. Commerce and A.M.A.'s Bureau of Medical Economic Research are jointly conducting the poll. The way returns are coming in, the survey may turn out to be the most accurate professional poll ever conducted. However, there still is the possibility that too many physicians without bookkeepers will neglect to send back the forms, resulting in an excessively high average income figure.

To date almost half of the 100,000 uncoded, short forms (covering one year only) have been returned. About 40 per cent of the 15,000 coded long forms (covering last five years) have been returned, and a slightly higher percentage of the 10,000 coded short forms. No direct appeal will be made to the uncoded group, but follow-up letters will be sent to the others with the objective of getting a return of 70 per cent.

The heavy return to date, Commerce Department says, means the survey can be made more useful in several respects. Breakdowns of average incomes now will be possible for about 44 instead of 20 states, as planned, and for 15 or so instead of one or two large cities. However, the unexpected volume of returns probably will mean the survey will not be completed in November as scheduled.

TRICHINOSIS SIMULATING SINUSITIS

Max J. Schroeder, M.D., New York City

(From the Department of Gastroenterology of the Stuyvesant Polyclinic Hospital)

THIS case portrays certain interesting features from the standpoint of onset, course, and diagnosis.

Case Report

On September 28, 1949, a fifty-two-year-old woman of Polish descent began to complain of "rings" underneath both lower eyelids, such as sometimes follow lack of sleep or sheer exhaustion. However, the next day she felt better and went to work as an elevator operator. About two days later, she noticed that her face, as well as both lower eyelids, appeared puffed. This picture was associated with slight headache, dizziness, stuffed nose, low-grade temperature of 99.8 F., and a generalized grippelike sensation. There were no associated symptoms. As this picture was unfolding, the headache, dizziness, and generalized sense of fatigue became more prominent. The muscular aches felt like those associated in the past with an upper respiratory infection.

About forty-eight hours later, the picture suddenly changed to resemble the possibility of fulminating pansinusitis, cerebrospinal meningitis encephalopathy, or other allied conditions. At this time she was prostrated and was vomiting. This was associated with an acetone breath, dry tongue, temperature of 104 F., pulse 120, and semistuporous condition. The eyes were almost closed, and the eyelids by this time were markedly puffed. The subjunctival hemorrhage was pronounced. This was associated with photophobia. The next day chemosis made its appearance, associated with tenderness over frontal and maxillary sinuses as well as a suggestion of nuchal rigidity, severe headache, and positive x-ray accessory sinus findings.

The blood count showed a normal red cell count and white blood cells 9,200, 70 per cent polymorphonuclears, eosinophils 10, monocytes 2, lymphocytes 18, and nonprotein nitrogen 46. There was a trace of sugar in the urine.

It was at this time that chemosis and the blood eosinophil count of 10 per cent drew attention away from sinusitis towards trichinosis, especially in view of the history of having eaten pork-bologna about two weeks prior to the onset of the present illness.

Aside from the clinical evaluation, laboratory help in establishing the diagnosis was derived from a gradually rising antigen dilution titer: 1:320 on October 6, 1:640 on October 13, and 1:1,280 on October 20. Complement fixation test, submitted to the University of Buffalo School of Medicine, was negative, and this result was returned with the remark, "It frequently takes four to seven weeks after infestation before antibodies appear in the patient's serum." From the practical viewpoint this implies that, by the time the test is valid, the patient is either better or dead. Even the muscle biopsy test does not aid in time.

It is interesting to sketch briefly the high points in the course of this case: It presented the picture of a very sick patient running a high temperature, 103 to 104 F., associated with a slow pulse of 96, marked prostration, and vomiting. For about three weeks the temperature would dip low in the morning to 100.5 F. and rise to 103, 104, or 105 F. in the evening. Close to the end of the third week of illness, the patient experienced intermittent epigastric distress for about three days. This closely resembled diaphragmatic pleurisy. Most likely this heralded the invasion of the diaphragmatic muscle by the trichinae.

Another symptom that is worthy of mentioning, and which was rather distressing for the patient, was her inability to void for about twelve days. During this time she had to be repeatedly and almost continuously catheterized, and even then the urinary output was scanty. The urinary findings were not remarkable except for a few hyaline casts and a faint trace of albumin, as may go with any condition causing a high temperature. She recovered completely after the illness had lasted about five weeks.

Therapy was mainly supportive, as large doses of penicillin and intravenous aureomycin did not in the least influence the existing condition. Supportive measures consisted of intravenous fluids, electrolytes, and vitamins, since the mouth intake was negligible, particularly in the face of almost persistent vomiting.

Comment

Since the available laboratory aid relative to the establishment of an early diagnosis is limited in its scope, it is well to stress the outstanding and pertinent clinical facts that help us to make a diagnosis, which includes the puffed condition of the face and eyelids and the gradual onset which, at the beginning, may simulate conjunctivitis sinusitis, or upper respiratory infection. It is well to bear in mind that this rather mild beginning could assume alarming proportions and cause us difficulty in differentiating the condition from typhoid fever, fulminating pansinusitis, acute encephalitis, cerebrospinal meningitis, or other allied acute cerebral entities.

Most authors appear to overemphasize the muscular pain and swelling. This is certainly refuted in our case, since the muscular tenderness was very slight, as it is at times in a "grippey" condition or when associated with an appreciable temperature.

It is well to bear in mind that the white blood count may be within normal limits and also to recall that at the onset the eosinophil count may be normal. I well recall another case of trichinosis where the eosinophilia did not make its appearance before the latter part of the second week of illness. There may be another reason why the eosinophilia is very low or within normal limits, i.e., when the condition is very severe or when the resistance of the patient is very low.

While chemosis and conjunctival symptoms are of the utmost significance from a diagnostic viewpoint, we must not lose sight of the fact that they may be of short duration (as it was in this case) and may not present themselves at the time of the examination.

319 East 6th Street

UNILATERAL MASSIVE VARICOSITIES OF THE VULVA IN A TWENTY-ONE-YEAR-OLD VIRGIN

MARIE PICHEL WARNER, M.D., and FREDERIC W. BANCROFT, M.D., F.A.C.S., New York City

(*From the Department of Obstetrics, Gynecology, and Surgery, Beth David Hospital*)

THIS presentation describes a case of unilateral massive varicosities of the vulva and left labia majora in a twenty-one-year-old virgin, simulating in appearance a large hemangioma or a varicocele in the male. Unilateral massive varicose veins of one labia majora in nonpregnant states, especially in young nulliparous females without some demonstrable cause or evidence of varicose veins elsewhere, are infrequent enough to warrant reporting.

Case Report

On January 15, 1948, M. M., a twenty-one-year-old, unmarried, white woman, consulted one of us (M. P. W.) because of a "large growth on the left side of the external genitals" (Fig. 1). Her mother had called her attention to the one-sided enlargement at the time of her first menstruation but had then told her that medical treatment of the genital anomaly was not necessary until she married. Because she was planning to be married shortly she sought medical advice. Even though she had no discomfort or physical symptoms from the tumor mass other than an awareness of its presence, she expressed concern over the possibility that she had some abnormal genital development which she thought might interfere with marital relations or childbearing. She also had an anxiety as to the possibility of it being a malignant tumor mass. She had had no sexual experience and was extremely embarrassed about a genital examination. Her personal and family history were essentially negative. Her menstrual cycle began at the age of twelve, occurred at regular thirty-day intervals, and lasted five days. She was of normal, female body build, $67^1/_2$ inches tall and weighed 151 pounds. Physical examination was negative except for the external genital lesion. She presented an enlargement of the left labia majora to about four times the size of the right one.

The tumor mass in the left labia majora was about the size of a hen's egg with numerous tortuous large varicose veins seen and felt under the skin and had two darker purplish-blue, nipple-like projections protruding as shown in the picture. There were extensive clitoral adhesions. The general appearance was that of a large Bartholin cyst. The mass transilluminated well and was not tender to touch. There was no impulse felt on coughing or straining. The hymen was intact and barely admitted one finger. The smallest size vaginal speculum was introduced, disclosing a normal vaginal canal and a clean, small, nulliparous cervix. Vaginal smear showed good estrogen activity. The internal pelvic organs appeared to be normal on bimanual rectal examination.

A differential diagnosis included: hemangioma (birth nevus), varicose veins of the vulva, endometriosis, labial hernia, or anomalous ovarian or testicular tissue.

The patient was seen in consultation by Dr. Frederic Bancroft, who agreed on the diagnosis of massive varicosities of the vulva and advised surgical removal. This was done at Beth David Hospital on January 29, 1948, under general anesthetic. Because a large varicosity could be felt passing over to the vulva, it was thought advisable to first ligate the left long saphenous vein. There were numerous anomalous branches which were doubly ligated to the bulb. The skin wound in the groin was closed with interrupted silk sutures. The patient was then placed in the lithotomy position, and an elliptic

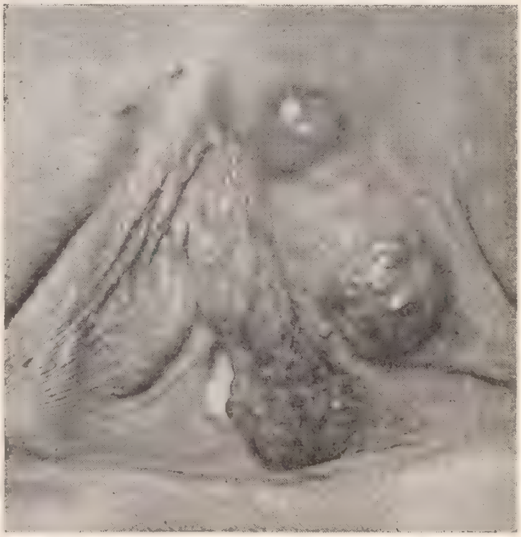


FIG. 1. Original lesion showing unilateral varicosities of left labia majora.

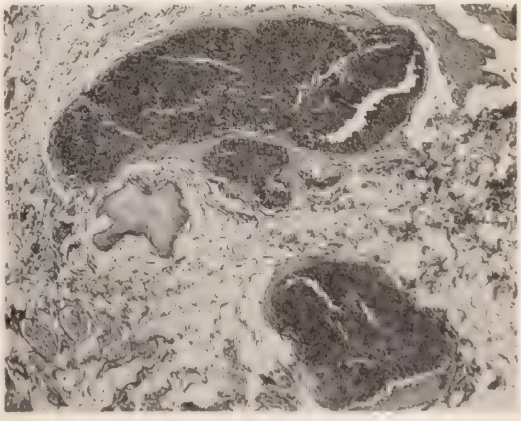


FIG. 2. Microscopic pathology.

Presented at the Clinico-Pathological Conference at Beth David Hospital on February 13, 1950.

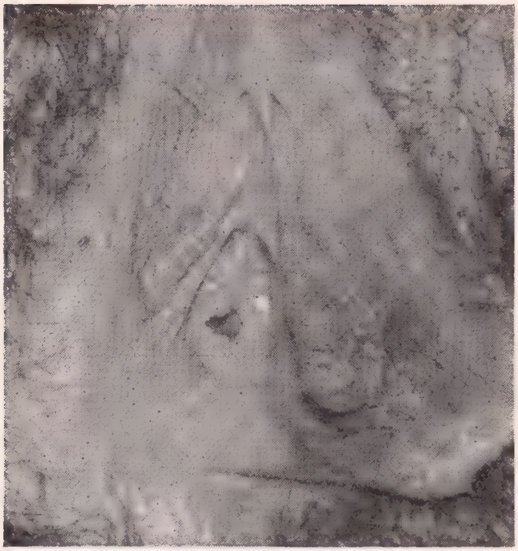


FIG. 3. Postoperative result. Follow-up photograph taken on February 28, 1950, twenty-five months after operation.

incision made about the tumor mass in the left vulva, extending the upper end well about Poupart's ligament since the large varicosities continued there. The veins to the hemangioma were doubly clamped, ligated, and cut. Considerable bleeding was encountered during the tedious process of dissecting, freeing, and removing the vulvar hemangioma en masse. A rubber drain was inserted at the lower angle, and an elastoplex compression bandage was applied. An indwelling catheter was sutured in place. Sulfadiazine tablets, $7^1/_2$ grains, three times a day, were given.

Because of slight bleeding postoperatively, the patient was kept at bed rest for five days, when the sutures were removed. There was primary union of the vulvar incision with slight sloughing of the lower angle. There was marked edema of the labia. She was discharged ten days postoperatively and advised to take hot sitz baths and to do knee-chest exercises several times a day to help reduce the edema and induration, by improving the venous circulation.

Pathologic report by Dr. Milton Helpern stated: "Specimen consists of an irregular mass of thickened skin and subcutaneous tissue with large varicose veins in the skin and dilated veins in the subcutaneous tissue. Microscopic diagnosis: Telangiectatic skin with follicular hyperkeratosis and hypertrophy of sebaceous glands; varicose veins of labium majus" (Fig. 2).

The patient was re-examined six months postoperatively at the time of her premarital examination. The left labia was still edematous to about three times the size of the right with varicosities showing. Seven months postoperatively, a retained suture sloughed through a fistulous opening in the left inguinal scar.

Follow-up photograph was taken on February 28, 1950, twenty-five months postoperatively (Fig. 3). This shows much less swelling of the left labia which, however, is still markedly larger than the right with persisting evidence of varicose veins. The patient is happily married and commented that she had never had any discomfort locally and is well-satisfied with the end results.

20 WEST 86TH STREET
16 EAST 90TH STREET

PROSTHETIC AND SENSORY AIDS INFORMATION CENTER

The Veterans Administration has invited physicians throughout the country to utilize a Prosthetic and Sensory Aids information center which was opened at 252 Seventh Avenue, New York City, on June 22.

Scores of scientists, physicians, prosthetic appliance inventors, and manufacturers attended a ceremoney at which Carl R. Gray, Jr. Administrator of Veterans Affairs, opened the center. They were informed that the exhibit which comprises the central physical property of the center is "the most complete collection of appliances and sensory aids now in existence anywhere in the world."

Gray said it is hoped that the New York City installation will "prove of real day-to-day value to the many physicians and surgeons throughout the nations who desire to keep abreast of the latest developments in the field of prosthetic and sensory aids."

The agency is prepared to service physicians who visit New York individually or to attend conventions, those who write the center for information, and to distribute up-to-date information through films and other materials available to hospitals and recognized medical groups. The exhibit will acquaint visitors with advantages and disadvantages of the latest appliances developed.

MALPRACTICE INSURANCE AND DEFENSE BOARD

John F. Kelley, M.D., Chairman

Malpractice Protection for Members on Active Duty with the Armed Forces

ONCE again the members of the Medical Society of the State of New York are being called up to serve in the armed forces of the United States. An increasing number of them are reporting for active duty, and it will be to their interest, as well as to all others subject to military call, to know what malpractice protection they may need while in service.

The Surgeon General of the Army has held that all members of the Army have the same civil rights of action between one another with reference to suits for malpractice or personal negligence as they have in civil life. The same degree of care, diligence, and professional ability required of a physician in caring for patients in civil life is required by law of a medical officer in the Army.

If departure from such standards results in harm to the patient, a medical officer will be liable in a civil suit by the patient just as if both the patient and the physician were in civil life. Thus, a medical officer in the Army stands in no different position with respect to answerability to his patients than that of a physician acting solely in a civilian capacity.

Medical officers on post or station duty are frequently called upon to care for the families and dependents of men and women in the Army, as well as the military personnel themselves. Although medical service to such civilians is furnished free of charge, a medical officer's liability to them is the same as it would be in civilian practice.

Were a claim to be pressed against a medical officer for alleged malpractice in the performance of his official duties, the government would no doubt provide defense for the physician accused. It has been the practice of the Attorney General in the past to provide, on request of an interested government department or agency, defense for government officers or agents in civil suits arising out of the activities undertaken in the discharge of their official duties.

The Judge Advocate General of the Army stated in 1941 that in the past the War Department itself had not undertaken the defense of a civil suit for malpractice brought against a member of the Medical Corps but that the defendant medical officer has had the right to have the case removed to a Federal court and to be defended by a United States attorney designated by the Department of Justice. He stated, however, that if a judgment were rendered against the medical officer, there is no provision by which the government can either pay the judgment or reimburse the defendant physician.

In many cases, members of the Society entering the armed forces leave their civilian practice in the care of other physicians to preserve it for them against their return to civil life. Under such an arrangement, it is likely that the locum tenens may be held to be the agent acting for the physician in service, and a suit for the acts of the agent would probably be brought against both doctors.

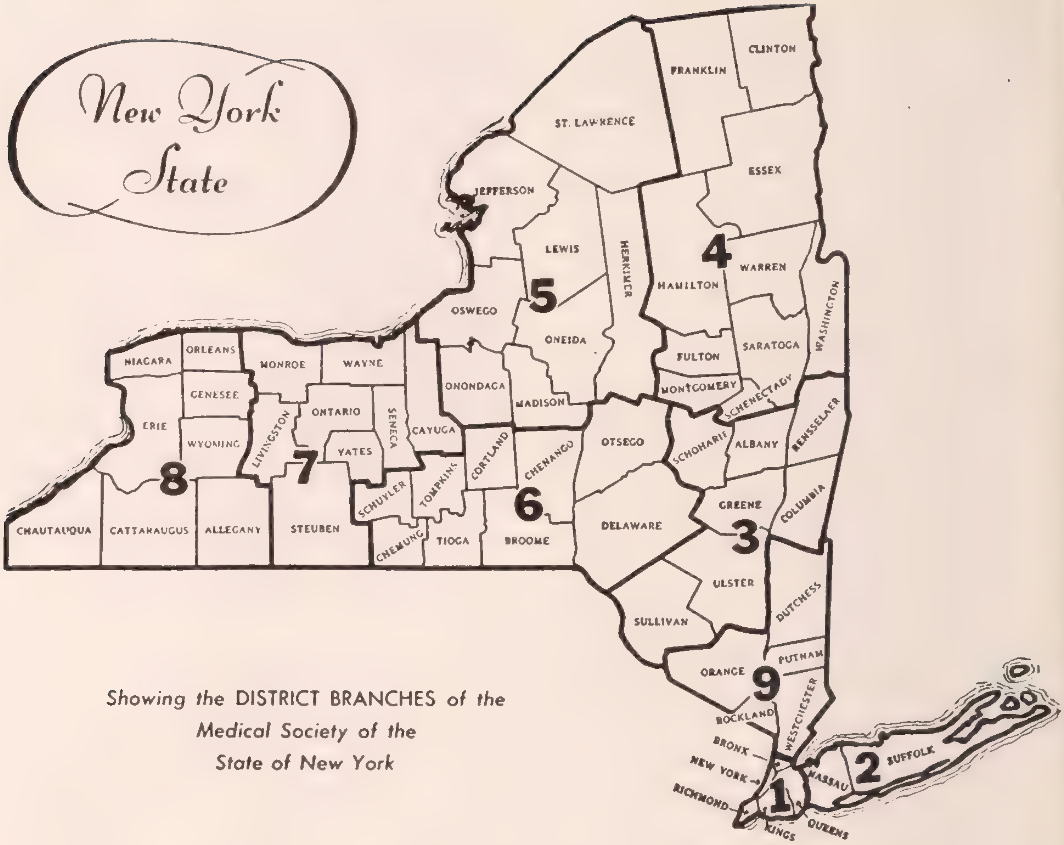
To provide protection for members of the Society against such liability as they may have while in service, the Medical Society of the State of New York has arranged with the Employers Mutual Liability Insurance Company to extend their insurance coverage under the group plan at 30 per cent of the base rates, plus the contingent reserve factors. For such coverage, therefore, the annual rates for minimum limits of $5,000/$15,000 are as follows:

Upstate members	$14.70
Metropolitan members	$20.00

Special attention is directed to the fact that protection on account of the acts of a locum tenens can be obtained only if the substitute physician is a member of the Medical Society of the State of New York and is individually insured under the group plan.

Although the liability of members in service appears to be substantially reduced, there is still considerable need for good insurance protection. Therefore, in view of the very low cost of such protection offered by the group plan of the Society, the Malpractice Insurance and Defense Board recommends that members in service retain their malpractice insurance.

Insurance now in force can be endorsed to provide protection while in service at the reduced rates by communicating with Mr. H. F. Wanvig, Indemnity Representative of the Society, 70 Pine Street, New York 5.


New York State
CLINTON
FRANKLIN
ST. LAWRENCE
ESSEX
JEFFERSON
LEWIS
HERKIMER
4
HAMILTON
WARREN
5
OSWEGO
ONEIDA
WASHINGTON
SARATOGA
FULTON
MONTGOMERY
SCHENECTADY
NIAGARA
ORLEANS
MONROE
WAYNE
ONONDAGA
MADISON
GENESEE
ERIE
LIVINGSTON
ONTARIO
SENECA
CAYUGA
WYOMING
YATES
CORTLAND
CHENANGO
OTSEGO
SCHOHARIE
ALBANY
RENSSELAER
8
7
SCHUYLER
TOMPKINS
6
GREENE
COLUMBIA
CHAUTAUQUA
CATTARAUGUS
ALLEGANY
STEUBEN
CHEMUNG
TIOGA
BROOME
DELAWARE
3
ULSTER
DUTCHESS
SULLIVAN
PUTNAM
ORANGE
9
ROCKLAND
WESTCHESTER
BRONX
NEW YORK
NASSAU
2
SUFFOLK
RICHMOND
1
KINGS
QUEENS

Showing the DISTRICT BRANCHES of the
Medical Society of the
State of New York

DISTRICT BRANCHES—COMPONENT COUNTY SOCIETIES

First District Branch

New York
Bronx
Kings
Queens
Richmond

Second District Branch

Nassau
Suffolk

Third District Branch

Albany
Columbia
Greene
Rensselaer
Schoharie
Sullivan
Ulster

Fourth District Branch

Clinton
Essex
Franklin
Fulton
Montgomery
Saratoga
Schenectady
Warren
Washington

Fifth District Branch

Herkimer
Jefferson
Lewis
Madison
Oneida
Onondaga
Oswego
St. Lawrence

Sixth District Branch

Broome
Chemung
Chenango
Cortland
Delaware
Otsego
Schuyler
Tioga
Tompkins

Seventh District Branch

Cayuga
Livingston
Monroe
Ontario
Seneca
Steuben
Wayne
Yates

Eighth District Branch

Allegany
Cattaraugus
Chautauqua
Erie
Genesee
Niagara
Orleans
Wyoming

Ninth District Branch

Dutchess
Orange
Putnam
Rockland
Westchester

FORTY-FOURTH ANNUAL MEETINGS
# of the
DISTRICT BRANCHES
# of the
MEDICAL SOCIETY OF THE STATE OF NEW YORK

PROGRAMS

SECOND DISTRICT BRANCH

Wednesday, November 1, 1950
Garden City Hotel
Garden City, New York

Afternoon Session

2:30 P.M.—Registration

3:00 P.M.—"Clinical Aspects of the Use of ACTH and Other Steroids in Rheumatic Disease"

Charles A. Ragan, Jr., M.D., assistant professor of medicine, College of Physicians and Surgeons, Columbia University

4:00 P.M.—"Recent Advances in the Treatment of Diseases of the Lung with the Newer Drugs"

Alvan L. Barach, M.D., associate professor of clinical medicine, College of Physicians and Surgeons, Columbia University

5:00 P.M.—Business meeting, election of officers

Evening Session

6:00 P.M.—Refreshments and dinner for physicians, wives, and guests

Introduction of officers of the Medical Society of the State of New York

Address by **Carlton E. Wertz, M.D.,** president, Medical Society of the State of New York

Remarks by **Mrs. Hugh G. Henry,** president, Woman's Auxiliary to the Medical Society of the State of New York

Officers—Second District Branch

President	Charles C. Murphy, M.D., Amityville
Second Vice-President	Austin B. Johnson, M.D., Cedarhurst

Presidents of Component County Societies

Nassau	Leo T. Flood, M.D., Hempstead
Suffolk	Perry S. Horenstein, M.D., Bellport

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on June 8, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of service with the armed forces for one member for 1950; on account of illness for eleven members for 1950 and one for 1949; also War Memorial assessment on account of illness was remitted for one member.

As instructed by you, I have thanked Governor Dewey for his letter that was read at the House of Delegates, May 8.

Having learned from the Membership and Fellowship Department of the American Medical Association that Dr. William H. Ross is eligible for Associate Fellowship in the American Medical Association without jeopardizing his active membership in the Medical Society of the State of New York and the Suffolk County Medical Society, as desired by Dr. Ross, your Secretary has taken the liberty to so nominate him to the A.M.A. Your confirmation of this is respectfully requested.

Your Secretary spent Thursday, May 25, at the State Public Welfare Department in Albany, with Dr. Charles F. Rourke of Schenectady representing your Subcommittee on Public Medical Care, of the Economics Committee. This meeting consisted of several of the county welfare commissioners and several medical directors of county welfare departments. Discussion of regulations for medical care of welfare clients was continued.

Matters from the House of Delegates.—In addition to the usual correspondence, your Secretary has communicated with your delegates to the American Medical Association regarding their duties. He has also studied many of the House of Delegates resolutions, and those referred to this Council are as follows:

Section 107, House Minutes—Report of Reference Committee on Report of President

A. It was voted "that cooperation be established by the proper committees of the Council to coordinate postgraduate medical education on a State level with the nine medical schools, the State Department of Health, and all other interested agencies. Courses for the general practitioner should be stressed."

The Council voted that this be referred to the Committee on Public Health and Education.

B. It was voted "that adequate coverage of night and emergency calls is of paramount importance and should receive wholehearted support from all county societies and communities."

The Council voted to urge each county society to establish an emergency medical service if it has not already done so and that the Secretary be instructed so to write the secretaries of the component county societies and that the NEW YORK STATE JOURNAL OF MEDICINE be requested to draw attention to this subject.

C. The House voted "We heartily endorse the idea of a community health council on a State and local level which brings into one agency all local elements which are able and willing to contribute to better health planning."

The Council voted to refer this to the Public Health and Education Committee and the Committee on Public Relations.

Sections 152, 145, 150, House Minutes—Report of Reference Committee on Report of Treasurer, Trustees, and Finance

A. The House voted "that the remainder of the year 1950" be allowed members for payment of the War Memorial Assessment, but no longer.

No action necessary.

B. Approval was voted of the recommendation "that an increase of $5.00 per year per member of State dues be herewith enacted" as of January 1, 1951.

C. The resolution "that the House of Delegates of the American Medical Association be memorialized to instruct the administrative division of the American Medical Association to establish its own independent procedures for collecting the dues of this organization directly from the individual members," was referred to you for study and action to have this accomplished "in most efficient manner."

After discussion, *the Council voted* to refer this to the New York delegation to the American Medical Association with power to act.

Section 108, House Minutes—Report of Reference Committee on Report of Planning Committee for Medical Policies

It was voted that "We urge the Council to continue to support these regional conferences which are sponsored by the American Medical Association," referring to the Middle Atlantic States Regional Conference of the Council on Medical Service of the American Medical Association.

Read for information.

Section 140, House Minutes—Report of Reference Committee on Report of Council, Part VI

Dr. Thomas O. Gamble, chairman, in considering problems affecting the medical profession and hospitals, reported favorably on the suggestion that "in addition to the present Council Committee, a special committee be set up in those counties that have hospital facilities. One member of this committee should be a general practitioner. This committee should join with the committee from the boards of trustees of local hospitals. This joint committee could work with sympathetic understanding for the benefit of all. . . . ." It suggests, however, that "if the rules of professional conduct as outlined in our code of ethics were observed, and if the county societies unswervingly defend that position, a start would be made in the right direction."

The Council voted to instruct the Secretary so to notify the county societies.

This committee recommended continuation of active opposition to the practice of medicine by hospitals and teaching institutions. "Unless we oppose this type of procedure, other hospitals will be hiring full-time men and going into the business of selling medical service for financial gain." The committee agreed with the Economics Committee in the following statement: "During this study it occurred to your Committee that while we were trying to solve this problem we were always directing our attention to the hospital administration end and entirely forgetting the part our own colleagues play—can it not be said that they are at least in part responsible?"

The Council voted to refer this back to the Committee on Economics. Mr. Martin was delegated to write a memorandum for the delegates to the American Medical Association and Dr. Azzari and Dr. Eggston to map out a plan for presentation to the American Medical Association House of Delegates.

Section 142, House Minutes—Uniformity of County and State Requirements for Remission of National Dues.

The House of Delegates upon recommendation of this committee, "*Resolved*, that the Medical Society of the State of New York be instructed to appoint a committee to study the bases for remission of dues of all component county societies and prepare recommendations for changes in county or State procedures in order to achieve uniformity of practice in which to base eligibility for remission of national dues."

The Council voted to refer this to the Planning Committee for Medical Policies.

Section 141, House Minutes—Establishment of Committee on Hospital and Professional Relations

Furthermore, on recommendation of Dr. Gamble's committee, the House voted that the Medical Society of the State of New York should establish "a committee on hospital and professional relations" . . . . "to deal with ethics, responsibilities, standards, and contractual relations relevant to medical services provided in hospitals and for the formulation of general policies with regard to such medical practice in hospitals." This was referred to the Council.

The Council voted to appoint a special committee.

Section 135, House Minutes—Division of Fees Between Physicians and Hospitals

Upon recommendation of the Reference Committee on Report of Council, Part VII, Dr. Guy S. Philbrick, chairman, the House adopted a resolution that deplored the fact that some hospitals deprived staff members of fees received for the practice of medicine, in violation of subparagraph 2 (f) of Section 6514 of the Education Law, and "*Resolved*, that the Medical Society of the State of New York take such action as it may deem proper under the circumstances to discourage and put a stop to such practices on the part of hospitals and physicians in the State of New York." Upon recommendation of this committee the House referred the matter to the Council with instructions "to take such actions as may be advisable" and voted that "1. Every physician in the State of New York be made aware of this situation; 2. All hospitals be put on notice in regard to this matter; 3. A copy of this resolution be sent to the Board of Regents; 4. Any other action, legislative or otherwise, be taken that will further the intent of this resolution."

The Council voted to refer this to the new special committee, when appointed, said committee to confer with the Committee on Workmen's Compensation.

Section 137, House Minutes—Preparation of State-Wide Medical Insurance Policy

The House requested the Council "through its Subcommittee on Medical Care Plans, to expedite the completion of the uniform plan on which they have in the last year been working, and that they impress the presidents of the plans with the urgent necessity of immediate action," as applied to a State-wide medical care insurance policy.

The Council voted to refer this to the Subcommittee on Medical Expense Insurance stating that all plans and county societies should be notified of its importance.

Section 136, House Minutes—Free Choice of Physicians in Voluntary Prepayment Health Insurance Plans

The House of Delegates recommended referral through the Council to the Legislation Committee of the following resolution: "Your Reference Committee approves the principle of the right of a patient to free choice of physician and is of the opinion that the Blue Shield Plans have accepted this principle. Your Reference Committee recommends that this resolution be referred through the Council to the Legislation Committee for action."

The Council voted to refer this to the Committee on Legislation.

Section 123, House Minutes—Injunction

The House of Delegates voted that the Medical Society of the State of New York cause the reintroduction at the 1951 legislature of a bill similar to Senate Intro. 94 of the 1949 session and work actively for its passage. The House further recommends "that extraordinary efforts be exerted by the Albany Executive Office to enlist the support of the Bar Association and other professional groups."

The Council voted to refer this to the Committee on Legislation.

Section 122, House Minutes—Hospital Practice of Medicine

The House of Delegates recommended the reintroduction in the 1951 legislature of the Friedman Bill (Senate Intro. 1107 of 1950) to prohibit vending by hospitals of medical diagnosis and treatment and recommended "that the Council do all in its power to support this legislation."

The Council voted to refer this to the Committee on Legislation.

Section 121, House Minutes—Free Choice of Physician

The Reference Committee on Report of Council, Part IX, Dr. J. Homer Cudmore, chairman, advocated and the House voted:

> "WHEREAS, the medical profession has consistently supported the right of a patient to free choice of physician, and,
>
> "WHEREAS, contract restrictions under certain voluntary insurance plans tend to deny or restrict the right of free choice of physician,
>
> "*Resolved*, that medical expense indemnity shall consist of reimbursement or direct payment for medical care provided through any duly licensed physicians of the subscriber's choice whether or not designated by such corporation."

This was also referred to the Council.

The Council voted to refer this to the Subcommittee on Medical Expense Insurance.

Section 124, House Minutes—Lien Law

The House of Delegates referred to the Council its resolution that a bill similar to Senate Intro. 2045 of 1949 be introduced at the 1951 session of the legislature to amend the lien law and civil practice act in relation to liens of physicians for care of certain injured persons, and that the Medical Society of the State of New York "work actively for its passage."

The Council voted to refer this to the Committee on Legislation.

Section 125, House Minutes—X-Ray Bill

To the Council was also referred the House resolution that the Medical Society of the State of New York cause the introduction of a bill at the 1951 session of the New York State Legislature to amend the Medical Practice Act defining roentgenology as the practice of medicine, and exert every possible effort for its passage.

The Council voted to refer this to the Committee on Legislation.

Section 117, House Minutes—Report of Reference Committee on Report of Council, Part X

A. Regarding the method of settlement of disputed bills under the Workmen's Compensation Law, the House of Delegates recommended that the Committee on Legislation cause to be introduced in the 1951 legislature a bill "to establish a uniform system of arbitration for the whole State rather than allowing the Medical Practice Committee to function in New York City."

The Council voted to refer this to the Committee on Legislation.

B. It was also voted by the House of Delegates that the Legislation Committee cause to be reintroduced in the 1951 New York State Legislature a bill to provide for arbitration of medical bills under the Workmen's Compensation Law which shall take place in the county in which the medical service was performed or an adjacent county and not necessarily in the county in which the injured worker resides.

The Council voted to refer this to the Committee on Legislation.

C. The Reference Committee on Report of Council, Part X (Workmen's Compensation), Dr. A. Wilbur Duryee, chairman, made a report concerning the Disability Benefits Law based upon material appearing on page 881 of the NEW YORK STATE JOURNAL OF MEDICINE, April 1, 1950. The House adopted the committee's recommendation that the Legislation Committee be instructed to have introduced into the 1951 New York State Legislature "such legislation as necessary to correct the faults of this Law, as they apply to the medical profession." This was also referred by the House to the Council.

The Council voted to refer this to the Committee on Legislation.

Section 139, House Minutes—Report of Reference Committee on Report of Council, Part VII

Letter from Dr. George Baehr written to Dr. John J. Masterson, president, and attached volume of appended material, was referred to the Council. This matter regards the Health Insurance Plan of Greater New York.

The Council voted to refer this to the Subcommittee on Medical Expense Insurance.

Section 99, House Minutes—Report of Reference Committee on Report of Council, Part XI

Dr. Kosmak suggested on the floor that the Council prepare a statement regarding distribution of the JOURNAL and *Directory*.

The Council voted to refer this suggestion to the Publication Committee.

Section 151, House Minutes—Report of Reference Committee on Reports of Treasurer, Board of Trustees, and Finance Committee: Collection of the War Memorial Assessment

Reinstatement of men who have been dropped for nonpayment of War Memorial Assessment. Referred to Council for their decision and notification to the county societies of the proper action to be taken.

After discussion, *no action was taken.*

Section 88, House Minutes—Report of the Committee on Revision of the Constitution and Bylaws: Oath of Allegiance

The Committee "feels that this resolution has possible legal complications which the Committee cannot foretell and with which it does not feel able to cope. It therefore recommends that this resolution be referred to the Council for further study and disposition."

After discussion, *it was voted* to refer this to legal counsel.

Communications.—1. Letter dated May 26, 1950, from Francis A. Brick, Jr., of Donovan, Leisure, Newton, Lumbard & Irvine, enclosing a bill for legal services, terminated May 15, 1950.

It was voted that the Council recommend to the Board of Trustees that this bill be paid.

2. Letters dated May 22 and 24, 1950, from Mrs. Thomas M. Clearwater, in appreciation for flowers and sympathy.

3. Letter dated May 25, 1950, of thanks for a contribution to the United States Committee of the World Medical Association, from Dr. Louis H. Bauer, secretary-treasurer.

4. Letter dated May 22, 1950, from Dr. Alfred P. Ingegno, chairman of the Scientific Program Subcommittee, regarding expenses incurred by Dr. Laurence H. Snyder in reading a paper at one of the general sessions.

It was voted that the full amount be paid.

5. Letters regarding the illnesses of Dr. Elton R. Dickson and Dr. James E. McAskill.

The Secretary was instructed to write Dr. Dickson a letter expressing hope for his speedy and complete recovery.

Dr. Wertz reported on Dr. McAskill's condition.

6. Letter dated May 27, 1950, from Dr. Asher Yaguda, Commander, Physicians Post No. 445, American Legion, Department of New Jersey, condemning a Federal "United Medical Administration" S.2008.

After discussion, *it was voted* to refer this to the President and Secretary for reply.

7. Letter from Dr. Irving L. Ershler, secretary, Onondaga County Medical Society, requesting remission of dues for eight members.

These remissions *were voted.*

8. Letter from Dr. Charles F. McCarty, director, Medical Society of the County of Kings, dated May 26, 1950, as follows:

> "Regarding your letter of April 26, re Dr. Clarence G. Robinson, Jr., we wish to call your attention to the following facts:
>
> "Dr. Clarence G. Robinson, Jr., was elected to active membership in this Society on December 16, 1947. This was an error due to the fact that he was a resident physician at the Coney Island Hospital at the time and should have been elected to Hospital Resident Membership. We are cancelling his active membership and listing him as a Hospital Resident Member. Hospital Resident Members are not liable for the War Memorial Assessment."

It was voted that Dr. Clarence G. Robinson, Jr.'s election to membership in the Medical Society of the State of New York be rescinded.

9. Letter from Dr. Carl B. Smith, secretary, Ontario County Medical Society, requesting that Dr. E. G. Padgham of Geneva, New York, be reinstated as an active member. He was elected a retired member of the Ontario County Medical Society and the Medical Society of the State of New York on May 4, 1949, but he now desires to resume active membership.

It was voted to reinstate Dr. Padgham as an active member in the State Society.

10. Letter dated May 31, 1950, from Mr. P. H. Costello, secretary of the National Association of Boards of Pharmacy, to Dr. Anderton, as follows:

"The following resolution, adopted at the recent annual meeting of this Association, is submitted for such consideration and action as your Association or its executive body may decide upon:

"*Resolved*, by the National Association of Boards of Pharmacy in convention assembled, that the American Medical Association be prevailed upon to officially oppose the establishment of physician-owned clinic pharmacies as not only grossly unfair to pharmacy and pharmacists, but also as certain to result in resentment upon the part of pharmacists at the very time when conditions are such as to make imperative the utmost cooperation and friendliness between medicine and pharmacy, and be it further

"*Resolved*, that the American Medical Association be prevailed upon to officially construe the pertinent section of its Code of Ethics so as to condemn physician-owned clinic pharmacies as unethical, unwarranted, and detrimental to good medical and pharmaceutical services.

"This Association appreciates how the matter above referred to is dealt with in 'Principles of Medical Ethics' but it is also known that there is an 'Association of Medical Clinics' and an 'Association of Clinic Managers' and it has been reported that the latter association advocates the establishment of pharmacies in physician-owned clinics."

After discussion, *it was voted* to refer this to the Committee on Economics.

11. Letter dated May 29, 1950, from the American Medical Association National Education Committee to State and County Medical Societies:

"This is to advise that at a meeting of the Board of Trustees and the Coordinating Committee on Sunday, May 28, a nationwide advertising program covering newspapers, magazines, and radio was given final and unanimous approval.

"After thorough consideration of all aspects involved, including the profession's position with Congress, it was concluded that the program presented by Whitaker & Baxter will solidify the real gains made in our campaign, advance the cause of voluntary health insurance, and emphasize to the public medicine's leadership in maintaining the American system and combating socialism.

"The advertising program is scheduled for October. You will be advised by Whitaker & Baxter within the next three weeks of full details in respect to all three schedules.

"This decision was reached after a thorough study of the facts and an all-day discussion. We are completely confident that medicine's objectives in this program will be successfully accomplished, and we shall deeply appreciate the wholehearted support and cooperation of the State and County Medical Societies.

E. E. Irons, M.D., *President*
L. H. Bauer, M.D., *Chairman, Board of Trustees*
E. L. Henderson, M.D., *Chairman, Coordinating Committee*

The above was read for information. The Secretary reported he had acknowledged it, and the Chair stated no action was necessary.

12. Letter of May 29, 1950, from Dr. B. Wallace Hamilton, secretary of the Medical Society of the County of New York:

"At a meeting of the Comitia Minora of the Medical Society of the County of New York held on May 8, 1950, the following recommendation submitted by the Committee on Workmen's Compensation was approved:

'That the Comitia Minora request the Legislation Committee of the Medical Society of the State of New York to introduce legislation at the 1950 session to restore the functions of the qualifying medical boards not now having authority in the Medical Practice Act.'

"This action was ratified at the stated meeting of the Society on May 22, 1950."

It was voted to refer this to the Committee on Legislation.

13. Letter dated June 5, 1950, to all executive secretaries of the state medical societies, from Dr. L. Fernald Foster, secretary, Michigan State Medical Society, stating that a second meeting of the Conference of Medical Legal Counsels would be held at the Palace Hotel in San Francisco on Sunday, June 25, at 10 A.M., and requesting the Society to send its legal counsel.

After discussion, the Secretary was instructed to write stating that our Legal Counsel regrets he cannot be present.

14. June 2, 1950, letter from the New York Academy of General Practice, as follows:

"*To:* Publication Committee
"*From:* Vincent E. Fischer, M.D.
"*Subject:* Editorial—*G.P.'s Organize* [New York State J. Med. **50:** 1348 (June 1) 1950.]

"Dear Sirs:

"Congratulations on a timely and well written endorsement of the G.P. movement.

"Your last paragraph offers a wealth of possibilities, quote, 'the Medical Society of the State of New York should *take active steps to* make this movement a part of itself and of its future program.'

"The Publication Committee, *N.Y.S. A.A.G.P. News* asks if you would be so kind as to submit a brief of the *active steps* under consideration. This request is made with the object of publication in the *News Letter* in the near future.

"It is the opinion greater cooperation can be obtained if the G.P. is informed that organized medicine is now concerned in his welfare.

"The recent resolution establishing a G.P. Section in the Society and the acceptance of the A.G.P. symbol in the State *Directory* are two active steps in the right direction worthy of publication.

Vincent E. Fischer, M.D., *Chairman, Publication Committee*

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon, Executive Officer, reported that since the meeting of the House of Delegates he had been busy arranging for the district branch meetings and that four executive committees of district branches had met.

Reports of Committees

Legislation.—Dr. Winslow introduced the following resolution with the approval of Dr. Dattelbaum and Dr. Hannon:

> "WHEREAS, no accurate statistics are available as to the number and type of cultists practicing in the United States; and
>
> "WHEREAS, the various states have different ways of handling this problem; and
>
> "WHEREAS, a definite knowledge of what has been accomplished in the various states would be of value to many groups in the A.M.A.; be it
>
> "*Resolved*, that the Council of the Medical Society of the State of New York hereby requests the A.M.A. to make a pilot survey of the number and type of cultists practicing in the United States; and following such pilot survey, if it seems desirable, proceed to make a complete survey of the whole country on the subject of cultists engaging in the practice of the healing arts; and be it further
>
> "*Resolved*, that the delegates from the Medical Society of the State of New York be hereby requested to present this resolution at the oncoming meeting of the House of Delegates of the A.M.A. at San Francisco on June 26, 1950."

The Council voted to adopt the resolution.

Convention.—Dr. Eggston, chairman, reported briefly on the past annual meeting held at the Hotel Statler in New York City. He stated the total attendance was greatly increased over the year 1948. The total registration was 6,985 as compared to 6,020 in 1948. This is the largest registration we have had at any annual meeting. He stated there was a little conflict in dates about the meeting in 1951 at Buffalo. Arrangements had been made for May 1 through May 4, but the second week in May seemed more desirable. He suggested that Dr. Wertz see if a change could be made.

He stated the Statler Hotel had blocked off for us the annual meeting in 1952 as May 11 through 16, and 1954 as May 9 through 14.

Economics.—Dr. Azzari, chairman, reported regarding meetings which had been attended by Mr. Farrell, director of the Bureau of Medical Care Insurance, and called attention to the first quarterly progress report on the New York State Blue Shield Plans for the period ending March 31, 1950.

He stated that a letter addressed to the Secretary from Bertholon-Rowland & Company, Insurance Agents, was referred to his committee and was considered too late to be incorporated in the annual report. The subject matter concerns a group life insurance plan for members of the State Society. Briefly, it is a plan that enables any member to procure whatever type life insurance he desires at standard rates regardless of past medical history or present physical condition if 75 per cent of the members under sixty years enroll. No medical examination is necessary and no one will be rejected, regardless of applicant's history. It will be necessary, however, for every applicant to take a like amount of insurance. The type of coverage is renewal term coverage.

After discussion, *it was voted* that the agent be informed that this is a matter for each county society to consider and not for the State Society to recommend.

Malpractice Insurance and Defense.—Dr. d'Angelo, member of the Malpractice Insurance and Defense Board, reported regarding a doctor who was to appear for a hearing before the Council because it had been recommended that his application for reinsurance be denied. At the Council's request, the Board arranged for reinsurance of the doctor for $100,000/300,000 coverage, until his appeal could be heard. The Board was notified last night that the doctor could not appear here today because of illness. Due to the very high coverage that he has, and because of the fact that in the opinion of the Board he is a very poor risk, they felt that a continuation of this coverage is unwarranted and therefore recommend that this insurance be terminated and that five days notice be given.

After discussion, the recommendation of the Board *was approved.*

Dr. d'Angelo stated that a communication from Wolfe, Corcoran, and Linder, Consulting Actuaries, who make the annual survey of the Malpractice Insurance and Defense Board, was considered. It is dated June 6, 1950, and states in part that this firm desires to inform the Society that it is also employed by the Employers Mutual Liability Insurance Company, along with other insurance companies, State Insurance Departments, and corporations. This matter has been studied by the Employers Mutual and was considered by the Malpractice Insurance and Defense Board last night. In view of the fact that they have made our survey for three years and that hereafter it will consist only of adding another year annually, the Board recommended that the employment of these consulting actuaries, Wolfe, Corcoran, and Linder, be continued.

It was voted to approve this recommendation.

Dr. d'Angelo continued by stating that he thought the Council had probably received the American Policyholders Insurance Company's brochure and commented upon it. The Malpractice Insurance and Defense Board would like to send a letter or would like the Council to send a letter to each member giving the facts about our own Group Plan as an answer to the type of letter from the American Policyholders.

After discussion, *it was voted* that the Board submit a letter to the Council at its next meeting for approval or suggestions.

Office Administration and Policies.—Dr. Beekman, chairman, reported.

Publication Committee.—Dr. Redway, in the absence of Dr. Kosmak, reported that the Committee had met June 7 and that routine matters were considered.

Public Health and Education.—Dr. Curphey, chairman, reported that he had attended various meetings and arranged postgraduate teaching days.

Quarterly Conference of State Health Officers—The chairman of the Council Committee had the privilege of appearing before the Quarterly Conference for the purpose of informing them as to the activities of the Committee as a whole and the relationships between the Medical Society of the State of New York and the State Department of Health resulting therefrom. At the same time he emphasized the interests common to both groups and the need for close cooperation in providing for the welfare of the people of this State.

Both morning and afternoon sessions of the annual meeting Teaching Day were well attended. It appeared to be the consensus of opinion of both

[Continued on page 2582]

appetite must be controlled

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"The greatest problem in preventive medicine in the United States today is obesity."[1] And today it is well-known that *"The only way to counteract obesity . . . is by a restriction of food intake."*[2]

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1. Walker, W.J.: Obesity as a Problem in Preventive Medicine, U.S. Armed Forces M.J. 1:393, 1950.
2. John, H.J.: Dietary Invalidism, Ann. Int. Med. 32:595, 1950.

[Continued from page 2580]

the speakers and the audience that the effort was rewarding.

The luncheon given by the Medical Society for the chairmen of the postgraduate education committees of county societies was attended by thirty-six of these gentlemen. A free discussion was held relative to improving service by the Committee and many helpful suggestions were obtained.

The exhibit of the Committee at the annual meeting attracted wide attention. About six hundred copies of the new edition of the *Course Outline Book* were distributed.

As a result of a meeting on asphyxial deaths, the State Health Department has invited Dr. Flagg to provide a demonstration of methods of resuscitation in cases of asphyxia at the annual Health Conference at Lake Placid June 5 to 8.

Your chairman has been invited to participate in a symposium on the "Medical Aspects of Atomic Emergency" at the forty-sixth annual Health Conference at Lake Placid, June 5 to 8. The topic, "The Place of the Practicing Physician in Atomic Defense," was assigned to him.

Subcommittee on Child Welfare—Referring to the Council meeting of February 9, 1950, when the question of instituting an epidemiologic study of retrolental fibroplasia in the State was turned over to this subcommittee, we can report that Doctor E. R. Schlesinger, director of the Bureau of Maternal and Child Health of the State Department of Health, has acknowledged the suggestions made by the subcommittee and states they will be included in the questionnaire being sent out as part of the study.

Subcommittee on Maternal Welfare—Suggestions were also sent to Dr. Schlesinger relative to the proposed report on complications of pregnancy and labor to be included on the back of birth certificates. This matter had been referred to the subcommittee in accordance with instructions from the Council on February 9.

Subcommittee on Rheumatic Fever—In conformity with a decision at the April 17 meeting of this subcommittee the proposed program plan for rheumatic fever of the State Department of Health was circulated among the members of the Subcommittees on Rheumatic Fever and Child Welfare. The replies to date have been favorable to the plan.

Dr. Curphey requested the Council to endorse a booklet called the "Guide for Local Rheumatic Fever," published by the State Department of Health.

Approval was voted.

Permanent Advisory Council on Poliomyelitis—As a result of a recent conference on poliomyelitis held under the auspices of the State Health Department at which Dr. Hannon represented the Medical Society of the State of New York, it was generally agreed that the need existed for the formation of a permanent advisory council made up of representatives of the various organizations represented at the meeting, with the inclusion of the State Hospital Association, for the purpose of coordinating the activities of the various groups handling cases of poliomyelitis.

Recommendation from Subcommittee on Physical Medicine and Rehabilitation (See minutes of Council meeting, April 13, 1950)—That a committee be formed to conduct a questionnaire survey of facilities for rehabilitation in the State of New York. Dr. Arthur Abramson and Dr. Richard Kovacs are suggested as the members of the committee, together with Dr. John J. Bourke, director of the New York State Joint Hospital Survey and Planning Commission.

The Council voted that this subcommittee be permitted to exist and that a representative of plastic surgery be included.

Question of Expenses of Out-of-State Speakers—One of the points discussed at the luncheon of the committee chairmen of postgraduate education of the county medical societies was the need for a reorientation of conditions governing reimbursement of speakers on the postgraduate education program. Up to the present the established rule has been to reimburse, with but few exceptions, only speakers from New York State. In the case of certain of the county medical societies adjacent to other states or to the Dominion of Canada, speakers of outstanding merit are frequently desired but are denied to the county groups because of our present policy.

It is therefore recommended to the Council that it approve a new policy for this Committee whereby county medical societies requesting out-of-state speakers will have their traveling expenses underwritten by the Medical Society of the State of New York up to a sum not exceeding $50; that it be further understood that in those instances where expenses exceed said ceiling the county medical society should assume the responsibility for any additional reimbursement above $50.

It was voted that the above policy be approved and that the fixed ceiling be $50.

Public Relations.—Dr. Winslow, chairman, submitted the following report:

The 144th Annual Meeting, from May 8 to 12, was the occasion for considerable publicity in the State press, both before and after the dates it was in progress.

The Public Relations Bureau publicized the meeting in advance through releases to county medical society bulletins, the radio, and the daily and weekly press, and through letters to medical school deans and to the hospital superintendents in the metropolitan area. A special release was sent out on the award of certificates to 81 fifty-year doctors. Abstracts were prepared for the press on certain of the scientific papers judged to have news value.

During the course of the meeting, a press room was maintained in operation every day and evening. Representatives of the major New York newspspers and wire services and a number of special writers for magazines and news syndicates were at hand to cover the meeting. The volume of clippings already received and those still coming in indicate that the use of stories originating at the meeting was widespread. Special releases were prepared on the addresses of the retiring president and the incoming president, and on the election of officers, together with biographic materials on the new president-elect. Pictures of the new president and president-elect were taken and made available to the press. Special handling was given to the address made by Dr. MacElroy, the outstanding general practitioner, at the annual banquet.

The Public Relations Bureau sponsored an exhibit at the annual meeting on the theme, "What About Compulsory Health Insurance? Can We Take It Easy Now?" The exhibit, which was constructed at a minimum expense out of materials at hand, attracted considerable attention and resulted in requests for campaign literature from as far away as South America. It pointed up the fact that 1950 will be a crucial year in the campaign against compulsory health insurance and urged all physicians to co-

[Continued on page 2584]

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**Proc. Soc. Exp. Biol. and Med.*, 1934, 32, 241-245; *N. Y. State Journ. Med., Vol.* 35, 6-1-35, *No.* 11, 590-592; *Laryngoscope, Feb.* 1935, *Vol. XLV, No.* 2, 149-154; *Laryngoscope, Jan.* 1937, *Vol. XLVII, No.* 1, 58-60

[Continued from page 2582]

operate with their county medical societies in making the campaign successful. Representatives of the A.M.A. declared the exhibit was one of the most effective they have seen and asked for photographs in order that it might be duplicated in other parts of the country.

The Public Relations Bureau has been cooperating actively with the metropolitan county medical societies which recently announced the formation of emergency medical services for persons unable to reach their own doctors in time of need. Led by Richmond County, these county societies have engendered considerable good will by their evident desire to perform a public service.

The campaign to obtain resolutions from local units of national organizations already on record against compulsory health insurance has made considerable progress in recent weeks. The latest Statewide organization to make its mailing list available was the New York State Federation of Women's Clubs. Approximately 350 letters requesting resolutions were mailed to local units of this organization. Meanwhile, replies to letters sent previously to other local groups continue to bring resolutions supporting the medical profession, so that as of June 1 the total number of resolutions was 400, an increase of 260 during the past three and one-half months.

A development of great importance in the National Education Campaign was the successful culmination of conferences with the Chamber of Commerce of the State of New York. The Chamber, which is highly regarded as a policy-making body by large business groups throughout the nation, not only passed a resolution strongly opposing compulsory health insurance, but published a report entitled, "National Compulsory Health Insurance Is *Not* the Answer." The report points out that responsibility for alerting the American people to the dangers of socialized medicine is not that of the doctors alone, but that a cooperative effort is needed by all who cherish freedom.

At the invitation of the Saratoga Springs Authority, the Public Relations Bureau has prepared an exhibit for display during the summer season at the Saratoga Hall of Springs. This exhibit, which will be viewed by thousands of visitors during the summer season, was constructed as economically as possible, mostly from materials already available. Its theme is, "The Medical Society of the State of New York—Serving Your Doctor To Better Serve You."

After a trial showing before a number of representative members of the Society and its staff, it was decided to purchase from the Michigan Medical Society a 16 mm. film, "To Your Health," for showings before local groups throughout the State. The film, which treats the compulsory health insurance issue dramatically and in a way favorable to the medical profession, is being offered to county societies on a loan basis.

Workmen's Compensation.—Dr. Kenney, chairman, reported.

New Business

At the invitation of Dr. Wertz, Mr. Tom Hendricks, secretary of the Council on Medical Service of the American Medical Association, spoke about health councils and their development throughout the country.

Mr. George Cooley, of the Council on Medical Service of the American Medical Association, was questioned by members of the Council regarding the practice of medicine by hospitals and the report of a committee known as the Hess Committee. He stated that the Hess Committee Report was confidential and is going to the Board of Trustees of the American Medical Association and from them to the House of Delegates. He was not at liberty to divulge its contents.

Election of Dr. John J. H. Keating as Councilor.—Dr. Kenney nominated Dr. John J. H. Keating of New York City to fill the unexpired term of Dr. Maurice J. Dattelbaum as councilor. Dr. Winslow seconded the nomination; Secretary Anderton moved the nominations be closed; Dr. Cunniffe seconded the motion.

It was so voted.

It was moved and seconded that the Secretary cast one ballot making the election of Dr. Keating unanimous.

It was so voted.

Committee Appointments.—The President stated that he had not yet been able to communicate with the various districts in the State in order to appoint the nominating committee created by the House of Delegates. As this committee has to be appointed and approved by August, he requested permission to get the approval of the Council by mail.

It was so voted.

Committees.—The President was voted the Council's approval of the attached committees and subcommittees.

Dr. Wertz requested permission to modify the various subcommittees of the Committee on Public Health and Education and report in September.

It was voted to grant this permission.

He stated that in the activities of the House of Delegates, unfortunately, no action was taken to continue our Committee on the Problems of Alcoholism. He thought it was an oversight and that it was important to continue the committee.

It was voted to continue the committee as a special committee.

Session Officers.—The President appointed Dr. Frederic D. Zeman as chairman of the Session on History of Medicine. He appointed Dr. Thomas E. Walsh as chairman and Dr. William Bierman as secretary of the Session on Physical Medicine.

These appointments *were approved.*

Tribute to Dr. Johnson.—The members rose and stood silent in memory of their deceased colleague, Dr. William D. Johnson of Batavia, a past-president, who had been buried four days previously.

[Continued on page 2586]

Chemically Standardized Veratrum Viride Is Effective in Hypertension

Much has been written pro and con about the value of veratrum viride in hypertension. For many years the drug has been in disrepute because of the fact that the preparations available on the market have been prepared by "hit or miss" methods.

Chemical standardization of veratrum viride, however, has provided in this drug a highly effective agent for the treatment of hypertensive patients.

Sollmann[1] states that veratrum is probably the most active and reliable cardiac depressant and that its use serves to slow and soften the pulse and lower the blood pressure.

Willson & Smith[2] state that veratrum viride possesses a vasodilating effect and because of this, it was demonstrated by Hite,[3] and Freis and Stanton,[4] that the drug lowered pressure in hypertension and gave symptomatic relief. Recent research tends to show that the decrease in blood pressure results more from peripheral vasodilation than from depression of cardiac output.

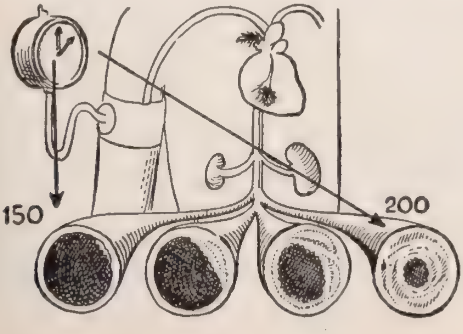
Uniformity of Action

When the veratrum alkaloids are chemically standardized, a uniform result can be expected. Their action usually causes a reflex fall in blood pressure and heart rate which originates in the afferent vagus nerve endings in the myocardium of the left ventricle and in the lungs. Although these factors ordinarily result with each heart beat, the veratrum alkaloids cause them to act continuously over prolonged periods of time. Reports have shown that 80 to 90 per cent of hypertensive patients respond to therapy when chemically standardized veratrum viride is used.

Cardio-Vascular Symptoms Cleared

In addition to the lowered pressure, objective signs of improvement may be observed, such as the clearing of retinal hemorrhages, diminution in cardiac size and reversal of left ventricular strain patterns in electrocardiograms.

Accompanying symptoms of the cardiac-hypertension syndrome, such as exertional dyspnea, tachycardia, nervous irritability, headache, are relieved. Yet, while the results of veratrum viride medication are prolonged, the drug may not afford quick relief.



Role of the Nitrites

For prompt and effective fall in blood pressure, nitroglycerin, which acts in one to two minutes, is the drug of choice. It acts rapidly and, because of its powerful vasodilatory action, gives the patient almost immediate relief. The action of nitroglycerin, however, is fleeting and to sustain lowered pressure between the action of nitroglycerin and veratrum viride, an intermediate is necessary.

To this end, sodium nitrite is used. This drug is also a vasodilator and affords sustaining relief until the long range action of chemically standardized veratrum viride becomes effective.

Importance of Sedation

Nearly all cases of hypertension require sedation for allaying periods of anxiety and affording the patient a good night's rest. Mild sedation is often useful, especially in cases associated with chronic coronary insufficiency.[5] It is well known that excitement may induce anginal attacks and in such cases, phenobarbital, because of its prolonged action, should be used.

All of these drugs, chemically standardized veratrum viride, nitroglycerin, sodium nitrite, and phenobarbital are to be found in Capsules RAY-TROTE IMPROVED, prepared by the Raymer Pharmacal Company of Philadelphia, Pa. Each capsule contains

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For the 30% of hypertensive patients with capillary fault, the above formula, with 20 mg. of Rutin added, is available in RAY-TROTE with Rutin.

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[Continued from page 2584]

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[Continued on page 2588]

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[Continued from page 2586]

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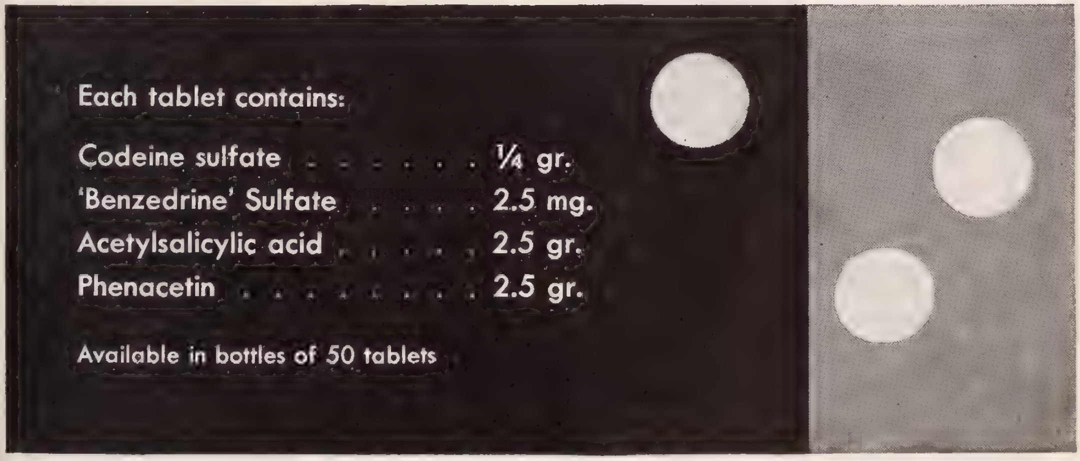

Each tablet contains:

Codeine sulfate	¼ gr.
'Benzedrine' Sulfate	2.5 mg.
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Phenacetin	2.5 gr.

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NECROLOGY

Isaac Astrachan, M.D., of the Bronx, died on April 6 at the age of fifty-eight. Dr. Astrachan received his medical degree from the Long Island College Hospital Medical School in 1923. He was a member of the Bronx County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Archie M. Baker, M.D., of Lindenhurst, died suddenly on September 24 at the age of fifty-four. Dr. Baker was graduated from the Syracuse University College of Medicine in 1922 and interned at Bellevue Hospital in New York City. During World War II he was chief medical examiner for the Babylon Selective Service Board. Dr. Baker was chief fracture surgeon at the Bay Shore Hospital and consulting surgeon to the Kings Park State Hospital. He was a member of the Suffolk County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

J. William Beckmann, M.D., of New York City, died on September 8 at the Lenox Hill Hospital at the age of fifty-one. Dr. Beckmann received his medical degree from the Washington University School of Medicine of St. Louis in 1924 and did postgraduate work at Johns Hopkins University Medical School. In 1937 Dr. Beckman joined the Bureau of Child Guidance of the New York City Board of Education, as a psychiatrist. He was a member of the American Psychiatric Society, the American Orthopsychiatric Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Rudolph F. Diedling, M.D., of West Palm Beach, Florida, and formerly of Saugerties, died on September 14 in Florida at the age of seventy-five. Dr. Diedling was graduated from the Albany Medical College in 1896 and served on the medical staff of the Auburn State Prison before opening his practice in Saugerties. He was consulting physician to the Kingston Hospital and during World War I served in the U.S. Army Medical Corps, being discharged with the rank of captain. In 1935 Dr. Diedling retired from practice because of ill health, moving to West Palm Beach the following year.

Quentin Edmond Dinardo, M.D., of Schenectady, died on September 10 in Ellis Hospital, Schenectady, at the age of forty-six. Dr. Dinardo was graduated from the Albany Medical College in 1930 and interned at Polyclinic, New York Post-Graduate, and St. Francis Hospitals in New York City. During World War II Dr. Dinardo served as senior medical officer with the 20th Seabees in the South Pacific, with the rank of lieutenant commander, U.S. Navy Medical Corps. He was a member of the Schenectady County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Eisenberg, M.D., of New York City, died on September 18 at the Mount Sinai Hospital at the age of sixty-four. Dr. Eisenberg received his medical degree from the Long Island College Hospital Medical School in 1908 and interned at Sydenham Hospital. An active Zionist, he was past president of the Zionist Region of Long Island City and of the Astoria Center of Israel.

Henry Hubert Giroux, M.D., of Brooklyn, died September 12 at the Jewish Hospital at the age of seventy-seven. Dr. Giroux received his medical degree from the New York University Medical School in 1893 and interned at Bellevue Hospital, New York City. He had practiced in Brooklyn for the past fifty-seven years.

James Sonnett Greene, M.D., of New York City, died suddenly on September 17 at his summer home in Neponsit at the age of sixty-nine. Dr. Greene was graduated from the Cornell University Medical College in 1902 and did postgraduate work at clinics and hospitals in Berlin, Breslau, and other European cities. In 1916 he founded the National Hospital for Speech Disorders in New York City and served as its medical director. In the last thirty-four years the hospital treated more than 75,000 patients. For his work in the field of speech and voice disorders, Dr. Greene several years ago received the gold medal of the American Laryngological, Rhinological, and Otological Society.

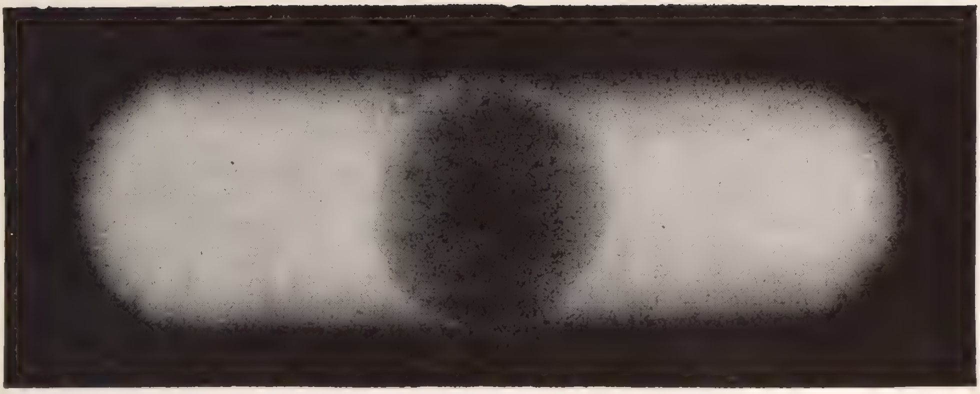
Dr. Greene was specially interested in the rehabilitation of men and women made voiceless by cancer of the larynx and several years ago started a speech clinic for such patients. Dr. Greene was the author of two books and several articles on speech disorders and was the editor of *Talk*, a magazine for speech sufferers. He was consultant on voice disorders to the New York Eye and Ear Infirmary and Memorial Hospital and a lecturer at the Graduate School of Medicine, University of Pennsylvania.

A Diplomate of the American Board of Otolaryngology, Dr. Greene was a member of the American Laryngological, Rhinological, and Otological Society, the American Academy of Ophthalmology and Otolaryngology, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Francis Raymond Irving, M.D., of Syracuse, died on September 9 at the Syracuse Memorial Hospital at the age of fifty-four. Dr. Irving was graduated from the Syracuse University College of Medicine in 1920 and served as house surgeon at the New York Lying-In Hospital and at the Cleveland Maternity Hospital, before starting his practice in Syracuse. Dr. Irving had been chairman of the Section on Obstetrics and Gynecology of the Medical Society of the State of New York and a member of the founders' committee and past-president of the Central New York Association of Obstetricians and Gynecologists. Dr. Irving was consulting obstetrician at the St. Mary's, Psychopathic, and General Hospitals, all in Syracuse; attending obstetrician at the Syracuse Memorial Hospital, and senior attending obstetrician at St. Joseph's Hospital.

A Diplomate of the American Board of Obstetrics

[Continued on page 2592]



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[Continued from page 2590]

and Gynecology, Dr. Irving was professor of clinical obstetrics at the Syracuse University College of Medicine and a member of the Syracuse Academy of Medicine, the Central New York Association of Obstetricians and Gynecologists, the Onondaga County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Lawrence Jacobius, M.D., of New York City, died September 26 at his home at the age of fifty-nine. Dr. Jacobius was graduated from the Albany Medical College in 1914 and practiced in New York City until his retirement six years ago. He had been associated with the Hospital for Joint Diseases, the Harlem Hospital, and the Jewish Memorial Hospital. A Diplomate of the American Board of Otolaryngology, Dr. Jacobius was a member of the Bronx Otolaryngological Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Christian William Janson, M.D., of Brooklyn, died on September 15 at his home at the age of seventy-one. Dr. Janson was graduated from the Cornell University Medical College in 1902 and interned at the Lenox Hill Hospital. A Fellow of the American College of Physicians, Dr. Janson was consulting gastroenterologist at Wyckoff Heights Hospital and a member of the National Gastroenterological Association, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick Love Keays, M.D., of Great Neck, died on September 8 at the Nassau Hospital, Mineola, at the age of seventy-eight. Dr. Keays was graduated from the Cornell University Medical College in 1899 and interned at New York Hospital. He was honored recently by the State Society upon his completion of fifty years of practice. Dr. Keays was consulting physician at the Nassau Hospital and a member of the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Frederick Dudley Keppel, M.D., of Syracuse, died on September 13 after a long illness, at the age of seventy-seven. Dr. Keppel received his medical degree from the Atlantic Medical College of Baltimore, Maryland, in 1897 and conducted his early practice in Kentucky, moving to Cazenovia in 1901. During World War I Dr. Keppel served with the U.S. Army Medical Corps. Because of war disability, he retired from active practice in 1919 and moved to Syracuse. Dr. Keppel was founder of the J. Irving Lyle Garrison, Army and Navy Union, and the Ernie Pyle Garrison, in Syracuse, and was former national surgeon of the Army and Navy Union.

David Francis King, M.D., of Laurelton, Queens, died on September 22 at his home at the age of ninety-seven. Dr. King was graduated from the College of Physicians and Surgeons, Columbia University, in 1874 and was the oldest living graduate of Columbia University. Dr. King interned at Lincoln Hospital and then opened a practice in New York City, where he maintained an office for fifty years. In 1930 he moved to Laurelton but continued his practice until 1944, when he retired after almost seventy years as a general practitioner. Dr. King was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas Augustine Lynch, M.D., of Lowville, died on September 16 in Lowville General Hospital at the age of fifty-four. He was fatally injured two days before when he fell from a porch and broke his neck and injured his spine. Dr. Lynch received his medical degree from the Fordham University Medical School in 1919 and interned in Brooklyn and at the Jersey City Memorial Hospital. During World War I he had served with the U.S. Army Medical Corps. Dr. Lynch practiced in Brooklyn, Milton, and Croghan until he moved to Lowville in 1932. For fifteen years he served as school physician at Lowville Free Academy, as physician for the Lewis County jail, and as health officer for the village of Lowville. Dr. Lynch was a member of the medical staff of the Lewis County General Hospital and a member of the Lewis County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Buel W. Maben, M.D., formerly of Kingston, died on September 15 at the Masonic Home Hospital, Utica, where he had been a patient for several years, at the age of eighty-one. Dr. Maben received his medical degree from the Long Island College Hospital Medical School in 1892 and started his practice in Kingston in 1900. He retired ten years ago.

Ernest Mosler, M.D., of New York City, died on September 21 at his home at the age of sixty-eight. Dr. Mosler received his medical degree from Munich University in 1905 and had been for many years professor of heart diseases at the Third Berlin University Clinic. In 1938 he came to the United States, a victim of Nazi persecution, and opened an office in New York City. Dr. Mosler was a member of the Rudolph Virchow Society, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Teofilo Parodi, M.D., of New York City, died on May 4. Dr. Parodi received his medical degree from the University of Genoa Medical School in 1888 and started his practice in this country in 1896. He was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Charles Edward Pearson, M.D., of St. George, Staten Island, died on September 16 at the Staten Island Hospital, New Brighton, at the age of seventy-two. Dr. Pearson was graduated from the College of Physicians and Surgeons, Columbia University, in 1900 and interned at the Staten Island Hospital. For forty-five years Dr. Pearson was associated with the Staten Island Hospital, as president of its medical board, a member of the board of trustees, and as consulting surgeon. He was also consulting surgeon at the Richmond Memorial Hospital. During World War II he served as chairman of the Staten Island Committee for Procurement and Assignment

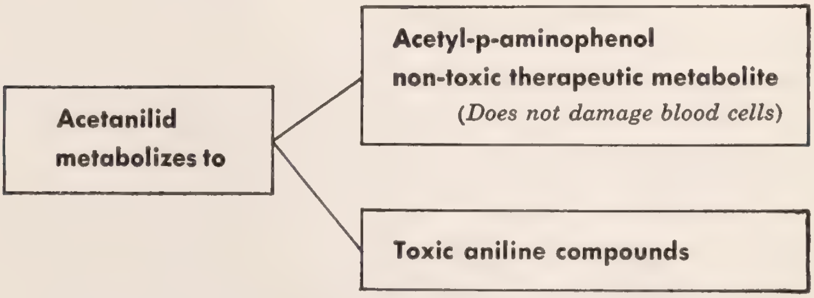
[Continued on page 2594]

Now offered to the medical profession for the first time

A new analgesic compound containing acetyl-p-aminophenol

. . . the non-toxic therapeutic metabolite of acetanilid

Long known as one of the most potent, rapid-acting analgesics, acetanilid has now been found to have a non-toxic therapeutic factor—*acetyl-p-aminophenol.* Studies at the Yale Laboratory of Applied Physiology and New York University School of Medicine show that *acetyl-p-aminophenol* has the high analgesic potency of acetanilid, without its toxicity. Unlike acetanilid and acetophenetidin compounds, *acetyl-p-aminophenol* does not damage blood cells, is safe even for chronic pain.



Acetanilid metabolizes to

Acetyl-p-aminophenol non-toxic therapeutic metabolite (*Does not damage blood cells*)

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Trigesic offers all the advantages of acetanilid . . . none of the disadvantages . . . plus the benefits of aspirin and caffeine

Each tablet contains 0.125 Gm. *acetyl-p-aminophenol;* 0.23 Gm. aspirin and 0.03 Gm. caffeine. *Bottles of 36, 100 and 1,000.* Also available as TRIGESIC WITH CODEINE, containing, in addition, 16 mg. codeine phosphate. *Bottles of 100.*

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"TRIGESIC" IS A TRADEMARK OF E. R. SQUIBB & SONS

[Continued from page 2592]

of Physicians. A Fellow of the American College of Surgeons, Dr. Pearson was a member and past-president of the Richmond County Medical Society and a member of the Medical Society of the State of New York and the American Medical Association.

Nicholas John Poltchaninoff, M.D., of New York City, died on June 22 at the age of fifty-eight. Dr. Poltchaninoff received his medical degrees from the University of Petrograd in 1914 and the College of Physicians and Surgeons, Columbia University, in 1922. He was assistant attending physician at St. Luke's Hospital and assistant attending allergist at St. Luke's Hospital Outpatient Department. Dr. Poltchaninoff was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ragnhild Ramstad Poole, M.D., formerly of Watertown and Madrid, died on August 17 in Lofoten, Norway, at the age of fifty-six. Dr. Poole returned to her native Norway about three years ago and had been assigned to the Lofoten post by the Norwegian government. Dr. Poole came to the United States in 1913 and received her medical degree from the Tufts Medical College of Boston University in 1928. In 1931 she established her practice in Watertown, where she was a member of the staffs of the House of the Good Samaritan and the Mercy Hospital. In 1942 Dr. Poole moved to Madrid to engage in general practice there and was associated with the medical staffs of the A. Barton Hepburn Hospital in Ogdensburg and the Potsdam Hospital. Before her return to Norway, Dr. Poole had been a member of the Jefferson County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ambrose A. Scouler, M.D., of New York City, died on September 18 at the Fair Oaks Sanitorium in Summit, at the age of seventy-eight. Dr. Scouler was graduated from the College of Physicians and Surgeons, Columbia University, in 1896 and interned at St. Vincent's Hospital. Until his retirement in 1940 he had practiced in Brooklyn, where he was examining physician for the Interborough Rapid Transit Company and in charge of a tuberculosis clinic for the City Department of Health.

George A. Smith, M.D., of Troy, died suddenly on August 24 at his home at the age of seventy-three. Dr. Smith was graduated from the Albany Medical College in 1901 and practiced in Troy until his retirement in 1940 because of ill health.

Fred Palmer Solley, M.D., of New York City, died on September 7 at St. Luke's Hospital at the age of eighty-three. Dr. Solley was graduated from the College of Physicians and Surgeons, Columbia University, in 1892 and interned at St. Luke's Hospital. He did postgraduate work in Heidelberg, Paris, and Vienna before opening his practice in New York City in 1896. Before his retirement in 1946 at the completion of fifty years of practice, he had been on the staffs of the Presbyterian, St. Luke's, and Knickerbocker Hospitals in New York City and Southhampton Hospital in Long Island. Dr. Solley was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Ludwig Robert von Roeder, M.D., of New York City, died on September 22 at the age of seventy-four. Dr. von Roeder was graduated from the Cornell University Medical College in 1900 and did postgraduate work in Vienna and Budapest. During World War I Dr. von Roeder served in the Mexican border campaign as a medical officer in the Seventh Regiment.

Benjamin Edgar Wolfort, M.D., of Brooklyn, died on September 17 at the Brooklyn Jewish Hospital at the age of seventy. Dr. Wolfort received his medical degree from the Johns Hopkins University Medical College in 1906 and interned at the Brooklyn Jewish Hospital. He was attending orthopedic surgeon at the Brooklyn Jewish Hospital from 1924 to 1940 and then was named consulting orthopedic surgeon, a position which he held at the time of his death. He was also consulting orthopedic surgeon at the Long Beach and Rockaway Beach Hospitals. Dr. Wolfort had been an orthopedic surgeon for the U.S. Public Health Service since 1943 and a member of the War Induction Board since 1942. In 1935 he was presented with a Distinguished Service Certificate of the City of New York by the late Mayor Fiorello H. LaGuardia for his many years of service with the Brooklyn Jewish Hospital.

Dr. Wolfort was a member of the American Academy of Orthopaedic Surgeons, the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Thomas B. Wood, M.D., of Brooklyn, died on September 17 while driving his automobile in Westfield, New Jersey, at the age of sixty-seven. Dr. Wood was graduated from the Cornell University Medical College in 1911. He was attending physician from 1911 to 1932 at the the Rockaway Beach Hospital, Queens, and the Broad Street Hospital, now the Beekman-Downtown Hospital, Manhattan. From 1914 to 1947 he was director of otolaryngology at the Coney Island Hospital. He was also attending surgeon and associate plastic surgeon at the Brooklyn Eye and Ear Hospital.

Dr. Wood was past-president of the Associated Physicians of Long Island, past-treasurer and past vice-president of the Kings County Medical Society, a vice-president of the Brooklyn Academy of Medicine, and a director of the Doctors Club of Brooklyn and of the Harbor and Coney Island Hospitals. A Diplomate of the American Board of Otolaryngology and a Fellow of the American College of Surgeons, Dr. Wood was a member of the Kings County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

MEDICAL SOCIETY
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1951

ANNUAL CONVENTION

- House of Delegates
- Annual Meeting and Banquet
- Teaching Day
- Scientific Program
- Scientific Exhibits
- Scientific Motion Pictures
- Technical Exhibits
- Woman's Auxiliary

APRIL 30 to MAY 4, 1951

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MEDICAL NEWS

Clifton Springs Sanitarium Celebrates Centennial

A SPECIAL five-day celebration, from September 13 to September 17, marked the one hundredth anniversary of the founding of the Clifton Springs Sanitarium and Clinic, in Ontario County. The celebration included the forty-fourth annual meeting of the Seventh District Branch of the Medical Society of the State of New York.

Founded by Dr. Henry Foster on September 13, 1850, the Clifton Springs Sanitarium and Clinic is a nonprofit, eleemosynary institution, supported by no public funds. All profits go back into the operation of the institution or aiding those who need financial assistance. The Sanitarium and Clinic has grown in the past century to a 305-bed institution, with a staff of 15 physicians, a diagnostic clinic, a department of radiology, a department of surgery including obstetrics, complete laboratories under a full-time pathologist, a department of neurophysiotherapy, and a rehabilitation department with modern apparatus and trained workers. The present superintendent is Dr. Samuel A. Munford, who first joined the staff in 1916.

Features of the centennial celebration included a day of medical clinics and conferences, the meeting of the Seventh District Branch of the State Society, a Nurses Day, with lectures, conferences, and a dinner of the Alumnae Association, a fire department parade, an "old timers" parade, a pageant showing one hundred years of nursing at the Sanitarium, and Clifton Springs Day, with an address by Lieutenant Governer Joe R. Hanley.

District Branches Hold Elections

AT THE forty-fourth annual meeting of the Fourth District Branch, held September 27 at Cambridge, the following officers were elected for two-year terms:

Dr. William E. Gazeley, Schenectady, president; Dr. J. Frederick Sarno, Johnstown, first vice-president; Dr. Alfred A. Hartmann, Malone, second vice-president; Dr. Walter S. McClellan, Saratoga Springs, secretary, and Dr. Leonard J. Schiff, Plattsburg, treasurer.

At the forty-fourth annual meeting of the Third District Branch, held September 28 at Hudson, the following officers were elected for two-year terms:

Dr. William C. Rausch, Albany, president; Dr. John H. Wadsworth, Cobleskill, first vice-president; Dr. Roger C. Bliss, Hudson, second vice-president; Dr. R. E. Mussey, Troy, secretary, and Dr. William M. Rapp, Catskill, treasurer.

[Continued on page 2598]

Officers of State and district branch medical groups are shown above at the centennial celebration of the Clifton Springs Sanitarium and Clinic. Left to right: **Dr. J. Stanley Kenney,** New York City, president-elect, Medical Society of the State of New York; **Dr. George H. Gage,** Rochester, president, Seventh District Branch; **Mrs. Hugh G. Henry,** Germantown, president, Woman's Auxiliary to the Medical Society of the State of New York; **Dr. Carlton E. Wertz,** Buffalo, president, Medical Society of the State of New York, and **Dr. S. A. Munford,** Sanitarium superintendent and first vice-president, Seventh District Branch.

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agent...

Wide antibacterial activity, low toxicity and virtual elimination of renal complications distinguish the use of Gantrisin* 'Roche', a new and remarkably soluble sulfonamide. Highly effective in urinary as well as systemic infections, Gantrisin does not require alkali therapy because it is soluble even in mildly acid urine. More than 20 articles in the recent literature attest its high therapeutic value and the low incidence of side-effects. Gantrisin is now available in 0.5 Gm tablets, as a syrup, and in ampuls. Additional information on request.

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** Brand of sulfisoxazole (3,4-dimethyl-5-sulfanilamido-isoxazole)*

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When the diet is deficient in vitamins

Theragran offers your patients the clinically proved, truly therapeutic "practical" vitamin formula* recommended by Jolliffe. (Jolliffe, Tisdall & Cannon: Clinical Nutrition, New York, Hoeber, 1950, p.634.)

THERAGRAN supplies *all* of the vitamins indicated in mixed vitamin therapy in the carefully balanced, *high* dosages needed for fast recovery from mixed deficiencies.

Each Theragran Capsule contains:

Vitamin A	25,000 U.S.P. Units
Vitamin D	1,000 U.S.P. Units
Thiamine Hydrochloride	10 mg.
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Niacinamide	150 mg.
Ascorbic Acid	150 mg.

Bottles of 30, 100 and 1000

*Thiamine content raised to 10 mg.

When you want truly therapeutic dosages specify...

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for therapy...

and correct the patient's diet

Squibb

[Continued from page 2596]

MEDICALLY SPEAKING—

Regional Hospital Plan Expanded—A grant of $24,500 from the New York State Health Department will enable the University of Buffalo School of Medicine to expand its regional hospital plan in six counties in western New York. Through this program the University is able to bring the latest advances in medicine to practicing physicians and surgeons. The grant for expansion of this project is expected to be annual. About 1,700 physicians in the counties of Niagara, Erie, Genesee, Wyoming, Cattaraugus, and Chautauqua will be able to take advantage of this planned program of postgraduate medical education.

The program, originated by the medical school two years ago, provides for the conduct of clinics and conferences by University faculty members at the community hospitals and for the assignment of residents from affiliated hospitals in Buffalo to the community hospitals requesting them. The grant will make possible the appointment of a full-time director of postgraduate education in the medical school.

Five hospitals now are associated with the University in the regional program: Wyoming County Community Hospital in Warsaw, Genesee Memorial in Batavia, Mount St. Mary's in Niagara Falls, Olean General in Olean, and Brooks Memorial in Dunkirk. Three more have applied for inclusion in the program: Niagara Falls Memorial, Tri-County Memorial Hospital in Gowanda, and Jamestown General. Cooperating in the program are four Buffalo hospitals affiliated with the medical school, Buffalo General, Millard Fillmore, Children's, and Edward J. Meyer Memorial. Dr. Abraham H. Aaron is head of the medical school's postgraduate department.

Establish Award for Research in Antibiotics—The Commercial Solvents Corporation and the Society of American Bacteriologists announce the establishment of an annual award for outstanding research in the field of antibiotics. The award, one thousand dollars and a gold medal, will be given to an individual or a group of individuals working in the Western Hemisphere who contribute to the better understanding of antibiotics. In selecting the winner of the award, particular attention will be given to the basic nature of the research upon which the award is made and its contribution to fundamental knowledge about antibiotics.

The Commercial Solvents Award will be administered by the Society of American Bacteriologists, and the recipient will be selected by a committee appointed by the president of the Society. It is expected that the first award will be presented at the annual meeting of the Society of American Bacteriologists in Chicago in May, 1951.

Academy Sponsors Radio Series—The second series of postgraduate radio lectures, sponsored by the New York Academy of Medicine, began on Thursday night, September 21, over Station WNYC-FM, New York City, continuing for seven successive weeks. First speaker in the series was Dr. Jeff Davis. Other contributors to the program include: Dr. Edward Tolstoi, Dr. William Goldring, Dr. Alvan L. Barach, Dr. Edgar M. Bick, Dr. Elise Strang L'Esperance, Dr. Count D. Gibson, Jr., and Dr. Arthur M. Master.

Journal Marks Anniversary—The golden anniversary of the American Journal of Nursing was celebrated with a dinner October 10 in New York City. Guest speaker was Mrs. Eleanor Roosevelt, whose topic was "The Nurses and the World of Tomorrow."

Lectureship Honors Dr. Pollitzer—The annual Sigmund Pollitzer Lectureship has been established under the sponsorship of the New York University Post-Graduate Medical School, through a grant from Mrs. Pollitzer in honor of her husband, the late Dr. Sigmund Pollitzer, former professor of dermatology and syphilology at New York Post-Graduate Medical School. Under the terms of the gift, outstanding scientists and teachers will be invited to speak on selected topics related to the field of dermatology and syphilology. The first Pollitzer Lecture was given on October 5 at the Carnegie Lecture Hall by Dr. Udo J. Wile, professor emeritus of dermatology and syphilology and former dean of the School of Medicine of the University of Michigan. His topic was "Cutaneous Medicine in the Medical Curriculum."

Adams County Medical Society Celebrates Centennial—The Adams County Medical Society of the Illinois State Medical Society celebrated its hundredth birthday with a four-day birthday party from October 14 to 17. The party was a community affair, bringing in the growth and development of Quincy and its surrounding territory from its pioneer beginnings before 1840, but the predominant note was the medical society's contribution to that growth. A pageant of fifteen episodes, "The Flame of Life," was given, illustrating the health progress of the Quincy area from the Indian medicine men and the malaria and cholera of the early days to the penicillin and the modern surgery of today.

An important feature was the Hall of Science set up under canvas in the stadium, in which the Adams County Medical Society, the Illinois State Medical Society, the American Medical Association, the Illinois State Dental Society, and a large number of public health and voluntary health organizations, industrial and agricultural groups placed exhibits.

The Adams County Society's one hundred years make it the oldest county medical society in Illinois, although the Chicago Medical Society was also founded in 1850.

Association Commemorates Founder—The life and work of the late Dr. William Freeman Snow, founder of the American Social Hygiene Association, was commemorated at a meeting of the Association October 26 in New York City. At the time of his death June 12 in Bangor, Maine, Dr. Snow was board chairman of the Association, pioneer citizens' group in the fight against venereal disease and commercialized prostitution.

At the meeting, held in St. Paul's Chapel of Columbia University, speakers described Dr. Snow's achievements as state health officer of California from 1908 to 1914; as general director of the American Social Hygiene Association from 1914 to 1937; as a leader in international social hygiene activities, both in the League of Nations and in the International Union Against the Venereal Diseases, of which he was president when he died, and as a personality who fought hard for strength and stability in family life and fought against VD and prostitution, the two major threats to the health and well-being of both individuals and family groups.

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MEETINGS

PAST

Bronx Society of Neurology and Psychiatry

At a recent meeting of the Bronx Society of Neurology and Psychiatry the following members were elected as officers:

Dr. Joseph D. Sullivan, president; Dr. Jacob H. Friedman, vice-president; Dr. Moses Madonick, treasurer, and Dr. Hilbert W. Ehrlich, secretary.

American College of Physicians, Western New York Regional Meeting

The Western New York Regional Meeting of the American College of Physicians was held October 14 at the Rochester Academy of Medicine, Rochester, with Dr. William S. McCann, Rochester, and Dr. Edward G. Reifenstein, Sr., Syracuse, as presiding officers for the morning and afternoon sessions, respectively.

Speakers on the scientific program included: Dr. James F. Conner, Rochester, "Chronic Ulcerative Colitis with Pyodermic Gangrenosa of the Leg: Results of Treatment with Combined Antibiotics"; Dr. Morris E. Missal, Rochester, "Myocardial Infarction After Penicillin: Probable Sensitization Reaction"; Dr. Richard E. Platzer, Clifton Springs, "Porphyrinuria in Periarteritis Nodosa"; Dr. Herbert R. Brown, Jr., Rochester, "Clinical Ballistocardiography."

Also: Dr. Corbet S. Johnson, Waverly, "Cardiac Cirrhosis"; Dr. Ralph F. Jacox, Rochester, "Determination of Rheumatic Activity in Arthritis by Turbidometric Assay of Serum with Quartenary Ammonium Compound"; Dr. Bernard M. Norcross, Dr. L. Maxwell Lockie, and Dr. John H. Talbott, Buffalo, "Study of Muscle Lesions and Rheumatic Nodules in Patients Receiving Cortisone Therapy"; Dr. Samuel E. Cohen, Elmira, "Giant Follicular Lymphoblastoma"; Dr. Lawrence E. Young, Rochester, and Dr. Richard F. Platzer, Clifton Springs, "Hemolytic Mechanisms in Hereditary Spherocytosis."

Also: Dr. G. W. Cronk, Syracuse, "Pulmonary Calcification and Histoplasmin Sensitivity in New York State"; Dr. Harry A. Bray, Ray Brook, "Appraisal of Strict Bed Rest in Tuberculosis Following Thoracoplasty"; Dr. Charles L. Steinberg, Rochester, "Steroid Hormones in the Treatment of Rheumatic Disease"; Dr. Paul A. Bunn, Dr. Charles Adair, and Dr. O. D. Chapman, Syracuse, "Hemagglutination Test for Tuberculosis"; Dr. William W. Faloon, Syracuse, "Pathogenesis of Ascites in Laennec's Cirrhosis"; Dr. George H. Ramsey, Rochester, "Some Unusual X-ray Problems Relative to the Chest and Cardiovascular System"; Dr. Richard H. Lyons, Syracuse, "Clinical-Pathologic Conference."

Association for the Advancement of Psychoanalysis

Dr. Sara Breitbart presented a paper on "The Dynamics of Phobias" at the regular meeting of the Association for the Advancement of Psychoanalysis, held October 25 at the New York Academy of Medicine.

FUTURE

American College of Chest Physicians

A postgraduate course in "Diseases of the Chest," sponsored by the Council on Postgraduate Medical Education and the New York State Chapter of the American College of Chest Physicians, will be held November 13 to 18 at the Hotel New Yorker, New York City. Dr. Edgar Mayer is chairman and Dr. Frank R. Ferlaino, secretary of the planning committee.

Further information may be obtained from the American College of Chest Physicians, 500 North Dearborn Street, Chicago 10, Illinois.

American Academy of General Practice, Nassau County Chapter

An all-day scientific session will be held by the Nassau County Chapter of the American Academy of General Practice on November 15 at the Garden City Hotel, Garden City, Long Island. Speakers will include: Dr. Maurice Bruger, New York City, "The Probable Role of Cholesterol in Atherosclerosis"; Dr. Marion B. Sulzberger, New York City, "Some Facts and Hints About Dermatology Which May Prove Useful to the Nonspecialist"; Dr. Perrin H. Long, Baltimore, Maryland, "The Clinical Use of Antibiotics"; Dr. Philip Thorek, Chicago, Illinois, "The Acute Abdomen."

New York University College of Medicine, Alumni Association

Dr. Luther B. MacKenzie will be guest of honor at the annual dinner of the New York University College of Medicine Alumni Association, to be held Thursday, November 30, at the Waldorf-Astoria Hotel, New York City. Dr. MacKenzie is a member of the New York University Council, chairman of the Board of Trustees of the New York County Medical Society, and a past-president of the College of Medicine Alumni Association. Dr. John H. Mulholland, professor of surgery at the Medical College, is chairman of the dinner committee.

American Academy of Dermatology and Syphilology

The ninth annual meeting of the American Academy of Dermatology and Syphilology will be held in Chicago, Illinois, from Saturday, December 2, through Thursday, December 7. President of the Academy is Dr. Earl D. Osborne of Buffalo.

Further information concerning the meeting may be obtained from the secretary-treasurer, Dr. John E. Rauschkolb, P.O. Box 6565, Cleveland, Ohio.

[Continued on page 2602]

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[Continued from page 2600]

American Academy of Dental Medicine

The American Academy of Dental Medicine will hold its annual mid-winter meeting and luncheon at the Hotel Statler, New York City, on Sunday, December 3, at 12:30 P.M. There will be a business session for members and delegates of various sections at 10:00 A.M.

For program and reservations, address: Dr. William M. Greenhut, national secretary, 124 East 84th Street, New York 28, New York.

PERSONALITIES

Honored

Dr. Arthur J. Bedell, Albany, was presented an honorary Doctor of Science degree on June 12 by the University of the South . . . Dr. J. V. DePorte, New Lebanon Center, director of the State Department of Health, Office of Vital Statistics, by the French Government for his distinguished work in the field of vital statistics and population studies. By order of M. Pierre Schneiter, French Minister of Health and Population, Dr. DePorte has been made a Commander of the National French Order of Public Health and has received a scroll and gold medallion . . . Dr. Howard Fox, New York City, has recently been made an honorary member of the Italian Society of Dermatology and Syphilology . . . Dr. Arthur H. Jackson, Sr., Watkins Glen, on the occasion of his seventy-fifth birthday by the Glen-Montour Falls Rotary Club on August 24.

Retired

Dr. Walter T. Dannreuther, professor and chairman of the Department of Obstetrics and Gynecology of the New York University Post-Graduate Medical School, after thirty-five years of teaching.

Appointed

Dr. Leona Baumgartner, as a special consultant to the Children's Bureau of the Department of Health of the City of New York. Dr. Baumgartner, who was on leave from the Department of Health to serve as associate chief of the Federal Children's Bureau, has returned to her post as assistant commissioner of the New York City Department of Health . . . Dr. Robert W. Berliner, formerly assistant professor of medicine at Columbia University, as chief of the Laboratory and Clinical Section on Kidney and Electrolyte Metabolism of the National Heart Institute . . . Dr. G. Bonaccolto, as clinical professor of ophthalmology at the Post-Graduate Medical School of the New York University-Bellevue Medical Center . . . Dr. Howard Cadwell, Buffalo, as resident physician with the New York State Department of Health assigned to the Saranac Lake District Office during the summer months . . . Dr. Martin Cherkasky chief of the division of social medicine at Montefiore Hospital, as physician-in-charge of the Family Health Maintenance Demonstration by the Community Service Society to experiment in a plan to keep families well rather than treat their illnesses . . . Dr. E. Osborn Coates, Jr., of Ardmore, Pennsylvania, to the medical staff of Trudeau Sanatorium as of November 1. Dr. Coates was a member of the resident staff of the Sanatorium from 1945 to 1947 . . . Dr. John P. Crosby, Lockport, as medical director of the Lockport Civilian Defense Program.

Dr. Emerson Day, associate professor of public health and preventive medicine at Cornell University Medical College, as director of the Strang Cancer Prevention Clinic, beginning September 1 . . . Dr. Arthur Gerard DeVoe, as chairman of the Department of Ophthalmology of the New York University Post-Graduate Medical School . . . Dr. Arthur Krida, professor and acting chairman of the Department of Orthopedic Surgery of the New York University Post-Graduate Medical School for the past year, as professor emeritus, after twenty years of teaching orthopedic surgery . . . Dr. Thomas F. Laurie, Syracuse, as medical director of the Syracuse Regional Blood Program . . . Dr. James E. McCormack, executive director of the Defense Department's Committee on Medical Sciences and previously assistant dean of New York University College of Medicine, as associate dean of the New York University Post-Graduate Medical School . . . Dr. Donald Mainland, formerly professor of anatomy at the School of Medicine of Dalhousie University, Halifax, Nova Scotia, as professor of preventive medicine in charge of medical statistics at New York University College of Medicine . . . Dr. William H. Mook, resident physician at the Mary Imogene Bassett Hospital for three years and for the past year a trainee in cardiology, U.S. Public Health Service, at the University of Washington Medical School, Seattle, as resident physician of the Philmont office of the Rip Van Winkle Clinic.

Dr. John F. Roach, professor and director of the Department of Radiology at Albany College, as medical defense consultant in the radiologic aspects of warfare to the New York State Department of Health . . . Dr. George Rosen, formerly director of the Bureau of Health Education of the New York City Department of Health, as associate director of the Health Insurance Plan of Greater New York . . . Dr. Howard A. Rusk, professor and chairman of the Department of Physical Medicine and Rehabilitation of the New York University-Bellevue Medical Center, as chairman of a seven-member national advisory committee to the Selective Service System on the selection of doctors, dentists, and allied personnel. Also serving on this committee are Dr. David M. Heyman, chairman of the board of the Health Insurance Plan of Greater New York, and Dr. John B. Pastore, executive director of the Hospital Council of Greater New York . . . Dr. C. F. Von Salzen, of the Northport Medical Society, as acting psychiatrist-in-chief of the Institute of Living, Hartford, Connecticut.

Elected

Dr. Theodore J. Curphey, chief medical examiner of Nassau County, as chairman of the Nassau County Committee of the American Cancer Society for a third term . . . Dr. James Quigley, Rochester, named president-elect of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons at the 1949 convention assumed his duties as president of the organization at its annual meeting in Hot Springs, Virginia, on September 9 . . . Dr. James W. Smith, New York City, as New York Regional Director of the National Society of Autograph Collectors . . . Dr. Carl G. Whitbeck, Hudson, as a member of the board of directors of the Hudson River Trust Company.

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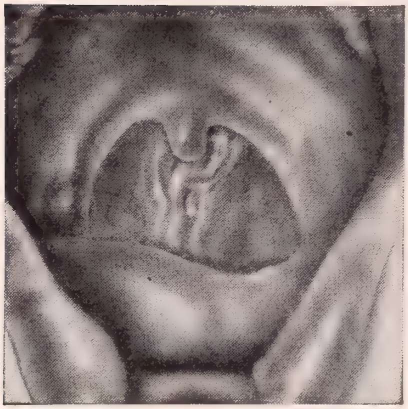

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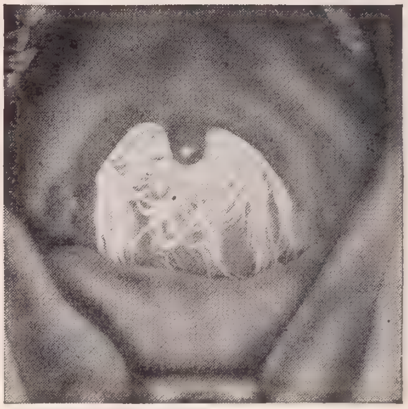

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[1] Seley, S. A.: Medical Management of Pyloric Obstruction Resulting from Peptic Ulcer, *Am. J. Dig. Dis.*, *13*:238, 1946.

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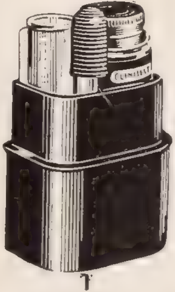

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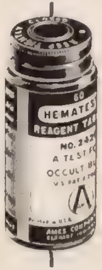

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Partial Bibliography on Cafergone

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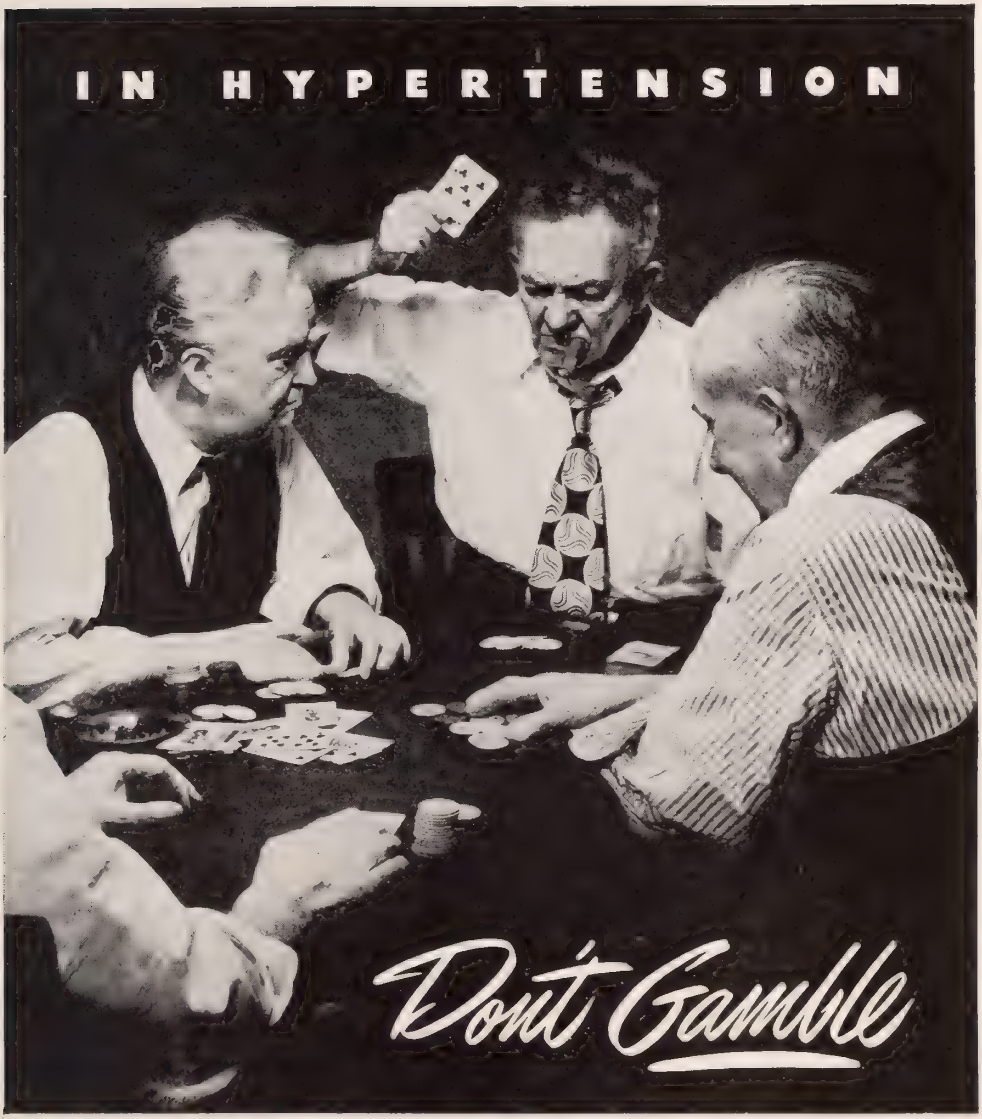

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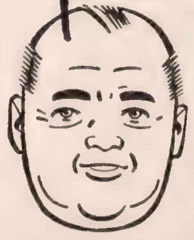

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1. Underwood, G. B., and Gaul, L. E.: J.A.M.A. *138*:570, 1948. **2.** Underwood, G. B.; Gaul, L. E.; Collins, E., and Mosby, M.: J.A.M.A. *130*:249, 1946. **3.** Howell, J. B.: Arch. Dermat. and Syph. 53:256, 1946. **4.** Gaul, L. E.: Hygeia 23:280, 1945. **5.** Gaul, L. E.: J.A.M.A. *127*:439, 1945. **6.** Lane, C. G.: J. Omaha Mid-West Clin. Soc. 6:45, 1945. **7.** Miller, H. E.; Ayres, S., Jr., and Alderson, H. E.: California & West. Medicine *51*:251, 1939. **8.** Ormsby, O. S.: Diseases of the Skin, Philadelphia, Lea & Febiger, 1937. **9.** Homans, J.: A Textbook of Surgery, Springfield, Charles C. Thomas, 1932.

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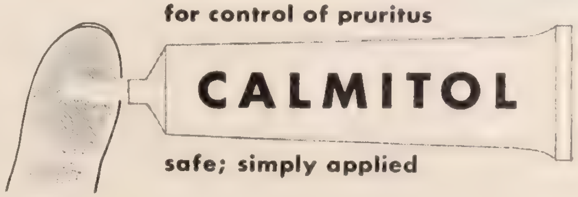

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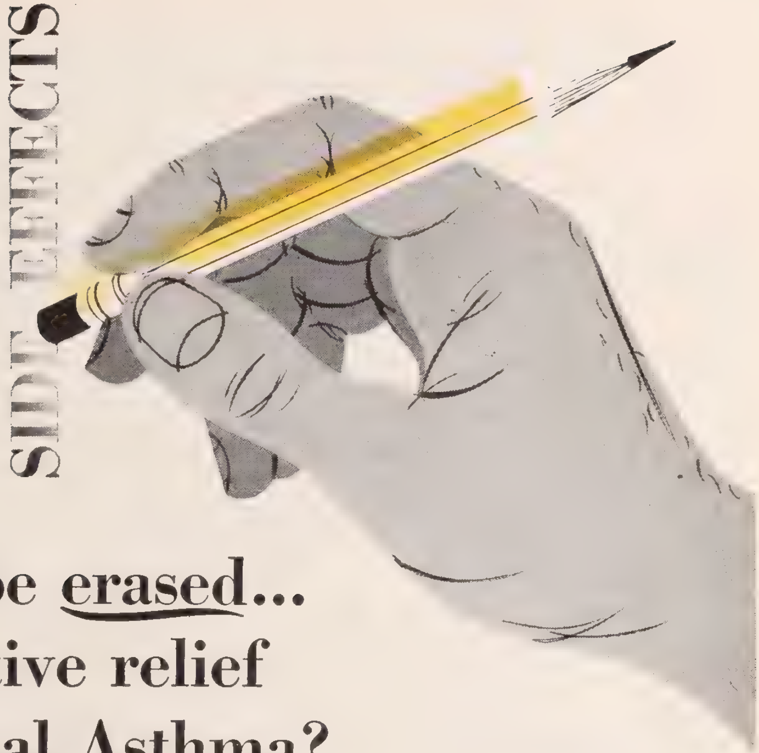

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[1] Hansel, F.K.: Ann. Allergy, 5:397, 1947

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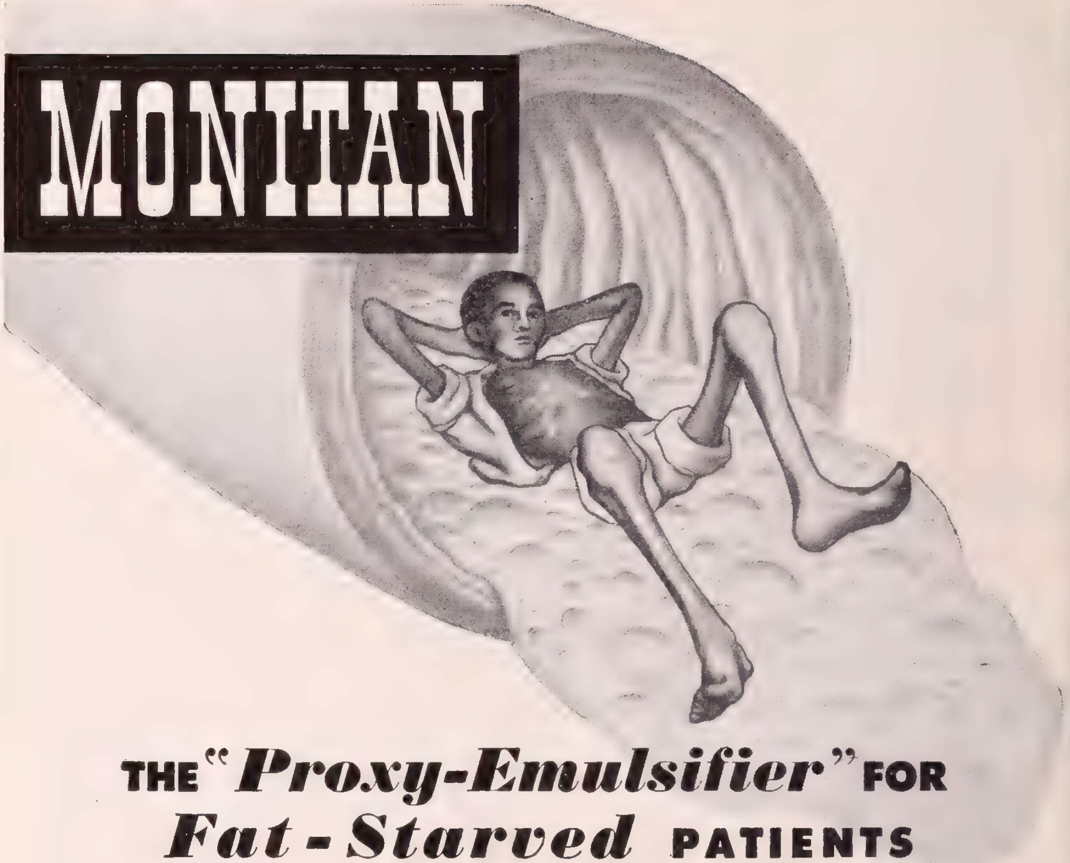

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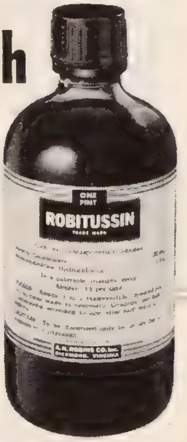

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USES: Acute colds of head and chest, bronchitis, laryngitis, tracheitis, pharyngitis, pertussis, influenza and measles. Helpful as a palliative of harmful cough in tuberculosis, asthma and paranasal sinusitis.

FORMULA: Each 5 cc. (1 teaspoonful) of Robitussin contains:

Glyceryl guaiacolate	100 mg.
Desoxyephedrine hydrochloride	1 mg.

In a palatable aromatic syrup

DOSAGE: Adults: 1 to 2 teaspoonfuls, repeated every 2 to 3 hours as necessary. Children: ½ to 1 teaspoonful according to age, 3 or more times daily.

SUPPLIED: In pints and gallons.

REFERENCES

1. Boyd, E. M. et al.: Canadian J. Res., 23:195, 1945.
2. Boyd, E. M. et al.: Canadian M.A.J., 54:216, 1946.
3. Connell, W. F. et al.: Canadian M.A.J., 42:220, 1940.
4. Foltz, E. E. et al.: J. Lab. & Clin. Med., 28:603, 1943.
5. Novelli, A. and Tainter, M. L.: J. Pharmacol., 77:324, 1943.

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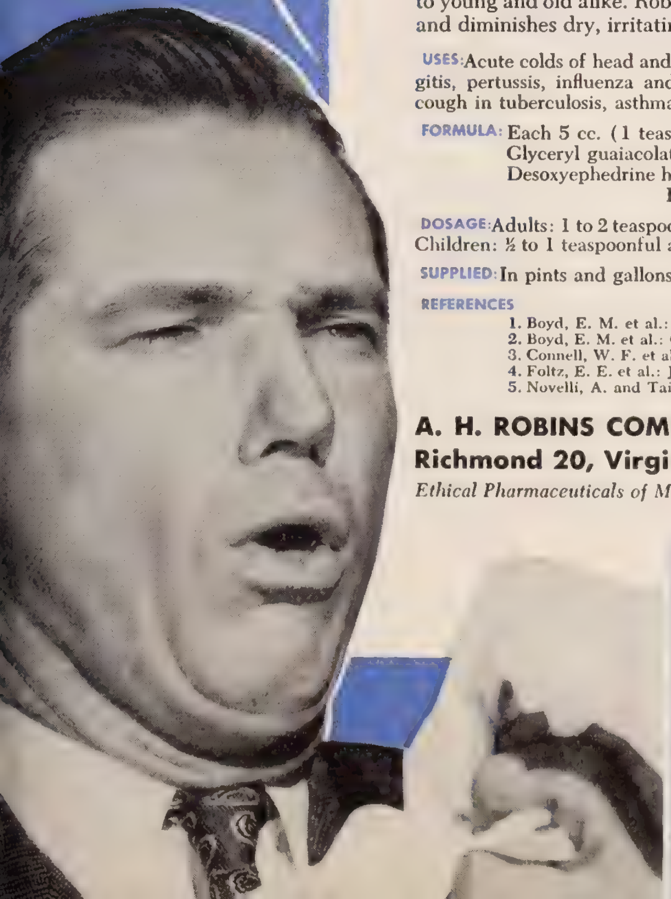

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1. Editorial: J.A.M.A. 141: 392 (1949).
2. Hueper, W. C.: M. Clin. North America 33: 773 (1949).

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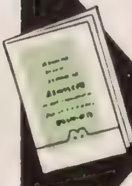

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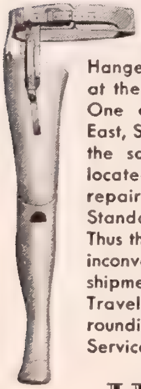

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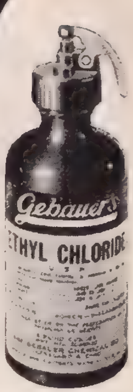

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1. Levin, L.; Kelly, J. F., and Schwartz, E.: New York State J. Med. 48: 1474 (1948).

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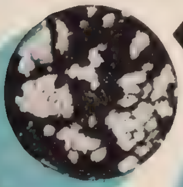
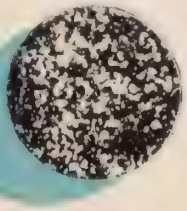


Untreated Milk—showing coarse, tough curds, often hard to digest.



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"Failure to answer the call to stool"[1] is one of the most common causes of constipation. As rectal reflexes are dulled, fecal accumulation, inspissation and subsequent atony make evacuation progressively more difficult.

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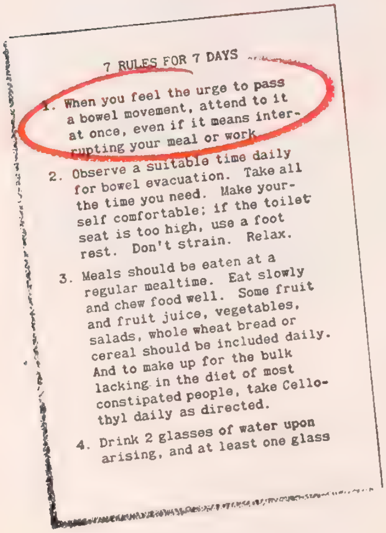

7 RULES FOR 7 DAYS

1. When you feel the urge to pass a bowel movement, attend to it at once, even if it means interrupting your meal or work.
2. Observe a suitable time daily for bowel evacuation. Take all the time you need. Make yourself comfortable; if the toilet seat is too high, use a foot rest. Don't strain. Relax.
3. Meals should be eaten at a regular mealtime. Eat slowly and chew food well. Some fruit and fruit juice, vegetables, salads, whole wheat bread or cereal should be included daily. And to make up for the bulk lacking in the diet of most constipated people, take Cellothyl daily as directed.
4. Drink 2 glasses of water upon arising, and at least one glass

Prompt response to physiologic urge is one of the "7 Rules for 7 Days," outlined in a simple leaflet designed for better patient-understanding, to overcome what are called "improper habits . . . which either singly or combined" cause constipation.[1]

Available to physicians:

Pads of the "7 Rules" may be had on request. Just write "7 Rules" on a prescription blank and send to Chilcott Laboratories, Morris Plains, New Jersey.

An aid to physiologic correction:

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These gratifying results can be duplicated in your own practice by incorporating Cellothyl Tablets (physiologically correct colloid) into a sensible two-part anticonstipation regimen such as these investigators found so successful.

Part I PHILOSOPHY OF CORRECTION

To assure a proper "mental attitude . . . the simple rules of bowel hygiene"[3] are explained. Effort is directed against poor diet, cathartic abuse, etc.,—and the fact stressed that the effect of lifelong habits which *cause* constipation cannot be nullified overnight. As a reminder of your advice, you may want to give the patient a copy of the leaflet "7 Rules for 7 Days," which is available on request.

Part II PHYSIOLOGY OF CORRECTION

Since explanation and advice often fail to alter deeply ingrained habits,[1-3] physiologic therapy with Cellothyl is an important part of the anticonstipation program.

Cellothyl is physiologically correct: following the normal digestive gradient, Cellothyl passes through the stomach and small intestine as a fluid, then thickens to a smooth gel in the colon to provide bulk where bulk is needed for soft, moist, easily passed stools.

Because of the unhurried, physiologic manner in which Cellothyl acts, enough time must be allowed for it to reach the colon before the first normal well-formed stool results. With sufficient bulk to stimulate intestinal motility and mass reflex, the patient may, "in the course of a few days . . . be able to resume more normal bowel habits."[4]

Dosage: 3 Tablets t.i.d., each dose with a full glass of water, until normal stools pass regularly. Then reduce to minimum levels for as long as required. *To "wean" the cathartic addict,* ½ the usual laxative dose may be given together with Cellothyl for several days, then ¼ the usual dose, with Cellothyl, then Cellothyl alone. Daily fluid intake must be high.

---

1. *Bargen, J. A.: Gastroenterology 13:275, 1949.*
2. *Musick, V. H.: J. Oklahoma M. A. 43:360, 1950.*
3. *Schweig, K.: New York State J. Med. 48:1822, 1948.*
4. *Council on Pharmacy and Chemistry: J.A.M.A. 143:897, 1950.*

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Each six *Cadroson* tablets contain:

Calcium	1.5 Gm.
Phosphorus	0.75 Gm.
Fluorine	0.5 mg.
Iron	15 mg.
Vitamin D	1,000 U.S.P. Units

CADROSON tablets are supplied in bottles of 100 and 1,000.
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Diethylstilbestrol Dipropionate-Breon is graced by an estrogenic action that *glides.* In selected dosage it is customarily free from awkward, interfering effects.

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REMOVAL OF IMPACTED CERUMEN
AS AN ADJUNCT TO SYSTEMIC ANTI-INFECTIVE THERAPY
CONTAGIOUS DISEASE EAR INVOLVEMENTS

FORMULA: Glycerol (DOHO) .... 17.90 GRAMS
(Highest obtainable spec. grav.)
Antipyrine .... 0.81 GRAMS
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FORMULA: Urea .... 2.0 GRAMS
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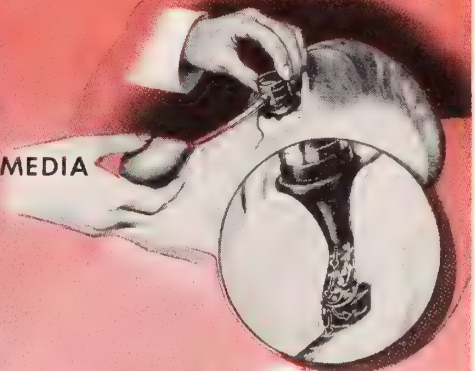

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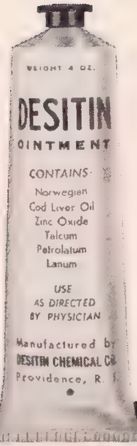
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[1] Behrman, H. T., Combes, F. C., Bobroff, A., and Leviticus, R.: Industrial Med. & Surg. 18:512, 1949.

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[1] Meyer, K. & Ragan, C.: Mod. Concepts of Card. Disp., 17:2 (1948)
[2] Quick, A. J.: J. Biol. Chem., 101:475 (1933)
[3] Guerra, J.: J. Pharm. Exp. Ther., 87:1943 (1946)

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1. "Symptoms were relieved from 4 to 24 hours after the administration of a single dose of Decapryn—" . . . Sheldon, J.M. Et al: Univ. Mich. Hosp. Bull. 14:13-15 (1948)
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1. Prigal, S. J.: Bacteriologic and Epidemiologic Approach to the Treatment of Respiratory Infections with Aerosols of Specific Antibiotics, Bull. N. Y. Acad. Med. 26:282 (Apr.) 1950.
2. Stovin, J. S.: The Use of Bacitracin in the Treatment of Sinusitis and Related Upper Respiratory Infections, New York Physician 32:14 (July) 1949.
3. Prigal, S. J., and Furman, M. L.: The Use of Bacitracin, a New Antibiotic, in Aerosol Form; Preliminary Observations, Ann. Allergy 7:662 (Sept.-Oct.) 1949.

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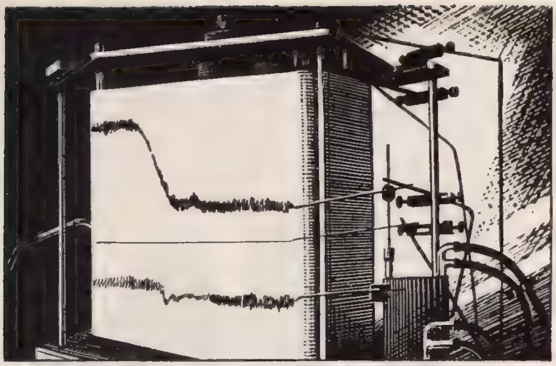

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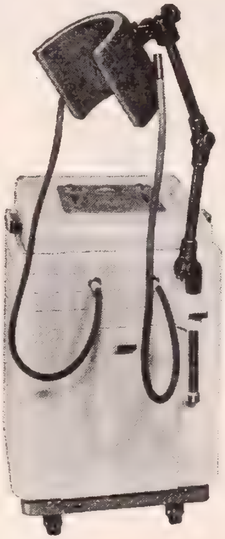

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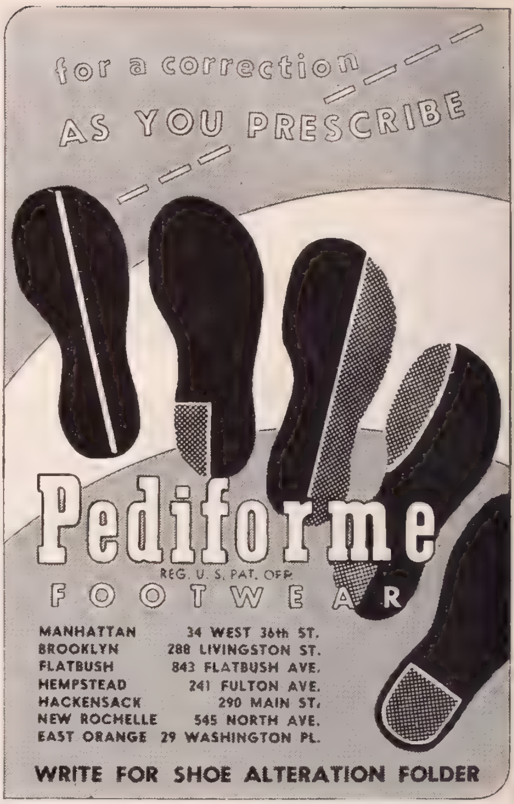

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Gray, L.: J. Clin. Endocrinol. 3:92 (Feb.) 1943.

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1. Bargen, J. A.: Gastroenterology 13:275, 1949
2. Ivy, A. C., and Berman, A. L.: Minnesota Med. 22:815, 1939

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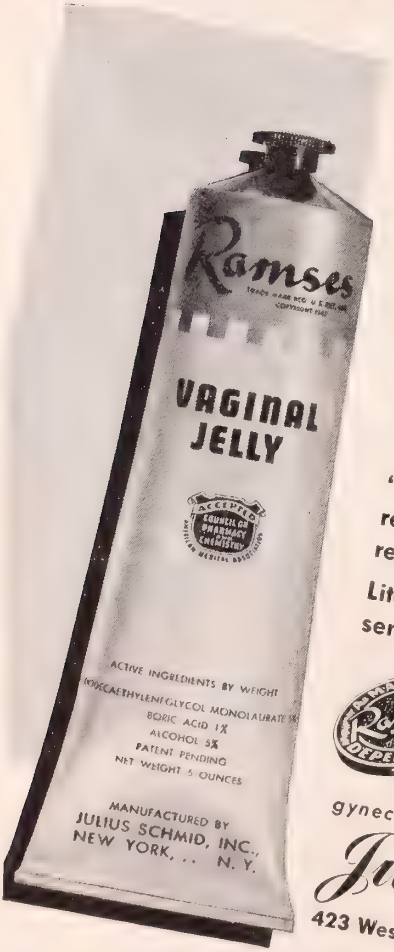
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BIBLIOGRAPHY

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Stanley, Phyllis: The American Journal of Medical Technology, Vol. 6, No. 6, Nov., 1940 and Vol. 9, No. 1, Jan., 1943.

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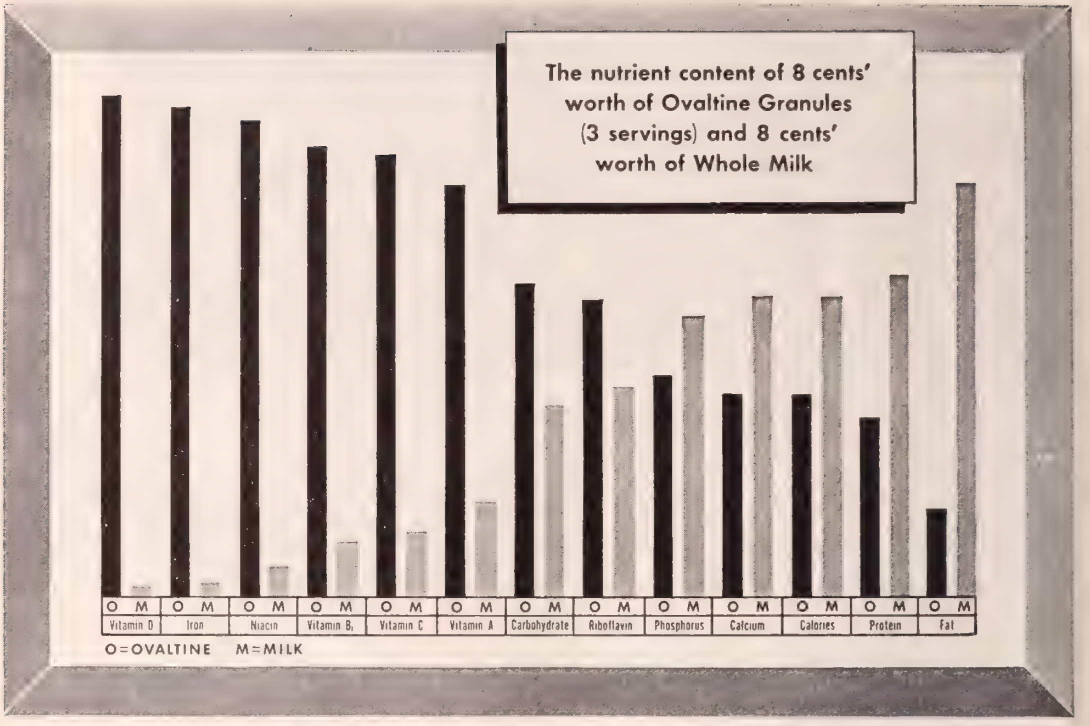

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Vitamin A	2025 I.U.	625 I.U.
Carbohydrate	29 Gm.	19 Gm.
Riboflavin	0.75 mg.	0.66 mg.
Phosphorus	255 mg.	363 mg.
Calcium	255 mg.	460 mg.
Calories	160	269
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A totally new antipruritic . . . EURAX, original product of Geigy research . . . sets new standards in the treatment of pruritus. In a carefully controlled study[1] EURAX provided "excellent (complete) relief" in 66.2 per cent of cases, and "moderate (considerable) relief" in 27.4 per cent. In most instances a single application ensured relief for 6-8 hours or more. In no case did the cream lose its effectiveness on continued application.

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As a specific in the treatment of scabies EURAX Cream in a single application eradicates the infection in over 90% of cases.[2] A second application gives practically a 100% cure rate.[4] No prior bathing or scrubbing required. Bacteriostatic, EURAX accelerates healing in infected scabies.

Geigy

1. Couperus, M.: J. Invest. Dermat. *13*:35, 1949.
2. Patterson, R. L.: Southern M. J. *43*:449, 1950.
3. Peck, S. M. and Michelfelder, T. J.: New York State J. Med. In press.
4. Tronstein, A. J.: Ohio State M. J. *45*:889, 1949.

EURAX (brand of crotamiton) Cream: 10% N-ethyl-o-crotonotoluide* in a vanishing cream base supplied in tubes of 20 Gm. and 60 Gm. and jars of 1 lb.

*U. S. Pats. # 2,505,681 2,505,682 E-19

GEIGY CO., INC., Pharmaceutical Division, 89-91 Barclay St. • New York 8, N. Y.

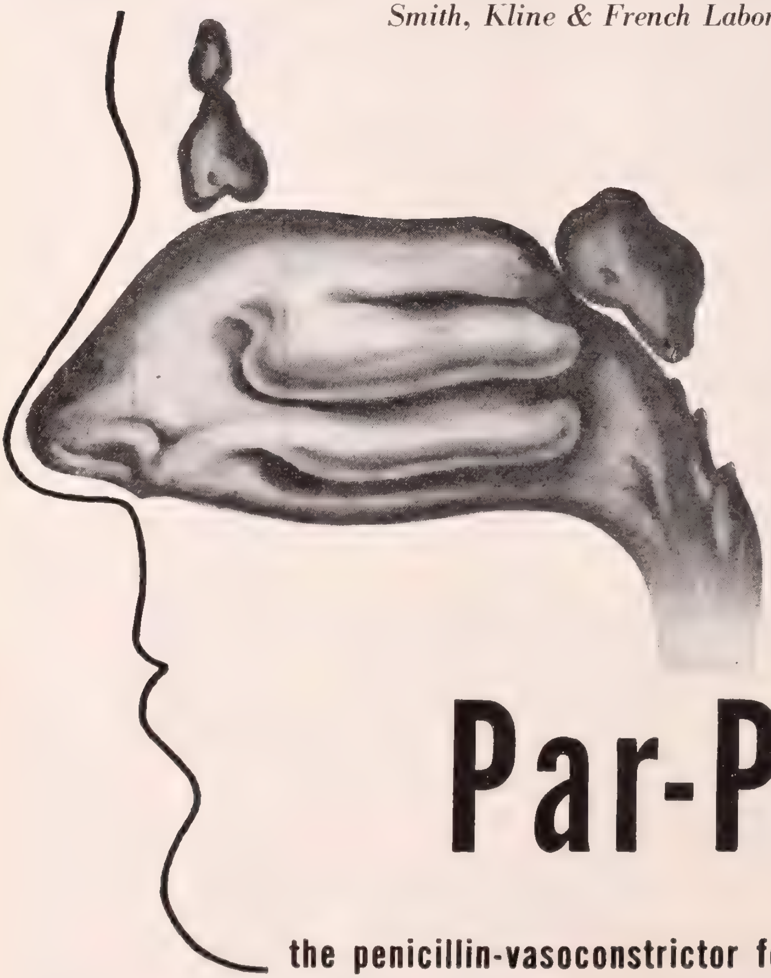
how the Paredrine in Par-Pen helps its penicillin fight intranasal infection

Council-accepted Paredrine Hydrobromide produces rapid and prolonged shrinkage of nasal mucosa. The nasal passages are opened so that the penicillin can "get through" to the infected areas. Bacteriostasis is thereby facilitated.

Paredrine does not break down the penicillin. Par-Pen remains at full therapeutic potency for an entire week—even when kept at room temperature.

Par-Pen contains crystalline potassium penicillin G, 5000 units per cc.; Paredrine Hydrobromide (hydroxyamphetamine hydrobromide, S.K.F.), 1%; in a specially buffered isotonic aqueous solution. Packaged in ½ fl. oz. bottles.

Smith, Kline & French Laboratories, Philadelphia



Par-Pen

the penicillin-vasoconstrictor for intranasal use

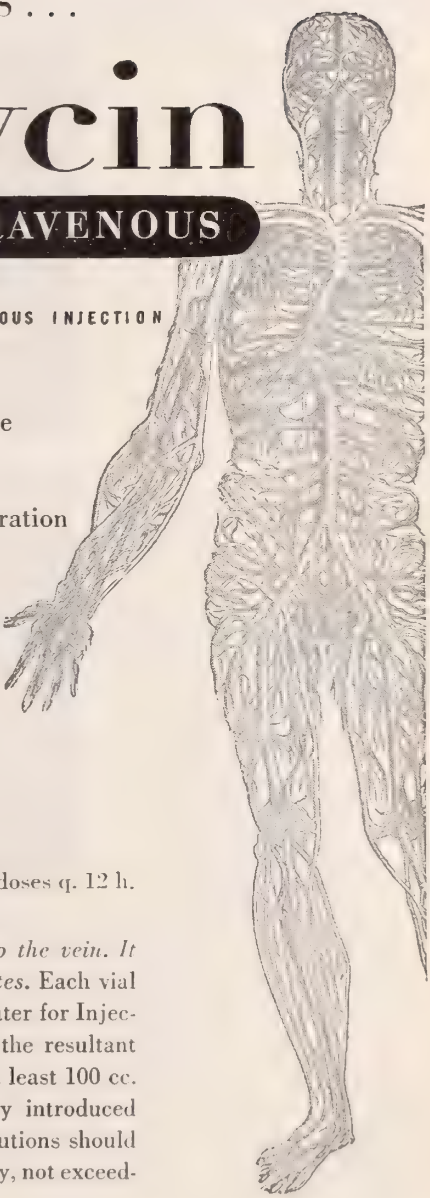
'Paredrine' & 'Par-Pen' T.M. Reg. U.S. Pat. Off.

Pfizer announces . . .

Terramycin

for hospital use only **INTRAVENOUS**

CRYSTALLINE TERRAMYCIN HYDROCHLORIDE FOR INTRAVENOUS INJECTION



Affords the advantages of intravenous therapy with the newest of the broad-spectrum antibiotics in:

. . . those conditions and cases in which oral administration is not feasible;

. . . severe, fulminating or necrotizing infections (by rapidly producing high serum concentrations):

. . . pre- and post-operative prophylaxis;

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Dosage and Administration:

0.5 Gm. to 1.0 Gm. of Terramycin Intravenous in divided doses q. 12 h. has been found adequate for most acute infections.

Terramycin Intravenous should be injected directly into the vein. It is never given by the intramuscular or subcutaneous routes. Each vial is dissolved in sterile 5% Dextrose for Injection, USP, Water for Injection, USP, or Physiological Saline Solution, USP, and the resultant clear solution further diluted to give a final volume of at least 100 cc. When desired, Terramycin Intravenous may be directly introduced into solutions for continuous drip infusion. Injection solutions should not contain more than 5 mg. per cc. and are injected slowly, not exceeding 100 cc. in five minutes.

Supplied: 10 cc. vials containing 250 mg. of Crystalline Terramycin Hydrochloride with sodium glycinate as a buffer.
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*One of a series of reports on CORTONE**

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Patient—M. D.:
Rheumatoid Arthritis.

History:
Disease present for eight years prior to administration of Cortone. Previous treatment included gold therapy, tonsillectomy, and general supportive measures.

Result:
Excellent subjective response; joint swellings greatly reduced; true weight gain of 4 lbs.

From the Arthritis Service
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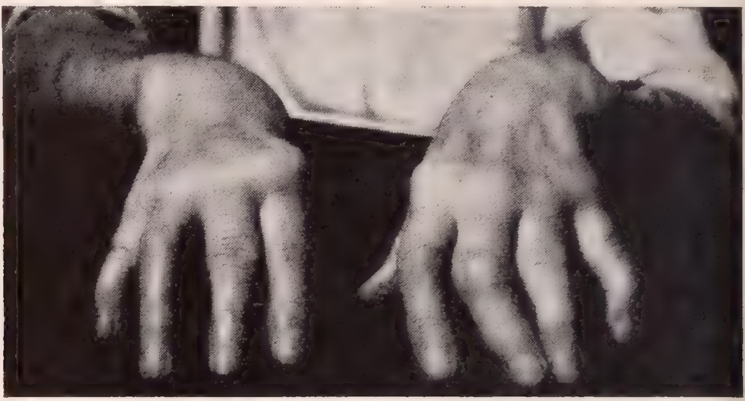
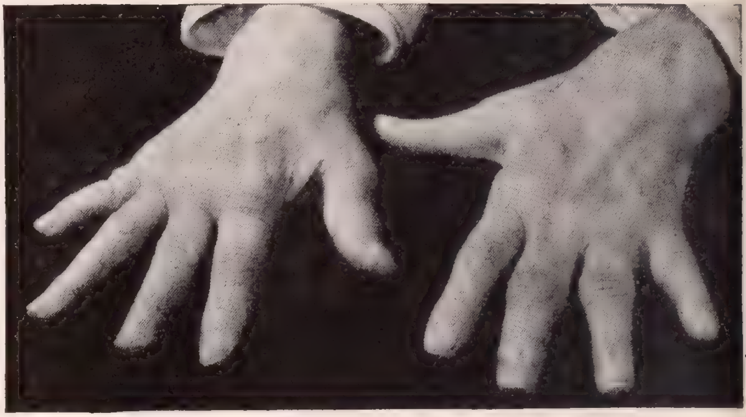


Prior to Administration of CORTONE



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Cortone (Cortisone), which is now abundantly available, has been used in the treatment of thousands of patients with rheumatoid arthritis. In virtually every case reported in the extensive literature, treatment with Cortone has produced remission of symptoms and signs of the disease.

Abundant quantities of Cortone now are available for use in your daily practice—from your usual source of medicinal supplies.

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Manufacturing Chemists
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(11-dehydro-17-hydroxycorticosterone-21-acetate)

**CORTONE is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

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The development of the improved Biolac supplies a long-sought need in infant nutrition. To accomplish this, Borden scientists surveyed our present nutritional knowledge. They then tested more than 500 formulations. Having decided on the formula that would best supply the normal infant's nutritional requirements in their most assimilable form, a modern plant was constructed in 1949 so that the new formula could also benefit from the most up-to-date techniques and control in processing equipment. A Biolac formula that is both new and improved is thus made available.

Biolac is intended for prescription by every physician with infants among his patients. It satisfies the physician's demand for a complete food to which only vitamin C need be added. That means it is simplicity itself to prepare and provides the maximum in formula safety for the infant.

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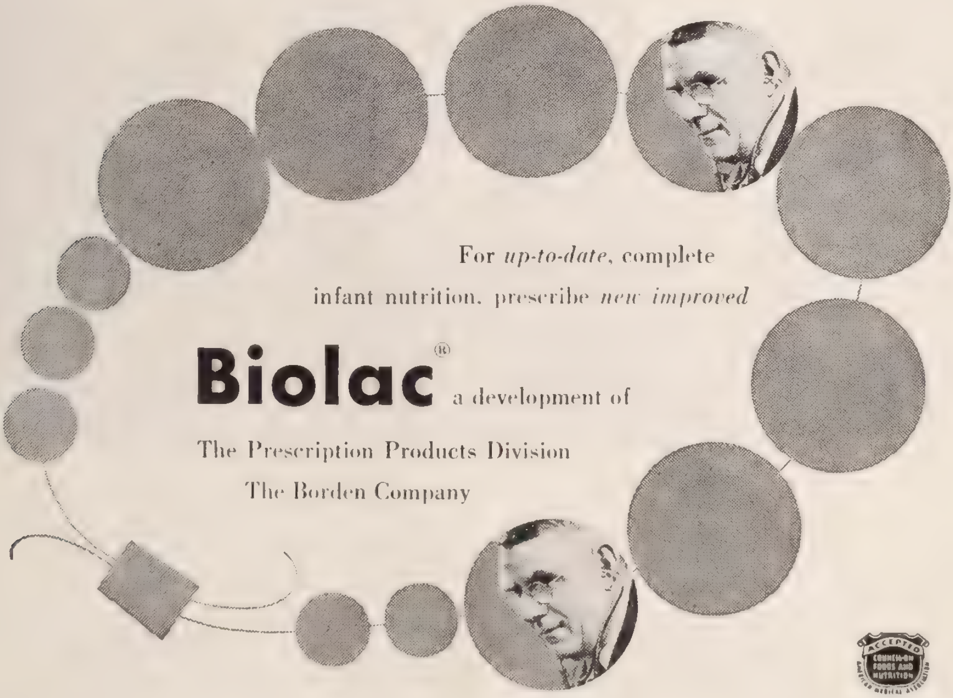

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Biolac® a development of

The Prescription Products Division
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Ingredients: skim milk, dextrins-maltose-dextrose, lactose, coconut oil, destearinated beef fat, lecithin, sodium alginate, disodium phosphate, ferric citrate, vitamin B_1, concentrate of vitamins A and D from fish liver oils, and water. Homogenized and sterilized.

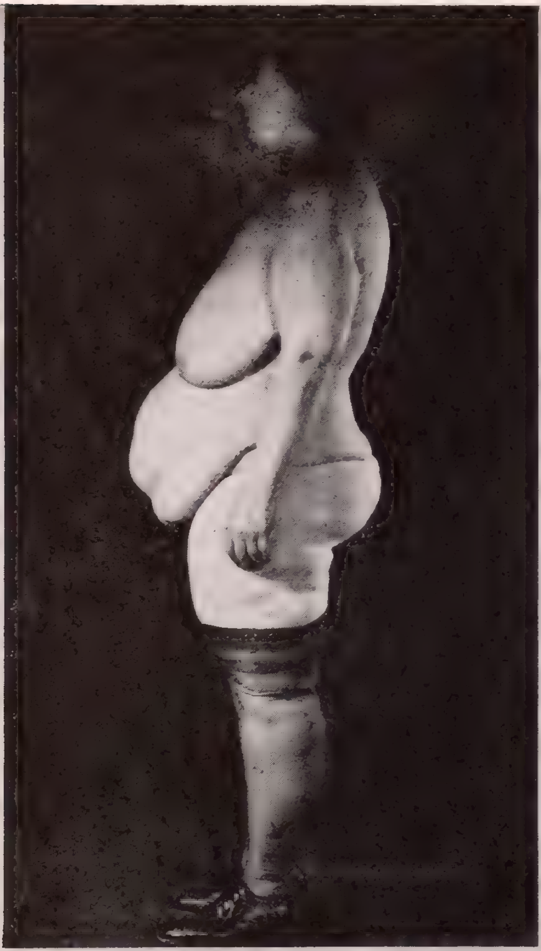
Dilution: one fluid ounce to one and a half ounces of boiled water for each pound of body weight.

Biolac is available at drugstores in 13 fluid ounce tins.

The Borden Company, Prescription Products Division, 350 Madison Avenue, New York 17

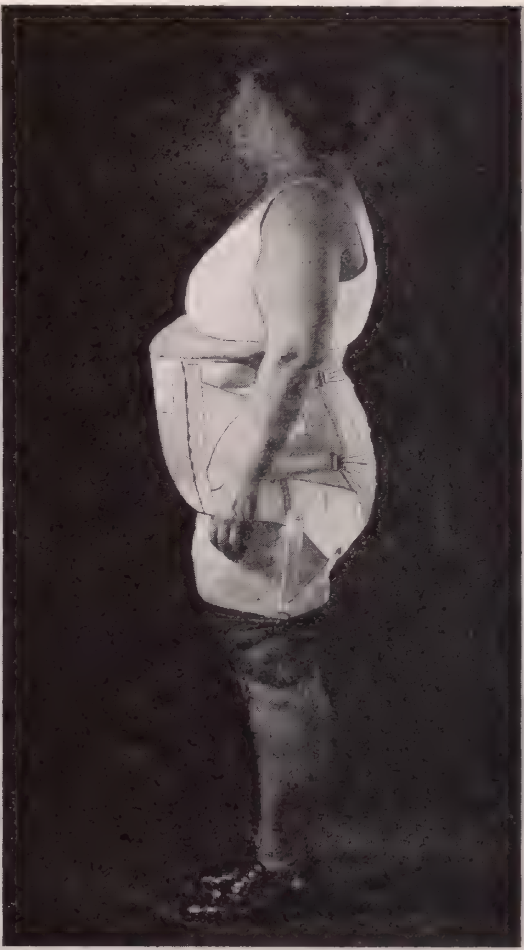
Ventral Hernia

A GREATER LIABILITY OF THE OBESE



● Photograph of patient, 51 years old. Weight — 226 lbs.; height — 5 ft. 5 in.

Patient was operated four years ago for fibroid tumors of the uterus when weighing 240 lbs. Complete disruption of the wound occurred on the fourth day. Pneumonia followed, requiring a six month's stay in the hospital.



● Photograph of patient after application of support.

The support holds the abdomen and its contents up and back, thus relieving the drag on the lumbar fascia and placing the load upon the pelvic girdle.

The gluteal region is well supported, thus relieving the pull on the posterior portion of the crests of the ilia.

The chief characteristic of Camp Supports is their ability to steady and support the pelvic girdle. It is from this support of the bony pelvis that the exceptional support of the abdomen and back takes place, as noted in the above illustrations.

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World's Largest Manufacturers of Scientific Supports
Offices at: 200 Madison Ave., New York; Merchandise Mart, Chicago; Windsor, Ont.; London, Eng.

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ONE PINT
Wyeth
Petrogalar
Aqueous Suspension of Mineral Oil
Plain
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SAFE . . .

PETROGALAR,® given at bedtime—not with meals—has no adverse effect on absorption of nutritive elements. It provides a relatively small but highly effective dose of mineral oil augmented by a bland, hydrophilic colloid base. The result is a soft-formed, easily passed stool, permitting comfortable bowel movement.

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THE dark, dank breeding ground of a clogged sinus is ideal for organisms but not for the patient. Shrinkage of nasal mucosa opens an airway, permits drainage, relieves discomfort, and admits penicillin for concentrated, localized activity. This may now be rapidly achieved for long periods without the disadvantages of earlier epinephrine-like decongestants. To combat infection and to provide comfort with only the slightest degree of restlessness or sleeplessness, without irritation, ciliary interference, or secondary engorgement, prescribe

'Clopane Hydrochloride' with Penicillin—G

(Cyclopentamine Hydrochloride, Lilly)

Complete literature on 'Clopane Hydrochloride' with Penicillin—G is available from your Lilly medical service representative or will be forwarded upon request.

DIABETES
DETECTION WEEK,
NOVEMBER [illegible]

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NEW YORK STATE
JOURNAL OF MEDICINE

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VOLUME 50 NOVEMBER 15, 1950 NUMBER 22

Editorials

The Manhattan Dermatological Society

Congratulations are in order on the fiftieth anniversary of the founding of the Manhattan Dermatological Society, the second oldest dermatological society in New York. The Journal is honored to be able to present in this issue a distinguished symposium by many outstanding authorities on dermatology which will be read with interest by the membership of the Medical Society of the State of New York.

As pointed out by Dr. Paul E. Bechet in his historical review of the annals of the Manhattan Society, there have been but eight resignations from the organization in the course of fifty years, out of a total membership limited to twenty dermatologists. Surely this is a remarkable testimony to the interest and loyalty of its members.

Founded in 1900 by Dr. William S. Gottheil and six others, the Society in its first president typified the American story of the founding of so many of our outstanding institutions of continuing worth and solidarity by men of constructive imagination, foreign born, often educated abroad, who arrived on these shores as immigrants and remained to become among our foremost citizens. If the American policy of welcome to all needed any justification, it would be found in the lives of such men as these.

. . .

We extend the hearty congratulations of the Medical Society of the State of New York through the Journal and sincere wishes for its future progress to the Manhattan Dermatological Society.

Direct Communication

We note with much satisfaction the appearance for the first time, in the September 23, 1950, issue of the *Journal of the American Medical Association*, of a President's Page, carrying a report to the membership from Dr. Elmer L. Henderson. This message direct from G.H.Q. to the men in the front line will be a regular monthly feature from now on. And a welcome one.

For too long, in our view, the A.M.A., typified by its chief executive, has been remote, withdrawn, impersonal. Some light but little warmth has, in the past, filtered down from Olympus to the customers. Rarely seen by Joe Doakes, M.D., medical practitioner to John Doe, citizen-taxpayer, he would be hard put to tell the inquiring reporter who was president of the A.M.A. at any given time and equally unable to visualize him.

Formal medicine, a term which came in our window when "organized medicine" went out years ago as a meaningless and rather stupid appellation, must be the top level representative of the practicing physician in the nature of things as they are. But its chief executive is a human being and, incidentally, deserves a better halftone cut than that on page 319 of the *J.A.M.A.* From him to other human beings should flow directly some of the better known attributes of man: warmth, kindliness, humor, sympathy, understanding, and inspiration.

We of the medical profession exhibit these to our patients in our daily routines, but they have been conspicuously lacking, not in fact perhaps, but in expression, between ourselves from the top down.

Now, in the hour of our need for each other, in the stiffening of our resistance to the subtleties of tyranny, of political controls, of heightened dues to provide the material of resistance, direct communication from the chief executive can become a leading force in medicine which can bind the profession as never before. The President's Page is a first step in this direction. We hope it will eventually be more than a monthly report, even as good a report as this one proves to be.

Current Editorial Comment

Manpower for National Defense. International events have once more brought into sharp focus the needs of industry and our armed forces for greatly increased manpower. What are the present population trends and the indications for our future male population at the principal military ages?

Says the *Statistical Bulletin*[1]

> Preliminary results of the census taken in April of this year indicate that the population of the United States then was about 151,000,000, including the armed forces overseas. This means an increase of more than 19,000,000 since 1940, or of 14.6 per cent. The detailed returns of the recent census are not yet available, so that we must be guided by the estimates covering the period up through 1949. The gains in population were not shared equally by all age groups. Relatively, the largest increases occurred at the young and at the more advanced ages. In contrast, the population at ages ten to nineteen declined appreciably.
>
> It is noteworthy that about 9,000,000 persons were added to the population at ages twenty-five to sixty-four between 1940 and 1949. Since persons at these ages constitute the main source of industrial and agricultural manpower, our country is now in a better position than ever before to expand its productivity for defense without seriously impairing the economy. The increase in population at the main productive ages, however, has been greater for women than for men.
>
> What about the group of men at ages eighteen to twenty-five, who constitute the principal reservoir of our armed forces? Although their number is somewhat larger now than in 1940, the outlook for the immediate future is less favorable. This group increased from about 9.3 million in 1940 to an all-time high of more than 9.6 million near the end of World War II. Since 1947, however, the

---

[1] Metropolitan Life Insurance Company, August, 1950.

number of males at ages eighteen to twenty-five has been decreasing and will continue to drop for the next few years, but even so will total 8.7 million by 1956. This decline results from the marked fall in the birth rate in the late 1920's and early 1930's. But after 1956, the number of men at the main military ages will begin to climb again, and will reach about 11.4 million in 1965; the indications are that the increase will continue even beyond that time.

In view of these facts, it is indeed fortunate that marked progress has been made over the years in conserving life in our country. Thanks to the remarkable advances in medical science and public health administration, the frequency of premature death has been significantly reduced among all components of the population. A measure of what this has meant in terms of military manpower is that about 160,000 of the men at ages eighteen to twenty-five are now alive owing to the decline in mortality during their lifetime. This is a dividend of manpower available for the country's armed forces which probably exceeds the number of United Nations' forces now engaged in Korea.

What maintains one vice would maintain two children.—Anonymous

The Army Medical Department. As more medical officers are recalled for active duty with the armed services it may be recalled that on July 27 the U.S. Army Medical Department marked its one hundred and seventy-fifth anniversary. On July 27, 1775, on recommendation of General George Washington, the Continental Congress first approved a plan for creation of a hospital, which made reference to the entire medical organization, and not to just one specific institution. Included in the famous names of those who have been responsible for the remarkable advances in the U.S. Medical Department are William Beaumont, Surgeon Jonathan Letterman, Major Walter Reed, Surgeon General James Tilton, Surgeon General George M. Sternberg, and Surgeon John S. Billings.

Contributions of the Army Medical Service over its one hundred seventy-five years of history include the writing of early American textbooks on surgery and pioneer work in the study of the digestive system and bacteriology. The conquest of yellow fever, development of the acrylic eye, and important discoveries in the fields of animal diseases and disease transmitted from animals to man are also landmarks in the Service's history. Penicillin, quinacrine hydrochloride, blood plasma, and DDT owe much of their effectiveness to research and application by Army physicians and allied scientists during the recent war. Tantalum, a new substance for sutures and bone filler, is among important Army medical developments. Other advances have been made in the prevention and treatment of hepatitis and scrub typhus and in thoracic, nerve, orthopedic, and heart surgery.

Some, at least of recent graduates in medicine, have elected to remain in the Army, perhaps to carry on in the service indefinitely. Over 75 per cent of the medical graduates who interned in Army hospitals under the Military Intern Training Program have remained in the Army longer than their legal requirement for active duty, according to figures released recently by Major General R. W. Bliss, the Army Surgeon General. The postwar Military Intern Training Program started July 1, 1947. Since then three groups, totaling 311, have completed internship training in Army hospitals as officers commissioned in the Medical Corps Reserve. At the end of the training period, they could accept regular Army commisssions, if tendered, and remain in the service. Otherwise, they could either remain on active duty under their reserve commissions or return to civilian life. Of the 311 young physicians who have passed through the program, 235 have elected to remain on active duty in the Army Medical Service, either as regular or reserve officers. Of the other 76, several have requested return to active duty after a comparatively brief period of nonmilitary practice. All but seven of the 76 retained their reserve commission. Each of the three groups showed approximately the same percentage of postinterns accepting prolonged military service. The first group, which started in 1947, numbered only 25, of whom 19 remained in uniform after completing their training. The 1948 group of 113 found 87 remaining on active duty at the end of the training year. Of the 173 doctors who ended their internships last month, 129 have decided to continue in the Army.

Medical societies, both state and local, have been active in stimulating voluntary return to active duty of numerous reserve officers. Reports from the field generally indicate close and effective cooperation between state and local medical societies and Army commanders who are responsible for calling up quotas of reserve officers. Army commanders are under orders to make every effort to obtain the help of medical societies in selecting reserves to be called, but the responsibility to produce the required physicians is theirs. In some cases there are reports that societies are not reacting promptly, which leaves the commanders no choice but to call up men on the advice of their medical staffs but without the guidance of the civilian profession.

More details on the initial call-up: Officers selected are being given a minimum of twenty-one days to get their personal affairs in order before reporting for duty . . . . . Alerted men may volunteer up to the time their orders are cut, thus qualifying for the extra $100 per month pay . . . . Army commanders are under strong advice not to call up a reserve who is practicing in a one-doctor community . . . . . This schedule calls for one third by September 22, another third by September 30, and the remainder by October 6 . . . . . . Women physicians who volunteer for active Army duty (they get the extra $100 also) will reduce the quota for each area.

As a consequence of its first call-up of individual reserves for twenty-one months, the Army decided to exercise its right not to accept additional one-year active duty volunteers. Under the 1947 law which provided the $100 bonus pay, the Army may refuse or accept one-year active duty volunteers. Now volunteers sign up for twenty-one months. The Navy still will accept reserves for one year and pay the bonus. However, the whole discussion might be academic. The services are authorized to freeze officers for the duration of the emergency.

IMPORTANT—PLEASE NOTE

The A.M.A. Membership Dues

The problems and misunderstandings arising from the collection of A.M.A. dues and assessments have been stated frankly in a recent communication from the Association's Secretary, Dr. George F. Lull. The following procedure should be followed:

1. Remittances for membership dues should *not* be sent direct to the A.M.A. by county societies or individuals. These should be channeled through the office of the State Society where member payments are recorded. Individual members' checks received will have to be returned to the state in which the member resides. This rule also applies to the 1949 assessment.
2. Who is exempt from paying A.M.A. dues? The county shall determine when the payment of dues is a hardship, but in no case will the A.M.A. dues be remitted unless the county and state society dues are likewise remitted. The dues of a physician who joins his county society after July 1 will be $12.50; if he joins before that date, $25.
3. A physician who transfers from one county society to another need not pay a second time, but he must pay once.
4. For this year only (1950), the A.M.A. will reimburse the state societies the accounting expense of collecting dues. After this year, the A.M.A. dues should be billed with state or county society dues.

Therapeutic penicillin dosage
is EASY, PLEASANT with

DROP-CILLIN

50,000 UNITS* IN A DROPPERFUL

Available in 9cc. bottle
containing 600,000 units.

DRAM-CILLIN

100,000 UNITS* IN A TEASPOONFUL

Available in 60cc. bottle
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Both with a palatable
vanilla flavor.

* BUFFERED PENICILLIN
G POTASSIUM

WHITE LABORATORIES, INC.
Pharmaceutical Manufacturers, Newark 7, N.J.

from
CLINICAL MEDICINE
March 1949

MANAGEMENT OF THE CARDIAC OUTPATIENT

by DONALD B. FRANKEL, M.S., M.D.
Fairfield, Illinois

"The generalized lack of hospital facilities today necessitates home or office treatment of the ambulatory patient with chronic cardiac decompensation. Treatment must be aimed at rapid and safe symptomatic relief, as well as at control of the failing heart.

"*Mercuhydrin* proved to have many advantages, chiefly that it caused a rapid and continuous diuresis, and thus rapid relief for the patient. It was uniformly well tolerated, and in no patient was there any reaction.

"Another advantage was the ease of maintaining the 'dry weight' with only one or two injections per week.

conclusions

"Ninety-eight patients with clinical cardiac decompensation were treated as out-patients. Meralluride sodium proved to be a necessary part of the therapy for chronic cardiac decompensation.

"1. Meralluride sodium *(Mercuhydrin)* caused no local or systemic reaction in any patient and was well tolerated by all; 2. It is as effective by the intramuscular route as by the intravenous and displayed a rapid and dramatic effect in every case; . . . 4. It is as important as any other factor in the emergency treatment of paroxysmal nocturnal dyspnea and cardiac asthma."

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well tolerated locally, a diuretic of choice

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Scientific Articles

MANHATTAN DERMATOLOGICAL SOCIETY

GOLDEN ANNIVERSARY

1900–1950

Manhattan Dermatological Society.—Standing, left to right: **Dr. Thomas N. Graham, Dr. Wilbert Sachs, Dr. Orlando Canizares, Dr. Paul Gross, Dr. Maurice J. Costello, Dr. George C. Andrews, Dr. Nathan Sobel, Dr. Jack Wolf,** and **Dr. Anthony C. Cipollaro.**

Seated, left to right: **Dr. Samuel Peck, Dr. Frank C. Combes, Dr. George M. Lewis, Dr. Isadore Rosen, Dr. Max Scheer, Dr. Herman Sharlit,** and **Dr. David Bloom.**

Dr. Paul E. Bechet and **Dr. Perry Sachs** were not present when the picture was taken.

To commemorate the fiftieth anniversary of the Manhattan Dermatological Society, the special series of articles which follow have been contributed for this issue of the JOURNAL *by the members of the Society.*

THE MANHATTAN DERMATOLOGICAL SOCIETY—ITS FIRST FIFTY YEARS (1900 TO 1950)

PAUL E. BECHET, M.D., Elizabeth, New Jersey

(From the Department of Dermatology and Syphilology, New York University-Bellevue Medical Center)

THE Manhattan Dermatological Society is in many ways a unique organization. It is the second oldest dermatologic society in New York, giving priority to the New York Dermatological Society which, founded in 1869, is the oldest in the world. There was never any real rivalry between the two societies, and both were conducted on much the same plane. As a matter of fact, of the 55 active members elected to the Manhattan Dermatological Society, 14 have also been members of the New York Dermatological Society. There have been in all only eight resignations from the Manhattan during the half century.

For many years the Manhattan Dermatological Society was probably the most difficult medical society in the world to enter. The intention to propose a new member had to be submitted to the Executive Committee, whereupon the secretary wrote each active member for his opinion. A single objection, no reason being necessary, caused the proposal to be dropped. If no objections were received, a unanimous vote of the members was still required. Since 1934, however, a majority ballot has sufficed. The Society is limited to 20 members, and its scientific work is restricted to the presentation of unusual dermatoses with all necessary laboratory data.

The Manhattan Dermatological Society was organized on November 21, 1900, at the home of Dr. William S. Gottheil, and the men responsible were Drs. Gottheil, Ludwig Weiss, Edmund L. Cocks, J. P. Oberndorfer, Robert Abrahams, and M. W. Franklin. At the second meeting on January 4, 1901, at the residence of Dr. Weiss, Drs. Asha Bleiman and Jacob Sobel were present as new members. Dr. Gottheil was elected president and Dr. Sobel secretary, and six cases were presented. At the executive session Dr. Weiss suggested that children should be shown first, a rule adopted and still followed by all the dermatologic societies in New York. He also suggested that members read a history of each patient presented, so "that our maiden effort be of high order." Dr. Abrahams suggested that means be devised for the publication of the scientific transactions of the Society; consequently, all transactions, beginning with the first scientific meeting on January 4, 1901, were published in the *Medical Record*, *Medical News*, and, from 1906 to date, in the *Archives of Dermatology and Syphilology*. Much of the early success of the Society was due to the tireless energy and devotion of Dr. Gottheil, ably assisted by Dr. Weiss. The first yearly report, dated January 3, 1902, recorded that nine regular meetings had been held and 84 cases presented.

Dr. Gottheil was born in Berlin on February 5, 1859. After several years at school in Manchester, England, he came to America at the age of eleven with his parents. He received his A.B. degree from Cornell University and his M.D. from the College of Physicians and Surgeons, Columbia University. He served his internship at the old City Hospital and developed a deep interest in that institution. He became attending dermatologist in 1901 and remained so all his life. Here he made most of his moulages and had a large collection at the time of his death. His teaching career started at the Post-Graduate Medical School and Hospital as adjunct professor of dermatology in 1907, and in 1912 he resigned to become professor of dermatology at Fordham University, a chair he held until his untimely death in 1920. He did much original work and was greatly responsible for the use of the insoluble mercurials, particularly the salicylates, solid carbon dioxide, and the use of autoserum. Dr. Gottheil died dramatically and without warning.

Dr. Weiss deserves equal credit with Dr. Gottheil as a founder of the Society. He was born on February 7, 1852, and graduated in medicine in Vienna in 1877. Shortly thereafter he began practice in New York. For a short time he lectured on skin diseases at the New York Post-Graduate Medical School and Hospital (1893 to 1895), and, while he served on the staffs of several hospitals, his greatest devotion was given to the German Polyclinic, of which he was president from 1900 to 1905, serving as chief of its dermatology department from 1883 to 1930. Dr. Weiss was the author of many articles and translated several books from German into English and from English into German. He was deeply interested in the endocrine glands and their relation to dermatoses and wrote much on that subject, as well as on tuberculin therapy and roentgenotherapy in dermatology. At a memorial service held at the New York Academy of Medicine on March 16, 1930, Rabbi Stephen S. Wise said in part, "He was a friend of men, a man who took his calling seriously and gave to it all that was in him—his best powers, his entire strength, his utter consecration. He was a true physician. As such he ministered to men, as such he will be remembered and his name long be blessed."

Edmund L. Cocks (1856–1911) served in Dr. Bulkley's Division at the New York Skin and Cancer Hospital from 1902 to 1910. He preceded Dr. Gottheil as professor of dermatology at Fordham University and also served as chief of the dermatology clinic both there and at Harlem Hospital. He was president of the Harlem Medical Association. I first met Dr. Cocks in 1909 when I was put to work under his direction at the Skin and Cancer Hospital. He had preceded me at the clinic by seven years and had been promoted to the new case room, where he inscribed in a ledger the pertinent facts about each patient. After a week or two of observation, I inherited the book and the pen and was thus the gainer, for I saw every new case entering Dr. Bulkley's service, besides enjoying the careful instruction of Dr. Cocks and of Dr. Whitehouse, the chief of clinic. Cocks was extremely diffident, and that quality masked an extraordinary degree of diagnostic acumen. I shall remain eternally grateful to him for the pains he took in directing my first dermatologic steps. He was devoted to the Manhattan Dermatological Society. Dr. Gottheil, at the end of Cocks' obituary, states: "To the end of his life he remained an earnest learner and worker in his chosen field, and in his demise the specialty loses a quiet but most useful follower."

Dr. Benjamin F. Ochs was present as an active member at the third regular meeting of the Society on February 1, 1901, and during the thirty-two years that he remained an active member he rarely missed a meeting and was an able discussant. He first introduced the use of potassium permanganate solutions in the treatment of tinea of the feet. He was deeply devoted to dermatology, as evidenced by the fact that, after seeing 20 or more cases, then discussing them ad infinitum, followed by supper lasting until about 1 A.M., he would frequently keep me on some street corner explaining the intricacies of some dermatosis he had seen at the hospital. A high amputation caused him to use crutches most of his life. On one unusually hot day while waiting for a street car, he removed his hat to wipe his brow, and a passing lady dropped a quarter in it. He kept this for many years as a "lucky piece." Ochs died in June, 1933.

Dr. Jacob Sobel, the first secretary of the Society, is still living and in active practice after fifty-five years, and we are greatly indebted to him for the careful recording of the minutes. He was interested in dermatology but did not make a specialty of it. He resigned in 1905.

Dr. Mihran B. Parounagian's devotion to the Manhattan Dermatological Society was phenomenal from the time of his election in 1905 until his death on June 13, 1946, and he rarely missed a meeting. He was its secretary from 1907 to 1912 and again from 1931 to 1937. He served as president in 1912 and 1929 and was a member of innumerable committees. In his forty-one years as a member he must have shown hundreds of patients. This was easy, as he was head of the Departments of Dermatology and Syphilology at the Gouverneur, City, and Bellevue Hospitals. He taught his specialty at the New York Post-Graduate Medical School and Hospital, the University of Vermont, and the School of Medicine of New York University. His outstanding work was done in syphilology, and the attendance at his syphilis clinic at Bellevue Hospital more than tripled during his incumbency.

The suppers following the meetings of the Manhattan were an institution, and the most popular were those served at Parounagian's and Weiss's homes—Armenian cooking at "Parry's" and Hungarian at Weiss's. Both men were charming hosts, overjoyed when their turns came to entertain, and aggrieved if we left before 2 A.M.

Ludwig Oulmann (1875-1940) was born in Stuttgart, Germany, on June 2, 1875. He graduated in medicine at Wurzburg and did postgraduate work at Nürnberg and Berlin. He served with the Imperial German forces in China during the Boxer Rebellion. He worked with Roentgen and enjoyed a close friendship with Unna. He began practice in New York in 1904, but almost yearly he visited his beloved Germany. Unlike Weiss, he remained a foreigner despite thirty-six years' residence in New York and did not become an American citizen until after the Armistice. Throughout World War I his sympathies were with his fatherland, and, in consequence, things were difficult with him in the Manhattan. However, both he and the Society weathered the storm, perhaps because Oulmann was companionable and pleasant in his ways and an excellent dermatologist. He joined the dermatologic staff of the Lenox Hill Hospital early in his career and served it until his death.

David L. Satenstein was born in New York on February 22, 1880, and received his medical degree from the College of Physicians and Surgeons in 1902. He spent two years in Europe in intensive postgraduate study. Shortly after his return he became associated with Dr. Gottheil at the old City Hospital and spent much time assisting Gottheil in making moulages of various dermatoses. Possibly the minute care required to make good ones may have started him in one of his two lifetime devotions, histopathology.

The other was the Manhattan Dermatological Society, to which he was elected in April, 1907. He served as secretary from 1912 to 1930, probably the longest tenure of this office in any dermatologic society. He became affiliated with the Vanderbilt Clinic under Fordyce in 1915 and remained there until shortly after Fordyce's death in 1925. Then he joined Dr. George M. MacKee at the New York Post-Graduate Medical School and Hospital, where he became associate professor and chief of its department of histopathology of the skin. He kept this up until his death, so that for twenty-five years or more he devoted most of his time to the microscopic interpretation of diseases of the skin. He was a painstaking teacher, and the younger dermatologists remember him gratefully for their start in dermatopathology, an invaluable aid in the study of skin diseases as a whole.

Dr. Jerome Kingsbury (1871–1944) was elected a member in May, 1908. He graduated in medicine from Bellevue Hospital Medical College in 1897 and interned at the old New York Skin and Cancer Hospital. He then began a long and faithful service on its dermatologic staff until he resigned in 1934. Dr. Kingsbury was visiting dermatologist at the City Hospital from 1920 to 1936, where he became expert in the diagnosis of leprosy. At various times he had charge of the dermatologic services of the Presbyterian Hospital Dispensary, Midtown Hospital, and Northern Dispensary, of which he was a trustee. He served as one of the professors of dermatology and syphilology at the New York Polyclinic Medical School and Hospital from 1925 until his death. He wrote the text of a *Portfolio of Dermachromes*, published by Rebman, New York, in 1913, containing the colored plates which appeared in the fourth edition of Jacobi's *Atlas*. The text was entirely new and clearly presented the American viewpoint of dermatology at that time.

Jerome Kingsbury had an extraordinary degree of reticence professionally but not socially. He was a delightful companion at dinner. His modesty was such that he never spoke of himself or his work, and it was difficult to induce him to discuss the cases presented. Two of his colleagues once attended a motion picture show and on the screen, to their surprise, they saw Kingsbury entering a balloon to take part in an international contest. One of them later said to him, "Why didn't you tell us you were a balloonist?," to which Kingsbury replied, "Why, you never asked me." For many years he had been a licensed balloon pilot, a charter member of the American Institute of Aeronautical Engineers, chairman of the Balloon Committee of the Aero Club of America, a member of the Early Birds, and a competitor in many national and international balloon races, and yet he had never spoken to his professional friends of his exploits. He was also a life member of the U.S. Revolver Association, and the bookcases in his office were covered with cups won in tournaments. I was with him at the old Skin and Cancer Hospital, at City Hospital, and at Presbyterian Hospital two or three times a week for some twenty-five years, and, although we worked on the most friendly terms possible, I did not even know where he lived. He was deeply interested in military affairs and was a member of the famous Seventh Regiment of New York. He served as a captain in the Medical Corps in France throughout World War I, not as a dermatologist, but as an operating surgeon in the field, and afterwards held the rank of colonel in the Medical Reserve Corps.

Dr. Charles W. McMurtry (1872–1914) was born in Pittsburgh on May 1, 1872, and graduated in medicine from Harvard in 1897. His father was wealthy, but the son worked harder in dermatology than if he had to make a living in it. He spent ten years in the intensive study of pathology and dermatology under Professor Lesser in Berlin and in Paris under Fournier and Darier. He returned to New York in 1908 and served the Skin and Cancer Hospital as clinical assistant on Dr. George Henry Fox's service from 1909 to 1912. He became an instructor in dermatology at the College of Physicians and Surgeons in 1910. To the Department of Dermatology of Vanderbilt Clinic he donated a large and fully equipped pathologic laboratory and worked there until his death. Dr. McMurtry was elected to the Manhattan Dermatological Society in 1913 and regularly attended its meetings until his premature death about a year and a half later.

Dr. J. Frank Fraser (1867–1943) was born at West River, Nova Scotia, on January 8, 1867, and received his medical degree from Bellevue Hospital Medical College in 1892. He first devoted much time to the study of pathology in the laboratory of his brother, Alexander Fraser, professor of pathology at the School of Medicine of New York University, and later specialized in dermatology. He became one of the leading histopathologists in New York. Among many important positions held by Dr. Fraser were chief of clinic of the Department of Dermatology and Syphilology at Cornell University Medical College and associate visiting dermatologist at New York Hospital. In 1935 he was made chief of clinic at the Skin and Cancer Unit. He was a splendid teacher and demonstrated this as associate professor in dermatology at Cornell and at the Post-Graduate Medical School and Hospital. Dr. Fraser wrote a number of significant articles on mycosis fungoides, presenting new ideas on its pathology. In discussion he was modest but not reticent and confined his remarks to pertinent facts. He was one of the most popular members of the Manhattan.

Dr. Fred Wise (1882–1950) was elected a member in 1910. He graduated from the College of Physicians and Surgeons in 1904 and interned at the New York Skin and Cancer Hospital. His first position there in 1906 was as clinical assistant on Dr. Torek's service in the cancer department, where he served until 1910. He then became a clinical assistant in dermatology on the service of Dr. George Henry Fox, resigning with him in 1911. Shortly afterwards he became associated with Dr. John A. Fordyce, professor of dermatology at the College of Physicians and Surgeons. Dr. George M. MacKee, Fordyce's chief of clinic at Vanderbilt Clinic, soon recognized Wise's superlative abilities, and they became close friends. At about this time a famous foursome joined Fordyce's staff—Drs. Isadore Rosen, David L. Satenstein, Max Scheer, and E. William Abramowitz, all eventually members of the Manhattan Dermatological Society. For nearly forty years these four were associated with Wise and MacKee, and all six ascended the ladder of fame together. Dr. Wise wrote so many articles casting new light on dermatology, that this alone brings him fame. His teaching, both at the Vanderbilt Clinic and later at Post-Graduate, made better dermatologists of the aspirants to our specialty.

It seems strange to talk of Fred Wise in the past tense. I believe the fact that he was liked so much by all of us was largely due to his modesty and fear of hurting our feelings if he disagreed with our diagnoses. For dermatology, Fred had what the French call *le feu sacré*. He read most of the dermatologic articles in both the European and American literature and remembered what he read. He did a wonderful job as editor of the *Year Book of Dermatology*. He was devoted to the Manhattan, enjoyed our meetings, and never failed to be present at the supper or collation.

Dr. E. William Abramowitz (1886–1949) was elected to the Society in 1937. He received his degree in medicine from the University and Bellevue Medical College in 1907 and in 1914 joined the dermatology department of the Vanderbilt Clinic. Dr. Abramowitz was attending dermatologist and syphilologist at many hospitals, the principal ones being University, Gouverneur, and Jewish Memorial Hospitals. He was clinical professor of dermatology at the New York Post-Graduate Medical School and Hospital from 1927 to his death. He wrote many important articles, but he will be best remembered for his original work on drug eruptions and his introduction of 40 per cent sulfur ointments for seborrhea.

Dr. Girsch D. Astrachan (1892-1946) was elected to the Society in 1944. He was born in Russia and served from 1915 to 1917 as a captain in the Russian Army in World War I. He became a prisoner of war in Germany from 1917 to 1920 and graduated in medicine at Jena, Germany, in 1923. He came to New York in 1924 and interned at the Metropolitan Hospital. He served on the dermatologic staff of the Flower-Fifth Avenue and Metropolitan Hospitals, but his most important connection was as attending dermatologist and syphilologist to the New York Skin and Cancer Unit. He had written a number of medical articles, and his future seemed bright when he died prematurely on April 30, 1946.

Our first honorary member, Dr. George Henry Fox, was elected in 1913, and to our joy refused to act as one, coming frequently to the meetings and suppers and regaling us with his stories and reminiscences. Two other honorary members, Dr. George M. MacKee and Dr. Howard Fox, were active members for at least thirty years. They were regular in their attendance and very fond of the Society. Devoted to dermatology and working far "beyond the call of duty" because they loved it, they were given most of the dermatologic honors to be had. Detailed biographies of both can be found in the special numbers of the *Archives of Dermatology and Syphilology* issued in their honor, the one on Dr. Fox by myself and Dr. MacKee's by Dr. Fox.

Active members of the Manhattan Dermatological Society, in the order of their election, are as follows:

1913	Paul E. Bechet
1915	Isadore Rosen
1922	Max Scheer
1922	George C. Andrews
1935	Anthony C. Cipollaro
1937	George M. Lewis
1937	David Bloom
1937	Maurice J. Costello
1938	Wilbert Sachs
1940	Herman Sharlit
1940	Samuel M. Peck
1942	Jack Wolf
1944	Thomas N. Graham
1945	Frank C. Combes
1945	Nathan Sobel
1949	Orlando Canizares
1949	Paul Gross
1950	Perry M. Sachs

Epilogue

I hope this history of the Manhattan Dermatological Society will convey the importance of the role it has played in the progress of American dermatology.

Dermatology is unique in at least one respect: the benefits to be derived from observing patients. In no other branch of medicine are pathologic changes as evident to the eye and, therefore, in no other branch is diagnostic acumen so dependent upon the observation of thousands of patients exhibiting not only the rare dermatoses, but, what is much more important, the many variations of the common ones. The Manhattan Dermatological Society has added much to the knowledge of its members. Its past has been marked by continuous progress, and its present gives great promise for the future.

1364 North Avenue

TREATMENT OF SKIN CANCER

George C. Andrews, M.D., and Anthony C. Cipollaro, M.D., New York City

(From the Departments of Dermatology, College of Physicians and Surgeons, Columbia University, and the New York Polyclinic Medical School and Hospital)

WHEREAS many epitheliomas can be successfully treated by either radiotherapy or surgery, each case presents an individual problem. This is especially true in the more difficult cases where there is invasion or extensive growth in elderly people. The results will often depend as much on the skill and experience of the physician consulted as upon the method of treatment used.

The small epitheliomas in relatively young people can be readily excised or irradiated. Both methods are equally successful. However, for elderly people in whom skin cancer is most prevalent, treatment by roentgen rays is ideally suited. The ease with which the patient receives the treatment, the lack of pain, absence of bleeding, and freedom from operative shock or risk are important considerations. Relatively minor surgical operations sometimes are accompanied by unexpected and serious complications in the aged. It is practically impossible in old people to excise some large skin cancers surgically. Take for instance a woman of seventy-five years who has an ulcerated basal cell epithelioma that covers one third of her scalp. Or, take another woman of sixty-eight years with severe diabetes mellitus who has an ulcerated epithelioma of the middle third of her forehead that had recurred twice after previous surgical excisions and now covered the middle third of her forehead from hairline to glabella. These actual cases were easily cured by roentgen rays. X-ray treatment, begun in 1896, has endured throughout the years, because it is successful in these difficult cases that are not operable surgically and because it is the best method in the majority of cases of epitheliomas in elderly people.

Another advantage of x-ray and radium therapy is that the action of the rays covers a larger field than the usual surgical excision. This is important because epitheliomas burrow in various directions so that their gross morphologic structure takes all kinds of shapes. Some are little, button-shaped masses in the skin. This is the simplest variety. It must be distinguished from the iceberg type which appears on casual inspection to be a little button-like mass but invades outwards and downwards, and it is anybody's guess how far. Other shapes take the form of "tinker toys," where, from the visible and palpable cutaneous lesion, a strand or strands of tumor cells run in different directions and nodules of tumor are formed at various distances and depths from the visible mass. Such nodules may be deep enough so that they are not palpable or visible. In another type, the superficial epithelioma may extend within the epidermis or develop in a multicentric manner for several centimeters outside the discernible skin tumor into the apparently normal skin. In the multicentric pattern buds of epithelioma arise from various neighboring interpapillary pegs. Such buds may coalesce in the dermis or form an extensive subcutaneous neoplasm. Multicentric epitheliomas may have a wide superficial extent of many centimeters in skin apparently normal to palpation and inspection. For these reasons the customary excision may be inadequate, and the wider field covered by x-ray therapy is advantageous.

The divided dose method of roentgen therapy makes it theoretically possible to maintain a saturation dose lethal to cancer cells in the tissue for one to several weeks. Since cells are specially susceptible to irradiation during mitosis, the method of therapy is highly destructive to cancer. Pathologic cells are, in general, more radiosensitive than normal cells, and cells of the embryonal type or young, actively growing neoplastic cells are more sensitive than well-differentiated or normal cells. X-ray treatment has largely superseded radium treatment for skin cancer because the quality of radiation from modern x-ray machines is ideal for this purpose and is easier and cheaper to use.

In particular locations, special considerations are involved. For instance, a common place is at the inner canthus where an epithelioma presents the danger of spread within the orbit and ultimate destruction of the orbital contents. Surgical removal may necessitate rebuilding of the lids and may injure the lacrimal duct. X-ray treatment usually avoids these two hazards and for old people is simpler and easier. The eyeball is amply protected by a metal shield placed beneath the lids. Sometimes such lesions extend from the inner canthus over the root of the nose to the opposite side. For instance, a physician, seventy-five years of age, had such a lesion that extended from the left inner canthus over the root of the nose to the right side of the nose and onto the left side of the nose, left cheek, and left lower lid. Surgical removal would have been most impracticable, but x-ray treatment cured the entire lesion simply without any noticeable scarring.

It is estimated that one third of all skin cancers occur on the nose. There are so many differences as to size, depth, location on the nose, involvement of cartilage, amount of secondary infection, histopathology, age of patient, kind of previous treatment, and other important features that too much generalization might lead to misconceptions. Small epitheliomas may be readily excised. Other epitheliomas, that is to say, the larger, deeper ones, particularly in the aged, are often treated by x-rays. Surgical removal of a side or tip of the nose usually necessitates reconstruction of the whole nose. This means several operations and invalidism for a year or more, with occasional failures so that the person is left with no nose at all. A man who was seventy once said, "A month at my age means a whole lot more than it did when I was twenty-one, because at my age I haven't too many more months to live."

Electrocoagulation and curettage may be used prior to irradiation. This technic is useful on bulky lesions but is also sometimes used where the tissues are very soft and the skin is thin, as on the lower lids. Electrocoagulation is useful for large melanomas in elderly people where operation is not feasible, although wide surgical excision is generally advisable. For instance, a physician's mother, aged eighty-three, was brought in by her son who is a prominent upstate surgeon. She had a melanoma of nearly the entire right cheek elevated like a tangerine. It involved the lower lid. There were no palpable glands. The tumor had evidently grown outwards rather than inwards. Electrocoagulation destroyed the entire mass, and now after two years there has been no recurrence. Three biopsies made at the time from different parts of the growth showed very malignant melanoma. Electrocoagulation and curettage are generally decried by surgeons who, it may be pointed out, have had little or no experience with it.

Chemosurgery is the name applied to a method of treating accessible cancers introduced by Mohs. It is a specially accurate, careful, and effective treatment for certain devastating and mutilating epitheliomas. The tissues are fixed and killed in situ by a chemical paste which does not destroy the histologic features, so that biopsies made day to day and week to week can be used to determine whether any remnants of the cancer are present, their exact location, and ultimate eradication.

There is much to be said pro and con for each method of treatment. All aim at the total destruction of the cancer and in properly trained hands nearly always can be depended upon to accomplish this.

PRACTICAL APPLICATION OF GENETICS TO DERMATOLOGY

David Bloom, M.D., New York City

(From the Department of Dermatology and Syphilology of the New York University Post-Graduate Medical School)

TO MANY physicians, genetics is still an experimental and highly theoretic field concerned with plants and animals and devoid of practical application to medical problems in man. This view is largely explained by the fact that the teaching of genetics has been inadequate and has usually been limited to high schools and colleges where it is treated as a part of biology without direct reference to human disease. If genetics were taught more systematically and in close relation to medical instruction, the present generation of physicians would be familiar with the great possibilities of the genetic approach to medicine.

There is reason to believe that the progress of medicine has finally reached a point where much more attention will be given to the analysis of constitutional and genetic factors in disease. The urgent need for this avenue of approach has become evident in many branches of medicine. A good example is the result of research in the field of blood groups which has led to the discovery of the Rh type and its causal relationship to erythroblastosis. The general trend toward a genetic orientation in medicine is demonstrated by the increasing number of medical schools and research departments devoting a substantial part of their educational and investigative activities to human genetics. The recent organization of the American Society of Human Genetics and the creation of its *American Journal of Human Genetics* are tangible signs of progress in this direction.

Genetics in Relation to Dermatology

Adequate knowledge of genetic principles is indispensable in dermatology, since many skin abnormalities are due to the effect of hereditary influences. Changes in the structural composition of various genes (mutations) may lead to disturbances in the fetal development, either of the epidermis and its appendages or the corium and its constituents; such changes may also result in general metabolic errors affecting these structures. The concomitant pathologic conditions may involve the keratinization process, the hair and nails, the sebaceous and sweat gland systems, the collagenous and elastic tissues, muscular and nerve elements, the pigments or the vascular system. It would be difficult to comprehend the etiology of a great number of these skin abnormalities without a full understanding of the underlying genetic mechanisms.

It is true that many of these skin abnormalities are compatible with life and are not of too serious nature. Nevertheless, they are of general clinical importance, as they may produce pronounced mental stress, tantalizing discomfort, and prolonged disability because of their conspicuousness. Consequently, a course in "Genetics in Relation to Dermatology" has been held, for many years, as an essential part of the basic instruction at the Skin and Cancer Unit of the New York University-Bellevue Medical Center.

A few facts will suffice to illustrate the high points and immense practical value of genetics in dermatology.

Predictability of Abnormalities in the Offspring

Many prudent and well-informed patients afflicted with a possibly inheritable condition request information about the probability of its transmission to offspring before they marry or decide to have children. Similar advice is sought by adoption agencies with respect to the chances of a child from an affected family to develop the given abnormality. Without adequate knowledge of genetics, it would be hazardous for any physician to offer advice on such problems.

Obviously, the statistical predictability of the possible appearance in the offspring of a genetically determined trait depends on the type of inheritance involved. On the average, a dominant disease like keratosis palmaris et plantaris, epidermolysis bullosa simplex, or ichthyosis vulgaris, shows one parent and one half of the offspring affected, if it is fully expressed in a carrier. In a recessive condition, such as xeroderma pigmentosum, epidermolysis bullosa dystrophica or hydroa aestivale, it will be the rule that one quarter of the children are affected, if both parents carry the pathologic gene without showing any phenotypical evidence of its effect. Affected carriers of a recessive trait are usually found in the collateral rather than in the direct lines of descent. Another feature of recessive inheritance is an increase in consanguineous matings in the parental generation, since parents who are related by blood are more likely to be carriers of the same mutated gene. Medical advice in regard to dominant or recessive traits depends, not only on the given mode of inheritance, but also on the rate and expected severity of their expression and on the prospects of therapeutic manageability.

Relationship Between Severity of Disease and Mode of Inheritance

As a rule, a dominant gene leads to the manifestation of a disease or abnormality which is mild in severity. Recessive genes result in a more severe pathologic change. This is explainable by the fact that a dominant gene expresses itself in the carrier of one pathologic gene, while a recessive disease requires homozygosity in order to be expressed at all. There are certain skin diseases which are of variable severity. In these, the mild syndrome is produced by a dominant gene and the more severe pathologic changes are the manifestation of recessive genes. For example, epidermolysis bullosa simplex manifests itself by superficial bullae when the skin is exposed to trauma and rarely leads to scarring. The severe type of the disease, epidermolysis bullosa dystrophica, produces bullae which are more deeply seated and give rise to ulcers and scars. The mode of inheritance of the genetic factor responsible for the latter type is recessive. The resultant pathologic changes of these genes may be so severe as to mutilate the patient, and in some cases the affected children die in the first few weeks or months of life (lethal type). Another example is ichthyosis, which in its milder form, ichthyosis vulgaris, is of dominant inheritance, while the more severe type, ichthyosis congenita, and the lethal type, "harlequin fetus," is of recessive inheritance.

Incompletely Dominant Diseases

The task of advising prospective parents as regards the expectancy of a certain skin disease in their offspring requires acquaintance with other peculiarities of genetic phenomena. For instance, some dominant abnormalities, such as keratosis palmaris et plantaris, psoriasis, and others, are distinguished by complete dominance. As a consequence, carriers of only one mutated gene (heterozygotes) may be expected to show exactly the same symptomatology as is observed in the carriers of two of these genes (homozygotes). Therefore, if both mates are afflicted with psoriasis, they may be reassured by the information that the psoriatic symptoms of their children will not tend to be much more severe than are those of the parents. However, in other conditions which are known to follow an incompletely dominant pattern of inheritance, the expectancy in the homozygous state will be in the direction of a greater severity of the disease than is true for the heterozygous state. The severity of the pathologic changes in the homozygous state may be so pronounced that there is incompatibility with life.

The clinical significance of this genetic principle may be illustrated by a few observations of particular interest.

Osler's Disease.—Snyder and Doan described the history of a child, both of whose parents had Osler's disease.[1] At birth, the child showed only telangiectatic lesions of the left side of the chest. Soon afterwards, however, multiple telangiectatic hemangioendotheliomas appeared, which involved the entire skin, the mucous membranes, and most of the internal organs. Superficial and internal hemorrhages developed and interfered with normal gastrointestinal and urinary functions. The child was only eleven weeks old when it died of severe anemia. Apparently, the gene for Osler's disease may assume the characteristics of a lethal factor when it occurs in homozygous state.

Blood Sickling.—According to the observations of Neel, the sickle cell trait found in approximately 8 per cent of the Negro population is due to a gene in the heterozygous condition, while sickle cell anemia is produced by the gene homozygotes.[2] Therefore, individuals showing evidence of sicklemia should be advised against choosing their mates from that group of persons affected by the same condition.

Sebaceous Cysts.—As a rule, multiple sebaceous cysts are an affliction of minor importance if they occur in a heterozygous state. However, in a homozygote they may lead to a severe or even fatal condition. In the pedigree reported by Munro, two parents revealed evidence of multiple sebaceous cysts.[3] Three of their children were similarly affected and died in infancy.

Ehlers-Danlos Syndrome.—This syndrome is characterized by hyperelasticity of the skin, friability of the skin and blood vessels, and hyperflexibility of the joints. The possibility of a variable severity of this syndrome in relation to homozygosity or heterozygosity was suggested by a pedigree reported by Johnson and Falls.[4] In this family unit, two affected parents had, in addition to four miscarriages and two children who died as infants, a total of eight children, five of whom were affected. Since two of the affected children developed the disease in a severe form, they possibly displayed the symptomatology characteristic of the homozygous state of the syndrome.

Aid in Early Diagnosis

That gene-controlled conditions may lend themselves to early diagnosis and therapeutic management while still in a subclinical stage is another reason favoring the study of genetic principles by medical men. A good example may be seen in xanthoma tuberosum, which is always associated with hypercholesteremia and liable to lead to cardiovascular involvement and early death. In such families, it would seem advisable to discover the presence of hypercholesteremia as early as possible and to treat such children by dietetic and other means. This procedure may possibly result in the prevention of serious complications, in analogy to the management of other conditions, such as pernicious anemia, gout, and hemolytic icterus.[5]

Conclusions

The discussion of these different problems will suffice to demonstrate the general importance of the modern science of medical genetics and to indicate its potentialities in dermatology. Experimental investigations in animals and plants, as well as twin studies in man, have provided a vast amount of valuable information which has not yet been utilized in human disease, either diagnostically or therapeutically. Systematic scrutiny of etiologically obscure conditions by medical specialists, in close collaboration with experimental geneticists, will undoubtedly lead to vital new discoveries in many branches of medicine. Before we can think of solving the therapeutic problems of complex diseases and of many obscure deaths in infants and fetuses, it will be necessary to understand their basic etiology in relation to gene action and gene mutation.

The family physician cannot fail to gain a better understanding of pathologic conditions from a careful study of family data. In addition, the availability of adequate family histories is a prerequisite for comprehensive studies by genetically trained specialists.

Although there has been some progress in the teaching of human genetics in medical schools and in specialized postgraduate courses, the immense potentialities of medical genetics have, as yet, not been fully recognized. Beyond question, the science of genetics will play an important role in our future approach to many diagnostic, therapeutic, and preventive problems in medicine which are still waiting for a final solution.

135 East 50th Street

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RECENT ADVANCES IN DERMATOLOGIC THERAPY

Frank C. Combes, M.D., and Maurice J. Costello, M.D., New York City

(From the Department of Dermatology and Syphilology, New York University Post-Graduate Medical School)

During the last decade dermatology has contributed much to medicine in the treatment of skin diseases. Much has been learned, not only in topical therapy of those dermatoses having their origin in the skin, but in the systemic therapy of those dermatoses which reflect anatomic and functional diseases of internal origin.

We have tried to select a few dermatoses which often offer problems in therapy both to the dermatologist and general practitioner.

Acne, Rosacea, and Sebaceous Cyst

Acne vulgaris, in and of itself, is never lethal in its outcome. Nevertheless, it is a serious disease in the sense that the "psychologic scarring" which often is associated with it seems more important than the cutaneous eruption or the pitted cicatrices which accompany and follow it. It is certainly not a disease which should be dismissed with a few encouraging words to the sensitive adolescent. It is a common dermatosis, affecting many adolescents in mild to severe form. It should always be treated and the refractory cases referred to a competent dermatologist.

There is a tendency to faddism in the care of patients with acne vulgaris. The pathogenesis of this disease is unknown. Its prevalence during adolescence seems to incriminate, not without justification, hormonal function. Unfortunately, treatment on this basis is not eminently satisfactory.

In the examination of the young man or girl with the disease the following outline is useful in its over-all evaluation.

1. Endocrine dysfunction: This exists in almost all instances developing during early puberty. In the male, Premarin or Progynon-DH creams locally are helpful. In the female with dysmenorrhea, Pranone, 1 mg. daily for seven days before the menses, may prove beneficial. If there is a definite premenstrual flare and no dysmenorrhea, Estinyl or Premarin by mouth for a week or ten days premenstrually are indicated.

2. Gastrointestinal disturbances, such as hypo- and hyperchlorhydria, constipation, and autoxemia, arising in the colon, must be corrected. The action of toxins developing from so-called "rich food" often have a deleterious effect on the pilosebaceous follicles causing pustular lesions.

3. Focal infections: These are of special significance in the acne of postadolescence, in the young girl in her twenties who has a few deep pustules with only an occasional comedo. These lesions are especially common on the chin and forehead and are not infrequently related to the menses. Search should be made for infections in the tonsils, sinuses, teeth (including unerupted

and impacted molars), gums, gallbladder, and colon. Attention should be given the scalp which may be the site of seborrheic dermatitis, an infectious process. It is provocative of much acne on the forehead and anterior to the ears, especially in those with an oily skin.

In some instances a cryptic or quiescent pulmonary tuberculosis may provoke a type of deeply seated conglobate acne with "cold abscesses." The old tuberculin (Koch) test in these patients should be carefully performed. It is usually positive.

4. Allergies: These are uncommon as a cause for acne, but occasional sensitivities to chocolate, milk, wheat, orange, tomatoes, spinach, nuts, and yeast are sometimes observed. This can best be proved by the use of elimination diets.

5. Nutritional disturbances: Too much emphasis is often placed on this feature in the treatment of acne. Not infrequently, instances of actual malnutrition are observed as a result of virtual starvation of the adolescent due to complete elimination of certain types of food, vital to growth at this critical time of life. Overindulgence in fats, sugars, pastries, or "soda pop" *should* be restricted, especially when "sweets" interfere with the appetite for more nourishing foods, but there is no logical reason why they should be indiscriminately forbidden if the patient's diet is well balanced. Sometimes an intolerance to fats is present. The overingestion of milk, especially its use in excessive quantities to "quench the thirst," is especially objectionable. Its restriction, the limitation of butter, gravies, and nuts, and the cautious administration of thyroid is sufficient in most instances to correct this lipid intolerance.

5. Medicamentous acne: Foods containing iodine and bromine often aggravate acne. These include sea food, spinach, cabbage, artichoke, white bread, and cake. Medications containing bromides, iodides, and iodized salt should also be forbidden.

Topical therapy of acne is essential. Thorough cleansing, especially the complete removal of cosmetics at bedtime, is important. For this purpose a proprietary called "Cream of Soap" proves very satisfactory. It is a pleasant emulsified soap prepared from bile salts and should be massaged into the skin for a minute or so before the application of water.

The mechanical removal of comedones with the comedoscoop, opening of pustules, expression of their contents, and the application of the dull acne curet are of considerable value. Exfoliating doses of the air-cooled Kromayer ultraviolet lamp applied to the affected areas augment the aforementioned measures. Hematinics should be prescribed when indicated. Vaccines are of limited value. The best single topical therapy in our hands is a skin-colored camouflage powder-base containing resorcin and sulfur and obtainable by prescription under the name of Dermasorcin.

Roentgen ray therapy is not the only treatment of the moderately severe and the severe types of acne, but it is the most effective method when other forms of therapy have been of no avail. It is frequently more effective in the hands of a competent dermatologist than all other methods combined.[1]

Rosacea has been difficult to treat. Until recently, the conventional form of therapy has consisted of diet, eliminating alcohol, coffee, tea, and highly seasoned foods. Dilute hydrochloric acid was prescribed for hypochlorhydria and indigestion, which frequently accompanied this condition. Walking and exercises were suggested to improve the peripheral circulation. The following prescription suggested by Lacksen makes the above measures hardly necessary and is an effective ointment for rosacea.[2] It is applied once or twice a day.

	Gm.
Salicylic acid	1.0
Precipitated sulfur	1.0
Compound Quinolor ointment (Squibb)	1.5
Aquaphor to make	30.0

Many patients with rosacea, especially chronic alcoholics and those with an associated seborrheic dermatitis of the face and neck, frequently suffer from an active or incipient macrocytic anemia due to liver damage and avitaminosis. Often the only means of diagnosing the anemia is on the basis of a high mean corpuscular volume (normal M.C.V. 80 to 90 cu. μ) and a low mean corpuscular hemoglobin concentration (normal M.C.H.C. 33 to 38 per cent). In the treatment of these cases a low fat, high protein diet is indicated, along with crude liver injections, vitamin B complex, hydrochloric acid, and lipotropic substances by mouth such as inositol, choline, and methionine. B_{12} is also useful in this type of rosacea.

The best treatment of a sebaceous cyst is to excise it. The smaller sebaceous cysts may be treated by the method suggested by Danna.[3] The skin over the center is infiltrated with procaine solution and the cyst punctured to its depth with the monopolar or bipolar needle until there is blanching of the area surrounding the needle. This procedure may have to be repeated a second or third time. Several days later, the sac may be pulled through a small opening with a pair of forceps. The resulting scar is minimal.

Sycosis Barbae—Folliculitis

The effective treatment for this one-time inveterate dermatosis is unguentum Quinolor Compound (Squibb).[4] It should be applied diluted at first (1:4) with petroleum jelly at night and after shaving. It should be continued indefinitely only after shaving at night or in the morning. Impetigo of the bearded region, often resistant to penicillin ointment and ammoniated mercury ointment, is amenable to Compound Quinolor ointment.

Nutritional Eczema

In the memory of the oldest members of our visiting staff we have always had a large proportion of patients with what was designated by one of our more enterprising residents of many years ago as "Bellevue eczema." The victims of this malady were usually past middle life, partially or completely edentulous, often alcoholic, and not infrequently tenants of the municipal lodging house. The eruption begins on the lower extremities and is featured by an unusual amount of edema. Later, it becomes more or less generalized, extremely chronic, and recalcitrant to all therapy.

We have found that all "Bellevue eczema" is on a nutritional basis. Briefly the following regimen has proved extremely helpful: (1) repair of dentures, (2) high protein diet with addition of hydrolysates, (3) dilute hydrochloric acid and pepsin as digestants, (4) thyroid (depending on blood cholesterol), (5) reduction of lipid intake if blood cholesterol is about 230 mg. per cent, (6) vitamins (by mouth and parenterally), (7) androgens and estrogens, and (8) reduction of sodium intake.

Dermatitis Herpetiformis (Duhring)

Sulfapyridine is of great value in the treatment of this chronic, pruritic, vesiculobullous dermatosis.[5] Small doses are administered initially to determine idiosyncrasy; then 1 Gm. three times a day is given until pruritus and then the eruption have disappeared. The maintenance dose may be 0.5 Gm. three times a day, twice a day, once a day, or 0.5 Gm. every other day. The smallest maintenance dose should be established. It is administered with bicarbonate of soda. Regular blood counts and urinalyses should be performed and the patient apprised of the risk involved, several serious complications to this form of therapy having been reported. On the other hand, there are records of patients who have taken one to three tablets daily for ten years without untoward effect. Therapy with the other sulfonamides is not as effective. The halogens should be eliminated from the diet and medication regimen.

Recently, adrenocorticotropic hormone (ACTH) has proved very helpful in some of these cases, a small maintenance dose keeping the patient free of any lesions for many months.

Condylomata Acuminata (Verruca Acuminata, "Venereal Warts")

These lesions are effectively treated by 20 to 25 per cent solutions of Podophyllin in 95 per cent alcohol or in compound tincture of benzoin.[6,7] Podophyllotoxin is the active ingredient. The solution is applied accurately to the entire surface of each digitate verruca and washed off in six hours with soap and water. The cell changes occasioned by Podophyllin suggest inhibition and arrest of mitosis, indicating the possibility of similar parallelism in the study of cancer. This drug is of no value in the treatment of verrucae of the vulgaris type. Although reports have appeared indicating the resolution of certain types of cutaneous cancer following the application of Podophyllin, we advise against this method in any malignancy.

Cutaneous Tuberculosis

The most dramatic, far-reaching, and most important contribution to the therapy of skin diseases in this century was made by Charpy when he published his monumental work on the successful treatment of tuberculosis of the skin with Calciferol (vitamin D_2).[8–11] Independently, in the same year (1943), Dowling also treated a patient with lupus vulgaris by the oral administration of large doses of Calciferol.[12] The discovery was brought about when Hinglais and Hinglais (1941) reported serious food deficiencies in occupied France, especially of calcium, phosphorus, and vitamin D.[13] This situation brought about an increase in the number of patients with lupus vulgaris and rapid progress of the disease in those suffering from it. Charpy's treatment consisted of large doses of vitamin D_2 in alcohol by mouth. He gave three doses of 15 mg., i.e., 600,000 international units in alcoholic solution in the first week, two doses in each of the next three weeks, and then one dose weekly for the next four months. Treatment was continued for three to six months after apparent cure. He also suggested a salt-poor diet, including two to three glasses of milk daily and large portions of raw vegetables and restriction of meat and cooked fats. Charpy and the European investigators have insisted on the vitamin D_2 in alcoholic solution, but we have had good results in the treatment of patients with true tuberculosis of the skin by the administration of any of the vitamin D_2 preparations obtainable—Calciferol (prepared by irradiating ergosterol) in the form of Drisdol, viosterol, Ertron, and Darthronol. Fifty thousand units, three times a day, are prescribed. Blood calcium levels should not be allowed to exceed 12.5 mg. per cent. Parapsoriasis has also responded favorably.

Although the favorable response of cutaneous tuberculosis to Calciferol is dramatic, in the cases treated it falls just short of complete cure. When this stage is reached, the remaining tuberculous nodules are destroyed by electrosurgery. Toxic symptoms are not uncommon. Charpy claims that alkalis may prevent them.

Calciferol has also been of value in tuberculous adenitis and to a lesser extent in erythema induratum. We have seen improvement in patients with Boeck sarcoid.

Tuberculosis orificialis, a serious complication of advanced pulmonary tuberculosis, appears to be less common since streptomycin has been used in the treatment of that disease. Streptomycin and Calciferol have been combined in the treatment of cutaneous tuberculosis with gratifying results. We have seen excellent results following the intramuscular administration of dihydrostreptomycin in the treatment of tuberculosis verrucosa cutis. The local intradermal injection of dihydrostreptomycin in 2 per cent procaine in the treatment of lupus vulgaris also offers promise.

Large doses of vitamin D_2 may cause exacerbation of the lesions of pulmonary tuberculosis. It is important, therefore, to determine whether the patient with cutaneous tuberculosis also has active pulmonary involvement.

Five per cent Promin jelly has been successfully employed in the treatment of several cases of tuberculosis colliquativa (scrofuloderma and erythema induratum).

Lupus Erythematosus

The gold salts, such as gold sodium thiosulfate, are still the best treatment for lupus erythematosus of the chronic, fixed, discoid type. They are contraindicated in acute and subacute cases of the disseminate type. Bismuth subsalicylate by intramuscular injection is also of value in chronic discoid lupus erythematosus. The effect of both these drugs is augmented by the intramuscular injection of crude liver extract. The latter has been of temporary value in treatment of the acute and subacute types. The arsenicals of the organic type have been administered in the treatment of chronic lupus erythematosus when gold and bismuth have failed. Mapharsen (oxyphenarsine hydrochloride) is the least toxic—0.02 Gm. in 5 cc. of distilled water injected intravenously twice a week for 10 doses. Vitamin E is of limited value in treatment of the superficial types. Bistrimate is in the same category.

The most dramatic and important advance that has been made in the past year is that accomplished with cortisone (Cortone Merck & Co.) and the adrenocorticotropic hormone (ACTH, Armour & Co.). In addition to their beneficial effect on the treatment of such an inveterate dermatosis as lupus erythematosus, they have been used with spectacular temporary remedial effects on similar recalcitrant dermatoses as psoriasis vulgaris, psoriasis arthropathica, acute and subacute lupus erythematosus of the disseminate type, scleroderma, dermatomyositis, dermatitis herpetiformis, and pemphigus vulgaris. One of our patients at Lenox Hill Hospital with acute disseminate lupus erythematosus developed severe thrombocytopenic purpura with cutaneous and mucosal hemorrhage which was arrested by administration of cortisone. She is now in a remission. The usual schedule of dosage was followed: 50 mg. every four hours the first twenty-four hours, a total of 200 mg. the second day, and 150 mg. daily thereafter gradually reaching the maintenance dose. It appears that the maintenance dose of cortisone approximates the therapeutic dose. Dr. J. Gardner Hopkins presented a patient at the New York Dermatological Society who had acute disseminate lupus erythematosus in remission following chloromycetin.

Basal Cell Epithelioma

Amersbach, Walter, and Sperti of the Institutum Divi Thomae successfully treated basal cell epitheliomas measuring from 1 to 4 cm. in diameter with the intradermal injection in and around the lesion of either spleen or liver extract once a week.[14] The number of injections varied from three to 20. A nonspecific local destructive effect was ruled out by injecting controls with dextrose solution of the same concentration as the spleen extract. Minimal scarring was observed.

Melanoma

The only permanent treatment of substantial value in the treatment of malignant melanomas is one of prevention. It is the considered opinion of many authorities that all black, blue-black, slate-colored, nonhairy, shotty moles should be removed in childhood in order to forestall breakdown and degeneration of these lesions at puberty or during adult life due to chronic irritation and trauma. In childhood when no clinical activity is present, excision may be conservative. There is seldom evidence of a malignant melanoma developing prior to puberty. What is suggested above for the rare, potentially malignant melanotic lesion does not obtain for the common (light-brown) pigmented or nonpigmented, hairy or nonhairy common mole which, generally speaking, is harmless.

According to Pack *et al.* who reviewed 951 cases, there is presumptive evidence that more lives can be salvaged by widening the scope of radical surgical approach in the treatment of malignant melanomas.[15]

Pemphigus Vulgaris and Pemphigus Vegetans

This is usually a fatal bullous disease affecting both the skin and mucous membranes, occurring most frequently in people of the Jewish race. The following regimen is followed on the dermatologic wards at Bellevue Hospital.

1. Carbarsone (Lilly) (paracarbamidophenyl arsonic acid) is chemically related to acetarsone but is less toxic.[16] One capsule (0.25 Gm.) is administered daily one-half hour before breakfast, increasing weekly by one capsule up to three daily. This may be continued if no evidence of intolerance appears.
2. High vitamin, high caloric, and salt-poor diet.
3. High protein diet to which are added large doses of the protolysates.
4. Crude liver extract intramuscularly, 3 cc. twice weekly.
5. Transfusions of whole blood.
6. Plasma.
7. Local therapy consists of potassium permanganate baths 1:40,000 and 1:3000 acriflavin in vaseline gauze and heat cradle.
8. Intelligent experienced nursing care is of paramount importance.

We have treated five cases of pemphigus vulgaris with cortisone acetate.

A man, aged sixty-seven, had an eruption confined to hips, scalp, and genitals for two years. It then became severe and spread to the mucous membranes of the oral and nasal cavities, the trunk and extremities, with denudation of extensive areas of skin. Cortisone therapy was begun on March 1, 1950. The usual dosage schedule was followed. Since March 15, he has been completely free of lesions on a daily maintenance dosage of 75 mg. Only residual hyperpigmentation remains. His weight has increased from 112 to 157 pounds (his usual weight) in that interval. His hair is less gray than before his illness, and many of the lanugo hairs on his somewhat bald scalp have become terminal. On one occasion, when the drug was discontinued, he promptly developed two large bullae, one on the right thigh, the other in the right tibial region. Both lesions subsided in twenty-four hours after the dose of cortisone was increased to 150 mg. daily.

The second patient, also a man, aged fifty-three, has been in remission for two months. The same schedule of cortisone dosage was followed. No new bullae have appeared, but the Nikolsky sign is still present over the original healed lesions. His general condition is excellent. The maintenance dose was 75 mg. daily. No eosinophils were found in a biopsy of one of the bullae at a time when the patient was on cortisone therapy, their absence offering some difficulty in making the histologic diagnosis of pemphigus.

Two other patients, a man and woman, improved under cortisone treatment, although they continued to develop bullae. The net result was improvement but not full remission. The man had decubital ulcers in which healing was accelerated when cortisone was discontinued. The woman had many large subcutaneous abscesses with fever complicating her pemphigus. This condition cleared when cortisone was discontinued. The eruption finally took on the features of pemphigus foliaceus.

A forty-three-year-old man with a fulminating type of pemphigus vulgaris died in spite of cortisone therapy in six weeks after the disease became generalized.

There were no serious untoward effects to cortisone or ACTH therapy in our series. Aureomycin caused complete remission to date in one patient with pemphigus vegetans. It is still too early to evaluate these remedies properly in diseases which are normally prone to spontaneous remissions.

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THE TREATMENT OF PSORIASIS AS A DISTURBANCE OF LIPID METABOLISM

Further Observations on Lipotropic Therapy Based on a Ten-Year Clinical Study

PAUL GROSS, M.D., and BEATRICE M. KESTEN, M.D., New York City

(From the Department of Dermatology, Columbia-Presbyterian Medical Center)

OF THE many theories on the etiology of psoriasis, the concepts of infection and metabolic disturbance have been the most widely discussed and studied. Grutz and Burger focused attention on the possibility that psoriasis was a lipoidosis.[1,2] Their concept and dietary approach to treatment did not receive wide acceptance. Clark, Dragstedt, and Becker went a step further in treating psoriasis as a lipid disturbance by using lipocaic.[3] Our interest in the metabolic aspects of the disease had its origin in the newer studies on fatty livers in animals and the influence of various vitamins and choline and inositol on the production and prevention of fatty livers, as demonstrated by McHenry and Gavin.[4,5] The work of Kesten and Silbowitz on atherosclerosis in rabbits produced by feeding cholesterol further justified our belief in the value of lipotropic therapy in disturbances of lipid metabolism.[6] Best and his coworkers used lecithin in their work on fatty livers, which was the starting point for the study of the lipotropic effect of nutrients.[7]

Our preliminary results encouraged us to embark on the clinical study of psoriasis and its response to lipotropic therapy.[8] The need for prolonged observation and the difficulties of the problem led to a ten-year study, the results of which will be summarized here.

Starting out with crude forms of vitamin B complex, such as liver, yeast, and wheat germ, we finally found in so-called soybean lecithin a mixture of phosphatides which promised to have a lipotropic effect based on its chemical constitution. Soybean lecithin furnishes choline and inositol in therapeutic doses. In our preliminary studies, synthetic choline and inositol preparations did not produce the effect on the psoriatic eruption which we observed from the administration of lecithin. We surmised that this was because other substances present in the natural product derived from the soya bean, such as the essential fatty acids and biotin, may also have a regulating effect on fat metabolism.

Method of Treatment

The 235 patients comprising this series were treated by a regimen of diet, soybean lecithin, and supplementary therapy as indicated.

With the premise that psoriasis is a disturbance of lipid metabolism, we felt that a diet low in animal fats and cholesterol was indicated. Such a diet was carefully outlined to our patients by the food clinic. It is notoriously difficult to induce ambulatory patients to adhere to a strict low-fat diet, so we were satisfied if eggs, fat meats, poultry, fish, cheese, and excessive amounts of butter and cream were eliminated.

Soybean lecithin was given to all patients. Originally, crude commercial lecithin was used in amounts varying from 30 to 60 Gm. a day, larger doses being used if there was no improvement at the lower level.* In recent years a new preparation has become available which contains 80 per cent purified granulated soya phosphatides, and thereafter it was used exclusively, in amounts of 15 to 45 Gm. daily.** The average daily dose of both preparations supplied approximately 0.6 Gm. each of choline and inositol. Most patients tolerated this dosage well, but in some instances it had to be reduced or discontinued because of gastrointestinal distress. In conjunction with the purified phosphatides we prescribed as a supplement, when they were available, capsules which contain 500 mg. crude lecithin, small amounts of vitamins A and D, thiamine, pyridoxine, riboflavine, and calcium pantothenate,† in daily doses of 6 to 12 capsules.

Where liver disease, alcoholism, or a positive cephalin flocculation test was found, crude liver extract was administered orally or parenterally and a high protein diet prescribed. In several cases of hypothyroidism, as indicated by clinical findings and a basal metabolic rate below −15 per cent, thyroid extract was prescribed. Reducing diets were employed when obesity was present.

Topical applications were used in some cases in the form of vaseline for lubrication and ointments containing salicylic acid for the removal of heavy scales. Ammoniated mercury, vioform, and coal tar ointments were prescribed for re-

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* The material in generous quantity was furnished by the American Lecithin Company, Inc., Atlanta, Georgia.

** Granulestin, Associated Concentrates, Woodside, Long Island.

† Acletin capsules, Associated Concentrates.

sistant patches or for the treatment of lesions on exposed parts of the body especially. The use of local therapy in a clinical study attempting to evaluate a systemic approach is open to criticism; however, everything depended upon the willingness of the patient to cooperate. Many were glad to dispense with local applications, but the average patient feels convinced that ointments are necessary. Nevertheless, there remained many cases of widespread eruptions and psoriatic erythroderma which responded to internal therapy alone. In some patients certain lesions were treated with active topical applications while others were left untouched and the improvement in both areas under systemic lipotropic treatment was comparable. Furthermore, we have become convinced during this study that an effective period of lipotropic therapy makes the dermal lesions of psoriasis more amenable to mild antipsoriatic remedies.

During the eruptive stage of psoriasis internal therapy alone should be employed, as rapid spreading and aggravation of lesions may occur after exposure to even slightly stimulating local remedies, ultraviolet rays, or roentgen rays. We feel that dietary measures and lipotropic therapy can do a great deal to overcome the therapeutic and psychologic difficulties of this phase of the disease.

Family and Personal History of Related Disease

Careful histories were taken in all the cases included in this series. A reliable family history was obtained from 135 patients, and the following diseases occurred in their blood relations: arthritis 20, cholecystitis five, diabetes 20, and psoriasis 35.

The incidence of associated disease among 250 patients with psoriasis was as follows: rheumatoid arthritis 41, liver or gallbladder disease 18, diabetes ten, hyperthyroidism 11, hypothyroidism five, alcoholism 15, and obesity 36, a total of 136.

It is difficult in the face of these findings to adhere to the old dermatologic proverb that "psoriasis is the skin disease of the healthy." It seems particularly significant that 15 per cent of the patients had a family history of diabetes and that 4 per cent had the disease. The incidence of obesity, liver and gallbladder disease, and chronic alcoholism may not be striking, but observation of the individual cases leaves the definite impression of their unfavorable influence on the severity of psoriasis. The presence of psoriasis in one or more members of the family recorded in about 25 per cent of our cases stresses heredity as an important factor in the disease.

Results of Lipotropic Therapy

Although statistical data do not give a true picture of the effectiveness of therapy in a disease such as psoriasis, they are submitted without case histories because of limitations of space (Table I). They do not reflect variations in the severity or chronicity of the eruption, its duration before the institution of therapy, and the influence of contributing physical and psychologic factors on the course of the disease. The ages of the patients varied from three to eighty-one years, including 12 children. The disease had been present before therapy was instituted for from one month to fifty years.

TABLE I.—Final Status of Patients

Results	Number of Cases	
Well (no lesions, no recurrence)	23	
Controlled (a few persistent lesions, or continued nail involvement, but patient satisfied with status)	29	
Improved (clearance, then partial remission; sustained improvement; local therapy necessary)	66	
		118
Unimproved (no response to any therapy)		37
Total adequately treated		155
Uncooperative		13
Not followed long enough		67
Total		235

The 23 patients who remained well after treatment were under observation for an average of two and one-half years, the duration of treatment averaging one year. This might seem rather prolonged, but the group includes cases showing complete disappearance of the eruption within a few months. The cases "controlled" by therapy also required an average of one year for a satisfactory result; they were under observation for an average of three years.

Chemical Analysis of Skin

Histochemical methods have demonstrated an increase of lipids in psoriatic lesions.[9] In order to carry out more accurate chemical analyses, we obtained three skin specimens from two patients with extensive psoriasis, and one from each of four normal individuals. One of the patients with psoriasis submitted to two biopsies, one from a psoriatic lesion and the other from uninvolved skin (Table II).

The results of chemical examination clearly demonstrated that there was no increase in the total lipid content of psoriatic skin as compared to that of normal individuals. The significant findings were obtained when the total cholesterol contents were compared, and especially the percentage of cholesterol in relation to the total amount of lipids. The total lipids of psoriatic skin contained three and sixth-tenths times as

TABLE II.—Chemical Analysis of Skin for Lipids and Cholesterol*

Initials	Age	Total Lipids Dry Weight (Per Cent)	Cholesterol of Total Lipids (Per Cent)	Serum Lipids (Mg. Per Cent)	Serum Cholesterol (Mg. Per Cent)	Free Cholesterol (Per Cent)	Remarks
Y. P.	26	1.77	4.8	804	165	26	Psoriatic lesion
		4.1	3.4	804	165	26	Normal skin of psoriatic patient
A. K.	66	3.1	7.5	547	171	28	Psoriatic lesion
M. G.	40	2.1	1.8	...	...	..	All specimens consisting of skin from fresh autopsy material of nonpsoriatic cases
J. G.	71	5.1	0.54	...	...	..	
J. B.	44	5.2	1.6	...	...	..	
J. A.	49	2.4	1.8	...	...	..	

* This work was carried out in the Department of Biochemistry, College of Physicians and Surgeons, Columbia University.

much cholesterol as the lipids of normal skin. Since both patients with psoriasis had low normal cholesterol values in the serum, one must assume that the disturbance of the cellular fat metabolism is far more complex than that which leads to xanthoma formation in hypercholesteremia. These findings also suggest that the pathologic changes of the psoriatic lesion, namely, a disturbance of the germinative cells of the epidermis leading to parakeratosis, acanthosis, and inflammatory reaction, are the result of a chemical alteration of the lipids of the skin.

Effect of Lipotropic Therapy on Serum Cholesterol and the Cephalin Flocculation Reaction

The effect of lipotropic therapy on the serum cholesterol levels of 94 patients was studied by repeated tests during and after the treatment period. The technic used was that of Schoenheimer-Sperry. The normal range of this method, as calculated by Steiner, is 150 to 275 mg. per cent, and the mean average for normal individuals is 254 mg. per cent.[10] Of 254 patients with psoriasis who had a routine serum cholesterol determination, 64 (25 per cent) had values above normal. The range in these cases was from 155 to 592 mg. per cent. Fifty-five cases showed a significant reduction of the serum cholesterol under therapy, while 39 did not. As can be seen in Table III, there was no correlation between the response of the psoriatic eruption and the improvement in serum cholesterol.

TABLE III.—Effect of Treatment on Serum Cholesterol

Number of Patients	Final Status	Cholesterol Reduced Yes	No
9	Well	6	3
19	Controlled	10	9
38	Improved	25	13
28	No response	14	14
Total 94		55	39

The cephalin flocculation reaction of Hanger was performed on the serum of 170 patients. In 13 cases the test was positive (2 to 4 plus). In seven cases repeated tests were performed during the course of lipotropic therapy, and six patients showed a reversal to a negative reaction within three to eleven months. The seventh showed no change.

Comment

The findings of abnormally high serum cholesterol levels in 25 per cent of our patients closely resemble those of Reiss, in whose series of 25 cases six showed levels above 275 mg. per cent.[11] Four patients in Reiss' series had diabetes, exceeding the incidence in our group. These figures relating to hypercholesteremia and diabetes and our additional findings of liver pathology and alcoholism furnish indirect evidence in favor of the theory that psoriasis is a disturbance of fat metabolism.

The results of our chemical analysis, showing a pronounced increase of cholesterol in relation to the total lipid content of the psoriatic skin, assume special significance because of recent studies by Gofman and coworkers.[12] These authors used the preparative and analytic ultracentrifuge in the study of the serum lipids and lipoproteins of rabbits with atherosclerosis produced by cholesterol feeding. They found a correlation of the development of atherosclerosis with a high concentration of molecules of the "S_f 10-30 class." These are giant molecules of low density which may be composed of cholesterol, its esters, phospholipids, fatty acids, and proteins and are part of the mechanism of cholesterol transport in the serum. In extending their studies to humans, Gofman and his group found a similar low density molecule, "S_f 10-20," containing 30 per cent cholesterol by weight. These molecules were increased in 101 of 104 patients who had had a proved myocardial infarction. The importance of these findings can be estimated from the following quotation:

> Patients with hypercholesteremia (over 300 mg. per cent) drawn from individuals without known disease, from diabetics, and from patients with myocardial infarctions, show no essential differences ultracentrifugally in the nature of the molecules transporting cholesterols, but instead show

> generally an increase in the quantity of cholesterol in the serum bound in the form of S_f 10-20 molecules. However, many normocholesteremic individuals may carry much more cholesterol in this fraction (S_f 10-20 molecules) than do hypercholesteremics.[12]

Applied to our concept of psoriasis, this means that laboratory confirmation of a lipid disturbance cannot be obtained from simple quantitative examinations of serum cholesterol. More histochemical studies by improved methods, direct chemical analysis of psoriatic skin, and, finally, studies of the serum by ultracentrifuge will be necessary before a firm basis for the metabolic theory can be established. The clinician will find a fruitful field in a careful appraisal of the relationship of diabetes to psoriasis and of the influence which liver disease and alcoholism have on the course of the cutaneous manifestations.

The beneficial effect of ACTH and cortisone on the eruption of psoriasis which has been observed may lead to a new therapeutic approach. Clinical research is necessary to analyze the action of these hormones upon the chemical and histologic process responsible for the psoriatic lesion. If successful, such studies may offer some explanation of the effect of psychic factors and climatic conditions on the clinical course of psoriasis.

The effectiveness of lipotropic therapy with soybean lecithin can be attributed for the present to its beneficial action on fat absorption, lipid transport, liver function, and probably cholesterol metabolism of the skin itself. The complete failure of this therapy in 37 out of 155 cases intensively treated and carefully followed must lead to the conclusion that this form of therapy is capable of correcting some of the metabolic defects but not the actual cause of the disease. The addition of lipotropic substances to a low-fat diet increases its effectiveness by regulating fat absorption and improving liver function, just as proper diet and supportive treatment alone can control many cases of diabetes. It may be that when the organic cause of psoriasis has been discovered, true substitution therapy comparable to that of insulin will become available. In the meantime, lipotropic therapy must be considered a valuable adjunct to the management of psoriasis.

Summary

A ten-year study of psoriasis as a disturbance in fat metabolism is reported. Data on the beneficial effects of lipotropic therapy by means of soybean lecithin are offered to support this concept.

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SOME FACTS AND FALLACIES RELATING TO SUPERFICIAL FUNGOUS DISEASE

George M. Lewis, M.D., Wilbert Sachs, M.D., and Mary E. Hopper, M.S., New York City

(From the Department of Medicine (Dermatology), New York Hospital and Cornell University Medical College)

THE inadequately diagnosed, overtreated patient with a superficial mycotic infection, or what looks like it, is a still too common observation. Chief reasons would appear to stem from two sources. The first is ignorance and the second carelessness. Both may be laid at the door of the patient when he elects to use proprietary nostrums to cure his self-diagnosed ailment. As is well known, he is frequently encouraged by well-meaning friends who do not hesitate to supervise his energies in the direction of empiricism, which would be laughable if it did not so frequently cause partial or even total disability and almost always extreme annoyance. Unfortunately, the reason a patient uses proprietary preparations of uncertain, but almost always irritating, contents is not always because of his own decision or his friends' urgings. Dermatologists frequently obtain the history of overtreatment on the basis of a recommendation of a commercial product by a physician, presumably bored by the request of a patient for help or too busy to consider the possible harmful effect of such advice. An assist should be credited to the skillful advertising of the manufacturers. That many otherwise sound physicians think of superficial fungous infections as triviata may be inferred by their request at the lunch table or in casual conversation while waiting for the elevator for the latest treatment for athlete's foot or what to do for a rash on the hands. A happy balance, in which the malady receives modern care without overemphasizing its importance, is apparently difficult to attain.

Clinical Features

Some of the more important diagnostic manifestations of superficial fungous infections should be common knowledge to physicians, no matter what their primary medical interest. They will then be able to direct the patient intelligently toward adequate yet safe therapy.

Tinea capitis (*Ringworm of the Scalp*).—This disorder is limited almost entirely to children and is caused usually by either Microsporum audouini or by M. lanosum. It is manifested by apparent loss of scalp hair, but on close inspection many stubby hairs, broken off and decolorized, will be found. The surface of the scalp is often scaly. Other evidence of inflammation is variable, occasionally being severe with boggy infiltrations, but more frequently exhibiting slight follicular redness or none at all. When the disease is caused by M. audouini, it may appear insidiously and be unrecognized for some time. This allows the playmates also to become infected. It is well known that the disorder with mild subjective symptoms is seldom diagnosed during the summer months and, if not screened out by the school health staff, may develop into an epidemic. It is fortunate that the majority of hairs infected with tinea fluoresce when exposed to filtered ultraviolet rays (Wood light). This is utilized as a rapid method of diagnosis and is essential in establishing a cure.

Dermatophytosis (*Athlete's Foot*).—Included under this heading are the manifestations from invasion by three different dermatophytes, and the clinical signs depend a great deal on the species of fungus involved. The primary evidence of the disease is most often on the foot, and the webs adjacent to the fourth and fifth toes are the most vulnerable. Here the skin may be red and scaly, macerated, and often fissured. The process may become acute, edematous, and spread to adjacent skin. Such patients often develop vesicular and pustular lesions on the soles and also on the fingers and palms. This type of disease is almost always caused by Trichophyton gypseum. In another syndrome the process may start on the feet between the toes, but the later manifestations are seldom acute. Instead, the disorder evidenced by dull-red, scaly areas on the sole or soles may later appear on a palm or over the buttocks and invade the toenails and occasionally the fingernails. This type is caused by T. purpureum. In the disease syndrome produced by Epidermophyton floccosum (inguinale) the upper inner thighs are commonly affected. Coincidentally, while the patient is not often aware of their presence, superficial scaly lesions may also be found on the toes or soles. The nails are seldom invaded by this fungus.

Tinea versicolor.—With very little experience this infection may be recognized by its superficial, brown, scaly characteristics. It is anomalous that, although it is virtually unnecessary and superfluous, the causative organism may be readily demonstrated under the microscope in a rapid mount using potassium hydroxide as a solvent, whereas in other situations in which the clinical features are not definitive and when positive proof would be useful, the organism may be difficult to demonstrate.

Tinea barbae.—Ringworm of the beard is unusual in urban communities but less so in rural districts where an occasional case is observed. This infection should be suspected when a man develops a boggy swelling in one or more parts of the beard, particularly when there is contact with an infected animal. T. gypseum is the usual cause.

Tinea circinata (*glabrosa*).—As the name implies many of the lesions have a circinate outline, but it should be remembered that not all circinate skin lesions are of fungous origin and also that this feature is not an invariable sign of mycotic disease. M. lanosum is the common cause and is usually seen in persons who have contacts with infected pets or other individuals with tinea capitis or tinea circinata.

Moniliasis.—The causative fungus, Candida (Monilia) albicans, is a normal and almost invariable inhabitant of the gastrointestinal tract. With such factors as middle age, overweight, diabetes, excessive use of soap and water, and lack of good hygiene, one or more of the manifestations are prone to appear. The most important expressions from the standpoint of incidence are intertrigo (affecting the digital webs, groin, inframammary areas, labial commissures, etc.) and

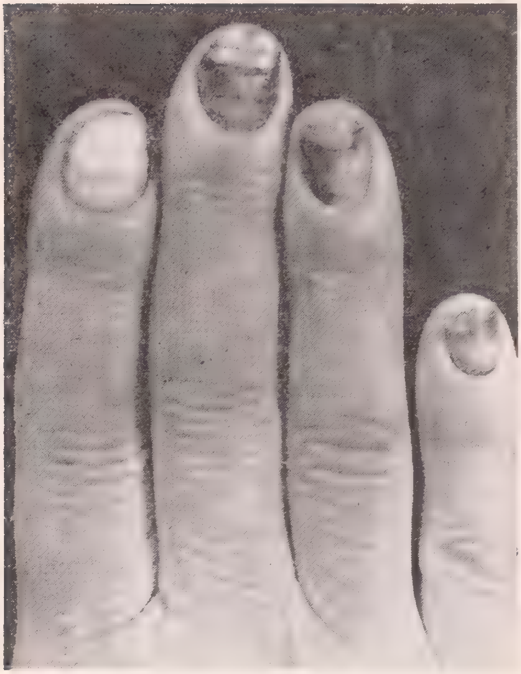

FIG. 1. Chronic paronychia and onychia due to infection with Candida (Monilia) albicans. Surgical intervention is contraindicated.

chronic paronychia of one or more fingers, with or without nail involvement (Fig. 1). The intertrigos are similar, no matter what the location, and consist of bright red, exudative, edematous, and well-defined plaques (Fig. 2.). There is usually tenderness rather than pruritus. Occasinally, vaginitis and, rarely, proctitis occur. The tongue is often beefy red and smooth.

The Overworked "Id" Complex*

The theory of an allergic reaction was developed by Jadassohn to explain a symmetric, transitory, papulovesicular rash noted in some patients with a kerionic fungous infection. Williams first advanced the hypothesis that the same phenomenon is present when patients exhibit an eruption on the hands while showing evidence of acute dermatophytosis of the feet. While this sequence of events seems logical and is commonly accepted, one should hesitate to apply this theory to explain every eruption of the hands. A considerable majority of the rashes affecting the hand have nothing whatever to do with fungi. Even in the typical cases of dermatophytid, in which the palms and sides of the fingers are affected, the active treatment usually undertaken induces a secondary dermatitis, more incapacitating by far than the original rash. The majority of eruptions seen on the hands finally are considered either contact dermatitis or atopic eczema or both. In many instances, pyogenic infection is a complication.

"Mycoses" That Do Not Exist

When the eitology of a skin condition is obscure, the appellation of fungous infection is often erroneously applied. The diagnosis is then falsely substantiated by taking a culture and finding one or more of the saprophytes so often accidentally present on the skin, particularly in the ear canal. Such fungi are present in the atmosphere as inactive spores. The appellations of aspergillosis, penicillinosis, jungle rot, otomycosis, etc., refer to ill-defined clinical syndromes in which the role of fungi is probably that of a secondary invader or contaminant.

Help from the Laboratory

Since many of the superficial fungous infections have characteristic clinical features, the question is often raised whether, as a routine procedure, it is necessary to attempt identification of the responsible agent. It has been intimated that this is not only unnecessary, but constitutes a "fancy Dan" attitude by those who make this a practice, and may be further construed as useful solely to impress the patient. If either motive is ever involved it is regrettable, but this should not be used as an argument against a procedure which enables a conscientious specialist to obtain particular information which may confirm his clinical impression and will help determine the course of

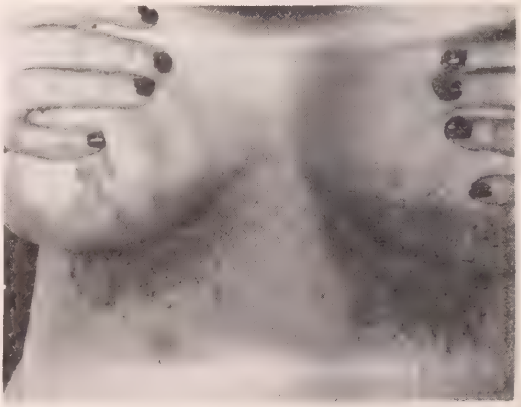

FIG. 2. Intertrigo due to Candida (Monilia) albicans, a not infrequent location in overweight, middle-aged women.

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* For more detailed discussion of this subject, the reader is referred to the monograph by Lewis and Hopper.[1]

therapy, as well as enable him to render a fairly accurate prognosis. The demonstration of fungi in a direct mount is not always easy and requires a fair amount of practice before it is dependable. The identification of most fungi of pathogenic propensity in culture is not too difficult, and our graduate students are able to acquire a high degree of proficiency. It is our opinion that, while not necessary in every case, the regular employment of laboratory procedures, even when the symptoms and signs are clinically typical, will be rewarding in a sufficient number of cases to be justified. The need for care and repeated checks in following patients is illustrated by the following case history:

R. S., a five-year-old girl with a scalp infection due to M. audouini, had been treated topically with a copper compound for about fifteen months. When examined at that time by the school nurse using the Wood light, no fluorescent hairs were found. The original lesion was discernible due to the shorter hairs. In the center of the lesion there was a small irregular area of total alopecia. When we first examined the patient, no fluorescent hairs were found, and on direct examination the hairs revealed no infection. A culture was taken and showed no growth. She was given a placebic ointment to apply. Three weeks later another culture was made, and M. audouini was obtained. Active treatment was resumed, but three weeks later another culture was made and again M. audouini was found.

Had the results of the Wood light tests or our first cultural study been accepted as adequate, an unfortunate decision, overlooking a hidden infection, would have been made.

When only minimal clinical evidence is present, repetition of cultural studies offers the only proof of absence of infection. The usual cultural procedures are simple as the dermatophytes grow well at room temperature and require an uncomplicated medium. The recent further simplification of methods by Wilson and Plunkett brings the technic well within the abilities of the practicing physician.[2,3] Interpretation of the cultural findings usually requires but little experience, although in some instances judgment in correlating the clinical and laboratory data will tax the abilities of experienced workers.

"Sure Cures" that Fizzle

Many doctors are drawn to the attractive, although extravagant, claims of manufacturers because the time-honored methods and procedures are often slow in achieving the desired result. Instead of remembering the adage to use soothing remedies on acute inflammations irrespective of the cause, there may be a temptation to use the product with an eye-appealing trade name, but which does nothing but increase the existing inflammation and destroy the confidence of the patient. Another source of annoyance is the premature publication of supposedly highly satisfactory results from the use of a new drug based on too few cases, inadequate comparison, or too optimistic an attitude.

The Uncooperative Patient

Except for a few simple conditions like tinea versicolor and certain of the types of tinea circinata, cure of the superficial mycoses depends on close cooperation between physician and patient. This means that a physician must outline a procedure that will be effective if applied and that the patient or relatives must regularly apply the medicament. Failure of the patient to carry out orders may be due to the lack of mentality to appreciate the importance of his part but is more apt to be due to a lack of understanding of the need for his diligence and of knowing approximately how long his efforts will be necessary. In order to enlist his cooperation, the patient should be told in simple language just what the doctor hopes to accomplish, and when.

Outline of Treatment

As mentioned, the superficial fungous infections are not usually difficult to diagnose, although the symptoms and signs occasionally simulate such dermatoses as seborrheic dermatitis, contact dermatitis, pityriasis rosea, atopic eczema, and others. Even in instances of a trivial manifestation or when the features are typical, laboratory confirmation is desirable, and this is more apt to be obtained if the work is undertaken before initiation of treatment.

Contrary to the popular belief, treatment is not always effective within a short period. The prognosis is variable, chiefly because of the different capacities to resist the several species of invading fungi. In tinea capitis due to M. lanosum, the prognosis is much more favorable for cure by topical remedies than when M. audouini is the cause. Similarly, in dermatophytosis T. purpureum is a much more difficult fungus to eliminate than either E. floccoseum or T. gypseum.

Topical remedies should be confined to known chemical compounds of low sensitizing propensities. The concentration of the drug should be low at first and later increased if desired; in this way, danger of provoking additional inflammation is lessened.

Tinea capitis.—X-ray epilation of the scalp hair is the best procedure in the treatment of tinea capitis caused by M. audouini, but this requires an exact technic and must be carried out only by a dermatologist who has received adequate training. Prolonged use of topical remedies with attention to detail is of limited help in this mycosis but is the indicated procedure for M. lanosum infections. Since the subject is controversial and cannot be here adequately discussed, the reader is referred to a recent article by Cipollaro and Brodey whose conclusions are shared by us.[4] Cure, when achieved and by whatever means, occurs only when the infected hairs have been epilated.

Dermatophytosis.—No wholly satisfactory regimen has been found for the management of T. purpureum infections. When the results are good, the patient has cooperated closely and has probably used many different remedies over a long period. Mechanical evulsion of nails and abrasive applications to infected, thickened skin is a necessary preparatory procedure.

In the more acute forms, one may cautiously apply fungicides of the fatty acid type, usually preceded by wet dressings or soaks. Occasionally, x-ray therapy is helpful. In tinea cruris a salve containing 3 per cent salicylic acid and 6 per cent sulfur precipitate is effective in almost all cases.

Tinea versicolor.—The patient should be examined under the Wood light to determine the extent of the rash. (This is the only glabrous skin mycosis in which the Wood light induces fluorescence.) Most patients respond rapidly to the daily application of 10 per cent aqueous solution of sodium hyposulfite.

Tinea barbae.—The main effort should be directed toward manual epilation of the infected hairs. Ointments are not well tolerated as a rule. Wet dressings assist in reducing the inflammatory reaction. Surgical incision is seldom indicated and may be harmful.

Tinea circinata.—Invasion of lanugo hairs may explain refractoriness to the usual fungicidal applications.

Moniliasis.—In addition to local applications of ammoniated mercury, gentian violet, and other agents, the predisposing factors leading to the infection should receive attention. Dietary restrictions, urinalysis, and substitution for use of soap and water when indicated are requisite if a favorable result is to be expected.

Summary

Some of the more important clinical features of the superficial mycoses are mentioned. An accurate diagnosis by laboratory methods is considered a definite advantage to corroborate the clinical impression and more accurately determine the prognosis and type of treatment. Some experience and good judgment are required to correlate the clinical and cultural findings and to avoid errors. Dermatophytid is not so common as one might expect from its frequent diagnosis. A plea is made for the use of remedies and methods adapted to be most effective against the particular etiologic agent.

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THE ROLE OF THE ANTIHISTAMINIC DRUGS IN PRODUCING CROSS-SENSITIZATION DERMATITIS

Samuel M. Peck, M.D., New York City

(From the Departments of Dermatology, Mount Sinai Hospital)

In a recent publication the author had suggested that cross-sensitization should be given more consideration as a factor in the chronic recurrent industrial dermatitis.[1] Such a possibility is especially to be sought for when the original dermatitis has been shown to be due to a sensitizing chemical which apparently had been removed from the patient's environment.

It is not too difficult to eliminate further contact with a known irritant in the industrial environment, but, unless this contact with the same or related chemicals is also prevented at home, a dermatitis may persist. A simple illustration is the case of the older worker with a dry skin who may develop a degreasing dermatitis on the hands from exposure to a petroleum solvent. Such an individual may have his dermatitis continue indefinitely by the home use of improper cleansing materials, such as strongly alkaline soaps.

The above examples are readily understood and do not require anything more to trace the etiology of the dermatitis and prevent its recurrence and chronicity but the recognition of a few simple physiologic principles. However, the problem becomes complicated indeed when, to avoid recurrences and properly recognize precipitating factors, a knowledge of intricate cross-relationship, both chemical and immunologic, between certain classes of irritants must be understood.

Bloch, Baer, Sulzberger, and Mayer have pointed out that sensitization may cross among several compounds because (1) there may be present identical allergenic principles, (2) there is produced a sensitization not only to the primary sensitizing chemical but also to one or more immunochemically related allergens.[2-5] The primary allergen and the secondary allergen may be so closely related that the sensitized cell does not differentiate between them. The primary allergen can be converted in the body into an agent which is identical with or closely related to the secondary allergen. It is also possible that the secondary allergen can be converted in the body into an agent which is identical with or closely related to the primary allergen.

Bloch was one of the first to point out that, when a patient became sensitive to iodoform, that hypersensitivity may be directed not only against the free iodine but against the methyl and methane groups also.[2] Once this sensitivity has taken place, to prevent recurrences the patient should avoid contact with the iodoform molecule, the free iodine, and in some instances with iodine-substituted methane.

In 1928, Mayer demonstrated that the apparent occurrence and recurrence of dermatoses in workers who were once sensitized to paraphenylenediamine by further contact with apparently unrelated chemicals was really due to sensitization primarily to compounds of quinone structure.[5]

Sidi, Tzanck, and Peck and Feldman, as well as others, have shown that there exists cross-sensitization of para-aminobenzoic acid and certain local anesthetics.[2,6,7] The basis for this cross-sensitization between apparently unrelated substances is that they all contain a primary amino group in the para position. Thus, a patient sensitized to procaine may show what is apparently a spontaneous sensitivity to the dye of the paraphenylenediamine group.

Sulzberger, Kanof, and Baer observed cross-sensitization of para-aminobenzoic acid in a number of patients who had dermatitis due to sulfonamide drugs.[8] Phillips showed that in patients who had dermatoses from various sulfonamide drugs there was also a high incidence of hypersensitivity to procaine hydrochloride.[9] In the patient reported by Peck and Feldman. there was sensitivity to sulfathiazole, benzocaine para-aminobenzoic acid, pontocaine, and buter sulfate but not to sulfanilamide.[7]

Many other instances of cross-sensitization t related and apparently unrelated chemicals ar constantly being reported.[10-12] A careful analysis of the chemical structure of many of these apparently unrelated chemicals has revealed the common sensitizing group in a number of instances.

In 1949, Peck pointed out that the widespread use of the antihistaminic drugs would intensify the importance of and multiply the cases of cross-sensitization.[1] Allergic reactions due to these compounds have been reported frequently. However, the author has tried to emphasize that, once a sensitization to a histaminic drug develops, it is difficult to know whether it is safe to prescribe another antihistaminic which has an unrelated chemical structure. Most of the antihistaminics now in popular use are closely related immunochemically. To avoid recurrences, and especially the precipitation of allergic reactions from previous use of these drugs, the physician should have some understanding of the chemical cross-relationship between the various antihistaminics.

Pyribenzamine is essentially an amine. Benadryl is closely related to Pyribenzamine where the hub of the molecule consists of a carbon instead of a hydrogen atom. In Benadryl, two of the three constituent groups remain the same as in Pyribenzamine. The Perlman fluorescent reaction depends on the presence of an o-pyridyl group as one of the three constituent portions of the molecule and the attachment of such a group to a nitrogen atom as the hub of the molecule.[13] This constellation obtains only in Pyribenzamine, Tagathen, Thenylene, and Neo-antergan. Thephorin bears practically no relationship to the preceding group.

Peck reported a number of examples of cross-sensitization among the various antihistaminic drugs.[1] Three of these cases are reported again because they illustrate so well the subject under discussion.

Case Reports

Case 1.—C. H., sixty-year-old white woman, had dermatitis herpetiformis of long standing. This patient's disease was well controlled by sulfapyridine until she developed a dermatitis from this drug.

The resultant eruption was treated by Thephorin ointment and lotion. After several weeks of topical use of this antihistamine, she suddenly developed a marked exacerbation of her eruption and was then found to be sensitive to Thephorin by patch test. Oral administration of Pyribenzamine produced a marked flare of her eruption in approximately forty-eight hours. A patch test with 2 per cent Pyribenzamine solution was found to be 2 plus. This patient had never received Pyribenzamine before but had been given Benadryl tablets some months previously which she had taken without difficulty. She was found at this time to give a positive patch test to Benadryl also.

This patient had developed a sensitivity to three of the antihistaminics. The sensitization to Thephorin could be explained as an acquired sensitivity in the patient who was known to be prone to sensitivity reactions. The Pyribenzamine sensitivity is difficult to explain on the basis of cross-sensitization to the Thephorin, since there seems to be no chemical relationship in structure between them. It was due either to a previous sensitization to Benadryl which is closely related chemically to Pyribenzamine, or since sulfapyridine and Pyribenzamine both contain a pyridine group, the Pyribenzamine sensitivity represents a cross-sensitivity to the sulfapyridine.

Case 2.—A forty-one-year-old white man with dermatitis herpetiformis had been treated with sulfapyridine. He had been taking Pyribenzamine orally for some time, and he had also been given Neo-antergan before he was seen. At the time of examination, the patient had typical Duhring's disease with marked exacerbation of the lesions on the sides of the forearms and on the hands which the patient maintained occurred after he took Pyribenzamine.

Patch tests gave positive reactions to Benadryl but not to the Pyribenzamine. This was very curious because he apparently had never been given any Benadryl. When Benadryl was administered to this patient, there was also a flareup of the eruption.

The sensitivity to the Pyribenzamine was either acquired per se or manifested itself because of a cross-sensitization to previous exposure to sulfapyridine. One would also expect a patient who had developed a sensitivity to Pyribenzamine to show signs of idiosyncrasy to Neo-antergan which differs from Pyribenzamine only by carrying a paramethoxy group on one of the three constituent portions of the molecule. In Benadryl, two of the three constituent groups remain the same as in Pyribenzamine. The immunochemical group here apparently is not too difficult to trace.

Case 3.—F. S., a thirty-seven-year-old white woman with an atopic dermatitis since the age of four, had been taking Benadryl tablets and Pyribenzamine for some time with some beneficial effects on her itching. On November 15, 1948, she was given Thephorin ointment. This was followed after several weeks of use by a marked flareup of her eruption. At that time, she found she could take Benadryl per os but that when she took Pyribenzamine the eruption became worse. She was then seen on March 24, 1949, without any evidence of eruption. On November 11, 1949, patch tests were found to be positive to 2 per cent Thephorin solution and 5 per cent Pyribenzamine solution. Patch tests with Benadryl solution were found to be negative.

Sensitivity to Pyribenzamine developed only after sensitization to Thephorin. Here, too, on the basis of known chemical configuration, it is difficult to explain the sensitization to Pyribenzamine and Thephorin and the lack of sensitization to Benadryl. Apparently, either we have here true sensitivity to totally unrelated drugs, or some antigen, common to both of those apparently unrelated chemicals, is formed in the body.

It is noted that, in this case as well as in some of the other cases mentioned, once sensitivity develops to one of these drugs, apparently a sensitivity can develop to hitherto tolerated antihistaminics even when they seem to have an unrelated chemical structure.

I would like to report several additional cases where there was cross-sensitization to apparently unrelated chemicals which after careful analysis was difficult to trace to a common immunochemical group. The type of cross-sensitization which we are now about to report will, I believe, be of importance to industry because of the class of chemicals which show this apparent cross-sensitization.

In case histories about to be cited, the problem becomes important not only from the viewpoint of therapy, but also as an actual problem in the prevention and treatment of industrial diseases. It is seen that exposure to pyridine compounds may lead to sensitization to antihistaminics such as Pyribenzamine and vice versa. Curiously enough, spontaneous sensitization to paraphenylenediamine may occur after sensitization to Thephorin. This last is difficult to understand on the basis of a common immunochemical group, and, as was pointed out before, some difficult-to-understand type of secondary allergen common to both chemicals may be formed in the body.

*Case 4.**—A thirty-two-year-old white woman had a chronic urticaria and pruritus vulvae. In addition to the typical urticaria which she presented, there was an acute dermatitis around the vagina secondary to topical treatment. The urticaria and the pruritus could be controlled by elimination diets. Pyribenzamine by mouth as well as local application of Thephorin ointment to the vaginal area caused relief of subjective symptoms.

After two weeks use of the Thephorin ointment, a dermatitis again developed around the vaginal area,

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* Not reported previously.

TABLE I.—Results of Patch Tests in Case 4

Test Substances	Results
Thephorin solution, 2 per cent	3 to 4 plus
Benadryl solution, 2 per cent	0
Pyribenzamine hydrochloride, 2 per cent	0
Paraphenylenediamine, 1 per cent	2 to 3 plus
Surfocaine ointment	0

TABLE II.—Results of Patch Tests in Case 5

Test Substances	Results
Benadryl solution, 2 per cent	2 to 3 plus
Thephorin solution, 2 per cent	0
Pyribenzamine solution, 2 per cent	2 to 3 plus
Trimeton ointment	1 to 2 plus
Nickel sulfate, 5 per cent	0
Paraphenylenediamine, 1 per cent	2 plus

and a sensitization to Thephorin was suspected Patch test results are shown in Table I.

As far as the patient knew, she had never been exposed to either a hair or fur dye. Paraphenylenediamine patch tests are being carried out as a routine measure in patients exhibiting sensitivity to antihistaminic drugs because of the above findings.

The practical value of the data obtained was brought out later when the patient developed a dermatitis on both legs after she had worn some new stockings. The eruption could be traced to sensitization to an azo dye on the nylon. It was known from previous studies that patients who were sensitive to paraphenylenediamine not infrequently showed cross-sensitization to azo dyes on nylon stockings because of common immunochemical groups.[10]

*Case 5.**—This case illustrates not only cross-sensitization between various antihistaminic drugs but also a relationship of such sensitivity to paraphenylenediamine allergy.

A fifty-four-year-old white woman was seen because of an acute dermatitis of the neck and chest of several weeks duration. This was proved to be due to paraphenylenediamine from a fur piece. Patch tests were made (Table II).

As a further test, the patient was given Trimeton ointment to apply locally. This caused a marked exacerbation of her dermatitis in forty-eight hours. Undoubtedly, the original dermatitis was due to sensitization to a fur dye, namely, paraphenylenediamine.

The patient then developed what seemed to be a spontaneous sensitivity to certain of the antihistaminics. As far as is known, the patient had never been exposed to these drugs. There are common immunochemical groups in Benadryl, Pyribenzamine, and Trimeton to account for cross-sensitization among them. As in Case 4 it is difficult to trace the common immunochemical group in paraphenylenediamine and the antihistaminics in question. We can only speculate, as in Case 4, that a common secondary allergen was formed in the body to account for this interesting relationship between the antihistaminics and the dye.

Summary and Conclusions

Recurrent and persistent dermatoses found in and out of industry are at times due to cross-sensitization to chemicals whose possession of a common immunochemical grouping is unsuspected.

The antihistaminics are becoming important as factors to be considered as causes of chronic recurrent dermatoses, since they are being used freely in industrial plants for the control of the common cold.

A sensitivity developed to one antihistaminic may lead to sensitivity not only to other antihistaminics with related immunochemical groups, but to apparently unrelated chemicals.

There is no explanation at present for the mechanism which can cause the development of spontaneous sensitivity to paraphenylenediamine after sensitization to an antihistaminic, especially Thephorin. The converse also may occur but is much less frequent.

33 East 70th Street

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FIFTY YEARS' PROGRESS IN THE TREATMENT OF SYPHILIS

Isadore Rosen, M.D., and Nathan Sobel, M.D., New York City

(From the Skin and Cancer Unit, New York University Hospital, New York University-Bellevue Medical Center, and the Department of Dermatology and Syphilology, New York University Post-Graduate Hospital)

THOSE of us who have practiced this specialty all these years believe it is worth while to review the many changes that have taken place in the past half century. This period has been a fruitful one. Between 1903 and 1910, with the discovery of the etiologic agent (the Treponema pallidum), the introduction of the Wassermann reaction and its many modifications, together with spinal fluid investigations, and the discovery of the first so-called "specific" antisyphilitic drug, salvarsan, our knowledge of all phases of the disease was greatly enriched. From these discoveries we began to realize that the disease could be eradicated.

We have noted great changes in the types of syphilis seen formerly and those encountered today. One need only recall the severe clinical varieties that were met with in everyday experience in hospitals and clinics. One saw the mildest primary and secondary lesions and, in addition, destructive tertiary ulcerations which were often unrecognized and neglected, sometimes for months and years, until important parts of the body were destroyed. These types of syphilis are things of the past. The physician taking up dermatology and syphilology as a specialty today will probably rarely see these clinical examples. They will only be seen in reference books.

The same may be said of cerebrospinal syphilis in all of its forms. In the early part of the century those of us in charge of syphilis clinics encountered in our daily routine patients suffering from the mildest forms of syphilitic meningitis as well as the advanced forms of meningoencephalitis, tabes, optic atrophy, and general paresis. Many of these patients were benefited by the newer organic arsenical preparations and had their health restored to become useful citizens, able to resume a gainful occupation. There is no question about what would have happened to those individuals had the condition occurred prior to this epoch-making era. One has only to compare the percentage of inmates in the state hospitals suffering from general paresis and other forms of cerebrospinal syphilis with the statistics today.

Anyone who was directly or indirectly associated with maternity hospitals thirty or more years ago will recall the pathetic experiences with active congenital syphilis. This was the period before compulsory premarital and prenatal Wassermann tests were required. This law in itself was responsible for the great reduction in the number of active congenital syphilitics. The recognition of active or latent syphilis in one or both parties requesting a marriage license and thorough preventive measures and treatment resulted in the subsequent birth of nonsyphilitic babies.

A review of some of the methods employed in the treatment of syphilis in the early salvarsan era is of interest. When Ehrlich discovered the "wonder drug," it was thought that one injection would sterilize the patient by destroying the many organisms. Salvarsan was administered intramuscularly, usually in the lower lumbar region, resulting in large painful infiltrations. This was followed by a rise in temperature which lasted a number of days and also nausea, vomiting, and headache. These infiltrations finally broke down, resulting in ugly looking ulcers which would take weeks to heal. But the clinical syphilitic manifestations rapidly involuted.

To avoid these symptoms, attempts were made to modify the drug so that it could be given intravenously. This was accomplished at the expense of its efficacy. Soon it was found that a series of injections were required to obtain a therapeutic effect. These injections were also accompanied by constitutional symptoms: high fever and vomiting which lasted a few days. However, in some patients the reactions were very severe with meningeal involvement, simulating meningitis, and there were some fatalities.

The drug was given intravenously by the gravity method using a high dilution, 0.1 Gm. dissolved in 20 cc. of sterile distilled water or 0.4 per cent saline solution. Because the salvarsan solution was acid in reaction and extremely toxic, it was always necessary to add a sufficient amount of 4 per cent sodium hydrate solution to neutralize the acid before the injection. Many modifications of the original salvarsan were made after its discovery. During World War I, when it could not be obtained from Germany, the late Dr. Jay Frank Schamberg of Philadelphia, through great effort and expense, was able to produce the drug. It was called arsphenamine. After this, other American pharmaceutical manufacturers were able to produce the drug. In order to simplify the administration, Neosalvarsan was placed on the market and was given by the syringe method. Following this other products were developed such as silver salvarsan which was supposed to be especially efficacious for involvement of the central nervous system. Then came Mapharsen which is now universally used when organic arsenic is indicated.

If one was not skilled in this type of therapy (and many were not in this early period), painful infiltrations surrounding the injected area occurred. These were sometimes followed by sloughs which took weeks or even months to heal with scar formation, and in that area veins could no longer be used for necessary subsequent medication of any kind. In many instances the inexperienced physician would have to expose the vein by incising the skin before he was able to inject the drug. This procedure was not only tedious but, as a rule, rendered the vein useless for further treatments.

At first the treatment of early congenital syphilis consisted of mercury in some form, either routine mercurial rubs or mercury given orally. While, in many instances, the clinical manifestations disappeared, the infection remained latent for various periods only to become active later. Here again, the Wassermann test and the newer drugs were a great boon, making possible the eradication of the disease. Because of the small veins in infants, it was difficult to use intravenous therapy. The external jugular veins and the superior longitudinal sinus were used. Finally, a method was devised of giving a neutral Neosalvarsan solution intramuscularly in courses of treatment. This was alternated with courses of intramuscular injections of a slowly absorbed soluble mercury in palmitin. This method was immediately successful, and babies with active congenital syphilis were free from clinical symptoms and became seronegative after a year or more of treatment.

It is interesting to recall that the blood for serologic tests was at first routinely obtained by needle puncture of the tip of the finger or lobe of the ear, and a few drops of blood were drawn into a capillary glass pipet. At that time, it was feared that venapuncture might produce emboli and cause death.

In the early twenties, bismuth was introduced as a replacement for the various mercurial preparations then in use. This drug proved to be more efficacious than mercury and less painful. The subsalicylate of bismuth was used in a 10 per cent suspension, preferably in a refined peanut oil base. These injections were given intramuscularly at weekly intervals in courses of 10 to 15 injections, alternating with arsenical preparations given intravenously in similar courses. Prolonged therapy for several years was favored.

During these past thirty or more years, our knowledge of syphilis of the central nervous system has been enhanced by the many newer tests that have been developed. It was soon recognized that early diagnosis of involvement of the central nervous system was of paramount importance to avoid destructive pathologic changes occurring in the cerebrospinal axis. Early recognition and proper treatment would avoid, in most instances, the serious complications, such as tabes, optic atrophy, general paresis, etc. This objective was achieved with the introduction of the procedure of early lumbar puncture. The spinal fluid was examined for cell count, titrated Wassermann reaction, globulin, colloidal gold test, and total protein. Abnormal findings in these tests called for intensive treatment. Rarely, this treatment caused hemorrhagic encephalitis and death. Patients who still had positive findings in the spinal fluid after thorough regular therapy were treated intraspinously by the Swift-Ellis method. Many became negative and remained so. Those that did not respond were given tryparsamide or fever-producing agents, such as malaria and typhoid injections or the heat cabinet.

In the early thirties, with the introduction of the five-day, continuous drip, intravenous arsenical treatment, short-term therapy was again attempted. The method was based on the principle that toxic amounts of drugs could be tolerated if given slowly by intravenous drip. While it gave good therapeutic results, the procedure ultimately had to be abandoned because of the occurrence of arsenical encephalopathy in 1 per cent of the cases and a fatality rate of 0.3 per cent. However, the incentive was given toward the further development of intensive methods of treatment, and when penicillin was first used in 1943 by Mahoney it was administered intramuscularly every four hours around the clock during a seven and one-half-day period, 60 injections making a total of 1,200,000 units.

Penicillin has gone through various phases from the amorphous penicillin to the one most commonly used in the treatment of syphilis at present, namely, a slowly absorbed repository form, procaine penicillin G with 2 per cent aluminum monostearate in oil. The best therapeutic effects seem to result from the use of penicillin G, even though this product has not been used for a sufficiently long time for final evaluation. Therefore, while the last word on effective therapy has not yet been said, penicillin G has thus far proved to be the most effective antisyphilitic drug ever used.

The most commonly accepted schedules at present are as follows: For the seronegative and seropositive primary, secondary, latent, and late benign tertiary syphilis, 10 daily intramuscular injections, 600,000 units each, making a total dose of 6,000,000 units of repository type of penicillin G, are given. For cardiovascular syphilis and neurosyphilis, at least 15 daily injections, a total of 9,000,000 units of penicillin G are used.

However, in these types some of us believe that penicillin should be preceded by weekly intramuscular injections of bismuth subsalicylate for a period of five to twelve weeks, depending on the severity of the disease, in order to prevent the occurrence of therapeutic shock or therapeutic paradox. For the same reason preparatory bismuth therapy is indicated in gumma of the larynx, gumma of the liver, and optic atrophy.

Some syphilologists, and we belong to that group, believe that 20 arsenical (usually an arsenoxide) and 10 bismuth injections should be given in addition to the full amount of penicillin stated above. While studies of the immediate eight to twenty-four months follow-up results obtained in the treatment of early syphilis do not show any advantage gained from such additional treatment with arsenic and bismuth, it may well be that long-term, ten to twenty years, observation might show a much more satisfactory outcome in respect to late sequelae.

The remarkable results obtained by penicillin therapy alone in neurosyphilis have caused most observers to abandon malaria therapy, whether they had previously used it alone or in combination with penicillin.

Penicillin therapy in pregnant women with syphilis has been close to 100 per cent effective. While some observers believe that antisyphilitic treatment is not warranted in every pregnancy of a woman with syphilis if she has had previous adequate therapy, we still administer treatment in each pregnancy as a precautionary measure. Occasionally, one finds false positive serologic reactions in infants born of syphilitic mothers, and in the absence of clinical lesions repeated titered serologic tests should be made. In most instances these infants finally attain seronegativity without treatment, showing they do not have syphilis. On the other hand, seronegative babies of syphilitic mothers should have follow-up observation with titered serologic tests, since it has been found that some of these later become positive. The titered Wassermann is also employed in all cases of syphilis in order to evaluate the effect of therapy.

Because of the nontoxicity of penicillin and the ease of its administration, syphilis is now treated almost exclusively by the general practitioner or in the clinics. The severe toxic and sometimes fatal reactions formerly seen from the arsenicals are practically nonexistent today. Those of us who still continue to use the arsenicals discontinue them immediately, even when a mild reaction occurs, because we feel that penicillin is the mainstay of therapy.

The recently introduced Nelson Treponema immobilization test, which is based on the demonstration of a specific spirochetostatic, and perhaps spirochetocidal, immune substance in the patient's serum, is most important.[1] This opens the door for a really specific serologic test to be developed and also possible advances in immunization against the disease. Delamater's study of the various growth forms of the Spirocheta pallida, using the phase microscope, may also contribute to our basic clinical knowledge of the reasons for the various stages of syphilis.[2]

Tremendous progress has been made in all phases of syphilis in the past fifty years. It is evident that we are on the threshold of an era in which new fundamental and revolutionary studies may finally eradicate this disease.

106 East 54th Street
124 East 40th Street

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SALT ORALLY FOR SHOCK

A group of leading American surgeons has advised that salt water taken by mouth, in a vast majority of cases, is as effective as blood plasma in the emergency treatment of shock from serious burns and other injuries.

The recommending surgeons are members of the Surgery Study Section, an advisory body to the National Institutes of Health and to the Surgeon General of the U.S. Public Health Service.

In general terms, the treatment calls for approximately one level teaspoonful of table salt and one-half teaspoonful of baking soda for each quart of water. A number of quarts are required each day. The only limitation on the amount consumed is the ability of the patient to consume the saline solution. Since great thirst accompanies serious burn injury, it has been found that patients will voluntarily consume a sufficient amount of the solution, which is quite palatable. No other drinking fluid is permitted in the first few days following injury.

HYSTEROGRAPHY AND HYSTEROSALPINGOGRAPHY

An Evaluation of 2,500 Cases

M. A. Goldberger, M.D., Richard Marshak, M.D., and Arthur Davids, M.D.,
New York City

(From the Gynecologic Service and Department of Roentgenology of Mount Sinai Hospital)

THE uterine cavity was visualized radiographically in 1910 by Rindfleisch, using bismuth paste as a contrast medium.[1] Cary and Rubin independently in 1914 described the use of collargol as a contrast medium to visualize the uterus by x-ray.[2,3] Although there have been many reports concerning the value, simplicity, and safety of hysterography and uterosalpingography during the last forty years, this method is still struggling for proper recognition.[4-12] We believe its use has been limited because of the fear of complications and lack of appreciation of its value. We have reviewed 2,500 cases to evaluate the safety and value of this method.

The indications for uterosalpingography are (1) menometrorrhagia, (2) dysmenorrhea, (3) sterility, (4) fibroid uterus, (5) postmenopausal bleeding, and (6) congenital anomalies.

Contraindications are acute and subacute pelvic inflammatory disease, intrauterine pregnancy, chronic cervicitis with purulent discharge, vaginitis, active uterine bleeding, and serious constitutional diseases.

The following contrast media were employed: (1) Lipiodol, (2) Diodrast, (3) Skiodan Acacia, (4) Hippuran, (5) Rayopake, and (6) Iodochlorol.

The advantages and disadvantages of these contrast media will be discussed briefly, as some of the complications reported depend upon the drug employed. Lipiodol was the first popular drug used for uterosalpingography, and by 1922 it had superceded the other radiopaque media, i.e., sodium bromide, thorium citrate, and bismuth paste, to outline the uterine cavity. The latter media were unsatisfactory because of the severe reactions and inadequate radiographic contrast. Sicard and Forestier in 1921, after much experimenting with Lipiodol and finding it nonirritating to the most delicate tissues, employed it for the localization of tumors of the spinal cord and other cavities.[13] Lipiodol became associated with uterosalpingography and for many years was the sole drug employed. As the use of the iodized oil increased, some reports of undesirable reactions appeared. These included (1) emboli, (2) foreign body reaction within the tubes and peritoneal cavity, and (3) pelvic abscesses.

Although there have been several instances reported of oil entering the uterine veins, the incidence of emboli has been slight.[11-20] In many of the cases reported in the literature there was insufficient evidence to justify the diagnosis of pulmonary embolus. Often large amounts of dye were injected under great pressure. Authentic cases of this complication, however, have been reported where proper technic was employed. In our series, when Lipiodol was employed, there were no cases of intravasation of the dye into the veins or any pulmonary complications. When using Lipiodol, the pressure was always below 200 mm. of mercury, and the largest amount of dye used was 8 cc. A large sinus opening into the uterine vessel is probably the most likely cause of Lipiodol intravasation where proper technic is employed.

A further objection to the use of Lipiodol has been the occasional fat granuloma which may form in the tubes and peritoneal cavity.[21] In our series this occurred once in a patient who was a sterility problem with closed tubes of many years duration. We believe that granulomas occur rarely in normal tubes, probably because of active peristalsis. Follow-up films would seem to substantiate this belief, as the dye has not been found in normal tubes after twenty-four hours.

Pelvic infections may occur following the use of any of the radiopaque media and will be discussed later in this paper.

Robins, who has used Lipiodol extensively, states that it is stable, nonirritating, nontoxic, and well tolerated by the peritoneum.[10,11] He believes that it is the medium of choice. Rubin, on the other hand, states that, until a radiopaque substance is found which has the proper viscosity and density to demonstrate permeable tubal structure and which possesses that degree of resorption which leaves no residue within the tubal lumen after a few hours, thus preventing foreign body reaction, one would do well in instances of sterility to stop using iodized oil.[22-24] The prevalence of this concept among those interested in sterility stimulated the investigation of other contrast media.

Titus *et al.* experimented with Skiodan (mono-

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iodomethane sulfate of sodium) which is used in intravenous pyelography.[25] Since the viscosity of Skiodan alone was too low for adequate visualization and proper handling, he added various viscous substances. Dextrose, starch, glycerine, propylene glycol, tragacanth, and acacia were investigated, and the optimum solution was considered to be 40 per cent Skiodan in 20 per cent acacia. This substance in rabbits was nonirritating, and histologic study revealed no changes. It was used subsequently in humans by Titus and found highly satisfactory. We have used this substance and Rayopake extensively. Our findings will be noted later.

Visco-rayopake as a medium for hysterosalpingography was introduced in 1941 by Rubin.[24] It has since been replaced by an almost similar drug, Rayopake (50 per cent diethanolamine salt of dioxo-3-iodo-6 methyl tetrahydropyridine-n-acetic acid). The iodine content is approximately 15 per cent. Both Skiodan Acacia and Rayopake have the advantage of quick absorbability and excretion which obviate the danger of embolization and foreign body reaction. Their quick absorbability can, however, be disadvantageous in sterility investigation, for it precludes the possibility of a late film which in some cases demonstrates tubal permeability.

Technic

The optimum time for the performance of the procedure is one week after the cessation of the menstrual flow. The patient is placed on a table equipped with a Bucky diaphragm. Stirrups may or may not be used. Bimanual examination is performed to determine the position, size, and mobility of the uterus and to note the presence of any palpable pelvic pathology. A preliminary film of the abdomen is taken. The patient is placed in the lithotomy position. A fibre, bivalved speculum is introduced into the vagina and the cervix exposed and painted with an antiseptic solution. The anterior lip of the cervix is then grasped with a tenaculum and a uterine sound introduced into the uterine cavity to note the direction and depth of this structure. This is of great importance as the cannula must be introduced in a similar direction. The iodized material is then introduced through the cannula which may have an attached manometer. The material is injected slowly and gently. The technics with hysterosalpingography and hysterography differ. In hysterography 1 cc. of dye is injected and a film taken. Fractional amounts of opaque material up to 3 to 4 cc. of dye are introduced and films taken at each injection. The fractional method was described by Hyams in 1933.[26] The dye is injected under low pressure, and, if any obstruction is encountered, the injection is discontinued. A film in the oblique position is valuable as it facilitates the interpretation of filling defects in the uterine cavity and demonstrates lesions on the posterior uterine wall.

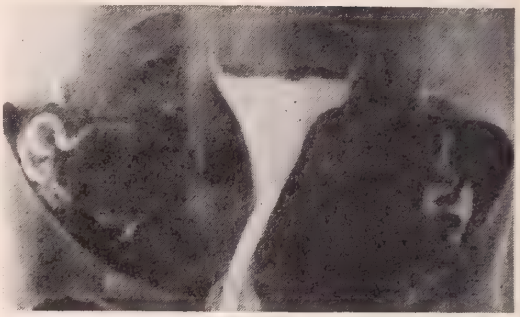

Fig. 1. Uterine cavity is normal in size, shape, and position. Both tubes are visualized to the fimbriated extremity and appear patent.

The procedure differs in sterility cases in two respects. First, the amount of dye used must be larger. Usually, the uterine cavity and tubes can be visualized in 95 per cent of cases with 6 cc. of dye and minimal pressure (Fig. 1). Larger amounts of dye are necessary in the occasional case of an enlarged uterine cavity or in the presence of a large hydrosalpinx (Fig. 2). If fluoroscopic control is used, the course of the dye through the uterus and tubes may be visualized and the exact amount necessary for visualization injected. This is feasible when using Lipiodol but difficult when using the water-soluble media because of their rapid absorbability and low viscosity.

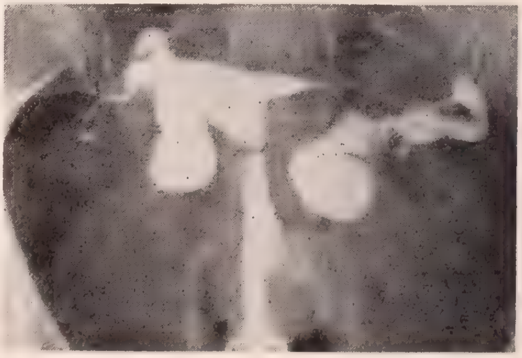

Fig. 2. Both tubes are closed at their distal ends. There is a large, bilateral hydrosalpinx (12 cc. water-soluble, radiopaque media easily injected).

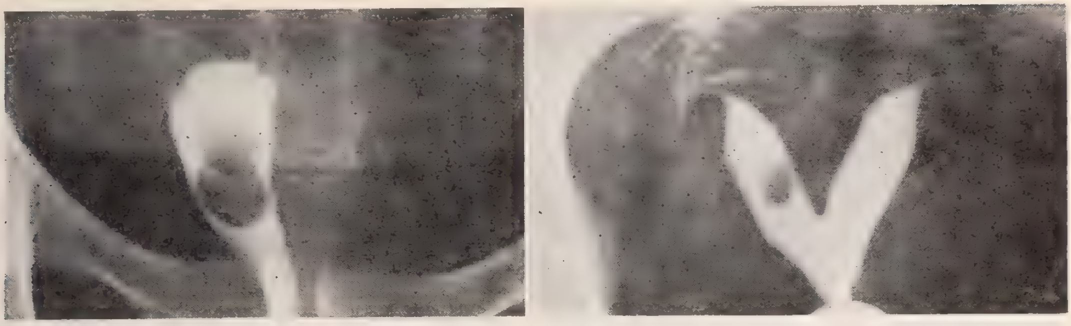

FIG. 3. *LEFT:* Two smooth, circular filling defects within the slightly enlarged, undistorted uterine cavity. Neither tube is visualized. Diagnosis: Endometrial polyps.

RIGHT: Uterine cavity is bicornuate in outline with a small, smooth, circular filling defect in the right horn. Diagnosis: Endometrial polyp.

The technic in uterosalpingography again differs, depending on whether water-soluble or oily media are employed. The injection with Lipiodol is discontinued when an obstruction to the flow of dye at 200 mm. of pressure is encountered. It is important to observe this rule with Lipiodol, as intravascular penetration may result in an embolus. If the films do not reveal the opaque material in the peritoneal cavity, a twenty-four-hour film may be taken, which helps in the differentiation of organic and functional tubal obstruction. When employing the water-soluble media, the dye should reach the peritoneal cavity, since a delayed film cannot be taken because of rapid absorbability. The finding of closed, but otherwise normal tubes with these media does not necessarily indicate organic pathology, as the closure may be due to spasm. Since intravascular penetration followed by embolization cannot occur with water-soluble media, we have employed pressures up to 250 mm. of mercury when necessary. In most cases when the tubal closure is due to spasm, this high pressure is sufficient for the dye to reach the peritoneal cavity. There is the occasional case, however, when the tubes are so spastic as to withstand this pressure. It is in these cases that Lipiodol is helpful, as a twenty-four-hour film may differentiate between spasm and organic closure. It should be noted that, when the closure is at the cornual junction, Lipiodol also is of no value, since the dye must reach the tubes for a twenty-four-hour film to be useful. It is not always essential for the dye to reach the peritoneal cavity, as roentgen study of the tubes may indicate whether or not they are normal. By employing a simple method, the operator can sometimes determine during the course of the injection when the dye has entered the tubes. Following the initial injection of 2 cc., the dye can be withdrawn. If the entire amount is recovered, one may be reasonably certain that the dye has not entered the tubes. When the entire amount cannot be withdrawn, it indicates that the dye has probably passed the uterotubal junction and entered the tubes.

Value of the Procedure

Hysterography is indicated in cases where the history and physical findings do not reveal, but lead one to suspect, the presence of an intrauterine pathologic lesion, such as an endometrial polyp, submucous fibromyoma, other intrauterine growths, and malformations of the uterus. Hysterography is also of value in determining the nature and extent of a surgical procedure when intra- or extrauterine tumors are present.

In six cases of our series the uterus was normal in size, and a dilatation and curettage performed because of menometrorrhagia revealed no evidence of a uterine lesion. Since bleeding continued in these cases, a hysterogram was performed subsequently to elucidate the cause of bleeding. A submucous fibroid was found in each instance. This is readily understandable, as a submucous fibroid forms a false wall which may be missed by the curet. These cases dramatically show the value of the procedure.[27]

The following conditions have been clearly demonstrated by hysterography: endocervical and endometrial polyps, intramural and submucous uterine fibroids, hyperplastic endometrium, endocervicitis, retained products of conception, pregnancy, ovarian tumors, carcinoma, tuberculous endometritis, congenital anomalies, and anteflexion and retroflexion of the uterus.

Polyps.—Polyps may vary in size, be single or multiple, and can be present in any portion of the uterine cavity (Fig. 3). There were 18 patients

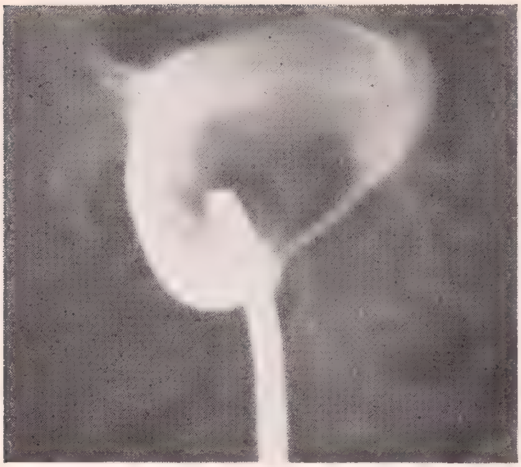

FIG. 4. Large smooth defect within uterine cavity which is moderately enlarged and globular in outline. Neither tube is visualized. Diagnosis: Submucous fibroid.

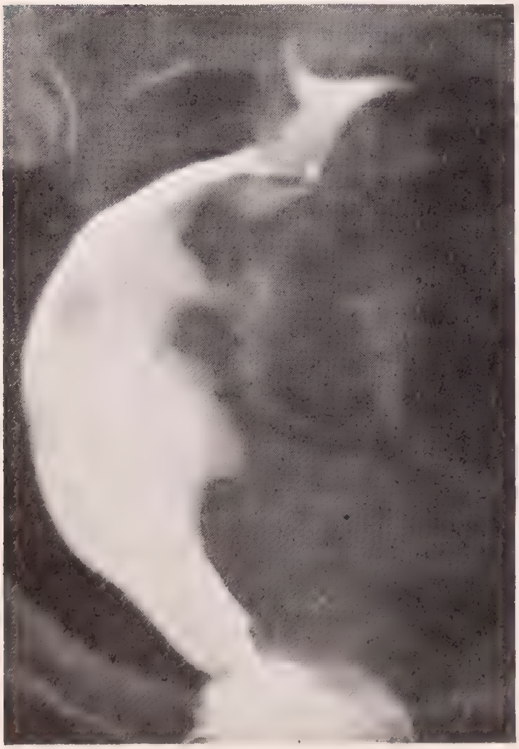

FIG. 5. Cervical canal is markedly dilated and elongated with a large, space-occupying mass in this region. No filling defects are noted within the tiny uterine cavity. Diagnosis: Large cervical fibroid.

who had a careful curettage for persistent uterine bleeding with negative findings where polyps were later demonstrated on hysterography. They are usually sharply outlined and do not distort the uterine cavity. When associated with a hyperplastic endometrium, they may be slightly irregular. It is important not to fill the entire uterine cavity to demonstrate polyps.

Fibroids.—Submucous fibroids may be small or large, single or multiple (Figs. 4 and 5). They can enlarge the uterine cavity, and the degree of enlargement depends upon the size of the tumor. When the uterine cavity is enlarged, it is usually globular in outline. Submucous fibroids may be small and impossible to differentiate from endometrial polyps.

Intramural fibroids usually form a smooth extrinsic pressure defect with varying encroachment upon the uterine cavity.

Hyperplastic Endometrium.—The uterine cavity is slightly enlarged and the borders hazy due to the prominent folds of the endometrium. Occasionally, the borders may be somewhat irregular with small multiple polyps.

Endocervicitis.—The cervical canal is widened, and the walls present a serrated appearance (inverted Christmas tree) (Fig. 6). The appearance is due to enlargement of the Nabothian glands with small ulcerations.

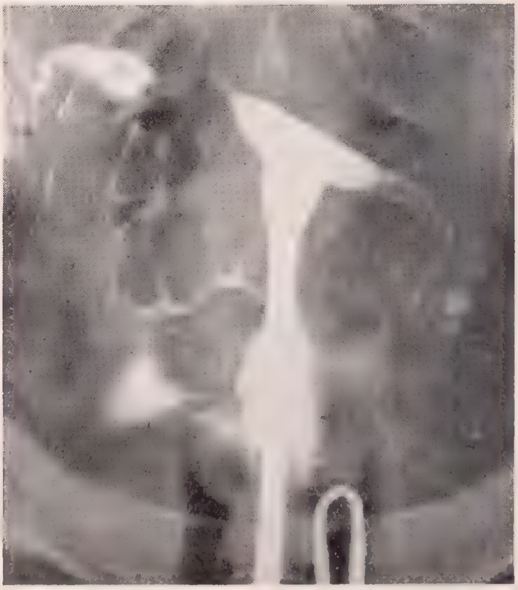

FIG. 6. Uterine cavity is normal in size, shape, and position. Both tubes are visualized. The cervical canal is dilated and serrated (chronic endocervicitis).

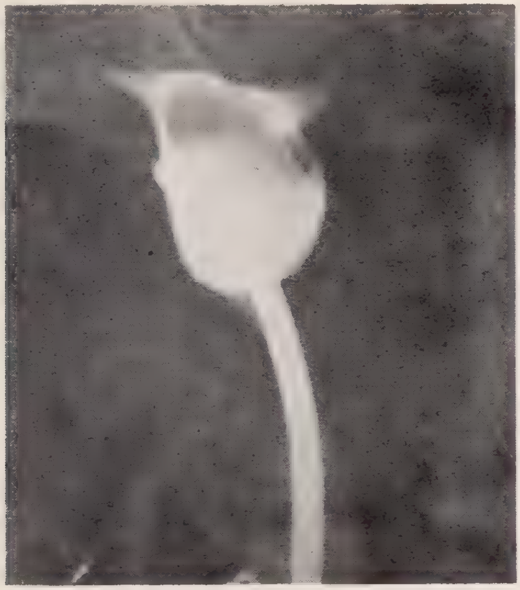

FIG. 7. Uterine cavity is slightly enlarged, and there is a large filling defect within the entire cavity. This has the appearance of a submucous fibroid; however, it is due to an early pregnancy.

Retained Products of Conception.—There may or may not be enlargement of the uterine cavity. Within the uterine cavity numerous irregular filling defects having a bizarre appearance are noted. The condition at times is difficult to differentiate from carcinoma of the uterus. The appearance is due to the presence of retained placental tissue, necrotized material, and coagulum.

Early Pregnancy.—The uterine cavity is usually slightly enlarged and globular in outline with a space-occupying mass simulating a submucous fibroid (Fig. 7). There were two cases in our series, and in both a diagnosis of submucous fibroid was made. In some clinics this method is used in the diagnosis of early pregnancy (Hauser). We feel that this is an unnecessary procedure; however, it should be noted that no abortion occurred in our cases.

Ovarian Tumors.—When large, these tumors may displace the uterus and corresponding tube. Ring-shaped shadows surrounding the ovary have been described, especially on a twenty-four-hour film.

Adenomyosis.—The invasion of endometrium into muscle forms tubelike structures into which a radiopaque media may penetrate, producing a rather characteristic roentgen film. Short spicule-like structures extend, especially from the superior surface of the uterus, varying in size from 1 to 4 mm., and end in very tiny sacs (Fig. 8). This roentgen finding was noted in approximately 15 per cent of the cases of adenomyosis. A possible cause for failure of the dye to enter the endometrial channels in the other cases is the marked overgrowth of muscle which may act as a

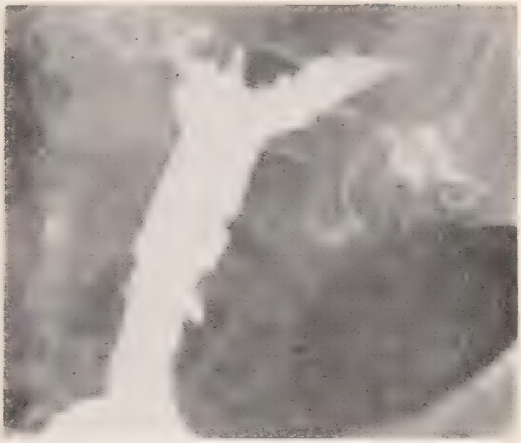

FIG. 8. Uterine cavity is slightly enlarged. There are several sacs extending from the superior surface and from the inferior portion of the right and left border of the uterine cavity. Diagnosis: Adenomyosis uteri.

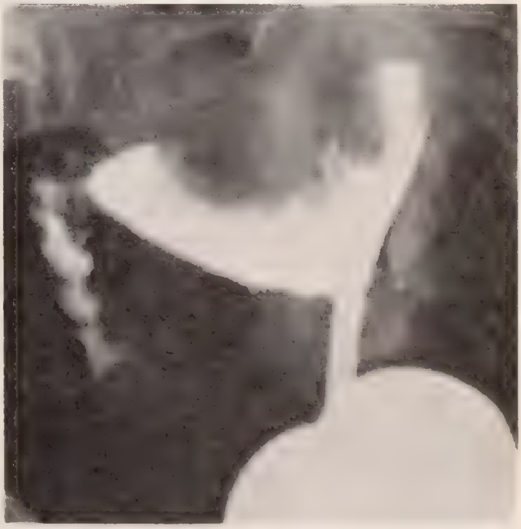

FIG. 9. Uterine cavity is slightly enlarged with a fairly large, irregular filling defect in the superior half. The border of the superior portion of the uterine cavity is completely absent. Diagnosis: Carcinoma of the uterus.

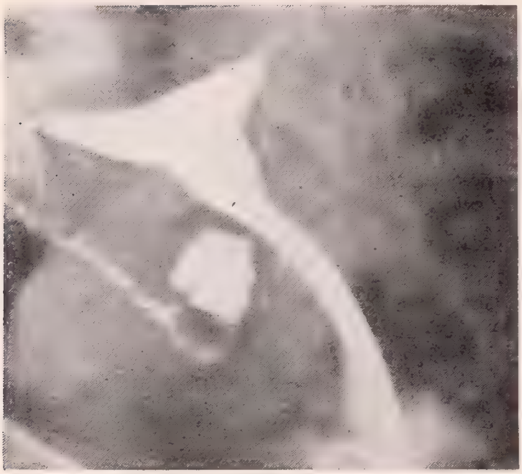

Fig. 10. The uterine cavity, situated on the right side, is normal in size and shape. The left tube is not visualized. The distal third of the right tube is moderately dilated and club-shaped. The portion of the tube immediately proximal to this dilated segment is moderately irregular with some serration of the border of the tube. No dye is noted in the peritoneal cavity. Diagnosis: Tuberculous salpingitis.

pinchcock preventing the dye from going into the endometrial channels. Another possible cause for failure is the presence of clotted blood within the endometrial channels. We have made the roentgen diagnosis of adenomyosis twelve times. These cases were confirmed by hysterectomy.[28]

Carcinoma of the Uterus.—The radiographic appearance of advanced carcinoma reveals an irregular, mottled defect with hazy and slightly irregular defects. The normal contour of the uterine cavity is interrupted (Fig. 9). We have had several cases, however, of small, fairly round filling defects, where the diagnosis of endometrial polyps was made which, after operation, proved to be a carcinoma. There are those who question the advisability of this procedure. However, careful injection of an opaque medium into the uterine cavity under low pressure probably is less traumatic than diagnostic curettage, and, although it cannot replace the latter procedure, it will, in many instances, determine the extent of the changes and the presence of a lesion.

Tuberculous Endometritis.—There was one case in our series of tuberculous endometritis. In this case the cervical canal was narrowed and the uterine cavity enlarged. Within the uterine cavity were numerous, irregular, hazy, smudged defects. This was due to the large amount of caseous necrotic material within the uterine cavity.

Congenital Anomalies.—The diagnosis of uterine anomalies has become much more frequent since the use of hysterography. The following conditions have been demonstrated in our series: uterus bicornous duplex, uterus bicornous unicollis, bicornuate uterus, uterus arcuatus, and patent septum between two uterine cavities.

Anteflexion and Retroflexion.—There is a varying degree of foreshortening of the uterus, depending upon the degree of flexion. A lateral position best demonstrates the flexion of the uterus.

Hysterosalpingography

We have been able to demonstrate the following tubal conditions in uterosalpingography: patency of the tubes, spasm, hydrosalpinx with and without closure of the tubes, site of tubal occlusion, displacement of the tubes, tuberculous salpingitis, and ectopic gestation.

Patency of the Tubes. The recognition of dye in the peritoneal cavity is simple. The dye appears as an amorphous structure which spreads rapidly in the cul-de-sac. Where the dye remains adjacent to the tube, a diagnosis of peritoneal adhesions may be made, especially if the tube is coiled and a sufficient amount of dye has been injected.

Spasm.—Spasm may be a cause of temporary closure of the tubes as demonstrated by the Rubin test or uterosalpingography. Radiographically the tube appears coiled, tortuous, and incompletely outlined. In these cases no definite statement as to patency should be made and the procedure repeated with Lipiodol where a twenty-four-hour film can be obtained.

Hydrosalpinx.—This usually involves the distal end of the tube (Fig. 2). The point of closure is smooth and abrupt, and the dilated segment simulates a sausage. The size varies with the degree of hydrosalpinx and the amount of dye injected.

Site of Tubal Obstruction.—At the uterotubal junction and the fimbriated extremity of the tube, obstruction is definite and easily determined. In the middle of the tube, unless Lipiodol is used, no definite differentiation can be made between spasm and organic obstruction (see Technic).

Displacement of the Tubes.—Occasionally pelvic tumors displace the tubes.

Tuberculous Salpingitis.—The tube is usually irregular, the mucosa destroyed, and a fistula is not uncommon (Fig. 10). Patency may or may not be present.

Ectopic Gestation.—Hysterography in three of the cases was done to elucidate obscure causes of uterine bleeding. In the first a filling defect

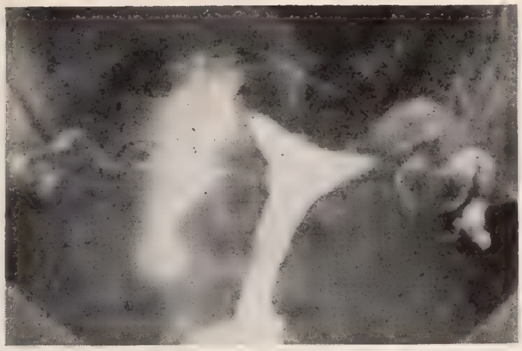

FIG. 11. The right tube is patent, and there is no evidence of any abnormality. The left tube reveals a circular filling defect about $1^1/_2$ cm. in diameter. Dye can be seen in the peritoneal cavity adjacent to the uterus on the right hand and above the left tube. Fluoroscopically a small portion of this dye could be seen passing through a pinpoint opening in the middle of the left tube into the peritoneal cavity.

the size of a dime was observed in the middle of the tube, and dye escaped from this site into the peritoneal cavity (Fig. 11). In the second case a mass the size of an egg was visualized, as were some of the pelvic vessels. In the third case, the tube was not visualized at the site of the ectopic pregnancy.

Complications

Complications have been divided into those due to the dye and those due to the procedure.

Complications due to the contrast media are as follows: pain, peritonitis, endometritis, allergic phenomena, and emboli.

Pain.—Eighty per cent of the cases experienced some degree of pain varying from a few minutes to several hours when the dye entered the tubes and the peritoneal cavity. This pain varied with the amount of contrast media injected and the different contrast media employed. Lipiodol caused the least pain. The pain was slightly more exaggerated with Skiodan Acacia and Rayopake.

Peritoneal Irritation.—Those patients who had severe prolonged pain exhibited some signs of peritoneal irritation, such as lower abdominal rigidity, tenderness, vomiting, and occasional fever. There were 14 patients in a series of 1,014 where the dye reached the peritoneal cavity who developed these symptoms. This reaction occurred 12 times with Skiodan Acacia and twice with Rayopake. We did not observe this reaction with Lipiodol.

Endometritis.—Four hundred fifty specimens were excised and studied at intervals of one day to one week following uterosalpingography. No reaction was noted in the cases where Skiodan Acacia, Rayopake, Hippuran, and Diodrast were used. In eight cases, following the use of the old Visco-rayopake, the following reaction was noted. The endometrium was swollen, hyperemic, edematous, and there was an infiltration of polymorphonuclear leukocytes. This reaction was not noted with the new Rayopake.

Emboli.—Pulmonary embolization following the use of Lipiodol is rare. This has been discussed previously in this paper. In our series this accident did not occur.

Allergic Phenomena.—Nine patients developed urticaria following the use of the water-soluble media. In eight of these cases the dye was noted in the uterine circulation. Antihistaminic drugs were employed with good results.

The following complications occur rarely: hemorrhage, perforation of the uterus, acute exacerbation of chronic pelvic inflammatory disease, shock, visualization of the uterine vascular structure, and introduction of dye into a pregnant uterus.

Seven times in our series patients developed pelvic peritonitis. In all of these cases there was a history of previous pelvic inflammatory disease, and the uterosalpingogram was performed to demonstrate tubal patency. Space does not permit a complete discussion of these cases.

Perforation of the uterus occurred once in our series, and it was due to an accident.

Mild peripheral vascular collapse was noted in three cases. The dye entered the peritoneal cavity in all of these. The shock was mild and consisted of a drop in blood pressure, rapid pulse, and profuse perspiration with rapid recovery. Whether this reaction was due to pain or to a phenomenon similar to that seen when the pleura is entered by a needle is open to conjecture. This type of reaction is often seen in the performance of minor surgical procedures and even venipuncture. It may be due to individual hypersensitivity.

Dye entered the uterine vascular structure 48 times in our series of 2,500 cases only with water-soluble media (Fig. 12).

It is difficult in so large a series of cases to avoid the introduction of dye into a pregnant uterus, especially when there is no indication that this condition exists. All pregnancies observed in our series remained intact following hysterosalpingography.

The complications due to the contrast media are not serious, nor do they cause any permanent harm to the patient. When the water-soluble

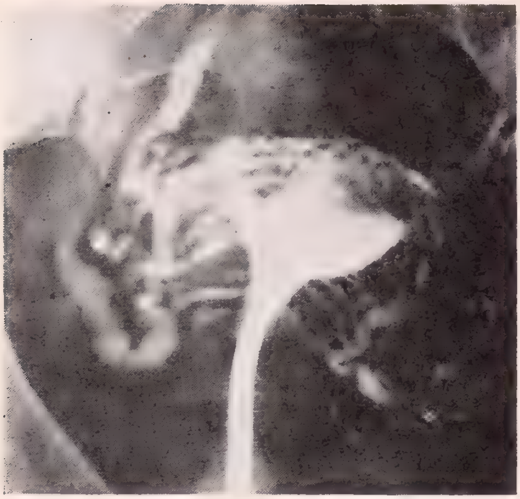

FIG. 12. Uterine cavity is normal in size, shape, and position. There is no evidence of any filling defects. The uterine and some of the pelvic vessels are well outlined. Water-soluble material was employed, and no pressure was used.

media enters the tubes and peritoneal cavity, pain occurs, but this can be adequately controlled with Demerol. The quickly absorbing contrast media do not cause any damage to the tissues, and embolization cannot occur. We never encountered permanent injury to the tubes or embolization from Lipiodol; however, these complications have been reported in the literature. The instances of allergic phenomena are few.

To summarize the relationship of the drugs to the safety of the procedure we can state that the quickly absorbing media, except for a moderate degree of pain, are harmless. Lipiodol on rare occasions may cause embolization and a granuloma within a previously diseased tube.

The complications of the procedure itself are relatively few and do not require further discussion.

The perfect contrast media for uterosalpingography is as yet not available. However, we found the water-soluble media very satisfactory despite the fact that it does not permit a twenty-four-hour film, and, therefore, patency is sometimes not established. They also have the slight disadvantage of producing pain. The more viscous materials are excellent for hysterography, but, when employed to visualize the tubes, they may in rare instances result in fat granulomas and emboli. Although the ideal medium for hysterography and hysterosalpingography has as yet not been found, complications from the substances available are so few that there should be no hesitation in the use of the procedure when indicated.

Summary

1. Twenty-five hundred cases studied by means of hysterography and hysterosalpingography are reviewed.

2. The technic, various contrast media, and the value of the procedure are described and discussed.

3. The relatively few and infrequent complications and the safety of the procedure are noted.

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Discussion

Mortimer N. Hyams, M.D., *New York City.*—In a review of my private cases x-rayed in my office and all salpingograms made by the entire gynecologic service of the Post-Graduate Hospital covering the past five years, slightly less than 1,000 were found to be recorded.

The correct interpretation of the x-ray picture is of the utmost importance, treatment depending on what is revealed in the developed films. Unless we use a meticulous technic, good visualization will be difficult, and the diagnosis of any pathologic conditions present will be missed.

Among the radiopaque media advocated and used, we believe that Lipiodol is the medium of choice. I have used it routinely for many years and found it entirely satisfactory. Spasm of the fallopian tubes has not been encountered. Peritoneal irritation, as indicated by severe pain and temperature, etc., has been conspicuous by its absence. In no patient to our knowledge has pulmonary embolism, allergic reaction, or uterine rupture occurred. Severe pain during or following uterosalpingography has been practically nil when using the fractional method of injection. The value of this method has been definitely proved, and its technic and application are recognized procedure. The radiopaque solution disseminates gradually throughout the cavities without producing a sudden dilatation which we believe is partly responsible for the pain reported. When pain is excessive and the pressure is increased, the procedure should be temporarily discontinued while the previous x-ray films are developed to determine the cause.

The lumen of the cannula should not be greater than a number 8 French to eliminate all possibility of excessive pressure during injection.

Several cases of venous infiltration have occurred. We believe this to be due to the injections being made either too soon before or after menstruation or because bleeding from some obscure lesion had not been allowed to abate. We have never found it necessary to use Demerol or any other sedative, and at no time was the patient hospitalized because of pain or any other complication following the procedure.

In the authors' discussion of endometritis, no reference was made to any reaction following the use of Lipiodol. This particular solution should be included with those marked "no reaction."

Skiodan Acacia has produced severe pelvic pain in many instances, and shock has occurred in some reported cases.

Uterosalpingograms made earlier than four to six weeks postpartum or after curettage will usually show the tubes to be closed at the uterine end, hence a salpingogram made during this period will be of no diagnostic value in establishing tubal patency. Sometimes a tube which appears to be normal may be partially occluded at the fimbriated end so that only a very small amount of the injected solution spills into the peritoneal cavity. In order to determine tubal patency a twenty-four-hour exposure is necessary if an accurate diagnosis is to be made. I consider the twenty-four-hour exposure as important as the injection of the radiopaque solution.

In every case of obscure bleeding in which the diagnosis cannot be made on physical examination, sufficient time must elapse after the bleeding has subsided before subjecting the patient to salpingography. It is of paramount importance to make repeated cytologic tests in all patients who are in the so-called cancer age or in whom malignancy is suspected. Vaginal smears should be made preliminary to uterosalpingography owing to the possibility of transferring cancer cells from the uterus into the peritoneal cavity during the injection.

Uterine polyps are not infrequent and may escape detection, especially if they are very small. The first and second films will demonstrate the filling defect, but subsequent injection of additional solution will show no defect present as the polyp will be obscured by the density of the surrounding radiopaque medium. The filling defect of submucous tumors, however, can be demonstrated during the entire fractional injection series. This is of importance in making a differential diagnosis between polyps and submucous tumors. In our observed cases submucous tumors have always been single.

It is unfortunate that the cervix, the most important of the female reproductive organs, has been neglected in uterosalpingography. Macroscopic examination of the cervical canal is very difficult. The accepted procedure in making salpingograms has been the introduction of a vaginal speculum exposing the cervix and the external os and then passing a rigid or flexible cannula through the cervical canal into the uterine cavity. The cannula used for injection is about $1^1/_4$ inches long so that its distal end extends beyond the internal os when the solution is injected.

When making the exposures, the vaginal speculum invariably obliterates the lower uterine segment and the cervical canal. As the cannula tip extends beyond the internal os during injection, the canal is only visualized in varying degrees depending upon the amount of pressure used and the backflow into the canal.

Latent pathology in the cervix may exist, and in an endeavor to visualize it I have again modified the technic in the following manner: In place of the usual metal vaginal speculum or one made of material impervious to x-rays I use a speculum made of lucite or bakelite, both of which are permeable to x-rays. This penetration enables us to visualize the endocervical structures, and any existing pathology can be seen in the developed film. In our modified technic the cannula tip has been shortened so that only about $^1/_4$ inch extends beyond the acorn which is held in close apposition with the external os by suitable tenacula during the injection.

When the solution is injected, it fills the cervical canal, the uterine cavity, and the fallopian tubes. This modification of uterosalpingography I have termed cervicouterosalpingography and is the technic used in making all our salpingograms.

We agree that uterosalpingograms should not be made when pregnancy is suspected. In patients on whom we have inadvertently carried out this procedure the diagnosis was easily made by noting the filling defect on the lateral border of the uterine cavity. It has been our experience that abortion does not usually follow this procedure.

In adenomyosis we have not visualized the small spicule-sized structures described by the author. We have found a mottled appearance of the uterus, varying in density, in all films of our series. These variations may be due to the type of endometriotic implants present, whether of the external or internal variety, or to extensive fibrotic changes present in the more severe types of this condition.

Cervicouterosalpingography has revealed many anomalies of the reproductive organs not otherwise demonstrable except by extensive operative procedures. Uterus bicornuate of varying degree is of rather common occurrence, and in the milder forms has little or no effect upon pregnancy and delivery. An important anomaly, the abnormally elongated fallopian tube, is not infrequent and plays an important role in the etiology of sterility.

In the early diagnosis of carcinoma, cervicouterosalpingography is a valuable diagnostic aid. In several of our patients in whom the vaginal smears were negative the x-rays demonstrated suspicious areas. Subsequent diagnostic curettage and microscopic examination of the tissue proved existing malignancy. The diagnosis can usually be made by noting the sharp demarcation of the irregular borders of the lesion. The x-rays reveal the location of the suspicious lesion, facilitating the obtaining of tissue for microscopic examination. Blind curetting will miss many cases of existing malignancy.

Hydrosalpinx is a term used to describe a dilatation of the distal portion of the tube with closure at the fimbriated end and must not be confused with dilatation without closure. Both show the same pathology, differing only in the patency of the tube in the one case and occlusion of the fimbriated end in the other. Here again the twenty-four-hour exposure is of the utmost importance.

In tubal obstruction cervicouterosalpingography is especially valuable in establishing the exact location of the lesion, thereby facilitating therapy adapted to the condition. In our experience, when a tube obstructed at the uterine end presents a rounded contour, no treatment except radical surgery is of any value. If the cornu is pointed or the tube and the fimbriated end normal but occluded, medical office procedures can often re-establish patency.

While some degree of morbidity may follow the use of any procedure in diagnosis or treatment, it can be reduced to a minimum by using proper instruments and apparatus, with a thorough understanding of the method used and the technical ability to carry it out. Obviously, the relatively few cases of reported complications occurring during or after cervicouterosalpingography cannot be regarded as important considering the value of the procedure in facilitating and making possible an accurate diagnosis.

SEVEN TYPES OF INFANTILE DRIVERS BELIEVED TO CAUSE TRAFFIC ACCIDENTS

Seven types of drivers who have never matured emotionally cause many traffic accidents, according to an article in the July issue of *Today's Health*, published by the American Medical Association. These infantile driver types and their behavior patterns are described by Marion Gleason, research assistant for the department of pharmacology and toxicology at the University of Rochester:

1. The person who hasn't outgrown the childhood conviction that his wants come first. His parents always sacrificed their own convenience and pleasure to accommodate him. Now he is the middle-of-the-road driver, the double-parker, the horn-blower at intersections.

2. The person who was taught as a child to obey without thinking. He becomes the driver who obeys signals from other drivers automatically and may drive into intersections or pass other automobiles without thought of other traffic.

3. The pampered type frequently is a well-groomed and charming woman. As a child she could get what she wanted by fluttering her lashes and shaking her curls and she uses the same technic with policemen to get away with parking by fire hydrants and driving through stop lights.

4. This type was bullied by older brothers and sisters and is the really dangerous driver. He works out his old resentments by speeding and sideswiping other autos.

5. Drivers who were overprotected or severely dominated as children account for a large number of serious traffic accidents. Usually in their late teens or early twenties, they find undertaking responsible adult life difficult. They are show-offs, daredevils, lawbreakers.

6. The type who was allowed to get by with wrongdoing. The childhood feeling of guilt may lead them from bad to worse conduct in an unconscious search for guidance they never received. They accept tickets and pay fines cheerfully. The traffic ticket takes the place of a spanking which the child wanted but never had.

7. The type who was poor and had to make secondhand textbooks and used bicycles do. He has to prove to himself that his standard-make model will get there just as fast as the most expensive custom-made automobile. Although he speeds, he is alert and rarely has an accident. The accidents he causes are those of trembling witnesses after he is half a mile up the road.

RISING INCIDENCE OF CESAREAN SECTION AND EFFECT ON MATERNAL AND INFANT MORTALITY

William Levine, M.D., F.A.C.S., and Sidney Zeichner, M.D., Brooklyn, New York

(From the Department of Obstetrics and Gynecology, Beth-El Hospital)

In 1939, we reported our results in 13,600 deliveries of which 123 were cesarean operations, an incidence of 0.9 per cent.[1] About half were classic operations, and half were of the low cervical type. Twelve patients died—a mortality of 9.7 per cent. Eight of these had undergone the classic operation, three had a laparotrachelotomy, and one the Porro operation. Our present series comprises an additional ten-year study limited to cesarean sections.

We observed during this study that there has been a rising incidence of cesarean sections in our own series and have noted similar increases in recent publications. Attempts are constantly being made to keep the frequency of this operation low because, despite improved results, vaginal delivery yields a far lower maternal mortality.

Tamis and Clahr showed that the increased incidence in cesarean section yielded improved results but cautioned against indiscriminate use of the operation early in cephalopelvic disproportion without an adequate period of observation in labor.[2] Schuman, on the other hand, has been advocating operative interference where dystocia is merely suspected and has urged its use in many other obstetric complications.[3]

Beck regards the safe time for cesarean section to be before the onset of labor, before the membranes have ruptured, and before vaginal examinations have been made.[4] He states that some have done 50 or even 100 cases without a death when performed during this stage. Furthermore, he believes that with low cervical section under local anesthesia the mortality during the "safe" period should be less than 1 per cent. When done within sixteen hours after onset of labor and four hours of ruptured membranes, it should not exceed 2 per cent if no vaginal examinations are done.

The major causes for the increased incidence of cesarean section are earlier operation in suspected disproportion, repeat operations, termination of pregnancy for severe toxemia, and its more frequent use in antepartum hemorrhage, particularly placenta previa.

Factors favoring better results are as follows: (1) improved technics, (2) newer approaches to the lower uterine segment by circumventing the peritoneal cavity, (3) more accurate clinical evaluation of the pelvis supplemented by pelvicephalometry, (4) more readily available compatible blood, (5) improved methods of anesthesia, (6) the liberal use of antibiotics, and (7) the avoidance of frequent vaginal examinations.

With these factors in mind, we surveyed our cesarean operations for the past twenty years. No distinction was made between ward and private patients. All of the ward patients were managed by the resident and intern staff but strictly supervised by the obstetric department. The private patients were similarly supervised when complications of pregnancy and labor became apparent. In this manner, all patients had come under the strict control and direction of the obstetric staff except in cases of spontaneous delivery or delivery by outlet forceps.

The total number of deliveries during the past twenty years was 38,775 of which 820 were cesareans (1.8 per cent). During the first ten years (1928 to 1937) there were 13,600 deliveries and 123 cesareans (0.9 per cent). In the second ten-year period (1938 to 1947), there were 25,175 deliveries of which 697 were cesareans (2.7 per cent).

The results of the first ten-year period have been previously analyzed. The present study deals with the 697 cesarean operations that were performed within the ten-year period of 1938 to 1947.

In Table I the indications for the cesarean sections performed for the above period are listed.

TABLE I.—Indications for Cesarean Section

Indication	Number	Per Cent
Cephalopelvic disproportion	260	37
Previous cesarean section	141	20
Placenta previa	106	15.2
Toxemia of pregnancy	36	5
Uterine inertia and cervical dystocia	25	3.5
Rheumatic heart disease	21	3
Malposition and malpresentation (transverse lie, posterior mentum, and brow)	17	2.5
Tumors obstructing labor	16	2
Postmaturity and estimated large child	14	2
Previous stillbirths	10	1.5
Ablatio placenta	10	1.5
Previous myomectomy	9	1.3
Breech in primipara	8	1
Previous vaginal plastic	7	1
Elderly primipara	6	1
Congenital malformation of vagina or fetus	4	0.5
Previous uterine rupture	3	0.4
Rh sensitization	2	0.25
Fetal distress	1	0.13

Cephalopelvic disproportion accounted for over one third of the cases of cesarean section and together with the repeat operations accounted for over 50 per cent of the total. In addition, over 15 per cent were performed because of placenta previa and 5 per cent for severe toxemia of pregnancy failing to respond to treatment wherein rapid emptying of the uterus was regarded as imperative. In 3.5 per cent of the cases, the operation was done for uterine inertia and accompanying cervical dystocia, and the operation was performed 21 times (3.0 per cent of cases) for rheumatic heart disease. A smaller percentage of patients were operated upon for malposition and for malpresentation (transverse lie, posterior mentum, or brow), tumors obstructing labor (2 per cent), postmaturity and estimated large child (2 per cent), previous difficult deliveries resulting in stillbirth and presently having a highly valuable child (1.5 per cent), and ablatio placenta (1.5 per cent). The remaining 5 per cent was made up of miscellaneous indications as listed in Table I.

Cephalopelvic disproportion was the indication in 260 patients. Most of them had x-ray pelvimetry studies prior to operation. In only rare instances of gross disproportion or pelvic deformity was cesarean section performed without a trial labor. The x-ray studies have been used to evaluate pelvic architecture and to assess the values of the diameters of the planes at the pelvic inlet, mid pelvis, and outlet. When these diameters indicate only slight variations from the normal, a trial labor is permitted. However, when engagement fails despite good labor, cesarean section is performed.

When labor pains are desultory, infrequent, and inefficient and associated with rupture of the membranes, a longer trial of labor is permitted. If engagement fails and the results of vaginal delivery appear dubious and risky, the extraperitoneal route is used to terminate labor.

There were 35 multiparas who had pregnancy terminated by cesarean section. This group consisted of patients who had difficult vaginal deliveries previously resulting in stillbirths. X-ray pelvimetry was employed, and where there was even slight deviation from the normal pelvic architecture or in the diameters of the pelvic planes, elective cesarean section was performed because of the high valuation placed upon the baby. Included in this group were also those patients who had previously delivered small babies and at present with an estimated larger one showed marked delay in engagement and descent. There were also a few patients who experienced difficult labor as primiparas and because of their present parity vaginal delivery was taken for granted. Careful observation during the course of good labor and the lack of progress convinced the accoucheur that abdominal delivery this time would be safer for the mother and infant. Careful observation of the multipara with a history of difficult labors and difficult delivery is essential, and abdominal delivery in many instances is justified.

The repeat operation was performed on 141 patients. Regardless of the indications for previous cesarean section, we are not inclined to place much reliance upon the uterine scar. We concede that many times in doing the repeat operation, the previous scar was difficult to locate and when located appeared sound. Upon several occasions, however, we encountered a severely thinned out lower uterine segment with an imminent rupture or an actual rupture even before labor. These few instances were sufficient to convince us that the old adage about cesarean sections should be followed. The repeat operation is usually planned for about seven to ten days before the expected date of delivery. O'Connor states that one must bear in mind that more postoperative complications are encountered after the repeat operation despite the absence of intrapelvic examinations, labor, or exposure to infection from ruptured membranes.[5] Abdominal distention, vomiting, fever, wound disruption, and general delay in wound healing have also occurred more frequently in the repeat operation in this series.

Placenta previa was the indication for cesarean operation in 106 cases. In at least the last three years of this study, painless bleeding before viability, regardless of parity, is treated expectantly with continuous hospitalization and blood replacement when indicated. After the thirty-fifth week, when viability is assured, pregnancy is terminated by cesarean section. This attitude has greatly increased our incidence of cesarean section, but the results to the mother and fetus have fully justified it. On the other hand, in those patients already in labor when admitted with the cervix dilated to 5 or 6 cm., simple rupture of the membranes in incomplete placenta previa and crowding of the head with an abdominal binder may suffice to control bleeding, and pelvic delivery is permitted. Where no cervical dilatation is present, regardless of the type of previa, in the presence of viability compatible blood is made ready, and immediate cesarean section is performed. Management of placenta previa by tamponade with bags, by Braxton-Hicks version, or by instrumental traction on the scalp has been abandoned because of the high fetal mortality and not too infrequent maternal mortality.

Uterine inertia, prolonging labor, delaying cervical dilatation, and producing physical and emotional exhaustion, has been treated 25 times by cesarean section in this series. These patients commence labor with early rupture of the membranes and inefficient pains. These factors do not permit early descent of the presenting part and at the same time delay cervical dilatation. Labor is permitted for many hours in the hope of advance in dilatation, eventual engagement, and finally of pelvic delivery. Sedation, even when judiciously administered, did not restore the patient and failed to produce more active labor. Even fractional doses of pituitrin cautiously used in the presence of cephalopelvic adequacy as determined by x-ray pelvimetry failed to produce progress. Such labors were terminated, after long hours of observation, by extraperitoneal cesarean section.

Cesarean section was used 17 times for terminating labor in severe malposition and malpresentation, such as transverse lie, mentum posterior, and brow presentations. In multiparas with membranes ruptured for a long time and when labor fails to correct a transverse lie, cesarean section was chosen rather than eventual internal podalic version. In primiparas with early rupture of the membranes and no further evidence of labor, cesarean section was the treatment of choice. In posterior chin and in brow presentations, where manual correction after long labor is difficult, abdominal delivery was elected.

Tumors obstructing labor required cesarean operation in 16 cases. Such tumors frequently but not always cause dystocia. In some, especially uterine tumors, they may be drawn upwards over the pelvic brim as the cervix dilates, permitting normal labor. Ovarian tumors and cervical myomata rarely become displaced during labor. Elective cesarean operation is done close to term.

Postmaturity and estimated large fetus was the indication for cesarean operation in 14 patients. Postmaturity is difficult to evaluate antepartum, and, when it is accompanied by an estimated large fetus, prolonged labor and relative disproportion result. Such hard long labors are poorly tolerated by the postmature fetus.

Previous myomectomy was the occasion for operation in nine cases. The site and the extent of the myomectomies were considered. Where the myometrium or the endometrium had been invaded, the uterine wall was considered a weak spot as in the scar following previous cesarean operation.

Breech in primipara was the reason for the cesarean operation in eight patients. In all instances, the pelvic architecture was studied and the pelvic measurements evaluated by x-ray. Where it was deemed risky for the aftercoming head to be delivered because of contractions in any of the pelvic planes, operation was performed.

Some of the miscellaneous indications for cesarean section were as follows: previous vaginal plastic (seven cases), elderly primipara (six cases), congenital malformation of vagina or fetus (four cases), previous uterine rupture (three cases), Rh sensitization (two cases), and fetal distress (one case).

Type of Operation

Table II shows that the low cervical cesarean section with the transverse incision into the lower uterine segment was used most frequently (89 per cent). We have found that the low cervical approach conserves blood loss and provides better peritonealization of the scar and less contamination of the upper peritoneal cavity. Therefore, distention is at a minimum, vomiting is rare, postoperative morbidity is less, and recovery smoother. The classic operation was used very infrequently—in fact, only 35 times in this study. It was used when, for technical reasons, the lower segment could not be approached and in some instances of placenta previa where the surgeon feared to incise over the placenta causing additional blood loss.

The extraperitoneal route to the lower uterine segment was used 46 times. In recent years, we have been using the paravesical approach described by Norton.[6] This operation was used when membranes were ruptured for many hours, where frequent intrapelvic examinations were made, and when labor had been prolonged in the hope that delivery would be effected vaginally. We have preferred the extraperitoneal approach to hysterectomy. Our experience with the paravesical approach yields fewer bladder and peritoneal injuries because it avoids sharp dissections of vesical and peritoneal attachments.[7]

Hysterectomy was done five times for multiple fibroids and Couvellaire uterus in severe uteroplacental apoplexy. It was never employed for potentially infected or actually infected cases during prolonged labor.

TABLE II.—Types of Cesarean Section Used

Types of Cesarean Section	Number of Cases
Low cervical	611
Classic	35
Extraperitoneal	46
Hysterectomy	5
Total	697

Anesthesia

We feel that the type of anesthesia used influences the course of the operation and the postoperative recovery. The proper selection of the anesthetic also exerts a beneficial effect upon the fetus. Table III indicates the type of anesthesia used in the series and reveals that fractional spinal anesthesia was used in 528 cases. Most of the operations where spinal anesthesia was used were performed with an initial injection of 50 mg. of procaine, some requiring an additional 25 mg. toward the completion of the operation. The method used has been described previously and contrasted with the results in inhalation anesthesia.[8] Rarely was more than 100 mg. of the anesthetic drug used to complete the operation.

Single-dose spinal anesthesia was abandoned almost entirely except where technical difficulties prevented the use of the fractional technic.

Inhalation anesthesia was only rarely used. Gas, oxygen, and ether were used only 82 times. When antepartum bleeding was profuse and the blood pressure depressed, inhalation anesthesia was employed. The choice of the anesthetic at such times remained with the anesthetist.

Local infiltration is infrequently used. In cardiac patients or where severe toxemia is present and when even a small dose of spinal anesthesia might adversely influence the blood pressure, it is employed. It has not proved satisfactory even there. It always has to be supplemented by general anesthesia. Its safety is not questioned. There were no anesthetic deaths in this series.

TABLE III.—TYPES OF ANESTHESIA USED

Types of Anesthesia	Number of Cases
Fractional spinal	528
Gas, oxygen, and ether	82
Caudal	24
Single dose spinal	15
Ether	15
Local infiltration	25
Cyclopropane	4
Undetermined	4
Total	697

The infant mortality in cesarean section, as reported by various observers and collected by Acken, ranged from 4.4 to 16 per cent.[9] Andrews, Nicholls, and Andrews reported 16 fetal deaths in 275 cesarean section (5.8 per cent).[10] Twelve were neonatal deaths, and four (1.5 per cent) were stillborn.

TABLE IV.—STILLBIRTHS IN CESAREAN SECTIONS

Indications	Gestation (24 to 30 Weeks)	Gestation (31 to 40 Weeks)	Total
Placenta previa	4	0	4
Placenta ablatio	4	1	5
Repeat operation	0	2	2
Uterine inertia	0	1	1
Disproportion and postmaturity	0	1	1
Failed forceps	0	1	1
Malposition	0	1	1

There was a total of 40 (5.8 per cent) fetal deaths in this series. Fifteen (2.15) per cent were stillbirths, and 25 (3.6 per cent) occurred during the early neonatal period. Table IV shows the indications for operation and at what period of gestation the operation was done. Previability and severe antepartum bleeding were the causes of fetal death in eight instances. One fetal death listed at term was due to total detachment of the placenta found at laparotomy.

However, there were two unexpected stillbirths when the repeat operation was performed close to term. The fetal heart tones were definitely heard on admission in each. In one case, the infant was apneic at birth, and respirations could not be initiated despite desperate efforts. In the second case, there was some difficulty in delivery of the head through the uterine incision, and it was eventually accomplished by applying forceps and exerting pressure upon the fundus. This infant never cried lustily, breathing was shallow, and it expired fifty minutes later.

Long labor in uterine inertia with a prolonged time interval after the rupture of membranes (sixty hours), meconium-stained amniotic fluid, and fleeting fetal heart tones prior to operation foreshadowed a bad outcome despite a hurried attempt at abdominal delivery.

Two patients had stillbirths where disproportion was the prime indication for the operation: One had good labor, but an attempt at delivery by forceps failed. The pelvis at this point was evaluated as hopelessly contracted, and abdominal delivery by extraperitoneal cesarean section was undertaken despite the absence of fetal heart sounds in order to avoid marked injury to the pelvic soft parts. Another patient had borderline measurements by x-ray pelvimetry, and because of the delay in spontaneous onset of labor (forty-four weeks) an elective cesarean section was done. The baby was apneic, and efforts at resuscitation failed.

Another stillbirth occurred in a tertiapara where the membranes were ruptured for eighteen hours with a mentum posterior position and a prolapsed arm. It was hoped that abdominal delivery would yield better fetal salvage than eventual internal podalic version because of fleeting fetal heart sounds. The fetal heart tones just prior to operation were fair, but after delivery by extraperitoneal cesarean section initiation of respiration failed despite heroic efforts.

TABLE V.—NEONATAL DEATHS FOLLOWING CESAREAN SECTIONS

Indications for Operation	Gestation (24 to 30 Weeks)	Gestation (31 to 40 Weeks)	Total
Placenta previa	12	4	16
Placenta ablatio	1	0	1
Previous section	1	2	3
Heart disease	1	1	2
Disproportion	0	2	2
Postmaturity	0	1	1

Table V shows the neonatal deaths including the indication for operation and at what period of gestation the operation was done. The greatest number of neonatal deaths, 17, was from prematurity accompanied by severe antepartum bleeding. Four neonatal deaths occurred in viable infants. Two deaths were in infants with erythroblastosis; one infant had several congenital anomalies, and one infant delivered at thirty-three weeks gestation died of prematurity nevertheless.

In the repeat operation group there was one infant delivered prematurely because of ruptured membranes at twenty-nine weeks; one infant delivered by repeat section at term died of erythroblastosis, and another died thirty-two hours after delivery of diffuse alveolar and interstitial hemorrhages of lungs and subcapsular hemorrhage of liver as revealed by autopsy.

Two infants from patients operated because of heart disease succumbed. One patient was only twenty-six weeks pregnant, and the operation was done to prevent further cardiac embarrassment. The second patient was delivered at thirty-eight weeks gestation by cesarean operation, but the infant died twenty-four hours later of atelectasis and aspiration of amniotic contents as revealed by autopsy.

Prolonged labor, with the hope that eventual engagement and vaginal delivery would result, caused two other neonatal deaths. Disproportion was realized late in labor, and after abdominal delivery these infants survived only a short time. One other patient, operated after forty-two weeks gestation and relative cephalopelvic disproportion, was delivered of an infant which survived one hour. Autopsy revealed "extensive aspiration of amniotic contents with focal acute pneumonitis."

Analysis of Maternal Deaths with Case Reports

Table VI lists the causes of maternal deaths, the indications for the operation, the type of cesarean section, and the age and parity of the patients. Four patients died of peritonitis, one of cardiac decompensation, one of massive pulmonary embolism, and one of renal failure following a transfusion with Rh incompatible blood. The year of the operation has also been listed to denote whether these patients had the benefit of chemotherapy and antibiotic therapy.

Case 1.—P. G., age twenty-five, a primipara, was in the hospital under observation because of rheumatic heart disease with the history of an attack of cardiac decompensation early in pregnancy and another one shortly before the operation. Membranes ruptured two weeks before term. When labor did not set in after four hours subsequent to the rupture of the membranes, low cervical cesarean section was performed. The immediate postoperative condition was satisfactory. The patient died from cardiac decompensation twenty-four hours later.

Our policy in recent years regarding rheumatic heart disease has been changed. Continued bed rest and full digitalization are recommended for patients with rheumatic heart disease who have had a history of decompensation prior to the pregnancy or who had suffered such an attack during the course of pregnancy. Delivery is permitted vaginally where no obstetric indications for cesarean section are present. When 5 to 6 cm. of cervical dilation are reached, continuous caudal analgesia is administered, and delivery under the same anesthetic is carried out. We have discontinued routine cesarean section in patients with rheumatic heart disease.

There were two deaths in patients operated on for placenta previa. However, the original indication for operation—placenta previa—had little to do with the cause of death. One patient died from ileus and the other from renal shutdown following a transufusion with Rh incompatible blood. Nevertheless, their conditions necessitated the operative procedures, and in one instance the fatal transfusion was to replenish blood loss.

Case 2.—M. A., multipara, age thirty-seven, was admitted close to term because of painless vaginal bleeding but discharged a few days later because placenta previa was not discovered upon vaginal examination and bleeding had stopped. She was readmitted six days later for profuse painless vaginal bleeding, and after a vaginal examination an immediate low cervical cesarean section was performed under general anesthesia. During the operation she bled profusely and was given

TABLE VI.—MATERNAL DEATHS IN CESAREAN SECTION

Indication	Year of Operation	Age	Type of Operation	Parity	Cause of Death
Rheumatic heart disease	1939	25	Low cervical	p	Cardiac decompensation
Placenta previa	1941	37	Low cervical	m	Ileus
Tumors obstructing labor	1941	29	Low cervical	p	Ileus
Previous section	1943	25	Cesarean, hysterectomy	m	Peritonitis
Placenta previa	1943	30	Low cervical	m	Rh incompatability and renal failure
Disproportion	1945	30	Extraperitoneal	m	Massive pulmonary embolism
Disproportion	1947	26	Low cervical	p	Peritonitis

1,500 cc. of blood. The next day, she developed pyrexia and became distended. The temperature remained high, the distention increased, and no passage of flatus or feces occurred during the next week despite all measures to initiate bowel function. She died seven days postoperatively of paralytic ileus.

Case 3.—B. C., age thirty, a multipara, was admitted because of placenta previa. Low cervical cesarean section was done. Blood transfusion of 500 cc. was given at the time of operation. A few hours later, the infant became icteric. Rh determination of the parents revealed that the patient was Rh negative, and her husband was Rh positive. Urinary excretion gradually diminished and failed to improve despite therapy. She became stuporous, developed uremic breath and marked azotemia, and died of renal failure on the eleventh day. Antepartum Rh determinations are done early in pregnancy now, and such instances are avoided.

One patient died following a repeat operation. The patient was admitted to the hospital for an elective cesarean section. At the time of operation, it was found that she had uterine fibroids and a chocolate cyst of the right ovary. Supracervical hysterectomy was done, and patient died on the fourth day postoperatively.

Case 4.—H. A., age twenty-five, a multipara, had had a previous cesarean section in 1940. She was admitted for repeat cesarean section, and at operation a degenerated fibroid and a chocolate cyst of the right ovary were found. After delivery of the baby through a lower uterine segment incision, a supracervical hysterectomy and right ovariectomy were performed. The next day she began to vomit, became distended, and developed a high temperature. These symptoms became worse, despite the use of chemotherapy, intravenous fluid, gastric suction, and prostigmine. The vomiting continued, and she died on the fourth postoperative day from peritonitis.

Two patients died following operation for disproportion. One patient died six hours after an extraperitoneal cesarean section, death being caused by a massive pulmonary embolism. The second patient died from peritonitis following a low cervical cesarean section after having been in labor for twelve hours and after the membranes had been ruptured for a period of twenty-four hours.

Case 5.—L. M., age thirty, a primipara, was seen at term with breech presenting. She had had irregular, inadequate pains for thirty-six hours and ruptured membranes for forty-eight hours. Extraperitoneal cesarean section was performed and a living baby obtained. Six hours later, she developed severe pain in the chest, became cyanotic and pulseless, and expired. Death was ascribed to massive pulmonary embolism.

Case 6.—P. G., age twenty-six, was a primipara whose membranes had ruptured two hours previously. X-ray pelvimetry showed midpelvic contraction. After twelve hours of good labor, the head remained unengaged. Low cervical cesarean section was performed. Thirty-six hours later, she developed a rise in temperature and became distended. Antibiotic therapy was instituted immediately postoperatively and continued in adequate dosage. Despite this therapy, she continued to vomit; distention increased, and she became progressively worse and died of peritonitis on the sixth postoperative day.

One patient was operated upon because of a fibroid tumor in the lower uterine segment. After a trial of labor for ten hours, the presenting part remained unengaged due to the obstructing fibroid and a low cervical cesarean section was performed.

Case 7.—A. G., age twenty-nine, was a primipara. Fibroids were found in lower uterine segment. She was given a short trial of labor. There was no engagement after ten hours of labor, and, hence, a low cervical cesarean section was performed. Postoperatively, there was a marked upper abdominal distention, and a rising temperature soon developed, accompanied by chills. She became toxic and irrational. Wound inspection revealed no evisceration, but the distention became progressively worse despite gastric suction drainage and prostigmine. She died of ileus on the sixth postoperative day.

Comment

These seven maternal deaths in the second ten-year period form a mortality of 1 per cent contrasted with the 9.7 per cent mortality in the first ten-year group.

A review of the maternal deaths indicate that recent changes in the approach of treatment of pregnancy complicated by rheumatic heart disease and availability of Rh compatible blood in adequate amounts in antepartum hemorrhage might further lessen maternal mortality in cesarean section from these causes. Prophylactic and therapeutic use of chemo- and antibiotic-therapy in the four cases of ileus and peritonitis undoubtedly would have favorably influenced the outcome. Two of these patients did not have the benefit of this newer therapy, while the other two did not receive them either prophylactically or in adequate therapeutic amounts. One patient (Case 6) might have been treated by extraperitoneal cesarean section.

Massive pulmonary embolism occurring without previous evidence of venous thrombosis remains an enigma to the obstetric surgeon and cannot at present be anticipated.

Summary

1. A twenty-year survey of cesarean sections is presented. This consisted of 123 cases in the first ten-year period and 697 in the second ten years. This last group was studied in detail.

2. The main indications are tabulated and discussed. The rising incidence is primarily due to earlier operation in cephalopelvic disproportion, the repeat operation, and treatment of antepartum hemorrhage (placenta previa) by this operation.

3. The low cervical operation and the paravesical extraperitoneal cesarean operation have favorably influenced postoperative results. Fractional spinal anesthesia has proved to be the anesthesia of choice in our hands. There were no anesthetic deaths.

4. The total fetal loss was 40 infants (5.8 per cent). Fifteen (2.15 per cent) were stillbirths, and 25 (3.6 per cent) were neonatal deaths. Twenty-three infants died because of prematurity, antepartum bleeding being the indication for operation. The other fetal and neonatal deaths are discussed in detail.

5. The maternal deaths in the last ten-year period are analyzed and commented upon. There were seven maternal deaths in the last ten-year period, a maternal mortality rate of 1 per cent. Four of these were due to infection, one from cardiac failure, one from uremia, and one from massive pulmonary embolism.

6. While the incidence of cesarean operations rose from 0.9 per cent in the first ten-year period to 2.7 per cent in the second ten-year period, the maternal mortality rate was reduced from 9.7 per cent to 1 per cent.

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W. P. Anderton, M.D., *Secretary*

SEPSIS FOLLOWING INCOMPLETE ABORTION

Peter Marshall Murray, M.D., F.A.C.S., and L. B. Winkelstein, M.D., New York City

(From the Abortion Service, Department of Gynecology, Harlem Hospital)

DURING the year 1948, a study of 755 abortions was made at the Harlem Hospital, of which 727 were simple infected abortions, while the remaining 28 were classified as septic.

It has been amply demonstrated that, shortly after labor or abortion begins, the uterine cavity becomes infected, which infection is usually limited to the body of the uterus.[1] The postabortal uterus, however, is a very fertile ground for the growth and dissemination of all pathogenic organisms.[2] Its lining, especially at the placental site, is a raw, contaminated surface, which, together with blood clots and placental fragments, forms an ideal culture media. With induced abortion, the dilated, stretched, and torn cervix may also be a portal of entry for many virulent infectious organisms.

If the infection spreads beyond the cavity of the uterus, other structures and tissues become involved. Since these various pictures of gynecologic pathology are so bizarre and multitudinous, it has been necessary to set up a classification of these pictures according to the structures involved and the pathology present.

Over a period of years, such a classification of these complications of abortion was devised by Falk on the basis of studies made at this Hospital.[3] This classification has been followed in the present series and may be briefly summarized as follows:

> *Type I abortion.*—Simple infected abortion where the infection is limited to the uterine cavity and has not spread beyond the limits of the uterus itself.
>
> *Type II abortion.*—Where the infection has left the uterus via the lymphatic channels but remains extraperitoneally in the pelvis. This sequel of abortion includes pelvic cellulitis, parametritis, abscesses of the broad ligament and of the pelvis itself and can further extend upward and outward to the adjacent tissues of the body, even to and beyond the paranephritic spaces. The peritoneal cavity is not involved, but the pelvic peritoneum may be thickened and irritated.
>
> *Type III abortion.*—Where the infection has spread, either by direct extension of the infected uterine sinuses or by a secondary infection from a pelvic cellulitis, to the pelvic veins resulting in a thrombophlebitis or a phlebothrombosis of these veins.
>
> *Type IV abortion.*—Where abscesses develop in the myometrium.
>
> *Type V abortion.*—Where generalized sepsis occurs, the infection being of such virulence that it passes through the walls of the uterus, enters the blood stream, and becomes attached to the valves of the heart. From here it may spread throughout the body, resulting in conditions resembling pneumonia, pneumonic abscesses, or generalized sepsis. The uterine cavity may show little or no remnants of the abortion or of the primary infection. Peritonitis is never present as a primary extension of the infection.
>
> *Type VI abortion.*—Where generalized peritonitis is present and has occurred as the result of direct extension through the tubes or as the result of the rupture of a pelvic or other postabortal abscess into the peritoneal cavity. At autopsy or laparotomy, severe infection of the pelvic viscera is noted, together with gangrene of the uterus, tubes, and ovaries. The abdominal cavity contains free, fluid pus.
>
> *Type VII abortion.*—When perforation of the uterus has occurred.

All cases studied in this series were classified on the above basis. The distribution of the various abortions seen is shown in Table I.

TABLE I.—Distribution of 755 Cases of Incomplete Abortions (Falk Classification)

	Number of Cases
Simple infected abortions (Type I)	727
Abortion with parametric involvement (Type II)	16
Abortion with peritonitis (Type VI)	7
Abortion with peritonitis and perforation (Types VI and VII)	5

In a previous paper we outlined the findings and therapy of the simple infected (Type I) abortions.[4] We recommended that every such abortion be curetted as early as possible, since such early curettage removes necrotic secundines which may act as a nidus for the dissemination of infection. Such surgical intervention is, in general, without danger, since we have demonstrated that, in a series of 727 cases so treated, no complications resulted. It is the purpose of this present paper to discuss the remaining 28 septic cases of the series.

Parametric Involvement (Type II Abortion)

Of the 28 septic cases following abortion that were admitted, 16, or 2.2 per cent, of the total were classified as having parametrial involvement (Type II). All were the result of criminal interference with early pregnancy, either by the introduction of a foreign body, paste, or by partial curettage[4]. The method in the remaining three is unknown.

The local pelvic spread of postabortal infection may occur through lymphatic channels, by direct extension through the wall of the uterus or by direct extension into the fallopian tube. Thus various types of pathology may be found: postabortal pyosalpinx, parametritis, pelvic abscesses, or tubo-ovarian abscess formation. The 16 cases of postabortal parametric infection studied were further classified as shown in Table II.

TABLE II.—INCOMPLETE ABORTION WITH PARAMETRIAL INVOLVEMENT IN 16 CASES (TYPE II)

	Number of Cases
Parametritis following abortion....................	9
Pyosalpinx following abortion......................	2
Pelvic abscesses following abortion................	2
Tubo-ovarian abscess following abortion...........	3

The diagnosis of Type II infection was made on the basis of a history of abortion and on general physical and pelvic findings. Various degrees of fever shock, anemia, dehydration, and toxemia are invariably present, together with tenderness and distention of the abdominal wall. Not infrequently, rebound tenderness could be elicited in the lower quadrants, but signs of generalized peritonitis were absent.

Exact diagnosis was made on the basis of the vaginal examination. Vaginal bleeding was not a constant finding but was usually present. On bimanual examination all of the characteristics of incomplete abortion were noted. The condition of the adnexa varied with the duration, severity, and course of the infection. In early or mild cases tenderness and induration of the parametria were significant of the spread outward, which, on reaching its maximum, simulated a "frozen" pelvis or a "shelf" extending across the pelvis (nine cases). Still later, when the infected areas had become walled off and broken down into pelvic abscesses, large, fluctuant, bulging masses could be felt in the lateral fornices and in the posterior cul-de-sac (two cases). When the infection spreads by continuity into the fallopian tubes, pyosalpinx develops which may be diagnosed on the basis of the presence of tender, hot, sausage-shaped masses in the adnexal regions (two cases). The maximal local spread of infection occurs with the formation of tubo-ovarian abscesses. These form as the result of the infective process involving the fimbriated end of the tube, together with involvement of the ovary through the site of a ruptured follicle. Such abscesses are diagnosed by the signs of local lower abdominal tenderness and peritonismus and, on bimanual examination, by the feel of large, fluctuant, firm, abdominopelvic masses attached to and arising from the pelvis. They are usually higher riding than other forms of pelvic abscesses and are well fixed in their position (three cases).

Temperature with all types of postabortal parametrial involvement was invariably elevated, varying from 101 to 105 F. on admission. Laboratory findings also reflected the results of toxemia, bleeding, infection, and shock. Red blood counts and hemoglobin levels were low and white blood counts high with a preponderance of polymorphonuclear forms, and sedimentation rates were invariably rapid.

In summarizing the diagnostic points for postabortal parametric involvement, main reliance must be placed upon the history and actual physical and pelvic findings. Differential diagnosis must be made between postabortal parametritis and similar conditions of the pelvis resulting from conditions other than abortion. Among other conditions, ruptured ectopic gestation, peritonitis with a silent peritoneum, acute severe appendicitis, and perforation of the uterus must be considered in the differential diagnosis.

THERAPY OF TYPE II ABORTION.—Methods of treatment were dependent upon the initial pelvic findings. Where hemorrhage was not a major factor, conservative methods of treatment were instituted, which consisted of maximal supportive and nursing care, watchful observation for further spread, and maximal doses of antibiotic and chemotherapeutic agents. Excessive bleeding, not controlled by oxytocics, necessitated curettage after fortification with penicillin and sulfa preparations. Otherwise, the following routine was established for all patients:

1. Complete bed rest with sufficient sedation and analgesia to allow the patient to be comfortable.
2. Maximal doses of antibiotics—penicillin in aqueous solution and in oil up to 1,000,000 units per day; sulfadiazine in doses of 1 Gm. every four hours, covered with equal amounts of sodium bicarbonate; streptomycin where indicated and available.
3. Routine use of ergonovine in courses of 9 doses, $^1/_{320}$ grain being given three times daily.
4. The adventitious use of frequent, small or, when indicated, large transfusions of whole blood.
5. Maintenance of water balance with intravenous feedings of glucose or glucose in saline where necessary.
6. High protein, high caloric diet with the supplemental use of vitamins and minerals.
7. Frequent gentle pelvic examinations to follow the course of the infection with checks on sedimentation rates and blood counts at frequent intervals.
8. Operative interference (colpotomy or laparotomy) for the evacuation of pelvic abscesses or for the removal of tubo-ovarian pathology.

The course of each type of parametrial involvement together with the therapy is summarized below:

Acute Parametritis (9 Cases).—Treatment was maintained indefinitely as long as improvement was present. Under this regimen, the intense parametritis gradually subsided, concomitant laboratory findings gradually became normal, and negative pelvic findings gradually supervened. If no uterine bleeding was present and if, on physical examination, it appeared that the uterus was completely empty, the patient was considered cured and discharged. Of the nine cases admitted with this type of postabortal parametritis, three were discharged in from fifteen to twenty-one days with no further treatment. In five of the remaining cases, the infection gradually subsided, but uterine bleeding continued. These were curetted in from twelve to nineteen days after admission without untoward effect and discharged as cured after appropriate periods of postoperative observation.

The remaining case of this group did not respond well to therapy. Although only moderate parametrial involvement was present on admission, the heroic use of large doses of penicillin and sulfadiazine, aided by several transfusions of whole blood, did not prevent the development of large tubo-ovarian abscesses. This patient was operated as described below.

Postabortal Pelvic Abscesses (2 Cases).—These cases, admitted with palpable abscesses in the pelvis, did poorly on antibiotic therapy and, after six and five days, respectively, were colpotomized and large pockets of pus evacuated. Both showed improvement after surgery. However, one developed a second abscess on the opposite side and was colpotomized again fourteen days later. With the establishment of adequate drainage, cure was completed without further surgery. Colpotomy was performed under Pentothal Sodium anesthesia, using the Frankel instrument for the perforation and opening of the abscess cavity. Drainage was maintained with a hard rubber tubular drain.

Postabortal Pyosalpinx (2 Cases).—Of these, one made an uncomplicated recovery with supportive antibiotic therapy and was discharged from the hospital nineteen days after admission. The other case did not respond satisfactorily in that large bilateral tubo-ovarian abscesses developed. She underwent definitive surgery fourteen days after the initial diagnosis was made.

Tubo-ovarian Abscess Formation (5 Cases).—Three cases were diagnosed on admission: one developed from a pyosalpinx and one from a simple parametritis. In all of these, maximal antibiotic measures proved to be of little value in curing the infection. Repeated observations have shown that, when the infective process has become walled off, the antibiotic agent is unable to reach the infection, and the maximal effect merely controls the further spread. All patients who either were admitted with or developed postabortal tubo-ovarian abscesses were maintained on maximal doses of the antibiotics until the pelvic status had become stationary before further definitive measures for permanent cure were undertaken. During this period, careful and frequent observations and examinations of the patient were necessary to detect leakage or rupture of the infected material from the abscess into the peritoneal cavity. It was felt that curative surgical interference presented the least danger to the patient if the operation could be performed when the pelvic condition had "cooled off." Criteria of this state were normal temperature, normal or approaching normal sedimentation rates, and a decreasing white blood count. The operative technic was similar to that of postabortal peritonitis and will be discussed under that heading.

All five cases of postabortal tubo-ovarian abscesses were operated upon. All recovered and left the hospital in from fourteen to eighteen days after operation.

Peritonitis (Type VI and VII Abortions)

Previous studies made in this hospital in 1937 and 1945 indicated that, when peritonitis occurred as the result of the spread of infection from a septic abortion, the mortality rate approached 100 per cent, regardless of maximal supportive treatment and medical and nursing care.[5] As with postabortal parametritis, infection can produce a peritonitis as the result of extension through the fallopian tubes, from the rupture of a retroperitoneal abscess, or as the result of perforation of the uterus (Type VII).[6,7]

Although the route of spread of the infection may vary, the basic severe pathology is the same. The picture is one of true peritoneal infection and irritation with free fluid in the peritoneal cavity plus the findings of an incomplete abortion. Differential diagnosis must be made with the peritonitis resulting from a ruptured viscus or a ruptured cholecystitic or pancreatic abscess, an acute appendicitis with or without rupture, a postabortal parametritis with peritonismus, and a ruptured ectopic gestation. Diagnosis can be further complicated by the fact that all degrees of severity of the peritonitis may occur. For the purpose of clarification, the 12 cases studied have been subdivided on the basis of the severity of the condition into two groups:

1. Those cases which, when admitted, presented both by history and on physical examination all of the findings of a true postabortal peri-

tonitis (six cases) or where the diagnosis was confirmed on the basis of abdominal or cul-de-sac puncture with the extraction of free pus (three cases).

2. Those cases where the original diagnosis was still more doubtful and where an observation period of from one to thirteen days was necessary for confirmation (three cases).

HISTORY.—The history of abortion, especially when induced, was not easy to obtain. All cases in this series occurred as the direct result of criminal interference with pregnancy, six by catheter, three by incomplete curettage, and three by other, unknown methods. The time between induction of the abortion and admission to the hospital varied from one to twelve days. Three patients had received inadequate doses of penicillin before admission, and four were taking sulfa preparations.

Nine of 12 cases (six very severe, three severe) were fulminating in nature and were admitted to the hospital with all of the criteria necessary for an immediate diagnosis present. Here the picture of general severe toxemia, dehydration, and anemia together with extreme debility was most marked. On examination, true peritonitis, coupled with the findings of incomplete abortion, left no doubt as to the true diagnosis. However, in three of these cases, a differential diagnosis of ruptured ectopic gestation or postabortal parametritis had to be considered, but the original diagnosis was confirmed by cul-de-sac puncture with the withdrawal of free, fluid pus.

The remaining three cases were tentatively diagnosed as incomplete abortions with possible peritonitis, since parametritis could not definitely be ruled out at the time of admission. These patients were treated expectantly as was outlined above and examined daily for changes in physical findings. It is of interest to note that during this period of observation, which lasted from one to thirteen days, because of maximal doses of antibiotics, the condition of these patients remained static or showed but slight improvement. However, a time was reached when the body could no longer retain the infective process, and a deterioration of the general physical condition ensued. This decline occurred as rapidly as overnight and necessitated the institution of immediate definitive procedures. This observation is in accord with previous experiences.[5]

Temperature elevations and laboratory findings in all degrees of peritonitis were extremely variable and often in no way indicated either the degree or the severity of the infection or of the general condition of the patient. Generally, the amount of temperature varied with the severity of the toxemia, the amount of dehydration, and the severity of the shock present.

Blood pressure also varied greatly, partially because of hemorrhage and partially because of shock and toxemia. Variations occurred between normal levels and the low of 0/0 mm. Hg in the most severe case.

Red blood counts and hemoglobin levels were also invariably low (1,000,000 to 3,400,000 red blood cells per cu. mm.; 20 to 50 per cent hemoglobin). White blood counts were always elevated, ranging from 17,000 to 28,000 cells per cu. mm. with differential counts showing as high as 98 per cent polymorphonuclear cells. Similarly, sedimentation rates were rapid. However, in general, as with postabortal parametritis, laboratory findings were of minor diagnostic help, the main diagnosis being made by the general physical findings.

Course.—The general course of postabortal peritonitis is very rapid and fulminating. Of the nine cases where diagnosis was made on admission, either by physical examination or by cul-de-sac puncture, six were admitted in an almost moribund state and the remaining three in remarkably poor condition. All gave histories of rapid deterioration, usually occurring within the period of hours. The remaining three cases which progressed while under observation likewise demonstrated the rapidity of the downhill course.

Since past studies and this present work have demonstrated the futility of controlling postabortal peritonitic infection by antibiotics and supportive therapy, a surgical approach was tried at this hospital in 1945 with a marked increase in the salvage rate.[5] This present study is confirmatory of previous findings.

Hysterectomy for postabortal peritonitis is not a new procedure, having been first employed successfully in a single case as far back as 1886.[5] Incision and drainage of the abdominal cavity was successful in curing from 20 to 30 per cent when such drainage was carried out through the abdominal wall or through the posterior cul-de-sac.[8,5] In 1945, 11 patients suffering from extreme postabortal peritonitis were treated by radical surgery at this hospital with a salvage rate of 63 per cent.[5] Since then, other reports confirmed these findings.[5-7,9-12]

Therefore, we have attempted in this series to treat all cases of postabortal peritonitis by radical surgery as soon as the diagnosis could be definitely established. Since all were in a critical state at the time of decision for surgery, it was necessary to prepare these patients quickly so that they would be in the best possible physical condition, at the earliest possible moment, to withstand a major surgical procedure.

Preoperative therapy aimed at the reduction of shock and toxemia, the building up of bodily defenses, and the control of vaginal bleeding by the following measures:

1. The replacement of body fluids by the intravenous injection of 5 per cent glucose in saline which was started immediately and was followed by
2. Transfusions of whole blood and plasma.
3. Maximal antibiotic therapy: 1,000,000 units of penicillin together with 4 Gm. of sulfadiazine given intravenously in the original glucose and saline infusion, and followed by the intramuscular injection of 100,000 units penicillin in aqueous solution every three hours.
4. Sedation and analgesia; the routine use of intramuscular sodium pentobarbital, Demerol, or morphine.
5. The prevention of further vaginal bleeding when present by removal of free secundines from the cervix and vagina and by the intramuscular or intravenous use of ergot derivatives.

Definite general standards for surgical interference could not be established, since each case had to be considered individually. However, every attempt was made to reduce shock to a minimum, to replace all lost fluids and blood elements, and to obtain adequate blood penicillin and sulfa levels. Nearly optimal preoperative conditions were reached in five of the 12 cases. In the remainder (six on admission, one after observation) the degree of shock and toxemia was so great that maximal supportive therapy was not sufficient to classify the patient as even a fair operative risk. Even though such debilitated states existed and no further improvement in the general condition could be obtained, it was felt that there was no chance for recovery without surgical interference. Surgery was, therefore, undertaken even in these poor risks, since it offered the maximal possibility for recovery by lightening the load of the infection.

SURGERY.—The surgical procedure employed both for the relief of postabortal tubo-ovarian abscesses (Type II) and for postabortal peritonitis (Types VI and VII) was identical. The principle involved is similar to the treatment of any infection where collections of pus are present and adequate drainage lacking. Operation was carried out with a minimum of trauma and as rapidly as possible. When the abdomen was opened, all free pus was removed and the viscera packed off. A rapid supracervical hysterectomy together with a bilateral salpingo-oophorectomy was then performed. Following that, the posterior wall of the cervix was then split down to the vagina in order to promote drainage. The pelvis was packed with 2-inch plain gauze, the end of which was let out into the vagina through the split cervix and the pelvis peritonealized as well as possible. The abdominal wound was then closed anatomically without the use of retention sutures or bolsters. Fluids, either in the form of whole blood or glucose and saline with added penicillin, were given continuously during the entire time that the patient was anesthetized.

Postoperative care was considered to be of maximal importance, and consisted of the following:

1. Penicillin in large doses: 300,000 units in oil daily plus 50,000 units aqueous every three hours. Sulfadiazine, 1 Gm., every three hours, covered with equal doses of bicarbonate of soda, or 4 Gm. given intravenously. This medication was continued for at least forty-eight hours after the patient was afebrile.
2. Maintenance of fluid balance with intravenous glucose or glucose and saline solutions. This was continued until adequate fluid intake could be maintained by mouth.
3. Intravenous amino acids and plasma to maintain normal blood protein levels.
4. The repeated transfusions of small quantities of whole blood (250 cc.) These were given almost daily for their antibiotic effect and for the maintenance of adequate red cell and hemoglobin levels.
5. The use of Fowler's position to promote dependent drainage.
6. Routine use of prostigmine methylsulfate, 2 cc. (1:2,000), every four hours for the first forty-eight hours to aid in promoting urinary function and with the hope of preventing paralytic ileus and postoperative adhesions.
7. Other procedures such as Wangensteen drainage, Harris drip enema, etc., as indicated.
8. Maintenance of proper nutrition—adequate vitamins, mineral, and caloric intake.

Early ambulation was not considered advisable. The pelvic packing was allowed to remain in situ over a period of four days at which time it was shortened several inches. This shortening process was continued daily until the entire packing had been removed. Skin sutures were taken out on the sixth or seventh postoperative day.

COMPLICATIONS.—It was always a source of wonder that patients who were in semimoribund states preoperatively rallied so rapidly and completely after operation and had such relatively calm postoperative courses. Complications were rare. No eviscerations were noted. Although intestinal distention and postoperative vomiting were common during the first forty-eight hours, no cases of paralytic ileus were encountered. Two cases developed a partial intestinal obstruction, which was controlled by Wangensteen suction and Harris drip enemas, and neither required further surgery. Temperature curves, in general, were high, ranging from 101 to 105 F. within twenty-five hours of operation; yet all descended to normal by lysis by the seventh or eighth day.

Results of Therapy of Postabortal Sepsis.—Twenty-eight cases of postabortal sepsis were studied, of which 16 were diagnosed as postabortal parametritis and 12 as postabortal peritonitis. The course, therapy, and final results of this study are outlined in Table III.

TABLE III.—Incomplete Septic Abortions (28 Cases)

	Number of Cases
Postabortal Parametritis	
Admitted with diagnosis of parametritis	9
Recovery with antibiotic therapy	3
Recovery with antibiotic therapy and curettage	5
Development of postabortal tubo-ovarian abscess—laparotomy	1
Admitted with diagnosis of pyosalpinx	2
Recovery with antibiotic therapy	1
Development of bilateral tubo-ovarian abscesses	1
Admitted with diagnosis of pelvic abscess	2
Recovery after colpotomy	2
Admitted with diagnosis of tubo-ovarian abscesses	3
Colpotomized and later operated	1
Laparotomized for tubo-ovarian pathology	2
Total	16
Postabortal Peritonitis	
Due to direct spread (Type VI)	7
Operated and recovered	5
Died	2
Due to perforation of the uterus (Type VII)	5
Operated and recovered	3
Died	2
Total	12

In the entire series of 755 abortions studied during a single year, there were four deaths, giving a gross mortality of 0.53 per cent. There were no deaths in the simple infected (Type I) abortions nor in the group where parametritis had developed following abortion (Type II). The four deaths which did occur were in the most severely infected group where peritonitis had developed, two as the result of direct extension from an infected uterus and two from perforation of the uterus during criminal abortion.

Of the four deaths which occurred, three were admitted to the hospital in a moribund state. There was unanimity of opinion among the consulting staff that these cases were hopeless and that neither surgical interference nor supportive therapy would be of help. These deaths could be directly attributed to the overwhelming shock and toxemia that was present preoperatively. However, since similar cases had recovered because of surgical intervention, surgery was attempted but without avail. Thus, although the gross mortality for the postabortal peritonitis group was 25 per cent, if these cases are omitted, the corrected mortality rate becomes 12.5 per cent for this group and 0.13 per cent for the entire series.

Comment

The classification of all types of incomplete abortions according to the infective pathology involved has been summarized, together with a complete study of the results of diagnosis and treatment of a continuous series of cases seen during the period of one year. In another paper, the treatment of simple infected abortion was reviewed. This present study has dealt with those cases of incomplete abortion which were complicated by sepsis. This study included 16 cases of postabortal parametritis and 12 cases of postabortal peritonitis all occurring as the result of criminal interference with early pregnancy.

All cases of postabortal sepsis result from the spread of intrauterine infection, either through lymphatic channels, by direct extension through the wall of the uterus, or by extension through the fallopian tubes. The degree of infection, its mode of spread, and the pathology produced are dependent upon the virulence of the organisms involved, the amount of trauma, and the normal antibiotic defenses of the body.

From our study of the simple infected abortion we feel that this spread can be minimized by the removal of the infected secundines. This is accomplished by the early complete curettage of the uterine cavity. However, when infection has left the uterine cavity, the need for removal of the secundines is not so important, since a new focus of infection has been set up in the pelvic tissues. The earliest spread of the infective process is to the adnexal regions where several localizing pathologies may be differentiated: (1) a true parametritis, (2) a pyosalpinx, (3) a retroperitoneal pelvic abscess, (4) a tubo-ovarian abscess. When the spread involves these parametrial tissues, our present study indicates that the best therapy is conservative in nature, employing the best nursing and supportive care with maximal doses of antibiotic and therapeutic drugs. These measures, however, may not be sufficient to control the infective process in every case, and when abscess formation develops in the pelvis evacuation of such abscesses must be accomplished surgically, either in the form of colpotomy or laparotomy. When such procedures were followed, no mortalities occurred in this series of 16 cases of severe postabortal parametrical infections.

Contrary to this, previous observations have shown that, when peritonitis develops, temporizing measures are of little or no avail. In this series, antibiotics were unable to limit or cure postabortal peritonitis in three cases where peritoneal infection was minimal at the time that such therapy was started. In our hands, 75 to 87 per cent of septic abortions complicated by peritonitis are salvagable if, as soon as the condition is definitely recognized and diagnosed, maximal preparatory and antibiotic therapies are instituted and the patient subjected to rapid radical pelvic surgery at the earliest possible moment. The operation used at this institution consisted of a supracervical hysterectomy, and bilateral salpingo-oophorectomy for removal of the nidus of the infection, together with splitting of the cervix and pelvic packing to produce adequate drainage. These conclusions agree in principle with work done previously at this and other hospitals.

Summary

1. Postabortal sepsis in the form of postabortal parametritis is best treated expectantly, utilizing a maximum of antibiotic therapy and only resorting to surgery if the infection cannot be controlled or if abscess formation occurs.

2. Postabortal peritonitis is an almost 100 per cent fatal disorder and does not respond to antibiotic therapy alone. Best results have been obtained by rapid surgical interference.

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MEDICAL GROUPS SET UP PLAN TO HANDLE PATIENTS' COMPLAINTS

The American Medical Association has announced that 34 of its 48 constituent state medical associations and the District of Columbia Medical Society now have committees which will hear complaints from the public.

The purpose of these committees, according to Dr. George F. Lull, Chicago, secretary and general manager of the A.M.A., is to "iron out any misunderstandings between the public and the profession." He said that the committees are another expression of the physicians' constant concern for the welfare of their patients.

Under the committee setup, any patient who is dissatisfied with service rendered, who feels he has been overcharged, or who is dissatisfied for any other reason may take his complaint to the medical society. The committee on professional conduct, as these patient-complaint committees are commonly called, will consider his charges, discuss them with the physician concerned, and recommend a solution.

"Experience has shown that most complaints arise out of misunderstandings that are quickly and amicably settled," Dr. Lull said, adding: "In cases involving fees, many difficulties occur solely because the physician and the patient neglect to discuss charges. Patients often don't realize that many tests and treatments are included under the simple heading 'For Professional Services Rendered.' After a committee-arranged conference between doctor and patient, these troubles usually evaporate.

"Even in the cases where a committee finds that the doctor has erred, little difficulty is experienced in settling complaints. Committee after committee has reported to the A.M.A. that they have never had a doctor refuse to accept their recommendations."

If more stringent discipline should be required, however, the medical society has the power to expel the physician involved from membership, or, if charges warrant, can even go so far as to request revocation of his license by the state board.

A majority of the state committees on professional conduct have been established as the direct result of a resolution voted by the A.M.A. House of Delegates last December. This resolution read, in part, "this House of Delegates hereby commends those constituent state associations that have already established committees to hear any complaints of the public and urges that all constituent associations adopt comparable programs."

The following states and the District of Columbia now have special committees set up to hear complaints from the public: Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Illinois, Iowa, Indiana, Kentucky, Maryland, Massachusetts, Michigan, Nebraska, New Hampshire, New Jersey, New Mexico, North Carolina, Ohio, Oklahoma, Rhode Island, Tennessee, Utah, Vermont, Virginia, West Virginia, Wisconsin, and Wyoming. In five states, public grievances are handled by the governing council of the state medical association. These states are Georgia, Kansas, Louisiana, Minnesota, and Nevada. Most of the other state associations are considering the formation of a professional conduct committee. In addition, many county societies have, or are establishing, local committees to hear grievances.

TECHNIC OF CIRCUMCISION WITH A SPECIAL CLAMP

Morris Leff, M.D., New York City

I WISH to present here a simple operative technic for the circumcision of the newborn. The operation is done when the baby is between five and eight days old. One milligram of vitamin K is given intramuscularly as a prophylaxis against bleeding. It is interesting to note that the ancient Hebrews set the eighth day of life as the day for ritual circumcision, at a time, as we now know, when the prothrombin is at its highest level.

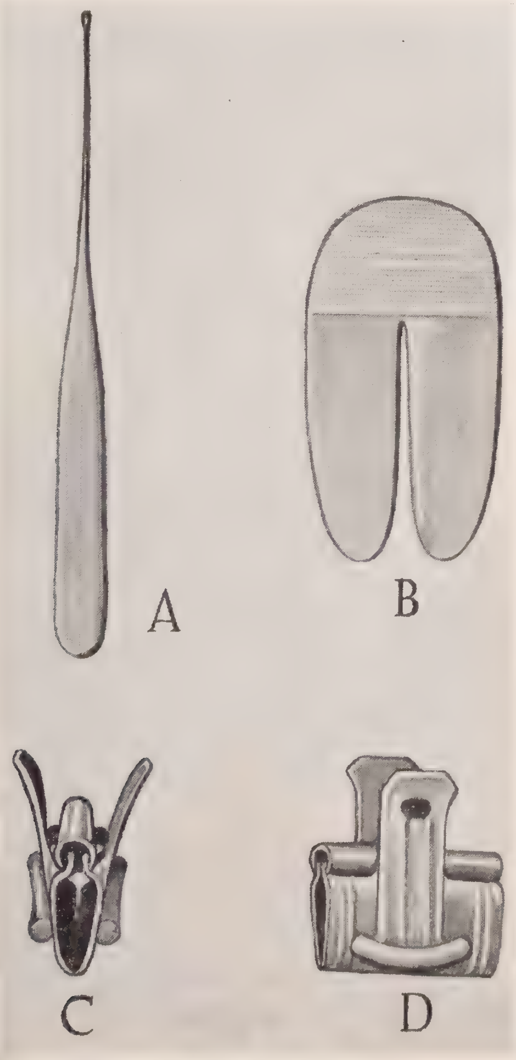

Fig. 1. Special instruments needed.

Procedure

The baby is held by a nurse. Its arms are wrapped on its chest. The legs are held in the lithotomy position. A sterile towel is placed under the baby's buttocks, a second towel covers its legs below the penis, and another one the abdomen. The penis is washed with a mild antiseptic. The operation is illustrated in the accompanying drawings:

Figure 1 shows the special instruments needed: (A) probe, (B) guard, and (C and D) the author's clamp.* The probe is moved all around the glans down to the corona to separate adhesions (Fig. 2). The foreskin should *not* be stripped back before the operation. The prepuce is grasped with two fingers of the left hand, and the guard is applied, adjusting it to the proper position according to the amount of prepuce that needs to be cut off (Fig. 3A and B). The ventral surface of the prepuce at the frenulum is cut a little less than the dorsal aspect (Fig. 3C). The author's clamp is applied on the prepuce close to the guard (Fig. 4A). The clamp is held tightly with three fingers of the left hand, the tips of the fingers resting on the ledge, and the clamp is compressed (Fig. 4B). The knife cuts the foreskin close to the clamp, and the subcutaneous tissue is then pushed down so that it lies below the corona (Fig. 4C). The bleeding is inconsequential.

Occasionally, when the foreskin has been stripped back before the operation, the incision

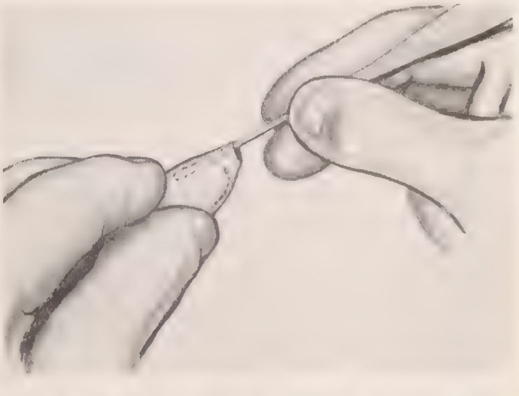

Fig. 2. Probe moved all around glans down to corona to separate adhesions.

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* Manufactured by the O. & G. Instrument Co., New York 53, New York.

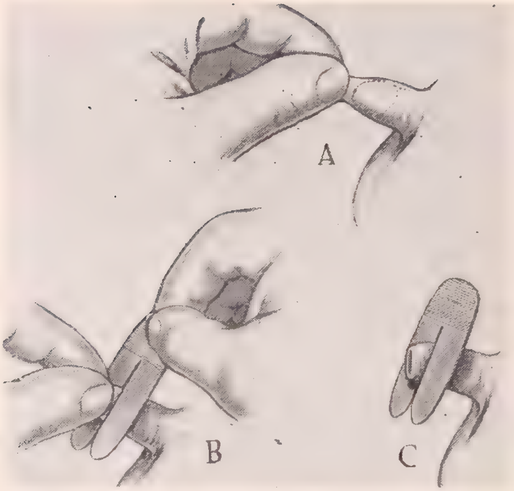

Fig. 3. Prepuce grasped with two fingers of left hand (A), and guard is applied (B). Ventral surface of prepuce at frenulum is cut a little less than the dorsal aspect (C).

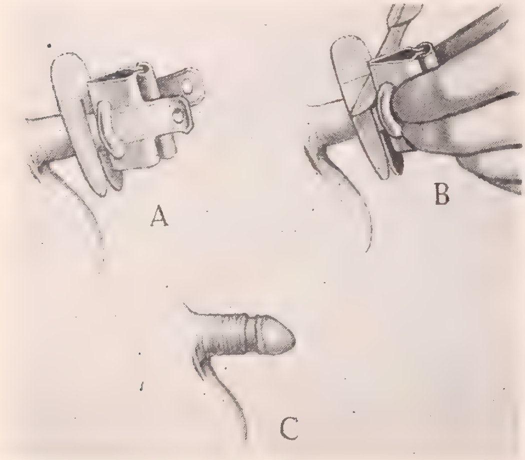

Fig. 4. Author's clamp is applied close to guard (A), and clamp, held tightly with three fingers of left hand, is compressed (B). Subcutaneous tissue is then pushed down so that it lies below corona (C).

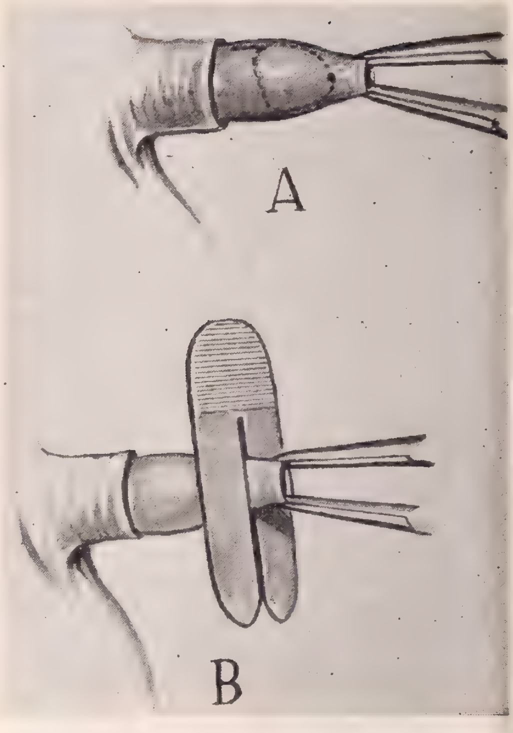

Fig. 5. In cases where incision does not include subcutaneous tissue the tissue must be removed as follows: tissue is grasped by two mosquito clamps (A), guard is applied (B), and the tissue trimmed off.

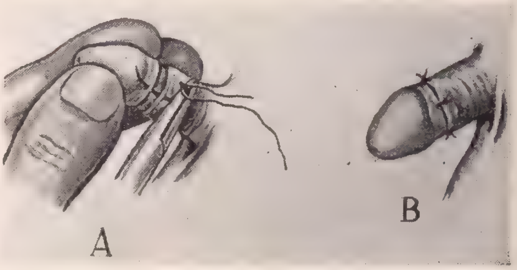

Fig 6. Skin and subcutaneous tissue are brought together by sutures.

will not include the subcutaneous tissue, and it is necessary to remove it by a second incision. The subcutaneous tissue (which is erroneously referred to as mucous membrane) is grasped by two mosquito clamps, the guard is applied, and the tissue trimmed off by the knife or scissors (Fig. 5).

The skin and subcutaneous tissue are brought together by four 000 plain catgut sutures (Fig. 6A and B). Caution should be taken not to penetrate the corpus with the needle. A little pressure is made with a gauze sponge to control any oozing. A piece of dry gauze is rolled into a bandage and is wrapped around the penis and then tied with a string to hold it in place.

The bandage is removed when it becomes soiled, and another piece of gauze is applied. No special aftercare is necessary. The operation takes less than four minutes.

1831 Grand Concourse

Case Reports

PROTEAN NATURE OF SCLERODERMA—WITH A NOTE ON PULMONARY CHANGES

STANLEY M. ARONSON, M.D.,* and LAZAR WALLERSTEIN, M.D., New York City

(*From the Departments of Pathology and Medicine, Sydenham Hospital*)

ALTHOUGH the etiology of scleroderma remains quite obscure, a number of concepts as to its character and course have become increasingly apparent. The diffuse involvement of the various internal viscera, such as the heart, lungs, and gastrointestinal tract, have been described.[1-7]

Because of the chronicity of the progress, a clinical panorama may result which varies from patient to patient and even in the same patient at different points of observation. As a result of the comparative rarity of scleroderma, the obscurity of the basic etiologic process, and the difficulty encountered in following one patient through the many years and even decades of the ailment, a wrong diagnosis of the progressive visceral involvement is by no means rare. The features of "cardiac" scleroderma, for example, are not uniquely distinctive and as yet are suggested to the mind of the clinician only by correlation with the cutaneous lesion and verified only by necropsy. It is not surprising, therefore, that extraneous diagnoses are commonly applied.

The present case has been closely followed for nineteen years by one of us (L.W.) since the inception of symptoms, and during this span of years the manifold facets of the disease have elicited the following presumed but mistaken diagnoses (the numbers in parenthesis refer to the years since the onset of the disease): Addison's disease (one), chronic ulcerative colitis (ten), heart disease (sixteen), carcinoma of the stomach (eighteen), and pulmonary tuberculosis (nineteen). All these independent impressions were arrived at by competent hospital staffs in various cities and were corroborated by strong radiographic and electrocardiographic evidence. The diagnosis of scleroderma, it must be emphasized, was also made on each successive hospital admission.

Case Report

In the year 1930, E. G., a twenty-five-year old, white, married housewife sought medical aid for a "cold" of a few weeks duration. Her chief complaint at that time was a stiffness of her fingers which prevented her playing the piano. Her past history was essentially negative, except for diphtheria during childhood. Physical examination at this time revealed swollen, livid fingers and a minimal fixation of the skin of the limb. Blood pressure was recorded as 104/75. The patient's weight was 121 pounds. At this time she was mentally alert and happy. Laboratory findings were red blood cells 3,500,000; hemoglobin 75 per cent; white blood cells 8,000, with 8 per cent eosinophils. The serologic test for syphilis was negative. In the subsequent weeks a brownish pigmentation of the thorax and extensor surfaces of the extremities was noted, and the patient was increasingly aware of fatigue, somnolence, anorexia, and lassitude. The patient was hospitalized where the clinical diagnosis of Addison's disease and commencing scleroderma was entertained. All blood chemical examinations including sodium and potassium studies were within normal limits except for the serum calcium which was recorded as 8.4 mg. per cent.

The patient was discharged and during the following ten years was hampered by slowly progressive and nonremittent tightening of the skin which, by 1940, had extended so as to cause partial immobilization of the mandible.

In the latter part of 1940, the first enteric symptoms presented themselves. The patient complained of indigestion and mild diarrhea. In 1943, she suddenly developed fever, unproductive cough, and acute right lower chest pain, the latter aggravated by deep respiration. The diagnosis of acute pleurisy was made and verified by x-ray. Therapy included bed rest and analgesics. The episode subsided within a few weeks.

Shortly after this attack the gastrointestinal symptoms reappeared and now included periodic dysphagia. An intractable diarrhea also developed. The latter was somewhat mitigated by large doses of paregoric and belladonna. The patient rapidly lost weight, and the diagnosis of chronic ulcerative colitis was considered. The diarrhea continued, with remission, through the ensuing years.

Exertional dyspnea became prominent in 1946. In January, 1948, several episodes of melena occurred as well as further weight loss, and the patient was hospitalized. Although the diagnosis of scleroderma was readily apparent, it was thought that an independent gastrointestinal lesion might exist, and a complete x-ray study of the enteric system was ordered. The x-ray films of the stomach revealed a persistent irregularity and possible filling defect of the distal aspect of the greater curvature. It was felt that these changes indicated a malignancy of the stomach. The patient, however, refused surgical exploration.

The patient stayed at home for the following

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* Present address: Department of Pathology, Memorial Hospital, New York City.

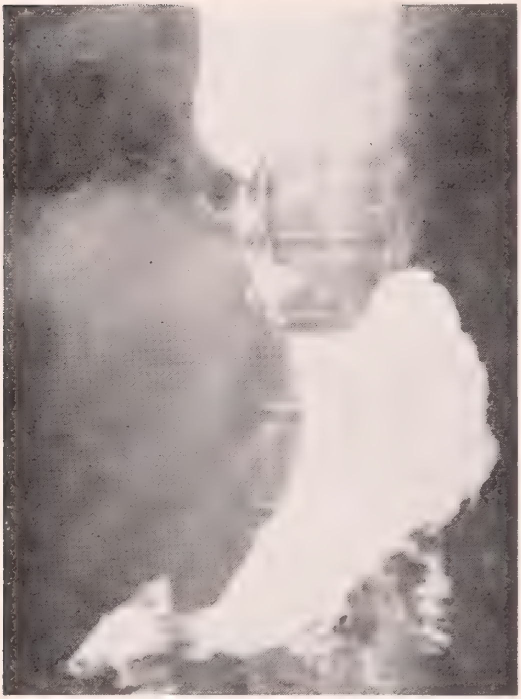

Fig. 1. Gastrointestinal series on last admission showing the dilated esophagus, irregular esophageal mucosal pattern, and deformity of the greater curvature of the stomach.

seven months, during which time intractably painful digital ulcers developed. In August, 1948, the patient was admitted to this hospital for nerve block to relieve the agonizing finger pain. The admission physical examination recorded the following relevant findings: The patient was emaciated and in acute pain. There was a rigid, taut, mask-like facies. The blood pressure was 90/70. There were numerous moist rales at both pulmonary bases posteriorly. A chest plate at this time revealed parenchymatous opacities in both lung fields, particularly in the left lower lobe, which were interpreted as possible tuberculosis. A gastrointestinal barium series demonstrated a similar gastric deformity that was observed at the previous hospital, as well as mucosal irregularity, constriction of the cardia, and proximal dilatation of the eosphagus (Fig. 1). An incidental finding in the roentgen film of the upper abdomen taken during the gastrointestinal series was the presence of a diffuse honeycombed pattern of small cysts throughout the lower lung fields. This was apparent only on an overexposed film. The significance of this pattern was not immediately understood.

Little change occurred in the patient's clinical status except for a slow and progressive downhill course. Therapy included transfusions, vitamins, thyroid extract, opiates, and bland diet. In addition, antihistaminics, adrenocortical hormone, and cytochrome C were attempted as empiric agents without avail and with no appreciable alteration in the patient's objective course or symptomatology.

It is interesting to note at this time that, although the patient at times retained enormous quantities of fluid within the esophagus, she never developed regurgitation or vomiting. Clinically, this was thought to represent the impairment and replacement of the antiperistaltic esophageal musculature by the sclerodermatous process.

An electrocardiogram showed numerous extrasystoles, changes of severe myocardial damage, and variations indicative of cor pulmonale. A urinalysis revealed a slight trace of albumin, no microscopic cellular elements of note, and a specific gravity on a casual specimen of 1.020. A hemoglobin determination demonstrated a 95 per cent level. The patient was afebrile throughout. Death occurred quietly on September 12, 1948, approximately nineteen years after the initial presenting symptom referable to scleroderma.

At autopsy the following positive findings were recorded: The body was that of an emaciated white female who appeared many years older than her actual age. Along the extensor surfaces of the arms there was a java-brown pigmentation. The normal skin wrinkles, particularly the expression lines of the

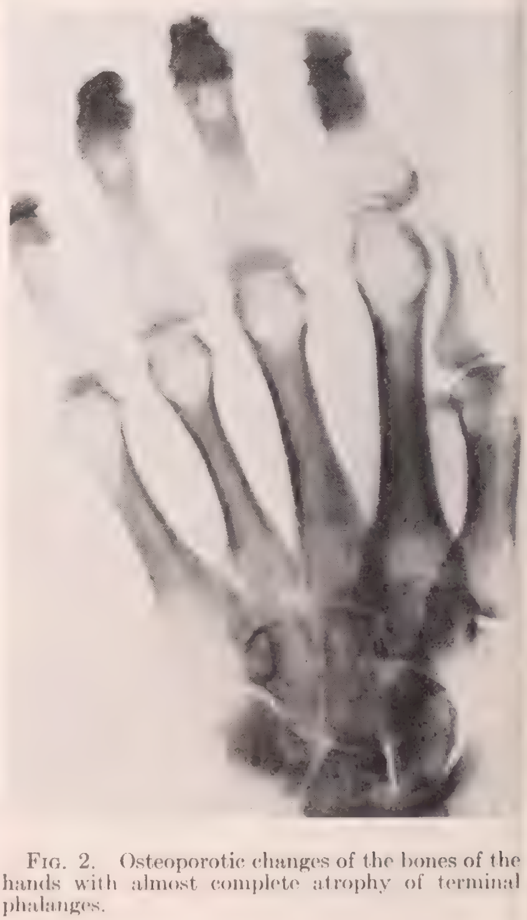

Fig. 2. Osteoporotic changes of the bones of the hands with almost complete atrophy of terminal phalanges.

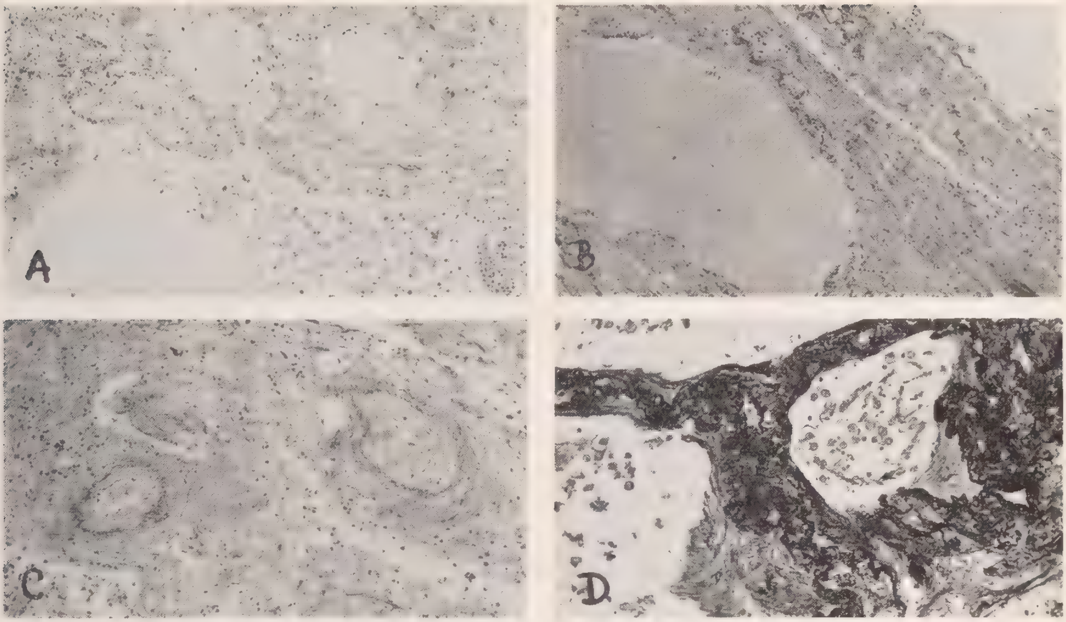

FIG. 3. (A) Photomicrograph of typical cyst demonstrating the simple cuboidal epithelial lining of such cavities (hematoxylin and eosin stain, 100 ×).

(B) Sections of another cyst filled with a protein-bearing fluid containing only rare cellular elements (hematoxylin and eosin stain, 100 ×).

(C) Sections of medium-sized pulmonary arteries revealing a severe degree of intimal thickening (hematoxylin and eosin stain, 100 ×).

(D) Photomicrograph showing the conspicuous increase, as well as thickening, of the elastic fibers in the cystic zones of the lung (elastic stain, 100 ×).

face and the skin in the vicinity of the joints, were absent. The mandible was immobilized in a slightly opened position. All the digits showed a marked degree of alteration with immobility of the joints, atrophy and deformity of the nails, and attenuation of the finger tips such that the latter appeared pointed. In addition, there were areas of erosion and gangrene in the region of the terminal phalangeal joint on the volar surface of most of the fingers (Fig. 2). Similar changes were noted on the toes.

The abdominal rectus muscles showed extreme atrophy, measuring only 3 to 4 mm. in greatest thickness. The pectoral musculature manifested the same degree of wasting. There were found 400 cc. of a clear amber fluid within the peritoneal cavity, but the peritoneal serous surfaces were smooth and glistening. The left pleural cavity contained approximately 300 cc. of an identical fluid. Dense fibrous adhesions were visualized binding down the right lower lobe of the lung to the corresponding parietal and diaphragmatic pleura and obliterating the interlobar fissure.

The pericardial cavity contained about 250 cc. of a transparent, amber-colored fluid. The pericardial serous surfaces were grossly normal. The heart weighed 325 Gm. and was extremely flabby in consistency. The right segment of the heart was considerably dilated. Throughout the myocardium there was noted a barely perceptible pattern of linear fibrous-like strands. These latter bore no apparent relationship to the coronary circulation but were distributed indiscriminately throughout the cardiac musculature. Dissection of the coronary vascular tree demonstrated no abnormalities.

The right lung weighed 500 Gm., the left 275 Gm. All the lobes, and particularly those on the right, were subcrepitant, heavy, and on cut section appeared extremely congested and edematous. In the right lower lobe parenchymal region neighboring on the cardiophrenic junction there was a defined area which was not congested but showed on section a great number of small cysts, none measuring more than 4 mm. in diameter. The intervening tissue seemed fibrous in appearance and texture. The portion of visceral pleura investing this region had a fine nodular contour. There was another area of similar parenchymatous change in the anterior costophrenic sinus aspect of the left lower lobe.

The esophagus was considerably dilated, reaching a diameter of 5 cm. in its middle third. Just proximal to its passage through the diaphragm, it was sharply constricted. There were no grossly apparent masses, scars, or adhesions to account for this sudden alteration in diameter. The wall of the esophagus was thin. The mucosal surface was a dull fleshy red interspersed with irregular patches of gray. The regions where the mucosa was gray were elevated 1 to 2 mm. forming a low series of sessile projections. These changes were most apparent in the lower third of the esophagus. The stomach appeared normal except for an extreme and diffuse thinning of the walls. There was almost complete absence of rugae, and a faint granular texture to the inner surface of the organ was seen. No other gross changes of note were demonstrated.

Numerous microscopic sections taken from the skin revealed the classic appearance of cutaneous scleroderma in the atrophic phase. Microsections from the heart demonstrated a diffuse interstitial fibrosis which was uniform in its prevalence between the endocardium and epicardium. The esophagus presented an acute and chronic ulcerative esophagitis with underlying patchy fibrosis of the muscularis. The stomach showed a similar but less extensive mucosal ulceration and inflammatory response.

The lungs were the site of the most unusual microscopic finding. In the transition zone between the cystic pulmonary parenchyma and the surrounding tissue, an irregular alteration of the alveolar septa was noted. These changes consisted, in the main, of pericapillary fibrosis and diminution or disappearance of the septal capillary. In approaching the cystic regions rupture and fragmentation of the alveolar walls was demonstrable. Sections taken from the center of the cystic area revealed an almost total loss of the alveolar structures with replacement by coarse strands of relatively acellular fibrous tissue (Figs. 3A and 3B). Appropriate stains demonstrated a marked increase in the number of elastic fibers in these zones; in addition, these fibers were conspicuously thicker and more fragmented than normal (Fig. 3D). The impression was reached that even considerable condensation as a consequence of the pulmonary lytic process would not account for the increase in elastic tissue visualized in the regions of cystic sclerosis. Another notable feature was the intimal thickening of many of the medium-sized arteries traversing the fibrous tissue (Fig. 3C). Inflammatory cells were infrequently demonstrated and, when seen, were usually lymphocytes and macrophages. The linings of the cysts consisted of fibrous strands for the most part. However, patches of cuboidal epithelium were occasionally found adherent to the inner walls (Figs. 3A and 3B). No actual continuity between respiratory passage epithelium and the adventitious cuboidal lining could be demonstrated, although it is assumed that the epithelium within the cysts was a regenerative growth from the smaller respiratory ducts rather than a metaplastic process. The bronchi and bronchioles were normal both grossly and microscopically.

Summary and Conclusion

A case of visceral scleroderma is presented which succinctly demonstrates the following features:

1. During the course of a chronic diffuse disease such as scleroderma, the clinical manifestations may be fluctuant and bizarre and may often simulate other medical conditions. One may be hard-pressed to adhere to the axiom of explaining all clinical manifestations with one diagnosis, particularly in the presence of seemingly incontrovertible roentgenographic evidence. The case described above closely mimicked such diseases as carcinoma of the stomach, pulmonary tuberculosis, Addison's disease, and chronic ulcerative colitis.

2. The pulmonary findings at autopsy closely reduplicate the changes in visceral scleroderma described in 1945 by Getzowa under the term, "Cystic and compact pulmonary sclerosis."[3]

3. Although pulmonary changes as visualized by chest roentgenograms have been described in the past, these alterations have consisted mainly of fibrosis.[1,8,9] We believe that the "honey-combing phenomenon" discussed above, representing the radiographic counterpart of cystic pulmonary sclerosis, is more closely suggestive of pulmonary scleroderma and, perhaps, with further corroborative evidence might be considered pathognomonic. In accordance with our experiment it is suggested that this change might better be demonstrated with slight overexposure of the film.

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CHLORAMPHENICOL FOUND USEFUL AGAINST BACILLARY DYSENTERY

Good results in treating 35 patients for bacillary dysentery with chloramphenicol (chloromycetin) are reported by a research group from Washington, D.C.

Diarrhea usually subsided within three days, and an uneventful recovery ensued in all 35 patients, according to Drs. Sidney Ross, Frederic G. Burke, E. Clarence Rice, and John A. Washington and Sara Stevens, B.S., all of the Research Foundation, Children's Hospital. Although sulfadiazine also is effective against the disease, its usefulness is limited, they point out. Causative microbes frequently become resistant to sulfa drugs, occasional patients are sensitive to sulfa compounds, and administering sulfadiazine to dehydrated patients in the tropical areas where the disease is most prevalent may be hazardous.—*Journal of the American Medical Association, August 26, 1950*

TRANSIENT BUNDLE BRANCH BLOCK

Isidore Stein, M.D., Joseph Weinstein, M.D., and Philip R. Casesa, M.D., Brooklyn, New York

(From the Veterans Administration, Medical Department, Brooklyn Regional Office)

BUNDLE branch block is not an infrequent aberration in the electrocardiogram. King has estimated that at Johns Hopkins Hospital it is seen more frequently than rheumatic fever.[1] In a period of five years it was one fourth as common as auricular fibrillation, three times as common as auricular ventricular block, and four times as common as auricular flutter.

Once established, bundle branch block is usually permanent. There is, however, a transient type of bundle branch block. The first case report was made by Lewis in 1913.[2] In this instance there was one continuous period of block. Another type of block has been described in which block alternated with normal complexes.[3-5] The cases reported below are of this type wherein a spontaneous change occurred from block to normal conduction and could be artificially produced by means of exercise, varying respiratory motions, and after the administration of several different drugs.

Case Reports

Case 1.—A fifty-five-year-old white male, a letter carrier, complained of periodic pain across his chest, needle-like in character and accompanied by dizziness. These episodes lasted about twenty minutes and had been present for three years. They bore no relation to activity. He became short of breath on walking three blocks. No other symptoms referable to the cardiovascular system were present. There was no history of rheumatic fever nor hypertension.

The patient's mother died at sixty-one years of age of a "heart attack" and his father at seventy-eight years of unknown causes.

The physical examination revealed essentially a middle-aged male, lying comfortably in bed. The blood pressure was 130/84. The fundi were normal. Cyanosis and orthopnea were not evident. The heart was not enlarged. The second aortic sound was equal to that at the pulmonic area. The rhythm was regular and the ventricular rate 78 per minute. No congestive phenomena were evident. During the changes in conduction as noted in the electrocardiogram there were no deviations in the character of the heart sounds, nor did the patient evince any complaints. His exercise tolerance was adequate.

Laboratory studies.—Red blood cells were 5,210,000; white cells 6,000; polymorphonuclear leukocytes 37; lymphocytes 60; monocytes 2; eosinophils 1; hemoglobin 17 Gm. The sedimentation rate was 4 mm. in one hour. The urinalysis revealed no abnormalities. The fasting blood glucose was 80.6 mg. per cent; urea 10.79 mg. per cent; cholesterol 198.6 mg. per cent. The basal metabolic rate was plus 9. The blood serology (Kahn test) was negative. A chest roentgenogram revealed normal lungs, and the heart was normal in size and shape. A localized calcific plaque was observed in the aortic arch. No calcification was observed within the cardiac silhouette.

Electrocardiographic Studies.—A routine tracing taken in the recumbent position showed low T waves in leads 1, and AVL, and biphasic T wave in V_6 and spontaneous changes from normal conduction to bundle branch block in lead 1, bundle branch block in leads 2 and 3 but normal conduction in the unipolar extremity and in the precordial leads (Fig. 1). Studies were then undertaken (only lead 2 is demonstrated) in the sitting position, following deep expiration, during the Valsalva maneuver, after exercise, and after full doses of atropine (Figs. 2 and 3). In all of these instances transient bundle branch block was produced. Deep inspiration, pressure on the carotid sinuses, the Mueller maneuver, and dihydroergotamine (1 cc. intravenously) failed to

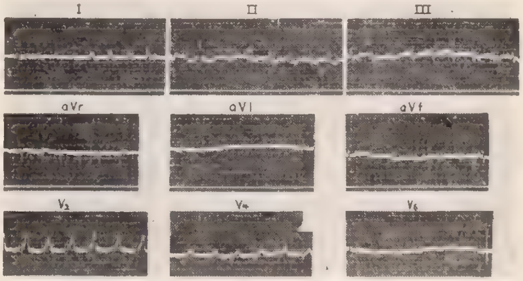

Fig. 1. Intermittent bundle branch block (Case 1).

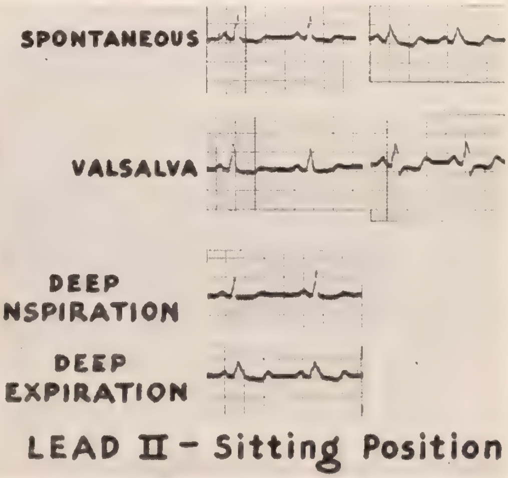

Fig. 2. Intermittent bundle branch block in the sitting position (Case 1).

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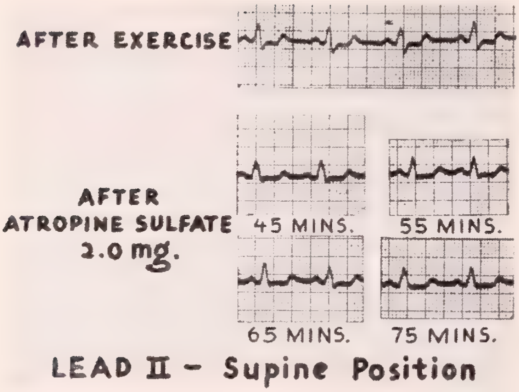

Fig. 3. Intermittent bundle branch block in the supine position (Case 1).

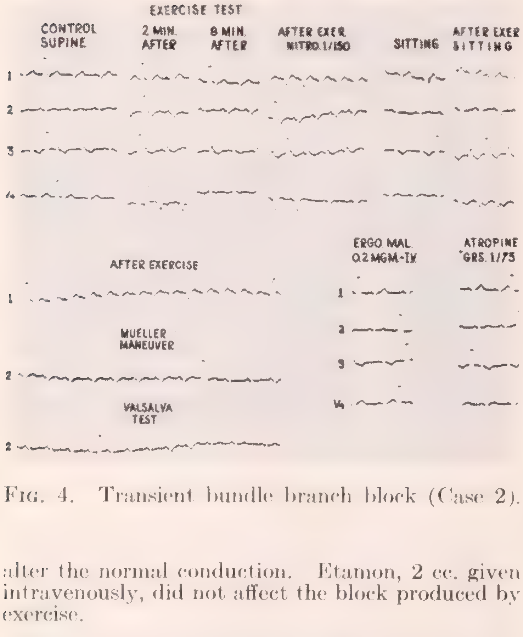

Fig. 4. Transient bundle branch block (Case 2).

alter the normal conduction. Etamon, 2 cc. given intravenously, did not affect the block produced by exercise.

Case 2.—A forty-one-year-old white male, an executive, was first told of a "heart condition" in 1944 while in the armed services. At that time he complained of "not feeling right" and of intermittent pain in the left shoulder, chest, and neck unrelated to activity. These symptoms were prone to occur following a "busy or trying" day and have persisted to date. They will disappear when he is relaxed. He is also short of breath on climbing a flight of stairs. Following a meal his heart will occasionally "pound." There are times when he feels "shaky" and faint. He will then perspire profusely. He presents no other complaint referable to the cardiovascular system. He was once told he had "hypertension."

There is no history of rheumatic stigmata, scarlet fever, or diptheria.

The examination revealed essentially the following: He was obese, weighing 193 pounds, height 5 feet 7 inches. The retinal arterioles showed moderate sclerosis. The blood pressure was 130/90. The heart was not enlarged; the sounds were of fair quality, the second aortic being equal to the second sound at the pulmonic area. The rhythm was regular and the ventricular rate 72 per minute. No murmurs were audible. There were no congestive phenomena present. His exercise tolerance was adequate.

Roentgenographic studies revealed that the heart and great vessels were within normal limits of size, shape, and configuration.

The electrocardiogram was at times normal and on other occasions showed the typical picture of right bundle branch block (Fig. 4). The latter was readily produced by exercise, the Mueller maneuver, and the Valsalva test. Premedication with nitroglycerine did not prevent the appearance of block following exercise. No effect was noted after ergonovine maleate (0.2 mg. given intravenously) and full doses of atropine sulfate.

Comment

These cases represent conditions of unstable conduction within the left bundle branch in Case 1 and right bundle branch in Case 2. In Case 1 the change from normal to block appeared spontaneously, in the sitting position, following deep expiration, the Valsalva maneuver, and atropine. It was consistently produced by mild exercise. Block appeared when the ventricular rate slowed and was also present during phases of tachycardia. Atropinization (vagal block) and exercise, allowing for sympathetic dominance, brought on periods of block. However, the effect of Etamon after exercise, which produced the block, gave inconclusive results. In Case 2 right bundle branch block appeared spontaneously, following exercise, the Mueller maneuver, and the Valsalva test. From these observations an autonomic nervous system imbalance as a factor in the production of this disturbance can be assumed. Case 1 unquestionably had an abnormal electrocardiogram (see Fig. 1) due probably to coronary sclerosis, and impairment of the vascular supply to the bundle branches, therefore, could play a definite part in the etiology of this unstable conduction system. The role of fatigue cannot be accurately estimated but could be a contributing factor, particularly where the cardiac rate was increased.

Summary and Conclusions

Two cases are reported wherein transient bundle branch block appeared spontaneously, in changing to a sitting position, following the Valsalva maneuver, exercise, and atropinization in one patient. In the other the block appeared spontaneously, following exercise and the Mueller and Valsalva maneuvers. It is postulated that such factors as autonomic nervous system imbalance, circulatory deficiency to the bundle branches, and fatigue may be responsible for this unstable state of conduction.

We are indebted to Walter Stern and Joseph Raiola for the technical work performed during this investigation.

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UNUSUAL SEQUELA OF A SCORPION STING

MARDOQUEO I. SALOMON, M.D., Bronx, New York

(From the Outpatient Department of the Morrisania City Hospital)

WHILE scorpions are fairly common arthropods in all tropical and subtropical countries and while the number of persons stung by them is enormous, it is generally considered that their venom either kills in a day or so, or else the victim survives without any lasting sequelae. Concerning the possibility of a fatal outcome, deaths have been reported from many places (Asia, Africa, South America, and the United States). In fact, statistics show that in Arizona more lives have been lost from scorpion stings than any other poisonous arthropod or reptile.[1] Whatever the exact chemical nature and pharmacologic properties of scorpion venom may be, and researches by De Magalhaes and others seem to indicate that the venom is a complex substance containing neurotoxins, hemolysins, coagulins, etc., there seems to be no doubt that the local phenomena caused by the sting either disappear without trace in a short time or else are simple epiphenomena in a state of deadly shock.[2-4]

The following case was observed in my private practice. During several years of practice in tropical and subtropical countries I found no similar case. Indeed, I believe nothing analogous has ever been published in the medical literature.

Case Report

The patient was a forty-year-old white South American of Spanish extraction. Eight months previously in his native Colombia, he was stung by a scorpion on his right wrist. Less than an hour later, the entire distal half of his upper extremity became hot, swollen, red, and painful. He developed marked constitutional signs and symptoms of a severe sepsis: fever, chills, asthenia, etc. He was given large doses of intramuscular penicillin as the only medication. After a few days he felt well, and his general condition became normal again. However, his right hand and wrist remained painful and swollen until his first visit to me eight months later.

Nothing relevant could be found in the patient's family or personal history. He was always in good health and had only once, two years before he was stung, developed a severe cold with an aftermath of "chronic sinusitis."

His general physical examination was essentially negative. A neurologic, cardiovascular, genitourinary, and chest survey disclosed nothing abnormal. The routine laboratory investigation (including serology and urinalysis) was negative. Clinical and roentgenologic examination of the skull disclosed a chronic maxillary sinusitis of the right antrum, entirely asymptomatic.

The right upper extremity presented a marked, tender and firm edema, especially around the right wrist but extending from the metacarpophalangeal region of the hand to a point about 2 inches above the distal extremity of the radius and ulna. The edema was so marked that the anteroposterior diameter of the right wrist was about twice as large as the corresponding diameter of the left hand. The edema seemed to involve all the soft tissues of the region. It was almost exquisitely tender to pressure. Roentgenograms (posteroanterior view and lateral) disclosed no osseous or articular pathology.

Differential diagnosis included chronic inflammation. If this were the diagnosis, how could it be explained in the absence of a persistent chemical irritant (venom) unless one supposed the persistence of some remaining fragment of the originally introduced poison, histochemically linked to the patient's tissues? Or was it a low-grade, chronic (microbian) infection caused by a secondary invader; or was it an organized hematoma due to a hemorrhage caused by the venom's hemolysins?

At any rate, I remembered Basu's advice—to give calcium intravenously. Of course, I fully realized that he referred to acute stages and not to an old, chronic sequela. Nevertheless, I injected 10 cc. of a 10 per cent solution of calcium gluconate intravenously. The effect was almost miraculous: Both edema and pain diminished considerably a few hours later. Two days later, I repeated the procedure, again with good results. After the fourth injection the symptoms vanished completely.

Comment

The very fact of a chronic sequela after a scorpion sting is highly interesting per se. Nevertheless, the exact nature, the pathologic substratum, of that sequela is still rather unclear. The very rapidity of its disappearance under the influence of intravenous calcium seems to rule out my original supposition of an organized hematoma.

On the other hand, I am not aware of any case of angioneurotic edema localized at one point for eight months. I must mention, however, that this pathology occasionally does respond more to calcium therapy than to antihistaminics.[5]

The hypothesis of low-grade infection caused by some causally introduced bacterial invaders seems rather unlikely: first, because the edema did not make the impression on organoleptic examination of a chronic infection and second, because of its rapid disappearance following calcium injection. Again, however, I have to add the well-known fact that some low-grade infections disappear under the impact of x-rays, albeit administered for purely diagnostic purposes. In fact, it seems that even osteomyelitis occasionally yields to the impact of a diagnostic application of roentgen rays. And yet, my feeling is that the first of the above-mentioned hypothesis, a possible histochemical link between the host's tissues and some fragment of the venom's complex molecule or molecules, would account better for what happened in this case. This impression is further substantiated by the fact that several cases of aracnism have been treated with dramatic results by intravenous calcium. Scorpions, zoologically, are related to spiders and other arachnoids. In fact, zoologically they form just another order of Arachnida.

Whatever the explanation may be, I believe this case to be of interest, especially in this age of shortened distances when tropical and subtropical diseases tend to be disseminated readily by shortened travel.

1450 Bryant Avenue

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HEMATOMETRA FOLLOWING POSTPARTUM GYNATRESIA IN A UTERUS SEPTATE DUPLEX WITH A SINGLE VAGINA

Bernard A. G. Weisl, M.D., Brooklyn, New York

(*From the Department of Obstetrics and Gynecology, Methodist Hospital*)

Mrs. A. V., a twenty-one-year-old white primigravida of Italian extraction, was delivered of a boy weighing 7 pounds, 15 ounces on June 25, 1949, by breech extraction and Piper forceps for the aftercoming head, after a labor of eleven hours and fifty-two minutes. The breech was a double footling which was in the left sacrum anterior position. Her antepartum course was normal, and Thoms' x-ray pelvimetry corroborated the clinical impression that the pelvis was ample for vaginal delivery of this baby. Her postpartum course was uneventful except that on the sixth day her temperature rose to 100.4 F., and the lochia was noted to be moderately profuse and had a foul odor. This condition apparently responded to a course of ergonovine tablets and vaginal instillations of 2 per cent aqueous mercurochrome. On the seventh postpartum day vaginal examination was essentially normal except that the uterus was noted to be moderately subinvoluted. On July 21, four weeks after delivery, examination revealed the cervix to be shifted to the right, and the uterus was anterior and slightly subinvoluted.

Catamenia resumed in August and was regular in amount and duration in September and October. In October, the patient noticed a feeling of heaviness in the lower abdomen. Thereafter she complained of pains in the back and lower abdomen on arising in the morning and during coitus, as well as increased urinary frequency. These symptoms became progressively worse so that she returned for examination on December 8, two weeks after the start of her November menses. On examination at this time the abdomen was soft. Vaginal examination revealed a firm cervix pushed over to the right fornix posteriorly, and a slightly irregular, nontender mass, the size of a twelve-week pregnancy, was outlined in the pelvis. This mass bulged into the anterior vaginal wall. Rectovaginal examination gave the impression of a mass and pressure against the rectum. The adnexae could not be outlined. A tentative diagnosis of right ovarian cyst was made, and the patient was advised to enter the hospital for investigation, but she deferred her admission until after the first of the year.

The patient had a menstrual period commencing on December 23, when she flowed for three days instead of the usual five. On January 6, 1950, the patient was admitted to the hospital because of excessive vaginal flowing. She was passing a brown, highly viscous material, which was odorless. Vaginal examination revealed a nontender small mass on the left and another nontender mass, now the size of a six-week pregnancy, on the right. During examination, with the escape of the viscous material from the cervix, this latter mass further decreased in size.

The patient was taken to the operating room a few hours after admission, where, under Pentothal anesthesia, the cervix was brought to the midline by means of a tenaculum and a uterine sound was passed to a depth of three inches into the uterine cavity. Further examination disclosed a septum extending up the cervical canal, starting 1 cm. up from the external os. During the examination this septum in the cervical canal was broken loose from its posterior attachment, and it was then possible to pass a uterine sound to a depth of $5^1/_2$ inches on the right side and 3 inches on the left side. On curettage, old degenerating viscous fluid with a brownish tinge was obtained from the right cavity and a scant amount of endometrial tissue from the left cavity. The sound indicated a septum which extended up into the uterine cavity and divided it into unequal compartments. Following curettage the uterus contracted well and had a globular shape.

Comment

It appears that this patient had a pregnancy in the right compartment of a uterus septate duplex with a single vagina which was unrecognized during her prenatal course and at delivery. It is thought that the septum became agglutinated against the right side of the internal os of the cervix following delivery, causing a gynatresia which produced a hematometra when catamenia resumed. The patient first noticed symptoms in October, about four months after delivery and after she had experienced three periods. The intrauterine pressure in the occluded compartment probably became so great that there was spontaneous partial drainage on January 6, 1950, which brought her to the hospital, where complete drainage was facilitated by the severing of the cervical septum. This case is being reported as an unusual postpartum sequela in a uterus septate duplex with a single vagina.

24 Eighth Avenue

TOLSEROL IN TETANUS

Esterino E. Santemma, M.D., Hempstead, New York, and George C. Graham, M.D., West Hempstead, New York

(*From the Contagious Service, Meadowbrook Hospital*)

TOLSEROL (3 ortho-toloxy-1,2-propanediol), known in Europe as myanesin, has been used in England for it's curare-like effects in anesthesia quite extensively.* Its mode of action is not definitely established but is thought to be a short-acting basal ganglion anesthetic.[1] In addition, it is thought to act on the spinal cord, perhaps at the internuncial neurons.[2] Tolserol is rapidly destroyed in the body, and only small amounts are recoverable in the urine and bile. The most important toxic reactions are sudden fall of blood pressure on rapid intravenous injection, probably due to direct myocardial depression, and local irritation resulting in thrombosis of vessels, both of which are much less when dilute solutions are employed.[1] Hemolysis is said to occur with each injection, but hemoglobinuria is seen only occasionally because of the renal threshold value for hemoglobin.[3]

It appears that oral Tolserol is of variable benefit (in our cases it produced nothing but nausea). Athetoid movements were completely controlled with $^1/_2$-Gm. doses by Berger and Schwartz, and "In....seven cases the control of muscular rigidity and spasm was satisfactory with phenobarbital and mephenesin," (Tolserol) and tracheotomy.[4,5] The same authors admit that they "did not attempt to keep these patients completely relaxed at all times."

Case Reports

Case 1.—W. L. was a ten-year-old white male admitted to Meadowbrook Hospital on May 16, 1949. Thirteen days prior to admission he had been struck on the right cheek with a sharp stick. The puncture-type wound which resulted had been cleansed with iodine at that time. Tetanus antitoxin had not been given. He was well until three days prior to admission (ten days following the injury). At this time he complained of a stiff jaw. This persisted until the day of admission when his parents noted that he could "barely open his mouth" and that his mouth was pulled to the left. At this time he also complained of dysphagia and substernal pain.

The past history was essentially negative except for the usual childhood diseases. He had been vaccinated against smallpox and immunized against diphtheria. He had never been immunized against tetanus, either actively or passively.

On admission the boy was afebrile, alert, and cooperative. There was a clean, narrow, healed wound about 1 cm. in length, 2 cm. anterior to the external auditory meatus over his right cheek. His mouth was pulled to the left, probably due to direct peripheral facial nerve injury, and he was unable to open his mouth more than 2 cm. A moderate amount of trismus was present in an otherwise negative physical examination.

Course.—Immediately, on admission, he was given 300,000 units of penicillin (aqueous), 60,000 units of tetanus antitoxin and 2 grains of luminal, all intramuscularly. The following day (first hospital day) he showed increased trismus, moderate opisthotonus, a sardonic smile, and he ran a low-grade fever. At this time he was started on 500,000 units of tetanus antitoxin every twelve hours (half intravenously and half intramuscularly), 1,000,000 units of penicillin (aqueous) daily in divided doses, and luminal sedation every four hours. On the same day it was decided to start Tolserol to relieve the spasm. He was given 30 cc. of a 2 per cent solution, the injection taking three to four minutes. Within one minute following the injection the boy was able to open his mouth, and the spasm was markedly decreased. At the same time the substernal pain cleared up. This effect was found to last about one and one-half hours; consequently he was given 30 to 50 cc. of Tolserol, as needed (every one-half to two hours), into the same antecubital vein using horizontal nystagmus as a therapeutic guide.

On his second hospital day he developed a phlebitis at the site of the Tolserol injection, and it was decided to give the Tolserol in a different vein by continuous drip.[6] An infusion was set up with 5 per cent glucose in saline, and a flask of 2 per cent Tolserol was hooked to the infusion by means of a Y tube. It was found that, by giving the patient 25 cc. of Tolserol every hour over a twenty-minute period and filling out the rest of the hour with glucose in water or glucose in 5 per cent saline, further phlebitic phenomena were prevented and he was relaxed most of the time.

This therapy—25 cc. of 2 per cent Tolserol every hour, penicillin 1 million units daily, tetanus antitoxin 1 million units daily, and intermittent luminal sedation—was continued until the fifth hospital day, at which time the dose of tetanus antitoxin was cut in half, so that he received 500,000 units a day. At this time the temperature returned to normal and remained so for the rest of his hospital stay. On the sixth hospital day the spasm was greatly reduced so that the infusion with the intravenous Tolserol was discontinued. The penicillin was reduced to 150,000 units and the tetanus antitoxin to 40,000 units daily. He was given 2 grains of luminal every four hours. At this time he was able to take fluids by mouth, and he was given $^1/_2$ Gm. of Tolserol (by mouth) three times a day.

On the seventh hospital day, all medication was discontinued. No effect was seen from the oral Tolserol. Oral Tolserol was again tried on the eighth and ninth hospital days in the same dosage without any notable effect.

He continued to show a gradual improvement. The facial palsy cleared up. He was put on a full diet and was out of bed on his tenth hospital day. He was discharged as completely recovered on May 30, 1949, the fifteenth hospital day. Examination one month after discharge was completely negative.

Case 2.—J. T., a man of forty-eight years, was admitted to Meadowbrook Hospital on November 23, 1949. His main complaint was inability to open his mouth for the past two days with a "stiff feeling" in the neck. Further questioning revealed that he had suffered an injury to his left thumb on November 2, 1949, which he had taken care of himself and which was still painful. The remainder of his personal and family history was of no significance, except that he had drunk two glasses of wine with dinner each day for the past twenty years. He had never received active or passive immunization to tetanus.

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* Tolserol is a registered trade name of E. R. Squibb & Sons.

Physical examination on admission disclosed a well-developed male, appearing his stated age of forty-eight years, lying quietly, and complaining that he did not understand why he had to be in the hospital. The following were the positive findings: extensive pyorrhea, bilateral nontender masseter spasm permitting the mouth to be opened only 1 cm., dorsocervical muscular stiffness preventing full flexion of the head on the chest, inability to take a full breath because of a tight feeling in the chest, and a moderate degree of spasm of both recti. On the outer aspect of the left thumb near the base of the nail there was a tender area about 1 cm. in diameter from which could be expressed a small amount of seropurulent material. There was a single palpable epitrochlear node on the left with no other nodes palpable elsewhere. The heart and lungs were essentially negative, and his blood pressure was 120/75. All reflexes were slightly hyperactive, and no abnormal ones were noted. The remainder of the examination was negative.

Course.—Shortly after admission, Dr. W. P. Bartels of Hempstead removed the outer half of the left thumbnail and discovered a 1.5-cm., "black sliver of wood, surrounded by a thick, grayish, foul drop of seropurulent material." The sliver was removed, and continuous wet dressings were applied. He was given 100,000 units of tetanus antitoxin in the buttocks, 60,000 units into the left deltoid, and 150,000 units intravenously. The next day (first hospital day) this procedure was repeated. Because of the increasing intensity of the spasm which interfered with his breathing, he was given by slow intravenous injection 30 cc. of 2 per cent Tolserol solution which relaxed him completely for thirty minutes. Accordingly, it was decided to give him the preparation by continuous infusion according to the method used in the first case. The Tolserol was run in at a rate of 30 to 40 drops per minute for a total of 50 to 100 cc. We used the patient as the criterion by which the amount administered and its frequency were judged. He was at all times able to indicate when he wanted more by saying "my chest is tight, I can't breathe," and when he could breath comfortably. Even though, on one occasion, a rate of 50 drops per minute was administered under our direct supervision for one hour, we noted horizontal nystagmus and a feeling of warmth as the only side-effects. During the entire time of its usage, the Tolserol crystals repeatedly precipitated out, and it was necessary to keep hot water bottles around the flask and tube to keep them in solution.

On the second hospital day 300,000 units of aqueous procaine penicillin G were given intramuscularly and continued once daily for six days because of obviously poor pulmonary ventilation. The tetanus antitoxin was continued intramuscularly for three days (150,000 units twice daily) and for the following two days at 25,000 units once daily. Phenobarbital sodium was administered hypodermically at four-hour intervals as needed.

On the third hospital day it was decided to give Amigen via the infusion setup. He received no more than 150 cc. when, on readministration of Tolserol, he developed severe pain with visible evidence of rapidly forming phlebitis in the vein which held the infusion needle. The needle was withdrawn and reinserted into another vein, and, although slower, the same phenomenon recurred. No more amino acid solutions were given. In spite of this, for the remaining period of Tolserol therapy, one after the other, every new vein we used, in either arm, became markedly inflamed and tender. By the sixth hospital day the medication was stopped. Because of the continued presence of a mild degree of spasticity, we tried oral tablets of Tolserol in the amount of 1 Gm. every two hours. Again using the patient's observation as a guide, he stated that they made him "sick to my stomach" and did not "loosen me up." Because of the same "stiff feeling" the tablets were tried again after he returned home, with the same results.

During his hospital stay he ran a low-grade fever except during the greatest activity of the phlebitis when it fluctuated between 101 and 103 F. During this period his white blood count rose from 9,000 to 15,000 with 82 per cent neutrophils. Several urine examinations were negative. There was no evidence of hematuria. Claustridium tetani and alpha Streptococci were cultured from the wound.

Examination two months after discharge found him feeling well except for a slight generalized weakness. Both forearms exhibited many firm, somewhat tender, cordlike veins. At no time, while under therapy, did it appear that tracheotomy might be necessary.

Comment

Both cases did very well with continuous infusions providing frequent administration of Tolserol. Case 2, however, presented the problem of multiple phlebitis. This, we feel, might have resulted from sensitization by the amino acid preparation which was used. Search of the literature failed to disclose a similar experience. Further work might establish this possibility. In our limited experience it seems that, to be effective, Tolserol is best given as a 2 per cent solution, and in this dilution relaxing effects lasting over forty-five minutes cannot be uniformly expected. In our first case, syringe injection of 30 cc. of 2 per cent Tolserol at the rate of 50 drops per minute gave a varying effect lasting from one-half to two hours. This method, however, was stopped because of the development of phlebitis. Our results are at great variance with the experience of Torrens who treated a case with 1 Gm. of Tolserol in a 5 per cent solution and noted an effect lasting "for about twelve hours when it was given intravenously."[7] In neither of our cases did it seem to matter whether 50 or 100 cc. were infused continuously. The amount of relaxation varied from thirty to forty-five minutes. A rate slower than 30 drops per minute produced no effect, and at 50 drops per minute no advantage was found. This latter rate was not exceeded because the hazards of hemolysis were felt to be unnecessarily enhanced.

Conclusion

1. Two cases of tetanus treated with 2 per cent Tolserol are discussed, with the feeling that the drug has a valuable place in the treatment.
2. Marked, multiple thrombophlebitis in one case suggests the possible sensitization of the organism by intravenous amino acid therapy.
3. With the present preparation it does not seem

to us that there is any necessity for giving Tolserol in greater concentration than 2 per cent, nor in infusing it at a rate greater than 40 drops per minute.

4. Oral Tolserol seems to have no effect in tetanus.

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COCCIDIOIDOMYCOSIS

Hyman E. Bass, M.D., F.A.C.P., and Mendel Jacobi, M.D., F.A.C.P., New York City

(*From the Jewish Sanitarium and Hospital for Chronic Diseases*)

COCCIDIOIDOMYCOSIS has been recognized on the North American continent since 1896. For many years this disease was known to occur with the greatest frequency in the endemic areas of the Southwestern United States. Sporadic cases were described from other more remote sections of the country, but usually a diligent inquiry revealed that these patients had either resided or traveled through the endemic areas. Occasionally the mode of infection was unusual—an automobile covered with dust which had traveled through the area, clothes containing dust which had been shipped to the unsuspecting victim, the dust-covered carpets in a transcontinental plane which were swept by an attendant in an Eastern City who then became infected, etc.

Recent years have seen many case reports of this disease in army personnel as a result of exposure in training areas located in the endemic regions.[1] A natural consequence has been the reports of cases in veterans now residing far from their original source of infection.[2] The increased interest in coccidioidal disease has resulted in its inclusion in the differential diagnosis of pulmonary lesions in non-veteran patients. This problem has become real with the popularity of sections of the Southwest as vacation or health resorts.

The present report deals with a case of pulmonary cavitation due to coccidioidomycosis discovered in Brooklyn, New York.

Case Report

R. W., a white woman, fifty-eight years old, was admitted to the Jewish Sanitarium and Hospital for Chronic Diseases on December 2, 1942, with the chief complaints of generalized joint pains, frontal headaches, loss of weight, and chronic productive cough. She had suffered from recurrent episodes of sinusitis and generalized joint pains following an attack of influenza in 1918. Following unsuccessful therapy for her sinusitis, she was advised to go to Arizona. In 1937, she went to Tucson, where she remained for eighteen months. While in Arizona, the sinus condition improved markedly, but on her return to New York City, she developed a chronic productive cough. She was treated for rheumatoid arthritis in 1940 and in the following years continued to show unremitting progression of her arthritic condition.

In January, 1944, she developed a sudden attack of dyspnea. Examination revealed rales and sibilant wheezes in both lungs. X-ray examination at this time revealed mottled infiltrations in both upper lung fields with annular shadows suggesting cavity formation in both upper lobes. Periodic x-ray examination performed during the next five years showed alternate appearance and disappearance of cavities in both upper lobes. An x-ray taken on

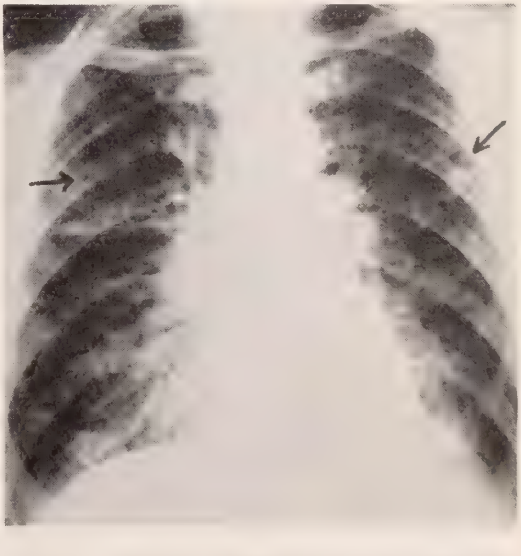

Fig. 1. Mottled infiltrations of both upper axillary lung fields. A large cavity is seen at the outer aspect of the third left anterior rib. A smaller cavity is seen at the upper border of the third right anterior rib.

October 10, 1946, revealed the characteristic thin-walled appearance of these cavities, which occasionally showed evidence of ballooning and fluid levels (Fig. 1). Although an intensive search for tubercle bacilli was carried out over a period of several years, none were found, and tuberculin tests were negative. Because of her history of residence for eighteen months in Arizona, in the endemic area for coccidioidomycosis, she was first studied in 1949 from the standpoint of possible coccidioidal infection. Sputum cultures were negative for Coccidioides immitis. A coccidioidin skin test using 1:100 diluted coccidioidin was negative. However, a repeat skin test using 1:10 diluted coccidioidin resulted in a positive skin reaction. Serologic tests for coccidioidal infection were performed by Dr. Charles E. Smith at the Stanford University School of Medicine and showed positive complement fixation reactions as follows: 3 plus (1:2), 2 plus (1:4), plus-minus (1:8).

Comment

Recovery of the fungus from the sputum is not essential for the diagnosis of residual coccidioidal lesions and is often the exception and not the rule in the late cavity case. The diagnosis of coccidioidal infection in this patient was based on the criteria suggested by Bass, Schomer, and Berke, who have followed a large group of cavity cases for as long as seven years.[3] These were (1) history of exposure in the endemic area, (2) positive coccidioidin skin test, (3) roentgenographic evidence of bilateral, thin-walled cavities which showed no change except for variations in size and which did not produce any dissemination to other parts of the lungs, and (4) absence of tubercle bacilli.[4] In addition, the negative tuberculin tests and the positive complement fixation reactions for coccidioidal infection aided in establishing the diagnosis of coccidioidomycosis.

Treatment of the residual cavities of coccidioidomycosis is reserved for those cases which have severe recurrent hemoptyses.[4] In general, however, cavity cases are asymptomatic and do not require any surgical therapy. It is the general feeling that most of these cavities close in time. No treatment was instituted for the patient described in this paper because of the above considerations. When last examined, the patient complained of mucopurulent expectoration which was believed to be due to severe sinus disease and possibly bronchiectasis. The cavities in both lungs were still visible on x-ray examination.

This case bears out the importance of including fungus diseases in the differential diagnosis of atypical pulmonary infiltrations or cavitation. Coccidioidomycosis is assuming added interest in this connection with the more frequent discovery of residual nodular or cavity cases in both veteran and nonveteran individuals who have been exposed to the infection in the endemic area.

12 East 76th Street
272 East 19th Street

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MEDICAL SCHOOLS SET ENROLLMENT RECORD; MORE DOCTORS GRADUATED

The outlook for graduation of more doctors to safeguard the health of the American people is better than it has ever been, as shown in the annual report of the American Medical Association's Council on Medical Education and Hospitals. The total enrollment in the 72 medical and seven basic science schools for the academic year 1949-1950 was 25,103. This represents an increase of 1,433 students, or 6 per cent, over the preceding year. The latest total is double the enrollment in 1910 (12,530) about 18 per cent higher than ten years ago, and even larger than during the years of World War II, when extra classes were enrolled in all medical schools.

From July 1, 1949, to June 30, 1950, 5,553 physicians were graduated from approved medical schools in the U.S., an increase of 459 over the preceding year. This is the largest number graduating from approved medical schools in the nation in one year except for the years 1946 and 1947, when several schools at the conclusion of their wartime program graduated more than one class during a twelve-month period.

On the basis of enrollments in the senior class for 1950-1951, the medical schools of the U.S. have estimated that they will have slightly more than 6,000 graduates during the coming year.

The report said that the budgets of the medical schools and basic science schools for the 1950-1951 fiscal year total about $67,500,000, representing an increase of about 42 per cent in the last four years. It also said that figures of the cost of new construction, completed, started, or authorized during the last year, were available for only one half of the projects reported, and the total cost of these was more than $100,000,000.

Polls taken in 19 medical schools during the past year reveal that the percentage of students planning to enter general practice has increased from 36 to 47 per cent in the last three years. The number planning to specialize has decreased from 36 to 31 per cent. Other students polled in both periods still had to make a decision.

—*Journal of the American Medical Association, September 9, 1950*

NECROLOGY

Kilian K. Bluhm, M.D., of New York City, died at his home on September 6 at the age of sixty. A native of Switzerland, Dr. Bluhm received his medical degree from the University of Heidelberg in 1917, and studied also at Strasbourg. Dr. Bluhm came to the United States in 1940 and established a private practice. A diplomate of the American Board of Psychiatry and Neurology, Dr. Bluhm was a member of the American Psychoanalytic Association, the New York Psychoanalytic Association, the Medical Societies of the County and State of New York, and the American Medical Association, and he was a lecturer and instructor at the New York Psychoanalytical Institute.

Boardman Marsh Bosworth, M.D., of Bronxville, died in a plane crash on October 9 at the age of fifty-two. Dr. Bosworth, a Rhodes scholar who received his degree in jurisprudence at Oxford University in 1922, was graduated from the College of Physicians and Surgeons, Columbia University, in 1931 and interned at New York Hospital. During World War II, Dr. Bosworth was a major in the Army Medical Corps, from 1942 to 1946, and served in the North African and European campaigns. He was invalided back to this country for a time in 1944 when he lectured in the war sessions program of the American College of Surgeons, after which he returned to Europe to act as chief of surgical service in a general hospital in England and as a commander of a prisoner-of-war hospital in Germany after the surrender.

Dr. Bosworth was a surgeon on the staffs of Grasslands, Lawrence, and Mt. Vernon Hospitals and was known for his work in preparing motion pictures designed to train medical students in surgical technics. A Fellow of the American College of Surgeons and a Diplomate of the American Board of Surgery, Dr. Bosworth was a member of the American Association for the Surgery of Trauma, the American Medical Association, the New York Academy of Medicine, and the Medical Societies of the County of Westchester and the State of New York.

George Clayburn Carter, M.D., of Queens, died on October 19 at the age of fifty-nine. The first Negro graduate of the Albany Medical College, Dr. Carter received his medical degree in 1914 and after two years internship started his practice in Queens. He was a member of the Medical Society of the State of New York, the Queens County Medical Society, and the American Medical Association.

William Wesley Carter, M.D., of New York City and Bronxville, died on October 11 at his winter home in St. Simmons, Georgia, at the age of eighty. Dr. Carter, a specialist in plastic surgery and diseases of the ear, nose, and throat, was graduated from the New York University Medical College in 1895 and served his internship at Bellevue Hospital. Dr. Carter was consulting otologist and laryngologist on the staffs of Gouverneur and Bellevue Hospitals and was a member of the American Academy of Ophthalmology and Otolaryngology, the American Laryngological, Rhinological, and Otological Society, the New York Academy of Medicine, and, in addition, was a Fellow of the American College of Surgeons and a Diplomate of the American Board of Otolaryngology.

George W. Cottis, M.D., of Jamestown, died on October 19 in St. Cloud, Florida, at the age of seventy. Dr. Cottis, a past-president of the Medical Society of the State of New York in 1942-1943, received his medical degree from Cornell University Medical College in 1904, interned at Bellevue Hospital, and then taught for three years at Cornell University Medical College. After a brief period of practice in Batavia Dr. Cottis moved to Jamestown where he practiced surgery until his retirement in 1945. He joined the Royal Army Medical Corps in 1916 and served as a captain in France and Belgium until the armistice.

Dr. Cottis was a founder of the American College of Surgeons and a Diplomate of the American Board of Surgery and was a member of the Buffalo Academy of Medicine, the Jamestown and Chautauqua County Medical Societies, the Medical Society of the State of New York, and the American Medical Association. He had been a surgeon on the staffs of Jamestown General and Woman's Christian Association Hospital and was formerly chairman of the New York State Governor's Committee on Public Health and of the Board of Visitors of the New York State Institute for the Study of Malignant Diseases.

Barney J. Dryfuss, M.D., of New York City, died on October 14 at the age of seventy-one. Dr. Dryfuss received his medical degree from the University of Louisville Medical School in 1903 and interned at Louisville City Hospital. In 1904 Dr. Dryfuss joined the physiologic chemistry department at Cornell University Medical College to do research work and later was named instructor. From 1909 to 1912 he served as proctologist in the Cornell Clinic and, having joined the rectal department of Polyclinic Hospital in 1908, served from 1912 to 1918 as chief of clinic and instructor in rectal diseases at that hospital. He was also a rectal surgeon at St. Bartholomew's Clinic.

In 1934 he joined the staff of St. Clare's Hospital and at the time of his death was proctologist on the staff and chief of the Proctologic Clinic at St. Clare's Hospital. Dr. Dryfuss was an honorary member of the Southwestern Kentucky Medical Association and belonged to the Medical Society of the State of New York, the New York County Medical Society, and the American Medical Association.

James Jesse Jones, M.D., of New York City, died on June 2 at the age of fifty-one. Dr. Jones received his medical degree from Tufts Medical College in 1924 and was clinical assistant in tuberculosis in the Outpatient Department of the Harlem Hospital. He was a member of the Manhattan Central Medical Society.

MEDICAL NEWS

Academy of Medicine Announces Lecture Series

THE SIXTEENTH series of "Lectures to the Laity" has been announced by the New York Academy of Medicine and will include six monthly lectures, which began October 25, at the Academy building, 2 East 103rd Street, New York City. The committee in charge includes Dr. Harold B. Keyes, chairman, Dr. Iago Galdston, secretary, and Dr. Thomas C. Peightal, Dr. J. A. W. Hetrick, Dr. Raymond P. Sullivan, Dr. Harry D. Kruse, Dr. Peter Marshall Murray, and Dr. Stanhope Bayne-Jones.

The schedule for the lectures, including the opening program given October 25, is as follows:

October 25—"Men, Machines, and the World About," the Linsly R. Williams Memorial Lecture, Dr. Norbert Wiener, professor of mathematics, Massachusetts Institute of Technology. Presiding chairman—Dr. Theodore Shedlovsky.

November 15—"The Renaissance in Endocrinology," Dr. Hans Selye, professor and director of the Institute of Experimental Medicine and Surgery, University of Montreal. Presiding chairman—Dr. Philip Bard.

December 6—"The Relation of Animal Psychology to Psychiatry," the Anniversary Discourse of the New York Academy of Medicine, Dr. David M. Levy, professor of clinical psychiatry, Yale University. Presiding chairman—Dr. Thomas A. C. Rennie.

January 17—"Quest for Antibiotics," Dr. Paul R. Burkholder, Eaton professor of botany, Yale University. Presiding chairman—Dr. Selman A. Waksman.

January 31—"Life Situations, Emotions, and Bodily Disease," Dr. Harold G. Wolff, professor of medicine (neurology), Cornell University Medical College. Presiding chairman—Dr. David P. Barr.

February 14—"Antibiotics: 'Miracles' Mass-Produced," the George R. Siedenburg Memorial Lecture, Mr. John E. McKeen, president, Chas. Pfizer and Company. Presiding chairman—Dr. Orrin Sage Wightman.

The lectures are scheduled to begin at 8:30 P.M. Admission is free, and the public is invited to attend.

MEDICALLY SPEAKING—

New York Academy of Medicine Library—A new circular of information describing the facilities offered by this Library is ready for distribution, and copies may be obtained on application to the New York Academy of Medicine, 2 East 103rd Street, New York 29.

Research Grant from National Society for the Prevention of Blindness—The National Society for the Prevention of Blindness has announced a research grant of $2,500 to the New York University-Bellevue Medical Center to study the sudden increase in the number of premature infants being blinded by retrolental fibroplasia. In announcing the grant Dr. Franklin M. Foote, executive director of the National Society, said that "The incidence of retrolental fibroplasia has increased markedly. One reason may be that we are keeping more premature infants alive. At any rate, approximately 650 infants are now being blinded by the disease each year. If this unexplainable increase continues, a new major health problem will be created."

Fellowships in Public Health—The New York State Department of Health announces the availability of fellowships in public health. The fellowships are for a period of from one to two years and provide for residency training as well as for a postgraduate academic year in a school of public health. The fellowship stipend is $2,400 to $4,200 per year depending on the type of training provided.

Applicants must be graduates of medical colleges approved by the American Medical Association or of foreign medical schools whose graduates have been recommended by the American Medical Association for consideration on the same basis as graduates of approved medical schools in the United States, and must have completed at the time of beginning the fellowship at least one year's approved internship. They must be eligible for license to practice medicine in New York State and should be interested in and eligible to enter public health service in New York State upon completion of the fellowship.

Applications and further information may be obtained by writing to Dr. Franklyn B. Amos, Director of Professional Training, New York State Department of Health, Albany 1.

Nurses Association Forms Committee—To assure maximum preparedness of the nursing profession, the American Nurses' Association will appoint a Committee on Nursing Resources to Meet Civil and Military Nursing Needs. The A.N.A. has called upon its member nurses' associations in the United States, Hawaii, and Puerto Rico to appoint similar committees to cooperate with civil and military defense authorities in meeting requirements for professional nursing service.

The A.N.A. committee will include representatives from the National League for Nursing Education, the National Organization for Public Health Nursing, the National Association of Colored Graduate Nurses, the Association of Collegiate Schools of Nursing, and the American Association of Industrial Nurses. State committees will also include representatives from nursing groups in specialized fields.

[Continued on page 2738]

3 Useful Cardiac Drugs

① Thesodate — Brewer IN ANGINA PECTORIS

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[Continued from page 2736]

Lectures on Industrial Medicine—The Faculty of Medicine, Columbia University, announces a series of lectures on industrial medicine to be given from nine to ten o'clock on Saturday mornings beginning on December 9, 1950. The lectures will be given in Amphitheater A, College of Physicians and Surgeons, 630 West 168th Street, New York 32, New York. The lecturers will be members of the staff of the Industrial Hygiene Division of the School of Public Health.

Interested members of the medical and allied professions are invited to attend. There will be no formal registration and no tuition fee. The schedule is as follows:

December 9—"History of Industrial Medicine"
December 16—"Scope, Objectives, and Practice of Industrial Medicine"
December 23—No lecture
December 30—No lecture
January 6—"Industrial Toxicology—General Principles"
January 13—"Toxic Metals I"
January 20—"Toxic Metals II"
January 27—"Toxic Solvents"
February 3—"Toxic Dusts"
February 10—"Toxic Gases"
February 17—"Occupational Dermatoses and Infections"
February 24—"Ventilation, Lighting, Noise"
March 3—"Elementary Nuclear Physics; Radiation Hazards"
March 10—"Workmen's Compensation"

To Give Lecture—Dr. John H. Dunnington, of New York City, will give the annual Mark J. Schoenberg Lecture on Glaucoma at the New York Academy of Medicine on Monday, December 4, at 8:30 P.M.

This lectureship was established as a memorial to Dr. Schoenberg's work in the control of glaucoma. It is jointly sponsored by the National Society for the Prevention of Blindness and the New York Society for Clinical Ophthalmology.

The title of Dr. Dunnington's talk will be "Observations on the Surgical Treatment of Primary Glaucoma."

Postgraduate Training in Anesthesiology—The New York State Society of Anesthesiologists, in cooperation with the American Society of Anesthesiologists, is offering postgraduate training in anesthesiology to any physician in this State who is engaged in full- or part-time practice of anesthesiology. Instruction is individualized and informal and covers fundamental aspects of clinical practice. Training will be given in or close to the applicants' own community on a flexible time schedule. There is no tuition fee.

Interested physicians may write to Dr. S. G. Hershey, New York State Society of Anesthesiologists, 137 West 11th Street, New York 11, New York.

Announcement of Fellowships—The Institute of Industrial Health of the University of Cincinnati will accept applications for a limited number of Fellowships which are being offered to qualified candidates who wish to pursue a graduate course of instruction which will qualify them for the practice of industrial medicine. Candidates who complete satisfactorily the course of study will be awarded the degree of Doctor of Industrial Medicine.

Any registered physician, who is a graduate of a Class A medical school and who has completed satisfactorily two years of residency (including internship) in a hospital accredited by the American Medical Association, may apply for a Fellowship in the Institute of Industrial Health. The course of instruction consists of a two-year period of intense preliminary training in the basic phases of industrial medicine followed by one year of practical experience under adequate supervision in industry. During the first two years, the stipends for the Fellowships vary from $2,100 to $3,000. In the third year the candidate will be compensated for his service by the industry in which he is completing his training.

Requests for additional information should be addressed to the Institute of Industrial Medicine, College of Medicine, Cincinnati 19, Ohio.

$10,000 Grant Aids Rheumatic Fever Study—The Department of Preventive Medicine of New York University College of Medicine, a unit of the New York University-Bellevue Medical Center, has received a grant of $10,000 from the Association for the Aid of Crippled Children to continue its study of administrative practices necessary for case-finding and follow-up of children with rheumatic fever and heart disease in the Lower East Side District of New York City.

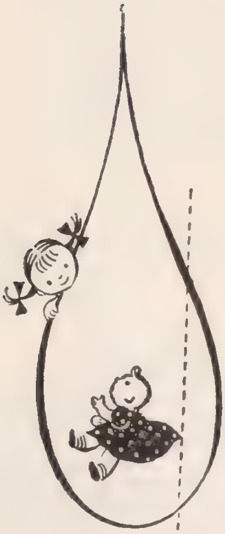
The purpose of this project is to develop in one health center district a rheumatic fever and heart disease program which can be adopted by the New York City Health Department and extended to a city-wide program. The project has been conducted for the past three and a half years on grants from the National Institutes of Health and the New York Heart Association, with the cooperation of the New York City Department of Health and Board of Education.

Further financial support of the project to the extent of $20,000, in order to complete at least one more year of study, has been promised by the New York Heart Association. Dr. Henry E. Meleney, professor of preventive medicine, is the responsible investigator. Dr. Elvira de Liee-Burke was project director for the first two and a half years, after which she was succeeded by Dr. Katharine Dodge Brownell.

Prize Essay Contest—The American Dermatological Association is offering a prize of three hundred dollars for the best essay submitted of original work, not previously published, relative to some fundamental aspect of dermatology or syphilology. The purpose of this contest is to stimulate younger investigators to original work in these fields.

Manuscripts typed in English with double spacing as for publication, together with illustrations, charts, and tables, are to be submitted in triplicate not later than February 1, 1951, and should be sent to Dr. Louis A. Brunsting, secretary, American Dermatological Association, 102-110 Second Avenue, Southwest, Rochester, Minnesota.

[Continued on page 2740]



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SQUIBB

[Continued from page 2738]

MEETINGS

FUTURE

Medical Department Conference of the Hospital for Joint Diseases

On Thursday evening, November 16, at 8:30 P.M., the Medical Department Conference of the Hospital for Joint Diseases will hold a meeting at the Hospital. The speaker will be Dr. Alexander B. Gutman, professor of medicine at the College of Physicians and Surgeons, Columbia University. Dr. Gutman's topic will be "The Management of Gout."

Pediatric Section of Kings County Medical Society

There will be a meeting of the Pediatric Section of the Kings County Medical Society on Monday evening, November 27, 1950, at 8:30 P.M. at the Kings County Medical Society Building, 1313 Bedford Avenue, Brooklyn, New York, Dr. Ovar Swensen will speak on "Pediatric Surgery."

Kings County Radiological Society

At the next meeting of the Kings County Radiological Society at the Medical Society Building, 1313 Bedford Avenue, Brooklyn, on November 30 at 9 : 00 P.M., Dr. Jacob Burkstein will speak on "Tumors of the Small Intestine."

PERSONALITIES

Speakers

Dr. Morton Berson, New York, will lecture and demonstrate reconstructive surgical technic in Ankara, Turkey, at the invitation of the Medical Faculty of the University of Ankara. Dr. Berson left on September 6 for Greece where he would perform operations on maimed Greek war veterans and demonstrate various surgical technics before going to Turkey . . . Dr. William L. Bradford, Rochester, on "The Diagnosis, Treatment, and Prevention of Whooping Cough" at the eighty-fifth annual meeting of the Michigan State Medical Society on September 20 . . . Dr. Frank C. Furlong, attending nose and throat specialist at Ellis, St. Clare's, and City Hospitals, at the Rotterdam Kiwanis Club on July 11 on the subject of "Government Intervention in Medicine" . . . Among the speakers at the twenty-fifth Clinical Congress of the Connecticut State Medical Society and the Yale University School of Medicine, held in New Haven from September 12 to 14, were Dr. Frank Glenn, New York City, on "The Surgical Treatment of Acute Cholecystitis"; Dr. Irving W. Wright, New York City, on "Neurovascular Syndromes of the Upper Extremity"; and Dr. Frederick H. Vom Saal, New York City, on "Intramuscular Nailing in the Treatment of Fractures" . . . Dr. Robert Graves, professor of neuropsychiatry, Albany Medical College, on "Peripheral Neuritis" at the Rip Van Winkle Clinic, Hudson . . . Dr. Samuel Farrar Kelley, assistant professor of clinical surgery (otolaryngology), Cornell University Medical College, on "Otorhinologic Surgical Problems in the Biochemical Era" at the fifteenth annual assembly of the United States Chapter, International College of Surgeons, on November 1 at Cleveland, Ohio.

Dr. Frederick Reiss, associate clinical professor of dermatology and syphilology, New York University-Bellevue Medical Center, at the inauguration meeting of the Marseille Branch of the French Society of Dermatology and Syphilology on October 13 . . . Dr. Maurice L. Tainter, director, and Dr. A. M. Lands, head of the pharmacological section of Sterling-Winthrop Research Institute, Rensselaer, at the eighteenth annual International Physiological Congress at Copenhagen, Denmark, on August 15.

New Offices

Dr. Harry F. Benjamin, general practice in Altamont . . . Dr. Gerald M. Branower, for the treatment of diseases and surgery of the eye in Great Neck...Dr. Clarke Tillman Case, practice of general surgery, Utica . . . Dr. Ernest A. Cerasano, practice of general surgery, Schenectady . . . Dr. Dominic R. Cirincione, general practice in Schenectady . . . Dr. J. B. Cortesi has resumed the practice of medicine in Schenectady after several months of study at New England Deaconess Hospital, Boston . . . Dr. John H. F. Coughlin, Jr., practice of medicine in Troy . . . Dr. Francis H. Darragh, formerly a member of the staff of the U.S. Army Hospital at West Point, general practice in Highland Falls . . . Dr. Vincent DeLalla, Jr., formerly of Rochester, practice of medicine in Utica . . . Dr. H. Binga Dismond, formerly on the staff of the Department of Physical Medicine of Sydenham Hospital, general practice in Bridgehampton . . . Dr. Edward J. P. Droleski, general practice in Elmira.

Dr. John Ferger, formerly of Burlington, Vermont, joined the staff of the Foster-Hatch Medical Group at Dundee in July . . . Dr. James A. FitzGerald, of Boston, Massachusetts, practice of obstetrics and gynecology in Watertown, in association with Dr. James L. Crossley . . . Dr. Andre Fiscella, formerly of Yonkers, medical and surgical practice at Pine Bush . . . Dr. Edward Furcinito, formerly resident surgeon at Oneida County Hospital, practice of obstetrics and gynecology in Utica . . . Dr. Robert D. Glennie, practice of surgery in Niagara Falls . . . Dr. William A. Griesau, formerly a resident at Queens General Hospital, practice of urology in Troy.

Dr. R. J. Harpending, for the practice of general medicine and surgery in Dundee . . . Dr. John Stone Hooley, for the practice of surgery in Rockville Centre . . . Dr. John Campbell Howard, Jr., medical practice in association with Dr. John R. Turiga in Beacon . . . Dr. T. J. Kantor, formerly a resident at Manhattan Eye, Ear and Throat Hospital, specializing in diseases of the ears, nose, and throat, in Utica . . . Dr. E. A. Kaskiw, formerly of Bay Ridge and Cumberland Hospitals, Brooklyn, general practice in Rome . . . Dr. William H. Kessenich, formerly of Providence Hospital in Washington, D.C., as a member of the Foster-Hatch Medical Group at Penn Yan . . . Dr. J. Harry Lagonegro, formerly of the New York Eye and Ear Infirmary, practice in diseases of the eye, ear, nose, and throat, in Elmira in association with Dr. William T. Boland . . . Dr.

[Continued on page 2742]

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[Continued from page 2741]

Ferdinand Lewkowicz, a native of Poland and formerly of Philadelphia, New York, general practice in Tannersville . . . Dr. John McRoberts, practice of pediatrics in Hornell in association with Dr. Arthur Karl . . . Dr. E. F. MacFadden, formerly assistant clinical pediatrician at New York Hospital, practice of pediatrics in Kingston . . . Dr. Joseph Markel, formerly on the staff of the Skin and Cancer Unit of the New York University Post-Graduate Hospital, for the practice of diseases of the skin in Yonkers . . . Dr. H. Margolis, formerly of Monroe, general practice in Highland Falls . . . Dr. Irving Mond, general practice in association with Dr. M. J. Frank in Beacon . . . Dr. James A. Montgomery, formerly resident surgeon at Queens General Hospital, practice of surgery in association with Dr. Howard N. Cooper in Watertown.

CORRESPONDENCE

CHANGED NAME OF PREPARATION

To the Editor:

Since the publication of my article, "Experimental Study of a Synthetic Breast Milk for Infant Feeding Formula" [New York State J. Med. **50:** 2067 (Sept. 1) 1950], my attention has been called to the fact that the A.M.A. Council on Foods and Nutrition has suggested that we change the title in forthcoming reprints and substitute, instead of "synthetic breast milk," "powdered infant food." It has also been suggested that wherever the words "synthetic breast milk" appeared they should be changed to "powdered infant food," with which I thoroughly agree.

Harry R. Litchfield, M.D.

September 6, 1950
60 Plaza Street
Brooklyn 17, New York

"ENDAMOEBA COLI"

To the Editor:

In the September 1, 1950, issue of the New York State Journal of Medicine, you have published on page 2039 a discussion which I gave relative to a paper entitled "The Incidence of Amebiasis in the Albany Area." In the manuscript which I submitted there appears in the sixth paragraph a reference to "the detailed differences between E. histolytica and E. coli." This of course was meant, in accordance with accepted usage, to indicate Endamoeba histolytica and Endamoeba coli. However, the printed discussion mentions Endamoeba histolytica and Escherichia coli. Since there is no difficulty in distinguishing a bacillus from a protozoan, the printed statement borders on the ridiculous. I should appreciate it if you would correct this error.

Howard B. Shookhoff, M.D.
Physician-in-Charge
Tropical Disease Diagnostic Service

Bureau of Laboratories
New York City Department of Health
New York City
October 10, 1950.

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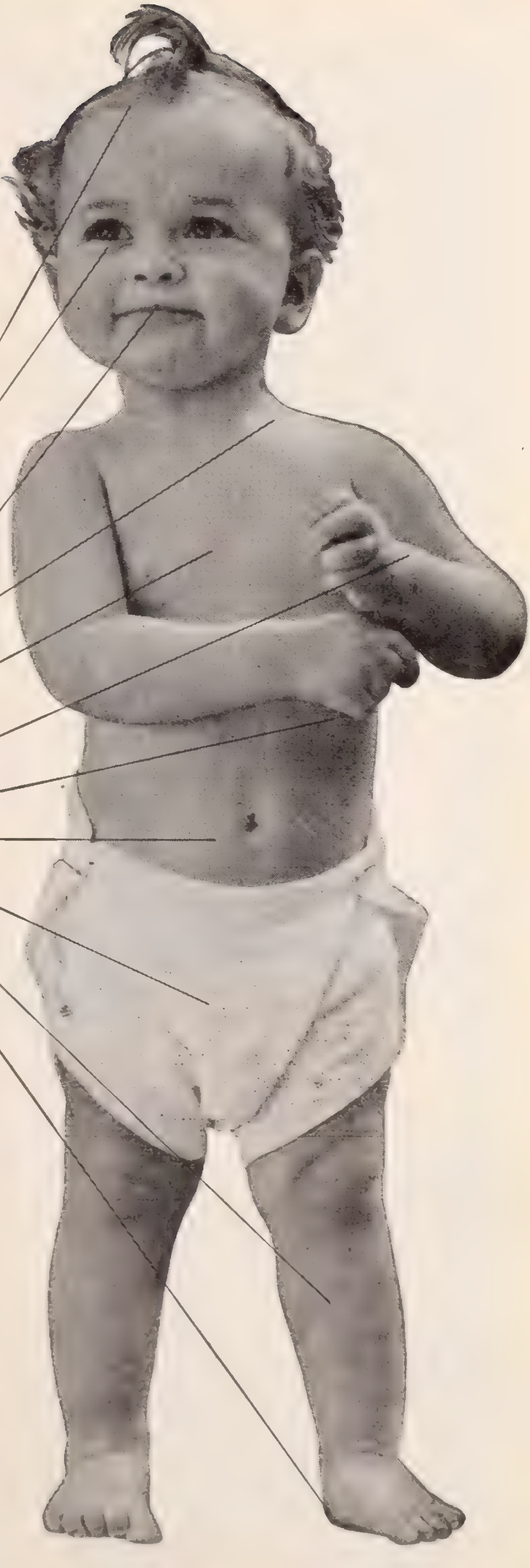

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1. "A Study of Enriched Cereal in Child Feeding" Urbach, C.; Mack, P. B., and Stokes, Jr., J: Pediatrics 1:70, 1948.

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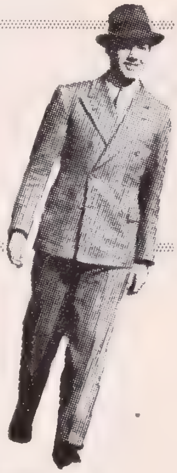

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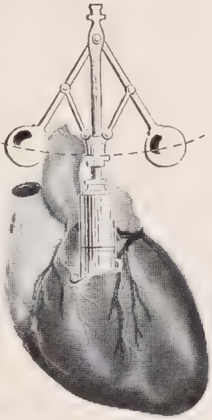

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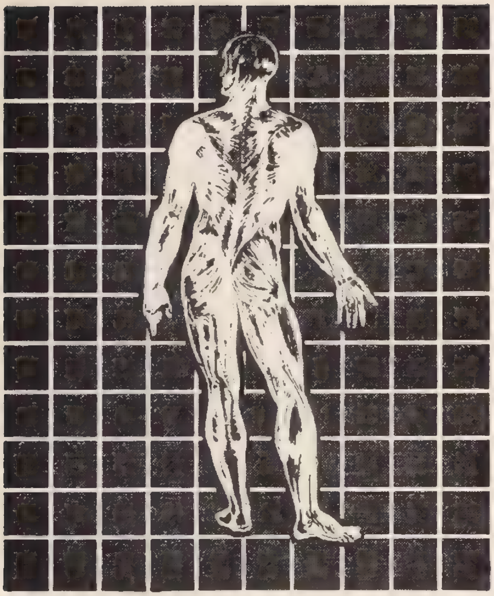

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**Lowenfish, F.P., N.Y. State J. Med., 50:922 (Apr. 1) 1950.*

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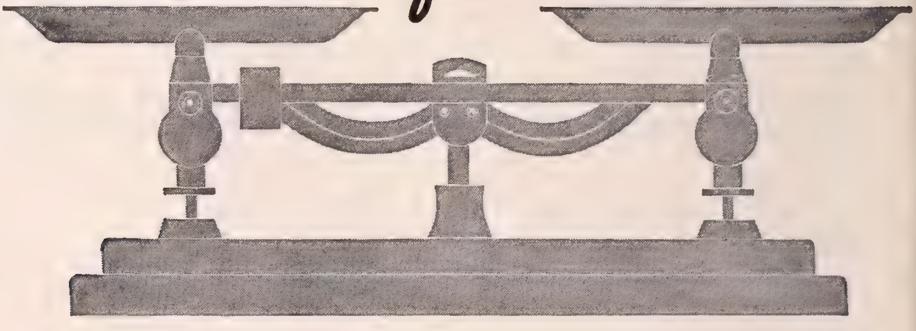

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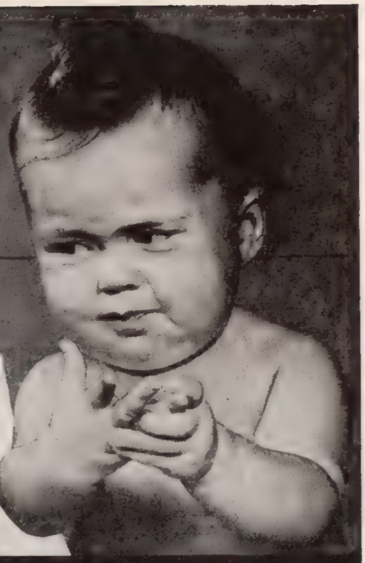

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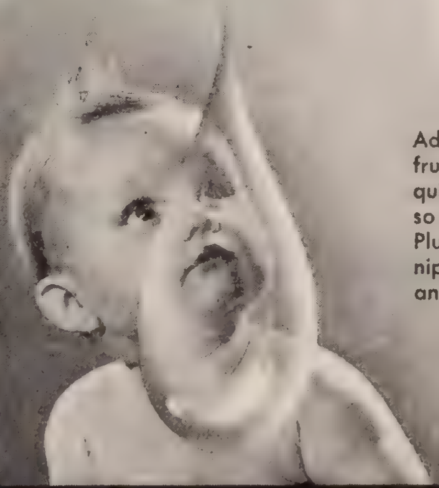

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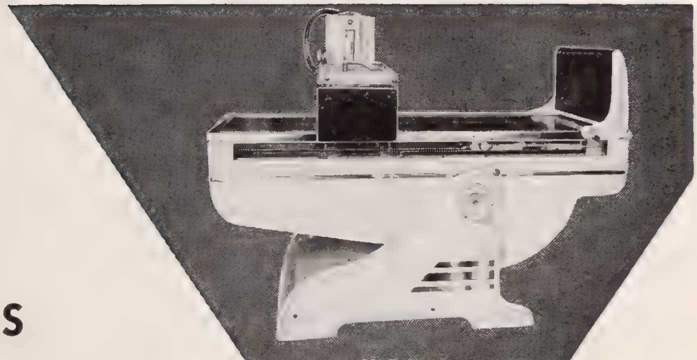

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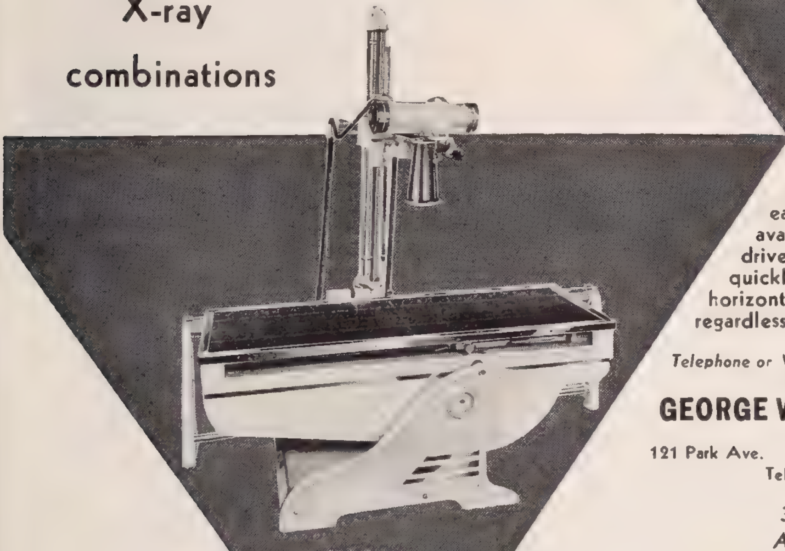

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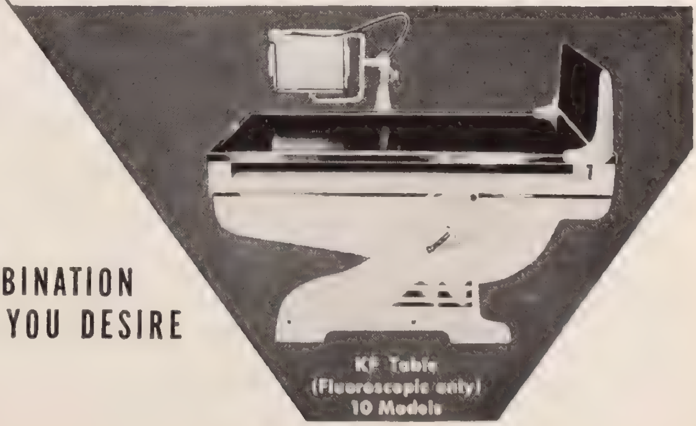

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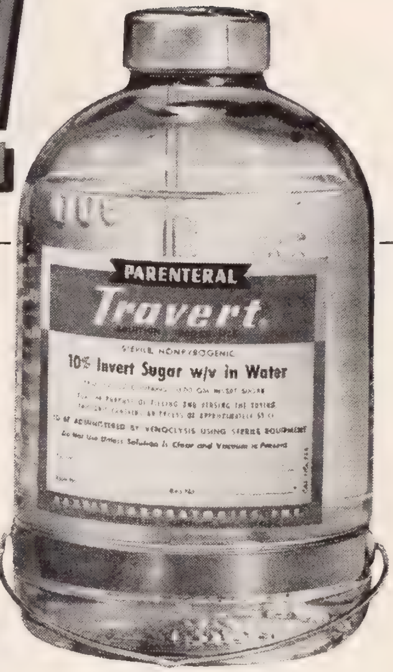

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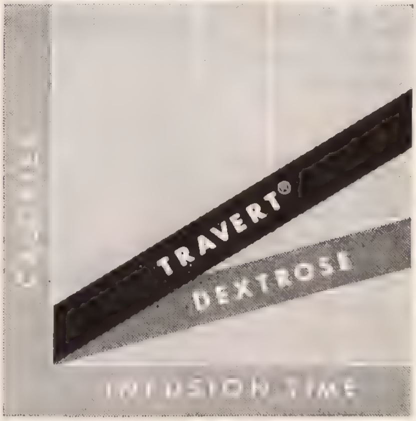

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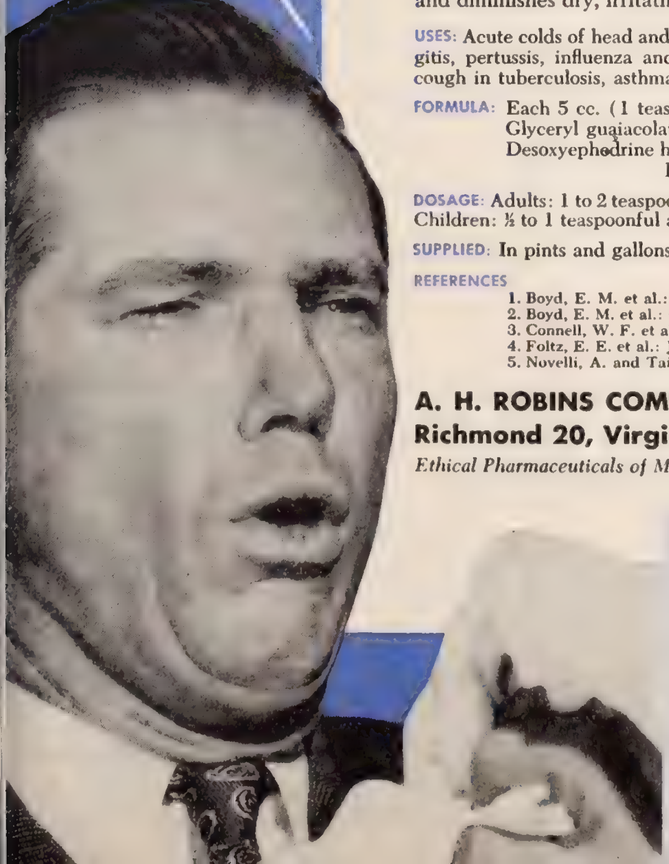

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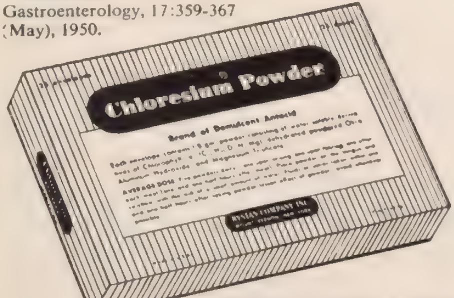

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*Offenkrantz, W. F., Rev. of Gastroenterology, 17:359-367 (May), 1950.

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Each tablet contains: Aluminum Penicillin, 50,000 units; sodium benzoate, 0.3 gram. Supplied in vials of 12 tablets.

[1] Terry, L. L. and Friedman, M. The Military Surgeon, Vol. 103, No. 5, November, 1948.
[2] Friedman, M. and Terry, L. L. Southern Medical Journal, Vol. 42, No. 6, June, 1949.
[3] Bohls, S. W. and Cook, E. B. M. Texas State Journal of Medicine, Vol. 41, November, p. 342.
[4] Reid, R. D., Felton, L. C. and Pitroff, M. A. Pro. Soc. for Exp. Biol. and Med., Vol. 63, p. 438.

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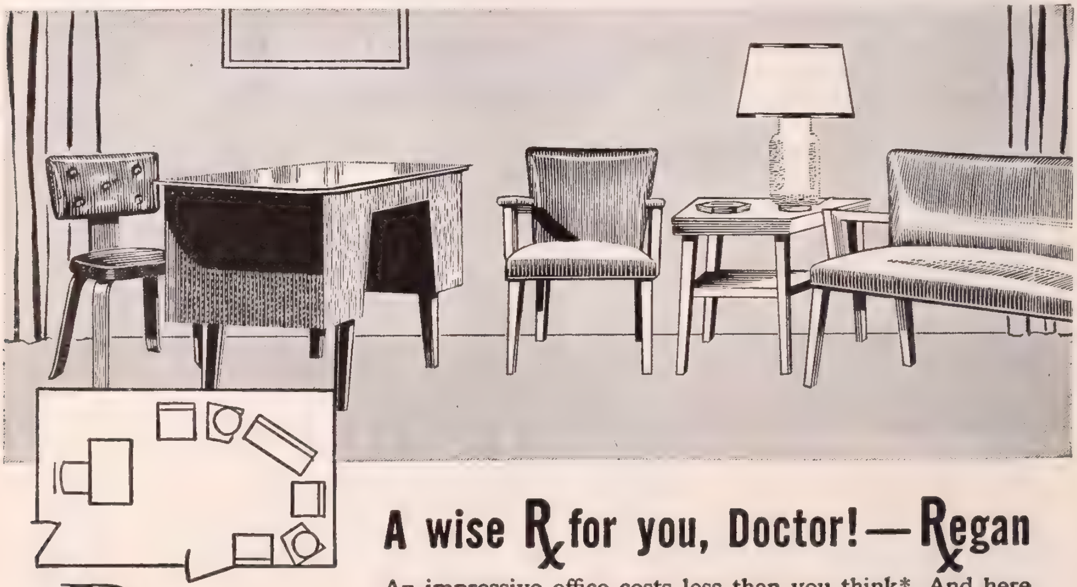

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(antihistaminic—antipyretic—analgesic)

with Chlor-*Trimeton** *antihistaminic therapy*

. . . prevents or aborts colds in 90% of cases when initiated within the first hour of symptoms.[1]

. . . shortens duration and decreases severity of an established cold.[1, 2]

. . . reduces the spread of infection to others by eliminating sneezing, lacrimation, rhinorrhea and coughing.[1]

DOSAGE AND TIMING: Two CORICIDIN tablets at the very first indication of a cold, then one tablet every three or four hours for three or four days. In established colds, one tablet every three or four hours for palliative effect.

COMPOSITION: Chlor-*Trimeton* 2.0 mg. (1/30 gr.) with Acetylsalicylic acid 0.23 Gm. (3½ gr.), Acetophenetidin 0.15 Gm. (2½ gr.) and Caffeine 0.03 Gm. (½ gr.).

PACKAGING: CORICIDIN tablets, tubes of 12; bottles of 100 and 1000.

BIBLIOGRAPHY:

1. Brewster, J. M.: U. S. Nav. M. Bull. *49*:1, 1949.
2. Murray, H. G.: Indust. Med. *18*:215, 1949.

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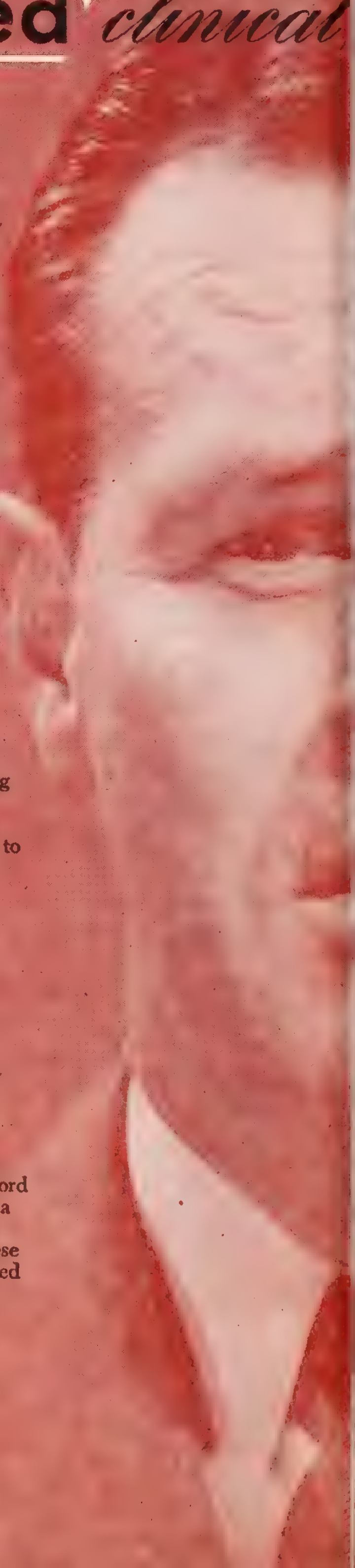
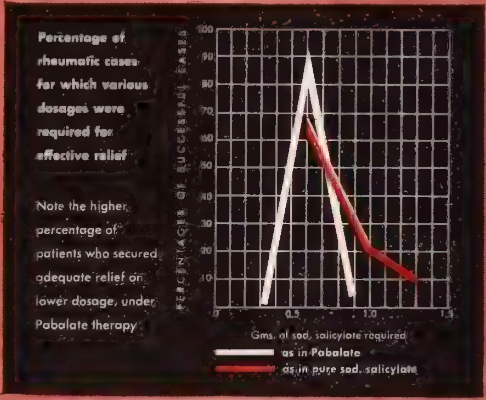


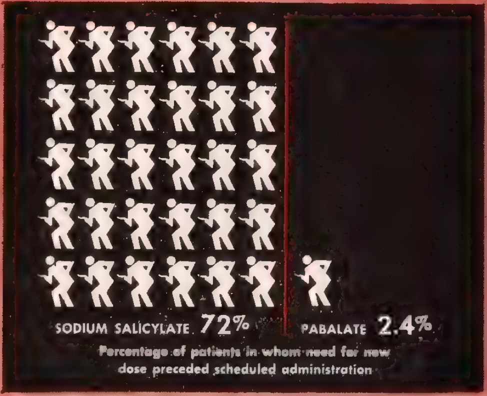

PERCENTAGES OF SUCCESSFUL CASES
100
90
80
70
60
50
40
30
20
10
0
0.5
1.0
1.5
Gms. of sod. salicylate required
as in Pabalate
as in pure sod. salicylate

Percentage of rheumatic cases for which various dosages were required for effective relief

Note the higher percentage of patients who secured adequate relief on lower dosage, under Pabalate therapy

CLINICAL EFFICACY ✓

of Pabalate therapy is indicated by the higher percentage of rheumatic patients securing adequate relief on lower dosages, than with sodium salicylate.*



Percentage of patients in whom need for new dose preceded scheduled administration

PROLONGED (24 HOUR) RELIEF ✓

from pain is afforded by Pabalate whereas 72% of those receiving pure salicylate in a clinical test required additional dosages, ½ to 1½ hours before due.*

Percentage of patients exhibiting by-effects
(tinnitus, deafness, gastric discomfort, nausea, vomiting, vertigo, constipation)

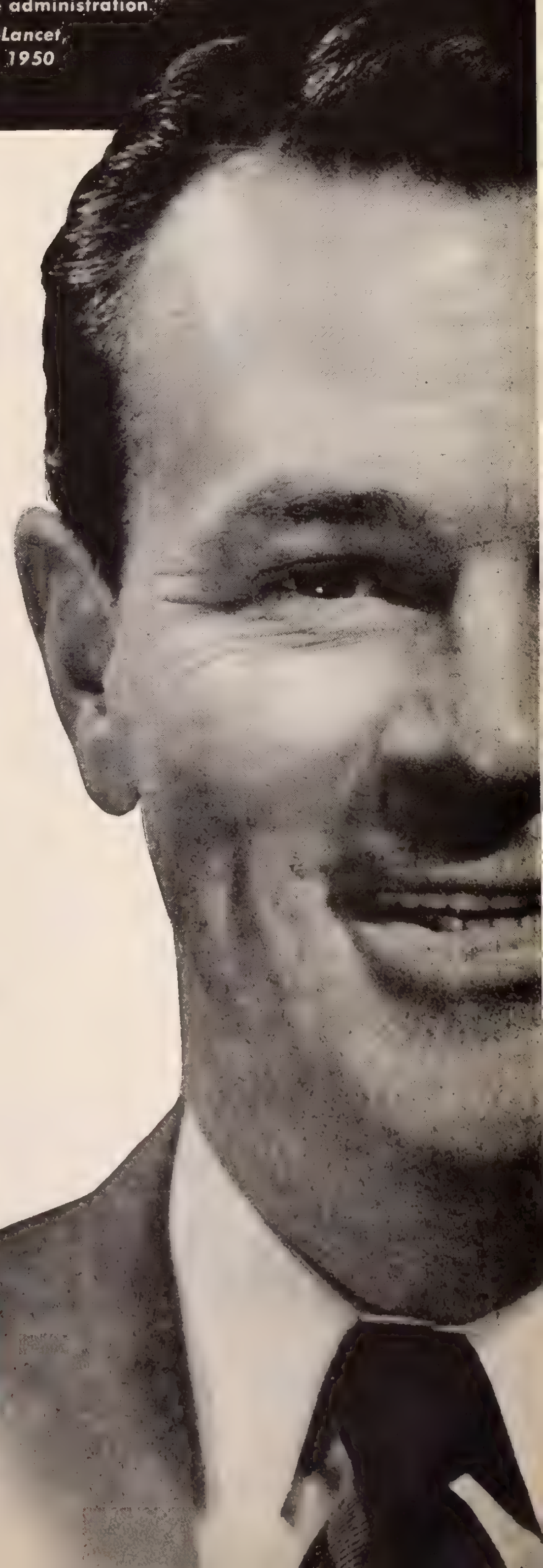
COMPLETE FREEDOM FROM TOXICITY ✓

is the remarkable record made by Pabalate in a clinical series of 125 patients. 55.2% of these same patients displayed symptoms of toxicity when taking sodium salicylate.*

antirheumatic superiority . . .

"The greater efficacy of this preparation is clearly manifested when one considers that whereas only sixty-eight per cent of the patients got relief from 0.6 Gm. doses of sodium salicylate, ninety-two per cent got equal relief on the same dosage of sodium salicylate in the form of 'Pabalate,' probably because of its para-aminobenzoate component." "Toxicity . . . [was] not reported by any of the patients during the administration."

— *Journal-Lancet, 70:192, 1950*



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NDICATIONS rheumatoid arthritis, fibrositis, cute rheumatic fever, gout, osteoarthritis. The Liquid also recommended as a replacement for analgesic-tipyretic medication generally.

ORMULA each Pabalate Tablet or each 5 cc. ne teaspoonful) of Pabalate Liquid contains sodium licylate, U.S.P. (5 grs.) 0.3 Gm.; para-aminobenzoic acid s the sodium salt) (5 grs.) 0.3 Gm.

SUPPLIED Pabalate Tablets are supplied in bottles 100 and 500; Pabalate Liquid in pints and gallons.

REFERENCES

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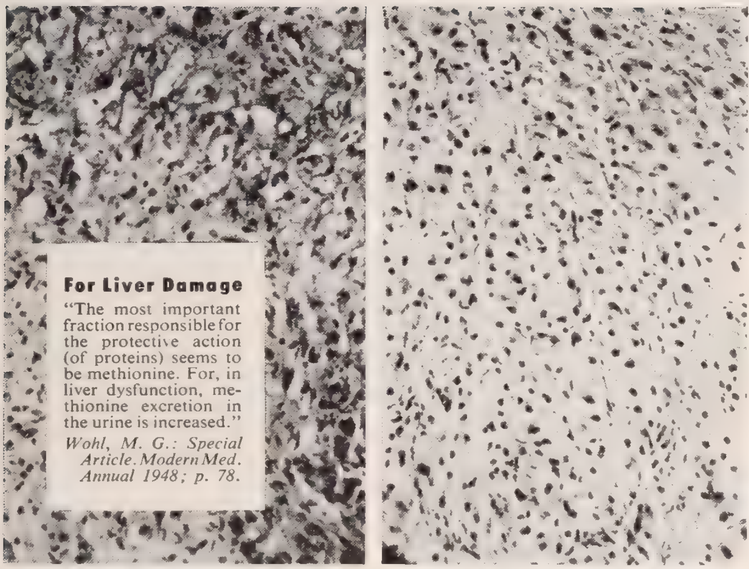

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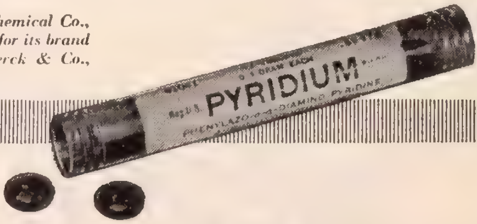

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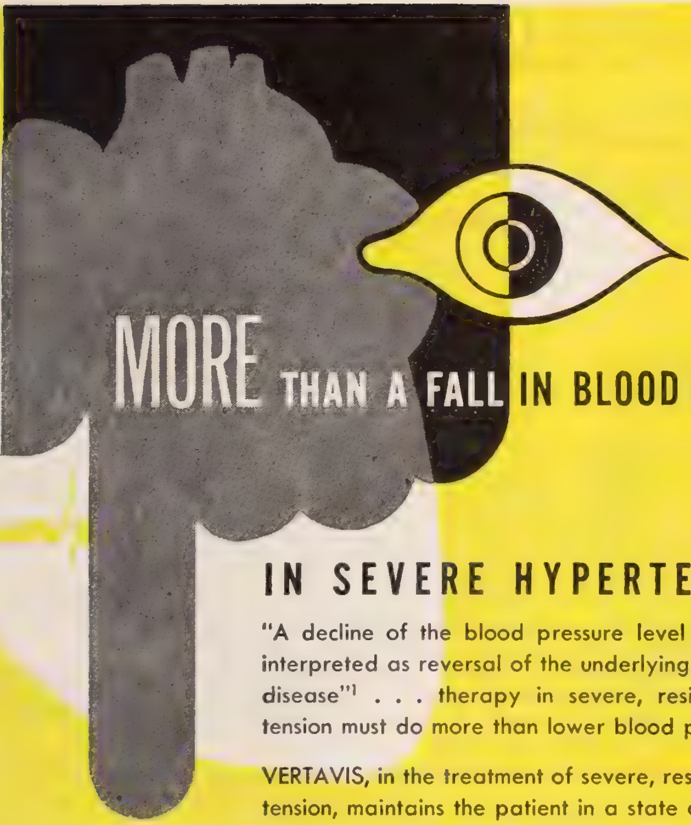

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(1) Missal, M. E.: New York St. J. Med. 50: 173-178, 1950; (2) Freis, E. D., and Stanton, J. R.: Am. Heart J. 36: 723-738, 1948; (3) Freis, E. D.: Med. Clin. N. Am. 32: 1247-1258, 1948; (4) Freis, E. D., et al.: J. Clin. Investig. 28: 353-368, 1949; (5) Wilkins, R. W.. et al.: J.A.M.A. 140: 261-265, 1949.

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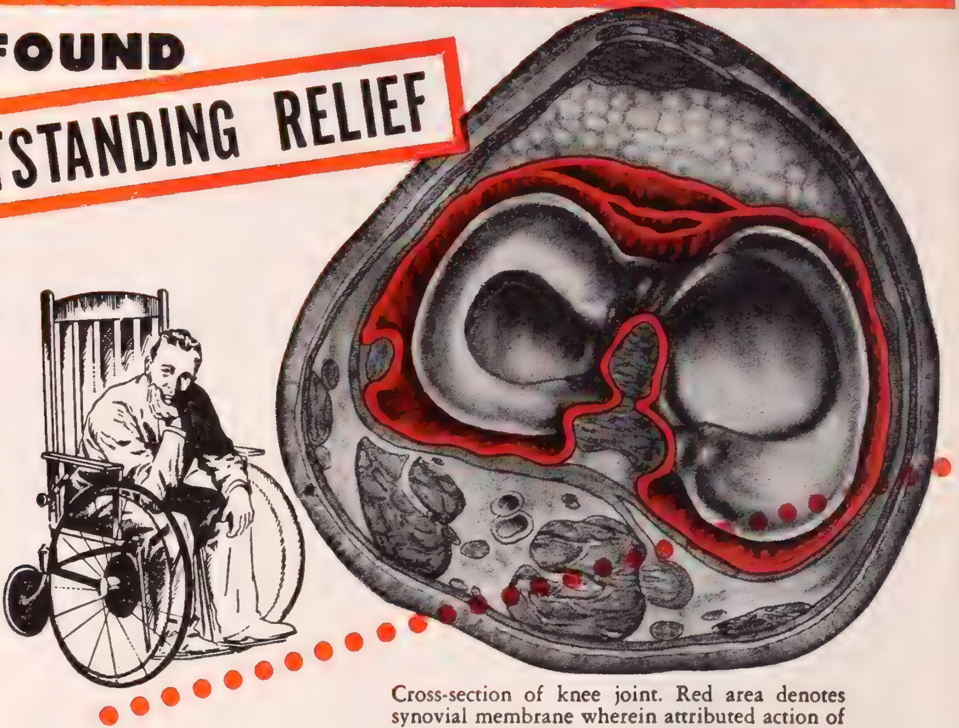

Cross-section of knee joint. Red area denotes synovial membrane wherein attributed action of sodium gentisate against hyaluronidase occurs.

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Also Available Sodium Gentisate Tablets 325 mg.—bottles of 100. Sodium Gentisate (powder) for prescription formulation through leading pharmacies.

[1] Meyer, K. & Ragan, C.: Mod. Concepts of Card. Disp., 17:2 (1948)
[2] Quick, A. J.: J. Biol. Chem., 101:475 (1933)
[3] Guerra, J.: J. Pharm. Exp. Ther., 87:1943 (1946)

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Camelin, et al: Presse Medicale, 58:889 (1950)
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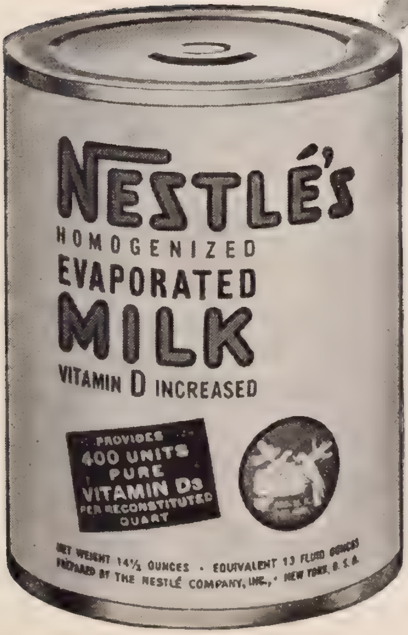
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1. Abramson, H.: "Fatal Boric Acid Poisoning in a Newborn Infant," Pediatrics 4:719-22, 1949.
2. Ross, C. A. & Conway, J. F.: "The Dangers of Boric Acid," American Journal of Surgery, 60:386-395, 1943.
3. Lictman, A. L., et al: "Talc Granuloma," Surg. Gyn. & Obst. 83:531-546, 1946.

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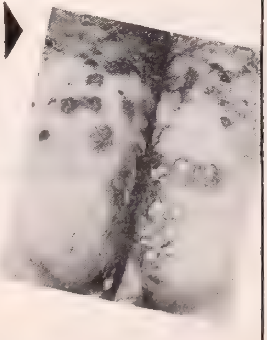

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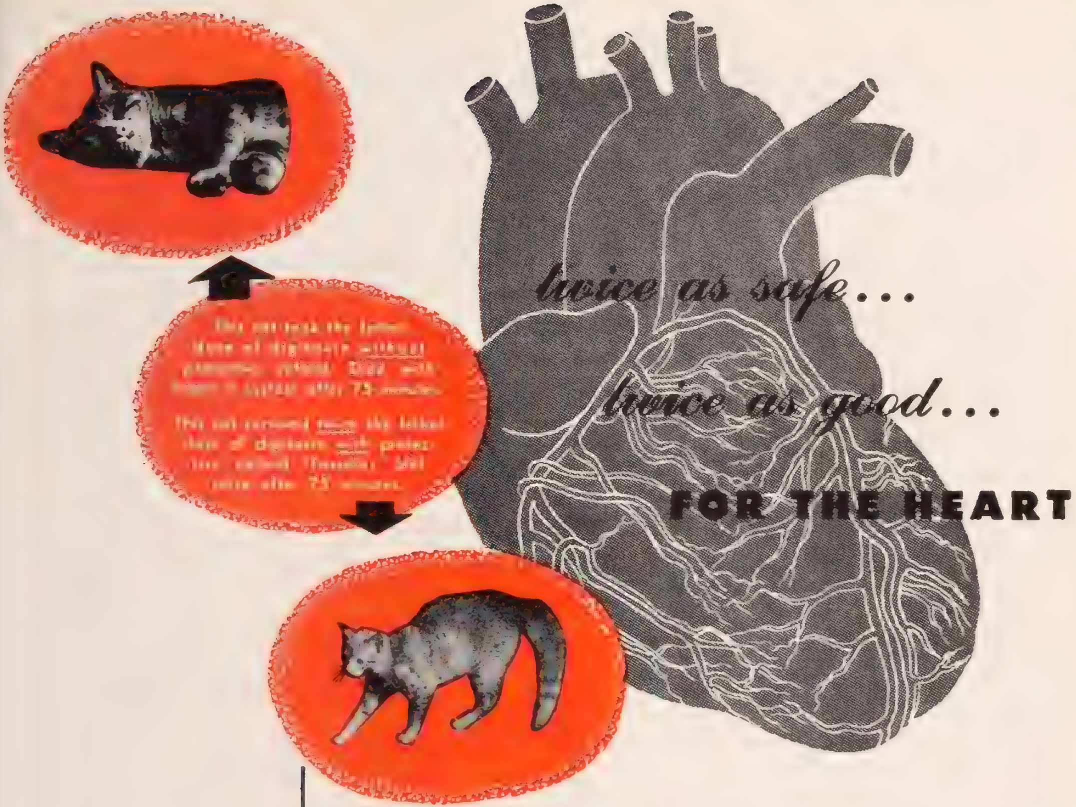
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NEW YORK STATE
JOURNAL OF MEDICINE

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VOLUME 50 DECEMBER 1, 1950 NUMBER 23

Editorials

The District Branch Meetings, 1950

An observer cannot fail to remark this year a spirit of renewed vitality and interest in the meetings of the district branches. As many older members may recall but some of the younger men may not know, the five original district branches were created by the New York State Medical Association, which was formed in 1884 by dissident members of the official Medical Society of the State of New York. Each branch covered the area of some 10 to 14 counties, and the meetings produced much of educational value to the physicians of the State. With the reunion of the two societies in 1906 the Medical Society of the State of New York took over the district branches from the Association.

In 1906 the number of the branches was increased to eight, and in 1925 Dr. Joseph Lawrence, executive officer of the Society, officially assumed the responsibility for the programs and arrangements of the branches. In 1944, Dr. Lawrence went to Washington as head of the Washington Bureau of the American Medical Association, and Dr. Robert R. Hannon became executive officer of the State Society. Attendance at district branch meetings during the War was somewhat curtailed due to travel restrictions and the physicians' heavy work load. But with the return to civilian practice of many of the younger men, interest in district branch meetings as well as attendance has noticeably increased.

The year 1950 marks the addition of a new district, the ninth, consisting of the counties of Dutchess, Orange, Putnam, Rockland, and Westchester. Thus in the period 1884-1950 the branches have nearly doubled in number while in almost the same period the population of the State (62 counties) has grown from 5,082,871 (1880) to 13,479,142 (1940) with 27,520 licensed physicians in

1949, of whom 9,966 practice outside of greater New York. Prior to 1944 it had been the duty of the president of the Medical Society of the State of New York to attend each district branch meeting, and this had been done faithfully since 1884. However, by 1944 the other duties of the president had grown to such proportions that he was relieved of one half of this obligation by the House of Delegates; the president-elect now addresses one half of the meetings each year.

Not only have the scientific portions of the meetings improved, due to the hard work of the officers, but more and more the social aspects seem to appeal to the doctors and their wives, particularly in the rural areas. This, we think, is a good symptom. As outside pressures upon formal medicine increase, there is greater need within the profession for a solidarity that is not only the scientific and relatively impersonal relationship between physicians in the hospital, at staff meetings and the like, but a solidarity that encompasses an appreciation of each other as human beings, sociable folk who have not lost the art of living, who can laugh at and with each other. Perhaps, in time, the period allotted to sociability during the meetings may be increased. It is something to think about.

A Fool and His Money . . . .

For some time it has been apparent that domestic inflation has been on the increase. Political considerations have seemed to prevail; frank discussion of the underlying threat to our economy has been suppressed. But frantic appeals from charitable and educational sources for more financial support to meet growing deficits, caused by higher costs of goods and labor, flow in daily with larger volume. Retail food prices at the corner grocery are up 20 to 30 per cent. Each day sees some group striking for higher wages. The government meanwhile goes its merry way buying up millions of dollars worth of food stuffs to be stored in rented caves and warehouses to support farm prices and to make housewives, hospital commissaries, and food buyers of all sorts pay more.

Now the higher taxes . . . . to sop up excess purchasing power . . . . . to pay for the Korean War . . . . . for the farm price support. Always more taxes, higher withholding rates, less take-home pay, more strikes for higher pay. The stupid political merry-go-round again—in spite of the experience of two previous wars, neither of which started with the handicap of some 257 billions of national debt. As an index of the rapid rise of inflation, the *Daily News* remarks:

> Back last June 25 when the military bigshots and budget experts were working over their slide rules, they came up with estimates that "X millions of dollars" would buy one hundred units of "military hardware." Well, take those $3^1/_2$-inch bazookas for instance which were so valuable in knocking out the Russian-made tanks of Red Korea. The U.S. tax cash which would pay for 100 last June 25 will now only pay for 77. The June 25 cost of 57-mm. and 75-mm. recoilless rifles has soared to the same extent. What formerly bought you 100 now gets you 77.
>
> The money which in June bought the Army 100 walkie-talkie radios now gets you 66. And as for aircraft, experts have testified that prices for their original combat Air Force program of April last have soared from around $315 to 360 million dollars.

This is not all. Our over-all defense buying—up 500 per cent since June 25—and supplies for the Atlantic Pact so-called allies—up 400 per cent in the same period—the increase in price since that time for these purchases has *passed five billion dollars.* American dollars have now begun to flow to the sounder currency of Canada and a few South American countries, a good sign that some people at least are alarmed at the fiscal prospect, even if our leaders in Washington are not perturbed.

Physicians will do well to take our present predicament seriously, we think. Every hospital budget, every insurance policy, every investment, every retirement plan is seriously threatened. All local charities, district nursing associations, and the like which depend solely upon the support of folks in a limited area and in modest circumstances are hard pressed to meet even heavily pared budgets. Yet no adequate controls of prices and wages have been instituted. We fail to understand why.

Already the operating costs of every county and state medical society have risen sharply with those of medical schools and hospitals. Shrinkage in dues-paying membership may be anticipated as more doctors are taken into the expanding military services. These considerations are of immediate concern to all who read this. Everyone is asked to accept increasing austerity and higher taxes and to institute economies—except the government which continues on its wasteful path to ruin.

Would it not be well for each member of this Society to think what can be done about it? In the best interests of the citizen-taxpayers, our less fortunate patients, and the poor, has not each physician an obligation to do what he may to halt the increasing, crushing burden of debt, rising food prices, and the inevitable misery of a bankrupt internal economy?

Darkness Before Dawn

As general knowledge and understanding by our citizens of this country's present unhappy predicament grows apace, the implications of the measures that may be taken to extricate ourselves become more and more disturbing to thoughtful men. One thing is certain: We are in it. And this certainty may be added to the other two—death and taxes.

Whether the current national predicament is the logical result of conscious choice and decisions made years ago, whether it has been fomented by ineptitude, blundering, or bad judgment or is merely the inevitable result of the inherent, explosive potential of conflicting ideologies makes little difference.

It has led to searching questionings, and the end is not yet in sight. It is leading to profound changes in our guiding personnel, and will change profoundly our mode of life. But the situation arising out of the predicament, with its many possible consequences, will ever move on, to what end? Our hopes, our determination, our sacrifices should be to bend those consequences to our liking—sane, strong, and civilized.

We are out of training, however; our muscles are soft; "our native hue of resolution is sicklied o'er" by subsidies; our capacity to become indignant, to be provoked, to rise in anger against any evil that does not affect us personally has become recently atrophied from disuse.

We have, in short, abandoned the concept of liberty held by our forefathers for a mess of sour pottage, for peace at any price. Under the new thought self-sacrifice for principle, for ideals, would seem to be like morality, a trait reserved for the very young, the naive, or the ignorant.

Symptoms of this malady are everywhere, even among some of the young men of the medical profession who have for the first time in history awaited the spur of the draft in the hour of their country's need. We believe, however, that when there is a multitude of symptoms the disease is functional and not organic, and that we have within ourselves what the situation needs. It will be set aflame, and soon. We will rise in our wrath, in our righteous anger, cast aside our tin cup with its thin, sour curds of subsidy and security, and with hardened muscles dare to challenge our fate, to go all out in order to come back in—free men.

SPECIAL ANNIVERSARY ISSUE

The January 1, 1951, issue of the JOURNAL will commemorate the Fiftieth Anniversary of the NEW YORK STATE JOURNAL OF MEDICINE. It will contain a history of the publication and special articles on the progress of medicine during this period.

Current Editorial Comment

Future M.D. Under the above title, the California Medical Association is publishing a news sheet directed to medical students, interns, and residents, which merits a word of commendation and should have an appeal to those to whom it is addressed. Neophytes in medicine have their problems, social, economic, and practical; they should be made aware of the world-wide convulsion in which they are required to participate not by choice but by necessity. The situation has been amply discussed in this new organ of information developed by one of our leading state societies and constitutes a pleasing contrast to that published in this State by an association of interns which is inimical to our fundamental practice of medicine.

A mind given to superstition is generally too weak to be reasoned out of it.

Authors are the worst judges of their own works, and so are physicians of their own complaints.

Youth Looks at Cancer. This provocative title is given to a booklet for general circulation provided by the Westchester Cancer Committee of the American Cancer Society, and, while addressed to students in schools, is applicable to their families and friends. The intelligent approach to cancer is to know about it, and this booklet provides such up-to-date, authentic, and useful information about the disease and its treatment that a reader cannot avoid being impressed by its contents. This latest revision of already widely circulated editions has been revised by Dr. Laurance D. Redway and others. Copies are available on application to the Committee, at 89 Pondfield Road, Bronxville 8, New York.

Medical Society of the State of New York

COMMITTEE FOR THE NOMINATION OF OFFICERS

1951–1952

In accordance with Chapter XI, Section 4 of the Bylaws, the President of the Society has appointed the following members as a nominating committee, who will present their report as of February 15, 1951.

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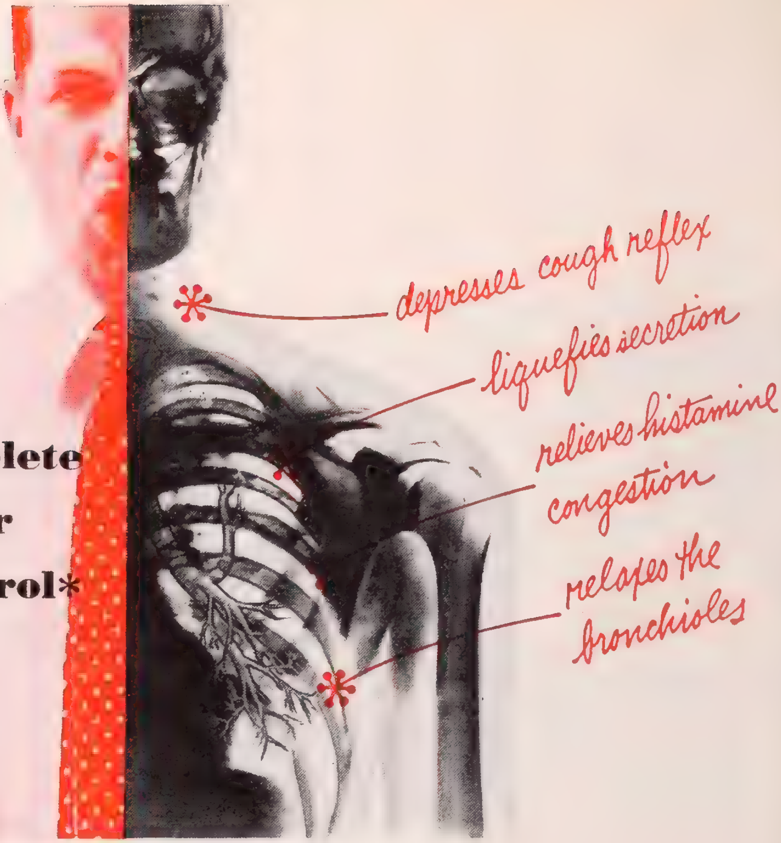
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Scientific Articles

BIOCHEMICAL AIDS IN THE DIAGNOSIS OF CANCER

Oscar Bodansky, M.D., New York City

(From the Memorial Hospital and the Sloan-Kettering Institute for Cancer Research)

BIOCHEMICAL aids in the diagnosis of cancer may be classified into two groups. The first comprises those procedures which aim at informing us whether or not cancer, of any type whatsoever, is present. The second class consists of those procedures which are based on revealing the biochemical derangement in a specific organ or tissue caused by the presence of a neoplasm in that or some other specific organ or tissue.

General Tests for Cancer

The search for a general test for cancer has a history of more than fifty years. It is a search which has been marked by alternate waves of hope and disappointment. For each of these tests, enthusiasm was high at first, then simmered down into argumentation, and finally vanished into neglect. Homburger has recently reviewed critically about 60 such procedures which were proposed during the years 1940 to 1948.[1]

There are a number of general tests for cancer which are of current interest and which have been or are being evaluated in various institutions throughout the country. It is beyond the scope of this paper to discuss these various tests in any detail. We should prefer to describe our own experience with the procedure proposed by Huggins, Miller, and Jensen in 1949, not only in order to evaluate this test, but also to illustrate the principles and criteria which must be followed in the devising of any general test for cancer.[2]

Huggins, Miller, and Jensen characterized the defective coagulation of serum proteins by the amount of iodoacetate necessary to inhibit coagulation by heat under certain standardized conditions. This coagulability was expressed as follows:

$$\text{Iodoacetate Index} = \frac{\mu\text{M iodoacetate} \times 4}{\text{Protein in Gm./100 cc. serum}}$$

Huggins found that 85 (97 per cent) of 88 patients with cancer had an index of less than 9. In contrast, only 16, or 17 per cent, of 95 patients with noncancerous disease and none (0 per cent) of 100 normal individuals had an iodoacetate index of less than 9.

We determined the values for the iodoacetate indexes in a group of 68 normal individuals, 68 patients with noncancerous disease, and 137 patients with cancer.[3] Figure 1 shows the distribution of the values for the indexes in these three groups, and Table I shows an analysis of the distribution of these indexes. It may be seen that none of the 68 normal individuals had an index of 8.9 or less and that only 35 of the 137 patients with cancer, or 26 per cent, had indexes below this value. The latter result contrasts sharply with that of Huggins and his associates who, it will be recalled, found that 97 per cent of his patients with cancer had an index below 8.9. Examination of Table I shows that when higher values for the iodoacetate index, such as 9.9, 10.9, 11.9, were used as differentiating points, increasingly greater percentages of cancer patients were included, but so also were increasingly greater percentages of normal people and of patients with noncancerous diseases. It was not possible to choose a range of values that was sufficiently inclusive of the values in noncancerous disease and sufficiently exclusive of those in patients with cancer to form the basis of a useful diagnostic test.

What was the reason behind the discrepancy between our results and those of Huggins? Table II shows that the group of cancer patients who were well enough to attend the outpatient clinic had higher indexes than did those patients with cancer who were hospitalized and who were very sick or were in the terminal stages of their disease.

In the course of our studies we noted a feature of considerable interest, namely, that the value of the iodoacetate index decreased, in some cases quite markedly, after operation. Figure 2 illustrates some of these decreases and shows that

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Presented at the 144th Annual Meeting of the Medical Society of the State of New York, New York City, Section on Pathology and Clinical Pathology, May 10, 1950.

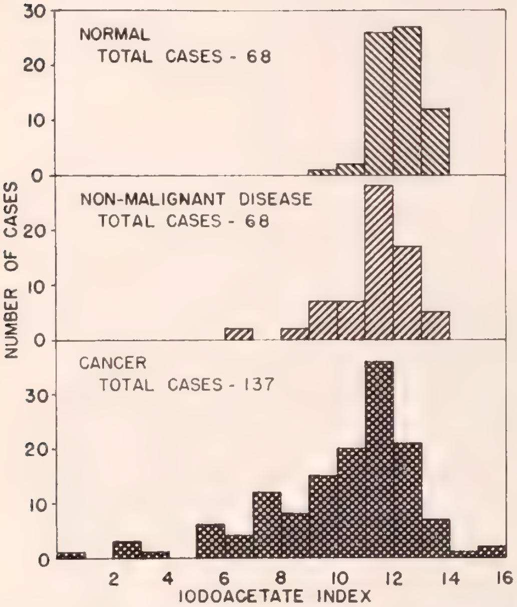

Fig. 1. Distribution of iodoacetate indexes in healthy individuals, patients with noncancerous disease, and patients with cancer.[3] Maximal amount of iodoacetate used in calculations was 22.8 micromoles.

after these declines the values for the iodoacetate index rose again toward normal levels after the first postoperative week unless infection supervened. We observed such postoperative decreases in 15 of 18 patients with cancer and in seven of eight patients who did not have cancer. The extent of the decline paralleled, in general, the extensiveness of the operation.

The occurrence of these low values of the iodoacetate index in the postoperative phase of surgery and in the sick cancer patients raised the question whether defective coagulation of the serum proteins was due to some common mechanism which was not specific for cancer. Huggins and his associates had reported low iodoacetate indexes in patients with tuberculosis and other infections. It has been shown that these three conditions, namely, the immediate postoperative phase of surgery, infection, and cancer in patients who are very sick are all characterized by an excessive excretion of nitrogen. The idea, therefore, suggested itself that the defective coagulation of serum proteins in these conditions was due to an over-all protein catabolism with accompanying increase in transport of proteins from the tissues to the serum.

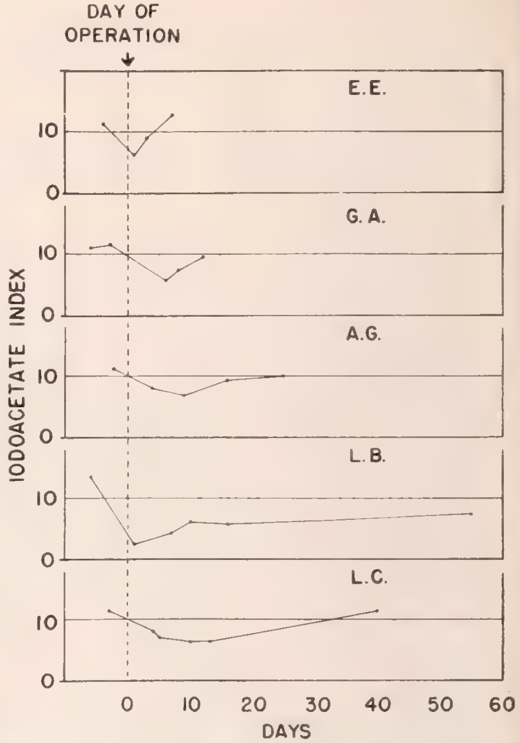

Fig. 2. Postoperative decline and subsequent rise of iodoacetate index.[3]

We had an opportunity to test this idea in four patients who were receiving adrenocorticotropic hormone (ACTH) and in one patient who was receiving cortisone. It has been established, both for rats and man, that administration of these

TABLE I. Comparison of Distributions of Iodoacetate Indexes* in Healthy Individuals, Patients with Noncancerous Disease, and Patients with Cancer[3]

		Per Cent Having an Index of			
	Number of Cases	8.9 or Less	9.9 or Less	10.9 or Less	11.9 or Less
Normal	68	0	1.5	4.4	45
Noncancerous disease	68	5.9	16	26	68
Cancer	137	26	36	51	77

* Maximal amount of iodoacetate used in calculations was 22.8 micromoles.

TABLE II.—Comparison of Distribution of Iodoacetate Indexes in Hospitalized and Clinic Patients with Cancer*,[3]

Index	Number of Clinic Patients	Number of Hospital Patients	Total
8.9 or less	7	28	35
9.0 or greater	51	51	102
Totals	58	79	137

* Chi square for difference between hospitalized and clinic patients = 10.0 ($p = <0.01$).

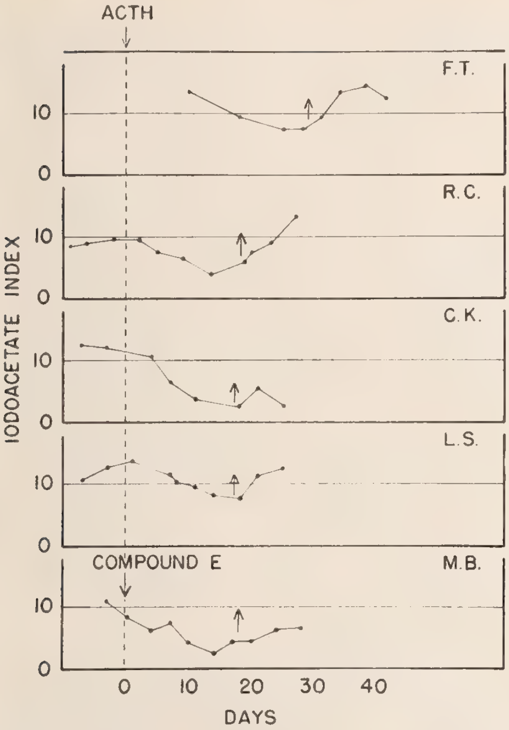

FIG. 3. Effect of administration of ACTH and Compound E on the iodoacetate index.[3] Upward arrow (↑) designates discontinuation of administration.

compounds leads to high nitrogen excretions and negative nitrogen balances. Figure 3 shows that, as a result of administration of ACTH and cortisone, the iodoacetate indexes, which were normal to begin with, decreased until they reached definitely low levels. As soon as the administration of these compounds was discontinued, the iodoacetate indexes began to rise and reached normal levels unless, as in the cases of patients C. K. and M. B., infection supervened.

It may be readily appreciated that some of the conditions which we have mentioned, namely, infection or operative procedure, may, in accordance with the concepts of Selye, be regarded as injurious stimuli which produce an excessive amount of adrenocorticotropin and thus affect the metabolism of protein.[4] It is known that these and other noxious stimuli, such as freezing, burns, application of skin irritants, hemorrhage, bone fracture, or myocardial infarctions, lead to changes in the electrophoretic pattern of the blood and changes in the sedimentation rate. Similar alterations have been reported in cancer, and the possibility exists that such changes may be due not to cancer per se but to the existence of other factors, such as infection, tissue necrosis, inanition, or great and protracted pain which may be associated with cancer in certain cases.

The significance of these considerations in the devising and evaluation of a general test for cancer appears evident. Such a proposed test should be scrutinized with respect to the possibility that it reflects merely an excessive over-all metabolism of protein. In other words, the test should be positive in early cases of cancer where the physical status and general nutrition of the patient are good. It should be negative in those conditions, such as infection, pregnancy, malnutrition, liver disease, where the protein metabolism may be disturbed. Of course, this distinction need not be absolute, but it must be quite marked. As the result of an analysis of the statistical aspects of this problem, Dunn and Greenhouse have recently stated that a general cancer test to be used for mass screening should give positive results in at least 90 per cent of the early localized cancer cases encountered in the general population and not more than 5 per cent false-positives in noncancerous individuals in the general population.[5]

Biochemical Aids in the Diagnosis of Specific Types of Cancer

We shall discuss now the second group of biochemical aids in the diagnosis of cancer, namely, those procedures which reveal a biochemical derangement of the function of a specific organ or tissue that is caused by the presence of a neoplasm in that or some other organ. Limitation of space forbids an exhaustive review of the problem, and we shall, therefore, consider only a few types of neoplasm.

Cancer of the Liver.—Most of the cancers which affect the function of the liver are secondary cancers, namely, metastases from other organs or extensions of carcinomas of the head of the pancreas, of the gallbladder, or of the ampulla of Vater. These cancers cause obstruction of the bile ducts, and the biochemical findings which

TABLE III.—CONCENTRATION OF TOTAL SERUM CHOLESTEROL IN CANCER AND OTHER DISEASES OF LIVER[6-9]

Group	Number of Cases	—Per Cent of Cases with— Concentrations Less than 250 Mg. per 100 Cc.	Greater than 250 Mg. per 100 Cc.
Normal	117	91	9
Parenchymatous liver diseases	111	77	23
Obstruction due to stone in bile duct	70	24	76
Obstruction due to carcinoma of head of pancreas, of extrahepatic biliary tract, or of metastases to lymph nodes	82	12	88

TABLE IV.—DUODENAL ENZYMES IN CARCINOMA OF THE PANCREAS[12]

Group	Number of Cases	Trypsin Percentage of Cases Having Units Less than 2	Trypsin 2.1 to 6	Trypsin 6.1 or Higher	Amylase Percentage of Cases Having Units Less than 2	Amylase 2.1 to 6	Amylase 6.1 or Higher
Normal	17	12	63	25	12	18	70
Cirrhosis; hepatitis	31	26	64	10	23	51	26
Obstruction due to stone	25	25	75		52	20	28
Obstruction due to carcinoma: head of pancreas or ampulla of Vater	15	73	20	7	67	33	0

they give rise to are similar to those which result from obstruction due to stones in, or stricture of, bile ducts. This similarity may be illustrated briefly by Table III where it is shown that the incidence of increased concentrations of serum cholesterol is about the same in both types of obstruction and is, of course, much higher than that present in parenchymatous liver disease. Other criteria of biliary obstruction, such as the level of serum alkaline phosphatase activity, show a pattern in obstruction due to these secondary carcinomas which is the same as that due to obstruction from stones in the bile ducts. There are few data in the literature concerning the biochemical findings in primary carcinomas of the liver. However, these indicate, in general, a resemblance to those found in parenchymatous rather than obstructive disease of the liver.

Cancers of the Ducts and Acini of the Pancreas.—Carcinomas of the pancreas most frequently affect the ducts and acini. The islets are also affected by neoplastic changes, but usually such changes are adenomatous and only rarely can they be termed malignant.

Carcinomas of the ducts and acini may give rise to a variety of biochemical derangements. By encroaching upon the islets of Langerhans, carcinomas of the pancreas may, in a certain number of instances, lead to glycosuria and hyperglycemia. We have already seen that carcinoma of the head of the pancreas or of the ampulla of Vater causes an obstruction of the common bile duct with findings similar to those due to any such obstruction, namely, jaundice, increased concentration of serum cholesterol, and increased serum alkaline phosphatase activity. A biochemical analysis of the duodenal secretion is of considerable value in deciding the nature of the obstruction. The presence of a stone in the common bile duct will be evidenced by cholesterol crystals, since their origin is the biliary calculi. The presence of red blood cells often indicates a carcinoma of the ampulla of Vater, because of ulceration at this site. In obstruction due to stones, the activities of the pancreatic enzymes, trypsin, lipase, and amylase, are unaltered, since the pancreatic duct is not obstructed. On the other hand, in cancer of the ampulla or of the head of the pancreas, both the biliary and the pancreatic ducts are often obstructed and the pancreatic enzymes in the duodenal secretions are diminished or absent.

We may now illustrate some of these statements by reference to specific studies. As has already been noted, glycosuria may occur in some instances. In various studies, the incidence of glycosuria has ranged from 9 to 24 per cent of the cases. More recently, Dashiell and Palmer obtained an incidence of 27 per cent in a series of 81 cases.[10] These authors also noted a decrease in the glucose tolerance in 18 of 21 cases in which this determination was done. In a series of 75 cases, Arkin and Weisberg found hyperglycemia in 15 per cent and reduced sugar tolerance in 20 per cent of the cases.[11]

Of considerable aid in the diagnosis of cancer of the pancreas are the analyses of the enzyme activity in the duodenal fluid. Table IV, based on the data of Comfort, Parker, and Osterberg, shows that only about 12 to 25 per cent of normal individuals or patients with liver disease had duodenal fluid trypsin activities which were less than 2 units, as defined by Comfort and his associates.[12] In contrast, 73 per cent of patients with obstruction due to carcinoma showed trypsin activities less than this level. A similar, although not so marked distinction, may be seen with respect to the duodenal amylase activities and was also observed with respect to the lipase activities.

The serum lipase activity, as is well known, is increased in diseases of the pancreas. Comfort observed that about one third of the cases with carcinoma of the pancreas and about 60 per cent of the cases with carcinoma of the ampulla of Vater showed increased values.[13] Since only a small proportion of patients with biliary tract disease show an elevation in serum lipase activity, this determination serves to differentiate between obstruction due to carcinoma of the pancreas and that due to stones in the bile ducts or metastases to the liver.

Tumors of Islet Cells with Hyperinsulinism.—In 1935, Whipple and Frantz reviewed 75 cases of hyperinsulinism.[14] In 62 of these cases tumors were found in the pancreas, and of these 62, three were carcinomatous and had metastases. In 1944, Frantz reviewed 127 cases of adenomatosis of the islet cells.[15] Of these, 12, or 10 per cent, were cases of proved malignancy.

The fasting blood sugar was determined, pre-

TABLE V.—TWENTY-FOUR-HOUR EXCRETION OF KETOSTEROIDS IN TUMORS OF THE ADRENAL CORTEX[19-23]

Number of Cases	Per Cent of Total Cases Giving Daily Excretion 1 to 10 Mg.	11 to 20 Mg.	21 to 30 Mg.	31 to 50 Mg.	51 to 100 Mg.	101 to 200 Mg.	201 to 400 Mg.	401 to 1,000 Mg.
41	10	5	7	5	24	22	17	10

sumably by a variety of methods, in 28 of the cases listed by Whipple and Frantz. The values ranged from 4 to 58 mg. per 100 cc., and in 26 of these cases, or 93 per cent, the concentration was less than 50 mg. per 100 cc. The cases with carcinoma did not exhibit more marked hypoglycemia than did the patients with simple adenoma. We need not elaborate upon the clinical symptoms which are associated with a low blood sugar; these may range from mild nervousness to mental confusion, erratic behavior, and even unconsciousness and convulsions. It is necessary to watch for symptoms such as these when food is withheld in order to evoke hypoglycemia in a suspected case of adenoma or carcinoma of the islets.

The glucose tolerance curve for the usual three to four hours is variable in these cases, as it may be essentially normal or mildly diabetic in nature. However, if blood glucose determinations are done at the fifth or sixth hours, definitely low values may be obtained. For example, Marble and McKittrick reported such glucose tolerance tests in a series of six cases; in five of these the blood glucose decreased to approximately 40 mg. per 100 cc.[16]

Although a lowered concentration of blood glucose is of considerable aid in diagnosing tumors of the islets, it should be realized that this finding may be obtained in other conditions, such as renal glycosuria, liver diseases which either interfere with the storage of glycogen or which cause an excessive storage of glycogen, and diseases which destroy or cause the atrophy of the pituitary or the adrenal gland. However, clinical symptoms and biochemical findings other than hypoglycemia aid in differentiating between these conditions and those due to adenoma or carcinoma of the islets of Langerhans.

Carcinoma of the Adrenal Gland.—Carcinomas of the adrenal cortex are almost invariably associated with a greatly increased excretion of ketosteroids. The values for the excretion in normal individuals vary somewhat with the investigator and the particular modification of the Zimmerman method which he has employed. Luft in Sweden has submitted unusually high values.[17] Those obtained by other investigators range from 1.7 to 18 mg. and average 8.8 mg. per day for females. For adult males, the range obtained by various workers is from 3.5 to 27.2 mg., and the average is 13.4 mg. per day.

TABLE VI.—SERUM ACID PHOSPHATASE IN PATIENTS WITH CARCINOMA OF THE PROSTATE[24]

Group	Number of Cases	Percentage of Cases with Serum Acid Phosphatase Less than 3.0 Units	Greater than 3.0 Units
Normal	30	100	0
Carcinoma of prostate; no metastases	70	89	11
Benign prostatic hypertrophy	75	100	0
Prostatitis	10	100	0
Carcinoma of prostate with metastases	130	15	85

The excretion of ketosteroids is frequently moderately elevated in those conditions such as Cushing's syndrome or adrenogenital syndrome in which hypertrophy of the adrenal is either found or is known to exist. For example, Hoffman observed that in cases without adrenal cortical carcinoma the values were normal or slightly high (range 7.5 to 36 mg. per twenty-four hours).[18] Escamilla obtained a range of 5.6 to 20.3 mg. in eight female adult patients, 12 and 29.3 mg. in two male adults, and 4 mg. in an eleven-year-old girl.[19]

Table V shows the distribution of the twenty-four-hour excretion in 41 cases of adrenal cortical tumor collected from the literature. It is not clear from the reports that these were all cases of adrenal carcinoma. Moreover, a number of these cases occurred in very young children in whom the normal excretion of ketosteroids is very low. It will be noted that 85 per cent of the cases show an excretion greater than 20 mg., and 73 per cent show an excretion greater than 50 mg. per twenty-four hours. Values over 100 mg. per day were frequent, and values as high as 800 mg. per day have been reported in a number of cases.

Carcinoma of the Prostate.—One of the most useful and reliable tests for the diagnosis of a specific type of cancer has proved to be the determination of serum acid phosphatase in the diagnosis of carcinoma of the prostate. There are many studies in the literature which illustrate the diagnostic aid which is to be obtained from this determination. We may illustrate this by a study made by Sullivan, Gutman, and Gutman in 1942.[24] Table VI shows that all of 30 normal individuals, or 100 per cent, had a serum acid phosphatase activity of less than 3.0 units. Similarly 100 per cent of patients with benign prostatic hypertrophy or with prostatitis showed activities less than 3 units per 100 cc. Eleven per cent of patients with carcinoma of the prostate but no metastases showed slight elevated activities, between 3.0 and 4.9 units. In contrast to these findings were those in patients with carcinoma of the prostate and with bone metastases as shown by x-ray. Eighty-five per cent of such patients had values higher than 3.0 units; in some cases the serum acid phosphatase activity was as high as 1,000 units. Similar results have been obtained by other investigators such as Herger and Sauer, Huggins and Hodges, and Herbert.[25–27] It should be noted that several methods for acid phosphatase are in use, and one should be acquainted with the normal range of activities obtained by each of these methods. However, in any case, when a serum acid phosphatase above the upper limits of normal is obtained, the chances are extremely high that carcinoma of the prostate with metastases to the bones is present.

Such an independent criterion of the existence of metastases in carcinoma of the prostate may be of considerable value in diagnosis. In some cases, the existence of metastases may be discovered before there is definite roentgenographic evidence. Again, the determination of acid phosphatase is of aid in differentiating bone diseases, such as Paget's disease, from carcinoma of the prostate. This determination is also of value in deciding whether operation is advisable and in following therapy.

Summary

We may briefly summarize this discussion by stating that biochemical aids in the diagnosis of cancer may be general or specific. Although there has been a great deal of interest in a general test for cancer, no reliable method is at present available. This, however, is a most important field for investigation. The second group of tests which we have discussed offer aid in the diagnosis of specific cancers such as those of the prostate, the adrenal, and the pancreas. They have the advantage in that we understand something about the biochemical mechanisms which underlie these tests. Like other diagnostic procedures, biochemical tests cannot be used alone; in combination with the history, physical examination, and other laboratory procedures they may be of considerable value in arriving at a diagnosis and in managing the patient with cancer.

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CORTISONE SIDE-EFFECTS REDUCED BY SMALLER DOSAGES

The development of a dosage of cortisone acetate to maintain improvement in cases of rheumatoid arthritis with a minimum occurrence of undesirable side-effects is reported in the September 30 issue of the *Journal of the American Medical Association.*

Cortisone is not a cure for the disease, but its administration reverses crippling results. Its continued use is necessary in order to prevent the return of the pain and deformities which mark rheumatoid arthritis. The problem of physicians using the drug has been to prevent complications in side-effects.

A report on the treatment of 42 patients is made by Dr. Edward W. Boland and Dr. Nathan E. Headley of Los Angeles. Based on preliminary studies, they said it appears that some severe cases and most less severe cases may be kept under adequate clinical control for long periods, with relative safety, with smaller maintenance doses ranging from 32 to 65 mg. a day, provided larger doses are used initially.

Comparatively few unfavorable reactions have developed when these small doses have been used continuously for as long as six months. So far all adverse effects have been temporary, disappearing on hormone withdrawal or lowering of the dosage.

CHANGES IN THE UTERINE CERVIX ASSOCIATED WITH PREGNANCY AND EPIDERMOID CARCINOMA IN SITU

JOSEPH SCHLEIFSTEIN, M.D., Albany, New York

(From the Division of Laboratories and Research, New York State Department of Health)

CARCINOMA of the cervix associated with pregnancy threatens two lives. Fortunately, early diagnosis and adequate treatment offer a good prognosis. On the other hand, incorrect diagnosis and surgery or radiation therapy may be fatal to the child and injurious to the mother.

Our attention was drawn to this problem in 1948 following an incorrectly diagnosed carcinoma in situ in a girl nineteen years of age, who, it was learned later, had aborted six weeks previously. Four additional cases have since been observed and form the basis of the present report.

Carcinoma of the cervix during pregnancy is rare, the incidence being approximately 0.03 per cent.[1-5] All of the authors cited stress the fact that carcinoma during pregnancy is usually found in multiparas and only rarely in primiparas, the average ratio being 8:1. Hirst, however, believes that carcinoma, especially carcinoma in situ of the cervix, occurs during pregnancy more frequently than the literature indicates.[6] He reports the occurrence of 23 new cases during the past five years, of which five were collected from the records of the Philadelphia Lying-In Hospital, an incidence of approximately 0.09 per cent in 2,264 pregnancies. Pregnancy complicating cervix carcinoma is perhaps not as rare as the converse. Sadugor, Palmer, and Reinhard found that, of 4,652 patients with carcinoma of the cervix admitted to Roswell Park Memorial Institute in thirty years, 124 or 2.6 per cent were pregnant.[7] It is significant that all of these authors, while mentioning the possibility of pregnancy changes in the cervix being mistaken for carcinoma, apparently feel that the differentiation is not too difficult. Their studies, however, were conducted previous to the recent advances in the early diagnosis of cancer of the cervix, and the diagnosis of carcinoma was made only when the basement membrane was breached.

While the concept of carcinoma in situ as a precursor of invasive carcinoma of the cervix was held in the early 1930's, general acceptance among pathologists is relatively recent.[8-12] This trend has led to earlier and earlier diagnosis of carcinoma in situ. While this has probably been a commendable advance, it is fraught with risks, and pathologists find it difficult to determine the minimum histologic changes necessary to establish a certain diagnosis of carcinoma in situ. The difficulties are deepened when the changes closely associated with pregnancy are superimposed on a carcinoma in situ. A search of standard textbooks of gynecology failed to reveal any information on the peculiar changes in the cervix that may be mistaken for carcinoma in situ, and only a few publications under a variety of titles dealing with this subject were found in the recent literature.[13-16]

The physiologic changes in the cervix during pregnancy have been fully described by the older writers. Hofbauer was among the first to call attention to certain changes which histologically may be the precursors of epidermoid carcinoma.[17] He examined the cervices of 29 gravid uteri and noted a variety of epithelial changes—in the majority, reduplication of cell layers, vacuole formation, and polymorphism of nuclei. In eight cases, however, epithelial proliferation with stratification, occurrence of mitotic figures, epithelial downgrowth into connective tissue, and goblet-cell formation were observed. He suggested that these might represent an important link in the chain of factors leading to more extreme epithelial variations and possibly carcinoma. These changes have been studied also by Levey, by McIlrath and Hellestrand, and by others.[18,19] Fluhmann in particular made a significant contribution to this problem.[20] On the basis of a study of 89 cervices, he believes epidermization and hyperactivity of the basal cell layers of the squamous epithelium are of special importance in view of the search for methods dealing with the recognition of early carcinomatous changes. These abnormal proliferations are especially apt to occur during pregnancy. In basal cell hyperactivity, he points out, an already fully developed squamous epithelium sends out shoots containing immature, rapidly proliferating cells which stain irregularly. The individual cells may vary in size, and many mitotic figures can be found. It is this picture, he concludes, that presents a difficult problem in the differentiation of early cancer.

Several reports caution against mistaking decidual reaction of the cervix for carcinoma. Lapan reports three cases of deciduosis of the cervix and vagina simulating carcinoma grossly.[21]

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This type of lesion, however, appears to be different from the changes encountered in our study. Sheets describes the changes of the postpartum cervix and stresses the difficulty of differentiating these from carcinoma, especially early carcinoma in situ of the cervix.[22] During the past two years, Novak has called attention to the changes in the cervix associated with pregnancy, cautioning against mistaking them for carcinoma in situ.[23] The recent publication of Hill is in a similar vein.[24] Murphy and Herbut do not hold this point of view.[25] While agreeing that basal cell hyperplasia does occur and that the squamous epithelium undergoes hypertrophy, they feel there is little resemblance to either invasive carcinoma or carcinoma in situ. Their conclusions are based on a series of 50 biopsy specimens of which 25 were from multiparas.

During the past two years approximately 2,500 biopsies of the cervix submitted primarily for diagnosis of cancer have been examined at the Division of Laboratories and Research. Of these, 259 are related to the problem under consideration. Squamous metaplasia of varying degrees, almost always associated with cervical polyps, occurred in a high percentage of pregnant and postpartum cervices. We believe it has no relationship to carcinoma.[26, 27] The classification of the significant lesions is shown in Table I.

TABLE I.—CLASSIFICATION OF SIGNIFICANT LESIONS

Classification	Number of Cases
Chronic cervicitis with decidual reaction	15
Cervical polyp with decidual changes	9
Papilloma of the cervix associated with pregnancy as described by Edmondson *et al.*[28]	6
Unequivocal carcinoma in situ associated with pregnancy	2
Invasive carcinoma	184
Carcinoma in situ	38
Equivocal lesions associated with pregnancy and difficult to distinguish from carcinoma in situ	5

The last five cases listed have been selected for discussion in the hope that the chance for errors of commission or omission which they present may be of value to others faced with similar problems.

Case Reports

Case 1.—F. R., age nineteen. A cervical biopsy was submitted for diagnosis accompanied by no other information. Histologic examination showed dilatation of the cervical glands with increased mucous secretion; the submucosa was infiltrated with inflammatory cells. The squamous epithelium was characterized by loss of stratification, the whole thickness being replaced by atypical cells varying in size and shape, with hyperchromatic nuclei and numerous mitoses. A diagnosis of carcinoma in situ was made (Figs. 1 and 2).

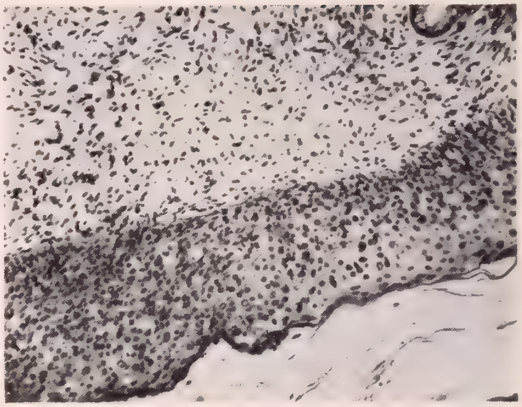

FIG. 1. Case 1. Loss of stratification, variation in size and shape of cells, hyperchromatic nuclei, and mitotic figures. Diagnosed as carcinoma in situ. (190 ×)

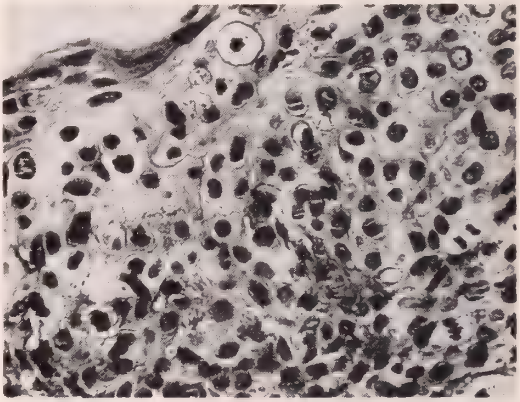

FIG. 2. Case 1. Higher magnification of Fig. 1, showing details of cells. Note the hyperchromatic nuclei and the mitotic figures. (600 ×)

It was learned subsequently that the patient was six weeks postpartum when the biopsy was made. She received no treatment and was followed at monthly intervals by examination of vaginal film preparations; all findings were negative. Later, she became pregnant again and was delivered prematurely at seven and one-half months.

One year and four months after the first biopsy, another biopsy showed chronic cervicitis, and clinically the cervix appeared normal.

Case 2.—E. H., age thirty-two. A cervical biopsy and a cervical film preparation were submitted in November, 1948, for diagnosis. No other information was volunteered at that time.

Histologically, a diagnosis of carcinoma in situ was made. The attending physician questioned the diagnosis, stating that the patient had been hospitalized for incomplete abortion and requested the

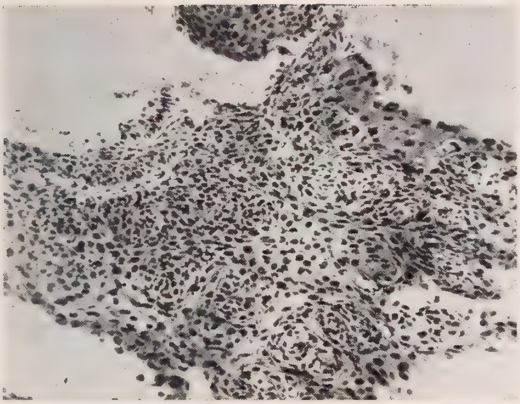

FIG. 3. Case 2. First biopsy—hyperplasia and anaplasia of the basal cell layers, hyperchromatic nuclei, and mitotic figures. Carcinoma in situ? (190 ×)

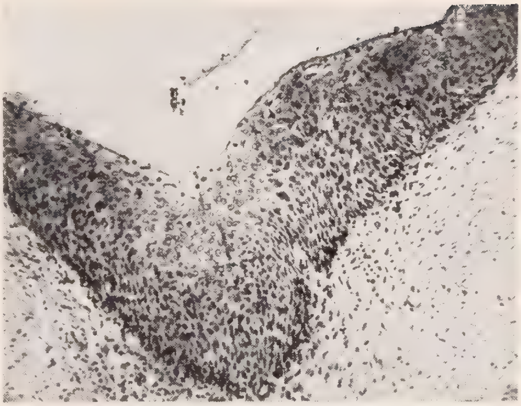

FIG. 5. Case 2. Second biopsy taken one year later—anaplasia and neoplasia involving the whole mucosa; epidermoid carcinoma in situ. (190 ×)

opinion of another pathologist. The film preparation and section were submitted to two consultants. While agreeing that the changes were atypical, they were unwilling to make a definite diagnosis of carcinoma and advised careful follow-up by examination of vaginal films and by repeat biopsy. One of the consultants suggested that the changes were probably due to the recent pregnancy. A series of film preparations all showed atypical cells suggesting carcinoma. Finally, in November, 1949, a complete hysterectomy was done (Figs. 3–6).

Grossly the uterus and cervix showed no significant abnormalities. A small ovarian cyst was present on the left side. Microscopically the fundus and adnexa showed no significant changes. The cervix was sectioned in serial blocks as advised by Foote and Stewart, and numerous sections were made of each block.[29]

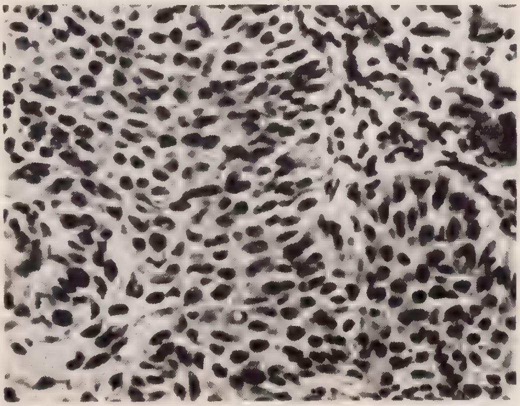

FIG. 4. Case 2. Higher magnification of Fig. 3, showing neoplasia of mucosal layer. (600 ×)

Histologic examination of the cervix now showed an unequivocal carcinoma in situ with no evidence of infiltration in any of the numerous sections. This diagnosis was confirmed by both consultants.

Case 3.—L. Y., age thirty. A biopsy of the cervix was submitted early in pregnancy. Histologically,

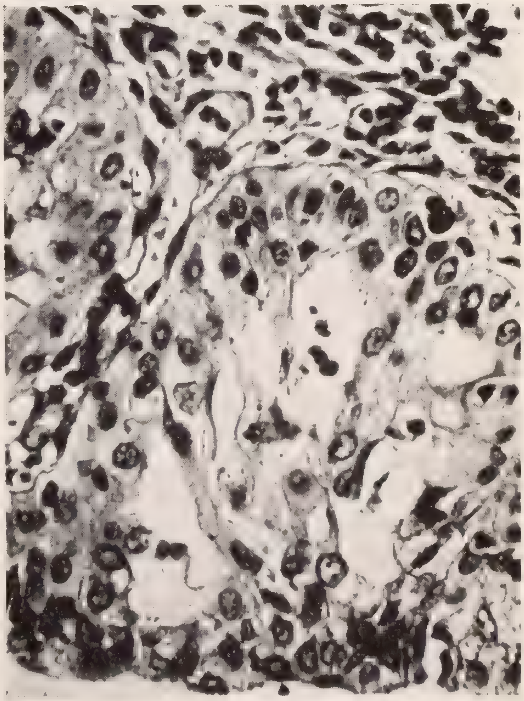

FIG. 6. Case 2. Higher magnification of Fig. 5, showing infiltration of the gland but not true invasion. (600 ×)

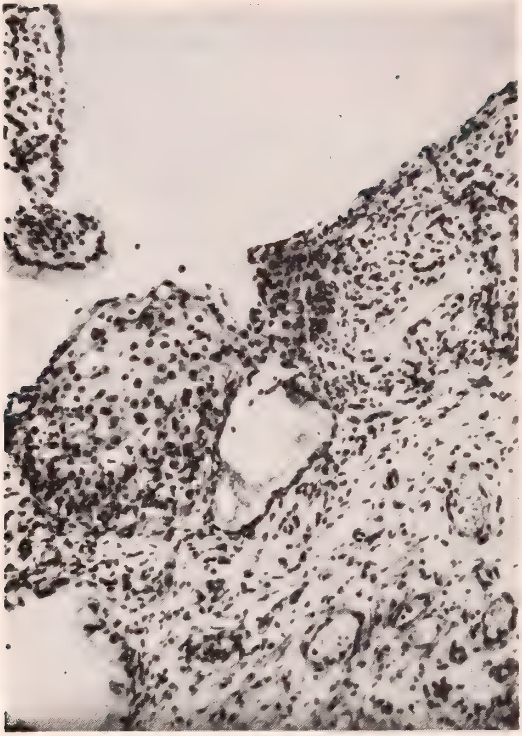

FIG. 7. Case 3. Loss of stratification, hyperchromatic nuclei, and mitotic figures. Carcinoma in situ? (190 ×)

changes consistent with carcinoma in situ were seen, but, because of the pregnancy, a definite diagnosis was not made. A repeat biopsy was requested. The second biopsy taken two weeks later showed only chronic cervicitis (Figs. 7–10).

Progress was checked by vaginal films which showed hyperchromatic cells with bizarre nuclei suggesting carcinoma. Patient was delivered prematurely at six and one-half months, and another biopsy taken six weeks later showed unequivocal epidermoid carcinoma in situ. She was treated with radium and has not done well. The original lesion apparently has increased in size.

Case 4.—E. D., age twenty-five. A diagnosis of carcinoma in situ was made from a cervical biopsy (Figs. 11 and 12).

It was learned subsequently that this patient was pregnant at the time the biopsy was taken and that a hysterectomy was later performed. Unfortunately, in spite of repeated requests, sections of the uterus could not be obtained, and the outcome is unknown.

Case 5.—F. C., age twenty-two. A biopsy of the cervix was submitted for opinion. The patient had intermittent bleeding during the preceding six weeks, and the uterus was enlarged to the size of a two to three months' pregnancy.

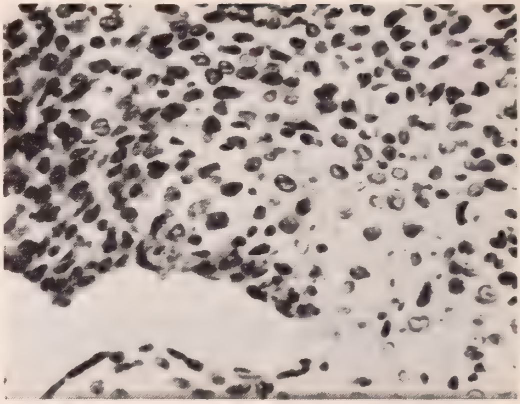

FIG. 8. Case 3. Higher magnification of Fig. 7, showing loss of stratification, hyperchromatic nuclei, and mitotic figures more distinctly. Carcinoma in situ? (600 ×)

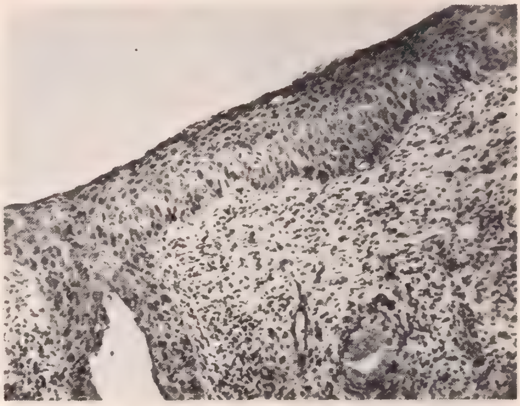

FIG. 9. Case 3. Biopsy taken two months postpartum—epidermoid carcinoma in situ with involvement of cervical glands. (190 ×)

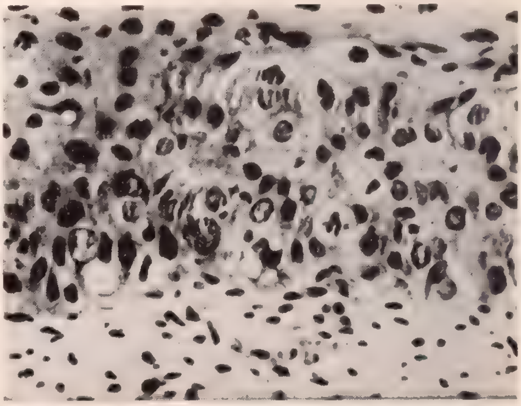

FIG. 10. Case 3. Higher magnification of Fig. 9, showing hyperchromatic nuclei and abnormal mitosis. (600 ×)

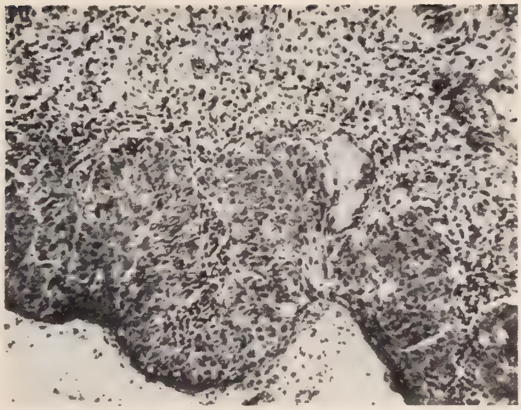

FIG. 11. Case 4. Hyperplasia of the basal layers, variation in size of cells, hyperchromatic nuclei, and numerous mitotic figures. Carcinoma in situ? (190 ×)

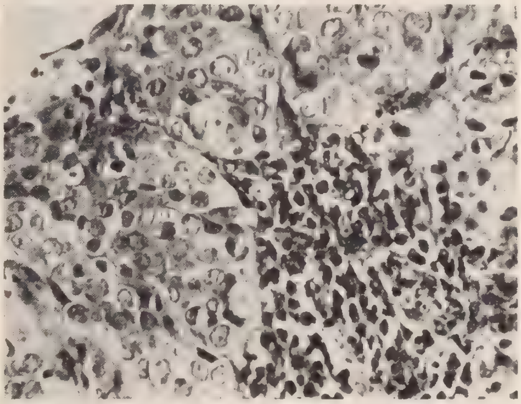

FIG. 12. Case 4. Higher magnification of Fig. 11, showing hyperchromatic nuclei, mitosis, no infiltration. Carcinoma in situ? (600 ×)

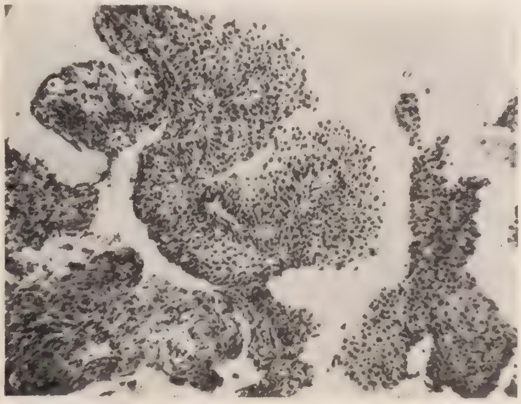

FIG. 13. Case 5. First biopsy—hyperplasia and anaplasia of the basal layers, variation in size and shape of cells, hyperchromatic nuclei, and mitotic figures. Carcinoma in situ? (190 ×)

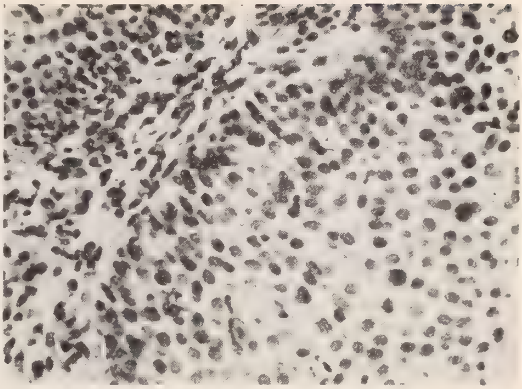

FIG. 14. Case 5. Higher magnification of Fig. 13, showing details of cellular structure. Note neoplasia of basal layers, marked hyperchromatism of nuclei, and mitotic figures. Carcinoma in situ? (600 ×)

Microscopic examination showed inflammatory cell infiltration of the submucosa and dilated cervical glands secreting mucus. The squamous epithelium was hyperplastic and showed loss of stratification involving the entire thickness of the mucosa, with the cellular pattern of carcinoma in situ (Figs. 13–16).

In view of the possibility of pregnancy, only a tentative diagnosis of carcinoma in situ was made, and a repeat biopsy was requested. A biopsy taken two weeks later showed a chronic cervicitis with decidual changes indicating pregnancy. A week later, the patient aborted. Another biopsy taken two months later showed a papilloma but no evidence of carcinoma. The patient is now in excellent health and shows no evidence of carcinoma.

Comment

Our analysis of these cases and the experience of others clearly indicate the difficulties in differentiating certain changes in pregnant cervices from early carcinoma in situ. Occasionally, during pregnancy a curious epidermization of the cervix results with anaplasia of the basalis which may assume a neoplastic appearance. A loss of normal stratification occurs which may involve the entire thickness of the mucosal layer. Cells may be abnormal in size, shape, and staining quality, the nuclei large and hyperchromatic, and mitoses common. It is this type of lesion that may be mistaken for early carcinoma in situ. The influence of pregnancy is suggested by the fact that in some cases the lesions regress and disappear following delivery. Unfortunately, pregnancy is not always the cause or the sole cause of these lesions, and in some cases only careful and prolonged observation affords a correct evaluation. The influence of pregnancy must, however, always be borne in mind, and some of our errors might have been avoided had we insisted

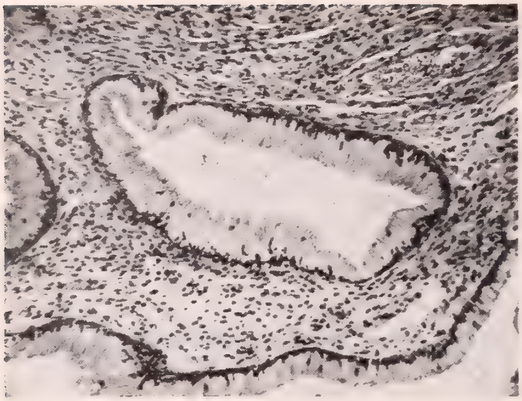

Fig. 15. Case 5. Second biopsy—dilated cervical glands with inflammatory changes. (190 ×)

on complete histories before making a diagnosis. This is true of Case 1. The youth of the patient, the fact that this was her first pregnancy, and that she was only a few weeks postpartum would have put us on guard.[30] In Cases 2 and 3 an error was made in the opposite direction. In these instances we were too much influenced by the history of the recent pregnancy. The experience clearly shows that there are no absolute histologic criteria for differentiating these conditions.

The recent studies of Epperson would seem to confirm this point of view.[23] He made a detailed study of the cervical changes during pregnancy and the postpartum period. A total of 780 biopsies was obtained from 290 patients. Of the biopsies collected prenatally, 15 per cent showed hyperactivity of the basal layer of the stratified squamous epithelium. A diagnosis of intraepithelial carcinoma of the cervix, which was confirmed by experienced pathologists, was made in six cases. Of these six patients, all were normal in the postpartum period. Two patients were followed eighteen months, two for six months, and one for five months. All continue to have normal biopsies. The studies of Cox, Buhler, and Mixson on equivocal lesions of the cervix are in a similar vein.[31] Difficulty was experienced in differentiating pregnancy from early carcinoma of the cervix; numerous repeat biopsies and the aid of consultants were required to arrive at the correct diagnosis.

It is understandable that similar difficulties have been experienced by those employing the vaginal film technic. Kernodle, Cuyler, and Thomas acknowledge that intrauterine cells in instances of incomplete abortion may be very confusing.[32] These cells very closely resemble malignant squamous cells. In fact, they believe that if a pathologist were required to make a diagnosis from examining only a group of such cells without knowing the history of the case, the usual diagnosis would be squamous cell carcinoma of the cervix.

It is disturbing to find some reports of an extremely high incidence of carcinoma of the cervix during pregnancy. Pund, Nettles, and Cardwell examined the excised cervices of 37 pregnant women and reported four preinvasive cancers, a percentage of 10.8.[33] In a recent communication, one physician wrote that he has treated no less than seven cases of carcinoma of the cervix during pregnancy in a period of three years.[34] When it is realized that even in an extensive experience carcinoma associated with pregnancy has been only rarely found, it is apparent that the criteria of diagnosis must be critically examined.[1,3,5]

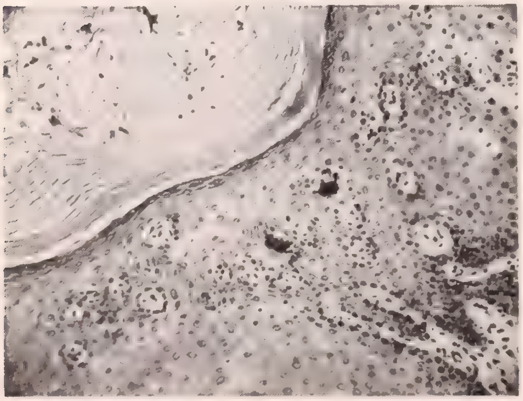

Fig. 16. Case 5. Third biopsy, taken two months postpartum, shows benign papilloma. (190 ×)

Summary and Conclusions

Attention is called to certain unusual lesions in the cervix during pregnancy. They consist essentially in a curious epidermization with anaplasia of the basalis. The nuclei are large and hyperchromatic and show numerous mitoses. These lesions are easily mistaken for early carcinoma in situ of the cervix.

The role of pregnancy in inducing these changes is suggested by the fact that in some instances the lesions regress following delivery. A prolonged follow-up is necessary to evaluate their significance. Five cases are described.

278 South Main Avenue

Photomicrographs were made by Mr. Frank C. Reed, to whom I am indebted.

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Discussion

William F. Finn, M.D., *New York City.*—I would like to compliment Dr. Schleifstein for refocusing attention on the problem of the cancer-like changes in the pregnant cervix. This is an important issue since some pathologists hesitate to diagnose carcinoma of the cervix during pregnancy.

There is no clinical or pathologic doubt about frankly invasive cancer. Fortunately, the association of pregnancy and cervical cancer is extremely rare. There have been four patients with cancer of the cervix among the 74,087 obstetric patients cared for in the Woman's Clinic of the New York Hospital from 1932 to the present, an incidence of 0.005 per cent. Conversely, four of the 500 patients with carcinoma of the cervix were pregnant, an incidence of 0.8 per cent. Dr. Hofammann and I as part of a larger study reviewed the 97 cervical specimens associated with pregnancy which were studied in our laboratory during the past two years. These were obtained in the following manner: biopsy 47, polypectomy 33, hysterectomy 14, and spontaneous necrosis and detachment of the cervix during labor 3. These were equally divided among the trimesters of pregnancy and the postpartum period. The pathologic findings were as follows: normal 22, decidua 31, epidermidization 20, basal layer activity 3, basal layer hyperactivity 10, invasive squamous cancer 1, intermediate layer activity 4, superficial layer activity 27, and papilloma 4.

Our findings show a higher incidence of decidual change than those of Dr. Schleifstein, but this may be due to the large number of polyps which are more prone to show this change. Only one patient had invasive squamous cancer while ten showed basal hyperactivity without anaplasia. An interesting speculation is whether the patients who show basal layer hyperactivity during pregnancy may later develop definite invasive cancer. The continuation of these studies may answer this question.

Some of the lesions which might be confused with squamous cancer include:

1. Decidua, especially when fused and syncytial-like.
2. Squamous metaplasia or epidermidization, even in the nonpregnant.
3. Proliferation of various layers of the squamous epithelium, especially basal layer hyperactivity.
4. Trophoblastic tissue.
5. Epithelial patterns which simulate invasion but show no anaplasia.

To illustrate the issue: Within the past month, we had a twenty-nine-year-old patient who had six weeks of amenorrhea and a cervical lesion which showed anaplasia so that it was interpreted as squamous carcinoma. Because of the age, the slides were circulated among several pathologists, one of whom refused to make a diagnosis because of the possibility of pregnancy. After the Ascheim-Zondek test had been reported as negative, hysterectomy was done, revealing an early invasive carcinoma at the squamocolumnar junction with no pregnancy. The crux of this paper is whether there are absolute histologic criteria for the diagnosis of squamous cancer of the cervix during pregnancy. In our experience, it would appear that proliferation of various layers of the squamous epithelium occurs during pregnancy. These mimic, but never completely reproduce, the characteristics of cancer. Basal layer hyperactivity and epidermidization may cause confusion but lack true anaplasia. When anaplasia is present, there should be no hesitation in diagnosing squamous cancer, even though the patient is pregnant. However, if the lesion is equivocal, the patient will probably not be subject to further hazard by the delay of repeat biopsies. Similarly a short delay in the immediate postpartum period to allow regression of the hyperactivity of the various layers will probably not affect the final outcome. I cannot agree with Dr. Schleifstein that "there are no histologic criteria for differentiating these conditions," as such criteria apparently exist. Further, the acceptance of the lack of criteria will lead to the unnecessary intervention in women without carcinoma and will delay treatment in those with cancer.

CHRONIC INFLAMMATORY DISEASE OF THE THYROID GLAND

Arthur W. Wright, M.D., Albany, New York

(From the Department of Pathology and Bacteriology, Albany Medical College)

CHRONIC inflammatory disease of the thyroid gland may be divided, from the standpoint of etiology, into two groups, specific and nonspecific. The former includes such specific inflammatory diseases as syphilitic thyroiditis, tuberculous thyroiditis, etc. These conditions will not be considered in this presentation. The latter group, much larger than the other, includes those forms of chronic thyroiditis in which the etiology is not generally clear, the pathologic changes not always precise, and in which, indeed, the true inflammatory character of the disease may sometimes be open to question. It is the various types of chronic thyroiditis that fall into this second group that will be the subject of this paper.

The three important forms of chronic thyroiditis that fall into this group are Riedel's struma or so-called eisenhartes struma or woody thyroiditis; chronic nonspecific thyroiditis with or without pseudotubercle formation, which we believe to be distinct from Riedel's struma; and struma lymphomatosa of Hashimoto. The last-named disease has been referred to as lymphadenoid goiter by Williamson and Pearse and others.[1] The inflammatory nature of this disease is open to doubt, but for convenience it is included as a form of chronic thyroiditis. All of these diseases are believed to be distinct entities, capable practically always, on the basis of combined clinical and pathologic study, of being differentiated from each other.

From a purely pathologic standpoint it is often possible to differentiate these three forms of thyroid disease, for the gross and microscopic characteristics are sometimes clear-cut. However, it is a much better practice, before a final diagnosis is made, to know the clinical history in some detail, for a more precise diagnosis can be made when each case is considered as a whole and not merely on the basis of the examination of a pathologic specimen. The importance of this correlated clinicopathologic study cannot be overemphasized.

Riedel's Struma

The oldest, although not the most common, of these chronic inflammatory diseases of the thyroid gland is that reported first in 1896 and later in 1897 and 1910 by Riedel.[2-4] He described three cases, all in young men, in which the significant findings were dyspnea, absence of fever, and an extraordinarily hard and fibrotic gland or lobe which was firmly bound to the adjacent structures in the neck and was sometimes erroneously diagnosed as carcinoma. Histologically, the gland was markedly fibrosed, with traces of choked or compressed lobules remaining, the presence of many "round cells," and slight endarteritis. The disease, Riedel stated, was uncommon, since he had seen only three cases in 1,063 operations for goiter.

Nine cases of Riedel's struma were studied. The disease occurred in both males and females but was more common in the latter, the ratio being about 4 to 1; it affected young to middle-aged adults, the average age being about forty years, and it was associated generally with symptoms which had rarely been present for more than one or two years. Detectable goiter, however, had sometimes been present for a longer time. Preoperative hyperthyroidism of slight to moderate degree was occasionally present, although hypothyroidism rarely was, the gland usually being neither overactive nor underactive.

At operation the entire gland was involved in about 80 per cent of the cases. In all cases the organ was characteristically tightly adherent to adjacent structures, was often difficult to differentiate from carcinoma, and practically always was removed with difficulty and then only incompletely or in fragments.

Pathologically, the outstanding characteristic was the hard, sclerotic nature of the tissue. The surfaces were freshly cut, showing that the specimen, which often had no recognizable features of thyroid gland, had had to be cut away from the surrounding tissues by sharp dissection. Indeed, some of the adjacent tissues, usually neck muscles, were still adherent. Histologically, dense fibrous tissue was found to replace most of the gland. Often all the epithelial structures were missing over large areas, but here and there a few lobules, or groups of acini, could be found. The acini appeared as small or compressed structures containing little or no colloid, but although they were sometimes almost strangled by the dense surrounding stroma they were, nevertheless, well formed and readily recognizable as thyroid acini. The epithelial lining cells were small, cuboidal, not enlarged or

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deformed, and it was not difficult to recognize the nature of the tissue. There usually was a notable absence of diffuse lymphocytic infiltration, although focal collections of lymphocytes, and, rarely, small lymph nodules with germinal centers might be seen. There were no evidences of acute inflammatory cells. The character of the lesion was that of chronic inflammation with dense, diffuse fibrosis, obviously of fairly long standing.

Chronic Nonspecific Thyroiditis

This group, the largest in our series, comprised some 58 cases. For a long time there has been a tendency on the part of many pathologists to group these cases with those of Riedel's struma, and, indeed, if gross and microscopic features alone are the basis of classification, such a grouping can often be made. However, in association with the clinical manifestations of the disease, differentiation is practically always possible.

This diease, like Riedel's struma, is of unknown etiology. The clinical history in our cases, however, was generally shorter, and the symptoms of thyroid involvement usually followed or were a continuation of a recent upper respiratory or dental infection. The thyroid gland became enlarged, was usually tender and hard, and was obviously the seat of active inflammation. The incidence seemed to vary with the season, rising during periods when upper respiratory infections were most prevalent and falling off when they subsided. The disease was more common in the younger age groups and affected either sex, although in our series females predominated.

Grossly, as in the case of Riedel's disease, the gland was irregular and hard. Less rarely, however, were portions of the adjacent tissues attached to the specimen. The similarity of the gross specimen to that of Riedel's struma was sometimes striking, although the fibrosis was generally more irregularly scattered throughout the organ and large zones of normal or recognizable thyroid tissue could be seen. Histologically the organ was irregularly sclerosed, foci of normal thyroid tissue alternating with foci of scarring. Compressed lobules or clusters of acini not in definite lobular groupings were generally present in the fibrosed portions. They were readily recognizable as acini, not being distorted unduly or lined by abnormal cells. Lymphocytes were present in considerable numbers, especially in persisting lobules or about acini and also scattered diffusely. In many places other inflammatory cells, particularly macrophages, were present. Many of these glands were characterized by the presence in the sclerosed portions of tubercle-like lesions, the resemblance to true tubercles sometimes being striking. These granulomatous foci were composed of accumulations of epithelioid cells or giant cells about masses of colloid in situations where acinar destruction had occurred. The nature and origin of the giant cells in these lesions seemed to vary. Certainly many of them were true phagocytic giant cells, presumably formed from macrophages, while others appeared to take origin from altered acinar epithelium. The latter cells, however, did not appear to be phagocytic.

There were occasional cases of this type of chronic nonspecific thyroiditis in which, although the clinical features were identical, the pathologic characteristics were not, for granulomatous or tubercle-like foci could not be found. Such cases could have easily been confused, pathologically at least, with Riedel's struma, but the interpretation of the histologic changes in the light of the clinical symptoms and signs placed them in the group of chronic nonspecific thyroiditis. Thus, it became apparent that accurate diagnosis in cases of this type could be made only if the histopathologic changes were interpreted in the light of the clinical manifestations of the disease. As far back as 1931, Graham criticized the placing of too great reliance upon microscopic findings alone and giving too little attention to the clinical and pathologic picture as a whole in the interpretation of these conditions.[5] On the basis of our own studies it is apparent that a diagnosis based upon histopathologic findings may only confuse rather than clarify the diagnostic problem.

Chronic thyroiditis of these two histopathologic types, particularly the second, may, therefore, be differentiated from Riedel's struma chiefly on the basis of correlated clinicopathologic study. The short duration of symptoms, the frequent relationship to pre-existing infections, the greater frequency during seasons of the year when there are increased numbers of cases of viral or virus-like infections set these conditions apart as being more truly inflammatory in nature. Graham first suggested that they might be different from Riedel's disease, and our findings are in accord with his expressed opinion.[6] Whether or not chronic nonspecific thyroiditis of this type may ever be an early stage of Riedel's struma is a question that cannot yet be definitely answered. However, in our experience there is no evidence that it is, and on the basis of the cases here reported the two diseases appear to be unrelated.

Struma Lymphomatosa (Hashimoto)

The last disease to be grouped as a chronic inflammatory process of the thyroid gland is presumably not inflammatory at all but a local manifestation of a more general disease; again, as in the case of those previously considered, of unknown etiology. This disease is struma lymphomatosa, first described by Hashimoto in 1912 and often designated by his name.[7] Twenty-three cases comprised the group.

Struma lymphomatosa occurred almost exclusively in women, only two cases being in males. It affected the thyroid gland diffusely, was not tender or painful, and produced only slight to moderate swelling of the organ. Clinically, the presence of a goiter, evidences of pressure, or lack of sufficient thyroid secretion were the most common symptoms. There was never associated overactivity of the gland.

At operation the gland could be removed without difficulty since it was not adherent to the adjacent tissues and could actually be shelled out, an important feature which differentiated this lesion from those described above as well as from malignant lymphoma which it may resemble. It was generally firm but not hard, smooth-surfaced but lobulated, sometimes had a grayish-yellow or tan color, and presented the appearance and consistency of a group of lymph nodes bound together with velvety fibrous stroma. On section, the tan color of the tissues was even more apparent, and with a little experience the nature of the lesion could be determined from a study of the gross pathologic features alone.

Histologically, the thyroid tissues were diffusely, often markedly, infiltrated by lymphocytes and/or plasma cells, with lymph nodules or follicles that were not only abundant but characteristic. Lobules might still be evident or might be masked by the lymphoid nature of the lesion. When they could be seen, the acini were usually small, sometimes irregular or distorted, and contained little or no colloid. They were often lined by large, bulky, parenchymatous cells which resembled hepatic cells and which have been likened by some to Hurthle cells. These cells appeared inactive and degenerate rather than hypertrophic and regenerative, as they are considered by some authors. This pattern of diffuse lymphoid infiltration and the characteristic change in the acinar epithelium are essential features in the histologic picture of struma lymphomatosa.

The presence or absence of increased amounts of fibrous tissue in the gland of this disease has led to some controversy concerning the diagnosis of Hashimoto's disease. Hashimoto in his original communication spoke of alterations in both the parenchyma and the interstitium. For this reason the suggestion has been made that the lymphoid strumas be divided into two categories: (1) struma lymphomatosa of Hashimoto in which stromal proliferation, in addition to lymphocytic infiltration and lymph nodule formation, is a prominent feature and (2) lymphadenoid goiter in which lymphocytic infiltration and lymph nodule formation are present in abundance but fibrous tissue proliferation is absent.[8] The latter condition may occur, it is stated, in glands of hyperthyroidism and is not limited to states similar to struma lymphomatosa. An arbitrary separation of these two kinds of lesions solely on the basis of histologic changes seems inadvisable.

That struma lymphomatosa may sometimes be characterized by abundant proliferation of fibrous stroma is evidenced by a case which came to our attention a few months ago. A sixty-six-year-old man had an unusually firm goiter which, contrary to expectation, shelled out easily but appeared as a firm, almost rubbery, fibrous mass with smooth but lobulated surfaces. Similarity to lymphatic tissue was missing. Histologically, the tissue proved to be a densely fibrous gland in which there still remained small, lymphocyte-infiltrated lobules embedded in fibrous stroma. In these lobules, which were not abundant, the acini were distorted and often composed of large cells which did not surround lumens. Colloid was not present. The dominant feature was the extreme and extensive fibrosis.

The first impression was that the lesion was Reidel's struma or chronic nonspecific thyroiditis. However, the disease was bilateral, involved the entire gland, was not associated with symptoms of infection or inflammation, was not firmly fixed to the adjacent tissues but shelled out easily, and was associated with underactivity. Histologically, moreover, the acinar structures were not normal-appearing but distorted, irregular, and lined with large parenchymal cells. The final diagnosis was a late or fibrotic stage of struma lymphomatosa. The clinical symptoms and the operative findings played an important part in making the diagnosis.

Comment

Chronic inflammatory disease of the thyroid gland may thus be divided into three rather definite clinical and pathologic entities. All are of indefinite or as yet unknown etiology. All are characterized by the evidences of nonspecific inflammation or of chronic inflammatory cell infiltration, and all may have varying degrees of fibrosis. Although there may be borderline cases that cannot be classified accurately on the basis of pathologic changes alone, correlation of the clinical signs and symptoms as well as the operative findings with the pathologic picture will usually lead to accurate diagnosis.

Riedel's struma is the oldest of these diseases from the standpoint of its description in medical literature, although it is today the least common. The pathologic characteristics are usually quite definite. The commonest disease is chronic nonspecific thyroiditis (subacute thyroiditis of Crile).[9] It has the most clear-cut inflammatory character of all and can often be differentiated from Riedel's struma without difficulty, even on the basis of histopathologic characteristics, although not infrequently the clinical signs and symptoms provide the deciding differential diagnostic features. The disease with the least evidences of active inflammation but the most extensive lymphocytic infiltration and lymph nodule formation is struma lymphomatosa of Hashimoto. Probably this is not a true inflammatory lesion at all but a local manifestation in the thyroid gland of a more widespread general disorder of unknown etiology. It is never associated with overactivity of the thyroid gland but rather with no change from normal or with slight to moderate underactivity.

What relation, if any, exists between these three forms of chronic thyroiditis? Is Hashimoto's disease, as suggested by Ewing in 1922 and supported by numbers of others since then, an early stage of Riedel's struma?[10] In our opinion, it is not, for all three diseases are considered to be distinct and unrelated entities. Indeed, Riedel's struma tends to occur at a younger age than Hashimoto's disease. Without sound foundation, in our opinion, is the recent suggestion of Rabson and Arata that certain of these lesions are not only related but appear to run a characteristic involutional and sequential course, namely, lymphadenoid goiter to struma lymphomatosa to Riedel's struma.[8] In our series of cases have been at least three in which struma lymphomatosa has remained struma lymphomatosa after long periods of time, in one case after eleven years. There is no evidence that one form can change to another.

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Discussion

Virginia K. Frantz, M.D., *New York City.*—The opportunity to discuss Dr. Wright's paper was welcome because it made it imperative to study our own material in the laboratory of surgical pathology at the Columbia-Presbyterian Medical Center. The task proved larger than anticipated and the work, much of which has been done by one of the surgical residents now in his surgical pathology six months, is not complete. However, it may be that as a result of the industry and initiative shown by Dr. Lester Vargas we will at some time have an analysis of our own material of sufficient interest to warrant presentation to take its place beside the experience of Dr. Wright as presented this afternoon, and to compare favorably, in numbers at least, with his and other recent series such as those of Marshall from the Lahey Clinic, Boston, and Crile from the Cleveland Clinic.

Marshall's series is large—119 cases. Seventy-eight of these he considered struma lymphomatosum and 41 inflammatory. This group he further breaks down into 18 cases subacute; 16 cases chronic; and seven cases of the end or healed stage, i.e., Riedel's. Crile's figures in 1948 were 14 struma lymphomatosum, 11 Reidel's, and 27 "subacute." Of the latter, however, only 14 were documented by histologic study. These "subacute" cases would, I believe, be called by our clinicians, "acute nonsuppurative thyroiditis" and would be expected to subside spontaneously. We have records of 30 such acute cases with no biopsy specimen, which subsided. We also have three cases which were subjected to operation, and all of these showed the granulomatous lesions with giant cells which Crile describes. However, we have 15 other cases showing such lesions which were chronic and did not have the early and complete remission of Crile's subacute and our own "acute" group nor the rest of the clinical picture.

Dr. Wright's figures were, you will remember, struma lymphomatosum 23; Riedel nine; chronic nonspecific thyroiditis 58. He gives no figures for acute thyroiditis. Ours, if classified similarly, are, approximately, struma lymphomatosum 31, Riedel 11, and chronic nonspecific thyroiditis 33, of which 15 had a striking giant cell picture. Careful search, however, of the fibrous types including classic Reidel usually yields a few giant cells but without the typical granulomatous picture. This might suggest, as Marshall has said, that the Riedel picture is an end stage to which, apparently, most chronic forms do not progress.

Three of our cases of classic Hashimoto struma went through a toxic and then an euthyroid stage. In two, operation was performed at the outset, and the histopathology was thought at the time to be compatible with toxic diffuse goiter. Reoperation in each case, nineteen and twenty years later, respectively, showed the typical picture of Hashimoto struma. In comparing the original sections it was seen that the first interpretation had been incorrect and that the picture was similar to the recent one although perhaps with somewhat less lymphoid tissue. We have a number of other cases, therefore, for reanalysis in the light of these findings.

We would like to conclude, therefore, that we are in hearty agreement with Dr. Wright's clinical and pathologic picture of the classic lymphoid and iron hard struma cases. The rough figures which I have given of our own cases are based on rigid criteria. The Hashimoto cases were all bilateral and had no adherence to the surrounding neck tissues and were uniform on cut surface. Those on which we are allowing ourselves a diagnosis of Riedel's struma we have insisted should show fibrosis involving adjacent structures. With these criteria we believe, with Dr. Wright, that these are two separate lesions, one probably metabolic and the other inflammatory. In the chronic nonspecific thyroiditis we have not yet reached the stage of sure classification of our own cases. When and if we can do so, we will heartily subscribe to Dr. Wright's insistence that it must be with full knowledge of the clinical picture (sometimes perhaps even waiting for a long follow-up!), of the findings at operation, and of the gross examination of the specimen. Histopathology, as Dr. Wright has pointed out, is a trap for the unwary in the diagnosis of these thyroid lesions and, I would like to add, to other diseases of the gland, notably some carcinomas of low-grade malignancy.

A.M.A. JOURNAL EXPLAINS ADVERTISING OBJECTIVES

The advertising program of the American Medical Association, which was launched in newspapers and magazines during the period of October 8 to 22, was not intended to sell American medicine itself but "to sell what has been our heritage in this country—faith, freedom and hope."

A 70-inch A.M.A. advertisement ran in every paid-circulation daily and weekly newspaper in the nation. The total circulation of the magazine group is more than 94 million which, combined with the all-inclusive daily and weekly newspaper schedule embracing 11,000 papers, gave tremendous reader impact to the A.M.A. advertising program. The A.M.A. radio schedule, one of the most extensive and concentrated programs in history, included more than 1,000 stations.

The campaign was offered to draw attention to the right way of seeking health as sponsored by the medical profession and thousands of other groups and to the wrong way which is advocated by a comparatively few selfish, arrogant politicians or political hangers-on or in some instances by well-meaning but misled citizens. The advertising was used to sell voluntary health insurance, whether offered by medical-founded, nonprofit organizations, accident and health insurance companies, or labor, industrial, or fraternal groups.

The copy also focused attention on the dangers of government-controlled economy and the loss of individual freedom, individual initiative, and freedom of opportunity that accompanies such regimentation. The National Education Campaign of the American Medical Association stresses the need for preserving faith in and active support of the American way of life. Most Americans do not want permanent government control over their medical and other personal affairs, although they are willing to accept temporary economic controls during a crisis such as war. However, they must be permitted to see the insidious ways in which socialism can creep into our lives. American medicine is issuing an invitation to other professions, to industries and businesses, and to others to participate in the spirit behind the advertising campaign so that there will be little room for doubt that "The Voluntary Way is the American Way."

The end result of this tremendous and unique undertaking will be a further check on the advances of the planners of socialism and regimentation. The dissipation of the dangers of government regimentation of the American people is dependent on the whole-hearted support of all who believe in freedom. The sacrifice of our fighting men who are engaged in a fight against aggression and tyranny on foreign soil will be futile if here at home we lose permanently the basic freedoms on which this nation has been created.

In its new role in the advertising field American medicine is not attempting to sell itself. Nor is it trying to maintain a system or advantage for its sole use. No, it is trying to sell what has been our heritage in this country—faith, hope, freedom. It believes as do most Americans in self-help and self-preservation, in pride of achievement, in the joy of accomplishment. American medicine in its advertising is not selling an article nor even a service. It is selling an ideal in the hope that others who believe in this ideal will raise their voices to say, "This is our country. We are thankful for what it has given us and others throughout the world. We want to maintain the basic principles on which it has grown to greatness so that we can continue to be self-sufficient and share with the less fortunate our blessings." There are many millions of Americans who believe in such a doctrine. Let us encourage them to say so. *J.A.M.A.*

EXTENSIVE PLASMACYTOSIS AND HYPERSENSITIVE STATES

THEODORE ROBERTSON, M.D., New York City

(*From the Department of Pathology, New York Hospital-Cornell Medical Center*)

ALTHOUGH the association of plasma cell proliferation and hypersensitivity has been extensively studied in experimental animals, only three human cases have been reported in which plasmacytosis was a feature of the necropsy findings. In 11 of the last 1,500 necropsies performed in this department, however, abnormal accumulations of plasma cells unrelated to known infectious processes have been evident. In this report I will attempt to demonstrate the histologic changes found with only slight reference to the clinical features of the cases.

The participation of plasma cells in the immune response, while suggested by studies from the Rockefeller Institute as early as 1930, was not specifically investigated until a coincident relationship between clinical hyperglobulinemia and a proliferation of plasma cells was proposed by Bing and Plum in 1937. They pointed out that hyperglobulinemia as seen in chronic infections and other disorders is commonly associated with an augmentation of plasma cells and other reticuloendothelial cells within and outside the bone marrow, and they suggested that a causal relationship might well be present. Numerous combined cytologic and immunologic investigations since then have demonstrated that a proliferation of plasma cells is readily produced in the lymph nodes of animals by a single injection of antigenic substances and that hyperimmunization results in a striking widespread plasmacytosis. It is thought that the plasma cells so stimulated are engaged in the production of antibody globulins. Clinical studies of bone marrow aspirations, on the other hand, have failed to demonstrate a definite correlation between plasmacytosis and hyperglobulinemia.

The most extensive plasmacytic infiltration found in the present series was present in two cases of death associated with hypersensitivity to sulfadiazine in which many of the lesions commonly associated with sulfonamide poisoning were also present. Many of the following illustrations are from these two cases. Four other cases of presumed drug and transfusion hypersensitivity have also exhibited plasmacytosis. One of these had, in addition, renal lesions similar to those of disseminated lupus erythematosus; another had interstitial nephritis, and still another an acute necrotizing arteritis. In one of the three cases of polyarteritis necropsied during this period plasmacytosis and hyperglobulinemia were present. This patient was a middle-aged woman who had reacted in a hypersensitive manner to many drugs throughout her life and to almost all the whole blood transfusions that she received during her terminal illness. It is interesting that, although no history of hypersensitivity was evident in the four cases of disseminated lupus erythematosus necropsied during this period, plasmacytosis was prominent and hyperglobulinemia had been demonstrated prior to death.

The plasmacytosis in all cases was most prominent in lymph nodes. This is in keeping with the findings in experimental animals. As also observed in animals, the medullary cords of these nodes were the main seat of plasma cell proliferation, but in the more extensive lesions the cortex also appears to produce plasmacytes. A transition was traced from primitive reticular cells to typical Marshalko plasma cells and on to degenerating forms with Russell bodies. In one of the cases of sulfonamide hypersensitivity where the serum globulin was 11.2 Gm. per cent, the lymphoid tissues everywhere produced plasmacytes almost exclusively. The spleen was the next most frequent site of plasma cell proliferation, and giant forms were often evident. Plasmacytosis was common, but less readily apparent, in the bone marrow. The adventitia of the renal pelvis often contained plasmacytes, while accumulations of these cells in the cortex of the kidney, about small blood vessels, in the pericardium, and in the liver were found only in the more severe cases. The amount of plasmacytosis in the various cases roughly paralleled the hyperglobulinemia found clinically.

Plasmacytosis has also been found in each of four additional cases of lupus, in one of three additional cases of polyarteritis subsequently examined from the older necropsy records of our department, and in two cases of allergic asthma. In all, 18 cases of plasmacytosis have been observed. Hyperglobulinemia was present in ten out of 11 cases in which serum globulins were determined late in the course of the disease. In all cases exhibiting plasmacytosis, except those of lupus, there was a history indicating hypersensitivity as, for instance, asthma, hay fever, or cutaneous and febrile reactions to drugs or transfusions.

The preponderance of the lymph nodes as the

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site of plasmacytosis has not been cited in previous clinical studies of this condition, mainly, perhaps, because most reports have dealt with the findings of bone marrow aspirations. Due to the hydrolysis of nucleic acids that occurs when bone is decalcified it has been difficult for us to demonstrate adequately large numbers of plasma cells in the marrow of these cases studied postmortem. In several instances their presence was obvious, nevertheless.

It is interesting to note that plasmacytosis is more constantly associated with hyperglobulinemia than it is with hypersensitivity. We have seen minimal to moderate plasmacytosis in several cases of cirrhosis of the liver where the serum globulin was greater than 3.0 Gm. per cent and where there was no history of hypersensitivity.

The reason for the plasmacytosis is still a matter of conjecture despite the rapidly accumulating evidence for its association with an increase in circulating antibody globulin in hyperimmunized animals. It remains to be proved whether the plasma cells actually do produce antibodies or whether they may serve as a storehouse for antibody globulin. It would seem from our present knowledge that plasma cells are at least one of the cellular elements engaged in antibody production. Although the demonstration of moderate plasmacytosis at necropsy cannot be considered pathgonomonic of a hypersensitivity reaction, it may provide a clue, especially in the presence of other changes such as arteritis or fibrinoid alteration of collagen. Severe extensive plasmacytosis probably does not occur, in the absence of chronic infection, in other than hypersensitivity states.

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CORRELATION BETWEEN CYTOLOGIC SMEARS AND MICROSCOPIC SECTIONS

N. Chandler Foot, M.D., New York City

(From the Department of Anatomy, Cornell University Medical College)

THE question often arises as to the possibility of correlating the appearance of tumor cells in cytologic smears with that of the same elements as observed in microscopic sections: Is there any similarity? In many instances the answer is in the affirmative, but it is not always possible to obtain so exact a correlation that the actual type of a tumor may be recognized by the elements which exfoliate into body fluids and appear in smears. It should be borne in mind that, when cells exfoliate, they may do so singly or in groups or clusters. In the former instance they tend to round up and to lose much of their characteristic appearance; in the latter the case is different as we have, to all intents and purposes, minute or microscopic biopsies of tissue at our disposal. For this reason cytologists often prefer to examine smears of material that has been obtained by abrading the surface of suspected areas with swabs, spatulas, or similar instruments rather than depend upon fluid which has been aspirated with a syringe. There is a group of systems which affords us cells that are sufficiently characteristic for one to arrive at fairly definite conclusions not only as to the mere presence of cancer, but also as to the type of tumor represented in a given smear. The female genital, the respiratory, and the urinary systems, in that order, usually fulfill these conditions; the alimentary tract, the breast, spinal and serous fluids, and like material are unsatisfactory in this respect. Indeed, in their case it is not always possible to detect the presence of tumorous elements, to say nothing of the matter of deciding the exact type of tumor from which they exfoliated.

Female Genital System

Let us first consider the system that has proved most fruitful in supplying the exfoliative cytologist with smears that can be diagnosed with considerable exactitude. It was the first to be investigated, and hence we have more experience with it than with some of the other systems.

Vaginal Smears.—These present cells that may have been produced in the vagina, the cervix, the uterus, or even in a fallopian tube or ovary; thus they constitute a sort of "clearing" or synoptic type of smear. Vaginal carcinoma cells are, of course, predominantly of the epidermoid type as the usual carcinoma is of the epidermoid or squamous variety. They exhibit perfect correlation with cells seen in biopsies of tissue from vaginal tumors; they may be squamous, usually heavily keratinized; they may arise from the malpighian layer and be rounded or cuboidal, possibly presenting prickles; or they may come from the basal or germinal layer, in which case they will be less readily recognizable as derived from an epidermoid tumor. As there are usually numerous examples of more superficially produced elements to guide one, the diagnosis may be readily made.

Carcinomatous elements exhibit anisocytosis, or irregularity in size and shape of the cell; anisokaryosis, or similar irregularities in the nucleus; hyperchromasia, or overstaining of the nucleus or of the cell as a whole. Some cytologists stress the presence of nodular thickening of nuclear membranes and numerous karyosomes as diagnostic of malignant change. Cells may be enormous, or their nuclei may be disproportionately large or lobulated. Long, slender cells (called "snake cells") are frequently seen. On examining biopsies of tissue from the tumors whence these cells exfoliated, one may readily find their counterparts in the same variety of size, shape, and staining intensity intercalated among less spectacular elements in the section. Epithelial pearls are often noted in smears, and they are as readily found in sections. Thus correlation is usually very close, and a diagnosis of epidermoid carcinoma, rather than carcinoma of a general and unspecified type, may be made from the examination of smears.

Cervical Smears.—These present two types of cell as the cervix comprises epidermoid epithelium in the portio and glandular in the canal. The former is exactly similar to that of the vagina and needs no elaboration here; the latter shows up in the form of vacuolated cells that contain mucus or fluid and are readily recognized as endocervical and as arising in an adenocarcinoma. Correlation, then, is quite simple and exact in this case.

Papanicolaou has written a good deal about "dyskaryotic cells" in his more recent papers; he introduced this term to cover cells that show changes in their nuclei which might be considered as indicative of malignant alteration, without corresponding metaplasia in the cytoplasm as a

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whole. These cells usually represent covering elements of the endocervix which are undergoing early epidermoid metaplasia and have exfoliated from the much-discussed intraepithelial or noninvasive carcinoma, or carcinoma in situ of the cervical canal. As a few of Papanicolaou's cases revealed these cells without developing carcinoma, he was impelled to devise a term that might suggest an attitude of suspicion, without definitely stamping the case as carcinomatous. If an intraepithelial carcinoma of this type be examined in sections, many of these dyskaryotic elements will be observed to be comprised in the layers of the altered covering epithelium; correlation is excellent. The questionable feature is this: Are such tumors invariably irreversible? The matter is still one for investigation; apparently intraepithelial cancer develops very slowly, and it may take several years before it becomes invasive. Hertig of Boston has recently stressed this fact after making an extensive study of the clinical course and the pathology of this type of tumor.[1]

Endometrial Smears.—These are characterized, in the presence of carcinoma of the endometrium, by atypical cells of a definitely mucous type. They are bizarre and conspicuously vacuolated and may be accompanied by bits of supporting stroma if they are fungating and ulcerating. The correlation between the cells in these smears and those in the sections from curetted biopsies is very close as a rule, although not as close as in the case of epidermoid and, hence, more differentiated tumors. Should epidermoid metaplasia occur in the endometrium, producing an adenoacanthoma, both epidermoid and glandular elements will be found to be associated in clusters in the smears. Correlation is again excellent. As to choriocarcinoma, it too may be readily identified in smears. Sarcomas of the uterus, such as the stromal variety and the rarer rhabdomyosarcoma, may be easily recognized in smears and will show a close similarity to those observed in sections.

Extrinsic Tumors.—Endometrial secretions, if taken high in the fundus, will sometimes contain cells from tubal or ovarian carcinomas which have entered the uterine cavity through the isthmus of a tube. Correlation is, however, not very close, and it would be rather unwise to venture this diagnosis on the basis of a few cells in a smear; much depends upon the clinical history of the case. If this indicates a large lateral mass identified as intratubal or ovarian and the absence of evidence of intrauterine tumor, it will naturally influence the interpretation of the smear.

Respiratory Tract

Here we are dealing with smears of sputum or of bronchial washings. Tumors may lie anywhere in the tract below the larynx. Epidermoid carcinomas show the same degree of correlation indicated in connection with this type in the female genital tract. If epidermoid cells in the smear are highly keratinized and pearls very abundant, the cytologist may be justified in suspecting laryngeal origin or invasion by an esophageal carcinoma into the trachea. The epidermoid carcinoma of bronchial origin is usually less intensely keratinized and shows fewer and smaller pearls; this corresponds with the appearance of smears and sections. The pleomorphic type of bronchogenic carcinoma exhibits a bewildering variation in the size, shape, and appearance of exfoliated elements, which is in full accord with the histologic picture in sections. The primitive round and oat-celled carcinomas show somewhat less correlation between smear and section; the oat-celled elements tend to become spheric and to form small clusters of concentrically arranged cells often showing vacuoles. Smears exhibiting the elongated or bluntly fusiform cells likened to oat grains are the exception. However, there is sufficient correlation for an exact diagnosis of "undifferentiated carcinoma." Bronchogenic adenocarcinoma, arising from parabronchial mucous glands, exfoliates cells that are vacuolated and contain mucus; there is excellent correlation between smears and sections. The "alveolar" or "septal-celled" type is also fairly characteristic in smears; its cells tend to exfoliate in clumps in which the elements are arranged in a parallel fashion as though stripped from a membrane; they may or may not contain mucus. The slow-growing and insidious "bronchial adenoma" exfoliates cells that show the same characteristics as do those in sections; there is sufficiently close correlation for the cytologist to hazard a specific diagnosis, but he is not on particularly firm ground. There is variable correlation between smears and sections in the case of metastatic or invading carcinomas. One case of metastatic renal cell carcinoma of the larynx exfoliated granular elements, although the sections of a biopsy revealed the usual clear cells. The reason for this is not evident.

Urinary Tract

Correlation between smears and sections from this system would be excellent were it not for complicating factors. The transitional cell tumors of the bladder, ureters, and renal calyces exhibit perfect correlation and can be readily diagnosed both as cancers and as transitional cell carcinomas. Renal cell carcinoma does not exfoliate into the excretory pathways of the urinary system until it has broken into a renal calyx and begins to ulcerate; under such circumstances its cells are atypical, degenerated, and very seldom of the characteristic vesicular variety—rather than being clear and bladder-like, they are granular. We have already discussed this in connection with the metastasis of a renal cell carcinoma in the larynx. Another complication is the fact that the prostate, in male patients, communicates with the urinary tract and exfoliates cells into the urine. These are seldom very characteristic, and they bear little relationship to the primary tumor, whether multiacinar, tubular, or diffuse in its type. Therefore, the investigation of prostatic tumors requires a specialized technic, with gentle massage of the organ and the preparation of smears from urine passed before massage, from prostatic fluid, from urine passed after the massage, and, if feasible, an ejaculate. Even so, the cells obtained will give little indication as to the architecture or type of the prostatic carcinoma. This matters little, as investigation of a series of these tumors reveals that the prognosis does not rest upon the type; indeed, it is impossible to prognosticate from its histology the probable outcome of a given case of prostatic carcinoma.[2]

Alimentary Tract

Naturally, as long as one is dealing with epidermoid carcinoma (usually esophageal), correlation will be close. Gastric carcinoma is difficult to detect in smears unless one employs methods that practically amount to biopsies. Gastric juice digests exfoliated cells, and these, even when undigested and in fairly good condition, rarely show striking atypia. Hence, the investigation of gastric carcinoma through smears of fluids and washings from the stomach has been disappointing, and methods are being devised to abrade pieces of gastric tumors from their superficies. Many of these growths are intramural and do not exfoliate; others are composed of signet-ring cells which are characteristic enough if one can locate them in smears, which one seldom does. So far as the lower alimentary tract is concerned, the results are better. Cells of carcinoma of the bile duct, or gallbladder, have been dredged up successfully in the bucket of a Rehfuss tube, as well as elements of pancreatic carcinoma. However, it was only with the aid of the clinical history of the case that their provenance could be identified. The presence of such cells in gastric lavage and in the absence of positive gastroscopic findings indicates that they may come from below the pylorus, but exactly which organ is involved necessarily remains problematic. Colonic washings have proved to be fertile in exfoliated cells from tumors situated too high to be observable with the sigmoidoscope. Here there is a fairly close correlation between their appearance in smears and in sections. The method deserves more exploitation as regards this segment of the alimentary tract.

Serous Fluids

As a rule the presence of tumor cells in serous fluids is of interest in confirming a diagnosis of carcinomatosis. It rules out an inflammatory process such as tuberculosis, but it does not save the patient's life. Here, there is no question of early diagnosis; the die has been cast. In only one metastatic carcinoma can the cytologist rely on morphology alone in venturing a sound guess as to its origin: one of the papillary carcinomas of the ovary. These usually exfoliate innumerable cells into the abdominal cavity, and these group themselves into radially arranged complexes or rosettes which correspond to the tips of villi in sections of tissue. Correlation is seldom close enough for one to determine whether the tumor is pseudomucinous or serous. With a clinical history to guide the cytologist, say one of mammary carcinoma in the past, it may be possible to detect sufficient similarity in the arrangement of clusters of metastatic cells to that of those in mammary cancer to enable one to say that the appearance of these is "compatible with a diagnosis of metastatic mammary carcinoma." This is admittedly scoring with a considerable "assist" from the clinician. One eminent exception to the general rule just laid down was observed in the case of a hydrocele fluid in which embryonal carcinoma of the testis was correctly diagnosed. The fact that the fluid came from the scrotal sac and that the patient had an enlarged and firm testis certainly prepared the way for this diagnosis to a large extent.

Other Systems

Spinal fluid has proved to be very sterile material for the cytologist, and the same is true of ocular fluid. For instance, in a sample of the latter there were many heavily pigmented cells which could not be critically examined on account of the masses of pigment. Bleaching would have been undertaken, had not the organ been already enucleated and sections of the tumor been available. In these it was evident that the exfoliated cells were pigment laden macrophages from a malignant melanoma in which the tumor cells proper were not exfoliating. Cells obtained in smears of fluid aspirated from the nipple in cases of suspected mammary carcinoma may be very definitely carcinomatous in appearance but not sufficiently typical for the observer to deduce whether that carcinoma be of the duct-cell, canalicular, or acinar variety. This procedure is in an incipient stage; possibly these statements will prove to be only partially true and valid once more material has been accumulated and with it more experience.

Summary

To sum up, then, it may be said that close correlation exists between the microscopic pictures observed in smears and in sections of carcinomas of the female genital, the respiratory, and, to a lesser degree, the urinary tracts. There is little or none in the case of other systems that come under the scope of cytologic investigation. This should not be construed to mean that the method is not of the highest value in detecting the presence of malignant tumors, which would be contrary to the facts.

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Discussion

Sidney A. Gladstone, M.D., *New York City.*—The structural abnormalities which characterize the evolution of the usual malignant growth may be divided into four stages. First are the minute changes occurring in cells normally situated, e.g., cytologic changes visible in individual cells in carcinoma in situ. Second, there are anatomic abnormalities visible in the altered relationship of these cells to each other, i.e., a loss of the normal tissue arrangement with the appearance of many irregular and disordered patterns. This, too, may be seen in carcinoma in situ. Third, there is the abnormal anatomic relationship between the new growth and the immediately surrounding tissues, as evidenced by progressive invasion, the new growth destroying and replacing contiguous normal tissues. Fourth, there is the final structural change as evidenced by the ability of the tumor to establish itself and grow in new sites, remote from the point of origin, i.e., in the form of metastases.

The diagnosis of cancer made at postmortem examination is usually based on data of all four stages. The diagnosis in a satisfactory surgical biopsy is often based on the first three types of abnormality. In a surface biopsy, such as sponge biopsy, the abnormalities of stages one and two are usually visible. In exfoliative cytology, the available data when present consist mostly of abnormalities in stage one. In a general way, the ease and certainty of the microscopic diagnosis of cancer progressively decrease with a reduction in the amount of tissue and types of structural abnormality.

The multiplication of technics for procuring and examining tissue elements in the microscopic diagnosis of cancer necessitates a logical basis for classification and evaluation. Since the amounts and types of tissue elements give evidence of the sequence of events in cancer growth and since they strongly influence the ease and certainty of the diagnosis, they may possibly serve as a useful basis for the classification of the three main types of microscopic diagnosis, i e., exfoliative cytology, surface biopsy, and deep surgical biopsy. Many other technical features, such as materials and instruments used in procuring the tissue elements, methods of concentrating, separating, carrying, fixing, and staining the material, are all of lesser theoretic significance, although often of great practical importance in influencing the success or failure of the various methods.

A consideration of the outstanding advantages and disadvantages of the three types of biopsy will serve to define their special fields of usefulness. The chief advantages of exfoliative cytology are the ease with which the secretions are collected and the possibility of gaining information regarding cancers remotely situated, such as the fundus uteri, kidney, prostate, periphery of lung, stomach, etc. The disadvantages of exfoliative cytology are the paucity of diagnosable material, the uncertainty of its presence, the time consumed in the study of the slides, and the highly specialized skill and training required for the satisfactory examination of the smears. The advantages of sponge biopsy are the simplicity of the technic, the relative abundance of diagnosable tissue obtained directly from the site of the lesion, and the use of standard methods of tissue preparation, providing stained paraffin sections in a form familiar to all pathologists. The great disadvantage of sponge biopsy is that in certain accessible tumors the superficial tissue may not be diagnosable, the characteristic cancerous tissue being deeply situated. In such cases deeper tissue must be obtained by the abrasive action of a special sponge holder, by the auxiliary action of a curet, or by resort to deep surgical biopsy. The great advantage of surgical biopsy is its ability to provide an abundance of tissue both superficial and deep. The disadvantage of surgical biopsy is that it involves a surgical procedure which is not sufficiently simple to encourage widespread, frequent, and repeated application.

Our experience with over 1,200 cases examined by sponge biopsy appears to establish its effectiveness in the diagnosis of cancer of the cervix, both early carcinoma in situ and late ulcerating lesions. Similar satisfactory results have been obtained by sponge biopsy in the diagnosis of ulcerating carcinoma of the rectum. Lesions of the oral cavity and skin presenting a moist ulcerating friable surface also lend themselves to diagnosis by sponge biopsy. In several cases (cervix and rectum) cancers missed by surgical biopsy were diagnosed by sponge biopsy.

In general, early curable cancer will be most frequently diagnosed by a widespread use of the simplest methods available. In any suspected case, if the tissue procured by simpler methods is not sufficient for an unequivocal diagnosis, additional tissue should be obtained by surgical biopsy, prior to instituting treatment.

THE MEASUREMENT OF PERMANENT DISABILITIES

Harry V. Spaulding, M.D., and Robert M. Erdman, M. D., New York City

(From the St. Clare's Hospital)

THE measurement of permanent disabilities is one of the most controversial topics of compensation. There is no common yardstick. Terms are relative, findings are not uniform, and conclusions are approximate. The final price tag of functional loss is placed upon the injured part by the surgeon, and, naturally, it is an item of controversy. Until a uniformly accepted method of measurement of permanent disabilities be devised, therefore, the estimations we are making today will continue to be far from accurate, opinionated, and a cause of continued dissatisfaction.

In 1914, when the New York Compensation Law was promulgated, the lawgivers devised a plan of awarding benefits for the loss of use of a limb. Partial loss of function of an extremity was to be estimated by the medical profession in terms of a percentage of the total loss.

It has been a great stimulus to the medical profession that their end results are thus checked up by a rating board of physicians, such as we have at the Workmen's Compensation Board. These men are trained in the field of estimating functional losses. The compensation law has thus placed a value on physical defects, which makes the individual surgeon strive for better end results.

Estimating Functional Losses

The methods employed in estimating functional losses are not founded upon any fixed rules but have evolved, like the English Common Law, from custom or precedents handed down from one examiner to another. Frequently, however, certain losses are fixed by the legislature and are statutory.

Except for those schedules fixed by law, the matter of measuring permanent disabilities depends upon several factors, among which are (1) the coefficient of personal equation of the doctor and (2) the coefficient of personal appeal of the injured.

Let me cite examples bearing on the first factor, namely, the coefficient of personal equation of the doctor.

A group of doctors once examined a case involving a fracture of the os calcis, in which the subastragaloid joint was irreparably damaged and ankylosed, but the tibioastragaloid joint was intact, with the result that the flexion and extension of the joint were unimpaired, but lateral mobility was lost. Five doctors, well trained in estimating values, submitted independent ratings —each different—varying from 5 to 40 per cent of a foot.

A man, working and injured in Buffalo but living in Syracuse, received a tentative rating of 75 per cent of a hand for loss of function following a Colles' fracture but was awarded, after final hearing, a 40 per cent adjustment. Later, he proceeded to work in New York City, and, upon his application for a rehearing, the hand was rescheduled at 55 per cent.

In 1928, a State case was scheduled at 80 per cent of an arm for loss of supination and pronation. Later, it was found to belong to Federal jurisdiction and was transferred. The Federal schedule was 20 per cent of a hand.

Medical Conferences Necessary

Nothing shows the necessity for medical conferences as much as the variation of opinions of the values of loss of muscle power. Take, for instance, the ruptured biceps or the quadriceps muscle. We have observed longshoremen doing heavy and laborious work with a ruptured biceps muscle, which they have had for years. We have observed cases involving a biceps rupture given two thirds of an arm, and, shortly thereafter, the patients were found doing the same laborious work. Nothing seems to vary so greatly as the coefficient of personal equation in rating loss of power for muscle injury. Many times brachialis anticus hypertrophies follow biceps rupture, and the power of the arm is relatively restored, with actual ultimate low percentage loss. Certainly, the inconsistency in rating this defect is most impressive.

The classic instance of the variation of medical opinion in schedule rating occurred when I read a paper on schedule ratings before the International Association of Industrial Accident Boards and Commissions at Richmond, Virginia, in 1940. The chief examiner of the State of Virginia called upon the visiting chief examiners of Massachusetts, Maryland, Connecticut, and New York to rate a Virginia case involving the sequelae of a septic tenosynovitis of the index finger. The Virginia examiner believed, in view of the ankylosis of the finger, that a full loss of the index finger should be estimated; the chief

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examiner from Massachusetts thought, in view of the secondary changes in the other fingers, that a schedule of 30 per cent of a hand should be found; the Maryland examiner believed that a third of the arm should be the award, in view of a marked defect also in supination and pronation; the Connecticut examiner rated the case at 50 per cent of an arm, and the chief examiner of the New York State Labor Board, after asking the man to strip, noted secondary changes in the shoulder, elbow, wrist, and fingers and believed that two thirds of an arm should be reserved. The variation of these leading state examiners was, indeed, a plea for further extensive study of the subject of schedule losses.

Coefficient of Personal Appeal

As to the coefficient of personal appeal of the injured, how many ratings are quite naturally prejudiced by a pleasing, an irritating, or a dishonest personality, by sympathy for old age, and by giving consideration to the compensation rate and the occupation? Yet, as you know, the State lawmakers have not included age, occupation, or benefit ratings in schedule loss determinations.

Many states have worked out benefit awards to cover occupational considerations; others have not. Take, for instance, a compensable accident occurring to several members of an orchestral group, resulting, in each case, in an ankylosis of an index finger. This would put the violinist out of his vocation, it would materially impair the pianist's capabilities, but it would cause no vocational inconvenience to the crooner.

The Industrial Accident Commission of California has prepared a revised schedule for rating permanent disabilities. This schedule takes into account the nature of the physical injury or disfigurement, the occupation of the injured employe, and his age at the time of the injury. Consideration is also given to the diminished ability of such an employe to compete in an open labor market.

The schedule is manualized to the point of requiring a specialist to calculate all the factors involved to the slightest degree in estimating the percentage of permanent loss of industrial usefulness. This system will require specialized training in both medicine and law, and its practical application will be critically observed by many states.

The percentage loss is the price tag which the employer pays the injured. The price on the label is arrived at differently in each state. There is no interstate or, I might say, no countrywide uniformity. Consequently, whoever discusses schedule losses speaks for his own state.[1]

In the consideration of permanent disabilities, we have functional losses and structural losses. The law also takes cognizance of cosmetic disfigurement of the face and head. The legislators have not considered the extensive burn and traumatic scarification of the extremities of dancers and models.

The basis of schedule loss consideration is the description of the functional loss of the simplest joint, namely, the interphalangeal joint of the thumb. Flexion of the terminal phalanx of the thumb from full extension through the 90-degree arc is arbitrarily divided into thirds or quarters. The critical study of this joint is the basis of all percentage defects.

The legislative bodies of each state have established varying compensation benefits for schedule loss injuries. By comparison, it would appear that the New York State figures were above average. In Table I the first column gives the New York State Compensation benefits in weeks (compensation benefits being two thirds of salary with a maximum of $32 per week). The second column is the rate according to the Longshoremen's and Harbor Workers' Compensation Act (as amended June 25, 1938). The difference in awards is largely compensated by the fact that, under the New York State law, the weekly payments for temporary disability are deducted from the final schedule award, whereas under the Federal law the schedule loss award is paid in addition to the weekly compensation benefits for temporary disability.

TABLE I.—COMPENSATION BENEFITS FOR SCHEDULE LOSS INJURIES

Disability	Compensation (Weeks) New York State	Federal
Loss of use of an entire arm	312	280
Loss of use of an entire hand	244	212
Loss of use of an entire thumb	75	51
Loss of use of an entire index finger	46	28
Loss of use of an entire middle finger	30	18
Loss of use of an entire ring finger	25	17
Loss of use of an entire little finger	15	7
Loss of use of an entire leg	288	248
Loss of use of an entire foot	205	173
Loss of use of an entire great toe	38	26
Loss of use of an entire lesser toe	16	8
Loss of vision in one eye	160	140
Loss of hearing in one ear	60	52
Loss of hearing in both ears	150	200

Schedules and Functional Losses

Schedules are fixed only, when treatment will effect no further improvement. They are based only upon defects in mobility. Loss of power and atrophy are not separately considered, as they are included in loss of motion. There is no schedule loss for loss of power or atrophy, per se, and grasping power tests are notably unreliable.

Functional losses are to be considered permanent when further improvement is not to be anticipated. An arbitrary time limit may well be considered as six to eight months for small joints, one year for large joints, eighteen to twenty-four months for nerve lesions, chronic fibrosis, chronic passive edema, and hysterical contractures. During this period, cases may be classified as partially disabled. As a basis for comparison the uninjured member should be considered as normal for that individual.

In determining any schedule loss, however, we should not be guided by the actual mathematic loss in degrees, as there are other factors—anatomic, cosmetic, and functional—which alter to some extent the calculated arithmetic loss. For instance, a laceration of the wrist causing a severed flexor longus pollicis tendon may well be mathematically calculated at 50 per cent loss of the digit. Yet, if there be thenar atrophy, interosseous atrophy, and sensory changes (of a so-called nonschedule type), the ultimate schedule must necessarily be greater than the apparent 50 per cent loss.

The following estimations and evaluations are, therefore, merely a guide to the basic loss in the average case. The actual loss in many cases is above or below these figures, determined by the pathology of the case in question.

In considering the mathematic losses, the percentages are based on the range of the various joints in degrees, as follows:

180-degree joints—1. Shoulder
2. Wrist
3. Supination and pronation
150-degree joints—1. Elbow
2. Hip
3. Knee
90-degree joints—1. All interphalangeal joints
2. Neck—rotation, lateral mobility, flexion, and extension
60-degree joint—ankle—flexion and extension

In my opinion, the loss of shoulder rotation should not be considered cumulative to the elevation defect, as both are generally associated. With a loss of elevation of the arm to the clavicular line, there is usually a 50 per cent restriction in internal and external rotation. Similarly, lateral mobility of the wrist should be disregarded and included in the loss of flexion and extension at the wrist. However, in the case of loss of lateral mobility in a subastragalar lesion following an os calcis fracture, the schedule loss should be based upon the combined consideration of both flexion-extension and lateral mobility defects.

Practically speaking, arm elevation limited to the clavicular level (90 degrees) is considered a loss of 40 per cent of the arm, since the use of the arm below the clavicular line is greater than above it. Complete loss of rotation per se may be considered 40 per cent loss of the arm.

Elbow.—Inability to extend the forearm beyond 90 degrees equals the loss of 40 to 50 per cent of the arm. Inability to flex the forearm beyond 90 degrees equals the loss of 40 to 50 per cent of the arm. Supination and pronation and ankylosis in the neutral position equals the loss of 40 per cent of the arm. But a mild supination-pronation defect following a Colles' fracture is to be calculated as a schedule loss of use of part of the hand.

Wrist.—Amputation at the wrist is estimated as the loss of use of 99 per cent of an arm. Consideration, of course, may be given for a usable prosthesis.

Ankylosis of wrist equals the loss of use of two thirds of a hand (providing that the fingers are intact).

Fingers.—A defect of three or more fingers is to be evaluated as a loss of part of a hand. (The schedule is arrived at by adding the percentage loss of each finger, multiplying by two, and dividing the total into the value of the hand. This method should be modified, of course, if the end result exceeds the statutory value of the entire hand.)

Amputation, or, as the law states, "a substantial loss of" the terminal phalanx of a digit, equals the loss of 50 per cent of the digit.

Loss of bone at the middle phalanx or complete ankylosis of two joints of a digit equals the loss of 100 per cent of the digit.

Lower Extremity.—Ankylosis at the hip equals 50 to 75 per cent loss of a leg—the latter if there be a very marked gait defect.

Ankylosis at knee in extension equals the loss of 80 per cent of leg.

Limitation in flexion to 90 degrees at the knee equals the loss of 40 per cent of a leg. This figure varies with the degree of defective gait.

Ten per cent of a leg is added for each 1 inch shortening following fractures.

Abnormal lateral or anteroposterior mobility at the knee is not disposed of on a schedule loss basis. Such cases are held to be permanently partially disabled or are disposed of on a lump sum settlement.

Ankylosis at ankle equals 75 to 80 per cent of a foot.

Defective lateral mobility gives schedules varying up to two thirds of a foot.

Abnormal lateral or anteroposterior mobility of the ankle is considered as permanent partially disabling. These cases, too, may be disposed of on a lump sum settlement.

Complete ulnar or median nerve paralysis equals the loss of two thirds of the hand, wrist drop equals the loss of two thirds of the hand, foot drop also equals the loss of two thirds of a foot, and in incomplete foot drop the percentage varies with the degree of the defect.

Biceps rupture without defect at elbow or shoulder joint equals the loss of 10 to 15 per cent of an arm.

Loss of head of radius with a defect at the joint is estimated at from 15 to 20 per cent of an arm. Should there be no defect, the claimant may be considered permanently partially disabled.

Ununited fractures may result in total disability except in minor nondisabling fractures, e.g., fracture of ulnar styloid.

Head Injuries.—Cases with concussion without objective neurologic findings are held to be temporarily partially disabled until the subjective symptoms disappear.

Cases with concussion with objective findings (brain injury) are held to be permanently or permanently partially disabled.

Back injuries are classified as resulting in (1) total disability, (2) partial disability (50 per cent working capacity), (3) considerable working capacity (25 per cent loss of working capacity), and (4) a very high working capacity (10 per cent loss of working capacity).

Conclusions

1. Uniformity of medical evaluations would make a great social law greater.
2. There exists confusion and lack of uniformity in measuring permanent disabilities.
3. By furnishing an accurate description of physical losses, the doctor best serves the administrator.
4. The estimates submitted are based upon close association with the practices of the New York State Workmen's Compensation Board for the past thirty-five years. They are, naturally, in the final analysis, the opinion of the writer and are relative, nonstatic, and, indeed, controversial but may serve as a general basis for estimating permanent disabilities.

115 East 61st Street

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NEW ULCER DRUG SEEN AS PREVENTIVE OF SURGERY

Most persons with serious disability from peptic ulcer can avoid surgery by receiving treatment with a new ulcer drug, Banthine, early tests with one series of patients indicate. The synthetic compound, which is taken in tablet form, blocks the impulses of the nervous system which stimulate overactivity and overacidity of the stomach. It is available only on prescription by a physician and must be taken under medical supervision.

Clinical trial of Banthine in 100 peptic ulcer patients is described by Drs. Keith S. Grimson, C. Keith Lyons, and Robert J. Reeves of Duke University School of Medicine, Durham, North Carolina, in the *Journal of the American Medical Association.* Of this group of patients, 62 were considered to have "conventional indications for surgery" before treatment with Banthine was begun. Surgery was performed on five because of development of scar tissue or other special indications.

"Most of the patients were limiting their activity, restricting diet, and using antacids before their trial of Banthine," the doctors say. "During treatment they were advised to discontinue use of antacids. With few exceptions, they were encouraged gradually to return to work and resume a normal diet during the first week or two of treatment.

"With the exception of two patients, the group has continued regular work or, if originally incapacitated, has returned to regular work. Pain of ulcer usually is relieved completely before healing can occur. It is much better that peptic ulcer when possible should be treated medically. It is our present opinion that Banthine is a medical treatment better than that heretofore available and that need for surgery has and will decrease. Perhaps scar tissue can be avoided by prophylactic use of a simple treatment such as Banthine. However, obstruction already present to a pronounced degree may lead to failure of Banthine therapy and need for surgical intervention.

"Results with Banthine used in lieu of rest, restriction of diet, or antacids or other medicaments have been gratifying. Elimination of conventional restrictions and medical treatments necessary for study purposes, however, is not necessarily recommended as a good general practice. Occasionally, because of delay of relief of pain or recurrence of pain Banthine treatment has been supplemented."

A NEW METHOD FOR REPAIR OF THE DISTAL RADIOULNAR LIGAMENTS

Frederick Lee Liebolt, M.D., New York City

(From the Department of Surgery (Orthopedics) of the New York Hospital-Cornell Medical Center)

STRETCHING or tearing of the distal radioulnar ligaments produces subluxation of the distal radioulnar joints, allowing the distal end of the ulna to move anteroposteriorly, or forward and backward. Such to-and-fro motion produces instability and disability, particularly in individuals who uset heir wrists extensively as plumbers, mechanics, and carpenters.

Desault was the first to report on the condition in a lecture read in 1791 at an open meeting of the Academy of Surgery, Paris, France.[1] He presented six cases he had observed as surgeon-in-chief of the Hôtel Dieu and termed them, "Luxation of Lower End of the Radius." The first case was seen in 1773, a cadaver of a sixty-year-old male, and the other five cases were acute subluxations in two children and three adults which he reduced by digital pressure to separate the radius and ulna while an assistant supinated the forearm.

Many forms of treatment have been developed for chronic subluxation of the distal end of the ulna. These include five styles of external support, five separate bone operations, six methods of internal metallic support, and 13 types of internal soft tissue support, none of which is the same as the one presented here.

Resection of the distal end of the ulna, first reported by Moore (1880), Van Lennep (1897), Angus (1910), Tillmanns (1911), and later popularized by Darrach (1912), should not be used in the treatment of simple subluxation of the distal radioulnar articulation when both of the bones otherwise are normal, because it is destructive, extensive, and unnecessary.[2–6]

Subluxation of the distal end of the ulna is the result of trauma, most frequently that of extreme pronation or extreme supination of the wrist. Many of the subluxations are associated with old fractures involving the wrist joint, particularly fractures of the ulnar styloid process, and some result from surgical excision of the head of the radius at the elbow.[7] However, in young individuals with elastic bones trauma may not produce a fracture but may tear or stretch the anterior and posterior ligaments.

The patients complain of marked weakness of the wrist joint associated with pain, numbness, and tingling. There is inability to perform forceful twisting or gripping and difficulty in carrying heavy objects, particularly with the hand supinated because the weight causes the ulna to protrude anteriorly, forcing the release of the object.

Examination reveals instability of the distal radioulnar joint with marked relaxation and free anteroposterior gliding of the ulna on the radius. The patient may be wearing adhesive strapping or a wrist band.

X-rays may be negative, but often they reveal an old fracture of the styloid process of the ulna which is ununited. Small bony fragments and calcific bodies adjacent to the styloid process frequently are present. Healed fractures elsewhere in the shaft of either the radius or the ulna indicate previous trauma which may explain the present radioulnar symptoms. However, even without evidence of fracture, the ulna may be luxated.

Those authors who have used slings have discovered and reported that the subluxation is not always prevented because the sling only prevents separation laterally of the radius and ulna and does not prevent subluxation anteroposteriorly.[8,9] Further complaints against the fascial slings include reports that they limit rotation and that they produce definite grooves on the neck of the ulna.[10]

At operation the soft tissues over the dorsal portion of the radioulnar articulation are found to be sufficiently thin to allow the ulna to slip, but the condition of the volar portion of the radioulnar ligaments rarely is forthcoming because exploration is not performed on the anterior aspect of the joint. The wrist joint proper is not entered, but the radioulnar joint is opened for inspection, and the triangular fibrocartilage disk generally is found to be normal, intact, firm, and not relaxed, although it may present a congenital perforation in 30.6 per cent of cases.[11] The cartilaginous surfaces of the radioulnar joint are normal with no inflammatory reaction present. Usually, the bones will be of good density, but decalcification may be present in which case the drill holes should be placed farther than usual from the periphery of the bones. Before placing the fascia the distal end of the ulna will show marked relaxation, often swinging in an arc of about 20 degrees, but after the fascia is inserted, only minimal relaxation is present, and the ulna will swing in an arc not greater than 5 degrees.

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Procedure

The operative technic consists of making a 6-cm. longitudinal incision over the dorsal aspect of the distal radioulnar joint through the skin and subcutaneous tissues. The extensor digitorum communis and entensor indicis proprius tendons are retracted laterally, while the extensor carpi ulnaris and extensor digiti quinti proprius tendons are retracted medially. The dorsal carpal ligament is incised transversely only $^1/_2$ cm. The soft tissues overlying the radioulnar joint are incised transversely and reflected proximally to produce a flap to cover the fascia at the completion of the fascial transplant. Six drill holes are placed in the two bones (Fig. 1). The holes are 3 mm. in size and are drilled only through the posterior cortex of the bones, those in each bone being connected to each other through the cancellous portion. The first drill hole is placed in the head of the ulna near the lateral border and just proximal to the cartilaginous rim which covers the distal one-half of the distal end of the ulna. The second drill hole is placed in the neck of the ulna 1 cm. proximal to the first hole. Two drill holes are placed in the medial border of the radius on a level opposite the two drill holes in the ulna, and two additional drill holes are placed farther laterally in the radius. Thus, four drill holes are placed in the radius and two in the ulna, the extra two holes being used to gain greater purchase on the fascia so it may be sutured under greater tension and away from the articulation rather than directly at the joint where looseness and relaxation occur.

The fascial strip removed from the thigh is started through the most distal and lateral drill hole of the radius, brought out through the corresponding medial drill hole, passed across the radioulnar joint into the proximal drill hole of the ulna, and drawn out through the distal drill hole of the same bone; then, back across the radioulnar joint to the most proximal and medial drill hole of the radius and out through the corresponding lateral drill hole. With the forearm held in neutral rotary position the fascia is drawn taut and sutured to itself across the two most lateral drill holes of the radius by interrupted 00 black silk sutures. The fascia thus produces an X-shaped ligament not through but across the external aspect of the radioulnar joint.

Of the five cases which form the basis of this report, the first was operated upon six years ago on September 15, 1944. Flexion, extension, abduction, and adduction of the wrist joint were normal, showing that the procedure did not interfere with the normal function of the radiocarpal joint. Motion of the fingers including the thumb was normal, indicating no impairment of the tendons in the area of the wrist. In each case the distal end of the ulna could not be pressed forward except for about $^1/_2$ cm., showing that the fascial transplant placed through the drill holes stabilized the radioulnar joint and firmly fixed the ulna to the radius. The surgical scars were found to be thin, and the skin over the operative areas was freely movable. There was no loss of function in the forearm, wrist, hand, or fingers, and the strength and the grip had been restored to normal.

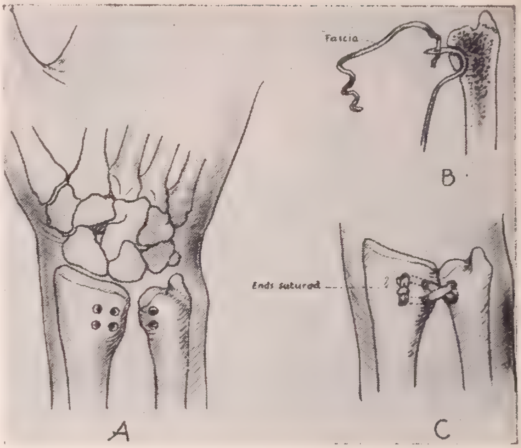

Fig. 1. Operative technic for reconstruction of the distal radioulnar ligaments: (*A*) view showing number, size, and position of drill holes placed in the distal end of the radius and ulna; (*B*) view showing that drill holes pass through only the posterior cortex of the bones; (*C*) view showing method of inserting fascia to produce an X-shaped ligament in normal anatomic position.

In each instance rotation at the distal radioulnar joint was normal, both in supination and pronation, indicating that the fascial transplant did not limit rotation of the forearm.

Case Reports

Case 1.—A nineteen-year-old private in the U.S. Army Air Forces was admitted on September 11, 1944, to the A.A.F. Regional Hospital, Coral Gables, Florida. He had received a fracture of the distal extremity of the right radius two years earlier in July, 1942, and thereafter the wrist was very weak. Three weeks prior to admission to the hospital, the patient was cranking a Mack truck when the distal end of the ulna "came out of joint" backward. Upon pulling on the hand the bone slipped back into position. Examination revealed free and excessive motion anteroposteriorly of the distal end of the ulna, and x-rays revealed an old ununited fracture of the ulnar styloid. On September 15, 1944, an X-shaped fascial ligament was inserted across the dorsal aspect of the right radioulnar joint by the technic described in this paper. The patient was discharged to full military duty two months later on November 20, 1944. When examined six months later at another

Air Corps base, the medical officer wrote, "Flexion, extension, and rotation of the hand in all directions are normal. This man has no loss of function of the right hand."

Case 2.—A twenty-five-year-old first lieutenant in the U.S. Army Air Forces was admitted on May 6, 1945, to the A.A.F. Regional Hospital, Coral Gables, Florida. He had received six separate fractures of the distal extremity of the right radius, as follows: The first at ten years of age (1930); the second was an open reduction for malunion; the third and fourth at twelve years of age (1932); the fifth at twenty-two years of age (1942) in an automobile accident which was followed by marked residual deformity of the bony structures, pain, tingling, and weakness; and the sixth at twenty-five years of age, (1945) when he fell on the right hand eight months before admission. Examination revealed forward subluxation of the ulna, the distal end slipping half way out of the ulnar notch of radius; a healing fracture of the middle third of the radius; limitation of pronation, supination, and extension of the elbow. Physical therapy was given for the limited motion following which, on July 4, 1945, an X-shaped fascial ligament was inserted across the dorsal aspect of the right radioulnar joint by the technic described above. Three months later, the wrist appeared normal except for slight limitation of motion due to the many fractures, and he was returned to full military duty.

Case 3.—A twenty-four-year-old second lieutenant in the U.S. Army Air Forces was admitted on July 12, 1945, to the A.A.F. Regional Hospital, Coral Gables, Florida. He had received an injury to the right wrist while playing football seven years earlier, in 1937. Thereafter the strength of the grip was decreased, and upon attempting to carry heavy objects with the hand supinated, the distal end of ulna would protrude forward, forcing the release of the object. Examination revealed that the distal end of the ulna slipped forward the full width of the radius, and x-rays revealed an old fracture of the ulnar styloid process which was ununited. On August 6, 1945, an X-shaped fascial ligament was inserted across the dorsal aspect of the right radioulnar joint by the above-described technic. The patient was returned to full military duty two and one-half months later on October 25, 1945.

Case 4.—A twenty-nine-year-old housewife was seen as an emergency on October 7, 1948, because of an acute injury to the left wrist when the patient fell during a fainting attack. Examination revealed backward displacement of the distal end of the ulna and superimposed soft tissue swelling. The overlying skin was red, and the area was exquisitely tender. A grip could not be made. Immediate x-rays revealed the distal end of the ulna to be displaced posteriorly without evidence of fracture. The ulna was replaced by digital pressure and held in place by adhesive strapping over felt pads. Aspirin, ice bag, and elevation were prescribed. X-rays taken twenty-one months later revealed the distal end of the ulna still displaced as originally.

Case 5.—A fifty-two-year-old male executive was examined on May 24, 1949. He had injured the right wrist, type of injury not known, in 1935 in a fall while playing squash, and a wrist band was worn occasionally thereafter. Present injury occurred three days earlier when the right hand slipped while patient was pushing himself up. Examination revealed dorsal prominence of the distal end of the ulna with crepitation and subluxation anteriorly. Patient did not desire x-rays, and hot epsom salts soaks with massage were prescribed.

Summary

In summary, a new method is offered for anatomic reconstruction of the distal radioulnar ligaments.

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Discussion

William P. Bartels, M.D., *Hempstead.*—It is evident that Dr. Liebolt has given the subject of lower radioulnar joint instability a very thorough study. The corrective method he has devised is essentially a reinforcement of the dorsal radioulnar ligaments. It is my understanding that any structure connecting fixed points on the dorsum of the lower ends of the radius and ulna will be tightened by full pronation, as the radius winds forward about the ulna, and relaxed by supination in the same manner. The converse is true of the anterior ligaments, so that the dorsal and volar lower radioulnar ligaments compensate each other, preventing undue laxity in the normal subject at any degree of forearm rotation. I do not understand just how tightening of the dorsal ligament alone, as Dr. Liebolt advises, can prevent instability in supination. This theoretic fault in the procedure is apparently of no importance, as Dr. Liebolt has stated that he found no instability after such surgery in his five cases.

The new operative procedure described is undoubtedly simple and free from complications in the hands of a master surgical technician such as Dr. Liebolt, but to me the procedure seems rather formidable in comparison to simple excision of the lower end of the ulna. This latter method has given uniformly excellent results in cases of all types of lower radioulnar joint disturbance treated by our group in Nassau County in the past four years at the Nassau and Meadowbrook Hospitals. Of course, after resection of the lower end of the ulna distal to the pronator quadratus attachment, a minor degree of radioulnar instability is present, but such instability is painless and compatible with excellent strength and hand function.

TRAUMATIC DISPLACEMENTS OF THE LOWER FEMORAL EPIPHYSES

B. E. Obletz, M.D., and P. A. Casagrande, M.D., Buffalo, New York

(*From the Buffalo Children's Hospital*)

Traumatic displacements of the lower femoral epiphyses are considered to be rare injuries. The major contribution by Poland in 1898 presents a thorough review of the literature, a detailed description of the injury, and his study of 114 collected cases.[1] Hilgenreiner in 1913 reviewed 200 cases in the literature and added six new cases.[2] This report is based on a study of 11 cases.

The traumatic displacements may be divided into two groups according to age: (1) birth and early childhood and (2) late childhood and adolescence. The two groups are different in clinical features and require different management.

Birth and Early Childhood

The lower femoral epiphysis is always visible on radiographs taken at birth, and its displacement should easily be recognized. Birth displacements usually occur during the delivery of a breech presentation where manipulation of the legs is necessary for extraction. While the exact mechanism of trauma is not known, it would seem that a strong backward force on the extended knee produces a rupture of the anterior portion of the periosteal cuff at the lower femoral epiphysis and a posterior displacement of the epiphysis. Less is known of the mechanism of injury during the first few years of childhood, but the clinical features are the same as in the birth injuries.

The diaphysis of the femur lacerates the periosteum anteriorly and projects through it as through a buttonhole rupture, making closed reduction practically impossible. The displaced epiphysis takes with it the periosteum of the femoral shaft, creating a space which rapidly fills with hemorrhage. This massive subperiosteal hemorrhage undergoes organization and within a week begins to show streaks of calcium density on radiographs. The initial hematoma is large and irregularly conical with its base distally.

As organization of the hematoma progresses, a new shaft is formed within the periosteal sleeve, solidly fixing itself to the displaced epiphysis. At three or four weeks the outlines of the old shaft and the newly formed femur are of equal densities. Gradually the original shaft is resorbed. The new femur straightens out as it grows in length, and at eight months it may be indistinguishable from its normal opposite member.

In the birth and early age groups, manipulative reductions do not succeed in replacing the epiphysis onto the shaft. Open reductions should never be performed. They are unnecessary and may cause irreparable injury to the epiphyseal cartilage plate. Without treatment of any kind or with simple immobilization nature restores the anatomy and function of the extremity. There is no disturbance of epiphyseal growth and no deformity of the knee.

Late Childhood and Adolescence

Traumatic displacement of the lower femoral epiphyses in older children is less commonly seen today than in the horse and buggy era. The most common cause of injury was entanglement of the foot in spokes of a revolving carriage wheel (hence the term "wagon-wheel fracture"). This mode of injury was not seen in any of our cases.

The epiphysis is usually displaced by indirect violence, e.g., forced hyperextension of the knee with or without torsion or lateral force. The epiphysis is flexed by the gastrocnemius heads and ligaments of the knee and usually displaced anteriorly to the metaphysis. In extreme hyperextension the epiphysis may lie anteriorly on the shaft of the femur. The separation may be a "pure" one or may include a fracture of the diaphysis involving the side of the shaft opposite the direction of the violence.

Diagnosis should be made without difficulty by clinical signs and radiographs. Reduction by manipulation under anesthesia is imperative in order to relieve pressure on the popliteal vessels and nerves. When done early, manipulation is usually successful. The most frequently used maneuver consists of traction on the leg, flexion of the knee, and strong pressure over the anteriorly displaced epiphysis. The knee is immobilized in a plaster spica in flexion and is gradually extended over a two-month period. Usually, full function is regained in six to twelve months.

If seen late or if closed reduction is unsuccessful, open reduction is justified. Careful handling of the epiphysis is necessary to prevent damage to the epiphyseal plate which may lead to growth disturbances. In general, the older the patient, the more accurate must be the reduction of the displaced epiphysis.

Malunited epiphyses can be corrected by supra-

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condylar osteotomy if the displacement is not severe. If the epiphysis is completely displaced and fixed to the anterior surface of the shaft as in Levinthal's case, open reduction may require lengthening of the quadriceps tendon.[3] In rare cases, resection of the distal end of the diaphysis may be necessary to reduce the epiphysis onto the shaft. All types of internal fixation and transfixion pins should be avoided because of the danger of growth disturbances.

Premature fusion of the epiphyseal plate may occur after violent manipulation or after open reduction with or without complicating infection. Early recognition of this premature fusion will suggest surgical arrest of the lower femoral epiphysis of the normal extremity to maintain equal leg lengths.

Case Reports

Case 1.—P. W., a female infant delivered by breech extraction on April 23, 1947, was cyanotic at birth, requiring oxygen and stimulants, but breathed normally after thirty minutes. There were no comments about the extremities until discharge from the hospital on May 1 when the mother noted that the baby's left knee was swollen and red. X-rays on May 2, 1947, showed posterior displacement of the lower femoral epiphysis with calcification of the subperiosteal hematoma in the lower half of the femur. The infant was immobilized in a long leg cast for two weeks. On July 25, 1947, there was no pain on movement of the knee with good range of motion and 1/4 inch shortening. On December 8, 1947, the knee lacked only a few degrees of full extension. On July 30, 1948, the knee had normal motion and stability; there was no limp and no shortening.

Case 2.—T. P., a male infant, was born on December 5, 1948, as an overterm breech delivery with the right knee delivered first. At ten days the parents noted swelling of the right knee which the infant did not move as freely as the left. No treatment was given. First x-rays were made at four weeks. At six weeks of age he showed a 20-degree flexion contracture of the right knee. One month later, the swelling and tenderness in the knee had disappeared, and he was kicking both legs equally well. On November 25, 1949, at about his first birthday, he showed no limitation of motion or weakness in the right lower extremity. At sixteen months he began to walk with assistance. Examination revealed a marked genuvarum at the right knee but a good range of motion. X-rays show some abnormality in the distal femoral epiphysis which will bear watching.

Case 3.—C. P., a female infant born on July 2, 1949, was an occiput presentation delivered without undue trauma. On July 13, it was noted that the right thigh and knee were swollen and tender. X-rays showed posteriorly displaced lower femoral epiphysis with evidence of early ossification of the subperiosteal hematoma. No treatment was given. The patient was last examined on April 17, 1950, when there was normal knee function and stability and no shortening.

Case 4.—V. H., a white male child of twenty months, was admitted to Buffalo Children's Hospital on January 7, 1947, because of pain, swelling, ecchymosis, and disability in the right knee. There was no definite history of trauma elicited from the mother who stated that she was attracted by his cries and found him sitting on the floor of the dining room. X-rays on admission showed a markedly displaced lower femoral epiphysis posteriorly. Several linear fractures were found on x-rays of the skull. Manipulative reduction under anesthesia was unsuccessful. Steinman pins were placed in the tibia and midshaft of the femur and incorporated into a hip spica cast which was ringed at the knee. Traction was applied to the tibial pin which corrected the shortening but not the posterior displacement. Further attempts at manipulation in this cast did not improve the position of the epiphysis. After seven days of traction the position was maintained by sealing the wedge at the knee with plaster. Both Steinman pins and the cast were removed on January 23, 1947. X-rays showed the progressive healing of the fracture separation by the formation of a new shaft within the subperiosteal hematoma and resorption of the original shaft. The patient began to walk on March 22, 1947. Final examination on March 4, 1950, showed both legs equal in length and configuration. The child walks without a limp, and there is full knee function and stability with excellent radiographic restoration of the femur.

Case 5.—E. H., a six-year-old, white boy, injured when struck by a car, was taken to the hospital by ambulance where examination revealed deformity of the right knee. X-rays showed an anterior epiphyseal displacement. The patient was given a general anesthetic, and the leg was manipulated and a right hip spica applied with the knee in about 60 degrees of flexion. Check x-rays showed excellent reduction. The cast was removed at the end of eight weeks, and the child was placed on crutches. At the last examination on April 19, 1950, he showed no leg shortening and a right knee with full range of motion and no deformity.

Case 6.—S. D., a six and one-half-year-old child, fell, injuring her left knee. She had immediate pain and swelling of the knee and was unable to put weight on it. X-rays showed an anteriorly displaced lower femoral epiphysis. On the third day, she was taken to surgery where a closed reduction was done under general anesthesia. Operative note stated that "with traction on the leg and manipulation the epiphysis was readily reduced." A long leg plaster cast was applied with the knee in full extension. No follow-up examination was obtained.

Case 7.—At the age of thirteen, A. S. caught her foot in a haystack while jumping from a height and twisted her right knee which became painful and swollen. She was unable to bear weight on the leg. She was seen by a family physician who diagnosed a sprain of the knee and ordered crutches. About one month later, the knee was still painful and swollen, and the child was taken to Children's Hospital where x-rays were taken and she was admitted to the Hospital. Ten days later, an ostectomy was done on the right lower femur and a right hip spica applied. X-ray at the time of surgery showed considerable improvement, although there was still a forward displacement of the epiphysis. Six months later the patient was walking well without pain. There was a $^1/_2$-inch shortening; she was able to extend and flex the knee completely. There has been no recent examination.

Case 8.—J. B., a fifteen and one-half-year-old boy, was convalescing from an acute slipping of the left upper femoral epiphysis. The hip spica had been removed, and he was up on crutches when he slipped and fell on January 28, 1949, injuring the left knee. X-rays showed a greenstick fracture just into the lower femoral epiphysis. He was immobilized by a traction to the lower leg. On March 5, 1949, the traction was removed, and he was allowed up on crutches. The results were satisfactory: there was no shortening and full motion.

Case 9.—W. W., a seventeen-year-old boy, was unable to stand on his right leg as a result of an injury on October 17, 1944, while playing football. He was taken immediately to Children's Hospital, and x-rays showed a dislocation of the lower femoral epiphysis with a triangular fragment of metaphysis. The boy was placed in skin traction, and on October 25, 1944, a general anesthetic was given and a closed reduction accomplished. A long leg plaster cast was applied. Check x-rays on October 25, 1944, were reported as showing good apposition and alignment of fragments. There was no shortening, and excellent knee function was restored.

Case 10.—R. R., thirteen years of age, was injured January 5, 1945, when he struck a tree while tobogganing and was taken to Children's Hospital where x-rays showed an anterior epiphyseal displacement at the lower end of the right femur with a triangular fragment of metaphysis attached. On January 5, 1945, a closed reduction under general anesthesia was attempted unsuccessfully. On January 8, 1945, an open reduction was attempted. There was considerable difficulty in mobilizing the epiphyseal fragment, and it could not be reduced accurately. A long leg plaster cast was applied. On January 17, 1945, the fracture separation was unreduced, and the patient was given another anesthetic and a closed manipulation done. A Steinman pin was placed in the tibial tubercle and the patient placed in traction of 8 pounds. On February 20, 1945, traction and Steiman pin were removed; on March 7, 1945, he was discharged with both extremities of equal length, an excellent result.

Case 11.—J. K., eight years old, fell and injured his left knee. The leg was manipulated and placed in a long leg cast. Five years later, x-rays of the left lower femur showed that the medial end of the left lower femur was higher than the lateral. The medial portion of the condyle also was lying posteriorly. Two days later, a supracondylar osteotomy was done to correct the varus deformity. X-rays showed that the lower fragment was angulated laterally. The alignment and position were good. Two months later, x-rays began to show bony union. Two years later epiphyseal stapling of the right lower femoral epiphysis and the right upper tibial epiphysis was done. There was 2 inches shortening of the left leg.

Summary and Conclusions

1. Eleven cases of traumatic displacement of the lower femoral epiphyses are presented. They are divided by age into two groups: (1) birth and early childhood and (2) late childhood and adolescence.
2. Reduction of the displaced epiphysis is not necessary in birth injuries or in early childhood. Open reduction is absolutely contraindicated. Full restoration of anatomy and function of the extremity occurs, even if gross displacement of the epiphysis remains unreduced.
3. Manipulative reduction of the displaced epiphysis in late childhood and adolescence should be performed early. Failing closed reduction, open reduction is justified. The older the child, the more accurate must be the reduction.
4. Malunited epiphyseal separations should be corrected by supracondylar osteotomy or open reduction. Surgical arrest of the lower femoral epiphysis of the normal extremity is indicated if premature fusion of the epiphyseal plate of the injured femur occurs.

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Property is the fruit of labor; property is desirable; it is a positive good in the world.

That some should be rich shows that others may become rich, and hence is just encouragement to industry and enterprise.—Abraham Lincoln

USE OF DIETHYLSTILBESTROL IN COMPLICATIONS OF PREGNANCY

LEO GITMAN, M.D., and ABRAHAM KOPLOWITZ, M.D., F.A.C.S., Brooklyn, New York

(*From the Endocrine Laboratory and Department of Obstetrics and Gynecology of the Beth-El Hospital*)

ONE of the more vexing and important problems in obstetrics is the prevention of the fetal loss due to complications of pregnancy. As in other fields of medicine, various therapeutic agents have been enthusiastically accepted, only to be discarded subsequently. However, the clinical experience and experimental data published to date appear to establish a sound basis for the use of diethylstilbestrol in many complications of pregnancy wherein the disturbance is one of estrogen and progesterone deficiency.

Karnaky was apparently the first to utilize diethylstilbestrol in premature labor and threatened and habitual abortion.[1] Since this publication he has advocated the use of large doses of this drug which, in his clinic, has yielded excellent fetal salvage rates.

Although the early use of this synthetic estrogen was based essentially on empiric grounds, the extensive experimental data presented by the Smiths and coworkers have furnished a rational, physiologic basis for its use.[2-4] The latter investigators have demonstrated that a progressive decrease in excretion of estrogens and progesterone and an elevation of chorionic gonadotropin was characteristic of abnormal gestations. They stated that the oxidation products arising from the metabolism of estrogens rather than the estrogens themselves cause increased production of progesterone by facilitating the utilization of chorionic gonadotropin.[2] It is important to note that this synthetic estrogen is effective because it stimulates the secretion of estrogen and progesterone and not because it is estrogenic in action.

It has been demonstrated that progesterone depresses the rate of oxidation of estrogen and the pituitary-stimulating properties of estrone.[5] The stimulating action of diethylstilbestrol, on the other hand, was not depressed by the presence of progesterone.[3] Thus, there is an excellent theoretic basis for the use of this drug in those conditions during pregnancy where progesterone deficiency is an etiologic factor, provided the steroid-producing cells (probably placental) are capable of responding to stimulation. This concept also implies that diethylstilbestrol, physiologically speaking, is preferable to progesterone since the former would be stimulating and the latter substitutive.

The present report, the result of a cooperative effort on the part of the members of the Department of Obstetrics and Gynecology, presents the findings in 51 cases in which adequate data were obtainable. The distribution of cases is presented in Table I.

Results

Abortion Prophylaxis.—Diethylstilbestrol was administered according to the schedule suggested by Smith, Smith, and Hurwitz.*[6] Progesterone was administered in a few cases in doses of 10 mg. weekly, and aqueous extract of corpus luteum once weekly was used in several cases. We feel that these factors can be disregarded in evaluating the results of our study.

In this group were 24 patients with a history of one to three previous abortions. In Table II the distribution of cases and outcome in each group are presented. The largest number of cases consisted of women who had had one previous abortion. Fifteen of the 17 were delivered of live babies. Of the four cases with a history of two previous abortions, two were successful. However, in one of the failures a uterosalpingography performed six weeks following delivery revealed a submucous fibromyoma of the uterus. Since hormonal therapy is not directed toward organic lesions of this type, this case should properly be omitted in the evaluation of this group. The most gratifying results were obtained in the three cases with three previous abortions. All were delivered of live babies.

TABLE I.—DISTRIBUTION OF CASES

Condition	Number of Cases	Number Successful	Per Cent Successful
Previous abortion	24	20	83
Threatened abortion	18	13	72
Diabetes mellitus	4	3	75
Low implantation of placenta	2	2	100
Hypertension	1	1	100
Operation	2	2	100
TOTAL	51	41	

TABLE II.—OUTCOME IN CASES WITH ABORTION PROPHYLAXIS

Number of Previous Abortions	Number of Cases	Number of Live Births	Per Cent of Live Births
1	17	15	88
2	4†	2	50
3	3	3	100

† Submucous fibromyoma found on uterosalpingography six weeks later in the one case which aborted.

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* Des, Grant Process of alpha, alpha-diethyl-4,4′-stilbenediol, supplied by Grant Chemical Co., New York.

On the basis of the statistical studies by Malpas and Eastman our results in the first two groups are of little significance.[7,8] However their estimate of the spontaneous cure rate in women who have had three previous abortions ranged from 16 to 27 per cent. The outcome in each of the three cases of our series was successful.

Threatened Abortion.—There were 18 cases of threatened abortion in our series. In each there was vaginal bleeding with or without cramps. The severity and duration of the bleeding varied from several hours of profuse bleeding to several weeks of mild bleeding or staining. Those cases exhibiting only abdominal pain were not included in the study.

With the onset of symptoms the following therapeutic schedule, with minor variations, was instituted. Twenty-five milligrams were given every hour for six doses, followed by 12.5 mg. every hour for six doses. For the next two weeks 50 mg. daily and then 25 mg. daily through the thirty-fifth week of gestation were administered. If symptoms reappeared, the schedule was repeated. Thirteen of the 18 cases carried to term (72 per cent). The number of acute episodes in each case varied from one to three. In the successful cases bleeding ceased within approximately twenty-four hours.

The results in this group clearly indicate the efficacy of diethylstilbestrol therapy if one considers that the maximum estimated spontaneous cure rate is 50 per cent.[9] Although the number of cases is small, the percentage of successes very closely approximates the results obtained in large number of cases.[10]

Diabetes Mellitus and Pregnancy.—The patients with diabetes mellitus complicating pregnancy were placed on a schedule recommended by Smith *et al.*[6] We have, to date, data on four cases, three with successful results. Two additional cases have not delivered yet but are progressing satisfactorily, and live births are anticipated. The failure was a case in which the persistently elevated urinary levels of chorionic gonadotropin could not be reversed by increasing doses of diethylstilbestrol. In another case the gonadotropin levels were normal until the thirtieth week of gestation, when there was an abrupt rise in the urinary titer. Five days later, there was a moderate increase in blood pressure, and pedal edema appeared. With an increase in the dose of stilbestrol the gonadotropins started decreasing toward normal levels, and there was no progression of pretoxemic signs. It is unlikely that the prompt reversal of gonadotropin level following the increased dosage of diethylstilbestrol was coincidental. During investigation of a pregnant diabetic Smith *et al.* noticed a drop in serum chorionic gonadotropin following administration of diethylstilbestrol with a reversal of this effect each time the drug was experimentally discontinued.[6]

On the basis of our small experience as well as theoretic considerations, we feel that all pregnant diabetics should receive diethylstilbestrol prophylactically. It is essential that therapy be instituted early since the steroid-secreting cells apparently are no longer responsive to stimulation after the onset of definite signs of toxemia.

Miscellaneous.—One case of moderate hypertension was treated prophylactically with no complications occurring. This allows of no valid interpretation.

Diethylstilbestrol was administered prophylactically to two patients undergoing operations during pregnancy, one for removal of cervical polyp and the other for appendectomy. Both carried to term. Here again we cannot definitely state whether or not the administration of diethylstilbestrol was crucial.

Of some interest were the results obtained in two cases of low implantation of the placenta. During bouts of bleeding the administration of diethylstilbestrol was followed by temporary arrest of profuse bleeding. In one of the cases this sequence occurred several times during the twenty-fourth to twenty-eighth week of gestation. The drug appeared to exert a hemostatic action, the exact nature of which is unknown.

Summary and Conclusions

The use of diethylstilbestrol in various complications of pregnancy yielded the following results: (1) abortion prophylaxis (24 cases) 83 per cent successful, (2) threatened abortion (18 cases) 72 per cent successful, and (3) diabetes mellitus (four cases) 75 per cent successful.

On the basis of our limited experience and in view of the clinical and experimental data published by other investigators, we feel that at present diethylstilbestrol is the drug of choice in those complications of pregnancy which are characterized by a deficiency of estrogen and progesterone.

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A FURTHER REPORT ON THE USE OF ETHER IN THE TREATMENT OF HERPETIC KERATITIS

Bernard Kronenberg, M. D., New York City
(From the New York Eye and Ear Infirmary)

IN THE August, 1941, issue of the *Archives of Ophthalmology*, I presented a preliminary report on the use of ether for treatment of herpetic keratitis. Since then I have had ample opportunity to re-evaluate this method of therapy and confirm its successful use. The comments in the literature, and personally to me, have been both favorable and unfavorable. Because of my continued successful results with this treatment and, on the other hand, the knowledge that a number of the unfavorable reports were from reliable sources, I felt it would be wise to reexamine the reasons for the successes obtained in my series in contrast with those obtained by others.

With this in mind I suggested to Dr. Fenn T. Ralph, resident at the New York Eye and Ear Infirmary, that he treat a series of cases of herpetic keratitis following very exactly the technic that I use. I also studied the last 12 cases from my private practice. As a result of this investigation and after conversations with men whose use of this treatment was unsuccessful, I have come to the conclusion that the technic must be followed faithfully if it is to be successful.

The method of application which has proved by experience to be effective is as follows: The patient's eye is anesthetized with 1 per cent Pontocaine. The lesion is outlined with fluorescine. The patient's head is made comfortable in a head rest. Good illumination is necessary. An assistant holds a container of fresh ether. Into this container a tightly woven, small cotton applicator, previously prepared, is dipped. The excess is quickly shaken off and the lesion is rubbed with the still wet applicator, removing the corneal epithelium of the lesion and a small amount of its surrounding epithelium. The mere application of ether to the lesion is not sufficient. It must be rubbed in. If one application is not sufficient because the ether may have evaporated, a fresh applicator is dipped into the ether and the rest of the lesion treated in a similar fashion. Metaphen opthalmic ointment is then instilled, and the eye is bandaged.

The eye must be examined twenty-four hours later. Again the cornea is stained with fluorescine. Any small remnants of the original lesion must be touched up again in the manner described above. This last step is extremely important, and its neglect is probably the cause of the poor results obtained by some observers. Metaphen ointment is again instilled and the eye covered for another twenty-four hours. The eye is then re-examined. The cornea is again stained with fluorescine, and remaining vestiges of the lesion, if any, are again treated as described above. As will be seen, however, in the more detailed reports of the cases, only a few required a third application of ether (Table I). It has been my custom to cover the eye for at least an additional twenty-four hours so that the total occlusion is at

TABLE I.—Detailed Reports of 20 Cases

Case Number	Sex	Age	Eye Affected	Duration Before Treatment (Days)	Previous Treatment	Days of Stain After Treatment	Total Duration (Days)	Number of Ether Applications
1	F	44	O. D.	1	None	1	2	1
2	F	55	O. D.	2	Penicillin	2	4	1
3	F	51	O. S.	5	Metaphen	1	6	1
4	F	36	O. S.	4	None	1	5	1
5	M	45	O. S.	14	None	2	16	1
6	M	15	O. S.	4	None	6	10	2
7	F	48	O. D.	1	None	2	3	1
8	M	22	O. S.	2	None	1	3	1
9	F	22	O. D.	3	None	3	6	3
10	M	54	O. S.	3	None	2	5	1
11	M	53	O. D.	2	None	4	6	2
12	M	52	O. D.	3	None	4	7	2
13	M	57	O. S.	2	None	4	6	2
14	F	22	O. D.	2	None	2	4	2
15	M	35	O. S.	2	None	3	5	3
16	M	60	O. S.	2	None	2	4	1
17	F	25	O. D.	1	None	2	3	2
18	F	51	O. D.	3	None	3	5	1
19	F	30	O. D.	1	None	2	3	2
20	M	40	O. D.	10	Prescription by medical doctor	2	12	1
Average	10 males 10 females	37 years	11 O. D. 9 O. S.	4.7		2.2	5.7	1.5

least seventy-two hours. This gives the newly formed epithelium an opportunity to heal in firmly.

I should like to emphasize again the advantages of the treatment with ether as compared to that with some of the stronger cauterizing agents such as iodine: (1) It is completely painless. (2) In most of the cases two applications of ether have been sufficient to cure the condition. Only a very small number of cases required three applications; none required more than three applications. (3) When treated early, none of the cases reported became chronic.

Table I is the list of the eight cases reported by Dr. Ralph from the New York Eye and Ear Infirmary as well as the last 12 cases from my private practice.

737 Park Avenue

SUPRACERVICAL HYSTERECTOMY FOR FIBROIDS: A STUDY OF LATE END RESULTS

E. MacD. Stanton, M.D., F.A.C.S., Schenectady, New York

(From the Department of Surgery, Ellis Hospital)

During the thirty-three years, 1913 to 1945 inclusive, the writer performed 202 hysterectomies for fibroids. One hundred and ninety-eight of these operations were supracervical hysterectomies. Eleven of the supracervical hysterectomies were lost track of within a few months following their operation. Three patients died soon after operation. The remaining 184 patients have been traced as regards follow-up records for an average of twelve and one-half years each.

The operative technic, except for the anesthetic, was essentially the same throughout the entire period. Ether was the standard anesthetic until 1927, although in the early twenties a few cases were operated under spinal anesthesia. In 1927 we began using ethylene and a year later cyclopropane. Since then all hysterectomies done by me in Schenectady have been done under cyclopropane.

With the patient in the Trendelenburg position, a low median incision was made. After exploring the abdomen, particularly as regards the gallbladder, the intestines were packed off. Next, the round ligaments were grasped close to the uterus and cut. The broad ligaments were then double clamped, severed, and the distal portion ligated with a figure-of-eight suture. Next, the lower portion of the broad ligaments were double clamped, deep enough to include the uterine artery, cut between the clamps, and ligated. A cone-shaped amputation of the cervix completed the removal of the uterus. The ends of the round ligaments were buried in the stump of the cervix which was closed over with deep sutures tied just tight enough to control bleeding.

The tubes were always removed. As a rule, in patients under forty-four years of age, one or both ovaries were left.

The abdomen was closed without drainage. Stay sutures were used in all cases. The sutures were removed on the twelfth day, except that in some particularly anemic cases they were left in several days longer. I have no record or memory of any noteworthy infections occurring in any of these cases. Evisceration did not occur in any case.

Postoperative treatment was very simple. A Murphy drip supplied liquids until nausea subsided. The drip is an automatic water supply. When the patient needs fluids, the drip is rapidly absorbed. When the patient has absorbed enough fluids and is no longer thirsty, nature stops absorbing. After nausea, liquids and later solid foods were given as desired by the patient.

Morphine was given as required for pain, but sleep-producing sedatives for the most part were avoided. My hospital experience has extended through periods when the interns have had great faith for the time being in some of the chloral derivatives, the bromides, the acetanilids, and more recently the barbiturates. In my experience, none of these has been satisfactory in the normally convalescing patient who is unable to sleep because she is literally rested out. Resistance exercises, practiced about five minutes out of the hour, keep the patient occupied, keep the body muscles strong, help to prevent phlebitis and other forms of thrombosis, and, in my experience, these exercises invariably condition the patient for natural sleep.

Among the recovered cases in this group, there was only one really serious postoperative complication. A woman, aged forty-seven, operated in 1944 for multiple fibroids, developed a mesenteric thrombosis nine days after operation. In my absence, my associate, Dr. Woodall, excised approximately four feet of thrombosed and necrotic small bowel using a Mikulicz type technic. She recovered and has remained in good health.

There were three postoperative deaths in this series. Two of them were definitely due to pulmonary embolism on the tenth and fourteenth postoperative days. The third case was a sudden unexpected death on the fifth postoperative day. I have always believed that the latter death was due to embolism, but there was no autopsy.

It should be borne in mind that many of these patients were operated on during a period when fibroid cases came to the surgeon with massive tumors, many of which had bled until hemoglobin readings in the low thirties were not uncommon and patients with hemoglobin readings above 50 per cent were considered good risks. In those days, hemorrhage was usually controlled by rest in bed. Iron, rest in bed, and an appropriate diet were relied upon to bring up the blood count. Today it is quite generally held that patients in similar conditions should be prepared for operation by whole blood transfusions. During all of the period in question, I used whole blood transfusions to replace acute blood volume loss but did not use transfusions in cases of anemia in which I considered the blood volume to be approximately normal. Judging from my observations over the years, it is my feeling that while preoperative transfusions are undoubtedly of real value in many cases, this value at the present time is often overestimated.

Twenty-one women have died during the years following their operations. Seven died of cancers not primary in the pelvic organs. Two died of cancer of the ovary. Twelve died of miscellaneous causes ranging from auto accidents to arteriosclerosis.

Based on *a priori* reasoning and actual experience, the following pathologies and morbidities are predictable as possibilities following supracervical hysterectomies: cancer developing in the cervical stump, prolapsus of the cervical stump, vesicocele, ventral hernia, symptoms due to postoperative adhesions, including acute obstruction, vaginal discharge, backache, painful ovaries, hot flashes and symptoms of the artificial menopause, altered mental attitudes, and dyspareunia.

In this series of 184 cases of supracervical hysterectomies for fibroids, there has been no known later development of cancer of the cervix. Only one cervix is known to have been removed since the hysterectomy. A woman operated on by me in 1937 for pelvic inflammatory disease with removal of both tubes and right ovary was again operated at age thirty-five in January, 1942, for menorrhagia due to multiple small fibroids. In November, 1945, three years and ten months after her hysterectomy, she again began to flow and in December, 1945, was operated on the gynecologic service of the hospital with excision of the remaining cervix. The laboratory report reads, "Small cervical polyp. Chronic endocervicitis."

In recent years much has been said about the danger of cancer developing in the retained cervix. Estimates based largely on the number of cases encountered in certain clinics have varied greatly with some estimates ranging as high as 3 or 4 per cent. At my suggestion, the statistical division of the New York State Department of Health has estimated that in upstate New York approximately 1.6 per cent of women reaching the age of forty ultimately die of cancer of the cervix. This estimate is based on statistically adequate mortality data accumulated in recent years. It would seem that this figure can be assumed as a fair estimate as regards hysterectomies performed for all nonmalignant conditions in women past forty years of age. In so far as many women are well past age forty at the time of operation, the actual hazard will be somewhat less than for age forty. Also, because of the relative absence of the supposedly precancerous types of cervical lesions in fibroid cases, it seems reasonable to assume that, following supracervical hysterectomies for fibroids, the incidence of cancer of the retained cervix will be somewhat less than the average expectancy.

Two women died seven and twenty-three years, respectively, after hysterectomy, of cancer of the retained ovary. According to the Connecticut experience tables, cancer of the ovary is approximately half as common as cancer of the cervix which would give it an expected incidence, after age forty, of around 0.8 per cent. This is not a very alarming incidence rate, but this factor should always be given due consideration when deciding whether or not to remove both ovaries when doing a hysterectomy.

The literature contains a number of articles dealing with prolapsus of the cervical stump following supracervical hysterectomies. That with proper operative technic this complication need not be frequent is indicated by the fact that this complication has not been found in any of my cases. It is interesting to note, however, that even though the stumps of the uterus may not prolapse, a vesicocele may develop. This has occurred in six of my patients, all at a late date following their operations, namely, seven and one-half, eight, thirteen, eighteen, nineteen, and twenty years after operation. This condition is apparently a phenomena of advancing age with little or no relationship to the hysterectomy.

Only one of the six patients with cystocele following hysterectomy for fibroids has elected to have an operation to cure the cystocele. When an operation is required, the presence of the cervical stump makes it possible and relatively easy to perform the only type of operation for cystocele which, in my experience, has given lasting results, namely, freeing the bladder from the cervix and pushing the redundant bladder up on to the cervix where it has a permanent solid support.

Two patients were reoperated for ventral hernias one year and one year and four months, respectively, after their hysterectomies. Both hernias occurred in very obese women. One repair was still holding after fourteen years and the other after two years. In the third patient, a small ventral hernia developed ten years after the hysterectomy. The patient was at the time suffering from an inoperable cancer of the stomach.

Symptoms attributable to postoperative adhesions have not produced any noteworthy morbidity. In my experience, symptoms commonly attributed to adhesions occur very rarely following operations performed in the presence of real pathology.

Vaginal discharge following operation was noted in only six cases. In one, the cervix was cauterized as an office procedure.

Backache was complained of in a few cases soon after the patients got on their feet. Properly fitted corsets and a few weeks time served to clear up this trouble. Taken as a whole, backache has been much less frequent in this group of cases than in the general run of women of comparable ages.

Notwithstanding the fact that one or both ovaries were retained in the majority of cases, there is no record of pain referable to these retained ovaries. This is in contrast to my experience with retained ovaries in younger women operated for pelvic inflammatory disease and other causes.

One patient developed a chocolate cyst in a retained ovary. This cyst was removed by operation.

Hot flashes and other symptoms of the menopause have been chiefly noteworthy because of their mildness or complete absence. This is probably due largely to the age at which these patients were operated and in part to the retention of at least one ovary in most cases operated before about age forty-four. My impression is that with Theelin available a higher proportion of ovaries could be sacrificed.

Altered mental attitudes such as we have frequently encountered in radium treated cases have not occurred as far as I could ascertain in any of these patients.

Dyspareunia is not mentioned in any of our follow-up notes.

Five women developed cervical polyps in the years following their operation. These polyps were heralded by spotting now and then and some vaginal discharge. In four of these patients, these polyps were easily snared off with an ordinary tonsil snare. This simple office procedure resulted in a cure. A fifth case, already referred to, was operated on three years and ten months after her hysterectomy by another surgeon who removed her cervix, along with the polyp.

Summary and Conclusions

In recent years, much has been written concerning the relative advisability of total versus supracervical hysterectomy. The arguments pro and con center very largely around pathologic conditions actual or potential in the retained cervix. As regards the cervix, hysterectomies for benign conditions fall into two rather sharply defined groups, namely, those performed for fibroids and those performed for benign conditions other than fibroids. Few women with fibroids have ever borne children. The cervical pathologies incident to childbirth are rarely encountered. Likewise, the cervical pathologies due to infection are equally rare. In hysterectomies performed because of fibroids, the cervix is as a rule essentially normal. On the other hand, cervical pathology is very frequently a factor demanding consideration when hysterectomy is performed for conditions other than fibroids.

Taken as a whole, I know of no major surgical operation which in our experience has yielded more satisfactory and lasting results than has supracervical hysterectomy for uterine fibroids. In 172, or 93 per cent, of the 184 traced patients in this group the results are found to have been almost 100 per cent satisfactory. Aside from mild menopausal symptoms in a few cases, these patients have remained free from morbidities in any way traceable to their operations. Also, as far as I have been able to ascertain, there have been no examples of marital difficulties due to the operation.

Sixteen patients developed postoperative pathologies as follows: five developed cystoceles, three incisional hernias, five cervical polyps, two died of cancers of retained ovary seven and twenty-three years after their hysterectomies, and one developed a chocolate cyst in a retained ovary.

In none of the 198 cases of supracervical hysterectomy performed by me for fibroids have the late results been such as to lead me to feel that it would have been better judgment had I removed the cervix when doing the hysterectomy.

146 Barrett Street

ON THE USE OF ANTICOAGULANTS

James T. Geddis, M.D., New York City

(*From the Fordham and St. Francis Hospitals*)

THE fruition of research in medicine must always await application of results at the bedside. New procedures and new drugs which cannot be made available to the practicing physician in his own environment are necessarily of limited value.

Ten years have elapsed since the discovery of Dicumarol imparted a tremendous impetus to the study of thromboembolic phenomena. It has become apparent from the publications of Jorpes, Allen, Hines, Kvale, and Barker, Wright, Marple, and Beck, and many others that lives can be saved and a great deal of disability prevented and overcome by proper use of the anticoagulants, heparin and Dicumarol.[1-4] From the very nature of the process involved in anticoagulant therapy, that of depressing the clotting tendency of the blood to a point close to spontaneous bleeding, there is grave danger to the patient. A huge mass of experimental and clinical data has accumulated which indicates that this danger can be controlled in great part by close teamwork between the laboratory and clinician. The literature on the subject of anticoagulant therapy consists almost exclusively of reports by large institutions organized for the study of special problems. The pitfalls of therapy, especially those resulting from the use of Dicumarol, have been widely stressed, and not many papers have come from smaller hospitals, and still fewer from individual physicians. It is the purpose of this presentation to indicate that more widespread use of anticoagulants by physicians in a smaller hospital, and even in the home, is not only possible but highly desirable.

Heparin administration causes changes in the blood-clotting time which can be easily and accurately determined. For this purpose the Lee-White method has been found most accurate, and it permits a satisfactory control of heparinization. Aqueous solutions of heparin, when injected intravenously, quickly reduce the blood-clotting time, but the effects of a single dose are dissipated within four hours. Heparin is very expensive as compared with Dicumarol. On account of its expense, and because of the necessity for the intravenous route and frequent dosage, aqueous heparin is not considered satisfactory for prolonged use. However, it is useful for short-time therapy and in bridging the lag period of the slow-acting Dicumarol when immediate and prolonged anticoagulant therapy is contemplated.

Recently, heparin has been prepared in retarding media which permit of infrequent dosage. These mixtures are undergoing evaluation at many centers, and apparently they can be used safely over long periods of time. Lowe and Eiber claim certain advantages for this therapy.[5] Prompt and adequate control of coagulation is obtained after an initial dose of 300 to 400 mg., given intramuscularly. This dose is repeated every three or four days, depending upon the coagulation time, which should be three times the normal value. Renal and hepatic diseases are not contraindications to therapy, as is the case with Dicumarol, and overheparinization is promptly controlled by application of icepacks at the injection site to slow absorption. Circulating heparin is quickly neutralized by small transfusions of whole fresh blood. Some clinicians feel that this form of anticoagulant therapy possesses such merit that it will soon replace Dicumarol.

Dicumarol, on the other hand, has been the anticoagulant most used so far. It is a drug which presents an important challenge to those who would use it. I know of no other drug whose use is complicated by so many unpredictable variables. Just as with heparin, if not enough is given, embolic phenomena are likely sequelae, and bleeding will occur when too much is given. Here, however, the comparison ends. Adequate heparinization calls for a blood-clotting level approximately three times the normal. This can be measured accurately, and the response from patient to patient is almost predictable. Proper dicumarolization calls for determination of the prothrombin activity of the blood. At present, there are at least 13 different methods for prothrombin determination. Major and minor differences in technic are used at different institutions, and to this is added the difference that exists in reporting prothrombin levels as percentages in some cases and as seconds in others. Attempts have been made and are being made to solve the accompanying confusion. For the physician, the only solution at present is to learn as much as he can about the method in use locally. If a clearly satisfactory test is not available, he should not use Dicumarol. However, this is a situation excusable only in areas where unusual conditions exist.

In the transactions of the first conference on blood-clotting and allied problems, held in February, 1948, under the auspices of the Josiah Macy, Jr., Foundation, Irving Wright stated in part:

One problem requiring immediate attention is that of simplification of the method for the estimation of prothrombin activity, or in the development of some other determination which will work as a guide for the administration of Dicumarol.[4]

There are certain contraindications to Dicumarol therapy. These may be listed as follows:

1. Renal insufficiency—this is a relative contraindication.
2. Hepatic disease with actual or potential prothrombin deficiency, again a relative contraindication.
3. After operations of the central nervous system, because of the danger from hemorrhage.
4. Blood dyscrasias.
5. Ulcerative lesions.
6. Clinical or subclinical vitamin C deficiency.
7. Any existing hypoprothrombinemia like that caused by salicylates, antibiotics, and chloroform anesthesia.

There is an entirely unpredictable patient response to standard doses of Dicumarol. The initial dose is usually 300 mg. Some clinics give 200 mg. on the second day. Subsequent doses are always calculated on the basis of the prothrombin determination for that day. Various investigators have indicated levels of prothrombin activity at which embolic phenomena do not occur and also levels at which bleeding is likely to occur. Neither of these end points can be estimated in any individual with accuracy, but, on the whole, as Wright has stated, when the prothrombin time in seconds is between two and three times the normal control level, determined on the same day, satisfactory dicumarolization has been achieved.[6]

However, there is a statistically significant group of patients which will suffer embolic episodes in spite of apparently adequate dosage of Dicumarol as shown by the prothrombin determination. Some of these have malignancies of the liver, pancreas, or elsewhere. Some have migrating phlebitis, and in some no cause has ever been found. Bleeding may occur in some patients with prothrombin levels which are apparently well above the danger point. Again, unsuspected complicating ulcerative lesions and some of the other conditions already referred to as contraindications must be suspected when this occurs. Link has given evidence to support the possibility of preventing some of these unexpected hemorrhages by the routine administration of vitamin C.[7] It is important that prothrombin determination be performed daily in most cases. Many individuals will be found to maintain a level prothrombin time during the second or third week of therapy. In them, satisfactory control can be maintained by doing the prothrombin time once or twice weekly. Wright and Foley have reported on the use of long-term anticoagulant therapy in ambulant patients.[8] This group includes cases of rheumatic heart disease, phlebitis migrans, and recurrent myocardial infarction.

Statistical analyses are of some help to the physician using Dicumarol, but his own cumulative experience and his clinical judgment are his guides, and these constitute another important variable in a situation replete with variables.

As with overheparinization, fresh, whole, citrated blood is very effective in the treatment of Dicumarol poisoning. Cosgriff, Cross, and Habif have recently shown that lyophilized plasma is a very effective form of therapy.[9] Vitamin K, in dosage from 60 to 100 mg. intravenously every four hours, is now generally considered effective in treating Dicumarol-caused hypoprothrombinemia.

In summation, concerning Dicumarol, we have a drug which, notwithstanding its disadvantages and variables, constitutes a very valuable tool in the prevention and treatment of thromboembolic phenomena. That it is a dangerous tool no one will deny. That certain improvements in its use are imperative is most certain. But I am convinced that many physicians are not using Dicumarol because its dangers have been so impressively presented. I believe that many more physicians not connected with large institutions should use Dicumarol and that they can conform to criteria that justify its use. Most small hospitals have laboratories with adequate facilities for performing prothrombin determination, and the advantage of close personal contact between staff members and technicians increases the probability that they will be done correctly. The technician's interest in the work is easily stimulated by discreet discussion of the clinical problems involved. This, in itself, is a stimulus lacking in larger hospitals. As a rule, small hospitals have facilities for home collection of blood samples, and thereby the physician is enabled to treat some of his cases in the home. This is safe when it is considered that blood-typing is just as available as blood prothrombin determinations, and, if necessary, the hemorrhagic results of overzealous treatment can be corrected as readily in the home as elsewhere. It is suggested that in areas where no hospital laboratory is available, physicians can learn to use the Smith bedside technic. As with all other methods for prothrombin testing, each batch of thromboplastin used must be compared with controls. Members of the patient's family, with presumably normal prothrombin levels, could serve this purpose.

These considerations prompted the writer to attempt anticoagulant therapy in his private practice, starting early in 1947. Up to the present, 54 cases with indications for such therapy have been treated. The number is too small for statistical analysis. Most of the cases were treated in a small, proprietary hospital. Some were treated at home. In some cases treatment was started in the hospital and continued at the home. The Smith bedside technic was used in all cases. Due consideration was given to the prevailing opinion that this is the least accurate of all the methods now used for prothrombin determinations. However, no other method was available. Frequent observation of the technic used by the two laboratory workers assigned to performing the test, assurance that each prothrombin determination was done with a fresh vial of thromboplastin, and comparison with a normal control for each determination gave fair proof of accuracy.

The cases included 37 of myocardial infarction: four of pulmonary infarction; eight of thrombophlebitis of the lower extremity, one of which complicated insertion of a Smith-Peterson pin for fractured neck of the femur; three of femoral artery embolus; one of rapid auricular fibrillation in an elderly hypertensive diabetic; one of cerebral embolus complicating thrombophlebitis of a lower extremity and rapid auricular fibrillation.

Failure of anticoagulant therapy is certainly present if thromboembolic phenomena occur or if dangerous bleeding occurs. Failure is also present if blood prothrombin is not maintained at a level commonly thought to prevent intravascular clotting. However, this is not usually accepted as failure because no clinical evidence of thromboembolism occurs. Patients in this category did not have the predicted thromboembolic tendency, or the attained prothrombin levels were sufficient to prevent clotting in these particular individuals. The stigma of failure is arbitrarily assigned to such instances in order to emphasize the necessity for giving enough Dicumarol to anyone who needs it. Fainthearted exhibition of this drug will result in frequent failure, and, while no brief is held for overzealous dicumarolization, a small amount of bleeding is much less dangerous and easier to treat than any kind of intravascular clot or embolus.

Case Reports

The cases cited in this report, when subjected to these criteria, include several failures.

From Serious Bleeding

Case 1.—Serious urinary bleeding in an elderly woman with diabetes and hypertensive cardiovascular disease, who developed rapid auricular fibrillation and pulmonary infarction. Bloody urine continued for seven days in spite of three transfusions of whole blood (not selected for its freshness) and two doses of vitamin K (60 mg. each). It is known now that the treatment was inadequate because the freshness of the transfusion blood was not ascertained, and more frequent doses of vitamin K should have been given. No ulcerative lesion of the genitourinary tract was found subsequently, and the patient has remained in fair health since this episode, which occurred in 1947.

Case 2.—A physician who had been using self-treatment for what he thought was asthma was admitted to the hospital suffering from an embolus of the left femoral artery and very severe congestive heart failure due to rheumatic heart disease and auricular fibrillation. He was given 300 mg. of Dicumarol on admission and 200 mg. the following day, at which time blood could not be obtained for prothrombin determination. The following day he died. At autopsy the ascitic and chest fluid were bloodstained, but no hemorrhagic sites were seen. It is felt that Dicumarol may have been a factor in the outcome.

Case 3.—An elderly woman, following insertion of a Smith-Peterson pin for fractured neck of the femur, developed thrombophlebitis of the affected leg, for which Dicumarol was given. After three weeks a bloody fluid exuded from the operative wound. The wound became infected, requiring incisions and antibiotics. It drained for three weeks. No other evidence of bleeding occurred. The failure in this case was not particularly dangerous, and final healing of the fracture and subsidence of the thrombophlebitis was complete.

From Embolism

Case 4.—One case of embolic death occurred. A man, forty-eight years of age, with hypertension and dextrocardia developed a large myocardial infarct. He was treated in the hospital for six weeks and then was transferred to the home of a daughter in a distant part of the city. Because of his poor condition the physician who treated him following discharge continued to give Dicumarol. Six weeks later he developed hemiplegia and died in two days, shortly after Dicumarol was discontinued.

There were nine cases which can be considered academically as treatment failures because adequate prothrombin levels could not be maintained although no embolism or thrombosis occurred. The author of the Smith technic requires that the level be about 40 per cent of normal for successful dicumarolization. Failure to conform to this requirement in these cases can be assigned to lack of experience with drug dosage and to unusual patient response. However, unusual patient response is definitely a factor. Shapiro has reported cases refactory to as much as 1,000 mg. daily. Dosage of such magnitude should not be attempted without recourse to expert opinion and use of more accurate determination of the prothrombin level than the one used.

One patient was treated at home with long-term Dicumarol therapy.

Case 5.—A sixty-three-year-old woman with hypertensive arteriosclerotic heart disease complicated by auricular fibrillation and congestive failure, whose heart rate and edema were very difficult to control, had been under treatment for two years. No evidence of thyroid hyperfunction was found, and no benefit was derived from prophylthiouracil. She developed sudden massive pulmonary infarction and was treated in the hospital for three weeks. Dicumarol was used. Following her return home, the fibrillation and edema could not be controlled, and it was decided to use anticoagulant therapy, both for prevention of large emboli and also because she was suspected of having multiple small pulmonary emboli as a cause for the intractable heart failure. After two weeks, during which daily prothrombin times showed that 150 mg. daily of Dicumarol maintained her prothrombin level at 40 per cent of normal, prothrombin times were done less frequently. For three months weekly prothrombin determinations showed satisfactory control of dicumarolization. However, no improvement in the heart condition was effected, and this treatment was stopped. The patient died suddenly about ten days later.

Comment

As a result of experience with anticoagulant therapy, certain convictions become apparent.

1. Use of anticoagulants is justified and desirable by more physicians than is indicated in the present literature on the subject.
2. Most physicians in this country have available the necessary facilities to justify their use.
3. Only by great diligence and care can a predicted increase in the complications of such therapy be prevented if its more widespread use does eventuate.
4. More accurate and more widely applicable tests of prothrombin activity are necessary.
5. In order to gain experience with Dicumarol a physician must train himself by personal observation of the daily prothrombin level and by prescribing the dosage of Dicumarol himself. Relegating these tasks to residents and interns deprives the physician of this training.
6. Start of anticoagulant therapy is frequently an emergency. For this reason it is suggested that some form of heparin—preferably in a retarding medium—be carried by physicians when making their calls.

Summary and Conclusions

1. Use of anticoagulants by physicians not connected with a large hospital is advocated. This includes use in the patient's home.
2. The advantages and disadvantages of such therapy are presented.
3. The failure in a small series of cases so treated are discussed.

1265 HOLLYWOOD AVENUE

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AUREOMYCIN SHOWS PROMISE AS TREATMENT FOR MUMPS

Results obtained in treating three patients with mumps suggest that aureomycin may be of definite value in this disease. Two women treated for mumps with aureomycin showed definite improvement within twenty-four hours after receiving the first dose of aureomycin, Drs. Wilfred D. Langley and John Bryfogle say in the August 12 issue of the *Journal of the American Medical Association.* Another patient, a man, received the drug less than twenty-four hours after symptoms of mumps were first noticed. Forty-eight hours after treatment was begun, he showed definite improvement.

While no definite conclusions can be drawn from treating three patients in the manner described, the results obtained would suggest that aureomycin may be of definite value in this disease.

CORNELL CONFERENCES ON THERAPY

Departments of Pharmacology and Medicine, Cornell University Medical College and New York Hospital

These are stenographic reports of conferences by the members of the Departments of Pharmacology and Medicine of Cornell University Medical College and New York Hospital, with collaboration of other departments and institutions. The questions and discussions involve participation by members of the staff of the college and hospital, students, and visitors. A selected group of these conferences is published in an annual volume, *Cornell Conferences on Therapy*, by the Macmillan Company.

Use of the New Antimicrobial Agents in Genitourinary Infections

Dr. Walsh McDermott: The treatment of infections of the genitourinary tract is the topic of the conference this afternoon. The opening remarks will be made by Dr. Victor Marshall.

Dr. Victor F. Marshall: The treatment of genitourinary infections has shown advances of unusual magnitude since the antimicrobial agents such as the sulfa drugs, penicillin, and streptomycin were put to work in this field. Strange as it may seem, the very fact that these drugs are so potent as therapeutic agents has enhanced a source of danger which was of relatively little prominence in the days when no such effective remedies were available. It is not a danger inherent in the toxicity of the agents; that, with the exception of streptomycin, is virtually negligible. The real danger lies in an unfortunate state of mind resulting from the availability of highly potent antimicrobial drugs. I refer to the dependence on the use of these agents alone as a means of bringing genitourinary infections under control. The enthusiasm for these drugs is readily understandable, since their effects are often dramatic and a source of intense satisfaction to both the physician and the patient, but it is the very fact of the striking results they produce which brings into relief a fundamental error in the concept of therapy of genitourinary infections; namely, the error that antimicrobial agents, if potent enough, can solve the major problems relating to the cure of these infections.

These drugs have modified therapeutic procedures and have made it possible to apply them more readily. However, the basic principles have remained, and these cannot be successfully ignored. One cannot emphasize too strongly that, while the new antimicrobial agents are very valuable as adjuncts in the therapy of genitourinary infections, accurate diagnosis and specific measures including surgery still continue as the mainstays of urologic practice.

In this discussion I shall omit such items as the prophylactic use of these drugs after operation to prevent pneumonia and confine my remarks to those uses which relate to the genitourinary tract proper. In this regard, four fairly distinct objectives may be discerned: the first is the treatment of specific diseases such as gonorrhea. Since this represents a special problem which should serve as the topic of a separate conference, I shall omit it from the present discussion. The second is to reduce the acute quality of some infections. The third is to reduce the activity of many subacute and chronic infections. The reduction of the activity of acute, subacute, and chronic infections is especially applicable to the preoperative preparation of many urologic patients. The fourth is to aid in clearing infection after the underlying pathologic lesion has been corrected by specific measures, or by nature. It is well to bear in mind that some patients recover without any therapy.

In regard to the matter of complete urologic investigation, there is the question whether all patients with urinary infection should be subjected to it. There is also the question as to the particular time a detailed urologic study is best undertaken. While most of you can recall cases of simple infections which were managed successfully with simple therapy, the urologist can cite many instances of that kind which proved deceptive and concealed a serious disease, even cases in which simple therapy seemed to be entirely successful, but only temporarily so. Such experiences give indication of the danger, the hazard of the false sense of security provided by highly effectual antimicrobial drugs in infections of the genitourinary tract.

An adequate history and careful examination may yield specific clues, such as a large mass in one flank, gross hematuria, or the like, which would indicate the need for an elaborate urologic investigation. But even when such clues are not obtained, I would suggest that any urinary infection which does not respond promptly, completely, and permanently to simple therapy should be investigated further. These points may be used as a practical means for drawing the line which divides urologic patients into two classes: those that are to receive relatively simple treatment without detailed urologic investigation, and those in whom an elaborate urologic study is imperative. In the therapeutic test, "promptly" means within a week, "completely" means the absence of residual symptoms and signs with a clear urine on microscopic examination, and "permanently" means the absence of a tendency to recurrence.

Among the factors in the urinary tract which lead to infection that is not promptly, completely, and permanently eradicated by simple therapy, four are most common: obstructions, foreign bodies including calculi, neoplasms, and tuberculosis. It is these that one should search for whenever an infection shows inadequate response. There are a few factors which are relatively rare; namely, specific diseases like syphilis and blastomycosis, and radiation injury. Conditions which interfere with the complete success of simple therapy are sometimes obscure. An example is the case of the female who presents urgency and frequency with inadequate response to simple therapy. In such a case, the urine is often found to be clear, cultures of the urine may be substantially negative, only slight trigonitis or granular appearance of the mucosa may be revealed by cystoscopy, instruments pass freely, the patient passes urine freely, and may present no residual urine. The remainder of the investigation may also prove essentially negative and present no suggestion of stone, tuberculosis, or tumor. Under these conditions one is apt to conclude that there is no obstruction, but I believe there is obstruction in most of such cases, at least in the sense of impaired drainage of the urethral glands.

It is well known that, in order to ascertain the value of a drug, it is necessary to compare the course of patients receiving the particular agent with the course of a group which serve as controls. Such studies of antimicrobial agents in urologic infections present unusual difficulties. These difficulties are reflected by the large number of faulty reports in the literature. I might mention a few of the common defects: Controls are either absent or their numbers too small; the total number of cases may be too few; the extent and duration of the follow-up may be inadequate or too brief and fail to reveal the true course of response, whether temporary or permanent.

In judging the utility of an antimicrobial agent in urinary infection, the fact that an appreciable number of cases undergo spontaneous recovery is a common source of error. The variables in the treatment of urologic infections are so numerous that it is impossible to secure satisfactory data from reasonably comparable groups without intensive selection and large numbers of cases. A small series of urologic patients usually fails to provide enough material for a control group and a treated group that are sufficiently alike to supply data for valid conclusions. Variations are extremely wide in the kind and degree of underlying pathology which plays the most important part in determining the response to the antimicrobial agent. There is also the fact that, during the use of the antimicrobial agents, the patients included in study groups are often receiving simultaneous treatment for the underlying lesions, thus adding further elements of uncertainty in the evaluation of the particular drug.

I may now say a few words about the various antimicrobial drugs which are administered in association with measures for establishing the diagnosis and for the management of the underlying causes responsible for the infection. The number of antimicrobial drugs is very large, but only a few of them are sufficiently important to merit consideration.

Methenamine, better known under the trade name of Urotropin, is one of the older urinary antiseptics. It can be taken over periods of several weeks. Perhaps its greatest usefulness at present is in the tapering off of antiseptic therapy during the periods when final healing is proceeding after major infectious activity has been eradicated or nearly so. Its action depends on the liberation of formaldehyde. It is effective only in an acid urine. Its antiseptic action is not very potent, but also not specific, and may be used against a very wide variety of organisms.

Mandelic acid is a valuable urinary antiseptic. There has been a tendency to displace it with some of the newer antibiotic agents, but there are conditions in which it has not been possible by means of other antibiotic drugs to produce equally satisfactory results. It is most effective against organisms of the colon group. Highly acid urine is unfavorable to the growth of bacteria. Mandelic acid is excreted in the urine and produces its antiseptic action at least in part as the result of urinary acidification. The discovery that betahydroxybutyric acid was the bactericidal agent in the urine during the use of the ketogenic diet led to the investigation of other hydroxy acids and to the discovery of mandelic acid as a potent urinary antiseptic about fifteen years ago. When mandelic acid fails to produce the expected results, it may be due to the fact that the pH of the urine is not below 5.5 and the concentration of the drug is not above 0.5 per cent. Mandelic acid produces a few minor toxic effects. The doses of 10 to 12 Gm. daily which are necessary may cause gastrointestinal upsets. Renal irritation is one of the common toxic effects. It is detected by red blood cells and albumin in the urine. It is rarely serious. I do not recall a case in which it failed to subside promptly after the medication was interrupted.

A word about the sulfa drugs. They clear about 90 per cent of uncomplicated bacillurias. They attack a wide range of organisms. They are effective whether the urine is acid or alkaline. They are somewhat more effective when the urine is alkaline, and, unlike mandelic acid, they are of some use in infection with the Bacillus proteus which splits urea and causes highly alkaline urine. It is a noteworthy fact that they often seem beneficial in urinary tract infection with organisms known to be not especially susceptible to these drugs. Also, the effective dose in urinary tract infection is often smaller than would be expected in the case of a similar infection outside the urinary tract. That the drug is not only in the tissues, but in the urine which washes the internal surface of the urinary tract, has been offered as an explanation, but it may not be so simple as that.

The action of penicillin seems to be quite specific for organisms in the urinary tract. Those that are not susceptible to penicillin are not affected in the urinary tract either. However, it is necessary to remember that, in the urinary tract, infections are not infrequently mixed, and that the mixed infection is not always recognized as such. There is also the fact that organisms which grow best in the patient are not necessarily the ones which grow best in the laboratory with the particular method used. Accordingly, a trial of penicillin in obstinate cases is occasionally worth while, although the infection seems to be due to a type of organism not generally considered susceptible. If, by this method, one of the members of a mixed infection, which may have escaped detection, is reduced or eradicated, it may help the patient overcome the remaining infection.

Streptomycin is a potent weapon against gram-negative bacilli which are very common in the urinary tract. However, there are two factors which limit its application. One is the occasional but severe toxic effects. The other is the marked tendency for the development of streptomycin resistance. It is our present practice in urology to reserve streptomycin as an ace in the hole for use after the other tricks have been played.

Before I go further, and some may wonder about this, I might mention that there is still some use for the arsenicals in urology, not only against spirochetal infections, but against certain other stubborn infections, particularly those due to staphylococci. The value of the arsenicals is not firmly established, but once in a while they seem to produce strikingly favorable results.

The value of renal and vesical lavage in urinary infections is not likely to go unchallenged. It is often stated that urologists are forever washing bladders and kidneys and putting in various colored solutions in the belief that they are producing cures. It is pointed out that the organisms are in the tissues where the antiseptic solution cannot reach them unless the solution destroys the tissues. This, of course, is true, but it does not reveal the whole picture. The lavage washes out foreign material such as pus, bits of urinary sediment, and calcified and phosphatic debris. Drainage from the surface is thus improved, and drainage is of the greatest value in the treatment of infections. Organisms grow in the urine as well as in the tissues. This is especially true if there is residual urine. The residual urine is warm, as in an incubator. Since it is never completely drained out, it provides especially favorable conditions for the continued growth of the organisms in the urine as well as in the patient's tissues. Instillation adds a bacteriostatic quality to the residual urine, even if it is only temporary. Also, the instrumentation which is necessary for renal pelvic lavage, and more particularly for bladder lavage, may in itself improve drainage.

Dr. McDermott: I find myself in essential accord with Dr. Marshall's remarks on the subject of the antimicrobial therapy of urinary tract infections. I have one minor point of dissent, Dr. Marshall. I believe that the use of the arsphenamines is purely a matter of adherence to a tradition. With everything else I most heartily agree.

It cannot be too strongly emphasized that, in antimicrobial therapy, whenever the anatomic situation is such that healing is impossible, the administration of a drug accomplishes no more than temporary inhibition of the infection. Even if sterilization results, when the anatomic condition is one that favors infection, infection will inevitably recur. I wonder whether Dr. Marshall would agree with me on the point that the mere presence of infection in the urinary tract signifies at least a temporary morphologic defect in the tract. An infection established there then perpetuates the abnormality.

Dr. Marshall's reference to the difficulty of evaluating the various forms of antimicrobial therapy in genitourinary infections is a particularly important matter. One simply does not encounter comparable cases in sufficient numbers to enable one to secure the most satisfactory kind of data for this purpose.

I would like also to refer to the problem of the concentrations of drug in the urine. To be sure, infections are in the tissues, so that, theoretically at least, high concentrations of the drug in the urine would serve no useful purpose, and the significant matter would be the concentration in the extracellular fluid, as reflected by that in the blood. In his study of streptomycin, however, Dr. Finland showed quite convincingly that, when the urine is alkaline, streptomycin-resistant variants do not emerge to anything like the same degree as when the urine is maintained acid. That observation indicates a peculiar relation between urinary infection and the composition of the urine. It might be that, as Dr. Marshall pointed out, infections can be propagated by the bacteria in the urine. They might multiply in the urine and invade the tissues from there. I think we may have to give more critical thought to the prevailing belief that what is in the urine is of no consequence.

May we now have some questions from the audience?

Dr. Harry Gold: I might ask Dr. Marshall what he would suggest as the first drug a general practitioner should prescribe for a patient in his office who has had urinary symptoms with infection for several days. Let us assume that the doctor has examined the urine and has found clumps of pus cells, but that the remainder of the examination provides him with no additional information, and further that he is not in a position at the moment to start a more intensive exploration of the genitourinary tract. Which of the drugs he mentioned would most likely prove successful?

Dr. Marshall: I am glad you emphasized the diagnostic aspects. There are a lot of little things that anyone can do without special equipment. A two-glass or three-glass test supplies some indication of the site of the infection. As you know, the first glass represents the bladder urine plus the urethral washings. The second glass represents the bladder urine minus the urethral washings. The third glass represents the bladder urine plus what can be squeezed out of the prostate. A stained smear can be made in the office, and this will show something about the type of infection.

To come back to your specific question, we usually give a sulfa drug, and most often sulfadiazine. This drug is not very expensive. All the patient has to do is to swallow a few tablets. We usually start with what is considered a small dose, 0.5 Gm. four times a day, because it keeps low the incidence of complications. If the patient fails to show some response in a day or two, it is indication that further diagnostic tests are required.

Dr. McDermott: What would you think about the use of streptomycin in such a situation?

Dr. Marshall: I am against that for several reasons. In many cases, streptomycin will suppress the urinary tract infection, and the patient will seem to have recovered. Even though the doctor knows better and is not lulled into a false sense of security, the patient may misinterpret the results and fail to return for the various diagnostic tests. Another objection is the fact that some of these patients may need streptomycin later, and, when they need it most, they may fail to respond because the first course made their organism resistant to the drug. We have had this matter brought forcefully to our attention in two cases of ureterointestinal transplantation. Reports in the literature indicate that the bowels can be cleaned up with sulfasuccinidine and sulfathalidine, together with a little streptomycin, and thus reduce the number of bacterial organisms. We tried it in these two patients. When we discontinued the streptomycin about two days after the operation, both of them developed a fulminating and fatal pyelonephritis. The degree of obstruction to the kidneys was not very great. Two cases do not prove very much, but our experience in these was enough to make us cautious. And so, we do not use streptomycin as a routine measure. We generally give sulfadiazine, penicillin, mandelic acid, or other agents first, even if the infection is a gram-negative bacillus. When we have decided that the time has come to hit the infection with all we have, we then turn to streptomycin.

Dr. McDermott: Would you say it is not proper to give streptomycin for urinary tract infections until a complete and exhaustive work-up has been made and a decision has been reached concerning surgical measures?

Dr. Marshall: That is correct. It is well to know what the whole problem is before using streptomycin. I think the administration of streptomycin, just because the patient has a few symptoms or some pus cells, is a very dangerous business.

Dr. Walter Modell: I think it is quite generally stated that penicillin is not especially useful in infections of the urinary tract. This is not the first time I have heard Dr. Marshall say that penicillin is useful. I wonder if he would amplify that.

Dr. Marshall: Aside from its use in gonorrhea and against other bacteria known to be highly susceptible to penicillin, it is helpful in the mixed infections. Very often an infection is due to two or more organisms. If a specific drug is used against the one which is considered to be the main cause of the infection, without improvement, knocking out the associated organism with penicillin may turn the tide. Also, it must be remembered that when giving penicillin, even if the infection is not eliminated, invasion by other new organisms may be prevented. Once you plow up the urinary tract, so to speak, with any infection, you can put another infection in it very easily. Penicillin may prevent that.

Dr. Ralph Tompsett: I believe that somewhere in the neighborhood of 5 to 10 per cent of the urinary infections are due to either Staphylococcus or Streptococcus fecalis. These are very sensitive to penicillin.

Dr. Marshall: That is so. As I mentioned earlier, there are a certain number of penicillin-susceptible organisms which are the primary and major causes of urinary infections. It is in such infections that penicillin produces the most striking effects.

Dr. McDermott: I would like to ask you a question, Dr. Tompsett. Do you believe there is any chance that this rather unpredictable beneficial effect of penicillin might be due to the fact that certain organisms, not considered suceptible to penicillin in the concentrations ordinarily obtained in the extracellular fluid, are affected by penicillin in such extremely high concentrations as might be present in the urine?

Dr. Tompsett: I think it might be, if the organisms multiplying in the urine are of any importance. I have little doubt that high enough concentrations of penicillin can be reached in the urine. Concentrations of penicillin above the levels needed to inhibit the growth of Escherichia coli or Friedländer's bacilli can be obtained with the ordinary doses we now use. That was not so in 1944, when very little penicillin was available and it was being given every four to six hours in doses of 10,000 units. The growth of these gram-negative organisms can be inhibited fairly effectively with concentrations of 100 units per cc. in a test tube, and such concentrations can be easily reached in urine.

Dr. McDermott: The fact that penicillin seems effective in some of these cases of urinary infection might, then, be another indication that there is a little more to this matter of urine concentration than we thought two or three years ago, when we glibly said that the concentration in the blood was the only factor of importance.

Dr. Marshall, I would like to ask you about the management of patients with asymptomatic bacilluria. Consider as an example the case of a women who had slight hypertension with her third pregnancy, and who, six months later, in the course of a routine examination, is discovered to have bacilluria with practically no pyuria and absolutely no symptoms referrable to the urinary tract. Is that something which should be treated from the standpoint of preventive medicine, to prevent possible hypertension from damage to the kidneys? The finding is not at all dramatic.

Dr. Marshall: It is difficult to know what to do. Whether or not to investigate it would seem to me the first decision one would need to make. If clues were found in the history suggesting that she had had similar episodes in the past, then something would need to be done. If she had nothing more than you mentioned, I would be inclined to give her some simple treatment, perhaps a sulfa drug or Urotropin, for two or three weeks, to see what would happen. If the bacilluria did not disappear, it would be necessary to consider a detailed work-up. Of course, great care must be used in collecting specimens of urine. In females, organisms are easily picked up from around the vagina and along the urethra, and these may be misleading. Most of the cases like the one you described turn out to be vaginitis or infection in the small glands along the urethra. These are localized and are not especially important.

Dr. McDermott: Let us assume, in this hypothetic case, it could be proved that the infection is higher up. This might be established by comparing catheterized and noncatheterized specimens. Do you think that such an infection, somewhere high in the urinary tract, might subsequently lead to hypertension? Would detailed investigation be justified on this basis? What would you think about that, Dr. Humphreys?

Dr. Gustavus A. Humphreys: I have no convictions one way or the other on that subject.

Dr. McDermott: I am concerned about hypertension associated with renal infection. What I am trying to get at is this: Can there be urinary tract infection so indolent and so asymptomatic that a considerable amount of renal function might be lost over a period of several years? Or is such infection always fairly obvious?

Dr. Marshall: It is not always obvious, but in chronic pyelonephritis there is usually an increased number of pus cells in the urine, or the history is one of recurring clinical episodes. The condition may not be evident at one visit, and the urine may even be crystal clear when it is held up to the window.

Dr. Modell: Does Dr. Marshall use the mixture of three sulfonamides?

Dr. Marshall: I know it is a popular mixture, but I have not used it. It is supposed to prevent crystalluria. We have had very few cases of this, since, from the early days of the use of the sulfa drugs, we have given large doses of sodium bicarbonate simultaneously. That effectively prevents precipitation. Furthermore, as I mentioned before, we are inclined to use very small doses of the sulfonamides, 0.5 Gm. four times a day.

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Dr. Gold: I wonder whether Dr. Marshall has had any experiences in which urinary infections failed to respond to treatment with sulfonamides given for a week or two, but then cleared up on treatment with Urotropin or mandelic acid?

Dr. Marshall: Yes, we have seen quite a number of those.

Dr. Lawrence B. Hobson: What has been the experience with avoiding the production of resistant organisms by using streptomycin simultaneously with other therapy, say a sulfa drug?

Dr. Marshall: I think Dr. Tompsett can tell you more about that. As I have said, we use streptomycin only occasionally, and then as a final measure.

Dr. Tompsett: I think everyone wants to know the answer to that question. We do not have it.

Dr. McDermott: However, Dr. Tompsett, do you think it makes sense on the basis of our present knowledge to use sulfadiazine with streptomycin? Is there any theoretic basis for combining the two drugs?

Dr. Tompsett: In theory, any organism in the urinary tract or elsewhere has a certain incidence of mutants resistant to streptomycin, which may develop during the process of multiplication; similarly, in the case of the sulfonamides. In theory, the incidence of organisms which would be resistant to both would equal that of the first multiplied by that of the second. For example, if the incidence of streptomycin-resistant mutants was one in a billion and of sulfonamide-resistant mutants was also one in a billion, one would expect the incidence of organisms resistant to both would be the product of the two, in other words, one billion times one billion. On the basis of this theory, if an organism were sensitive to both sulfadiazine and streptomycin, attacking it with both drugs simultaneously should markedly lower the chances of developing a resistant strain. The trouble is that we are not certain whether it really works that way.

Dr. Modell: What dose of Urotropin do you give? What is the routine?

Dr. Marshall? The principal consideration is to have the urine acid.

Dr. Humphreys: The dose varies with the patient's tolerance. We aim at 4 to 6 Gm. daily. Some develop nausea and cannot take 4 Gm. a day. Others can take 6 Gm. without trouble.

Dr. Gold: What do you use to acidify the urine?

Dr. Humphreys: Ammonium chloride.

Dr. McDermott: What dosage of streptomycin is generally used by urologists and for what periods of time?

Dr. Marshall: In general, we start with 1 Gm., and then give 0.5 Gm. twice a day. We usually continue it for approximately one week. This does not refer to some of the unusual cases or tuberculosis.

Dr. McDermott: How much toxicity is encountered with this regimen?

Dr. Marshall: I do not have the figures, but the incidence is quite low in comparison with that for tuberculosis, where the doses are larger and treatment is longer.

Dr. McDermott: We have the impression that neurotoxicity, which is the only complication, is more serious both in its incidence and duration in elderly people than it is in the young or middle-aged. The urologists treat many people in their seventies. Have you noticed a higher incidence of toxicity in the older age groups?

Dr. Marshall: We are less inclined to use streptomycin if the man is old, and, when we do use it in advanced age, we are inclined to discontinue it a little sooner than in others.

Dr. McDermott: Is there solid evidence that there is special risk in the aged, or is it just an impression?

Dr. Marshall: It is not more than a clinical impression.

Dr. McDermott: Dr. Hobson, do you think that the substitution of dihydrostreptomycin is of any substantial help in the problem of the supposed toxicity of streptomycin in elderly persons?

Dr. Hobson: It is probably less neurotoxic than streptomycin, but the incidence of neurotoxicity is probably so low with both compounds after the small doses employed in urology that any difference in elderly people, particularly in the absence of impaired renal function, might not be a matter of importance.

Dr. McDermott: I take it that you would regard the toxicity of 1 Gm. of dihydrostreptomycin daily for a week as essentially negligible. Is that it?

Dr. Hobson: Yes, but I suspect that the same is true for streptomycin.

Dr. McDermott: The relative neurotoxicity of the two has not yet been established.

Dr. Hobson: That is correct.

Dr. Gold: I would like to ask Dr. Marshall how he would manage a urinary infection which is frequently encountered in patients with acute coronary thrombosis. After a dose or two of morphine, some of these patients, and especially the elderly ones, develop urinary retention which not infrequently escapes detection until a large abdominal mass representing the overdistended bladder is discovered. The patient is catheterized, and before long infection sets in. It seems essentially an uncomplicated infection due to implantation of organisms.

DR. MARSHALL: It is not quite so simple as it seems because there is functional obstruction.

DR. GOLD: Some of these patients are catheterized at intervals of twelve hours, and some at intervals as short as six hours. I am not certain whether the failure to void spontaneously is due to spasm of the sphincter or to paralysis of the bladder. If it is the latter, it is not clear to me where the element of obstruction lies.

DR. HUMPHREYS: There are, of course, many simple infections without obstruction due to implantation of organisms. The incidence of this type of urinary infection seems to have increased. It occurs, for instance, in catheterizations of the ureters prior to hysterectomy. This leaves urinary tract infection on one side, and it may be a severe one. It is more or less uncomplicated. It represents simply a good inoculation. Such infections occur in the best of hospitals where any considerable number of cystoscopies are performed. An important point in this connection is the fact that the organisms implanted are more regularly the Aerobacter, Proteus, and Pyocyaneus groups than was the case ten years ago. These are resistant to practically everything we have.

DR. McDERMOTT: That is an extremely significant point. I am very much interested in what you have said about the change in prevalence, for it has an important bearing on the use of antimicrobial agents. Aureomycin is a potent agent against the gram-negative bacilli. In many who have been treated with aureomycin, the infection becomes predominantly proteus which, as Dr. Humphreys pointed out, is one about which little can be done. There may be such a balance of organisms in the genitourinary tract that, with a particular anatomic situation and infection, upsetting one may actually promote development of the other. Pyocyaneus and Proteus may well become a serious problem.

DR. MARSHALL: That is a real difficulty. Even when the urologist eliminates the stones and obstructions, a well-established proteus infection within the kidneys leaves us with a problem for which there is no very effective therapy.

DR. McDERMOTT: Streptomycin is effective in aerobacter infections provided it has not been previously misused. I think we are in complete agreement that this short-time, potent, antimicrobial agent should be reserved until everything has been cleaned up, and put to use when future infection is no longer inevitable.

I would now like to say a word or two about Dr. Gold's question.

DR. GOLD: Might I repair the question a bit?

DR. McDERMOTT: I like it the way it is, if you have no objection. I would treat this infection with the most potent agent, and that is streptomycin, if the infection seemed a serious threat to the chance of recovery from the heart attack. On the other hand, if the infection did not introduce a danger of this kind, I might be inclined to let it go without special treatment in the hope that it would take care of itself. Would you agree with that?

DR. MARSHALL: I believe that even in a condition of that kind I would withhold streptomycin unless the situation were critical. I would probably prescribe penicillin and sulfa drugs and then taper off the treatment with mandelic acid. I would simply attempt to hold the infection in check.

DR. McDERMOTT: I presume that, in withholding streptomycin, it is your thought to proceed in a conservative manner, since the obstruction present in these cases may clear up in a few days. Is that it?

DR. MARSHALL: Yes.

DR. GOLD: Dr. Marshall's suggestion of tapering off the treatment with mandelic acid leaves me wondering why one would wish to diminish the infection gradually, which is the notion conveyed by the term "taper off." I can see the wisdom of using all three drugs, and also the reason for not using them simultaneously, the sulfa drugs being most effective in an alkaline medium while mandelic acid is most effective in an acid medium. If that were not the case, it would seem to me proper to use both of them at the same time. I can see no advantage in damaging the bacterial population slowly and gradually over wrecking it as completely and rapidly as possible, assuming the absence of a special source of danger in the rapid destruction.

I think I should proceed with my original purpose of repairing my question. I had suggested that the urinary infection which develops after catheterization in an individual with urinary retention following the use of morphine is a simple infection without obstruction, and I asked how that is best treated. There seems to be agreement on the point that these cases are not simple and do have obstruction. And so, I will repair the question by stating that the case I have in mind has an indwelling catheter which makes it possible for the bladder to keep itself substantially empty. Is there obstruction in a case of this kind? Also, where lies the infection that results from catheterization in the kind of case I mentioned?

DR. MARSHALL: The indwelling catheter changes the problem but does not improve the basic trouble. It relieves the obstruction of the bladder, but it exacts a price. The foreign body in the bladder is irritating, and the urethra and prostate are partially obstructed. Even in the gentle and so-called aseptic catheterization, trauma results and urethral organisms move higher up. There is no such thing as a perfectly atraumatic catheterization. The site of the infection varies. In many, it starts in the urine or on the surface of the bladder, eventually extending into the bladder wall. In a large number, it extends to the prostate.

Dr. McDermott: Unfortunately, our time is up.

Summary

Dr. McKeen Cattell: The conference today explored the place of the antibiotics in the treatment of genitourinary infections and the choice of preparations. Their use represents an important advance, but it was emphasized that the principles in urologic therapy have not been revolutionized and cannot be ignored. Accurate diagnosis and specific therapeutic measures including surgery continue to be the mainstays of urologic practice. The chief fields of use of the antibiotics in genitourinary infections were stated to be: in the therapy of specific diseases such as gonorrhea, consideration of which was excluded from this conference; to reduce the quality or activity of some infections, especially for the preparation of patients for operation, and as an aid to the clearing of infection after operation.

In conjunction with the measures for the diagnosis and correction of the underlying cause, various antimicrobial drugs are useful, but relatively few are essential. Methenamine, the effectiveness of which is dependent upon the liberation of formaldehyde in an acid urine, has its greatest value in tapering off antiseptic therapy after the major infection has been eliminated. Mandelic acid may be similarly used for its adverse effect on bacterial growth in the resulting acid urine. The sulfa drugs have a wide range of usefulness, even against organisms which in the test tube are not particularly sensitive to their action. Penicillin, on the other hand, has a more limited range of usefulness and is effective only in urinary infections against organisms which are known to be sensitive to it. Sometimes, however, in obstinate cases, there may be mixed infection, and in these the reduction or eradication of an unidentified organism may facilitate the control of the major organism responsible for the infection. Streptomycin is an important weapon against gram-negative bacteria, but there are important limitations to its use. Because of the occasional toxic actions and the ready development of streptomycin-resistant organisms, it was strongly recommended that this drug be reserved for use until obstruction or other anatomic defects are eliminated, and future infection is no longer inevitable.

A number of problems in the management of genitourinary infections were raised in discussion. These included the possible role of high drug concentration in the urine in contact with infected tissue, the possible value of arsenicals against staphylococcus infection, the question of the timing of antibiotic therapy in relation to the correction of anatomic abnormality and the extent to which the condition should first be investigated, the use of sulfonamide mixtures, the possibility of reducing the incidence of streptomycin resistance by the simultaneous use of sulfa drugs, and the question of increased sensitivity of the aged to the toxic actions of streptomycin. Evidence bearing on these problems was cited, but in most cases the available information was not adequate for a final answer.

Addendum: At the time of this conference, investigations were in progress dealing with two new antimicrobial agents, aureomycin and chloramphenicol (chloromycetin). Their ultimate importance has not yet been established, but there is fairly strong indication that aureomycin and chloromycetin are significant additions to antimicrobial therapy of urinary infections. In the limited experience reported up to the present time, one or the other has proved effectual in some cases of urinary infection in which the sulfonamides, penicillin, and streptomycin were unsuccessful. They affect a wide variety of organisms. E. coli is highly susceptible to them, a fact which favors the utility of these compounds for prevention and cure of common urinary infections. Their behavior is in need of much further study, as indicated by an observation in which the elimination of bacilli was followed by the appearance of a coccal infection. Aureomycin and chloromycetin have demonstrated fairly potent action against some rickettsia and viruses. There are reports of their successful use in gonorrhea, granuloma inguinale, and lymphopathia venereum. Both compounds are usually employed by the oral route in doses of 0.25 Gm. three or four times daily for periods of several days. Their systemic toxicity is of a low order, and much larger doses have been used without ill effect.

We must prevent the Government from wasting the labors of the people under the pretense of caring for them.—Thomas Jefferson

Case Report

AN UNUSUALLY EXTENSIVE CASE OF RHINOPHYMA

J. Eastman Sheehan, M.D., and Wilson A. Swanker, M.D., New York City

(From the New York Polyclinic Medical School and Hospital and the New York Medical College)

NEVER common, today rhinophyma is almost as rare a phenomenon as total loss of nose from lues. The case presented here is noteworthy because of the unusual extent and severity of the lesion.

It is generally accepted that this condition is a sequel to severe acne rosacea. The lobulated tumors which ultimately result from the hypertrophy of the sebaceous glands, associated with an infiltration of hyperplastic fibrous tissue, are not malignant, albeit highly disfiguring.

Case Report

The patient, a white man of fifty years, had suffered from acne vulgaris throughout his entire youth. As far back as he remembered, he had always had a reddish nose, deepening or lightening in color with changes in temperature.

Two years before seeking aid, he had become cognizant of a disfiguring enlargement of the nose.

As often occurs in rhinophyma, the area of tumefaction had undergone repeated infection with the production of large abscesses. Although unsightly and alarming to the patient, these were always contained locally and did not constitute a systemic threat.

Inspection revealed a rhinophyma of unusual extent, involving the skin over the lower part of the osseous bridge, the entire cartilaginous bridge, most of the alar rim, and the anterior portion of the columella. The roughened, elevated mass extended approximately 2 cm. beyond the cartilaginous elements of the ala (Fig. 1). The nose was the typical reddish purple of rhinophyma, produced by permanent dilatation of the arterioles, venules, and capillaries.

Local conduction anesthesia was effected with 2 per cent procaine containing 8 drops of epinephrine per ounce. The lesion was circumscribed by an incision extending through the full cutaneous depth. By a combination of blunt and sharp dissection, the outlined skin was excised. Sponges saturated with hot saline solution were applied to control bleeding; active bleeding points were ligated.

A muslin pattern of the defect was made and outlined on the infra-auricular skin of the neck. By means of a skin-graft knife, a thick epidermic graft was freed, incorporating about three fourths of

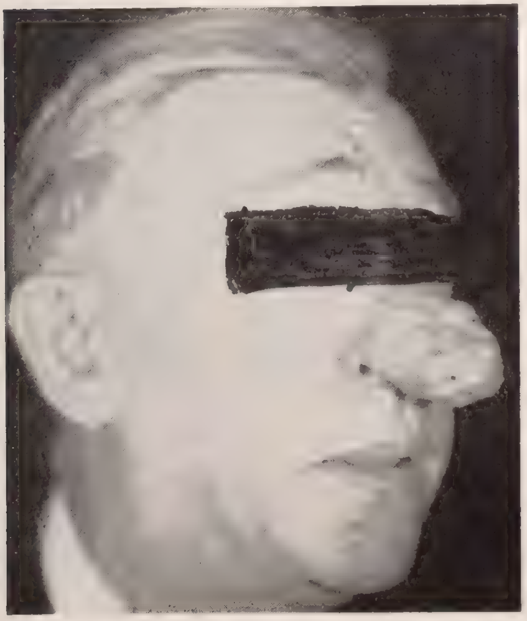

Fig. 1. Preoperative condition of an unusually extensive case of rhinophyma.

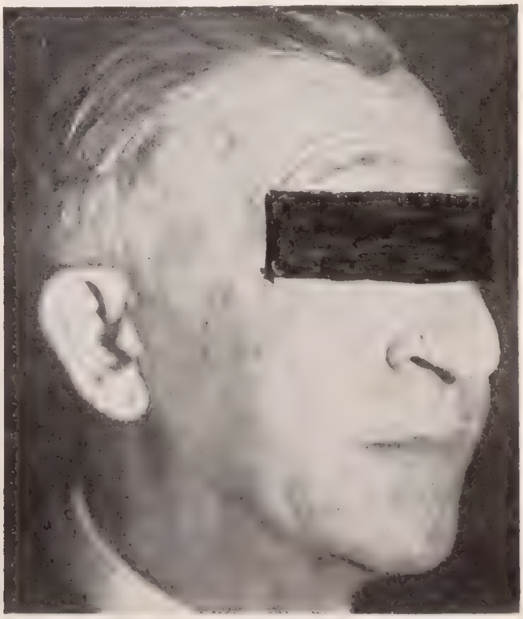

Fig. 2. Operative result.

the thickness of the skin. This was transferred to the nasal defect and applied by the method of plasma fixation.[1–3] The surgical area was covered with vaseline gauze and a pressure dressing of fluffed gauze applied. In two weeks the graft had taken perfectly (Fig. 2).

Comments

In early cases of rhinophyma, conservative treatment is occasionally successful. Antibiotics are given to combat the inflammation, and alpha-tocopherol (200 mg. three times a day) to soften and eradicate the fibrosis.

In moderately advanced cases in which cutaneous thickening is the predominant characteristic, the elective treatment is shaving of the skin. The elevated area is pared off and a vaseline-gauze pressure dressing applied. Alpha-tocopherol and antibiotics are administered orally. In suitable cases a highly satisfactory integument is achieved by this method. Skin regeneration takes place through the islets of epithelium represented by the gland ducts and hair follicles.

In large tumors, as in the case described herein, surgical correction offers the only hope of cure. The lesion must be excised down to a perfectly clean base, even if this entails exposure of the lateral cartilages. Otherwise remnants of pathologic tissue will act as nuclei for subsequent recurrences.

When the tip of the nose and alae are involved but the skin of the alar rim and columella is healthy, the defect resulting from excision of the tumor mass can be closed without grafting by extensive undermining and approximation of the skin edges. Here too alpha-tocopherol and antibiotics are administered.

When the alar rim and/or columella are involved in addition to the cartilaginous portion of the nose, a graft is essential to repair the defect and should be applied immediately. It should consist of skin of intermediate thickness, matching the rest of the facial integument in color and texture. For this purpose the donor areas of choice are the postauricular region, neck, and upper arm, in the order given.

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SCHIZOPHRENIA ATTRIBUTED TO OVERWHELMING FRUSTRATION

The view that schizophrenia, one of the major mental illnesses, is produced by overwhelmingly frustrating situations in life has been advanced by Dr. Richard L. Jenkins, chief of the research section of the Veterans Administration Psychiatry and Neurology Division, Washington, D.C. Dr. Jenkins also outlined an approach to more effective treatment of the condition which fills roughly a quarter of all hospital beds in the nation.

"There is widespread evidence that the schizophrenic person is one who has passed his threshold of tolerance for frustration and has as a result begun to react in nonadaptable ways," Dr. Jenkins said in the August issue of the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

"Schizophrenic patients as a group have experienced relatively little success in school," he pointed out. "Poor performance in school with attendant frustration is only one piece in a broad mosaic of poor performance and frustration in the early background of schizophrenic patients. We see one avenue of satisfaction after another closed by personal sensitiveness, crippling experiences, and memories. They fail to achieve satisfaction either in their more personal-familial relations, or later in their broader group, school, social, or sexual adjustment.

"The trait of seclusiveness, the 'shut-in' personality and related behavior as a precursor of schizophrenia has been widely remarked.

"Stereotyped unadaptive behavior, resulting from continued frustration, has been demonstrated in animals and is demonstrably reversible. Schizophrenia is not a disease with a specific organ abnormality or a specific causal agent. It is a special type of maladaptation commonly showing a tendency to be progressive.

"With this hypothesis, the objective of therapy is easily defined. It is to reverse the maladaptive process. It is to relieve frustration and simplify the situation to a point where the patient can achieve success and satisfaction in his efforts and replace 'frustration behavior' with flexible adaptation to the realities of his environment.

"The first step is to seek to diminish the patient's frustration. If the symptoms have developed under conditions of unusual and relievable external strain, this is easily done. If the symptoms have developed insidiously with no unusual or relievable external strain, this may be extremely difficult to achieve. A beginning re-establishment of flexible adaptive motivation behavior might utilize simple technics developed in learning studies with animals.

"Frustration is a universal human experience, and everyone must handle some degree of frustration in his daily life. A common source of frustration is a disproportion between aspiration and achievement. In our society the area of greatest human frustration is typically that of interpersonal relationships.

"It is of interest that the incidence of schizophrenia in our cities follows a diminishing gradient as one moves away from the center of the city. The relatively chaotic, high-stress, poverty-stricken slum areas of our cities have several times as many hospitalized schizophrenic patients for their population as have the better residential areas."

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

AT ITS meeting on September 21, 1950, the Council of the Medical Society of the State of New York considered the following matters, taking action as indicated.

Secretary's Report

Remission of Assessments.—Remission of annual assessments was voted on account of illness for eight members for 1950; two War Memorial assessments were remitted on account of illness, and four were remitted on account of service with the armed forces.

You will remember that the 1950 annual report of the Council to the House of Delegates recommended that a Section on General Practice be established. Inadvertently, this matter did not reach the floor of the House from the reference committee to which it went. Your Secretary, therefore, takes the liberty to recommend that the Council empower President Wertz to appoint a chairman and secretary of such a section and to proceed with its formation.

> After discussion, *it was voted* to establish a Session on General Practice, and to refer the question of establishing a section to the next House of Delegates.

Since the last meeting of the Council your Secretary has attended the meeting of the executive committees of the Ninth and of the Second District Branches, the annual dinner of the Physicians' Guild of Brooklyn, the annual meeting of the New York State Public Welfare Association at Bolton Landing, the House of Delegates of the American Medical Association in San Francisco, the Council on Emergency Medical Preparedness of the American Medical Association in Washington, D.C., two meetings of the Medical Advisory Committee on Civilian Defense of the New York State Department of Health in Albany, and the annual picnic of the Rockland County Medical Society at Ladentown. I have also attended several committee meetings during the past three months.

During August I absented myself from the office for a holiday of ten days. During this time it gave me pleasure to visit the following localities which have requested our Society to help obtain a general practitioner: Georgetown, Madison County; McGraw, Cortland County; Nichols, Tioga County; Alfred, Allegany County; Honeoye, Ontario County; Altmar, Oswego County, and Middleville, Herkimer County.

As the result of a request from the New York State Cerebral Palsy Association, Inc., President Wertz has appointed, subject to your approval, Dr. George G. Deaver to act in a liaison capacity with that organization for our Society. He respectfully requests your approval.

> Approval *was voted.*

Your Secretary has also attended meetings of the Fifth and Seventh District Branches.

Communications.—1. A letter from Dr. Louis H. Bauer, chairman of the Board of Trustees of the American Medical Association, to Dr. W. P. Anderton, September 18, 1950, stated that only 44 per cent of the members of the Medical Society of the State of New York had paid their A.M.A. dues. Dr. Bauer pointed out that, if not corrected, this would entail a decrease in the number of New York delegates to the A.M.A. from 23 to 10. He suggested an energetic follow-up.

> After discussion, *it was voted* that the Treasurer of the State Society communicate with the county society treasurers and report at the next meeting of the Council.

2. Letter from Mr. H. F. Wanvig, secretary of the Malpractice Insurance and Defense Board, requesting, in the name of the Board, that its Advisory Committee on Plastic Surgery have two additional members. It already has two members, and the Board requests that Dr. Leon E. Sutton of Syracuse and Dr. Arthur Palmer of New York City be added.

> The President so recommended, and *it was voted.*

3. Letter dated September 6, 1950, from W. I. Myers, dean of the New York State College of Agriculture, a unit of the State University of New York, Cornell University, Ithaca. This requests the appointment of a member to Professor Olaf F. Larson's Advisory Committee in regard to a study being undertaken by the Department of Rural Sociology at Cornell to determine the extent to which rural families are utilizing private and public health resources and the factors associated with differential rates of use.

> The Council *approved* the recommendation of the President that Dr. Theodore J. Curphey be so appointed.

4. Correspondence with the Medical Society of the County of Monroe regarding the membership of Dr. George H. Clark. Dr. Clark has been a loyal member of his county and State societies for a lifetime. In 1945 he removed from the State of New York, thereby automatically resigning, but without realizing that such resignation was taking place. The Medical Society of the County of Monroe recommends that Dr. George H. Clark's State Society assessments for 1946, 1947, and 1948 be remitted and that he then be restored to good standing. In that way he will be eligible for recommendation for retired membership provided that his dues up to and including the current year are remitted.

> *It was voted* that Dr. Clark's dues be remitted, for 1946 through 1950.

5. A letter dated August 15, 1950, from Dr. F. E. Coughlin, chairman of the Section on Public Health, Hygiene, and Sanitation, to Dr. W. P. Anderton, asked if it were possible for a section to elect a vice-chairman.

> After discussion *it was decided* to reply unofficially that the Bylaws do not prohibit electing a vice-chairman of a section. *It was also decided* that the matter be referred to the Committee on Constitution and Bylaws.

6. Letter, dated August 24, 1950, expressed appreciation of Miss Doris K. Dougherty for flowers sent to her mother's funeral.

7. A letter dated July 20, 1950, from Mr. Owen C. Becker, vice-president of the Farmers' Museum, Inc., asked that the Medical Society of the State of New York set up in Cooperstown a doctor's office typical of the period 1800 to 1850. It stated that a suitable office had been found to accommodate material which might be collected by the Society. In response to an inquiry from Dr. Anderton, they stated further that the cost of such a project would be comparatively small.

After discussion, *it was voted* to refer this matter to the local county society for investigation and request their report.

8. Letter of July 12, 1950, from the Secretary General, Professor Gino Babolini, Congresso Italiano della Tuberculosi, requesting the Society to take part in and prepare material for the Tenth Italian Tuberculosis Congress, in Naples, May, 1951.

After discussion, *it was voted* to instruct the Secretary to reply that the Council regrets its inability to accept the invitation, as it is contrary to policy.

9. A letter dated July 10, 1950, from Dr. George F. Lull, secretary of the American Medical Association, was read for information. It stated that, in response to a request made by Dr. Anderton on June 13 (resolution passed by the House of Delegates of the Medical Society of the State of New York), the Board of Trustees of the A.M.A. had asked Whitaker and Baxter to send progress reports on the National Education Campaign to county and state societies for local distribution.

10. A letter dated June 2, 1950, from Dr. B. Wallace Hamilton, secretary of the Medical Society of the County of New York, conveyed the official request of the county society that the Medical Society of the State of New York make recommendations to the Legislature regarding the amendment of four provisions of the Disability Benefits Law.

After discussion, *it was voted* to refer this matter to the Committee on Legislation.

11. Letter of June 7, 1950, from Dr. G. B. Gilmore, secretary of the Bronx County Medical Society, regarding reimbursement for expenses incidental to the collection of the American Medical Association dues for 1950.

After discussion, this matter *was referred* to Dr. Azzari to take up with the Bronx County Society and report.

12. A resolution, passed June 21, 1950, by the Bronx County Medical Society follows:

"*Resolved*, that the Council of the State Medical Society be petitioned to circularize all members with the Supplementary Report of the Malpractice Insurance and Defense Board, 1949–1950, for the purpose of acquainting them with the advantages of the Group Plan."

After discussion, *it was voted* to refer the above resolution to the Malpractice Insurance and Defense Board for study.

13. A letter dated June 26, 1950, from Dr. Christopher Parnall, Jr., secretary of the Medical Society of the County of Monroe, quoted a resolution by the Comitia Mínora of that society disapproving the purchase by some hospitals of Workmen's Compensation Insurance from the New York State Insurance Fund. The letter expressed the hope that the Council would "use its influence to persuade the hospitals engaged in this practice to make other plans."

After discussion, *it was voted* that the matter be referred to the Economics Committee.

14. Letter of September 6, 1950, from Mr. William F. Martin, counsel of the Medical Society of the State of New York, to Dr. Anderton.

"Under date of June 16, 1950, you sent me a copy of 'Section 88, House Minutes—Oath of Allegiance' which had been referred by the Council of the Medical Society to this office for study and report.

"I am at a loss to understand why any such resolution is thought to be desirable. The Medical Society has been singularly free from charges of Communistic or other similar types of activities. Its membership consists entirely of professional men, all of whom have been licensed to practice in the State of New York and who have been carefully screened and examined by the Board of Regents. Such oaths as the present suggested one may, perhaps, be needed in a particular organization which is under the threat of serious infiltration by undesirable elements, but I see no present need for it in the Medical Society. It would seem to me particularly repugnant to submit it to all of the present membership.

"As you know, the faculties of the universities maintained by the State of California were recently asked to sign a similar pledge. They rose up in rebellion, and the thought of having them sign the pledge was abandoned. There was no question that among the great number who resisted the signing of the pledge were professors and instructors of unquestionable loyalty, who, however, had theoretical objections to the signing. I think we would encounter a considerable amount of resistance among our membership.

"Regardless of the ultimate constitutional question as to whether such oaths may properly be required for membership in a quasi-public society such as ours, I would think it generally inadvisable to require the same."

After discussion and consultation with Mr. Martin, *it was voted* that the Council take no action at this time on the resolution.

15. Letter from Dr. Albert A. Rosenberg, secretary-treasurer of the Dutchess County Medical Society, under date of June 26, 1950:

"Since Dr. Else Simmel, now of Uncas-on-Thames, Connecticut, is a member of the Connecticut State Medical Society, we must consider that she has resigned from the Dutchess County Medical Society and the Medical Society of the State of New York as of September, 1949.

"We therefore respectfully petition the Council of the Medical Society of the State of New York to refund her dues, in the amount of $15, to the Dutchess County Medical Society, so that we in turn may refund to Dr. Simmel a total of $25, which would include both her State and county dues."

It was voted that this request be granted.

16. Letter dated June 8, 1950, from Dr. Oscar M. Race, president of the Medical Society of the County of Richmond, requesting that the 1950 State Society dues of Dr. Douglas C. Neblett be remitted and refunded, due to ill health.

It was voted that Dr. Neblett's dues for 1950 be remitted and refunded and that the American Medical Association be notified of the action and requested to remit his 1950 dues.

17. Letter from Dr. Irving L. Ershler, secretary of the Medical Society of the County of Onondaga, requesting that Dr. Frank Ross Haviland's 1950 dues be remitted. He was seventy-five years of age on January 18, 1950.

It was voted that this request be granted.

18. Letter dated September 15, 1950, from Dr. Benenson, secretary of the Medical Society of the County of Queens, requesting in the name of that society that Dr. Hyman Harberg, who is a member but who lives in Jonesboro, Arkansas, have his 1949 dues and War Memorial assessment remitted in order that his resignation, effective December 31, 1949, can be accepted.

It was voted that this request be granted.

19. Letter dated June 7, 1950, from Dr. Louis H. Bauer, secretary-general of the World Medical Association, inviting the Society to send an observer to the World Medical Association meeting at the Hotel Roosevelt, New York City, October 16–20, 1950.

It was voted that Dr. John J. Masterson be the representative of the Society at this meeting.

20. A letter dated September 14, 1950, from Dr. A. A. Rosenberg, secretary-treasurer of the Dutchess County Medical Society, quoted a resolution of the Physician Veterans of Dutchess County calling for:

1. deferment of induction into the armed services of physicians who served in World War II;
2. priority of induction of physicians under fifty years of age who were deferred during World War II for reasons of physical disability or indispensability, and affirming
3. the fitness for service of any physician in active practice;
4. the availability for service of any physician in Dutchess County.

The letter stated that this resolution had also been adopted by the Dutchess County Medical Society.

It was voted to refer this to the Committee on Procurement and Assignment, when established.

21. Letter dated September 11, 1950, from Dr. Donald R. Lyon, secretary of the Schoharie County Medical Society, to Dr. Anderton. Regarding this letter, Dr. Anderton explained, "Dr. Joseph H. Isenstead, of 33 Barclay Street, Canajoharie, had requested transfer in 1948 to the Medical Society of the County of Montgomery from the Schoharie County Medical Society. Inadvertently this request was not acted on as promptly as it might have been. There has been considerable correspondence about it. Dr. Donald R. Lyon has written as follows:

> 'About a year ago (September 27, 1949) we sent a statement of good standing for Dr. Isenstead and a request that his membership be transferred to Montgomery County.
>
> 'At that time (and now) I had on hand his letter stating that he had requested this action on August 25, 1948. I do not find the 1948 letter at present, but have no doubt about the accuracy of the date given.
>
> 'To clear up the difficulties that have arisen through one delay after another, I would request that the Council of the Medical Society of the State of New York sanction Dr. Isenstead's request for transfer, retroactively as of September 1, 1948.' "

It was voted that the request be granted.

22. A letter from Dr. Joseph A. Geis, dated September 13, 1950, presented his report as representative of the Society at the meeting of the Vermont State Medical Society. Dr. Geis stated that, as requested, he had delivered the good wishes of our Society and that he had spoken briefly on the subject of grievance committees in this State.

The Treasurer's report was accepted.

Report of the Executive Officer

Dr. Hannon, executive officer, reported that he attended the meeting of the Legislation Committee and the officers of the State Society on August 31. He also had been attending meetings of the district branches. Two district branch scientific meetings have been held: the Fifth, in Syracuse, and the Seventh, in Clifton Springs, which were excellent and very well attended.

At the meeting of the Legislation Committee a number of matters were taken up, referred to the Legislation Committee by the Council, and several other matters pertaining to future legislation. It appeared to him from that meeting that we would be asked to have introduced a large amount of legislation this year, and practically none will have any chance of passing.

Reports of Committees

Legislation.—In the absence of Dr. Siris, chairman, Dr. Hannon reported:

"There was a meeting of the Legislation Committee on August 31. Dr. Siris referred most of the items from the Council to different members of the Committee. The minutes from that meeting came to me to whip into shape for Dr. Siris, but in view of traveling around the State to district branch meetings, I have not had time to make the proper study or get in touch with Dr. Siris to make a complete report.

"I can say that Dr. Siris also asked that there be subcommittees on the various topics. He requested the subcommittee chairmen, as members of his committee, to submit nominations for their particular subcommittees. I have received names from one chairman, Dr. Geis, chairman of the Subcommittee on Hospital Encroachment. He has asked that Dr. Sidney S. Leshine, of Flushing, and Dr. Thomas W. Stevenson, Jr., of New York City, be appointed.

"At that meeting the Subcommittee on Cults, of which Dr. Williams is chairman, reported. Dr. Siris is anxious to have the report of the Subcommittee on Cults presented to the Council. Dr. Williams is here. The Legislation Committee accepted the report from this subcommittee, to be referred to the Council."

Approval of the Subcommittee on Hospital Encroachment *was voted.*

Subcommittee on Cults.—Dr. Williams, chairman, distributed copies of the report of his subcommittee to members of the Council.

After discussion, *it was referred* back to the Legislation Committee for report.

Constitution and Bylaws.—Dr. Adie, chairman, reported that the Committee had considered the bylaws of the Second, Eighth, and Ninth District Branches. Approval was recommended.

This *was voted.*

He also reported that the Medical Society of the County of Oneida had submitted a change in its bylaws, Chapter X, Section 1, which states, "Each member shall pay annually the sum of $55, which shall be due on the first day of January. At the same time he shall pay the amount of the per capita State assessment for the current year fixed by the House of Delegates of the Medical Society of the State of New York." The original chapter reads $5.00 annual county society dues. The Committee thought this should be referred back to the county for verification of the proposed increase.

After discussion, *it was voted* to clarify the matter of dues with the county society before final action.

Convention Committee.—Dr. Eggston, chairman, presented a complete report on the 144th Annual Convention of the Medical Society of the State of New York, held at the Hotel Statler in New York City from May 8 through May 12, 1950, as distributed in the agenda.

Economics.—Dr. Azzari, chairman, gave the report of the Bureau of Medical Care Insurance and of the Subcommittee on Medical Expense Insurance.

June 25 to 30, 1950—Your Director attended the American Medical Association Convention in San Francisco and was present at the following meetings: June 24, Blue Shield Commission, held at the Mark Hopkins Hotel. A report was presented on contributions received from member Blue Shield plans toward the establishment of a National Service Agency. Capital contributed to date was reported at approximately $300,000. The original amount to be established was $375,000. However, by action of the Commission the amount was reduced to a minimum of $325,000 and the period for payments extended to December 31, 1950.

The following resolution was adopted by the Blue Shield Commission on June 25:

> "The primary purpose of Blue Shield Plans is to provide, on a prepayment basis, for the cost of those services which normally are a part of medical care.
>
> "The determination of what such services should be is a matter for which the medical profession is primarily responsible.
>
> "Blue Shield Plans should not permit themselves to be used as an agency to force upon the public, the medical profession, and the hospitals any definition of such services which is not generally applicable.
>
> "The public service values of voluntary prepayment plans should not be sacrificed to gain ends for which the plans have no responsibility."

June 25, 1950—Mr. Farrell was present at the Conference of Presidents and other officers of State Medical Associations at the Palace Hotel. The President, Dr. Clarence E. Northcutt, presided. Five excellent papers were presented which will be published in the report of the Conference at a future date. The paper by Dr. Julian P. Price of South Carolina on "Medicine's Greatest Gift" was outstanding, as well as the paper presented by Mr. Baird H. Markham, of New York City, on "American Democracy on Trial."

On invitation of Dr. Winslow, your Director attended a meeting of the New York State delegation at the Palace Hotel, and on Monday, Tuesday, Wednesday, and Thursday was present at the sessions of the House of Delegates of the A.M.A. June 28, Mr. Farrell was present at the fourth annual meeting of the Medical Society Executives held at the Alexander Hamilton Hotel.

July 20, 1950—Your Director, on invitation of Dr. Floyd S. Winslow, attended a meeting of the Public Relations Committee.

July 24, 1950—Mr. Farrell conferred with Mr. Edward R. Evans, executive director of Northeastern New York Medical Service at Albany, and, on July 25, met with Mr. Charles Dubuar, chief actuary of the State of New York Insurance Department, regarding reserves for future maternity benefits in Blue Shield Plans.

Report of the Subcommittee on Medical Expense Insurance—The Subcommittee held a joint meeting with Blue Shield Plan presidents on July 28, 1950, at the office of the State Society, Dr. A. H. Aaron, chairman, presiding. Representatives of Blue Shield Plans presented reports on the progress of their plans regarding the recommendations made by the Subcommittee at its November 30, 1949, meeting on the formation of a State-wide contract to be offered in addition to present existing contracts.

After discussion, it was agreed that a proposed plan for a State-wide contract should be sent by Mr. Farrell, director of the Bureau, to each plan for consideration before the next meeting of the subcommittee and Blue Shield Plan presidents.

Following this meeting the Subcommittee on Medical Expense Insurance of the Committee on Economics convened with the presidents of the county medical societies in the Metropolitan area, at the office of the State Society, Dr. A. H. Aaron, chairman, presiding, to consider a letter Dr. George Baehr, chairman of the board of directors of the Health Insurance Plan of Greater New York, directed to Dr. John J. Masterson, president of the Medical Society of the State of New York. This was read at the 1950 meeting of the House of Delegates of the Medical Society of the State of New York and referred to the Council which referred it to the Subcommittee on Medical Expense Insurance.

After an extensive analysis of Dr. Baehr's communication requesting approval of HIP on the basis that it complied with the Suggested Principles for Lay-Sponsored Voluntary Health Plans, as adopted by the A.M.A. House of Delegates, it was pointed out that any lay-sponsored plan desiring approval by a proper accrediting body of the A.M.A. must come bearing the endorsement of the State and county medical societies involved.

The Subcommittee recommended to the Council that they consider advising Dr. Baehr that before applying to the House of Delegates for approval it is necessary to obtain local county medical societies' approval; if this approval is not granted, a special committee of three members may be appointed: one by the plan, one by the county medical society, and one by the Medical Society of the State of New York, to investigate and study reasons for withholding approval. If a majority of such a committee so recommends, approval of a plan will probably be granted.

After discussion, *it was voted* to approve this recommendation.

The Subcommittee also considered the following resolution referred from the Council:

> "WHEREAS, the medical profession has consistently supported the right of a patient to free choice of physician, and
>
> "WHEREAS, contract restrictions under certain voluntary insurance plans tend to deny or restrict the right of free choice of physician, be it
>
> "*Resolved*, that medical expense indemnity shall consist of reimbursement or direct payment for medical care provided through any duly licensed physician of the subscriber's choice whether or not designated by such corporation."

The Subcommittee recommended adoption because this conforms to the Standards for Approval, by the Medical Society of the State of New York, of New York State medical care plans.

The Second Quarterly Progress Report on the New York State Blue Shield Plans for the period ending June 30, 1950, was submitted.

The Committee report as a whole *was adopted*.

Emergency Preparedness.—Dr. Masterson, chairman, outlined the program contemplated by the New York State Civil Defense Commission and the steps taken by Dr. Herman E. Hilleboe, Commissioner of Health, toward fulfillment of the program. The latter included organization of health officers for medical defense throughout the State, appointment of local medical directors, and appointment of a Medical Advisory Committee on Civilian Defense consisting of Dr. Carlton E. Wertz, Dr.

W. P. Anderton, Dr. John J. Masterson, Dr. Theodore J. Curphey, Dr. Lester J. Unger, Dr. Joe W. Howland, Dr. J. G. Fred Hiss, Dr. Thomas O. Gamble, Dr. Louis H. Bauer, and Dr. J. Stanley Kenney.

In accordance with the suggestion of the Emergency Preparedness Committee, *it was voted* that this advisory committee to the Commissioner of Health be also made a special committee of the Council.

Dr. Masterson included in his report a list of policies recommended by the Medical Advisory Committee on Civilian Defense as follows:

1. Local organization for medical defense headed by a medical director or executive medical director drawn from Health Department personnel, and a medical consultant representing the county medical society;
2. A training program involving the cooperation of the State Health Department, county medical societies, and deans of medical schools;
3. Blood grouping for as much of the population as possible in connection with other laboratory tests;
4. Avoidance of mass immunization procedures and encouragement of individual measures of precaution;
5. A survey of resources by county and city medical directors.

He continued by saying that the Department of Health of the State of New York had prepared a report, to be submitted to the Civil Defense Commission, to which it wanted additions or corrections by the Medical Advisory Committee, particularly a statement of the treatment to be given for burns, fractures, and shock. He stated that a copy of the report in its final form would be sent to the presidents of county medical societies.

Regarding a plan for the conservation of medical manpower for which the Nebraska State Medical Association had requested the approval of the Society, Dr. Masterson expressed the opinion of his committee that, since planning must be done on a national scale, the decision should rest solely with the Council on National Emergency Medical Service of the A.M.A.

Finance.—Dr. Kenney moved that the report of the Finance Committee be referred to the Executive Committee of the Council for their review, study, and report, so that the whole Council can consider it with clarifications.

The motion *was seconded and carried.*

Office Administration and Policies.—Dr. Beekman, chairman, reported that the committee had met on September 20, 1950. Office management problems had been discussed and the committee voted to request the Council to recommend a number of salary increases to the Board of Trustees, to become effective October 1, 1950 (not to include executives):

Weekly Earnings	Per Cent of Increase
$35 to $39.99	15
40 to 44.99	13
45 to 49.99	11
50 to 54.99	9
55 to 59.99	7
60 and over	5

This would cost the Society approximately $10,800. Discussion developed that the percentage increase contained in the recommendation would be in addition to salary increases recommended.

It was voted to accept the report and recommend the increases to the Board of Trustees.

Publication Committee.—Dr. Kosmak, chairman, reported as follows:

"The Committee had its first meeting yesterday after the summer vacation, but meetings were held throughout the summer at two-week intervals by the editorial group, so that the management of the JOURNAL was under thorough supervision during all of the summer.

"A number of routine matters were discussed, and a suit brought against the Medical Society of the State of New York and Mr. Dwight Anderson by Mr. Gordon Marshall. Mr. Martin explained the situation to the committee."

Mr. Martin stated:

"I would like authority from the Council to further discuss this matter. . . .with the Trustees. . . . Fundamentally, it is a suit for commissions, and tacked onto it is a defamation of character charge. . . . I would like to report to the Trustees on . . . .what, if any, commissions Mr. Marshall was entitled to."

It was voted that Mr. Martin be empowered to report to the Board of Trustees.

Public Health and Education.—Dr. Curphey, chairman, reported he had arranged postgraduate instruction and teaching days and had attended various meetings.

1. A meeting with Commissioner of Health and other representatives of the State Health Department was held in New York City on July 12. The following subjects were considered:
   (*a*) Medical aspects of civil defense
   (*b*) Diabetes, mass detection
   (*c*) Maternal health program plan
   (*d*) Lectures relating to neonatal mortality
   (*e*) Joint sponsorship by State Medical Society of the two-weeks refresher course for general practitioners at Buffalo
   (*f*) Retrolental fibroplasia
   (*g*) Coordinating committee on poliomyelitis
   (*h*) Specialists roster
2. July 20 meeting of Public Relations Committee.
3. At the meeting of the Emergency Preparedness Committee on August 3 discussion centered around the organization of instruction for physicians on atomic warfare casualties. This was further discussed at
4. Meeting of Medical Advisory Committee in Albany, August 4. Dr. Franklin B. Amos of the State Department of Health was placed in charge of this training. The regional or district health officer is to contact president of county medical society to arrange details of meetings for instruction of the physicians in treatment of atomic casualties.
5. Meeting of August 8 relative to narcotic drugs. It was agreed by those present (including representatives of pharmaceutical houses) that in case of emergency these drugs should be immediately available to physicians, with a small supply specially held in reserve by pharmacists. These are to be obtained by private purchase on official order forms from authorized dealers. An intermediate reserve can be established by the Health Department's approval at police precinct or health stations, as subdepots for storage of municipally-owned narcotic drugs.
6. Meeting of August 17. Final draft of comments and suggestions on State Health Department's suggested Program Plan for Maternal Health not yet completed.

In connection with the approved epidemiologic study of retrolental fibroplasia being conducted by the State Health Department (with the Council's approval) two letters from Dr. Conrad Berens have been sent in support of the study. One of these was addressed to all upstate physicians, recommending that they have all prematures below 1,810 grams at birth given a careful ophthalmoloscopic examination soon after birth, and at the fifth, eighth, and tenth weeks. The second letter, mimeographed by the State Medical Society, was directed to the ophthalmologists of the State, urging their cooperation.

7. At the Academy of Medicine on September 5, several films dealing with various aspects of atomic warfare were reviewed with a view to determining their applicability to the educational program of the physicians of the State. It was the consensus of the reviewing board present, which consisted of representatives of lay and medical groups, that in many respects these films lacked sufficient medical information to warrant their use in this program.

8. At the meeting in Albany of the Medical Advisory Committee, September 18, the Commissioner of Health presented a plan for emergency medical aid in the event of atomic explosion, with the understanding that it was tentative and subject to revision. The plan outlined the recommended organizational and operational approach from the medical point of view.

Cancer Subcommittee.—Dr. Adie, chairman, reported that the American Cancer Society, the National Institute for Cancer Research, and the United States Public Health Service had prepared a film, "Breast Self-Examination," to be shown before women's groups throughout the United States. He stated that, since the film had not yet been approved by a professional group in New York State, the American Cancer Society wished to have it reviewed by a group of physicians in each county and approved before being shown. He asked permission to purchase 100 copies of a descriptive pamphlet and to send one to each county society president with a request that he make a booking for preview of the film.

Permission *was voted.*

Dr. Adie reported further that four new tumor clinics and four new detection centers had been started in upstate New York. He informed the Council that Dr. Gerhart, director of the Bureau of Cancer Control, prior to taking a year's leave of absence, had added an assistant director, Dr. Vincent Handy, to his staff. At Dr. Gerhart's request, he asked permission to have Dr. Handy attend the meetings of the subcommittee in Dr. Gerhart's absence.

Permission *was voted.*

Public Relations.—Dr. Winslow, chairman, presented the following report.

The Committee on Public Relations and the Subcommittee on Public Relations held a joint meeting on July 20 in the Society's New York office to formulate plans for the ensuing year.

On August 29, the Committee on Public Relations met to discuss a tentative budget for 1951 and to give further consideration to a number of matters taken up at the initial meeting.

Acting on the unanimous recommendation of the Subcommittee, the Committee on Public Relations approved a budget calling for an increase in the number of field representatives employed to implement the National Education Campaign. The budget provides for the hiring of three additional field representatives, in addition to the three hired last year, and for their traveling expenses. This was urged by the Subcommittee as necessary for the proper operation of the Society's public relations program. The budget also contains an additional amount to cover the cost of widening the circulation of the *News Letter*.

To stimulate greater interest by members of the Society in the approaching elections the Committee authorized the printing of a leaflet urging each member to register and vote. Such a leaflet was prepared and copies were sent to the *News Letter* mailing list with an order blank to enable members to secure as many additional copies of the leaflet as they might need for local distribution.

The Committee authorized distribution to county public relations committee chairmen of two pieces of literature which it felt would be of great value to them. One is "Grass Roots Public Relations," a small volume dealing with public relations technics; and the other is "Working with Newspapers," a brochure giving specific advice on the way to deal with the press.

Two thousand copies of a booklet entitled "The Sad Case of Waiting Room Willie," a comic publication, have been obtained by the Public Relations Bureau. Copies are being sent to members throughout the State, and they will be able to obtain as many additional copies as they need through the Public Relations Bureau. There have been many requests for literature of this type in the past.

On two occasions during the summer the Public Relations Bureau rendered assistance to the Legislation Committee to secure action with regard to legislation pending in Washington. In one instance telegrams were sent to U.S. Senators and to all county society legislation chairmen in opposition to Reorganization Plan Number 27. This plan, which would have elevated Mr. Ewing to cabinet rank, subsequently was defeated. In the second instance, telegrams were sent in connection with legislation dealing with the drafting of doctors.

A marked increase in the distribution of campaign literature was brought about through the efforts of Mr. Tracey in enlisting the support of the New York State Pharmaceutical Association, which has a membership of 6,000. The association, through correspondence and in its publication, has urged members to further the A.M.A.'s campaign by distributing literature and displaying the poster, "The Doctor," during the week of October 8. To date, more than a half million pieces of literature and 2,000 copies of the poster have been ordered by New York State druggists.

The Public Relations Bureau was represented at the annual meeting of health officers and nurses at Lake Placid on June 6. President Wertz addressed the meeting, and Dr. Curphey, chairman of the Committee on Public Health and Education, also was on the program.

The Bureau issued news releases publicizing the various district branch meetings and assigned staff members to be present at all of the meetings to handle local publicity.

The outstanding recent achievement in the metropolitan area in the field of public relations was the establishment of the New York County emergency service program. This completes the city-wide coverage and implements the long-term objective of the Public Relations Committee of the Coordinating Council. New York County is also pioneering the establishment of a county-wide mediation committee, a new phase of public relations. This committee will hear and act on matters brought to its attention by patients.

There is in preparation an outline on emergency service programs, for the guidance of those county societies who have not formed an emergency service committee and a similar outline on grievance committees.

The Speakers Bureau continues to receive and answer requests for speakers. Recently Dr. Elmer Hess, of Erie, Pennsylvania, was secured to speak at the Chautauqua County Institute. Dr. Weintrob was secured to address the Amvet Convention in New York City, and Dr. Leinwand to speak before a group at Columbia University.

At the September meeting of the executive board and the State committee chairmen of the Woman's Auxiliary, the program, public relations, legislation, and press and publicity chairmen outlined plans and methods by which they intend to implement their programs during the coming year.

Rural Medical Service.—Dr. DiNatale presented the following report:

The Rural Medical Service Committee met in Syracuse on September 12, 1950. Several topics were discussed, such as:

1. Attendance of some member of the committee at the annual meeting of the A.M.A. on rural medical service.
2. Possibility of the committee keeping in touch with rural communities that may need medical services and trying to locate physician in same with cooperation of the local county society.
3. Some communities may believe they need medical services and upon investigation it was found that physicians from nearby areas adequately can furnish needed medical care, and no full-time medical man was actually needed. It was suggested that in some so-called critical areas some physician or physicians from nearby areas could establish medical office on part-time basis to furnish medical service.
4. It was mentioned of certain areas that unless they had some position available such as local school physician, local health officer, or even part-time industrial position in nearby locality, they could not attract physicians into that community.
5. Certain communities are subsidizing physicians' services by creating local committees, obtaining funds and furnishing office space, etc. for physicians. It was discussed also, that, in areas where need has been shown, perhaps this committee could aid in cooperation with local medical society in such projects as new hospitals, blood banks; and it was even suggested that some persuasion might be used on local boards of supervisors where local medical societies have approved the establishment of county health units on a voluntary basis, such units having been approved by our State Medical Society. It was stated that perhaps no great problem in rural medical services exists in our State because of doctor availability and distribution, because of hospital service availability, and that no one was more than 25 miles from available hospital or medical services. It was suggested also to study methods whereby Blue Shield and Blue Cross Service Plans could be made available to certain rural people not now covered, including those that may be on welfare rolls.
6. It was decided by the committee to propose to the Council that it approve the holding of a pilot meeting in that experimental station, the Eighth District Branch; the meeting to be with farm leaders of the area and other interested groups to see what their problems may be and what we, as a Society, can do to solve them.

Woman's Auxiliary.—Dr. Mott, chairman, submitted the following report:

"It gives me great pleasure to report that one of my first duties as chairman of the Advisory Council to the Auxiliary was to attend a meeting of the Executive Board on September 7.

"During this meeting, Mrs. Hugh G. Henry, president, and other members of the executive board and chairmen of the State committees reviewed the plans for the coming year. I believe that if each of you could have been there to hear them you would have come away inspired by the plans and enthusiasm that the ladies have for the task of helping their doctor-husbands.

"Among the special projects the Auxiliary has engaged in are the promotion of the A.M.A.'s publication, *Today's Health*, and arrangements to conduct an exhibit at the 1951 New York State Fair.

"The executive board has requested that I ask this Council for permission to allow doctors' wives residing in counties that do not have auxiliaries to join neighboring auxiliaries and, therefore, I offer the following resolution:

> "*Resolved*, that permission is hereby given to the county woman's auxiliaries to accept members from neighboring counties that have no auxiliaries. Authority to decide what counties may be permitted to accept members from neighboring counties shall reside in the president."

It was voted to adopt the resolution.

Workmen's Compensation.—Dr. Kenney, chairman, reported that he and the director of the Bureau participated in a meeting of the Legislation Committee on Thursday, August 30, 1950. Prior to the meeting your director prepared an outline of the important matters referred by the House of Delegates to the Council for action, with comments. At a meeting of the Council following adjournment of the House of Delegates the Council referred various matters to the Legislation Committee and to the Compensation Committee. The recommendations of the House of Delegates and Council were carried out in each instance with respect to compensation legislation as will be evidenced by the report of the Committee on Legislation.

The routine work of the Bureau has been carried on throughout the summer. Communications from physicians and county medical societies have been received and answered. The bureau is up to date in its work.

Report of Delegates to the A.M.A.—Dr. Winslow, chairman, made the following report:

"The following were representatives of our Society as members of the House of Delegates of the American Medical Association in San Francisco, California, June 26, 27, 28, and 29, 1950: W. P. Anderton, Albert F. R. Andresen, John J. Donovan (alternate for James R. Reuling), Floyd S. Winslow, Herbert H. Bauckus, Denver M. Vickers (alternate for Thomas M. Brennan), Ralph T. B. Todd, John L. Edwards (alternate for William B. Rawls), Edward F. Flood, Leo F. Schiff, B. Wallace Hamilton, Clarence G. Bandler, John J. Masterson, Leo F. Simpson, Thomas A. McGoldrick, George W. Kosmak, J. Stanley Kenney, Peter J. DiNatale, Andrew A. Eggston, Maurice J. Dattelbaum (alternate for W. Guernsey Frey), Renato J. Azzari, Peter M. Murray, and Joseph P. Henry.

"Dr. Eggston was a member of the reference committee on medical education; Dr. Andresen was chairman of the reference committee on hygiene and public health; Dr. McGoldrick was a member of the reference committee on amendments to the Constitution and Bylaws; Dr. Flood was chairman of the credentials committee; Dr. Kenney was a member of the reference committee on industrial health; Dr. Kosmak was a member of the reference committee on miscellaneous business, and Dr. Anderton was chairman of the reference committee on emergency medical care.

"Your delegates met at the Palace Hotel, Sunday evening, June 25, 1950, from 7:30 until 10 P.M. Resolutions presented by the Medical Society of the State of New York and other resolutions were discussed, as well as certain candidates for elective offices.

"Our resolution regarding 'Hospital Practice of Medicine' was introduced by Dr. DiNatale. Upon recommendation of the reference committee on Report of Board of Trustees and Secretary, the House of Delegates passed a substitute resolution similar in intent. The resolution regarding the American Board of Gynecology and Obstetrics and re-evaluation of the entire policy of residency training was introduced by Dr. Bauckus. This was referred by vote of the House to the Council on Education and Hospitals of the American Medical Association. Dr. Henry introduced the resolution from the Medical Society of the State of New York urging establishment by the American Medical Association of a Special Committee on the Problems of Alcoholism. Instead of passing this resolution the House referred it for study to the Commission on Chronic Illness. 'Self-Testing for Sugar in Diabetic Detection,' a resolution from our Society, was introduced by Dr. Schiff. Identical resolutions were introduced by some other delegations. On recommendation of the reference committee on hygiene and public health this resolution was passed as was our 'Specialty Boards' resolution introduced by Dr. Bandler. The House of Delegates, upon recommendation of its reference committee, did not pass the resolution from the Medical Society of the State of New York regarding collection of American Medical Association dues, which was presented by Dr. Henry, on the ground that it was not feasible. The seventh resolution introduced at the behest of the House of Delegates of the Medical Society of the State of New York, 'Pilot Survey of Practitioners of So-Called Healing Arts,' was referred to the American Medical Association Board of Trustees for transmittal to the Bureau of Medical Economic Research. This had been introduced by Dr. Vickers.

"The second meeting of your delegates was held at the Palace Hotel, Wednesday evening, June 28, immediately after attending a supper of the Long Island College Hospital Alumni Society, at the generous invitation of Dr. Masterson. Dr. Bandford Murphey of Colorado and Dr. L. W. Larson of North Dakota, candidates for the Board of Trustees of the American Medical Association, addressed your delegates. Candidates for the election to be held the following day were discussed.

"It gives me pleasure to report that Dr. James R. Reuling was re-elected vice-speaker of the House of Delegates of the American Medical Association for one year, and that the House of Delegates voted to accept the invitation from the Medical Society of the State of New York to hold its 1953 Annual Meeting in New York City."

New Business

Malpractice Insurance Appeal.—A member's appeal from the decision of the Malpractice Insurance and Defense Board to deny his insurance with the Group Plan was heard by the Council.

The matter was considered in executive session, and *it was voted* unanimously to uphold the decision of the Malpractice Insurance and Defense Board and to deny the appeal.

Committee Appointments.—The personnel of the Nominating Committee which was appointed and which the Council approved by mail is as follows:

Nominating Committee

First District	Dr. Goodlatte B. Gilmore, Bronx
Second District	Dr. John M. Galbraith, Glen Cove
Third District	Dr. Harry Golembe, Liberty
Fourth District	Dr. Joseph A. Geis, Lake Placid
Fifth District	Dr. James I. Farrell, Utica
Sixth District	Dr. James Greenough, Oneonta
Seventh District	Dr. Leo F. Simpson, Rochester
Eighth District	Dr. Guy S. Philbrick, Niagara Falls
Ninth District	Dr. Ralph T. B. Todd, Tarrytown
Members-at-Large	Dr. Beverly C. Smith, New York City Dr. William J. Orr, Buffalo

Special Committee on Problems of Alcoholism

Milton G. Potter, Buffalo, *chairman*
Harold W. Lovell, New York City
Meyer Texon, New York City
Daniel F. Luby, Syracuse
John L. Norris, Rochester
Marvin Avram Block, Buffalo

This committee *was approved.*

The President requested approval of the following committee appointments.

It *was so voted.*

Executive Committee of the Council

Dr. Carlton E. Wertz, president
Dr. J. Stanley Kenney, president-elect
Dr. W. P. Anderton, secretary
Dr. Maurice J. Dattelbaum, treasurer
Dr. Harold F. R. Brown, councillor
Dr. Walter W. Mott, councillor
Dr. Floyd S. Winslow, councillor

Public Health and Education Committee, Subcommittees

Blood Banks

- Lester J. Unger, New York City, *chairman*
- Morris Maslon, Glens Falls
- Ralph Stillman, New York City
- Ernest Witebsky, Buffalo

Cancer

- George C. Adie, New Rochelle, *chairman*
- Edward Douglass, Rochester
- Irwin E. Siris, Brooklyn
- Victor C. Jacobsen, Troy
- Louis C. Kress, Buffalo
- John S. Fitzgerald, Utica
- Dwight V. Needham, Syracuse
- Cushman D. Haagensen, New York City
- Clyde L. Randall, Buffalo
- Charles S. Cameron, New York City, *adviser*
- Paul R. Gerhardt, New York State Department of Health, Albany, *adviser*

Child Welfare
Frederick H. Wilke, New York City, *chairman*
A. Clement Silverman, Syracuse
Charles A. Gordon, Brooklyn
Albert D. Kaiser, Rochester
Alexander T. Martin, New York City
William J. Orr, Buffalo
Paul W. Beaven, Rochester
Thurman B. Givan, Brooklyn
Frederick W. Bush, Rochester

(For Regional Chairmen in Pediatrics see under Maternal Welfare Subcommittee)

Diabetes
George E. Anderson, Brooklyn, *chairman*
Charles F. Gibbs, Rochester
Scott Lord Smith, Poughkeepsie
Frederick Williams, Bronx

Film Review, Medical
John L. Norris, Rochester, *chairman*
Lee A. Hadley, Syracuse
Edward C. Hughes, Syracuse
David S. Ruhe, New York City, *adviser*
Granville W. Larimore, New York State Department of Health, Albany, *adviser*

Geriatrics
Scott Lord Smith, Poughkeepsie, *chairman*
C. Ward Crampton, New York City
Wardner D. Ayer, Syracuse
Frederick D. Zeman, New York City

4-H Clubs
J. G. Fred Hiss, Syracuse, *chairman*

Hard of Hearing and the Deaf
Gordon D. Hoople, Syracuse, *chairman*
Edmund P. Fowler, New York City
Marvin F. Jones, New York City
Charles A. Anderson, Brooklyn

Industrial Health and Accident Prevention
Leonard Greenburg, New York City, *chairman*
David J. Kaliski, New York City
Stuart A. Good, Buffalo
Stanley E. Alderson, Albany

Maternal Welfare
Charles A. Gordon, Brooklyn, *chairman*
James K. Quigley, Rochester
Edward C. Hughes, Syracuse
Frederick H. Wilke, New York City

REGIONAL CHAIRMEN

Region One: New York, Richmond, Bronx
Obstetrics—George W. Kosmak, New York City
Pediatrics—Harry Bakwin, New York City
Medicine —Scott Johnson, New York City

Region Two: Kings, Queens, Nassau, Suffolk
Obstetrics—Harvey B. Matthews, Brooklyn
Pediatrics—Charles A. Weymuller, Brooklyn
Medicine —Alfred P. Ingegno, Brooklyn

Region Three: Westchester, Rockland, Dutchess, Putnam, Orange
Obstetrics—Julian Hawthorne, Rye
Pediatrics—Reginald A. Higgons, Port Chester
Medicine —Scott Lord Smith, Poughkeepsie

Region Four: Schenectady, Fulton, Montgomery, Schoharie, Greene, Ulster
Obstetrics—William M. Mallia, Schenectady
Pediatrics—James J. York, Schenectady
Medicine —Frederic W. Holcomb, Kingston

Region Five: Albany, Washington, Saratoga, Columbia, Warren, Rensselaer
Obstetrics—Joseph O'C. Kiernan, Albany
Pediatrics—Hugh F. Leahy, Albany
Medicine —James F. Rooney, Albany

Region Six: Clinton, Essex, Franklin, St. Lawrence
Obstetrics—Edwin W. Sartwell, Plattsburg
Pediatrics—Ivan R. Wood, Plattsburg
Medicine —Daisy H. Van Dyke, Malone

Region Seven: Jefferson, Lewis, Herkimer, Hamilton
Obstetrics—Wendell D. George, Watertown
Pediatrics—H. Louis George, Jr., Watertown
Medicine —John M. Rice, Watertown

Region Eight: Onondaga, Oswego, Oneida, Madison, Cortland, Cayuga
Obstetrics—Edward C. Hughes, Syracuse
Pediatrics—Tyree C. Wyatt, Syracuse
Medicine —Charles D. Post, Syracuse

Region Nine: Broome, Tioga, Chenango, Otsego, Delaware, Sullivan
Obstetrics—Stuart B. Blakely, Binghamton
Pediatrics—John B. Burns, Binghamton
Medicine —Clifton H. Berlinghof, Binghamton

Region Ten: Monroe, Orleans, Wayne, Livingston, Ontario, Yates, Seneca
Obstetrics—Ward L. Ekas, Rochester
Pediatrics—Albert D. Kaiser, Rochester
Medicine —Benedict J. Duffy, Rochester

Region Eleven: Chemung, Schuyler, Steuben, Tompkins, Allegany
Obstetrics—R. Scott Howland, Elmira
Pediatrics—George R. Murphy, Elmira
Medicine —F. Sullivan Hassett, Elmira

Region Twelve: Erie, Niagara, Chautauqua, Cattaraugus, Genesee, Wyoming
Obstetrics—Lewis F. McLean, Buffalo
Pediatrics—William J. Orr, Buffalo
Medicine —Roy L. Scott, Buffalo

Mental Hygiene
S. Bernard Wortis, New York City, *chairman*
Harry A. Steckel, Syracuse
George R. Lavine, Rochester

Nutrition
Norman S. Moore, Ithaca, *chairman*
Edgar C. Beck, Buffalo
Norman Jolliffe, New York City
Benjamin M. Bernstein, Brooklyn

Physical Medicine and Rehabilitation
Alfred L. Lane, Rochester
Richard Kovacs, New York City
Walter S. McClellan, Saratoga Springs
George M. Raus, Syracuse
George G. Deaver, New York City
Arthur Abramson, Bronx
Austin J. Canning, West Haverstraw
Norman Egel, Rochester
Gustave Aufricht, New York City

Cerebral Palsy (Subcommittee)
George G. Deaver, New York City, *chairman*
Austin J. Canning, West Haverstraw
Alfred L. Lane, Rochester

Procurement and Assignment
James F. Rooney, Albany, *chairman*
Paul K. Sauer, New York City
J. Stanley Kenney, New York City
Beverly C. Smith, New York City
Charles D. Post, Syracuse
Christopher Wood, White Plains
Edward T. Wentworth, Rochester
A. H. Aaron, Buffalo
W. P. Anderton, New York City

Rheumatic Fever

Charles A. R. Connor, New York City, *chairman*
Clayton W. Greene, Buffalo
J. G. Fred Hiss, Syracuse
James W. Quinlan, Rochester
George M. Wheatley, New York City

The President also nominated Dr. Joseph A. Lane of Rochester to replace Dr. J. Stanley Kenney, resigned from the Medical Service Committee.

Approval *was voted.*

The President requested permission to add Dr. J. Stanley Kenney to the Committee on Emergency Preparedness.

Permission *was voted.*

President Wertz asked approval of his appointment, as the result of a request from the New York State Cerebral Palsy Association, Inc., of Dr. George G. Deaver to act in a liaison capacity with that organization for our society.

Approval *was granted.*

For the Conference of the National Rehabilitation Association, Inc., which will take place at the Hotel Statler, New York City on October 24, 25, and 26, Dr. Wertz requested permission of the Council to appoint later our representative.

Permission *was granted.*

For the new committee established by the House of Delegates on Hospitals and Professional Relations, the President requested confirmation by the Council of the appointment of Dr. Harold F. R. Brown of Buffalo, as chairman, Dr. M. J. Fein, of New York City, and Dr. Carlton F. Potter of Syracuse.

It was so voted.

As delegates from the Medical Society of the State of New York to the annual meeting of the Pennsylvania State Medical Society, the President asked approval of the nomination of Dr. Reuling and himself; as delegate to the New Jersey State Medical Society in May, Dr. Cunniffe; and as representatives to the Connecticut State Medical Society in May, Drs. Kenney and Anderton.

Approval *was voted.*

Contract Renewals

It was voted that the Council recommend to the Board of Trustees that the annual contracts with Dr. Hannon, Dr. Kaliski, and Mr. Farrell be renewed.

AMERICAN CANCER SOCIETY CLINICAL FELLOWSHIPS

The American Cancer Society has announced a limited number of clinical fellowships available for postgraduate training, emphasizing diagnosis and treatment of cancer. Deadline for filing applications is December 5, 1950.

The Society's program of clinical fellowships begun in 1948 will continue through the next hospital training year, July 1, 1951, to June 30, 1952, with fellowship training commencing July 1. Fellowships will be made available primarily to teaching institutions approved by the Council on Medical Education and Hospitals of the American Medical Association. Individuals desiring such fellowships should consult the appropriate authority in the institution of their choice.

It is emphasized that the deadline for filing applications is December 5, 1950. Letters of application may be sent to Brewster S. Miller, M.D., assistant director, Professional Education Section, American Cancer Society, 47 Beaver Street, New York 4.

NECROLOGY

Francis Anthony Andres, M.D., of Allegany, died on October 21 at St. Francis Hospital, Olean, at the age of forty-six. Dr. Andres received his medical degree from the Georgetown University Medical School in 1931 and interned at Sisters Hospital in Buffalo. In 1932 he established his practice in Allegany and became physician at St. Bonaventure University, a post he held at the time of his death. During World War II Dr. Andres served as a captain in the U.S. Army Medical Corps in the European Theater of Operations. He was a member of the staffs of the Olean General and St. Francis Hospitals, both in Olean. Dr. Andres was a member of the Cattaraugus County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Dominic T. Ciolli, M.D., of Buffalo, died suddenly on October 22 at the age of fifty-five. Dr. Ciolli was graduated from the University of Buffalo School of Medicine in 1920 and did postgraduate work at the University of Pennsylvania. A member of the Reserve Officers Training Corps during World War I, he served with Buffalo induction boards for three years during World War II. Dr. Ciolli was a member of the Buffalo Academy of Medicine, the American Psychiatric Society, the Erie County Medical Society, the Medical Society of the State of New York, and the American Medical Association. Dr. Ciolli was chief neuropsychiatrist at Columbus Hospital and assistant attending neuropsychiatrist at Sisters, Meyer Memorial, and Deaconess Hospitals, all in Buffalo.

William Guy Doran, M.D., of New York City and Jersey City, died on November 1 at his home in South Orange, New Jersey, at the age of sixty-four. Dr. Doran was graduated from the Cornell University Medical College in 1911. During World War I he was an Army captain in the Rainbow Division and during World War II he was awarded the Congressional Medal. Dr. Doran was orthopedic surgeon at St. Mary's Hospital, Hoboken, and at St. Vincent's and Pollak Hospitals in Jersey City, and was consulting orthopedic surgeon at the U.S. Public Health Service Dispensary and the U.S. Marine Hospital at Staten Island.

Dr. Doran was a Diplomate of the International Board of Surgery, a Fellow of the American College of Surgeons, a Fellow of the International College of Surgeons, and a member of the American Academy of Orthopedic Surgery, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association. He was a founder and member of the American Academy of Compensation Medicine and was orthopedic consultant for several railroads, including the Delaware, Lackawanna & Western, the Lehigh Valley, and the Central Railroad of New Jersey.

Frank Merritt Dyer, M.D., of Binghamton, died on October 12 at his home at the age of seventy-nine. Dr. Dyer was graduated from the Cornell University Medical College in 1902 and continued his medical studies in Vienna and Germany, establishing his practice in Binghamton in 1904. Dr. Dyer, who had been associated with the Binghamton City Hospital for more than forty years and was vice-president of its board of managers, was also consulting surgeon at the Ideal Hospital in Endicott and the Binghamton State Hospital. A Fellow of the American College of Surgeons, Dr. Dyer was a member of the Binghamton Academy of Medicine, the Broome County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

David Felberbaum, M.D., of New York City, died on October 26 at his home at the age of sixty-seven. Dr. Felberbaum was graduated from the College of Physicians and Surgeons, Columbia University, in 1906 and interned at the Montefiore Hospital, where he was pathologist and attending physician until his retirement ten years ago because of ill health. Dr. Felberbaum was a member of the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

William J. Gabel, M.D., of Syracuse, died on October 15 at the University Hospital at the age of sixty. Dr. Gabel was graduated from the Syracuse University College of Medicine in 1916 and joined the staff of the University Hospital where he remained until his retirement from practice eight years ago because of ill health.

Nathaniel Holmes Ives, M.D., of Mount Vernon, died on October 8 at the age of seventy-seven. Dr. Ives was graduated from the New York Homeopathic Medical College in 1895 and interned at Grace Hospital in New Haven, Connecticut, and Cumberland Hospital, Brooklyn. He began his practice in Mt. Vernon in 1896.

Dr. Ives had been a trustee of the New York Homeopathic Medical College and in 1945 was elected to honorary life membership to the Board of Managers of the Mount Vernon Hospital in recognition of his half century of service to the Hospital. In 1948 he was honored by the Medical Society of the State of New York for his fifty years of service.

Dr. Ives had served as senior warden of the Church of the Ascension in Mount Vernon for forty-three consecutive years for which he was honored by the late Bishop Manning. For seventeen years, until 1939, he directed and operated the Fernway Girls Camp in Monterey, Massachusetts. Dr. Ives was a member of the American Medical Association, the Medical Societies of the State of New York and the County of Westchester, the Homeopathic Medical Society of the State of New York, the Mount Vernon Medical Society, the American Institute of Homeopathy, the Association of the New York Central Lines Surgeons, and the Dunham Medical Club.

Richard Anthony Kinney, M.D., of Jamestown, died September 21 at the age of forty-four. Dr. Kinney received his medical degree from the Georgetown University Medical School in 1930. He was attending surgeon at the Jamestown General Hospital and attending physician and surgeon at the Women's Christian Association Hospital, also in Jamestown. Dr. Kinney was a member of the Chautauqua County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Warren Chamberlain McFarland, M.D., of Warwick, died on October 18 at the age of eighty-five. Dr. McFarland was graduated from the Yale Medical School in 1887 and had practiced medicine in New York State for nearly sixty years until his retirement a few years ago. During his career Dr. MacFarland had been associated with the Bronx Hospital and the Sarah Horton Memorial Hospital, Middletown, and at the time of his death was consultant otolaryngologist on the staffs of the New York University Post-Graduate Hospital and the Manhattan Eye, Ear and Throat Hospital. Dr. MacFarland was a member of the Medical Societies of the State of New York and the County of New York and the American Medical Association.

John Alphonsus McNevins, M.D., of the Bronx, died on June 8 at the age of sixty-six. Dr. McNevins was graduated from the Cornell University Medical College in 1906. He was a surgeon at Union Hospital and was a member of the American Medical Association and the Medical Societies of the State of New York and the County of the Bronx.

Kanzo Oguri, M.D., of Brooklyn, died on October 24 at his home at the age of fifty-eight. A native of Nagoya, Japan, Dr. Oguri came to the United States as a young boy and was graduated from the New York Homeopathic Medical School in 1920. During World War II, he served as chairman of the Japanese-American group of the American Red Cross and also headed the Japanese-American War Fund. Dr. Oguri was associate attending radiologist and associate attending urologist at Prospect Heights Hospital in Brooklyn.

Charles Tilley Sharpe, M.D., of New York City, died October 27 at St. Luke's Hospital at the age of seventy-five. Dr. Sharpe received his medical degree from the University of Manitoba Medical School in 1898 and practiced first as a horse and buggy doctor on the western Canadian prairies, later moving to Winnipeg. He came to New York City in 1910, and for some years was medical director of the Life Extension Institute before opening his own office. Dr. Sharpe was a medical adviser to many large financial organizations, including the Empire Trust Company, the Bank of the Manhattan Company, and the New York Trust Company.

Dr. Sharpe was a member of the New York Academy of Medicine, the Radiological Society of North America, the American Heart Association, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Elias Stein, M.D., of Flushing, died on October 4 at the age of forty. Dr. Stein was graduated from the Long Island College Hospital Medical School in 1933. He was assistant attending pediatrician at the Queens General Hospital Outpatient Department. Dr. Stein was a member of the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Francis Farron Talbot, M.D., of Niagara Falls, died on October 23 at Mount St. Mary's Hospital in Niagara Falls at the age of thirty-six. Dr. Talbot received his medical degree from the Georgetown University Medical School in 1939 and interned at the Sisters of Charity Hospital in Niagara Falls before starting his practice there in 1940. Dr. Talbot was chief ophthalmologist at Mount St. Mary's Hospital and attending ophthalmologist at the Niagara Falls Memorial Hospital. He was a member of the Niagara Falls Academy of Medicine, the Buffalo Ophthalmological Society, the Niagara County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Dora K. Weiss, M.D., of New York City, died on October 7 at the age of sixty. Dr. Weiss received her medical degree from the University of Munich Medical School in 1922 and came to the United States where she interned at the Beekman-Downtown Hospital. She was assistant attending anesthetist at the Beekman Downtown Hospital. Dr. Weiss was a member of the American Society of Anesthesiologists, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Victor Felsenthal Woolf, M.D., of New York City, died on October 16 at his home at the age of forty-seven. Dr. Woolf was graduated from the College of Physicians and Surgeons, Columbia University, in 1930 and interned at Sydenham Hospital. He was chief of staff of the tuberculosis division of the Halloran Veterans Hospital in Staten Island. A Diplomate of the American Board of Internal Medicine and a Fellow of the American College of Physicians, Dr. Woolf was a member of the American Trudeau Society, the New York Academy of Medicine, the New York Society for Thoracic Surgery, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Fritz Wittles, M.D., of New York City, died on October 16 at the age of sixty-nine. A native of Vienna, Dr. Wittles received his medical degree from the University of Vienna in 1904 and then, as a protégé and associate of Dr. Sigmund Freud, he was associated with several Viennese hospitals and psychiatric institutions for twenty-four years. He came to the United States in 1928 and lectured on psychoanalysis for two years at the New School for Social Research, following which he established a private practice in New York City and became a research fellow and psychologist at Bellevue Hospital.

Dr. Wittles was the author of many books and articles, among them being a biography of Dr. Freud, "Freud and His Time," "The Technic of Psychoanalysis," and many articles for professional journals. Dr. Wittles was also a member of the American Psychiatric Association, the American Psychoanalytic Association, the New York Psychoanalytic Society, the American Medical Association, the Medical Society of the State of New York, and the New York County Medical Society. A Diplomate of the American Board of Psychiatry and Neurology, Dr. Wittles also was an instructor and lecturer at the New York Psychoanalytic Institute.

MEDICAL NEWS

District Branches Elect Officers

TWO additional district branches of the Medical Society of the State of New York have reported on elections of officers held at their annual meetings.

At the meeting of the Ninth District Branch on October 18 at the Hotel Thayer, West Point, the following officers were elected:

Dr. Morley T. Smith, New Rochelle, president; Dr. John F. Rogers, Poughkeepsie, first vice-president; Dr. Harold S. Heller, Spring Valley, second vice-president; Dr. Earl C. Waterbury, Newburgh, secretary, and Dr. Reid R. Heffner, New Rochelle, treasurer. The Ninth District Branch is made up of the medical societies from the following counties: Dutchess, Orange, Putnam, Rockland, and Westchester.

On November 1, the Second District Branch, meeting at the Garden City Hotel, Garden City, elected officers for two-year terms, to begin at the close of the 1951 session of the House of Delegates. These officers are:

Dr. Austin B. Johnson, Cedarhurst, president; Dr. George P. Bergman, Greenport, first vice-president; Dr. Leo Flood, Hempstead, second vice-president; Dr. William Carman, Islip, secretary, and Dr. Irving Drabkin, Rockville Centre, treasurer. The medical societies of Nassau and Suffolk Counties comprise the Second District Branch.

Sixth District Branch Proposes New Organization

THE groundwork for an improved public relations program on a district branch level was laid by members of the Sixth District Branch of the State Society when they approved a set of proposals submitted by their Executive Committee at the forty-fourth annual meeting at Ithaca on October 4.

The proposals submitted by the Executive Committee, headed by Dr. Norman C. Lyster, of Norwich, Sixth District Branch president, will now go before the component county societies for consideration. The counties involved are Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Tioga, and Tompkins.

These are the recommendations offered:

1. A full-time, salaried executive secretary provided with adequate office facilities, travel expenses, and supplies to supervise the over-all program.
2. An Investigating and Collecting Agency, supervised by a committee of doctors, with branches conveniently located throughout the district which shall function to collect fees and investigate the economic circumstances of those cases referred to it.
3. A District Grievance Committee composed of one member from each county in the district organization to stand behind the individual county grievance committees and to act as an appeal board for the latter.
4. A bulletin published at regular intervals to acquaint the members of the district with the problems of the district.
5. An organized effort to standardize the economics of the treatment of welfare patients in various counties of the district.

To properly implement and conduct this program, the Executive Committee further recommended that each county society should (1) establish an emergency medical service, (2) establish a county grievance committee and appoint a member to the district grievance committee, and (3) take steps to raise funds to initiate the program and carry on the first year of its activities.

In calling upon members of the component societies to support the program, Dr. Lyster said: "By way of explaining these recommendations, let me say that the greatest threat to American medicine today lies in some form of government-controlled medicine. A well-developed local program to improve public relations is necessary to combat this trend. Our great organizations such as the American Medical Association and the State Society can do much, but it is you and I that must put on the actual performance at the local level."

New Test for Rheumatic Fever Reported

DR. RALPH F. JACOX, instructor of medicine of the University of Rochester School of Medicine, has reported a "100 per cent successful" test for rheumatic fever and allied diseases has been developed by him and Dr. Robert Gale, formerly with the University of Rochester and now of the St. Johnsbury, Vermont, research group, during the past year. The test was reported to the American College of Physicians at the Rochester Academy of Medicine, in Rochester, and to the Grand Lodge, Free and Accepted Masons of the State, which provided grants for the research work.

Dr. Jacox described the test as a method of adding the chemical, quaternary ammonium salt, to individual blood serums of patients having, or suspected of having, rheumatic fever, arthritis, and allied diseases. When the chemical is added, the serum turns cloudy. The degree of cloudiness indicates the progress the disease has made. Weekly tests on rheumatic fever victims were conducted in Rochester hospitals, and the degree of improvement following different methods of treatment noted. In addition to being a guide for treatment, the test shows when the patient can return to normal activity.

The University of Rochester recently shared in the third grant for research on rheumatic fever made by the Masons of New York State, receiving a check for $23,350. Other grants announced by the Masonic Foundation for Medical Research and Human Welfare, totaling $188,832, went to the following: New York University-Bellevue Medical Center, $65,085; College of Physicians and Surgeons, Columbia University, $24,580; Irvington House for Cardiac Children, $23,575; University of Buffalo School of Medicine, $19,440, and University of Syracuse School of Medicine, $32,802.

State Society Executive Committee Appointed

IN ACCORDANCE with the Constitution and Bylaws of the Medical Society of the State of New York, as revised by the House of Delegates at the 144th Annual Meeting in May, President Carlton E. Wertz has appointed an executive committee which will have authority to take action in case of an emergency arising in the interim between the meetings of the Council. The Committee, which has been approved by the Council, includes Dr. Carlton E. Wertz, president; Dr. J. Stanley Kenney, president-elect; Dr. W. P. Anderton, secretary; Dr. Maurice J. Dattelbaum, treasurer, and Dr. Harold F. R. Brown, Dr. Walter W. Mott, and Dr. Floyd S. Winslow, councillors.

World Medical Association Holds Annual Meeting

FIVE hundred medical leaders, representing 28 nations of the world, gathered in New York City recently to discuss problems of the medical profession and to hear reports on medical progress.

The occasion was the fourth General Assembly of the World Medical Association, a voluntary organization of national medical associations in 41 countries with a combined membership of nearly 500,000 physicians. More than 225 American doctors attended the meeting, the first W.M.A. General Assembly to be held in the United States.

Euthanasia (mercy killings), Nazi medical atrocities, the British National Health Service, and other issues came up for discussion as well as the latest developments in endocrinology, gastroenterology, and other medical areas.

The W.M.A., which held its first meeting of the General Assembly in Paris, September, 1947, has as its aim the betterment of health throughout the world.

"The motivation of the World Medical Association is conspicuously free from political and nationalistic purposes," Dr. Louis Bauer of New York explained. Dr. Bauer serves as secretary-general of the W.M.A. at its New York headquarters and is also chairman of the board of trustees of the American Medical Association.

War in the Far East prevented some delegates from attending. Because visas had been frozen under the new Internal Security Act, at least ten delegates from Europe and South America failed to arrive.

One of the highlights of the assembly was the inauguration at the opening session on October 17 of Dr. Elmer L. Henderson of Louisville, Kentucky, as president of the W.M.A. Dr. Henderson was installed as president of the American Medical Association in June of this year and thus becomes the first physician ever to lead simultaneously the two largest medical associations in the world.

At the inauguration, Dr. Henderson said, "Physicians by their thinking, spirit, and effort can set an example for governments, diplomats, and people everywhere to preserve the peace." Noting that the W.M.A. is uniting the medical profession of the world, he declared, "Continued increased cooperation of that kind is one of the necessary ingredients for building a better world." He called upon the doctors of the world to "demonstrate convincingly that international cooperation is a workable reality."

Dr. Charles Hill of London, retiring president, was unable to attend the medical meeting. Conflicting duties in Parliament prevented his coming. He sent a message to delegates expressing faith in the accomplishments of the W.M.A.

Dr. Hill, however, expressed serious dissatisfaction with the present British National Health Service. He wrote that the general practitioner in England is losing both patients and prestige. If it becomes clear that no prospect for satisfactory settlement is in sight, "preparations should be made for a withdrawal of general practitioners from the National Health Service," Dr. Hill asserted.

General policy and medical ethics sessions of the General Assembly drew the largest attendance. At one spirited gathering, W.M.A. delegates voted "to condemn the practice of euthanasia under all circumstances" as "contrary to the public interest and to medical principles as well as to natural and civil rights."

Dr. S. G. Sen of India and Dr. E. A. Gregg of Great Britain fought a losing battle in favor of "mercy death with the consent of the patient and the state to bring an end to intolerable suffering." They argued many doctors have used drugs to speed the death of patients suffering from incurable diseases.

Delegates from Ireland, France, and the U.S. were strongly opposed. Dr. Marcel Poumailloux of France declared approval of euthanasia would "open the door to all possible crimes and criminal practices."

W.M.A. delegates voted to authorize the Council, the executive body, to consider any applications of doctors of Western Germany and Japan to membership despite the protests of two Israeli physicians, Dr. Emil Adler and Dr. S. G. Zondek.

The Israeli delegates protested that many doctors in Germany had been involved in and had even taken the initiative in such inhuman experiments as forced sterilization and vivisection of humans.

The charges of "crimes against humanity" were generally admitted by doctors of West Germany who declared: "We hereby solemnly give our promise through the World Medical Association to the medical profession through the world never again to participate in or to permit such a betrayal of medicine." The German physicians promised expulsion of members personally guilty of crimes referred to and those not willing to "maintain a high standard of professional behavior in the future."

The decision was 33 to 3 in favor of referring action to the Council. Dr. Adler said he did not object to the organization having relations with German physicians, but that there should be a "probation time" before admission to membership.

The assembly adopted another resolution disapproving attempts "by various governments to control the traditional freedom of science by dictating judgments on such biological and medical questions as genetics, anthropology, and even physiology to serve political ends." References to Soviet Russia and Nazi Germany as the governments in question were deleted.

Fraudulent and misleading drug advertisements were also criticized, and delegates were advised to warn the public against new discoveries not fully tested.

At scientific sessions, doctors heard of the latest advances in endocrinology, gastroenterology, and in therapeutic uses of blood and blood derivatives. Dr. Albert F. R. Andresen of Flushing Hospital, Brooklyn, reviewed diseases of the stomach and intestines, declaring that "most medications for ulcer are useless," and that so-called hyperacidity plays no important part in causing ulcer and requires no treatment.

"The treatment of uncomplicated ulcer in view of the fact that it is known to heal spontaneously should consist simply of a bland, well-balanced diet, a little high in protein values, with frequent feedings." Special treatment, even operative technics, are sometimes necessary, however, if perforations or persistent hemorrhages are evidenced.

The director of blood banks for the National Red Cross, Dr. L. K. Diamond of Boston, told the medical men that the world's blood needs have greatly increased in the last few years because of the need for blood stockpiles for defense. He estimated that the U.S. would need from 4 to 5 million pints of blood per year to meet civilian needs plus an undetermined amount for military and civilian stockpiles in case of emergency.

The American Medical Association was host to delegates at a dinner on October 19. At that time Dr. Roger I. Lee of Boston, past-president of the A.M.A., told the assembly that medicine, unlike most professions, does not patent its products and procedures, but makes them available to the public.

"Patents have enriched many inventors and some scientists outside the medical field," Dr. Lee said. "I wonder what the public reaction would be if a valuable remedy were cornered and exploited by a patent with the result that people died for want of the remedy?"

On October 20, delegates visited West Point where Major General Bryant E. Moore, superintendent of the U.S. Military Academy, told visitors that the medical profession could prove to be a forceful factor in promoting world peace.

"With each year has come a deeper realization that members of the medical profession are the true international diplomats of peace," General Moore said at a luncheon meeting. "Your influence is based upon the esteem in which peoples of all countries hold the profession of medical sciences. It is not improbable that a road to permanent peace will be found through your efforts to expand the horizons of medicine."

At the concluding session of the assembly Dr. Dag Knutson of Djursholm, Sweden, was unanimously chosen as president-elect of the organization. He will take office at the fifth General Assembly of the W.M.A. to be held in Stockholm, Sweden, September 15 to 20, 1951. Delegates voted to hold the 1952 meeting in Athens, Greece.

Dr. Knutson has been president of the Swedish Medical Association since 1946. A specialist in internal disease and head of the University Policlinic for Internal Disease at Karolinska Sjukhuset, Stockholm, Dr. Knutson has served on the Council, the executive body of the W.M.A., since 1947.

Dr. Otto Leuch of Switzerland was re-elected treasurer, and the following council members were re-elected: Dr. J. A. Bustamante, Cuba; Dr. S. C. Sen, India; Dr. R. L. Sensenich of South Bend, Indiana, and Dr. L. Garcia-Tornel of Spain.

A Conference of Medical Editors of the World was held on October 21, with Dr. Morris Fishbein of Chicago, editor of the *W.M.A. Bulletin*, as chairman.

Teaching, Research Grants Awarded

TEACHING and research grants to physicians and institutions in New York State have been announced by the U.S. Public Health Service. Research grants awarded under the National Mental Health Act include the following:

Dr. Benjamin Malzberg, New York State Department of Mental Hygiene, Albany, $7,000, for studies of discharge and mortality rates (on a life table basis) for patients admitted to the New York State Hospitals, by sex and major groups of mental disorders; Drs. H. S. Liddell and C. M. McCay, Cornell University, Ithaca, $19,944, tolerance for environmental stress in aged and newborn sheep and goats; Dr. George E. Daniels, Columbia University, New York City, $13,500, psychosomatic aspects of ulcerative colitis; Dr. Elvin A. Kabat, Columbia University, New York City, $35,100, immunochemical studies on experimental acute disseminated encephalomyelitis and on multiple sclerosis; Dr. Abner Wolf, Columbia University, New York City, $8,208, prenatal factors in the causation of permanent disabilities and defects of the nervous system.

Also: Dr. Fred A. Mettler, New York City, $4,660, research conference group on psychosurgery; Dr. Nolan D. C. Lewis, New York State Psychiatric Institute, New York City, $14,000, development of experimental and time-saving diagnostic and prognostic technics in psychiatry; Dr. Lauretta Bender, New York University, New York City, $21,276, childhood schizophrenia; Dr. Morris B. Bender, New York University College of Medicine, New York City, $3,726, changes in perceptual functions in organic psychoses; Dr. Armando Ferraro, New York State Psychiatric Institute, New York City, $7,650, prevention of experimental allergic encephalomyelitis; Dr. Anne Roe, New York City, $7,914, personality characteristics of eminent scientists; Dr. Mitchell A. Gold, Scientific Personality Research Corporation, New York City, $10,000, basic research in personality structure in relation to the significance of expressive movement and its physiology, and relations to the health and disease of the oral cavity.

Teaching and stipend grants awarded for 1951 in psychiatry include the following:

State University Medical Center at Syracuse, $12,420, undergraduate psychiatry; Albany Medical College, $12,500, undergraduate psychiatry; State University Medical Center at New York, Brooklyn, $12,500, undergraduate psychiatry; American Association of Psychiatric Social Workers, New York City, $18,360, psychiatric social work; American Association of Schools of Social Work, New York City, $4,100, psychiatric social work; University of Buffalo, $6,300, clinical psychology; Columbia University, New York City, $206,923, graduate psychiatry, psychiatric social work, and psychiatric nursing; Fordham University, New York City, $10,652, psychiatric social work; National League of Nursing Education, New York City, $15,000, psychiatric nursing.

Also: New York Bureau of Child Guidance, Brooklyn, $5,000, graduate psychiatry; New York Psychoanalytic Institute, New York City, $11,500, graduate psychiatry; New York State Psychiatric Institute, New York City, $13,936, clinical psychology; New York University, $56,240, graduate psychiatry, clinical psychology, neurology, and undergraduate psychiatry; Presbyterian Hospital, Babies Hospital, New York City, $9,369, graduate psychiatry; University of Rochester, $57,685, graduate psychiatry, clinical psychology, and undergraduate psychiatry.

Teaching grants awarded by the National Heart Institute to medical schools to assist in expanding and improving their cardiovascular teaching curricula include the following in New York State:

College of Medicine, State University Medical Center, Brooklyn, $13,950; University of Buffalo School of Medicine, $14,000; Cornell University Medical College, New York City, $14,000; New York University-Bellevue Medical Center, $14,000; Syracuse University College of Medicine, $13,999.

To Expedite Army Medical Reserve Appointments

THE Department of the Army has announced that physicians, dentists, and veterinarians who registered for the draft October 16 may receive commissions in the Army within four to seven days after the individual application reaches the Office of the Surgeon General, provided the application papers are in order and there is no questionable aspect in the physical condition of the applicant.

The Army has directed all the continental Army commanders to give top priority to the processing of applications for reserve commissions by physicians, dentists, and veterinarians who registered on October 16.

Army medical facilities have received similar instructions to insure that applicants for medical, dental, and veterinary corps commissions will not be unduly delayed in receiving their physical examination.

The Surgeon General stated that applicants for reserve commissions may come in person, if they desire, directly to the Personnel Division of the Surgeon General's Office, where special arrangements have been made for the rapid processing of those applying for appointment and active duty. Written inquiries will also receive prompt attention.

Major General Raymond W. Bliss, Army Surgeon General, said that everything possible would be done to assure qualified applicants a reserve commission prior to induction. Medical and dental officers with appointments in the Reserve Corps are not eligible for induction by Selective Service, even though previously registered.

MEDICALLY SPEAKING—

1950 Lasker Awards—A researcher in cancer, one in heredity, a public health pioneer, and a unit of the Rockefeller Foundation were named recently as winners of the 1950 Lasker Awards, which have been made annually since 1946 to "bring to public attention medical discoveries, the potentials of which might not otherwise be used fast enough in combating disease." New York recipients include Dr. George Papanicolaou, Cornell University Medical College, who was cited for devising a smear test which, through microscopic investigation, makes possible the early detection and study of possible prevention of cancer, and the International Health Division of the Rockefeller Foundation, which received the group award for its control and eradication of diseases throughout the world.

Acadmey of General Practice Elects Officers—At the annual meeting of the New York State Academy of General Practice, held in October in Rochester, Dr. Vincent E. Fischer of Rochester succeeded Dr. William A. Buecheler of Syracuse as president. Officers elected include: Dr. Samuel A. Garlan, New York City, president-elect; Dr. John McGavern, Honeoye Falls, vice-president, and Dr. Raymond S. McKeeby, Binghamton, secretary-treasurer. Delegates approved a resolution to ask the State Legislature to take a definite stand against compulsory health insurance.

Plastic Surgeons to Be Trained—A grant of $27,000 from the Milbank Memorial Fund to be used to train plastic surgeons has been announced by Dr. Donal Sheehan, chairman of the scientific committee, New York University-Bellevue Medical Center. This is the last of several grants from the Fund to the Medical Center intended to promote the rehabilitation of individuals with various handicapping conditions so that they can again play a useful role in society.

The plastic surgery grant will make possible creation of three fellowships for the training of surgeons in the Plastic Surgery Unit, Department of Surgery, New York University College of Medicine, under the direction of Dr. John Marquis Converse. These surgeons will also assist in carrying out needed research in this field.

Reconstructive plastic surgery is aimed at the rehabilitation of the great number of Americans who suffer facial disfigurement each year in accidents on highways, in factories, and in homes, and at rehabilitation of those who suffer facial disfigurement through disease, such as cancer, and congenital abnormalities. The program of the Plastic Surgery Unit is designed to prevent facially disfigured people, who are shunned or pitied by their neighbors, from withdrawing from society, breaking off relations with business associates and friends, and becoming an economic and social waste.

To Give Course in Psychiatry in General Medicine—A course in "Psychiatry in General Medicine" will be given at Mount Sinai Hospital, New York City, once a week, on Tuesday mornings, from January 9 to May 22, 1951. The course, to be given by Dr. M. Ralph Kaufman and staff, in affiliation with Columbia University, is for the general practitioner and not the specialist and is primarily a clinical course in which the students may have an opportunity to work with patients presenting characteristic problems. For further information, address the Registrar for Medical Instruction, Mount Sinai Hospital, Fifth Avenue and 100th Street, New York 29, New York.

Openings for Missionary Doctors—The Board of National Missions of the Presbyterian Church in the U.S.A. has announced openings for missionary doctors needed immediately. At Haines, Alaska, a small town on an inlet in southeastern Alaska with approximately 250 native and white residents, a general practitioner who must also do some surgery is needed. At the Embudo Presbyterian Hospital in Embudo, New Mexico, a 25-bed hospital for Spanish-Americans, an assistant physician is needed. For further information, write to Department of Missionary Personnel, Presbyterian Board of National Missions, 156 Fifth Avenue, New York 10, New York.

Session on General Practice Established—In a move to give greater recognition to the general practitioner, the Council of the Medical Society of the State of New York has authorized the establishment of a Session on General Practice in connection with the 145th Annual Meeting to be held next May in Buffalo. Dr. William A. Buecheler, Syracuse, past-president of the New York Academy of General Practice, has been designated chairman of the Session, and Dr. Floyd C. Bratt, Rochester, has been named secretary.

Intern Training Program Marks Anniversary—The fifteenth anniversary of the inauguration of the New York State Psychological Intern Training Program was marked by special exercises October 20 at Letchworth Village and Rockland State Hospital. An all-day conference, planned by Dr. Alfred M. Stanley, director of Rockland State Hospital and chairman of the committee on arrangements, highlighted recent developments in clinical psychology and problems of training clinical psychologists.

Polio Statistics—The State Health Department announced that the "peak" of this year's poliomyelitis outbreak in the upstate area appears to have been passed during the middle of September. The week of "peak incidence" of the disease in 1949 was the week ending August 19. A total of 2,036 cases has been reported in the upstate area since January 1. At the same time last year, 2,042 cases had been reported.

American Academy of Neurology Announces Official Publication—The American Academy of Neurology has announced the establishment of its new official publication, *Neurology*, to be published in January, 1951, as a bimonthly. This will be the only American journal devoted exclusively to neurology. Its editorial scope will embrace every aspect of clinical neurology, including diseases of the nervous system, neuropathology, neurosurgery, neuroanatomy, neuropsychiatry, and neurophysiology. Dr. Paul F. A. Hoefer, associate professor of neurology at Columbia University, is a member of the editorial board.

Junior Chamber of Commerce Urges Referendum—The New York State Junior Chamber of Commerce at its October meeting urged that the United States Junior Chamber of Commerce conduct a nation-wide referendum among local J.C. organizations to determine the policy of the U.S. Junior Chamber of Commerce in regard to national health insurance. The New York State organization announced its strong opposition to compulsory government-operated health insurance as being undemocratic and un-American. The recommendations of the State group were forwarded to the national group for consideration with the recommendation that, upon the completion of such a nation-wide referendum, a report outlining the position of the Junior Chambers of Commerce regarding national health insurance be furnished to the appropriate committees of Congress and the President.

MEETINGS

PAST

Brooklyn Dermatological Society

At the October meeting of the Brooklyn Dermatological Society, the following officers were elected for 1950–1951: Dr. Irving N. Holtzman, president; Dr. Moses Silverman, vice-president; Dr. Camillo B. Locasto, secretary-treasurer; Dr. Samuel I. Greenberg, editor, and Dr. Abraham J. Gewirtz, assistant editor.

Long Island Psychiatric Society

The Long Island Psychiatric Society held its first meeting of the season in October at the Pilgrim State Hospital, Brentwood, Long Island. Dr. S. Bernard Wortis, director of psychiatry at the New York University-Bellevue Medical Center, was guest speaker. His subject was "Research in Psychiatry."

Women's Medical Association of New York City

The annual fall dinner meeting of the Women's Medical Association of New York City was held November 1 at the Hotel Beekman Tower. The program presented a conference on "ACTH, Cortone, and Adrenal Cortex," with the following participating: Dr. Elaine P. Ralli, associate professor of medicine, New York University College of Medicine, "Relation of the Adrenal Cortex to Metabolic Disorders"; Dr. Joseph Bunim, associate professor of medicine, New York University College of Medicine, "Treatment of Rheumatic Diseases with ACTH and Cortone"; Dr. Robert Cooke, director, Institute of Allergy, Roosevelt Hospital, "The Use of Adrenal Cortical Hormones in the Treatment of Allergic Disease."

Eastern New York Eye, Ear, Nose and Throat Association

The annual clinic day of the Eastern New York Eye, Ear, Nose and Throat Association was held November 2 at the Albany Hospital. The evening program began with dinner at the Albany Country Club and included a talk by Dr. James W. Babcock, attending otolaryngologist, Columbia-Presbyterian Medical Center, New York City, on "The Effect of Streptomycin on the Labyrinth."

Association of Military Surgeons of the United States

The fifty-seventh annual convention of the Association of Military Surgeons was held November 9, 10, and 11, in New York City. Among civilian doctors appearing on the scientific program were the following: Dr. Louis H. Bauer, Hempstead, secretary general, World Medical Association; Dr. Howard A. Rusk, chairman, Department of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center; Dr. Irving S. Wright, professor of clinical medicine, Cornell University Medical College; Dr. William F. Macfee, surgical director, St. Luke's Hospital, New York City.

FUTURE

New York Tuberculosis and Health Association

The annual Tuberculosis Conference of the New York Tuberculosis and Health Association will be held on Tuesday, February 20, 1951, at the Hotel Statler, New York City.

PERSONALITIES

Honored

An honorary fellowship in the British College of Obstetricians and Gynecologists was conferred on Dr. George W. Kosmak, New York City, at a ceremony held September 29 in London, England, and received in absentia by Dr. Osborne of the American Embassy . . . Dr. Arthur J. Bedell, Albany, received the honorary degree of Doctor of Science in June from the University of the South and shortly thereafter left for Europe where he exhibited his famous photographs at the sixteenth International Congress of Ophthalmology, in London . . . Dr. Paul W. Beaven, Rochester, the 1950 Albert D. Kaiser Medal of the Rochester Academy of Medicine . . . Dr. William E. Mosher, Cortland health commissioner, at a testimonial dinner October 23 in Cortland given by the Cortland Board of Health and the Cortland County Tuberculosis and Public Health Association . . . Dr. Walter T. Dannreuther, New York City, retired as chairman and professor of the Department of Gynecology of the New York University Post-Graduate Medical School, was tendered a farewell dinner by the members of the staff, past and present, at the Waldorf-Astoria Hotel on October 9. He is succeeded in his position by Dr. Locke L. Mackenzie.

Appointed

Dr. Roswell K. Brown, Buffalo, as assistant dean of the University of Buffalo School of Medicine . . . Dr. Charles Buckman, former director of the Gowanda State Hospital, as assistant commissioner of the State Department of Mental Hygiene . . . Dr. William J. Daley, Buffalo, as a trustee of the William J. Conners Foundation . . . Dr. Douw S. Meyers, Kingston, to the board of managers of the Kingston Laboratory . . . Dr. Haydon Rochester, Ithaca, as director of the Tompkins County Mental Health Clinic.

Elected

Dr. Saul Yafa, Glens Falls, to the board of directors of the Northeastern New York Medical Service Blue Shield Plan.

Speakers

Dr. Harry Bakwin, professor of clinical pediatrics, New York University-Bellevue Medical Center, New York City, on "Behaviour Problems" at the thirteenth annual medical symposium of the Duke University School of Medicine November 11, in Durham, North Carolina . . . Dr. Eli Bauman, New York Presbyterian Medical Center, on arthritis and rheumatism, and Dr. Charles Plotz of Maimonides Hospital, Brooklyn, on gout and diet during a radio discussion on Station WYNC, New York City, on October 11 . . . Dr. Earl C. Chester, Neurological Institute, New York City, on "The Physician's Speech Training" at a panel on "College Speech Training for Students of the Professions" to be held December 30 at Purdue University . . . Dr. Karl Gruppe, Utica, chairman of the Oneida County Medical Society's committee on the deaf and hard of hearing, at a meeting of the Mothers Club in Clinton on October 19.

Dr. Gerald F. Jones, Utica, on "The Threat of Socialized Medicine" at a meeting of the Rome Kiwanis Club October 11 in Rome . . . Dr. Frank A. Graniero, Utica, on socialized medicine at a meeting of Utica Lodge 184, Order of B'nai B'rith on October 13 . . . Dr. John C. McClintock, Albany, on compulsory health insurance at the fifty-fourth annual convention of the State Daughters of the American Revolution October 4 in Albany . . . Dr. Morris Maslon, cancer chairman of the Warren County Medical Society, on "Cancer, the Disease, and the Warren County Tumor Clinic" at a meeting for members of the Warren County Field Army, Cancer Training Institute of the American Cancer Society, New York State Division, October 20 in Glens Falls . . . Dr. Walter A. Osinksi, Albany Medical College, on "The Role of Psychiatry Today" at a meeting of the Social Science Forum of Siena College October 13 . . . Dr. Adele E. Stresseman, Brooklyn, on marriage counseling at the eighth annual conference of Greene County Town Health Committees in Catskill . . . Dr. D. W. Wooley, Rockefeller Institute for Medical Research, on "Selective Toxicity of the Sulfonamide Drugs" as the seventeenth Walter M. Brickner Lecture at the Hospital for Joint Diseases, New York City, on November 14.

New Offices

Dr. Edmund C. Bodkin, Army veteran who spent three years in the South Pacific with the Eighth General Hospital and has since been stationed at Veterans Hospitals, practice of urology in Rome . . . Dr. David D. DePue, associate surgeon at the A. Barton Hepburn Hospital, practice of surgery in Ogdensburg . . . Dr. William B. Ebert, Army veteran, practice of internal medicine in Beacon . . . Dr. Paul E. Griffin, general practice in Gloversville . . . Dr. Norman A. Harvey, practice of pediatrics in Glens Falls . . . Dr. Beecher W. Leversee, practice of urology in Schenectady . . . Dr. Marshall I. Nevin, practice of internal medicine in Baldwin.

Dr. William F. Nickel, Jr., practice of surgery in Plandome Heights . . . Dr. Hobart C. Parkhurst, practice of dermatology, in association with his father, Dr. H. D. Parkhurst, in Utica . . . Dr. C. J. Regan, general practice and practice of obstetrics, in Warsaw . . . Dr. Edwin A. Robinson, general practice in Rochester . . . Dr. William H. Smith, practice of pediatrics in Katonah . . . Dr. Leonard J. Spitaleri, general practice in Greenwood Lake . . . Dr. William C. Taylor, practice of pediatrics in Utica . . . Dr. Wayne C. Templer, formerly of Binghamton, practice of internal medicine in Corning . . . Dr. Eben D. Tisdale, practice of obstetrics and gynecology in Ithaca . . . Dr. Ernst A. von During, general practice and practice of surgery, in Collins Center . . . Dr. Ambrose G. Walsh, practice of obstetrics and gynecology in Utica . . . Dr. Leonard E. Witkin, formerly of New York City, practice of obstetrics and gynecology, in Amityville.

COUNTY NEWS

Albany County

Dr. Malcolm Brown, associate professor of medicine, Queen's University, Kingston, Ontario, spoke on "Diseases of the Liver" at the meeting of the Albany County Medical Society held October 25 at the Albany College of Pharmacy. Also appearing on the program was Mr. Ralph Henry Smith, executive director of the Albany Community Chest, who spoke on "The Albany Community Chest in the Life of Albany."

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Dr. Simon J. Gormley, Albany County health commissioner, has been appointed medical director of the county's civilian defense organization.

Allegany County

Medical methods for serving the citizens of Allegany County in the event of atomic attack were the subject of a six-hour course given to members of the Allegany County Medical Society. The first three-hour session was held at the regular meeting on September 14 and dealt with medical aspects of atomic warfare and consideration of defenses for civilians.

Bronx County

Officers of the Bronx County Medical Society for this year are as follows: Dr. Abraham B. Tamis, president; Dr. Abraham J. Fleischer, president-elect; Dr. Thomas F. McCarthy, vice-president; Dr. G. B. Gilmore, secretary, and Dr. Charles W. Frank, treasurer. Committee chairmen include: Dr. Joseph Golomb, public health; Dr. James A. Lynch, legislation; Dr. Carl R. Ackerman, medical economics; Dr. George Schwartz, public relations, and Dr. Frederick Wurzbach, board of censors.

Broome County

More than 200 physicians of Broome County attended the first in a series of two training classes for treatment of atomic bomb victims, held September 20 in Binghamton by the Broome County Medical Society and the New York State Department of Health. Dr. Leonard J. Flanagan, president of the County Society, was in charge of the plans for the course.

Cattaraugus County

Officers of the Cattaraugus County Medical Society, chosen at the annual meeting in June, are as follows: Dr. William C. Goodlett, Olean, president; Dr. Thomas C. Gardner, Salamanca, vice-president; Dr. George C. Cash, Olean, secretary, and Dr. Edward R. Mountain, Olean, treasurer.

Cayuga County

An emergency medical service was made available to residents of Caygua County who are unable to reach their own physician, according to plans announced by Dr. A. Chidester, president of the Cayuga County Medical Society. The emergency service is being operated from the switchboard at the Auburn City Hospital.

Chautauqua County

Dr. Donald M. Glover, surgeon at St. Luke's Hospital in Cleveland, Ohio, spoke on "Abnormalities of the Intestinal Tract Existing at Birth" at a meeting of the Chautauqua County Medical Society held in September at the Newton Memorial Hospital, Cassadaga. Dr. Samuel R. Patti of Dunkirk, president of the group, presided at the meeting.

Chemung County

A series of two meetings to study "Medical Aspects of Atomic Explosion" were held by the Chemung County Medical Society on September 20 and September 27 in Elmira. The program was arranged by Dr. F. S. Hassett, chairman of the County Society's committee on graduate medical education, in cooperation with Dr. Milton Tully, Hornell District State health officer.

On November 15, a program of postgraduate instruction, arranged by the State Society Council Committee on Public Health and Education, with the cooperation of the State Department of Health, was presented at the Mark Twain Hotel, Elmira.

Guest speakers included: Dr. Charles L. Steinberg, physician-in-charge, arthritis clinic, Rochester General Hospital, "The Uses of ACTH and Cortisone"; Dr. Chester Southam, Memorial Cancer Center, New York City, "The Treatment of Lymphomatous Diseases"; Dr. Jacob D. Goldstein, associate professor of medicine and bacteriology, University of Rochester School of Medicine and Dentistry, "Radioactive Iodine and Diseases of the Thyroid Gland," and Dr. Francis W. O'Donnell, chief thoracic surgeon, Millard Fillmore Hospital, Buffalo, "Problems in Cardiac Surgery."

Chenango County

Thirty-one of Chenango County's 35 doctors attended afternoon and evening series of lectures on "Medical Aspects of Atomic Explosion" held in September in Norwich. Plans were under the supervision of Dr. William H. T. Crull, Afton, president of the Chenango County Medical Society. The lectures were given by Dr. William Faloon, Dr. Daniel Burdick, Dr. Paul Clark, and Dr. Donald Nouse, all of the Syracuse University College of Medicine.

Columbia County

At the annual meeting of the Columbia County Medical Society, held October 3 in Hudson, the following officers were elected: Dr. Harold Levine, Hudson, president; Dr. Edward Urba, Kinderhook, vice-president, and Dr. Roger C. Bliss, Hudson, secretary-treasurer.

A series of programs of postgraduate instruction, arranged by the State Society's Council Committee on Public Health and Education with the cooperation of the State Department of Health, were held during October and November for the Columbia County Medical Society. These programs included:

October 17—"Management of Acute Vascular Emergencies," Dr. Clarence E. delaChapelle, professor of medicine, New York University Post-Graduate Medical School.

October 24—"The Clinical Aspect of Renal Function in Hypertension and Nephritis," Dr. David P. Earle, Jr., associate professor of medicine, New York University College of Medicine.

October 31—"Prevention of Disease in Old Age," Dr. Frederic D. Zeman, lecturer in medicine, College of Physicians and Surgeons, Columbia University.

November 14—"The Treatment of Chronic Arthritis," Dr. Edward F. Hartung, assistant clinical professor of medicine, New York University Post-Graduate Medical School.

Cortland County

Two programs of postgraduate instruction have been held for the Cortland County Medical Society this fall, arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health. These included:

September 15—"Gynecology in General Practice," Dr. Sydney W. Stringer, clinical instructor in gynecology, Syracuse University College of Medicine.

November 17—"Diabetes Mellitus," Dr. Maynard E. Holmes, clinical professor of medicine, Syracuse University College of Medicine.

Dutchess County

In conjunction with the October meeting of the Dutchess County Medical Society, the annual golf tournament was held, won by Dr. E. Gordon MacKenzie, Society president. Guest speaker at the evening scientific session was Dr. Frank A. Gagan, who spoke on "Recent Trends in Thoracic Surgery."

Under the auspices of the State Department of Health and the State Society, a course in "Medical Aspects of Atomic Explosion" was given for the County Society members on November 8 and November 29 at the Hudson River State Hospital, Poughkeepsie. Dr. Stewart Cosgriff, College of Physicians and Surgeons, Columbia University, was in charge of the lectures.

On November 15, a Cancer Teaching Day was held at the Vassar Brothers Hospital, Poughkeepsie, with Dr. Chester O. Davison, chairman of the County Society cancer committee, and Dr. E. Gordon MacKenzie, president, acting as chairmen for the afternoon and evening sessions, respectively.

Guest speakers included: Dr. Edgar Leonard Frazell, associate attending surgeon, Memorial Hospital, New York City, "Diagnosis and Treatment of Cancer of the Head and Neck"; Dr. William Edward Howes, director, Brooklyn Cancer Institute, "Melanoma—Diagnosis and Treatment"; Dr. Saul B. Gusberg, assistant attending obstetrician and gynecologist, Sloane and Vanderbilt Clinic, New York City, "Diagnosis and Treatment of Early Cervical Cancer"; Dr. Joseph H. Farrow, associate surgeon, Memorial Hospital, New York City. "Use of Hormones in Breast Cancer," and Dr. Harry S. N. Greene, professor of pathology, Yale University School of Medicine, New Haven, Connecticut, "The Biologic Differentiation of Malignant Tissue."

Erie County

Over 600 Erie County physicians enrolled during September for a series of four special training courses in the diagnosis and treatment of atomic bomb casualties held at four Buffalo hospitals: Buffalo General, Sisters', Millard Fillmore, and Mercy Hospitals.

Dr. Stephen A. Graczyk, Society president, announced that Dr. Antonio F. Bellanca, member of the Erie County Health Board and president of the medical staff of Columbus Hospital, had been appointed chairman of the County Society's newly formed special committee to cooperate in military and civilian defense.

On September 13, the Erie County Medical Society, in cooperation with the Western New York Committee for Education on Alcoholism, conducted a public education meeting for the laity on "Problems of Chronic Alcoholism." Dr. Milton G. Potter, Buffalo, president of the Western New York Committee, was moderator, and guest speakers included Dr. C. Nelson Davis, Malvern, Pennsylvania; Dr. Harold W. Lovell, New York City; Dr. Marvin A. Block, Buffalo, and the editor of *Grapevine*, official publication of Alcoholics Anonymous.

The fourth annual clinical program of the Erie County Medical Society was held on October 24 in Buffalo, with afternoon and evening sessions held. Guest speakers and their topics included: Dr. Louis M. Hellman, professor of obstetrics and gynecology, State University Medical Center at New York, "The Role of the Placenta in Pregnancy"; Dr. Paul C. Swenson, professor of radiology, Jefferson Medical College, Philadelphia, Pennsylvania, "Evaluation of Roentgenological Procedures in the Examination of the Gastrointestinal Tract"; Dr. Joseph T. Freeman, Philadelphia, "The Medical Problems of the Elderly"; Dr. John R. Mote, Armour Research Laboratories, Chicago, Illinois, "Recent Advances in the Use of the Newer Hormonal Substances," and Dr. Austin Smith, Chicago, editor, *Journal of the American Medical Association*, "The Horizon for Medicine."

Essex County

At the annual meeting of the Essex County Medical Society, held October 5, the following officers were elected: Dr. F. Clark White, Ray Brook, president; Dr. George G. Hart, Lake Placid, vice-president; Dr. James E. Glavin, Port Henry, secretary-treasurer; Dr. T. R. Cummins, Ticonderoga, delegate to State convention, and Dr. Hart, alternate.

Dr. Robert J. Scott of Port Henry was elected president of the Essex County Branch of the American Cancer Society at a meeting held in Elizabethtown. Dr. George G. Hart, Lake Placid, is second vice-president.

Franklin County

Dr. William A. Gaspar, Malone, was elected president of the Franklin County Medical Society at the annual meeting held in September at Saranac Lake. Other officers chosen, all of whom will take office January 1, include: Dr. Richard Bellaire, Saranac Lake, vice-president; Dr. Daisy H. Van Dyke, Malone, secretary-treasurer, and Dr. A. A. Hartmann, Malone, delegate to the State convention.

On October 25 physicians of Franklin County attended a one-day course on "Medical Aspects of Atomic Explosion" at the Alice Hyde Hospital in Malone. Speakers included Dr. Ralph Reynolds, Albany Medical School; Dr. C. M. Steward, Saranac Lake, and Dr. Edward Sharkey, Albany Medical School.

Fulton County

Two programs of postgraduate instruction, arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health, were held for the Fulton County Medical Society this fall. Guest speakers and their topics were:

September 21—"Surgical Treatment of Biliary Tract Disease," Dr. Frank Glenn, professor of surgery, Cornell University College of Medicine, New York City.

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October 19—"Diagnosis and Treatment of Rheumatic Fever and Rheumatic Heart Disease," Dr. Adolph R. Berger, assistant professor of clinical medicine, New York University College of Medicine, New York City.

Greene County

Dr. Elisha B. Van Deusen, Catskill, was elected president of the Greene County Medical Society at the annual meeting held October 10 in Cairo. Other officers chosen are: Dr. Alfred O. Persons, Lexington, vice-president; Dr. William M. Rapp, Catskill, secretary, and Dr. Mahlon H. Atkinson, Catskill, treasurer. Committee chairmen include Dr. P. G. Waller, New Baltimore, legislation, and Dr. Sol Jarvin, Catskill, public relations and public health.

Guest speaker at the meeting was Dr. Linn J. Boyd, director of medicine, New York Medical College and Flower and Fifth Avenue Hospitals, New York City, who spoke on "Diagnosis and Treatment of Pulmonary Embolism." The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Herkimer County

Dr. Frederic D. Zeman, lecturer in medicine, College of Physicians and Surgeons, Columbia University, presented a paper on "Common Clinical Errors in the Care of the Elderly Patient" at a meeting of the Herkimer County Medical Society held October 10 in Herkimer. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education with the cooperation of the State Department of Health.

Jefferson County

A teaching day on "Medical Aspects of Atomic Explosion" was held at the September 19 meeting of the Jefferson County Medical Society in Watertown, with speakers from the Syracuse University College of Medicine.

At the October 17 meeting, Dr. Clyde L. Randall, University of Buffalo School of Medicine, presented a paper on "The Office Management of Female Pelvic Disorders," and at the November 21 meeting, Dr. Louis Girard, coordinator of the postgraduate ophthalmology program at New York University Post-Graduate Medical School, spoke on "Diagnosis and Treatment of the More Common External Diseases of the Eye." The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Kings County

At a special meeting of the Kings County Medical Society, held September 26 in Brooklyn, Dr. Marcus D. Kogel, commissioner, New York City Department of Hospitals, spoke on "Tentative Plan of Organization, Medical Emergency Division, Office of Civil Defense, New York City," and "Tentative Plan for Evacuation of Casualties."

At the October 17 meeting, Dr. Robert W. Wilkins, associate professor of medicine, Boston University School of Medicine, spoke on "Management of Hypertension."

The Pediatric Section of the Kings County Medical Society met on October 23 to hear a paper by Dr. Meredith F. Campbell, associate urologist, Bellevue Hospital, on "Common Urologic Diseases in Infancy and Childhood."

Lewis County

Officers of the Lewis County Medical Society for 1950–1951 are as follows: Dr. Earle E. Barnes, Jr., Lowville, president; Dr. Gunter Bach, Croghan, vice-president, and Dr. John Myers, Port Leyden, secretary-treasurer.

Livingston County

On October 26 the Livingston County Medical Society, together with its Woman's Auxiliary, met for dinner and an evening program as the guests of Dr. and Mrs. Henry Brill at Craig Colony, Sonyea. Dr. Robert Wise, chairman of medical service of the National Emergency Committee for Livingston County, outlined the part physicians would play in the event of atomic bombing.

It was reported that the County Society and Auxiliary had voted the sum of $400 to cover the expenses of a girl from the county in nurse training. Presiding at the meeting was Dr. Anderson Vickers, Mount Morris, president of the County Society.

Madison County

Dr. Lee S. Preston, Oneida, was re-elected president of the Madison County Medical Society at its annual meeting in October in Oneida. Also re-elected were Dr. Edward G. Hixson, vice-president; Dr. Francis Pfaff, secretary, and Dr. Anthony Zaia, treasurer.

Dr. Lee Hadley, Syracuse, presented a paper on "Certain Conditions Compatible with Low Back Pain and Sciatica."

Nassau County

A diabetes detection drive was conducted by the Nassau County Medical Society during the last week in September, under the chairmanship of Dr. Franklin W. Fry, Hempstead, chairman of the Society's diabetes committee. A simple, self-testing kit was made available at all drug stores in the county, with reports made on a voluntary basis direct to the Medical Society office.

At the regular meeting of the Society on September 26, Dr. I. J. Tartakow, epidemiologist of the Nassau County Health Department, spoke on "Observations on the Epidemiology of Poliomyelitis."

New York County

Two steps to counteract the drive for socialized medicine were inaugurated by the New York County Medical Society in September with the establishment of a twenty-four-hour-a-day emergency medical service and a mediation committee to handle complaints on fees and services. Dr. Kenneth M. Lewis, president of the Society, announced in October that 161 emergency calls had been handled during the first month of the service.

At the regular monthly meeting of the Society, held October 23 at the New York Academy of Medicine, Dr. Lewis gave his inaugural address.

Niagara County

At the meeting of the Niagara County Medical Society on October 10, Mr. Alexander Bradt, district administrator for the Workmen's Compensation Board, spoke on "Operations of the Disability Benefits Law." At the November 14 meeting, Dr. W. W. Scott, professor of urology at the University of

[Continued on page 2866]

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Rochester School of Medicine and Dentistry, spoke on "The Urologic and Psychiatric Aspects of Sexual Impotence," with discussion by Dr. Irving Hyman, assistant professer of neurology, University of Buffalo School of Medicine.

Oneida County

Dr. John F. Kelley, Utica, president of the Oneida County Medical Society, announced the appointment of a medical civil defense committee to work with county authorities on civil defense, with Dr. Hyzer W. Jones and Dr. Gordon A. Holden, both of Utica, as cochairmen. The physicians' committee includes: Drs. C. S. Dickson, Harold E. Katzman, Vito S. Lee, Anthony Panzone, and Abraham L. Shaheen, all of Utica; A. DeWitt Brown, New Hartford; William H. Williams, Whitesboro; David H. Rosendale, Chadwicks; Garnet L. Higgins, Sauquoit; Walter J. Karwoski, New York Mills; Edward D. Dake and Bradford F. Golly, both of Rome; Arthur F. Gaffney, Clinton; Carl L. Ellsworth and Lynn M. MacConnell, both of Waterville; William E. Allison, Camden; Karl T. Sanford and Reams A. Domser, both of Boonville; Herbert N. Wallace, Poland; Albert C. Redmond, Barneveld, and James B. Lawler, Vernon.

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A special program of postgraduate instruction, arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health, will be held for the Utica Academy of Medicine on Thursday, December 21, at the Hotel Utica at 8:00 P.M. Dr. John L. Pool, assistant professor of clinical surgery, Cornell University College of Medicine, will speak on "Cancer Surgery of the Head and Neck."

Onondaga County

A symposium on "Spleen Disease" was presented at the meeting of the Onondaga County Medical Society held October 3 at the University Club, Syracuse, as a program of postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health. Participating in the symposium were Dr. Arthur H. Blakemore, associate professor of clinical surgery, College of Physicians and Surgeons, Columbia University, and Dr. Robert H. Elliott, associate professor of surgery, College of Physicians and Surgeons, Columbia University.

At the November 14 meeting, Dr. Arthur R. Colwell, professor of medicine, Northwestern University, spoke on "Some Problems in the Treatment of Diabetes."

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A program of postgraduate instruction was presented on November 29 for the Allergy Society of Syracuse at the University Hospital. Dr. Carl E. Arbesman, instructor in bacteriology and immunology, University of Buffalo School of Medicine, spoke on "Testing and Newer Therapy in Asthma and Hay Fever."

Ontario County

Dr. Henry S. Abbott, Geneva, was elected president of the Ontario County Medical Society at the annual meeting held October 10 in Canandaigua. Dr. Robert M. Price, Clifton Springs, was named president-elect, and Dr. Carl B. Smith, Victor, was re-elected secretary-treasurer.

At the scientific session, Dr. Bradford Simmons, Canandaigua, presented a paper on "Surgical Treatment of Peptic Ulcer," and Dr. Griffith J. Winthrop, Canandaigua, read a paper on "Quinidine."

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Three programs of postgraduate instruction have been presented this fall for the Geneva Academy of Medicine, arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health. The topics and speakers were:

September 18—"Hypertension and Hypertensive Renal Disease," Dr. Milton Plotz, associate professor of medicine, State University of Medicine, Brooklyn.

October 16—"The Treatment of Pneumonia," Dr. Count Gibson, assistant in medicine, College of Physicians and Surgeons, Columbia University.

November 20—"The Surgical Treatment of Hypertension," Dr. J. William Hinton, professor of clinical surgery, New York University-Bellevue Medical Center.

Orleans County

The Orleans County Medical Society has established a grievance committee to handle dissatisfactions in the medical sphere, Dr. John G. Ellis, Albion, president, has announced. The committee was appointed with the approval of all doctor members of the Society for the purpose of equitably adjudicating any differences which may arise between doctor and patient.

Putnam County

Officers of the Putnam County Medical Society for the year 1950-1951 are as follows: Dr. W. P. Kelly, Jr., Carmel, president; Dr. Ferdinand J. H. Lehr, Carmel, vice-president; Dr. A. Vanderburgh, Brewster, secretary, and Dr. George H. Steacy, Lake Mahopac, treasurer.

Queens County

Dr. B. J. Duffy, Jr., instructor in medicine, University of Rochester School of Medicine and Dentistry, and research associate, University of Rochester Atomic Energy Project, spoke on "Current Developments in the Use of Radioactive Materials for Medical Purposes" at the meeting of the Queens County Medical Society October 31 in Forest Hills. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Also at the meeting Dr. Marcus D. Kogel, New York City hospital commissioner, spoke on "Organization of Medical Emergency Care in Civilian Defense."

Rensselaer County

Dr. Edith H. Quimby, associate professor of radiology, College of Physicians and Surgeons, Columbia University, spoke on "The Use of Radioactive Isotopes for Therapeutic Purposes" at a meeting of the Rensselaer County Medical Society held October 10 in Troy. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

The November meeting was held November 2 at

[Continued on page 2868]

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the Sterling-Winthrop Research Institute in Rensselaer. Speakers were Dr. Frederick C. Nachod, Dr. Aaron Arnold, and Dr. Emery W. Dennis.

Saratoga County

Dr. John R. MacElroy, Jonesville, New York State's outstanding general practitioner for 1949, was elected president of the Saratoga County chapter of the American Academy of General Practice at the organization meeting of the group in September. Other officers chosen are: Dr. Sonya Hoffman, Ballston Spa, vice-president, and Dr. George D. Anderson, Ballston Spa, secretary-treasurer.

Schenectady County

Dr. Donald A. Covalt, clinical director, Institute of Physical Medicine and Rehabilitation, New York University-Bellevue Medical Center, spoke on "Rehabilitation in Medicine with Reference to Specific Problems" at a meeting of the Schenectady County Medical Society held October 3 in Schenectady.

At the November 7 meeting, Dr. Temple Fay, Women's Medical College, Philadelphia, spoke on "Medical Considerations and Classification in Cerebral Palsy."

Schoharie County

Dr. Franz Konta, Richmondville, was elected president of the Schoharie County Medical Society at the annual meeting held October 10 in Cobleskill. Other officers chosen include: Dr. Earl Eaton, Cobleskill, vice-president; Dr. Donald Lyon, Middleburg, secretary, and Dr. Duncan Best, Middleburg, treasurer.

A program of four afternoon sessions of postgraduate instruction, arranged by the State Society's Council Committee on Public Health and Education, in cooperation with the State Department of Health, was held during October and November for the Schoharie County Medical Society.

The topics and speakers were as follows:

October 24—"Recent Advances in Pediatric Therapy," Dr. T. Campbell Goodwin, assistant clinical professor of pediatrics, College of Physicians and Surgeons, Columbia University.

October 31—"The Clinical Use of ACTH and Cortisone," Dr. Joseph W. Ferrebee, associate clinical professor of medicine, College of Physicians and Surgeons, Columbia University.

November 14—"Hormone Therapy in Obstetrics and Gynecology," Dr. Olaf J. Severud, Mary Imogene Bassett Hospital, Cooperstown.

November 21—"Avoiding and Preventing Malpractice Suits," Mr. William F. Martin, New York City, counsel, Medical Society of the State of New York.

Steuben County

Dr. Milton G. Potter, Buffalo, chairman of the Committee on Problems of Alcoholism of the Medical Society of the State of New York, spoke on "Alcoholism" at a meeting of the Steuben County Medical Society held November 9 in Hornell. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Suffolk County

A symposium on "Allergy" was presented at the meeting of the Suffolk County Medical Society held October 25 in Central Islip. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Speakers and their topics included: "Asthma," Dr. James H. Barnard, attending physician, Allergic Clinic, Roosevelt Hospital, New York City; "Pediatric Allergy," Dr. Robert Chobot, assistant professor of pediatrics, New York University Post-Graduate Medical School, and "Allergic Manifestations in Skin Disease," Dr. Anthony C. Cipollaro, assistant professor of dermatology, Cornell University Medical College.

Sullivan County

Dr. James J. Smith, instructor in medicine, New York University College of Medicine, spoke on "Alcoholism as a Medical Problem," at a meeting of the Sullivan County Medical Society held September 13 in Monticello. At the November 15 meeting, Dr. Charles W. Lloyd, department of obstetrics, State University of New York Medical Center, Syracuse University, spoke on "Endocrine Disturbances and Treatment." Both programs were postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Ulster County

Dr. Thomas I. Hoen, professor of neurology and neurosurgery, New York Medical College and Flower and Fifth Avenue Hospitals, New York City, spoke on "Peripheral Nerve Surgery" at the meeting of the Ulster County Medical Society held October 10 in Port Ewen. The program was postgraduate instruction arranged by the State Society's Council Committee on Public Health and Education in cooperation with the State Department of Health.

Warren County

Dr. Arthur C. Davis, Glens Falls, was elected president of the Warren County Medical Society at the annual meeting October 12 in Glens Falls. Other officers chosen include: Dr. Earl Carroll, vice-president; Dr. Robert E. Boyle, secretary, and Dr. Charles R. Barber, treasurer.

Washington County

Dr. Leo A. Thume, Fort Ann, was elected president of the Washington County Medical Society at the annual meeting October 10 in Hudson Falls. Other officers chosen are: Dr. Philip Harff, Cambridge, vice-president; Dr. D. M. Vickers, Cambridge, secretary, and Dr. Charles A. Prescott, Hudson Falls, treasurer.

At the scientific session, Dr. G. Gowing Broad, assistant proctologist, Syracuse Memorial Hospital, spoke on "Proctology."

Westchester County

At the September meeting of the Westchester County Medical Society, Dr. Frank H. Lahey, of the Lahey Clinic, Boston, Massachusetts, spoke on "Differential Diagnosis of Tumors of the Neck," and on October 17 Dr. Sol Sherry, assistant professor of medicine, New York University College of Medicine, spoke on "Therapeutic Applications of Streptococcal Enzymes."

In September the Society established a twenty-four-hour-a-day emergency medical service for the residents of Westchester County.

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TO THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

State Executive Board Holds Midwinter Meeting

WITH the conference theme, "Be Prepared," the executive board of the Woman's Auxiliary to the Medical Society of the State of New York met in Rochester on November 9 and 10 for the annual midwinter session. In addition to officers and State committee chairmen, presidents and presidents-elect of the county auxiliaries were present.

Mrs. Hugh G. Henry, president of the State Auxiliary, presided at the meeting at which reports were presented by chairmen and presidents, as follows: 1950 Auxiliary convention, Mrs. William J. Lavelle; 1950 national conference, Mrs. Harold B. Johnson; president's report, Mrs. Henry; archives, Mrs. William Bartels; 1951 convention, Mrs. Charles Borzilleri, Jr.; *Distaff*, Mrs. Adolph H. Emerson; endorsements, Mrs. Lavelle; finance, Mrs. John J. Goller; historian, Mrs. Louis R. Ferraro; legislation, Mrs. John B. Horner; national bulletin, Mrs. Milton W. Kogan; organization, Mrs. Michael M. Schultz; parliamentarian, Mrs. Harry F. Pohlmann; Physicians' Home, Mrs. George P. Bergmann.

Also: press and publicity, Mrs. Albert M. Biglan; printing and supplies, Mrs. Walter A. Schmitz; program, Mrs. Reginald A. Higgons; public relations, Mrs. Harry I. Norton; revisions, Mrs. Luther H. Kice; *Today's Health*, Mrs. Edwin A. Griffin; midyear meeting, Mrs. J. Fletcher McAmmond; clippings, Mrs. Thomas E. Bullard, and voluntary medical plans, Mrs. Alfred L. Madden.

At the conference dinner on November 9 at the Hotel Seneca, guest speakers were Dr. George James, assistant director, Division of Medical Services, New York State Department of Health, on "What the Doctor's Wife Should Know About Medical Defense," and Mr. Thomas A. Hendricks, secretary, Council on Medical Service, American Medical Association, on "The Role of a Doctor's Wife Today." Mrs. Henry presided at the banquet and introduced the guest speakers.

Members of the convention planning committee included: Mrs. Harry I. Norton, president, Monroe County Auxiliary, hostess county; Mrs. J. Fletcher McAmmond, convention chairman; Mrs. James W. Thomson, arrangements; Mrs. John J. Finnigan, registration; Mrs. Harold C. Bonner, decorations; Mrs. Joseph A. Lane, music; Mrs. George Dacks, nursing exhibit, and Mrs. Jacob Epstein and Mrs. John R. Williams, Jr., publicity.

Additional County Auxiliary Officers

To complete the list of officers of the county auxiliaries serving this year, in addition to those listed in the September 1, 1950 issue of the JOURNAL, the following have been reported:

Broome County

Mrs. William E. Low, president; Mrs. Mark Welch, vice-president; Mrs. J. Worden Kane, treasurer; Mrs. Ben Matthews, recording secretary; Mrs. Harry Levy, corresponding secretary; Mrs. G. Robert Murray, hospitality; Mrs. Robert Smith, legislation; Mrs. Leonard Flannagan, publicity; Mrs. Charles Squires, membership; Mrs. Frank D. Baston, nurse loan fund; Mrs. Alfred Lowenstein, historian; Mrs. Donald Stack, sunshine; Mrs. John A. Kalb, *Today's Health*, and Mrs. Robert Bogdasarian, Mrs. Kalb, and Mrs. Harold McNitt, directors.

Cayuga County

Mrs. S. J. Karpenski, president; Mrs. Herbert Jones, first vice-president; Mrs. Egan Fisher, second vice-president; Mrs. Robert McManus, corresponding secretary; Mrs. Ralph Getty, recording secretary; Mrs. W. E. Black, treasurer; Mrs. George Sincerbeaux, historian; Mrs. E. S. Platt, legislation; Mrs. L. H. Rothschild, membership; Mrs. William Havill, press and publicity; Mrs. David Hammond, program; Mrs. Marshall Louis, public relations.

Chenango County

Mrs. James M. Flanagan, president; Mrs. Lynn Wilson, vice-president; Mrs. John Hollis, secretary; Mrs. L. Eugene Daily, treasurer.

Queens County

Mrs. Frank Lo Presto, president; Mrs. William Cashion, president-elect; Mrs. Gustin Kiffney, vice-president; Mrs. John Scannell, recording secretary; Mrs. John Finnegan, treasurer; Mrs. William Flanagan, assistant treasurer; Mrs. Sol Axelrad, corresponding secretary; Mrs. Harry Secky, historian.

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[1] Long, C-F.: A Controlled Industrial Study of an Analgesic Compound, Edrisal with Codeine, Indust. Med. *19*:446 (September) 1950.

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BOOKS

REVIEWED

A Candle in Her Hand. A Story of the Nursing Schools of Bellevue Hospital. By Dorothy Giles. Duodecimo of 240 pages, illustrated. New York, G. P. Putnam's Sons, 1949. Cloth, $4.00.

This volume of 220 pages is a fitting sequel to *The Bellevue Story*, which appeared in 1948. Here we have described in detail the development of the first large and well-recognized School of Nursing. What an unpleasant story is that of the indifference of the local government and also, to a less degree, of the medical profession of that day, to the complete lack of competent nursing, until members of a lay board of prominent women through their tireless labor brought "progress out of a marshland of corrupt politics and parsimonious public practice."

It is a most interesting and instructive story and includes many facts of the early history of New York City as they relate to health and sanitation. For many years the Bellevue Hospital Training School for Nurses supplied from its graduates the personnel to fill important executive positions in newly established schools throughout the country.

Though it is primarily of interest to doctors and nurses, the lay reader will find much to learn and admire in this small well-written volume.

S. R. Blatteis

Handbook of Digestive Diseases. By John L. Kantor, M.D., and Anthony M. Kasich, M.D. Second edition. Octavo of 658 pages, illustrated. St. Louis, C. V. Mosby Co., 1949. Cloth, $11.

This second edition of the former *Synopsis of Digestive Diseases* by the late Dr. John L. Kantor has been completely rewritten by Dr. Kasich. The latter author did not intend to write an exhaustive treatise. However, he has succeeded admirably in writing a fine compact book on gastrointestinal diseases.

Some of the many additional valuable features of the *Handbook* warrant comment. The important relationship of gastroenterology and internal medicine as well as the application of physiologic principles is stressed throughout. The numerous tables, charts, roentgenograms, and explanatory line drawings are concise and informative. Brief but well-written chapters by contributing authors discuss the subject of psychiatric and allergic aspects of digestive diseases. In the chapter entitled "Diagnostic Methods," a discussion of gastroscopy with modern flexible instruments and cytologic examination of gastroduodenal secretions might serve a useful purpose.

This volume is highly recommended for its concise and excellent presentation.

Milton J. Matzner

The Physiological Basis of Medical Practice. A Text in Applied Physiology. By Charles Herbert Best, M.D., and Norman Burke Taylor, M.D. Fifth edition. Quarto of 1,330 pages, illustrated. Baltimore, Williams & Wilkins Co., 1950. Cloth, $11.

The fifth edition of this standard physiology textbook is divided into sections on the blood and lymph, circulation of the blood, respiration, excretion of urine, digestion, metabolism and nutrition, ductless glands, the nervous system, and special senses. It is replete with illustrative diagrams and has an excellent bibliography. Experimental material in all fields has been brought up to the date of writing. Revisions of clinical concepts as applied to medical practice are well discussed. The easily readable style of the previous editions has been maintained.

This text is enthusiastically recommended as a valuable addition to the library of every medical student and clinician. LEON M. LEVITT

The Medical Clinics of North America. Chicago Number. January, 1950. Octavo. Philadelphia, W. B. Saunders Co., 1950. Published bimonthly (six numbers a year). Cloth, $18, net; Paper, $15, net.

Under the able editorship of Dr. John A. Bigler of Northwestern University Medical School, the publishers have attempted, and in fact succeeded in producing a short volume which includes a synopsis of the important facts of recent advances in twenty-one pediatric subjects. Each article is written by an eminent authority in the special field discussed so that the reader obtains the latest word on the subject.

The articles have been written with a view toward bringing the general practitioner up to the minute, since it now is generally recognized that he takes care of the majority of the children throughout the nation. The subjects are covered in a lucid, pleasant style, and enough of the scientific background has been included to interest but not enough to bore a busy practitioner. KENNETH G. JENNINGS

Must We Hide? By R. E. Lapp, Ph.D. Octavo of 182 pages, illustrated. Boston, Addison-Wesley Press, 1949. Cloth, $3.00.

This book summarizes briefly the essential facts concerning atomic bombs. Although it is not devoted to medical problems, there are sufficient data and illustrations to make it interesting reading for physicians. A. E. SHIPLEY

Physiology of the Eye. Vol. 1. Optics. By Arthur Linksz, M.D. Quarto of 334 pages, illustrated. New York, Grune & Stratton, 1950. Cloth, $7.50.

This volume constitutes the first of three works, the second to be on physiology of vision and the third to be on biochemistry of the eye.

Your reviewer has not only enjoyed and profited by this fine contribution but also took particular pleasure in the mode of presentation. As Dr. Lancaster says in his introduction, the illustrations and material are particularly fine and, if anyone finds errors in statements, he will more than likely find out that he is the one in error, not Dr. Linksz. Your reviewer was pleased with Chapter 17, a subject in which he has been interested for many years.

The three volumes, when finally published, will probably remain as classic texts and will doubtless replace any books now in use. The only suggestion that seems reasonable is that Dr. Linksz elaborate on the history and studies of refractive errors. He has omitted reference to the work of Tron and to that of Brown and Donders. The progress made by such early workers as Cohen and Randall may not have advanced our present theories, but at least they did maintain an interest in the statistical mode of study. The work of Stenstrom, on which Dr. Linksz has placed so much stress, did not include the period of infancy and childhood, and, in fact, his age groups were quite limited in some decades.

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ROLE OF PSYCHIATRY IN MEDICINE

To the Editor:

It is interesting that, in this age when psychiatry has been so much sold—and in some quarters oversold—to the general public, there still are many physicians who fail to understand its role in medicine and to accept it as a real specialty.

One large organization providing medical service to its subscribers admits not only general practitioners as participants in its plan, but also surgeons, oculists, dermatologists, etc. However, if a psychiatrist's services are used, it never covers them financially, implying that they are not recognized as of value to that association. Its director of medical services explained to this correspondent that a mental specialist's service may be available to "our doctors of medicine (as if the psychiatrist is not one of them) if they elect to refer a case for an opinion as to whether or not a patient's disturbance is due to a *functional* (sic) mental disorder."

I submit that this is an old-fashioned, nowadays unscientific expression, and I am convinced that most psychiatrists will agree with me. Mental disorders are, both in their advanced and lighter forms, *positive* conditions, like the physical diseases, whether or not they accompany the latter, whether they are the effects or the causes of them, or whether they are independent entities. No diagnosis of any mental trouble should ever be made by elimination only, that is, as a conclusion from the fact that no other is possible.

So many people suffer from mental abnormalities that it is unthinkable that a great number of the patients of the medical service in question should not be affected by them. Those problems may, of course, be overlooked by a physician untrained to discover them, and therefore his treatment in such cases is bound to be faulty and unsuccessful. Just as it takes an otologist to know something about diseases of the ear, an ophthalmologist to treat eye diseases, or a surgeon to perform a major operation, so only a good psychiatrist can diagnose and treat mental diseases properly or adjust the unadjusted to life and its difficulties. Undoubtedly those patients of the above-mentioned organization who are troubled by mind pathology need psychiatrists, no matter whether or not the general practitioners or other specialists are aware of it.

B. Liber, M.D.

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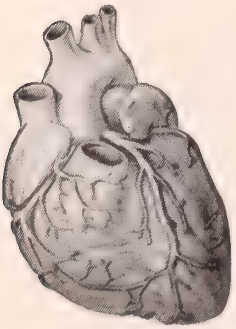
Rosenman, R. H., et al.: J.A.M.A. 143:160	"Of 14 patients with angina pectoris treated with [Eskel] . . . a good response was obtained in 11, moderate improvement in 1 and no effect in 2."
Osher, H. L., and Katz, K. H.: Boston M. Quart. 1:11	"[Eskel] therapy produced definite subjective and objective improvement in 84% of 19 patients with angina pectoris."



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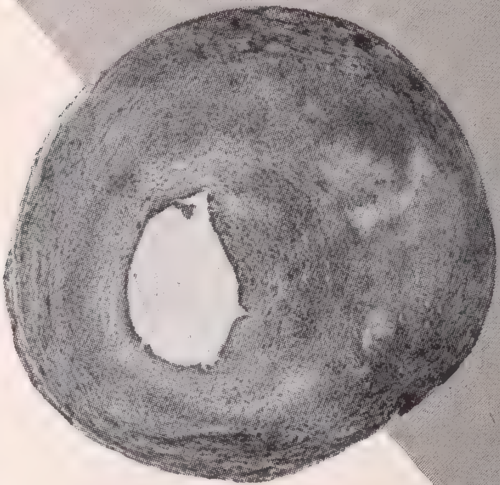

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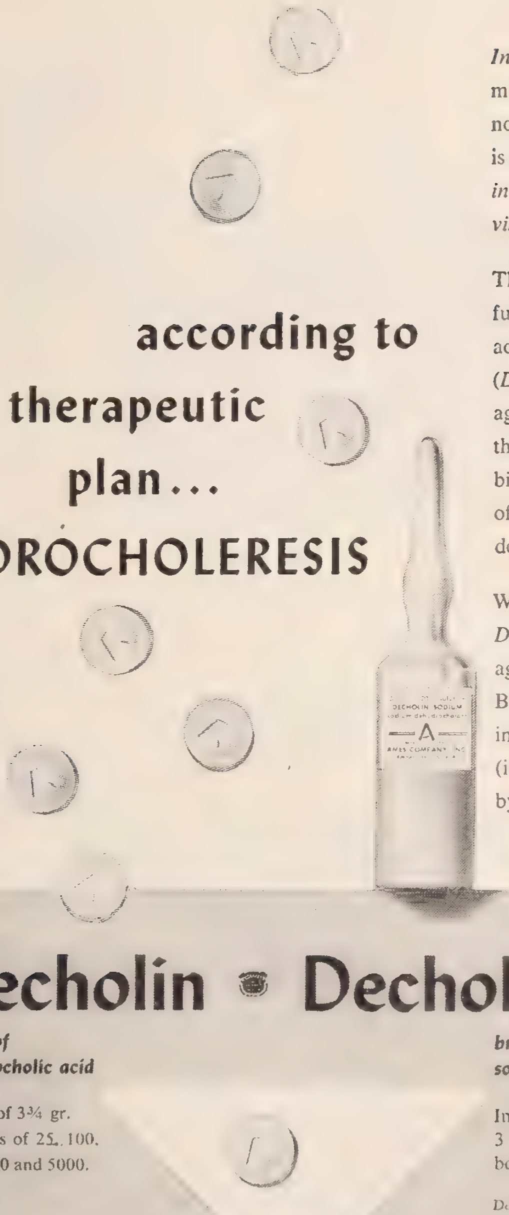

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*Shelmire, B, *Postgrad. Med.*, 4:443, 1948.

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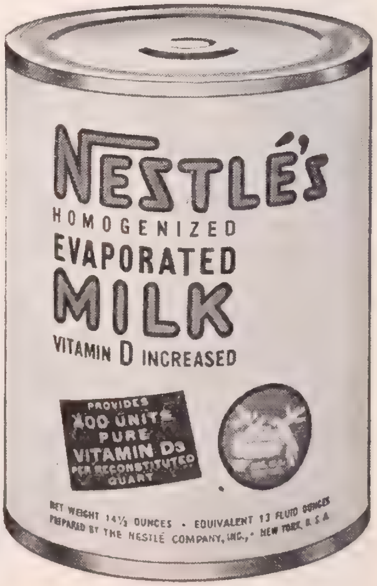
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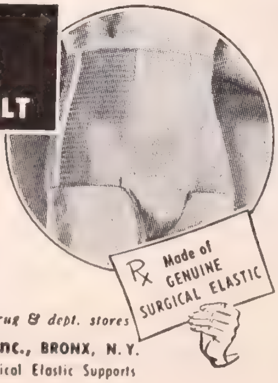

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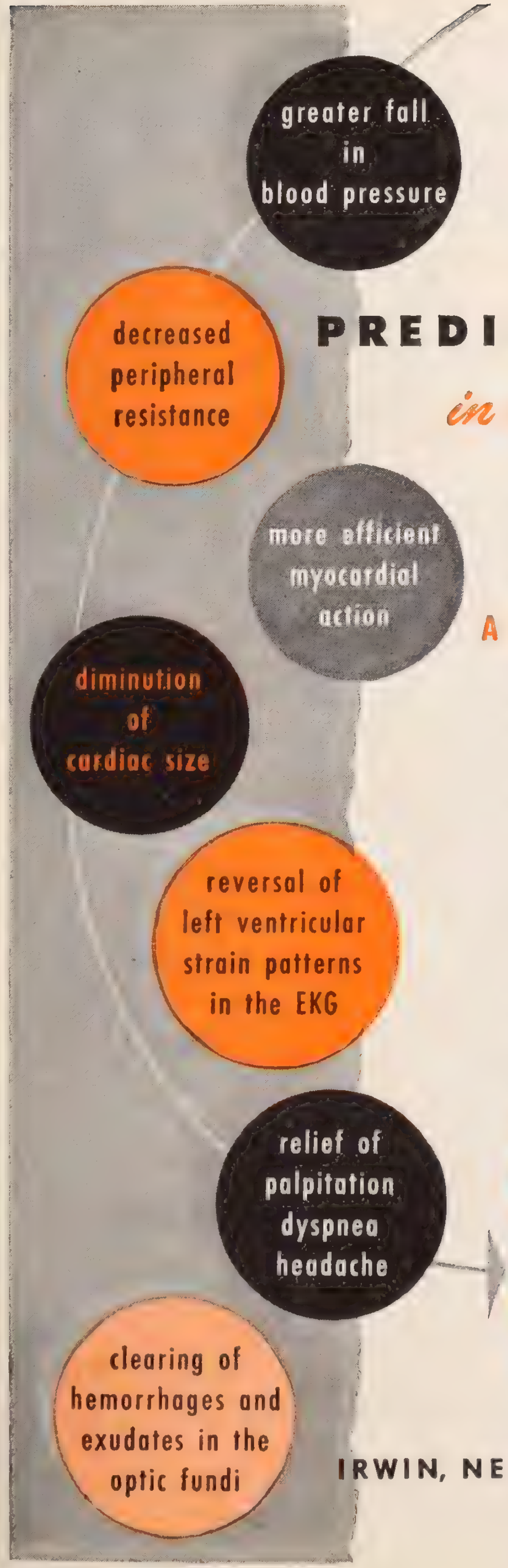
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for severe, resistant hypertension

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Prescription: Feosol Plus

"A reconstructive tonic"

For those ill-defined secondary anemias—of convalescence, adolescence, pregnancy, etc.—where more than just iron is needed, Feosol Plus is the *logical therapy*. Feosol Plus corrects not only the iron deficiency but also other metabolic deficiencies which may co-exist.

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Feosol Plus by no means replaces 'Feosol'—the standard therapy in simple iron-deficiency anemias.

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Hamblen, E. C.: North Carolina M. J. 7:533 (Oct.) 1946.

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*Perloff, W. H.: Am. J. Obst. & Gynec. 58: 684 (Oct.) 1949.

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1. Editorial: J.A.M.A. 141: 392 (1949).
2. Hueper, W. C.: M. Clin. North America 33: 773 (1949).

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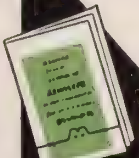

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. . . but the patient too seldom appreciates

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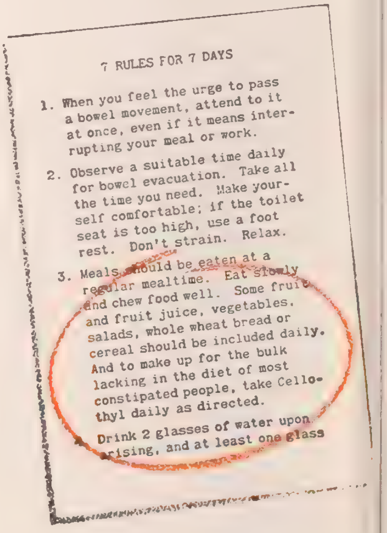
An aid to patient-education:

Proper food, properly eaten at regular mealtimes, is one of the "7 Rules for 7 Days," clearly outlined in a simple leaflet designed for better patient-understanding, to overcome the "improper habits of living and eating . . . which either singly or combined" cause constipation.[1]



7 RULES FOR 7 DAYS

1. When you feel the urge to pass
a bowel movement, attend to it
at once, even if it means inter-
rupting your meal or work.

2. Observe a suitable time daily
for bowel evacuation. Take all
the time you need. Make your-
self comfortable; if the toilet
seat is too high, use a foot
rest. Don't strain. Relax.

3. Meals should be eaten at a
regular mealtime. Eat slowly
and chew food well. Some fruit
and fruit juice, vegetables,
salads, whole wheat bread or
cereal should be included daily.
And to make up for the bulk
lacking in the diet of most
constipated people, take Cello-
thyl daily as directed.

Drink 2 glasses of water upon
rising, and at least one glass

Available to physicians: Pads of the "7 Rules" may be had on request. Simply write "7 Rules" on a prescription blank and send to Chilcott Laboratories, Morris Plains, New Jersey.

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In 80 to 92% of patients in private practice[2,3] constipation was corrected when Cellothyl was used in the anticonstipation regimen. Even in obstinate clinic-treated cases,[1] it was found that years of constipation can be corrected in days with Cellothyl.

Because the usual program of diet-and-instruction per se often fails to change deeply ingrained habits, these investigators made *physiologic correction* with Cellothyl an integral part of their regimens. A simple program such as the following should produce "good" or "excellent" results in the majority of patients.

1. "The simple rules of bowel hygiene"[3] are explained and effort is directed against contributory causes[1-3]—faulty diet, cathartic abuse, etc. As a daily reminder of your advice, you may want to give the patient a copy of the leaflet, "7 Rules for 7 Days," which is available on request.

2. Cellothyl (physiologically correct colloid) is prescribed, 3 tablets t.i.d., each dose with a full glass of water to assure proper hydrophilic action.

3. The patient is told not to expect results in a few hours. He must give his bowels a chance to return to normal. And because Cellothyl acts in an unhurried physiologic manner, adequate time must be allowed for it to reach the colon and rectum before the first normal well-formed stool results.

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Cellothyl is physiologically correct. Following the normal digestive gradient, it passes through the stomach and small intestine in a fluid state, then thickens to a smooth gel in the colon to provide bulk where bulk is needed for soft, moist, easily passed stools.

The presence of sufficient physiologically correct bulk stimulates intestinal motility and mass reflex so that the patient may "in the course of a few days . . . be able to resume more normal bowel habits."[4]

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Cellothyl Tablets (0.5 Gram) in bottles of 50, 100, 500 and 5000
Cellothyl Granules, for pediatric use, in bottles of 25 and 100 Grams.

Are you using the "7 Rules" for constipation correction?

1. Bargen, J. A.: Gastroenterology *13*:275, 1949.
2. Musick, V. H.: J. Oklahoma M. A. *43*:360, 1950.
3. Schweig, K.: New York State J. Med. *48*:1822, 1948.
4. Council on Pharmacy and Chemistry: J.A.M.A. *143*:897, 1950.

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Among the conditions in which Cortone has produced striking clinical improvement are:

- **RHEUMATOID ARTHRITIS** and Related Rheumatic Diseases
- **ACUTE RHEUMATIC FEVER**
- **ALLERGIC DISORDERS,** including Bronchial Asthma (Status Asthmaticus)
- **INFLAMMATORY EYE DISEASES**
- **SKIN DISORDERS,** notably Angioneurotic Edema, Atopic Dermatitis, Exfoliative Dermatitis, including Cases Secondary to Drug Reactions, and Pemphigus
- **LUPUS ERYTHEMATOSUS** (Early)
- **ADDISON'S DISEASE**

**CORTONE is the registered trade-mark of Merck & Co., Inc. for its brand of cortisone.*

MERCK

MERCK & CO., INC.
Manufacturing Chemists
RAHWAY, NEW JERSEY

will reduction of serum cholesterol extend life?

by preventing atherosclerosis

"It is generally accepted that persistently high plasma cholesterol levels are associated with development of arteriosclerosis,"[1] a major cause of coronary thrombosis fatalities[2] and a "burning problem" in diabetes.[3]

Accumulating evidence shows that lipotropic therapy will reduce elevated blood cholesterol levels[4-7]. . . and even may "prevent or mitigate" cholesterol depositions in the intima of blood vessels in man and animals.

It has been reported[8] that in patients who have survived acute coronary occlusion, lipotropic therapy may significantly prolong life as compared to similar untreated groups.

now contains added lipotropic vitamin B_{12}

methischol capsules syrup

for complete lipotropic therapy

suggested daily therapeutic dose of 9 capsules or 3 tablespoonfuls provides:	
Choline Dihydrogen Citrate	2.5 Gm.*
dl-Methionine	1.0 Gm.
Inositol	0.75 Gm.
Vitamin B_{12}	9 mcg.
Liver fractions from . . 36 Gm. liver	
*present in Methischol Syrup as 1.15 Gm. choline chloride.	

400% more cholesterol in coronary arteries in fatal thrombosis

"The average cholesterol content of the coronary arteries in a group of patients who died from acute coronary artery thrombosis was four times as great as the average cholesterol content of the coronary arteries in a comparable group of control patients."[2]

Write for samples and literature

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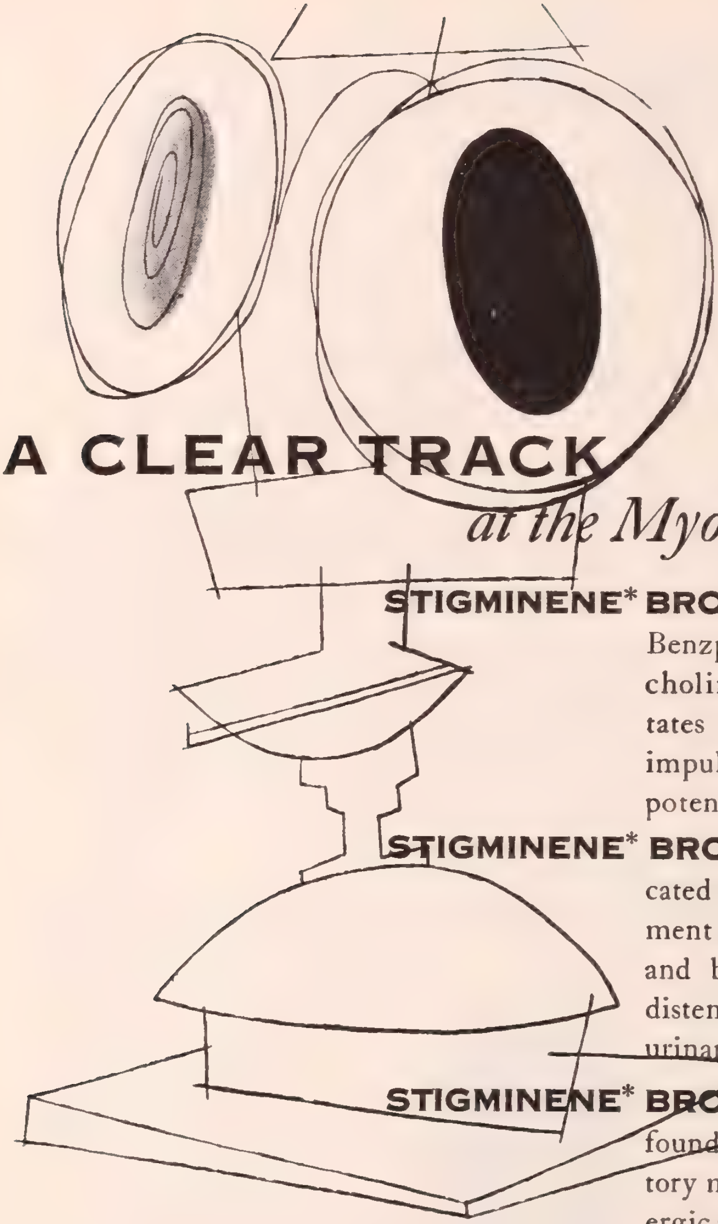
8. Morrison, L. and Gonzalez, W. F.: Amer. Heart J. 38:471, Sept. 1949.

u. s. vitamin corporation
casimir funk laboratories, inc. (affiliate)
250 E. 43rd St. • New York 17, N. Y.



A CLEAR TRACK *at the Myoneural junction*

STIGMINENE* BROMIDE *'Warner,'* Brand of Benzpyrinium Bromide, a new cholinergic compound, facilitates the transmission of nerve impulses, thus improving and potentiating muscle tone.

STIGMINENE* BROMIDE *'Warner'* is indicated in the prevention or treatment of postoperative intestinal and bladder atony, abdominal distention, paralytic ileus, and urinary retention.

STIGMINENE* BROMIDE *'Warner'* will be found an adequate and satisfactory means for providing cholinergic action in the experimental therapy of myasthenia gravis and other disorders in which experimental cholinergic therapy is deemed advisable.

PACKAGE INFORMATION: Stigminene* Bromide is available in 1-cc ampuls of a 1:2000 solution, 0.5 mg each, for intramuscular or subcutaneous injection, cartons of 12 and 50 ampuls.

WILLIAM R. WARNER
Division of Warner-Hudnut, Inc.
New York • Los Angeles • St. Louis

*Trade Mark

to make the common cold *less common*

CORICIDIN*

(antihistaminic—antipyretic—analgesic)

with* Chlor-*Trimeton*

antihistaminic therapy

- . . . prevents or aborts colds in 90% of cases when initiated within the first hour of symptoms.[1]
- . . . shortens duration and decreases severity of an established cold.[1, 2]
- . . . reduces the spread of infection to others by eliminating sneezing, lacrimation, rhinorrhea and coughing.[1]

DOSAGE AND TIMING: Two Coricidin tablets at the very first indication of a cold, then one tablet every three or four hours for three or four days. In established colds, one tablet every three or four hours for palliative effect.

COMPOSITION: Chlor-*Trimeton* 2.0 mg. (1/30 gr.) with Acetylsalicylic acid 0.23 Gm. (3½ gr.), Acetophenetidin 0.15 Gm. (2½ gr.) and Caffeine 0.03 Gm. (½ gr.).

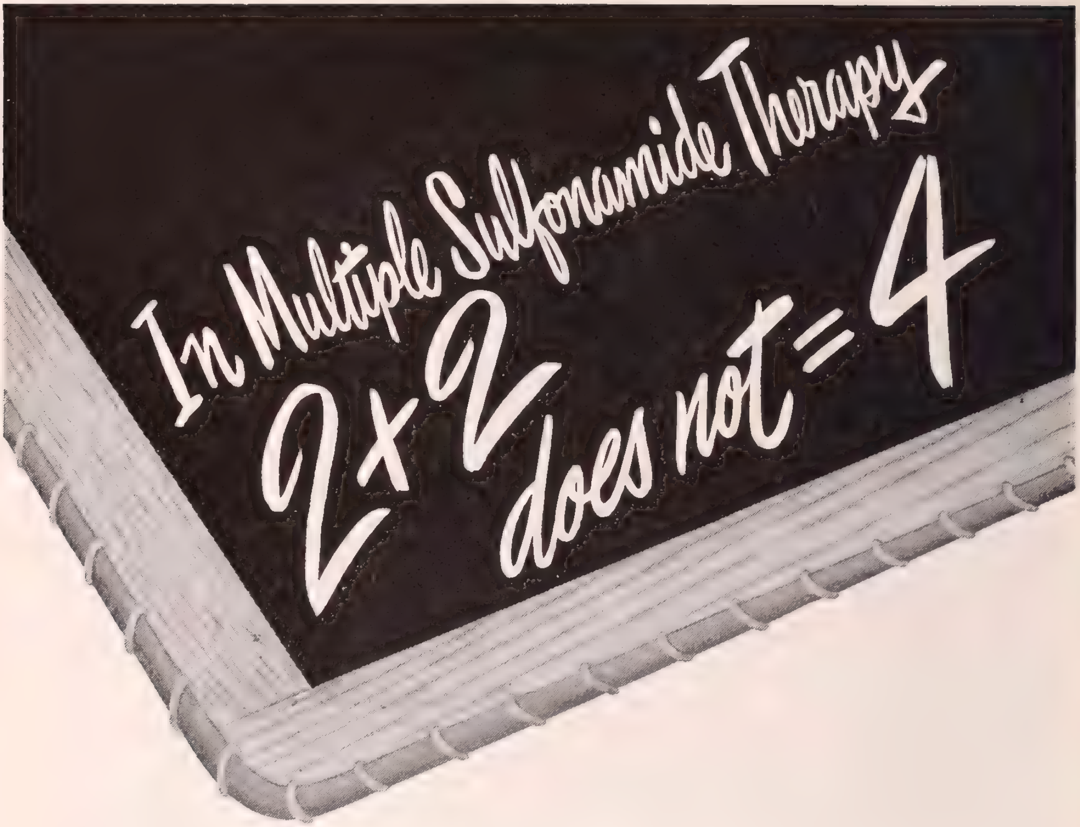
PACKAGING: Coricidin tablets, tubes of 12; bottles of 100 and 1000.

BIBLIOGRAPHY:

1. Brewster, J. M.: U. S. Nav. M. Bull. *49*:1, 1949.
2. Murray, H. G.: Indust. Med. *18*:215, 1949.

*T.M.

Schering CORPORATION
BLOOMFIELD, N. J.



Therapeutic action is additive, but the total urinary solubility of two sulfonamides is significantly greater than that of either alone.

Aldiazol-M, a dual sulfonamide, contains both sulfadiazine and sulfamerazine in microcrystalline form, and the alkalizing salt, sodium citrate. Aldiazol-M increases the field of useful application of sulfonamide therapy because:

Blood levels are produced more rapidly. The microcrystalline form of the sulfa drugs is absorbed more quickly, leading to higher initial levels.

Hazard of renal complications is reduced. Because of the greater solubility of dual sulfonamide mixture, urinary precipitation is prevented, virtually eliminating crystalluria.

Greater therapeutic efficacy is obtained. Aldiazol-M can be given safely in adequate dosage, and effective blood levels maintained in adults on a dosage of 2 teaspoonfuls every four hours.

Widely indicated. Aldiazol-M is indicated whenever the specific actions of sulfadiazine and sulfamerazine are required. It is valuable not only in adults, but also in the treatment of many infectious diseases in children.

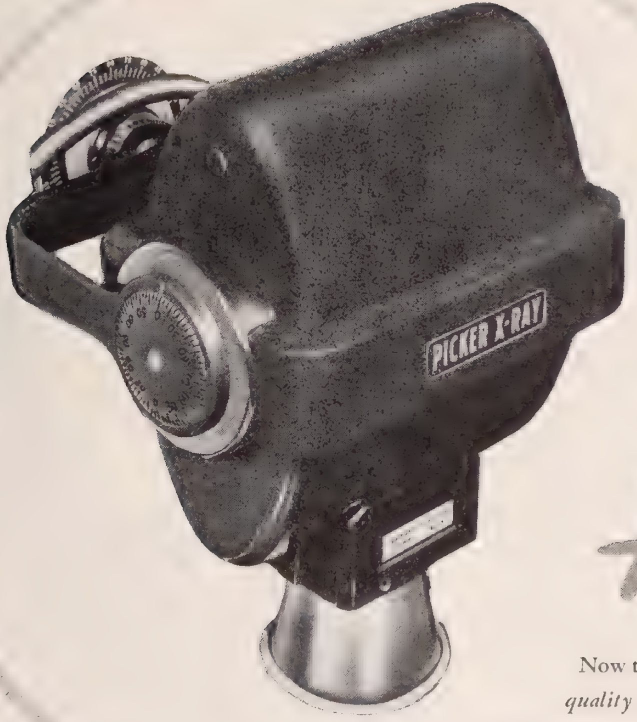
Aldiazol-M is available on prescription through all pharmacies. Write for literature.

THE S. E. MASSENGILL COMPANY
Bristol, Tenn.-Va.
NEW YORK • SAN FRANCISCO • KANSAS CITY

Each teaspoonful (5 cc.) of Aldiazol-M provides:

Sulfadiazine (microcrystalline)	0.25 Gm.
Sulfamerazine (microcrystalline)	0.25 Gm.
Sodium Citrate	1.0 Gm.

Aldiazol-M



the "Meteor" has a new *powerhead*

Now the Picker 15 MA "Meteor"—the versatile *quality* x-ray unit in the low-priced field, comes with a newly designed, self-contained x-ray tubehead *at no increase in price.*

This power-packed new head gives you greater radiographic speed, particularly for heavy body parts. It's sleek and compact—easier to position, easier to handle. The radiographic detail with its 2.0 mm. focal spot is comparable to that of far more costly units. And you can use the new "Meteor" on your ordinary house current—it draws only 15 amperes. Now, more than ever, the pedigreed Picker "Meteor" offers peak value in low-priced x-ray units. For the story, call in your local Picker representative, or write us—

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the Picker "Meteor"
combination x-ray apparatus

15 MA "Meteor" $1495.
60 MA "Meteor" 1995.

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There are Picker Service Depots and Sales Offices in principal cities of the U.S. and Canada: all alertly at your service in providing x-ray apparatus, accessories, and supplies.

HIGHER NEW ANTIRHEUMATIC THERAPY *SALICYLATE LEVELS* VITAMIN C PROTECTION

Pabasyl Tablets represent a new concept in antirheumatic therapy with the salicylates. Each enteric-coated tablet supplies:

Para-Aminobenzoic Acid*	0.3 Gm. (5 grains)
Sodium Salicylate	0.3 Gm. (5 grains)
Ascorbic Acid	0.01 Gm. (10 mg.)

Pabasyl Tablets afford rapid relief of pain, fever and inflammation in many rheumatic diseases because they provide:

1. **HIGHER** Salicylate Levels — With simultaneous administration, Paba and salicylates have a reciprocal action that increases salicylate concentration in the blood.

2. **LOWER** Salicylate Dosage — Paba not only boosts the salicylate level attainable with a given salicylate dose but also in itself contributes analgesic and antipyretic actions.

3. **Vitamin C Protection** — Ascorbic acid maintains Vitamin C levels often depleted by fever and salicylate therapy.

Enteric coating allays gastric irritation.

**As the Sodium Salt.*

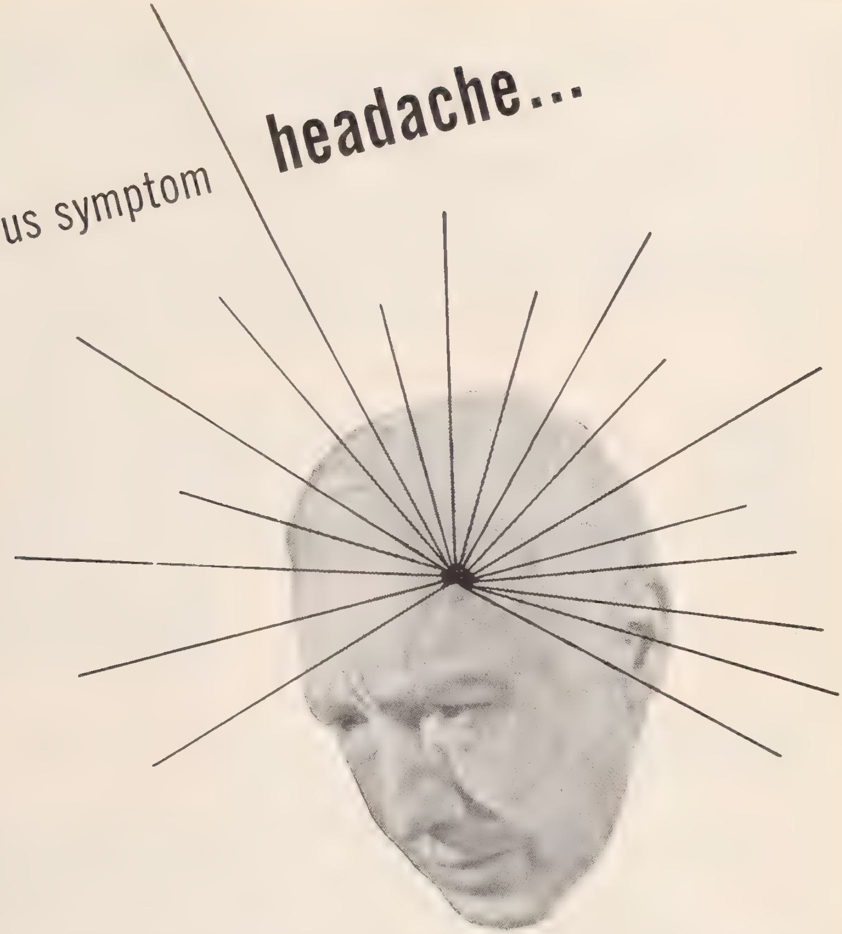
pabasyl

In Bottles of 100 Tablets

Dosage adult: 2 tablets three times a day.

IVC®

IVES-CAMERON COMPANY, INC.
22 EAST 40th STREET, NEW YORK 16, N. Y.



"The ubiquitous symptom **headache...**

. . . is probably the most common ailment to which we all are heir"*

Edrisal's dual action represents a new approach to the treatment of pain. In addition to relieving the pain of headache, 'Edrisal' relieves the depression that so often intensifies the perception of pain. You can assure your patient who is more than ordinarily prone to headaches the benefit of this dual action by prescribing an adequate supply of 'Edrisal' now.

Smith, Kline & French Laboratories, Philadelphia

Edrisal

Each tablet contains:

'Benzedrine' Sulfate, N.N.R.	2.5 mg.
(racemic amphetamine sulfate, S.K.F.)	
Acetylsalicylic acid	2.5 gr.
Phenacetin	2.5 gr.

a new approach to the treatment of pain

'Edrisal' & 'Benzedrine' T.M. Reg. U.S. Pat. Off.

*Minish, L.T., Jr.: Headache, Kentucky M.J. 48:66 (Feb.) 1950

*Intermediate Acting**

GLOBIN INSULIN

'B.W.& CO.'

**Clinical Evidence:—*

"...it was found that the characteristic activity of globin insulin and 2:1 mixture (of protamine zinc and regular) insulin is essentially the same."[1]

"Not often do either globin insulin or a 2:1 mixture require supplementary use of regular insulin. Fully 80% of all severe diabetics can be balanced satisfactorily with one of them."[2]

[1] *Reeb, B. B., Rohr, J. R., and Colwell, A. R.: Proc. House Staff Dept. Med., Wesley Memorial Hospital, Chicago, Ill. Feb. 6, 1948.*

[2] *Rohr, J. H., and Colwell, A. R., Proc. Amer. Diabetes Assn. 8:37, 1948.*

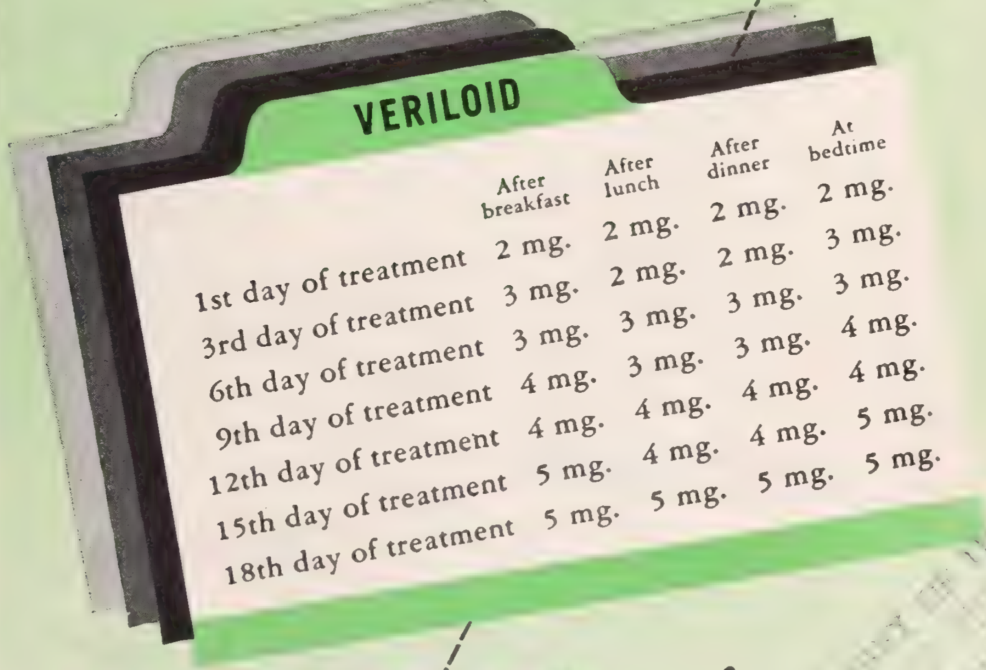
**COMPLETE CLINICAL
INFORMATION WILL BE
SENT ON REQUEST**

**'Wellcome' brand Globin Insulin with Zinc, 'B. W. & Co.'®
is supplied in vials of 10 cc., U-40 and U-80**

BURROUGHS WELLCOME & CO., (U. S. A.) INC., TUCKAHOE 7, NEW YORK

This Dosage Schedule...

will produce optimal clinical results



	After breakfast	After lunch	After dinner	At bedtime
1st day of treatment	2 mg.	2 mg.	2 mg.	2 mg.
3rd day of treatment	3 mg.	2 mg.	2 mg.	3 mg.
6th day of treatment	3 mg.	3 mg.	3 mg.	3 mg.
9th day of treatment	4 mg.	3 mg.	3 mg.	4 mg.
12th day of treatment	4 mg.	4 mg.	4 mg.	4 mg.
15th day of treatment	5 mg.	4 mg.	4 mg.	5 mg.
18th day of treatment	5 mg.	5 mg.	5 mg.	5 mg.

VERILOID* *in Hypertension*

The dosage schedule shown above is designed to produce optimal clinical results with Veriloid. Dosage is increased as indicated, to a point where an acceptable drop in tension is recorded. It is important to determine the dosage requirement of each individual, since the therapeutic need varies from patient to patient.

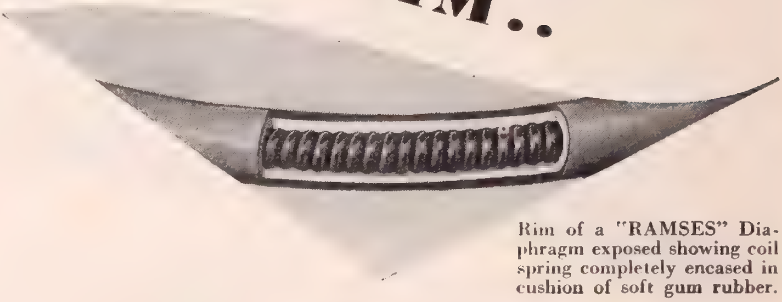
Veriloid should be taken preferably with or immediately after meals and at bedtime, *but never more often than at 4-hour intervals.* Experience has shown that the average patient responds best to a *daily* dose of 10 to 12 mg. When an acceptable drop in pressure has been obtained without side effects, the dosage level at that point is considered the maintenance dose.

Veriloid, representing the active hypotensive ester alkaloids of Veratrum viride, is biologically standardized in mammals for uniform hypotensive activity. It is available on prescription only through all pharmacies in 1.0, 2.0 and 3.0 mg. tablets. Literature on request.

*Trade Mark of Riker Laboratories, Inc.

RIKER LABORATORIES, INC. • 8480 BEVERLY BLVD., LOS ANGELES 48, CALIF.

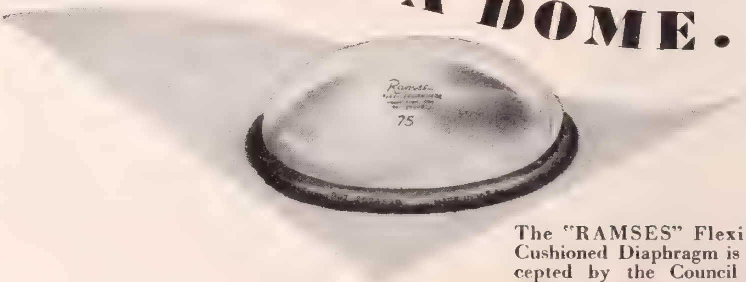
COMFORT IN A RIM..



Rim of a "RAMSES" Diaphragm exposed showing coil spring completely encased in cushion of soft gum rubber.

A coil spring with the necessary tension to hold it firmly against the vaginal walls can produce discomfort unless it is properly cushioned. Examine the rim of the "RAMSES"* Diaphragm and you will find that the coil spring is encased in soft rubber tubing, which acts as a protective cushion. This construction is patented and available only in the "RAMSES" Flexible Cushioned Diaphragm.

PROTECTION IN A DOME..



The "RAMSES" Flexible Cushioned Diaphragm is accepted by the Council on Physical Medicine and Rehabilitation of the American Medical Association.

A diaphragm dome must not only occlude the cervix—it must have a reasonably long life. The exclusive process used in manufacturing the dome of the "RAMSES" Diaphragm from pure gum rubber produces velvet smoothness, plus flexibility and long life.

A comparison will quickly reveal the advantages of supplying the patient with the patented "RAMSES" Flexible Cushioned Diaphragm.

"RAMSES" Diaphragms are available in sizes ranging from 50 to 95 millimeters in gradations of 5 millimeters.

A MARK OF Ramses DEPENDABILITY

gynecological division

Julius Schmid, Inc.

423 West 55th Street, New York 19, N. Y.

quality first since 1883

*The word "RAMSES" is a registered trademark of Julius Schmid, Inc.

acute staphylococcal endocarditis

resistant to other antimicrobial therapy
TREATED WITH TERRAMYCIN[1]

J. S., age 19, female.

History: Staphylococcus aureus septicemia with acute mitral endocarditis and embolic left-sided hemiplegia. Failed to respond to sulfadiazine and penicillin.

Therapy: Terramycin for 53 days; initial dose 1.0 Gm. q. h. 3x; subsequent dosage from 1.5 Gm. q. 4 h. to 0.75 Gm. q. 3 h.

Result: Temp. normal on 12th day of treatment; no further embolic phenomena; hemiplegia gradually disappeared; recovery apparently complete except for persistent apical systolic murmur and residual weakness of left foot. Result recorded as "cured".

CRYSTALLINE
Terramycin
HYDROCHLORIDE

New Council-accepted broad-spectrum antibiotic orally effective—well tolerated

ACCEPTED COUNCIL ON PHARMACY AND CHEMISTRY AMERICAN MEDICAL ASSOCIATION

1. Terramycin may be highly effective even when other antibiotics fail.[1]
2. Terramycin may be well tolerated even when other antibiotics are not.[2]

Suggested for: *acute pneumococcal infections, including lobar pneumonia, bacteremia; acute streptococcal infections, including erysipelas, septic sore throat, tonsillitis; acute staphylococcal infections; bacillary infections, including anthrax; urinary tract infections due to E. coli, A. aerogenes, Staphylococcus albus or aureus, and other Terramycin-sensitive organisms; acute brucellosis (abortus, melitensis, suis); hemophilus infections; acute gonococcal infections; lymphogranuloma venereum; granuloma inguinale; primary atypical pneumonia; typhus (murine, epidemic, scrub); rickettsialpox.*

Dosage: On the basis of findings obtained in over 150 leading medical research centers, 2 Gm. daily in divided doses q. 6 h. is suggested for acute infections.

Supplied: 250 mg. capsules, bottles of 16 and 100;
100 mg. capsules, bottles of 25 and 100;
50 mg. capsules, bottles of 25 and 100.

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Pfizer

Antibiotic Division
CHAS. PFIZER & CO., INC., *Brooklyn 6, N.Y.*

announcing

'ESKACILLIN-SULFAS'

an exceptionally palatable **fluid presentation** of **penicillin** and the **sulfonamides**

'ESKACILLIN-SULFAS' is for the prevention and treatment of infections caused by organisms sensitive to the action of penicillin or the sulfonamides.

Exceptionally palatable, each teaspoonful (5 cc.) of 'ESKACILLIN-SULFAS' supplies *100,000 units* of crystalline potassium penicillin G and a total of 0.5 Gm. (0.167 Gm. each) of the following *three* sulfonamides: sulfadiazine, sulfamerazine and sulfamethazine.

'ESKACILLIN-SULFAS' *has 5 outstanding advantages:*

1. **Wider antibacterial spectrum**
2. **Additive and synergistic action**
3. **Relative safety of triple sulfonamide therapy**
4. **Proven effectiveness of oral penicillin**
5. **Lessened chance of developing drug-resistant organisms**

'ESKACILLIN-SULFAS' *is not a bulky compound tablet.*
It is an easy-to-take fluid—available in 2 fl. oz. bottles.

Smith, Kline & French Laboratories, Philadelphia

'Eskacillin' T. M. Reg. U. S. Pat. Off.

CHODUCELL
Each tablet contains:
Methylcellulose 0.50 Gm
Cholic Acid Maltbie 0.04 Gm
Activated bulk laxation for the relief of constipation.
Maltbie
MALTBIE LABORATORIES, INC.
NEWARK, NEW JERSEY U.S.A

NOW!

Activated
BULK
FOR
CONSTIPATION

CHODUCELL TABLETS

Choducell tablets stimulate the intestinal tract to give satisfactory results in more patients. In these new tablets the bulk-producing effect of methylcellulose is activated by pure Cholic Acid-Maltbie.

Experience has shown that bland bulk alone is often not enough to produce effective laxation. For that reason, while retaining all of the established benefits of methylcellulose, Choducell Tablets also contain pure Cholic Acid-Maltbie to stimulate gentle peristalsis.

Note the lower—hence economical—dosage!

Each tablet contains:
Methylcellulose .....0.5 Gm.
Cholic Acid-Maltbie..0.04 Gm.

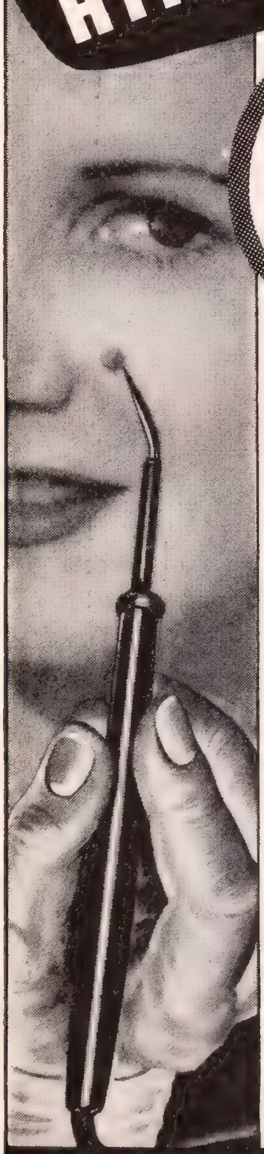
DOSAGE: The average dose is 2-3 tablets upon retiring accompanied by a full glass of water; in severe cases 2 or 3 tablets twice daily until normal stool is obtained.

MALTBIE

MALTBIE LABORATORIES, INC., Newark 1, New Jersey

BIRTCHER

HYFRECATOR



Used by More Than 70,000 DOCTORS

. . . for the removal of skin growths, tonsil tags, cysts, small tumors, superfluous hair, and for other technics by electrodesiccation, fulguration, bi-active coagulation.

Now, completely redesigned the new HYFRECATOR provides more power and smoother control . . . affording better cosmetic results and greater patient satisfaction. Doctors who have used this new unit say it provides for numerous new technics and is easier, quicker to use.

$49⁵⁰ COMPLETE

Send for descriptive brochure, "Symposium on Electrodesiccation and Bi-Active Coagulation" which explains the HYFRECATOR and how it works.

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To: The BIRTCHER Corp., Dept. NYS
5087 Huntington Dr., Los Angeles 32, Calif.

Please send me free booklet, "Symposium on Electrodesiccation and Bi-Active Coagulation."

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A PLEASANT ALKALINE DRINK

SOLD AND FAVORED SINCE 1880
BRIOSCHI

Actively alkaline. Contains no narcotics, no injurious drugs. Consists of alkali salts, fruit acids, and sugar, and makes a pleasant effervescent drink.

Send for a sample

CERIBELLI & CO.
121 VARICK STREET NEW YORK

Buy

Savings

Bonds

for the tense and nervous patient

There's double therapeutic action in Eskaphen B Elixir:

1 . . . Therapeutic relaxation . . . mild, calming sedation of phenobarbital—to ease tension, to quiet nervousness.

2 . . . Restoration of appetite . . . high dosages of thiamine —to remedy the B_1 deficiency so often present in these patients, to restore appetite and improve general nervous tone.

Remember that each 5 cc. teaspoonful of Eskaphen B Elixir contains phenobarbital, ¼ gr.; thiamine, 5 mg.—nearly three times the recommended daily allowance of thiamine.

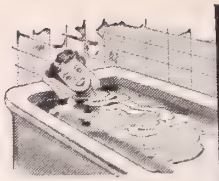
Smith, Kline & French Laboratories, Philadelphia

Eskaphen B Elixir

the delightfully palatable combination of phenobarbital and thiamine

'Eskaphen B' T.M. Reg. U.S. Pat. Off.

When your patient needs



Spa Therapy . . .

The place is **The Saratoga Spa**

Have you a patient who needs

CORONARY TREATMENT

One hundred seven coronary cases were recently studied. Of this group 33 were females, 74 males, the latter being chiefly from executive and professional walks of life. Not a few were physicians. The average age was 61, the range being 40 to 80 years. The average duration of symptoms was three years, the limits being one month to 10 years. In 32 there was a definite history of coronary occlusion. Twenty-seven had a history of pre-existing high blood pressure, eight of low pressure.

Classified according to the American Heart Association 44 were in Class IIA (activity slightly limited) and 63 in Class IIB (activity greatly limited).

Before beginning a regime each patient was subjected to a thorough physical examination together with all indicated laboratory procedures. The average of the initial blood pressure readings made at this time was 168-95. The final average figure arrived at was 140-81, a difference of 28 mm. of mercury in the systolic and 14 in the diastolic reading. These readings were made after a rest period to obviate the influence of any recent activity.

Symptomatic Change According to Age Groups

Age group	No. Cases	Improvement		
		Moderate	Marked	None
40-50 . .	11	10	0	1
50-60 . .	41	32	5	4
60-70 . .	34	22	8	4
70-80 . .	18	16	0	2
80- . .	3	3	0	0
	107	83	13	11

As reprinted from the New York State Journal of Medicine, 35:715, (July 15) 1935

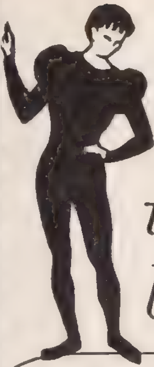
When you recommend "a change of scene"

3 weeks at The Saratoga Spa will benefit, refresh, relax your patients with such chronic conditions as Heart and Digestive disorders, Arthritis and related ailments, and Hypertension. At your request, we will send list of local, private practicing physicians who will cooperate with you as to treatment, rest and diet. Address Medical Director, The Saratoga Spa, 155 Saratoga Springs, N.Y.

Listed by the Committee on American Health Resorts of the Council on Physical Medicine and Rehabilitation of the American Medical Association

The SARATOGA SPA

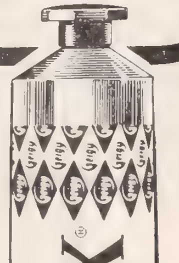
The Empire State's Contribution to the Medical Profession



now to sleep—
perchance to dream
undisturbed
by night-time **itch**

EURAX®

ANTIPRURITIC CREAM



EURAX antipruritic cream, applied to the itching area before retiring, is your patient's best assurance of a full night of undisturbed sleep.

A totally new antipruritic . . . EURAX, original product of Geigy research . . . sets new standards in the treatment of pruritus. In a carefully controlled study[1] EURAX provided "excellent (complete) relief" in 66.2 per cent of cases, and "moderate (considerable) relief" in 27.4 per cent. In most instances a single application ensured relief for 6-8 hours or more. In no case did the cream lose its effectiveness on continued application.

Not an antihistaminic . . . not a -caine derivative . . . not a phenol preparation . . . EURAX gives quicker, longer-lasting itch control with notable absence of local irritation, sensitization or systemic toxicity.[3]

As a specific in the treatment of scabies EURAX Cream in a single application eradicates the infection in over 90% of cases.[2] A second application gives practically a 100% cure rate.[4] No prior bathing or scrubbing required. Bacteriostatic, EURAX accelerates healing in infected scabies.

Geigy

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2. Patterson, R. L.: Southern M. J. *43*:449, 1950.
3. Peck, S. M. and Michelfelder, T. J.: New York State J. Med. In press.
4. Tronstein, A. J.: Ohio State M. J. *45*:889, 1949.

EURAX (brand of crotamiton) Cream: 10% N-ethyl-o-crotonotoluide* in a vanishing cream base supplied in tubes of 20 Gm. and 60 Gm. and jars of 1 lb.

*U.S. Pats. # 2,505,681 2,505,682

E-19

GEIGY CO., INC., Pharmaceutical Division, 89-91 Barclay St. • New York 8, N. Y.

ELI LILLY AND COMPANY *announces*

NPH ILETIN (INSULIN, LILLY)

and thereby marks another

improvement in diabetes management

Clinical evidence indicates that single daily injections of NPH Insulin provide an efficiently timed Insulin effect which closely parallels average requirements over a twenty-four-hour period. This new preparation of Insulin eliminates, in most instances, occasion for mixed injections of Insulin and Protamine Zinc Insulin. In severe and complicated cases, supplementary doses of Insulin may be utilized, if indicated.

Lilly

Detailed information and literature pertaining to NPH Iletin (Insulin, Lilly)
are personally supplied by your Lilly medical service representative
or may be obtained by writing to

ELI LILLY AND COMPANY *Indianapolis 6, Indiana, U.S.A.*

NEW YORK STATE JOURNAL OF MEDICINE

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Editorials

Christmas, 1950

Wherever the members may be throughout the world, the Journal brings them the greetings and best wishes of the Society's officers and employes. Once again the holiday season finds this nation at war in support of a principle: That freedom, under God, shall not perish from the earth.

Under the aegis of the United Nations, the world is divided into two camps: those who subscribe to the above principle and those who do not. Those who do not seem to remain within the forum of the U.N. off and on, for the purpose of gumming up the works with as much dialectic materialism as the vituperation compressors can generate behind the Iron Curtain. This corrosive, sticky, atheistic product of Statism is sprayed about by Andrei ("nozzle") Vyshinski and the dialectically materialistic press of the U.S.S.R. and environs, including the *Compass* and *Daily Worker* here, for what flies it may entangle along the lunatic fringe of our democracies whether in private or public life, or in the arts, sciences, or professions.

The medical profession has not been nor will it be entrapped by any such tanglefoot treason, however disguised. Its concern is the scientific care of the sick, defeat of the compulsory national health insurance fraud with the taxpayer's help, and provision of sufficient, well-trained medical officers for the armed services. It is doing all of those things under the competent leadership of the American Medical Association now awake to the fact that advertising pays in a good cause better than tax-supported propaganda in a bad one.

The current military and diplomatic commitments of this nation are costly in terms of lives, suffering, and treasure. They will be more rather than less so. Since when or where has human freedom or liberty been cheap either to have, to hold, or to broaden? This and succeeding Christmas seasons may demand sacrifices and more sacrifices; but that, after all, is the spirit of Christmas, sacrificing something so that others may have something. If such giving does not hurt the giver it is no sacrifice, merely a distribution of surplus, as cold and heartless as government farm subsidy.

The editors of the JOURNAL wish to extend hearty wishes for the holiday season and to say with Tiny Tim: "God bless us all, everyone."

The Junior A.M.A.

For some time it has appeared evident that formal medicine has for too long overlooked the needs other than academic of students, interns, and beginners in practice. These young people coming from the colleges, where, in recent years, an increasing neoliberalism has been evident, into the study and early practice of medicine have tended to lean somewhat to the left. This tendency has been more evident in some areas than in others, seeming to be more noticeable in large, congested districts but by no means confined there.

Medicine with its formal disciplines and its long training period resulting in the generally responsible and mature character of its young, beginning practitioners has in the past tended to be conservative. This conservatism has in due course penetrated the councils of formal medicine affecting somewhat its views concerning developments and changes in the social structure of the commonwealth.

Neoliberals in the medical student and intern categories have lately come under the influence of politically motivated agitators, of disaffected persons, and some groups which make a vocation of filling any vacuum with noisy propaganda. The American Medical Association recognized the need for "an independent organization of medical students which will develop policies and activities that are acceptable to the majority . . . .," at its 1950 San Francisco meeting. Six months previously the Board of Trustees had been directed to study the idea and develop plans; these were accepted, and a new A.M.A. organization limited to medical students is in process of formation. This does not include interns, however, but it is anticipated that provision for them will be made, possibly in the form of special memberships by county medical societies.

Medical schools will have their own student societies, run by elected officers, with the dean, a faculty member, and county and state medical society appointees constituting an advisory committee. It is probable that the administration of the national student organization will consist of an executive council composed of ten students to be elected at the national convention when held, three representatives of the A.M.A., and an executive secretary who will be a nonvoting member appointed by the Board of Trustees of the A.M.A. with headquarters in Chicago.

Yet to be decided is the extent to which the A.M.A. will assist in financing the new organization. But a constitutional convention is due to be held in the near future, with interested students in the meantime invited to meet with officers of the A.M.A. for discussion.

We heartily applaud the action of the A.M.A. in leading the way toward a unified medical profession, first by recognizing the needs of students and interns for positive leadership and second by its willingness to underwrite and guide an affiliate organization to accomplish such unification.

SPECIAL ANNIVERSARY ISSUE

The January 1, 1951, issue of the JOURNAL will commemorate the Fiftieth Anniversary of the NEW YORK STATE JOURNAL OF MEDICINE. It will contain a history of the publication and special articles on the progress of medicine during this period.

Current Editorial Comment

Markle Foundation Stresses Humanities. In its giving of funds to medical schools and other educational institutions, the Markle Foundation, through its executive director, Mr. John M. Russell, stresses the need for young, "broad-gauged" men in medical education, the social sciences, and the humanities, "who have gone beyond the pattern of narrow, departmental training. . . . It will be these men," Mr. Russell says, "who in time will insist that the education of a doctor be more realistic."

We have awaited for some time the return to a more sane concept of medical education as it relates to modern life. In commenting upon the annual report of the Dean of Columbia University's Faculty of Medicine in our issue of September 15, we could find ourself in agreement with Dr. Rappleye's argument abolishing premedical education in a few well-chosen phrases, but we could not quite figure out how he proposed to do it.[1] Training, he said, on the college level should be preparation not for medicine, or dentistry, or public health, but for life.

Now comes Mr. Russell, who says for the Markle Foundation: The present "younger generation" will "have to decide where to prune and where to encourage growth in the curriculum. Physicians will have to be trained as physicians and the academically-minded teacher will be discouraged from assuming that everyone in the classroom must be trained to become a full-blown specialist in biochemistry or physiology or other subject.

"The emphasis on research in medicine is tending to throw medical schools and medical education off balance," Mr. Russell says. "An interest in teaching, in what to teach and how to teach it, somehow does not have the glamour or command the respect accorded laboratory work or care of patients. Rats are more interesting than students, apparently; the care of a patient more thrilling than the curriculum.

"As a result of the emphasis on research the number of papers a man produces has somehow come to be used as a mechanical measure of his worth, and as a lazy means of evaluating his work. Published papers are the scientists' means of communication with one another, and with that purpose no one would quarrel. However, promotions, improved pay, better positions, membership in scientific societies, and grants of all kinds tend to be based more and more on yardage gained—yardage in the form of galley proof.

"Whenever a survey of medical schools is made, great stress is laid on research facilities. Square footage of floor space and number of research workers are as convenient to measure as the yardage of scientific papers."

Abandonment of the humanities to the extent we have witnessed in the last half century is apparently seen now as a great mistake. Perhaps to some extent the error can be rectified. At any rate the recognition of the deficiency seems to be a good point of departure for necessary action.

A close man is not a pleasant friend.

To What End Medical Education? The larger concept of medical education is addressed editorially in the *Quarterly Bulletin* of the Northwestern Medical School.[1] "What are the social responsibilities of the profession?" Dr. John Romano in 1948 stated that the function of medicine is to acquire knowledge and to apply it to promote health, to prevent disease, to free man and to help man free himself from the enslavement of pain, illness, and physical disability and from the equally great enslavement of morbid fear, guilt, and neurotic personal and social restriction . . .[2]

> The doctor protests when one suggests that he lacks a social conscience. He will immediately tell you how he gives time to clinics, and the patients who are cared for by him for nothing, and of innumerable charities and courtesies which he has extended as an individual. Commendable as all of this is, it has nothing to do with the big picture; it does not get to the root of the matter, and it is no guarantee that he even understands the causes which have necessitated the charities. We have usually preferred to spend large sums of money in collecting funds for charity rather than spend the necessary amount to eliminate the cause of the need for that charity.
>
> If we are to fulfill the function of medicine as

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[1] It's a Short Life, p. 2152.

[1] Summer Session, 1950.

[2] Current Medical Digest (Sept.) 1950.

> defined by Romano, "to free man from the equally great enslavement of morbid fear, guilt, and neurotic personal and social restriction in order that man can function to his maximum capacity as a conscious, intelligent, rational, free human being," then there is no time to lose. There is no choice in the matter—for the problems must be met boldly, studied thoroughly, and solved in the immediate future. In a world where two thirds of the population are the victims of a greedy neuroticism, demanding the subservience of man and preventing his achieving the intelligent, rational, and free state, time becomes critically urgent. It demands the supreme effort of every human being to find the greater solution necessitated by the greater problem.

With this we can agree, but the whole responsibility does not lie with the medical profession. To eliminate the necessity for charity, for example, would be to abolish misfortune—a worthy objective but scarcely one to be attempted by the medical profession without a good deal of help and considerably more know-how. To this end the politicians and the so-called statesmen have conceived the "welfare state," the logical achievement of which would eliminate the necessity for charity by eventually putting everyone in the gutter. This is not to interpret the term "charity" in the manner of St. Paul but in its quid pro quo or political usage.

Says the *Quarterly Bulletin* further:

> With the advent of modern scientific advance, the physician and his coworkers have retreated from the exigencies of active service in a democratic society. Much of this isolation from participation in government is due to the connotation given the word "politics." Public service is regarded as undignified; it is beneath the attention of both the scientist and the clinical physician. The man of medicine too often is not willing to grasp the abstract concepts of the need by which government, even self-government, may prevent catastrophe.
>
> It seems a bit incredible that the science of medicine, dedicated to the preservation of man's mind and body, is overwhelmed when confronted with decisions involving a strange phenomenon—practical political thinking. It is not a question of whether the medical man can, should, or wishes to participate; the choice is no longer his; he *must* participate!

A practical problem arises: If doctors are to participate, as suggested, in the mechanics of government and public service to an effective degree, who will then practice medicine? We agree with the theoretic concept but must ask for more explicit directions for taking the prescription.

IN MEMORIAM

Samuel Joseph Kopetzky, M.D.

Dr. Samuel Joseph Kopetzky, of New York City, former president of the Medical Society of the State of New York and a member of the Publication Committee of the JOURNAL for several years, died suddenly at his home of a coronary thrombosis on November 13 at the age of seventy-four. Born in New York City, he was a graduate of the class of 1898 of the College of Physicians and Surgeons of Columbia University. Dr. Kopetzky specialized in otolaryngology, becoming professor at the Polyclinic Hospital and later director of the department, in addition to being consultant at several New York and New Jersey hospitals. He served in the Spanish-American War as well as in both World Wars and was prominently identified with the Selective Service Administration.

Dr. Kopetzky was a facile writer and contributed numerous articles on his specialty to various medical journals, as well as being the author of a widely used textbook

Long identified with and actively engaged in the activities of his county and State medical societies, Dr. Kopetzky had a host of friends and associates who held him in high regard for his abilities. They remember him for his cheerful disposition, his ready smile, and his generally healthy appearance which belied his age.

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Scientific Articles

Symposium

SURGERY IN CHILDREN

The following papers have been prepared as a special symposium on surgery in children for this issue of the New York State Journal of Medicine. Articles have been contributed by members of the Department of Surgery, New York University Post-Graduate Medical School, New York University-Bellevue Medical Center, Dr. J. William Hinton, chairman.

PRE- AND POSTOPERATIVE MANAGEMENT OF CHILDREN

Charles George Neumann, M.D., and Jameson L. Chassin, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University) and the University Hospital)

ALTHOUGH most surgeons are thoroughly trained in the management of the pre- and postoperative course of adult patients, it seems that less emphasis is placed upon these subjects with respect to children. This is not because these studies lack importance in children's surgery; on the other hand, the infant and young child present so complex a problem during acute illness that it is usual to call upon the wisdom and experience of a pediatrician for advice. Working together as a team, the pediatrician and surgeon can usually provide more skillful care for the sick child who requires operation than either specialist can provide alone. In this paper an attempt will be made to review briefly those principles of the pre- and postoperative care in children which are of mutual interest.

The child's response to illness is in many ways different from that of an adult. Many acute pathologic processes progress with startling rapidity in children.[1] For instance, acute appendicitis can progress to fulminating peritonitis within twenty-four hours in a young child, unless the proper treatment is instituted. In many cases one cannot delay therapy until meticulous, prolonged roentgenologic and laboratory studies have been completed. Fortunately, most acute surgical conditions are amenable to rapid diagnosis by experienced observers. In their susceptibility to shock, children also differ from adults.[2] They tolerate blood loss very poorly, and hemostasis must be carefully accomplished during operation. Operative trauma and forcible or prolonged retraction of the abdominal incision are more shocking to children than the same amount of trauma would be to an adult.

The fundamental goals of preoperative management are (1) to correct the derangement of physiology which has been produced by the disease, (2) to replenish or maintain the patient's reserves so that he may better be able to cope with his illness and his operation, and (3) to provide such antibiotic therapy that will minimize the seriousness of actual or potential infection. The supportive measures used to accomplish this end are not dissimilar to those employed in the postoperative period or those used in treating medical disease of children. Because the very surgical procedure designed to help the patient is also an added physiologic insult to some degree, in surgical patients these supportive measures usually have to be undertaken more assiduously. This means that attention must be directed simultaneously to water and electrolyte balance, nutritional status, hemoglobin content of the blood, respiratory function, and the control of infection.

Rare indeed is the need for operation so urgent that time cannot be taken to correct dehydration and to overcome shock. Operations of any magnitude performed upon seriously dehydrated infants and children will often prove fatal regardless of the surgeon's operative skill. Management of the fluid and electrolyte balance in children is so essential for surgical success that a separate section is devoted below to a detailed discussion of this problem.

Another vital factor in improving the patient's condition is the transfusion of whole blood whenever the hemoglobin level is low. In the absence of concurrent hemorrhage, this is usually given in dosages of 10 to 20 cc. per Kg. of body weight. This amount may be given twice a day in instances of severe deficiency. During operation whole blood should be replaced as rapidly as it is lost. After operation frequent hemoglobin determination should be the guide for the administration of further blood transfusions.

The status of the patient's nutrition, especially with regard to proteins and vitamins, is of great importance in insuring a smooth hospital course.[3] It has been shown that wound healing is impeded by deficiencies of proteins or of vitamin C. Protein depletion also may lead to an increased susceptibility to operative shock and to infection. To correct important degrees of nutritional deficiency, one cannot depend solely upon parenterally administered amino acids. Unless intravenous fat emulsions become available, it will not be practical to supply the child's entire caloric requirement by the parenteral route. If the caloric requirement is not met, there can be no significant amount of protein repletion. Therefore, one must still depend primarily upon the oral route for nutritional therapy, both before and after operation. If the oral route cannot be used due to some type of intestinal obstruction, it is advisable to accomplish surgical correction of the obstruction as soon as electrolyte and hemoglobin deficiencies have been overcome. Once the natural peroral route has been restored, rapid nutritional improvement is the rule.

Sedation for children is necessary in the preoperative period for allaying fear and gaining cooperation. Because of its respiratory depressant action, morphine is not given to young children or infants preceding anesthesia. Atropine is used as preanesthetic medication to help diminish bronchial secretions and to block undesirable vagal reflexes. In choosing the drug and dosage for premedication, it is often profitable to obtain the advice of the anesthesiologist who will soon be faced with the problem of inducing anesthesia. This is especially helpful since smooth induction of anesthesia is of the greatest importance if one is to avoid inflicting upon the child a harrowing emotional experience. It is also desirable for the anesthesiologist and the surgeon to establish rapport with the child before operation and to offer him some sort of explanation of what is in the offing. Postoperatively, codeine and aspirin may be used, although children generally seem to require very little in the way of analgesic drugs.

Once the decision to operate is reached, peroral feedings should be avoided for at least six hours prior to induction of anesthesia. Occasionally, this presents more of a problem than is at first apparent. Faced with hunger or thirst, youngsters will often attempt to obtain food or water surreptitiously. It is important to keep the stomach empty in order to prevent vomiting during anesthesia. At this time the gag reflex is absent or depressed, and the danger of aspirating gastric contents is a very real one. This may result in an aspiration pneumonia which is one of the serious complications of the postoperative period. If the stomach is dilated or if it is expected that there will be any degree of manipulation of the stomach at operation, a Levine tube should be passed in order to keep this organ empty. Following prolonged ether anesthesia, there is sometimes a long period during which the gag reflex remains depressed, allowing aspiration of vomitus. The nasopharynx and even the trachea may have to be suctioned with a catheter to keep the bronchial tree dry. In some cases it is helpful to place the child on his side or to elevate the foot of the bed to avoid aspiration. There is no substitute for close, intelligent observation by alert, trained personnel until the patient is fully awake.

Of paramount importance in making major operations safe for the child is the establishment of a foolproof method of administering intravenous fluids, plasma, and blood during and after surgery. This usually involves the insertion ot a cannula or a polyethylene catheter of appropriate caliber into an ankle vein after isolating the vein by sharp dissection. The apparatus must be rigidly fixed to the leg so that never will the occasion arise during operation when the administration of fluids or blood will be delayed because a channel is not available.

Oxygen therapy, preferably by tent in children, is indicated whenever there is depression of respiratory or cardiac function. It is especially useful following thoracic surgery. Occasionally, in young children the use of an endotracheal tube results in laryngeal edema and obstruction. In the early stages of this condition oxygen is valu-

TABLE I.—Approximate Normal Daily Requirements of Water at Rest[5]

	Water Losses			Recommended Water Allowance		
	Urine (Cc.)	Stool (Cc.)	Insensible (Cc.)	Cc. per person	Cc. per Kg.	Ounces per Pound Body Weight
Infant (2 to 10 Kg.)	200 to 500	25 to 40	75 to 300	330 to 1,000	165 to 100	2.5 to 1.5
Child (10 to 40 Kg.)	500 to 800	40 to 100	300 to 600	1,000 to 1,800	100 to 45	1.5 to 0.7
Adolescent or adult (60 Kg.)	800 to 1,200	100	600 to 1,000	1,800 to 2,500	45 to 30	0.7 to 0.5

able and may forestall the need for tracheotomy, but, if respiration is persistently labored, tracheotomy is in order. In the presence of severe paralytic ileus, oxygen therapy may, over a period of a few days, help alleviate intestinal distention.

Antibiotic therapy is indicated preoperatively in diseases such as bronchiectasis and perforated appendicitis, where it is desired to minimize the danger of spread of the infection by operative manipulation. Sulfasuxidine, streptomycin, or aureomycin perorally should be used to reduce the bacterial flora prior to colon surgery in children as in adults. Following operation, the unthinking routine use of antibiotics should be avoided, lest complications be masked and remain inadequately treated. In the presence of known sepsis and preferably after bacterial cultures have been made, antibiotics can be employed with great effectiveness. Representative daily dosage schedules for infants and children are as follows: penicillin, 500,000 units; streptomycin, 0.05 Gm. per Kg.; aureomycin, 0.05 to 0.10 Gm. per Kg.; chloromycetin, 0.05 to 0.10 Gm. per Kg.

Postoperative complications referable to the cardiovascular and genitourinary systems are unusual in children. The unwillingness of a child to be sick and his rapid and spontaneous return to full activity minimize certain postoperative complications, although the difficulty of keeping large dressings and apparatus for immobilization in place is thereby increased. It is not logical to enforce rest upon infants by restraint for seven to eight days following hernial repairs, for instance. They exert more strain on the wound in struggling against their bonds than if they are allowed complete freedom. Children themselves usually practice the principles of early ambulation regardless of the desires of their surgeon.

Fluid and Electrolyte Balance

It is well known that dehydration in infants progresses very rapidly with serious result. The explanation for this phenomenon lies in the fact that the daily fluid turnover for infants is proportionately much greater than that of adults.[4] For example, a 7-Kg. infant has a daily water output in the form of urine and insensible loss of vapor from the skin and lungs of a volume which is equal to half of the entire extracellular fluid of the body. An uncompensated loss of this magnitude is rapidly fatal. In a 70-Kg. adult, the water output per day, by contrast, is only one seventh of his extracellular fluid volume. It is for this reason that the maintenance of fluid balance in infants and young children is so critical a problem. A distinction must be made between the dosage of materials necessary to maintain a child in an already well-hydrated state and that necessary to correct a serious electrolyte and fluid deficiency.

Maintenance Requirements.—Preservation of the body fluid compartments in the normal state requires the daily provision of a certain amount of water, sodium, and chloride. Other electrolytes like potassium and calcium, while of great importance, may be ignored if parenteral therapy will be necessary for only a few days in a previously normal child. For maintenance therapy, administration of the quantities of water and sodium chloride listed in Tables I and II constitutes adequate therapy.[5] These figures apply only to resting individuals who are not visibly perspiring. Otherwise, appropriate additional quantities of water and salt must be provided. For example, a 10-Kg. infant, during the twenty-four-hour period following an elective operation, should receive a total of 1,000 cc. of water. Of this quantity, 150 to 200 cc. may be in the form of saline and the remainder in the form of 5 per cent glucose in water. As soon as the child is able to return to oral fluids and diet, the parenteral route is no longer used. In general, during the first two days following operation saline should be used sparingly as there seems to occur a temporary period during which the kidneys are unable to keep up with the excretion of sodium. Of course, in the presence of obvious loss of sodium (vomiting, diarrhea, perspiration) the lost electrolyte should be replaced.

Restitutional Therapy—Dehydration.—When a child is encountered in an acutely dehydrated

TABLE II.—Approximate Normal Daily Requirements of Sodium Chloride at Rest[5]

	Sodium Chloride (Gm.)	Physiologic Saline Solution (Cc.)
Infant	1	125
Child	3	350
Adult	4 to 6	450 to 700

state, estimation of the nature and quantity of electrolyte and water deficiency is a difficult task requiring clinical experience and knowledge of the various deficiency syndromes.

Metabolic acidosis is the most commonly encountered situation. This usually results from loss of intestinal juices by vomiting, e.g., appendicitis, intestinal obstruction beyond the pylorus. It is aggravated by starvation ketosis. The serum chlorides are somewhat low, and the carbon dioxide combining power is markedly reduced, as is the serum sodium. The patient is usually dry of tongue and skin with sunken eyeballs and depressed fontanelles (in the infant). Hyperpnea and oliguria are usually present. Shock and coma may result in the absence of therapy.

Restitutional therapy for such a patient may include physiologic saline in a quantity approximating 4 to 8 per cent of body weight according to the severity of the dehydration. For a 10-Kg. infant this may come to 600 cc. of saline, but this must be given together with the regular daily maintenance dosage (1,000 cc.). In addition, an extra allowance of water (up to 50 cc. per Kg.) may be added in the presence of excessive perspiration, fever, etc. In other words, over a twenty-four-hour period this 10-Kg. infant may receive parenterally a mixture of 600 cc. of 5 per cent glucose in saline and about 1,200 to 1,500 cc. of 5 per cent glucose in water. With marked acidosis and oliguria, this therapy can be improved by substituting for one third of the saline an equivalent volume of one-sixth molar sodium lactate or 1.3 per cent sodium bicarbonate solution. Therapy of acidosis due to severe diarrhea or in diabetic coma frequently requires correction of the intracellular deficit of potassium. Since overdosage of potassium may lead to cardiac arrest, this electrolyte must be given cautiously.

Metabolic alkalosis is seen frequently following vomiting of gastric hydrochloric acid in hypertrophic pyloric stenosis. This is accompanied by loss of sodium into the urine. Signs of dehydration similar to those enumerated above may occur, except that alkalosis produces shallow respirations and tetany in contrast to the hyperpnea and coma which follow acidosis. The general plan of therapy is similar to that of acidosis: Saline is given in the knowledge that the kidney will excrete excessive quantities of the sodium ion while retaining the chloride ion.

In the presence of severe alkalosis there may occur a loss of potassium from the body. If this is demonstrated by estimation of serum potassium levels in the blood, restitutional therapy must frequently include potassium as well as sodium chloride.

Frequent checks on the progress of therapy should be made. Clinical signs must be observed as they change with therapy. Periorbital and peripheral edema suggest that fluid and sodium therapy has been excessive. Cessation of hyperpnea or of tetany indicates that therapy has been effective. When possible, the urine volume should be recorded. In critical cases, as in extensive third degree burns, a catheter may be inserted and the urine output checked hourly to guide the progress of the fluid therapy. Estimations of serum chloride, carbon dioxide combining-power, and blood pH indicate progress in the correction of the acid-base derangement.

Summary

In summary, it must be emphasized that the metabolic aspects of surgical disease in children demand closer supervision than in adults, that the progress of major surgical disease in children is often more rapid than in adults, and that children will withstand less surgical trauma than adults. These factors argue for rapid diagnosis, the early institution of operation when indicated, the close attention to correction of physiologic derangement before, during, and after operation, and meticulous attention to minimizing surgical trauma.

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PRACTICAL CONSIDERATIONS IN THE SURGICAL MANAGEMENT OF CHILDREN WITH REGARD TO THE AUTONOMIC NERVOUS SYSTEM

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L. Corsan Reid, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

THE practical considerations in the surgical management of children as regards the autonomic nervous system are well illustrated by the following case which happened in one of the large metropolitan hospitals within the past year.

A six-year-old boy was discovered to have a cardiac murmur by his local physician. Otherwise, general physical examination was negative except for the presence of some adenoid tissue. The electrocardiogram was negative, chest x-ray negative, with no signs of cardiac enlargement. A recommendation was made that the adenoid tissue be removed, and assurances were given that it was a very minor operative procedure and the child could be taken home in the early afternoon.

Accordingly, the boy was admitted to the hospital and was given scopolamine at 7:30 A.M. Anesthetic started at 9:15 A.M., adenoidectomy at 9:35 A.M. There was some difficulty with bleeding, during which time there was considerable mechanical irritation with packs, etc., in the posterior nasopharynx. During the carrying out of these mechanical procedures, the child had a pulse which was feeble and irregular with inefficient respiration. Finally, the nasopharynx was tightly packed, following which there was a complete cardiac arrest. Intracardiac adrenaline was administered without result, and after waiting an appreciable period with no evidence of cardiac activity, the thorax was opened, the heart massaged, and beats commenced. While these were irregular at first and rather rapid, they soon settled down to a reasonable rate. The thorax was closed, and, before sending the child back to the ward, the nasopharynx was examined to be sure there was no bleeding. During the course of this mechanical irritation, cardiac standstill again occurred. By shaking the child, massaging the chest, etc., the heart commenced beating and quickly settled down to relatively normal activity with satisfactory blood pressure readings. The child was returned to his room, and subsequently the course was uneventful.

The following morning a careful check revealed nothing unusual, and he was taken to the operating room to remove the pack. It was quickly noted that any mechanical irritation in the nasopharynx gave an irregular, feeble pulse and actual cardiac arrest. With cessation of the activity in the nasopharynx the heart started to beat and appeared to function normally. It was very obvious that cardiac irregularities and standstill only occurred while mechanical irritation of the nasopharynx was in progress. The pack was not removed, and the child was returned to his room.

A discussion on vagovagal reflexes had been held at this hospital two weeks previously, and it was suggested by some of the younger members of the staff that this represented an unusual expression of these reflexes and the patient should be given atropine. The objection to the use of atropine was that it would make the heart go too fast, which, after all, is less undesirable than the fact that it would not go at all. Accordingly, on the third day, all other conditions being the same, the child was given atropine immediately before removing the pack from the nasopharynx. Removal of the pack and careful examination of the nasopharynx by various mechanical procedures caused no change whatsoever in respiration or cardiac activity.

The initiation of vagovagal reflexes from the nasopharynx with such profound functional derangements is quite unusual, but the pattern of expression with irregular heart, cardiac standstill, etc., and an associated respiratory difficulty is very typical.[1] The most common initiating factor in vagovagal reflexes with this characteristic clinical picture is the introduction of various mechanical contrivances into the respiratory passages, and probably this occurs most frequently during the introduction of intratracheal tubes for anesthesia. The following case is an illustration of how dangerous these reflexes can be on occasion.

A young woman was having an elective herniotomy with the usual preoperative preparation. When anesthesia was satisfactory, the laryngoscope was introduced for the placing of an intratracheal tube. On removing the laryngoscope, there was a cardiac standstill and subsequent exitus. In this particular institution this accident has happened sufficiently often that there is a standing order for all intubations to be preceded by atropine. In this case it was unfortunately omitted.

Other examples of a type of trigger stimulus might be cited. For example, Felix has shown that repeated small trauma to the bronchial mucous membrane led to cardiac arrest, and Nissen has reported that, on constricting the bronchus of a girl of twelve, there was a temporary cardiac arrest, and subsequent touching of the bronchus with a sponge gave the same result.[2]

The reflex mechanism of these phenomena has been satisfactorily established by use of the electrocardiograph and the recording of cardiac changes which occurred during the carrying out of mechanical irritation in the respiratory passages and esophagus by a wide variety of agents or contrivances. Electrocardiographic changes have been observed simply by spraying the throat with cold water.[1] Their complete abolition by atropine further substantiates this concept.

A good question is, "What is the pathway over which these reflexes travel, and what determines their course, for example, in an effector organ like the heart?" In other words, will these reflexes affect the specific tissue or the coronary arteries? According to Larsell, there are three groups of nerve plexuses in the lung: first, the bronchial group; second, the vascular group; and, third, the pleural group.[3] From nerve endings in any one of these locations a stimulus may arise and take one of three possible pathways: (1) by afferent vagal fibers to the vagal center, and then by efferent fibers to the heart; (2) axon reflexes within the vagal network and hence passing from lung to heart without going through the vagal center; and (3) irradiation of vagal impulses through various ganglia to the sympathetic system and so to the heart. The first would seem to be the most frequent occurrence and undoubtedly represents the major pathway because of the associated respiratory difficulties; impulses arriving at the vagal center could readily spread to the respiratory center. These impulses arriving in the heart have two possible actions:

1. Effects upon the heart centers such as the sinus node, auricular ventricular node with inhibition of the heart such as bradycardia, auricular ventricular block, auricular and ventricular extrasystoles, etc.

2. Reflex effects on the coronary artery with alteration in blood flow. Decreased coronary blood flow may very well initiate extrasystoles, but, due to the type of T wave found, it is probable that in the impulses going to the specific tissues no significant alteration in blood flow occurred. Those reflexes initiated in the vagal nerve endings in the nasopharynx, respiratory passages, and esophagus were conducted over a nervous network by which they arrived in the heart, setting up effects exclusively limited to the functional response of the specific tissue. In dogs, irritation of the pleura under certain conditions gave rise to impulses following a similar path and the same destination. On the other hand, those impulses originating in the pulmonary vascular bed appear to manifest their effects on the heart exclusively through their action upon the coronary circulation. This is best exemplified by the pulmocoronary reflex of Scherf.[4,5]

Regarding the associated respiratory disturbances, the evidence is not so clear cut as that brought out by the electrocardiagram. But, in a further study on reflexes from the mouth, trachea, and esophagus, it has been shown that reflexes may originate in the vagal nerve endings of the respiratory passages which on mechanical irritation can depress respiration.[6] If these are abolished by atropine and the local application of butyn, there are other reflexes as result of muscles being placed upon the stretch which drive respiration in an accelerated fashion. The frequency of these reflex phenomena is surprising because the vast majority would be missed unless recorded with an electrocardiograph. In a series of 35 unselected cases with a wide variety of anesthetic agents, there were ten showing indisputable reflex effects upon the heart as result of mechanical irritation in the nasopharynx, trachea, and esophagus. Probably, these were most frequently observed with cyclopropane.

The role of anesthesia is better appreciated when it is realized that in accentuating the functional derangements from these reflexes the functional response of the specific tissue is markedly altered by the anesthetic agent. In other words, a heart under anesthesia is as vulnerable to vagal stimulation as a heart with widespread structural organic lesions would be without anesthesia.

Practically, the most important feature is that all these potentially harmful reflexes are prevented by atropine.

Summary

In summary, one can say, first, that, as a result of any type of mechanical irritation introduced into the nasopharynx, the pharynx, the trachea, or the bronchi, as well as the esophagus, reflexes within the autonomic nervous system may be initiated leading to cardiac standstill, cardiac irregularity, and marked circulatory derangement.

Second, these reflexes usually affect the respiratory center in the same direction at the same time.

Third, whenever organic lesions are present in the specific tissue, these reflexes are particularly dangerous.

Fourth, a normal heart under anesthesia is as vulnerable to derangement from vagal stimulation or vagovagal reflexes as would be a severely structurally altered heart without anesthesia. The conclusion seems warranted, therefore, that mechanical irritation of the respiratory passages and esophagus is not without danger, and any such contemplated procedure should be preceded by a preliminary dose of atropine, which will certainly minimize and nearly always prevent the undesirable reactions potentially present in autonomic reflexes.

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GASTROINTESTINAL BLEEDING IN INFANTS AND CHILDREN

J. William Hinton, M.D., and S. Arthur Localio, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

OF THE many causes of bleeding from the gastrointestinal tract in infants and children, all of them will be associated with blood in the stool in various amounts, shades, and appearance. Hematemesis is not characteristic of all gastrointestinal bleeding Hence, the presence or absence of blood in the stomach, together with the character of blood in the stool, will frequently serve as an important differential diagnostic signpost.

Before considering the significance of blood in the stomach, it is important to rule out spurious bleeding, i.e., blood which enters the stomach from an oronasal, pharyngeal, or pulmonary source. In nursing infants, hematemesis may occur following ingestion of blood sucked from a fissured breast. These infants will at times vomit copious amounts of blood, without exhibiting signs of acute blood loss. Blood arising from the respiratory passages, if not first swallowed, is usually frothy in appearance.

Once the spurious causes have been ruled out, hematemesis then indicates bleeding from a source in the upper gastrointestinal tract from the esophagus to the first portion of the jejunum. Given a patient with hematemesis and the passage of bright red blood from the rectum, one must assume multiple foci of bleeding both high and low, for even massive upper gastrointestinal tract hemorrhage will not produce bright red blood in the stool. This type of bleeding is usually due to disease not primarily gastrointestinal, such as purpura, hemophilia, leukemia, aplástic anemia, panhematopenia, hemorrhagic disease of the newborn, scurvy, jaundice, terminal episodes of uremia, and marasmus. The demonstration of a bleeding tendency by the presence of ecchymosis, petechiae, hemarthrosis, etc., or the laboratory demonstration of deficiency in platelets, bleeding, clotting, or prothrombin will usually serve to indicate the diagnosis.

Obviously, any of the foregoing diseases may have bleeding from a source in the upper gastrotestinal tract only and will not be associated with the passage of bright red blood by rectum and, therefore, must be included with the other causes of hematemesis, such as duodenal or gastric ulcer, congenital or acquired esophageal varices, foreign bodies, trauma, corrosive gastritis, excessive vomiting, or vicarious menstruation.

Ulcer of the stomach and duodenum, while rather rare, can be the cause of serious hemorrhage in infants and children. Ulcer has been reported at all ages, even in stillborn and premature infants. Bird, Limper, and Mayer report 66 bleeding ulcers in a survey of 243 ulcers in patients from birth to fifteen years of age.[1] Ulcers appear to be more common from birth to two years and least common between two and seven. Ulcer in infancy is frequently symptomless until a gastric hemorrhage occurs. Severe exsanguinating hemorrhage is not uncommon. There is usually vomiting of red blood or coffee-ground material associated with melena. In massive bleeders, the stools may be tarry in color with plum-colored liquid blood separating from the solid stool. The same may be true of all bleeding from the upper gastrointestinal tract. The blood is usually changed in character, well mixed with the stool, and free of clots. These observations are of importance when there has been no hematemesis. The source of the bleeding can be readily placed in the upper gastrointestinal tract by the passage of a stomach tube. Bleeding ulcer can be differentiated from the other causes of gastrointestinal bleeding by x-ray.

Esophageal varices can be congenital or secondary to Banti's disease, cirrhosis of the liver, thrombosis of portal or splenic veins. Varices give rise to profuse recurrent hemorrhage, usually with hematemesis of bright red blood and tarry stools. In most instances the diagnosis of the underlying diseases will previously have been made, for varices and bleeding are late manifestations. Careful esophagograms with barium will usually outline the varices.

Trauma, foreign bodies, and corrosive gastritis as causes of the hematemesis can usually be suspected by a careful history. Vicarious menstruation from the stomach is rare, and the history of bleeding, usually mild, coincident with menstrual periods, seems to establish the diagnosis.

The presence of blood in the stools without hematemesis and without the demonstration of blood in the stomach will rule out all of the above causes of gastrointestinal bleeding and will bring on the consideration of the diseases listed below. These can be divided into bleeding from a midway source such as the small gut, a low source such as the colon, and a rectal or anal source. Observation of the character of the stool—its color, the color of the blood, and the admixture of blood and stool—will frequently indicate the level of the bleeding.

If blood is bright red with or without clotting and separated from the feces, it comes from a source near to or in the rectum and anus, such as a fissure, the passage of a bulky constipated stool, proctitis, foreign body in the rectum, hemorrhoids, or polyp. The proctoscope will demonstrate all of these lesions. If the passage of the stool is painful, it suggests the presence of a fissure. If the bleeding is profuse, a polyp is suggested.

Passage of red blood, admixed with the stool and associated with pus and mucus, will usually indicate ulcerative colitis, tuberculous enteritis, dysentery (bacillary or amebic), or typhoid. Proctoscopy, stool culture, and x-ray will make the diagnosis definite.

Although blood from a midway source may be dark and clotted or not clotted, bright red and clotted or not clotted, or an intermediate shade, it usually is fairly well mixed with the stool and midway between fresh and tarry. If it is associated with mucus, then intussusception is likely. Signs of obstruction and the presence of a mass will complete the diagnosis. If blood varies at different times from a very dark color at one time to a fairly bright red at another, it must come either from two different sources or from a single midway source, such as a Meckel's diverticulum, duplication of the intestine, or multiple polyposis. Bleeding from a Meckel's diverticulum almost invariably arises from a small peptic ulcer in the aberrant gastric mucosa lining the diverticulum. Meckel's diverticulum may manifest itself at any age. Approximately half of the patients seen by Ladd and Gross were under two years of age and 80 per cent of the bleeders were under this age.[2] Bleeding is characteristically massive, and these patients, unless operated upon, will die of exsanguination. X-ray rarely demonstrates the lesion.

Duplication of intestine, particularly ileum or jejunum, will give a picture of bleeding not unlike a Meckel's diverticulum except that bleeding is apt to be recurrent and less severe. Most of these patients present signs of partial intestinal obstruction. Many have a palpable mass, and the x-ray will serve to demonstrate some of them.

Polyposis of the colon or small gut causes continuous loss of small amounts of blood which is usually mixed with stool. The blood may be tarry or dark red or bright red, depending upon location of the polyps and the amount of bleeding and frequency with which the stool is passed. X-ray and sigmoidoscopy will invariably demonstrate the lesions.

The picture of intestinal obstruction with an acute surgical abdomen associated with the passage of dark red blood per rectum will be diagnostic of a strangulating intestinal obstruction.

A diagnosis is the first prerequisite to intelligent treatment of gastrointestinal bleeding. In most instances the therapy of bleeding is the medical therapy of the underlying disease. In a few instances, the therapy is surgical and more or less of an emergency nature. On rare occasions, it may be necessary to operate for a bleeding ulcer which cannot be controlled by medical management. Bleeding esophageal varices can be controlled by a double lumen tube with a balloon so placed that when it is inflated it will control the bleeding from the lower esophagus by tamponade. Foreign bodies in the stomach, intestine, or rectum may have to be removed to control bleeding. Traumatic lesions of the gastrointestinal tract will frequently require urgent surgical correction.

In those patients with a Meckel's diverticulum with massive hemorrhage, Ladd and Gross recommend immediate operation to prevent death from exsanguinating hemorrhage.[2] They report 24 cases with but two deaths. Intussusception that cannot be reduced calls for early surgery. Bleeding consequent to a strangulating obstruction demands immediate surgery.

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THE EARLY DIAGNOSIS OF ACUTE ABDOMINAL LESIONS IN CHILDHOOD

Louis R. Slattery, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

EARLY diagnosis of acute abdominal lesions is even more imperative in children than in adults. The lesser anatomic capacity for intraperitoneal localization of infection in the child and his more delicate fluid and electrolyte equilibrium are responsible for this fact. Diagnosis is rendered more difficult because the history most often consists of parental observations, and physical findings are hard to interpret because of an uncooperative patient. The difference in technic of physical examination in children and the importance of patiently examining the abdomen before any unpleasant features of the examination, such as throat or rectal examination, are done has been well emphasized.[1,2] This paper will purposely omit the acute intestinal obstructions of the neonatal period associated with congenital anomalies and the chronic obstructive phenomena attendant upon these lesions later in childhood in order to emphasize the most common acute problems encountered on our service: acute appendicitis, intussusception, and traumatic rupture of the spleen.

Acute Appendicitis

This remains the most common acute abdominal condition of childhood. Early diagnosis is as important today as it was prior to the era of sulfonamides and antibiotics. These agents have not changed the role of surgery as the primary therapeutic agent.

The diagnosis can be made with relative ease despite discrepancies in the history, temperature, and leukocyte count when abdominal pain and right lower quadrant tenderness are prominent. Rigidity is purposely omitted from this discussion as it is not an early sign, denoting, as it does, involvement of the parietal peritoneum by the inflammatory process.

Diarrhea is frequently a misleading symptom leading to late diagnosis. The child's complaints of abdominal pain may be attributed to a gastroenteritis and a mild degree of abdominal tenderness overlooked or attributed to the diarrhea. This train of circumstances results in delay until perforation and unmistakable signs of peritonitis make the diagnosis obvious. For this reason it is worth emphasizing that diarrhea has been shown to occur in 16 per cent of cases of appendicitis by Scott and Ware, and its presence cannot be construed as evidence against the diagnosis of acute appendicitis.[2]

Concomitant acute or chronic upper respiratory infections may also be responsible for tardy diagnosis when the abdominal pain, vomiting, and tenderness may be erroneously attributed to the respiratory infection. Here too, appendicitis may not be suspected until the signs of peritonitis clearly indicate the correct diagnosis.

A normal leukocyte count may prove misleading. This occurs in approximately 15 per cent of cases.[1,3] Perforation and peritonitis may also be accompanied by normal leukocyte counts.[2,3]

Acute mesenteric lymphadenitis is the most frequent disease requiring differentiation from acute appendicitis. This should be suspected when the pain is mild and associated with vague right lower quadrant tenderness rather than the point tenderness found in appendicitis. The tenderness is also more medial in location than that of appendicitis, and the leukocyte count is normal. Acute pyelitis of the right kidney can be differentiated by the high temperature, lumbar tenderness, higher leukocyte count, and urinary findings. Pneumonia with diaphragmatic pleurisy may be differentiated by cough, elevated respiratory rate, higher leukocyte count, and roentgenograms of the chest. Meckel's diverticulitis may be indistinguishable from acute appendicitis unless the inflamed diverticulum lies outside the right lower quadrant so that the unusual location of tenderness draws attention to the diagnosis. Primary peritonitis of pneumococcal or streptococcal origin may be suspected when the history of abdominal pain is atypical and the temperature and leukocyte count elevated higher than usual. Differentiation can be made with certainty only when a direct smear of the pus has been made.

When the diagnosis is uncertain, observation is best continued in the hospital so that this time may be advantageously employed correcting any dehydration that may have occurred. Further diagnostic procedures to exclude other disease may also be performed during this interval.

Intussusception

In this surgical disease of infancy and childhood early diagnosis is the most important single factor in the outcome. The low mortality obtained by operation during the first twenty-four hours of the disease has been clearly shown.[1,4–6] Despite the advances in surgery that have lowered operative mortality in so many fields, that of resection for intussusception remains comparatively high.

Intussusception occurs most frequently from the fourth to eleventh month of infancy although it is not uncommon during the remainder of childhood. Healthy, well-nourished children are most often affected, and males predominate over females. From the standpoint of early diagnosis proper evaluation of the history and observation of the patient during a paroxysm of pain are most important. The excruciating pain lasting a few seconds followed by a ten or fifteen-minute period of complete relief and well-being is almost diagnostic. Vomiting usually occurs with the pain, and blood appears in the stool after the first twelve hours of illness. The most important physical finding is a nontender sausage-shaped mass or sensation of mass in the abdomen. There may also be a sensation of emptiness in the right lower quadrant known as Dance's sign. Rectal examination may reveal a mass by bimanual examination not felt on abdominal examination and may show blood upon the examining finger. Barium enema may be used to corroborate the diagnosis but is necessary in only 10 per cent of cases.[1,5] A normal barium enema does not exclude the presence of an ileoileal intussusception. Reduction of intussusceptions by this means is not within the scope of this paper.[7]

The severity of the colic serves to differentiate intussusception from acute appendicitis, mesenteric adenitis, or intestinal obstruction due to other causes. Symptoms of intestinal obstruction dominate the late phases of this disease so that, in our consideration of early diagnosis, such late signs as distention and dehydration are purposely not considered.

Traumatic Rupture of the Spleen

The typical case of splenic rupture occurs after a fall or blow upon the left side of the body. The prompt appearance of shock, rapid thready pulse, low blood pressure, falling red blood cell and hemoglobin determinations, and signs of peritoneal irritation, most marked in the left upper quadrant, make early recognition relatively easy.

A second type of patient is seen whose rupture of the spleen has been intracapsular or has sealed over with clot so that massive hemorrhage has not occurred. These patients complain of pain in the left upper quadrant and left shoulder and show some rigidity and tenderness in the left upper quadrant. Inability to stand up straight may also be present. Signs of shock are absent, but blood studies show some lowering of the red blood cell and hemoglobin values accompanied by leukocytosis. These patients are subject to massive hemorrhage at a later date so that early diagnosis is essential before this takes place. Patients suspected of this type of injury should obviously be observed in the hospital rather than the home.

The third type of problem encountered is the child with multiple major injuries involving the chest and head as well as the abdomen so that interpretation of the abdominal signs and shock is difficult. The precarious condition of these patients makes exploratory laparotomy undesirable. Roentgenograms of the chest are essential to determine bony injury, mediastinal shift, and the presence of blood or air within the pleura. The last may be present without rib fracture when there has been bronchial rupture and may be associated with extensive subcutaneous emphysema. Recognition and relief of pneumothorax is an important part of the shock treatment and is essential to produce efficient respiratory exchange. When avoidance of unnecessary laparotomy is so important, needle aspiration of the peritoneal cavity for free blood is useful to establish the diagnosis. When blood is obtained the diagnosis is substantiated, and operation can be carried out with confidence. On the other hand, failure to aspirate blood does not exclude the possibility of hemorrhage. Such patients should be explored if shock recurs after relief of pneumothorax and adequate shock therapy.

Summary

The three most commonly encountered acute abdominal problems of a children's service in a municipal hospital have been briefly reviewed from the standpoint of early diagnosis. Late symptoms and signs have been purposely omitted.

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GENERAL FACTORS GOVERNING THE MANAGEMENT OF SMALL BOWEL OBSTRUCTIONS IN CHILDREN

Robert T. Crowley, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and Children's Surgica Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

WHILE the etiology, pathologic changes, diagnosis, and treatment of small bowel obstructions in children are, in general, the same as those encountered in adults, persistently higher over-all mortality is recorded in the juvenile age group (twelve years and under).

This persistently higher mortality in the young may, in the main, be accounted for by the following factors:

1. The variety of conditions prevalent in childhood which give rise to clinical signs closely similar at onset to those of small bowel obstruction, e.g., prodramata of exanthematous diseases, severe infections of the respiratory tract, and various forms of gastroenteritis. Because of this factor such cardinal signs of small bowel obstruction as abdominal pain and vomiting are frequently attributed to the more frequently occurring nonobstructive origins when obstruction actually exists. Thus much valuable time is lost before the true obstructive origin of the signs is recognized.

2. The rapidity with which the dehydration and electrolytic imbalance incident to small bowel obstruction of any type develops and progresses in young subjects. To appreciate this factor it is necessary to recall that a rather characteristic sequence of pathologic changes occurs in small bowel obstruction which profoundly affects the body as a whole. These changes occur in any instance of small bowel obstruction regardless of etiology, type of obstruction, or age of the subject, and may be briefly summarized as follows:

> Stasis of the intestinal content at the site of obstruction → progressive distention and dilatation of the bowel at and proximal to the site of obstruction due to accumulation of fluid and gas → loss of fluid and electrolyte (chloride) from the circulating blood volume into the disturbed bowel segment → increasing dehydration and dechlorination evidenced by progressive hemoconcentration and alkalosis → ultimate death from dehydration and electrolyte depletion.

The point to be made concerning this factor is that, while the above process occurs in adults as well as children, given the same type, level, and degree of obstruction, it develops earlier, progresses far more rapidly, and is much more poorly tolerated in young subjects. Failure to appreciate this factor is likely to result in delay in use of the effective supportive measures of decompression and fluid and chloride administration until too late.

3. The high incidence of causal factors in children which produce small bowel obstruction of the strangulating type. To stress the importance of this factor, it is essential to separate all instances of small bowel obstruction into two general types: (1) simple obstructions in which the bowel is obstructed but in which there is no significant coincident interference with the mesenteric blood supply of the obstructed bowel segment and (2) strangulating obstruction in which there is not only obstruction of the bowel but coincident impairment of its mesenteric circulation which, if allowed to continue, results in bowel necrosis, perforation, and peritonitis.

In children the incidence of strangulating obstruction is inordinately high. This is due to the fact that the most common causes of small bowel obstruction in the young, exclusive of incarcerated external hernia (e.g., volvulus, intussusception, herniation, and constriction of the bowel through abnormally persisting congenital peritoneal bands and foramina), are those which not only occlude the bowel lumen but constrict and impinge upon the vessels of its attendant mesentery as well.

Obviously there can scarcely be a more disastrous error of management in obstructive cases than failure to diagnose and treat accordingly instances of strangulating obstruction, for the dehydration and electrolyte depletion incident to small bowel obstructions in general and the necrosis, perforation, and peritonitis consequent to strangulating obstruction in particular, operating together, make the condition rapidly fatal.

On the other hand, if it can be ascertained with certainty that the obstruction is nonstrangulating (simple) in character, more time can be allowed for general supportive measures, decompression, and fluid and electrolyte administration so that the subject's condition is optimal for any essential surgical procedure.

The decision as to whether the obstruction in any individual instance is simple or strangulating is, therefore, of paramount importance, for it not only determines the necessity of operation but the time for the latter.

When the cause of the obstruction is apparent, as in instances of obstructive symptoms associated with an irreducible mass at one of the abdominal hernial orifices (incarcerated or strangulated hernia), the differentiation between simple and strangulating obstruction presents no particular problem, for here it must be assumed that the obstruction is strangulating in type. It is in those instances of obstruction where the cause of the obstruction is entirely concealed within the abdomen and little or no evidence is presented as to its nature from external examination that difficulty is encountered. As will be noted later, decision as to the simple or strangulating nature of the obstruction in such cases where the cause is concealed can be made only after a painstaking evaluation of all available signs and symptoms. When the differential diagnosis between simple and strangulating small bowel obstruction has been incorrectly made, two common errors occur: When the obstruction is simple and misdiagnosed as strangulating in type, operation is carried out precipitously before the patient's condition is optimal for the procedure. In such simple obstructions, a period of decompression by intubation and suction together with intravenous fluid and chloride administration is usually preferable, not only to improve the patient's condition but to render the technical surgery simpler by the reduction of distention. Conversely, when the obstruction is strangulating and misdiagnosed as simple in type, overlong delay with conservative general measures (decompression and fluid and chloride administration) may result in avoidable bowel necrosis, perforation, and peritonitis.

In view of the three factors above discussed, particularly pertaining to small bowel obstruction in children (viz., the variety of conditions peculiar to childhood which may simulate obstruction, the rapidity with which fluid and electrolytic imbalance occur in true obstructive conditions in children, and the high incidence of strangulating types of obstruction in juvenile age groups), the following diagnostic and therapeutic points in management are emphasized:

1. In all instances of abdominal pain and vomiting the possibility of obstruction as the causal factor must be primarily excluded as early as possible. Since, by far, the majority of obstructive lesions are mechanical in nature, two clinical signs are of the utmost significance, particularly in the absence of any temperature elevation: (1) periodic examination of pain synchronous with audible peristalsis and (2) x-ray evidence of bowel distention with or without visible fluid levels. As previously noted, such distention in the young occurs early and progresses rapidly, and, in the event the obstruction is complete, can be readily detected in four to six hours.

2. In all instances of positively diagnosed obstruction as well as those in which the presence of an obstructive lesion remains seriously in doubt, decompression by intubation and suction, together with intravenous fluid and salt administration, is to be initiated at once. In the event of actual obstruction much valuable time is thereby gained against the rapid progression of distention, dehydration, and electrolyte depletion. If, on the other hand, the clinical syndrome is subsequently proved to be nonobstructive in nature, little harm is done by the institution of such measures.

3. In all instances of proved small bowel obstruction every effort should be made to determine whether the obstruction is simple or strangulating in nature. This determination is, as previously stated, critical, for upon it depends whether or not definitive operation must be immediate or can be delayed. The distinction between simple and strangulating obstruction, when the cause of the obstruction is concealed, is frequently extremely difficult but can be made in a majority of cases by close evaluation of all available criteria, the most important of which are listed in Table I.

TABLE I.—SUMMARY OF THE DIFFERENTIAL DIAGNOSTIC FEATURES DISTINGUISHING STRANGULATING FROM SIMPLE ACUTE SMALL BOWEL OBSTRUCTIONS

	Strangulating Obstructions	Simple Obstructions
Pain	*Onset:* sudden and fulminating *Type:* severe, cramplike, present continuously with peristaltic exacerbations	*Onset:* gradual, less sudden *Type:* less severe, cramplike, but tends to disappear in periods of peristaltic inactivity
Vomiting	*Onset:* tends to occur at onset of pain *Type:* sustained, continuous, severe, little relation to peristaltic action	*Onset:* gradual, usually at a considerable interval after onset of pain *Type:* periodic, tends to be simultaneous with peristaltic action
Shocklike manifestations	*Onset:* appear early, almost at onset *Type:* persistent with progressive severity	*Onset:* appear much later *Type:* less severe
Response to conservative therapy (decompression and hydration)	*Poor response*—symptoms and signs tend to persist and progress in spite of all measures	*Good response*—symptoms and signs tend to improve with conservative measures
Peritoneal fluid	Invariably bloody, frequently demonstrable with x-rays	Clean, rarely present in excess
Presence of isolated loop	Frequently present and demonstrable with x-rays	Rarely present
Abdominal mass	More often present and detectable by abdominal or rectal palpation	Rarely present or detectable
Abdominal tenderness	More frequently present and marked	Less frequently present and less marked
Abdominal spasm	More frequently present and marked	Usually absent; when present, less marked
Blood studies	Show dehydration and hemoconcentration — present in spite of therapy	Show dehydration and hemoconcentration — tend to ameliorate with therapy

4. In all instances of strangulating obstruction the indication for immediate surgical intervention is absolute, and operation should be carried out as soon as the patient's condition is deemed adequate to support the procedure. In all instances in which the nature of the obstruction, i.e., whether simple or strangulating, remains in doubt after careful evaluation, immediate surgery is also indicated on the ground that the young patient can better support the error of a precipitous laparotomy for simple obstruction than the perforation and peritonitis incident to a neglected strangulating lesion.

Summary

The high mortality of small bowel obstructive lesions in children is recognized.

Three general factors contributing to such mortality are indicated.

Diagnostic and therapeutic considerations predicated upon these three factors are discussed.

SURGERY FOR JAUNDICE IN INFANTS AND CHILDREN

R. Franklin Carter, M.D., and George M. Saypol, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and University Hospital)

IN THE past, jaundice requiring surgery in infants and children was a formidable problem for the following reasons: (1) Diagnosis was uncertain. (2) There was hesitancy in subjecting these patients to surgical exploration. (3) The risk of operation was great, and surgery was often fruitless.

Advances in our knowledge of diseases of the biliary tract have provided a solution to some of the difficulties. Laboratory tests such as the serum alkaline phosphatase and cephalin-cholesterol flocculation usually enable us to differentiate hepatocellular from extrahepatic obstructive jaundice. Although in extrahepatic obstructive jaundice one often cannot say clinically what the exact operative findings will be, one can be reasonably certain that surgical exploration is indicated. The advent of vitamin K, increased use of blood transfusions, and improvements in anesthesia have gone far toward lessening the risk of surgery. Two- to three-hour explorations for a patent bile duct are not unusual, and no longer should they result in operative shock. The apparently insoluble problem is that of relieving the patient without any patent extrahepatic bile duct, the so-called complete atresia, yet it is not outside the realm of possibility that some of these may in the future be aided by a successful direct anastomosis of the cut surface of liver to part of the upper intestinal tract.

Material

Between November, 1947, and December, 1949, we observed and treated 13 patients with congenital abnormalities of the biliary tract and one child with portal cirrhosis. Thirteen were from the University Hospital and one was from Bellevue Hospital, Fourth Surgical Division, both of New York University-Bellevue Medical Center. The cases were as follows:

Congenital atresia of bile ducts	11
Cystic dilatation of bile ducts	2
Portal cirrhosis	1

Among the atresias two infants died while being prepared for surgery. Postmortem examination in both cases confirmed the clinical diagnosis. Six additional patients died after one or more operations directed at obtaining bile flow from the liver into the intestinal tract. Of the remaining three patients two had atresia of the common bile duct, and one had atresia of the common hepatic duct except at the porta hepatis. These three patients had successful biliary-intestinal anastomoses. The patients with atresia of the common bile duct are doing well seventeen and twelve months postoperatively. The patient with atresia of the common hepatic duct was doing well two months postoperatively but has been lost sight of despite an intensive follow-up search.

Both patients with cystic dilatation of the ducts are doing well twenty-eight and nineteen months following short-circuiting procedures.

The patient with portal cirrhosis and portal hypertension, a twelve-year-old girl jaundiced for one year, is well six months following splenectomy and splenorenal anastomosis.

Conditions for Which Surgery is Indicated.—

1. Congenital stenosis or atresia of the bile ducts.
2. Cystic dilatation of the bile ducts.
3. Choledocholithiasis associated with familial hemolytic icterus.
4. Obstruction following trauma to bile ducts.
5. Liver tumors associated with jaundice including cysts, adenoma, and carcinoma.
6. Occasional cases of splenic anemia and portal cirrhosis in which there is portal hypertension. Splenectomy and splenorenal anastomosis may give dramatic results in some selected patients.

Nonsurgical Conditions Which Must Be Excluded.—1. Icterus neonatorum: The stools contain bile, and jaundice usually disappears by the end of the first month.

2. Erythroblastosis fetalis: This can be diagnosed shortly after birth, particularly with the aid of the Coombs test and Rh studies of parental and fetal blood.
3. Congenital hepatic syphilis: This can be diagnosed by maternal and infant blood Wassermann tests and roentgenographic studies of the infant's bones.
4. Familial hemolytic icterus: The urine rarely contains bile, and there is increased fragility of erythrocytes.
5. Jaundice of hemolytic sepsis: The stools contain bile and biliuria is negligible.
6. Infectious hepatitis.
7. Homologous serum jaundice. In conditions 6 and 7 the history, usually associated with 3 or 4 plus cephalin-cholesterol flocculation and increased urobilinogen in the urine early in the disease, helps to make the diagnosis.
8. Jaundice caused by toxic drugs.

Work-up

HISTORY

Jaundice.—Time of appearance should be recorded and whether it is persistent and progressive or intermittent. In congenital atresia of the bile ducts jaundice usually appears by the end of the first week even though it may not be noted until the second or third month, and it is persistent and progressive. In cystic dilatation and in choledocholithiasis it is usually intermittent.

Pain.—This is usually of a dull nature, in the right upper quadrant or epigastric region of the abdomen, and is often present in cystic dilatation of the bile ducts, tumors of the liver, and cholelithiasis.

Color of Stool and Urine.—In atresia the stool is acholic and the urine is bile-stained from the time of birth. With increasing jaundice bile pigment excreted by intestinal glands may color the stool a pale yellow. In conditions characterized by intermittent jaundice the stool is alternately clay-colored and pigmented.

Fever.—This may be present in all types of obstructive jaundice but is notably absent in the atresias.

Weight Loss.—This is usually absent except in occasional cases of carcinoma of the liver.

PHYSICAL EXAMINATION

The nutritional state usually is remarkably good. Jaundice is variable, ranging from a slight yellow tint to a deep greenish hue. Signs of pruritus are often present.

Abdominal Examination.—A mass may be present in the liver, suggesting a cyst or solid tumor, or below the liver edge in the right upper quadrant, suggesting cystic dilatation of the duct. In the latter condition it may vary in size from time to time because of periodic spontaneous drainage.

Liver enlargement is common with increasing or persistent obstruction of the bile ducts. It is progressive and associated with splenic enlargement, ascites, and the appearance of distended abdominal veins.

LABORATORY STUDIES

Laboratory studies should include the following: Urinalysis including bile and urobilinogen; stool is inspected from day to day and in addition examined for bile and urobilinogen; complete blood count including spherocyte study; erythrocyte fragility test; Rh studies of parental and fetal blood; blood Wassermann on mother and on child; serum bilirubin; and serum cholesterol.

Also: serum cholesterol esters; serum alkaline phosphatase; cephalin-cholesterol flocculation; prothrombin time; serum proteins and albumin-globulin ratio; duodenal drainage for presence of bile, and upper gastrointestinal roentgenogram to determine displacement of adjacent organs by a cyst of the bile ducts.

Cholecystogram is infrequently done because

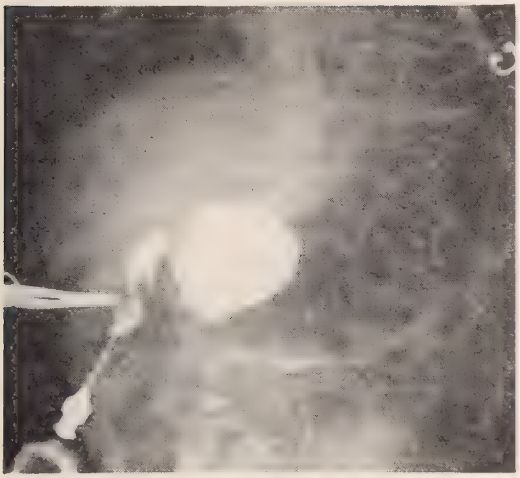

Fig. 1. Immediate cholecystocholangiogram showing cyst of common bile duct.

it rarely yields useful information in jaundice. When the serum bilirubin is over 3 mg. per cent, the liver will not excrete the dye, or the gallbladder will not concentrate the dye sufficiently for visualization.

Not all of the aforementioned laboratory tests are made routinely. The diagnosis of so-called "surgical jaundice" is possible often with a minimum of tests. Two of the most useful are the serum alkaline phosphatase which should be above 12 Bodansky units and cephalin-cholesterol flocculation which, except for advanced extrahepatic obstructive jaundice causing marked hepatic dysfunction, should be negative or 1 plus in forty-eight hours.

Treatment

Preparation of these patients for operation and therapy following surgery includes notably the liberal use of blood transfusions, vitamins K, B, and C, and liver extract intramuscularly. Antibiotics are employed solely as prophylaxis against wound infection and respiratory complications.

Surgical technics are not within the scope of this paper. However, we wish to stress the importance of carefully administered anesthesia, the use of a cut-down for insuring intravenous therapy before the patient is taken to the operating room, and the frequent employment of immediate cholangiograms to facilitate diagnosis.

Case Report

C. T., a three-month-old female, was admitted to University Hospital on November 23, 1947, with a history of jaundice for two weeks, alternately gray and yellow stools for nine weeks, and "dark" urine during the previous week.

Physical examination revealed a well-nourished infant, weighing 11 pounds, with icterus of the skin and sclerae. The liver was enlarged to the right iliac crest, and the spleen was felt three fingers below the left subcostal margin.

Laboratory studies were as follows: urine positive for bile; stools clay-colored; erythrocytes 3,100,000; hemoglobin 11.0 Gm.; leukocytes 9,000; neutrophils 36 per cent; prothrombin time, 15.5 seconds (undiluted), 29.5 seconds (diluted); erythrocyte fragility normal; icterus index 42 units; serum bilirubin 4.8 mg. per cent; alkaline phosphatase 27.4 Bodansky units; serum cholesterol 215 mg. per cent; cephalin-cholesterol flocculation negative; thymol turbidity 4.1 units; total serum proteins 6.6 Gm. per cent; duodenal drainage trace of bile.

In view of the infant's age, a diagnosis of congenital atresia of the bile ducts was made, and following preparation, operation was performed on December 2, 1947. On finding a cystic mass involving the common bile duct and a small gallbladder containing bile, immediate cholecystcholangiogram was performed (Fig. 1). For technical reasons biliary-intestinal communication could best be effected by cholecystogastrostomy, and this was done.

Postoperatively the temperature ranged from 99 to 104 F. for eight days. The jaundice cleared, and on December 21, 1947, when the child was discharged from the hospital, the icterus index had fallen to 15 units. The child has remained well and symptom-free.

Conclusions

1. An outline of conditions associated with jaundice in infants and children is presented.
2. Methods of differentiating medical conditions from those requiring surgery are given.
3. A plea for early recognition of surgical conditions is made.
4. Although salvage by surgery often appears hopeless, one must be heartened by the increasing number of restituted patients. Without early operation, most of these infants and children are destined for an early death.

SEE ANNOUNCEMENT ON PAGE 2962

A DISCUSSION OF THE OPTIMAL AGE FOR THE SELECTION OF PATIENTS FOR SURGICAL INTERVENTION IN CONGENITAL HEART DISEASE

Jere W. Lord, Jr., M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division, Bellevue Hospital, (New York University), and University Hospital)

AT THE present time, there are three main types of congenital heart disease which can be favorably influenced by surgical procedures. The first one, persistent patency of the ductus arteriosus, was operated upon successfully for the first time by Dr. Robert Gross in 1938.[1] This condition, the natural course of which leads to death of the patient at the age of thirty-five years on the average, can be completely corrected surgically with the establishment of a normal life expectancy. Coarctation of the aorta, also known to shorten life to an average of thirty-five years, was successfully corrected independently by Crafoord in 1944 and by Gross in 1945.[2,3] Again, an entirely normal anatomic and physiologic state can be established in the majority of these patients by surgical means. The third congenital cardiac anomaly to be influenced favorably by a surgical procedure is tetralogy of Fallot, which is dramatically helped by the Blalock-Taussig operation.[4] In this group, the basic faults are not corrected, but the unfavorable effect of impaired circulation of the blood through the lungs can be corrected by the construction of an artificial patent ductus.

The diagnosis of a patent ductus arteriosus rests clinically on the presence of a murmur heard best in the second left interspace anteriorly. Typically, the murmur is a continuous one throughout systole and diastole but with a systolic accentuation and possessing a "machinery" quality. Taussig holds that the diagnosis is in doubt unless such a murmur is present.[5] Additional aids in establishing the diagnosis are (1) fluoroscopic examination in which one usually observes increased hilar markings and pulsations, the so-called "hilar dance" and prominence of the pulmonary conus. These children are not cyanotic unless heart failure ensues, which rarely occurs until later in adolescence or in adulthood. (2) The six-foot heart x-ray confirms the prominence of the pulmonary conus and increased vascular markings in the hilar regions. (3) Cardiac catheterization is useful but not an essential part of the examination. When employed, the important findings include the observation of increased oxygen saturation of the sample of blood taken from the pulmonary artery over that taken from the right ventricle, and, by known formulas, the blood flow through the ductus may be calculated. (4) Angiocardiography is occasionally valuable in demonstrating continued opacification of the heart by recircularization of the bolus of diodrast through the ductus from the aorta and back to the pulmonary circuit with return to the left side of the heart. Sometimes an aortic dimple is visible at the orifice of the ductus. In many instances, 40 to 50 per cent of the output of the left ventricle passes through the patent ductus. The pathologic physiologic effects include an increase in the cardiac output, an increased blood volume, and hence increased work by the left ventricle which eventually may lead to left ventricular strain and failure.

Let us consider what happens to the patient with an untreated patent ductus. In a significant number, the Streptococcus viridans becomes engrafted on the wall of the ductus, particularly at the pulmonic end where vigorous eddyings of currents of blood are constantly present. Prior to the utilization of penicillin, all of these cases ended fatally unless the ductus was operated upon. With penicillin, the infection can usually be cleared, but further infection is likely unless the ductus is obliterated by operative means. The second important event which usually occurs in the individual with a patent ductus is the development of heart failure in early or mid-adulthood. Some of these patients can be restored to normal by operation if not too far advanced, but the technical difficulties are greater and the risk of operation increased. Finally, some of the children with patent ductus fail to develop as well as they should and suffer an increased number of pulmonary infections.

Indications for surgical intervention in a patient with a patent ductus used to be limited to those who had developed one of the complications outlined above. However, as experience has increased, the view that all patients, asymptomatic as well as symptomatic, should have the ductus obliterated has gained favor.[6] In the child who is in excellent general condition, the operative mortality in the hands of an experienced surgeon should be under 1 per cent. In large series, most deaths have occurred in the complicated cases, the infected ones, and especially in the group between the ages of twenty and forty years when the left side of the heart has suffered significant strain. How early in life should the physician recommend the operation? It is well to remember that the ductus may not close spontaneously in a few instances until eleven to twelve months of age. It would seem, therefore, that the ideal period in which the operation should be performed would be between the ages of two and five years. The diagnosis must be established and the possibility of spontaneous closure allowed for, which would usually carry the child into his third year. Technically, the isolation of the ductus from the surrounding structures, especially the tough fibrous tissue between it and the left bronchus, is a simple procedure in the young child but in later life may be fraught with danger. Further, the ductus is relatively small in the young child in contrast to that found in the middle-aged individual. Finally, the pulmonary artery seems to increase markedly in size as the decades pass, which adds to the potential hazards. Within a period of five days, the author obliterated a large (12 mm.) ductus in a thirty-seven-year-old woman and a smaller one (7 mm.) in a nine-year-old child, and a marked difference in technical aspects of encompassing the two ducti was appreciated. Young children withstand the operation well, are usually excellent risks, and have little postoperative morbidity.

The diagnosis of coarctation of the aorta is relatively easy, providing the physician will routinely palpate the femoral arteries in all children and, if diminished or absent, check the blood pressure in the legs as well as the arms. It is clear that any child or adolescent who shows an elevation of the blood pressure in the arms should be checked by measurement of the blood pressure in the legs. Normally, the level of the pressure in the legs is higher than that in the arms, and a reversal definitely points to a coarctation. Confirmation of the diagnosis is made by a 6-foot heart x-ray in which an absent aortic knob is usually noted, and sometimes notching of the lower margins of the fourth to the ninth ribs is seen. The latter is due to dilatation and tortuosity of the intercostal arteries which serve as collateral vessels to circumvent the obstructed aorta. Angiocardiography is helpful in demonstrating the site, degree, and type of coarctation.

Gross has stated that the patient should probably be twelve years or older before operation is undertaken because of the problem of the growth of the anastomosis and the aorta from childhood to the adult state.[7] Recent work by Johnson and Kirby has shown in pigs that technics are available for the construction of an anastomosis which will permit growth equal to that of the aorta above and below.[8] All that is necessary is to use number 5 zero silk and completely interrupt the suture line at several points. Patients with coarctation develop significant difficulty because of their basic defect in 75 per cent of cases.[9] These difficulties include left-sided heart failure, cerebral hemorrhage, aneurysm near the stenotic area, and bacterial endarteritis of the aorta. Technically, the aorta becomes difficult to suture because of sclerotic changes with the passage of years, although one remarkable case reported by Shumacker had developed an aneurysm by the age of eight and a half years.[10] Therefore, it would seem that the optimal age for surgical correction of an established case of coarctation of the aorta would be between the ages of five and ten years. The general and local conditions would be most favorable, and the risk of operation would consequently be less.

Tetralogy of Fallot has been so admirably presented by Blalock, Taussig, and Potts in their combined series of over 1,000 cases that nothing can be added from our small series of patients.[4,11,12] The diagnosis rests on the presence of cyanosis in a child who usually "squats" when tired or out of breath, exhibits clubbing of the fingers and toes, has a systolic murmur to the left of the sternum, and whose heart on fluoroscopy shows a boot-shaped appearance in the anteroposterior view and a clear pulmonary window in the left anterior oblique. The electrocardiogram shows right axis deviation due to hypertrophy of the right ventricle. Pure pulmonary stenosis, tricuspid atresia, and Eisenmenger's complex may be differentiated by appropriate studies which are outlined in Taussig's excellent book.[5]

In a review of the first 500 patients operated upon at Johns Hopkins, Bahnson and Ziegler analyzed the causes of death.[13] In their data, it was shown that the optimal time to operate upon these children was between the ages of two and twelve years. The lowest mortality occurred between the sixth and tenth years. In some instances, however, the infants have been so incapacitated that operation was necessary prior to the age of two years. However, Taussig believes that if clinical judgment points to a better than fifty-fifty chance of survival to the age of two years, then operative intervention should be postponed until that time.

Conclusions

On the basis of the observations discussed in this paper, it would seem that the optimal age for operation upon children with patent ductus arteriosus is between two and five years, for coarctation of the aorta between five and ten years, and for tetralogy of Fallot between two and twelve years.

55 East 92nd Street

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CONGENITAL MALFORMATIONS OF ANUS AND RECTUM

Donald A. Davis, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

IT IS said that congenital malformations of the anus and rectum occur once in 5,000 to 10,000 births.[1] Most likely the occurrence is more common since many are never reported and many more are never recognized. Needless to say, early recognition is the responsibility of every doctor attending the childbirth and the immediate postnatal period.

Ladd and Gross have classified these anomalies in a practical and useful manner, into four types irrespective of associated fistulas.[2,3] Type I includes those anomalies which have a patent rectum and anus but have a stenosis either of the rectum or the anus; in Type II are those which have an imperforate anus, the obstruction being membranous; Type III includes those which have an imperforate anus with the rectal pouch ending blindly some distance above; in Type IV are those which have a normal anus and rectal pouch, but also with the rectal pouch ending blindly some distance above.

Children who present the anomaly of stenosis of the anus or rectum have difficulty in defecation and need frequent enemas and cathartics. If neglected, some children give the picture of partial obstruction, i.e., distention and obstipation. Some have merely straining at stool and constipation. The stools tend to be ribbonlike. On examination the anal membrane may have only a small opening, or, if the anus is normal, the examining finger will meet with a stenotic area in the rectal pouch. These children strain at stool, and the perineum bulges. They do not gain weight as they should. The treatment in these cases is digital dilatation at daily intervals until the opening is adequate.

The membranous occlusion of the anus is an obvious anomaly which, of course, should be recognized in the first twenty-four hours. There is no meconium. The child is restless and cries. If the defect is not noticed, the child goes on to show the picture of complete obstruction. On examination the finger is not admitted into the rectum, and the membrane appears thin and darkened and bulges when the child strains or cries. The treatment in this instance is also simple. The membrane may be ruptured with the examining finger or incised and the excess tissue excised.

When the anomaly of imperforate anus and blind rectal pouch is encountered, the child passes no meconium but becomes distended and goes on to vomiting, the picture of complete obstruction. The child strains and cries. On examination there may or may not be an anal dimple and the perineum does not bulge on straining or crying. After twenty-four hours there is abdominal distention, borborygmus, and fecal vomiting. The x-ray procedure as described by Wangensteen is very valuable in locating the depth of the rectal pouch.[4] The child is held head down, and a flat or lateral plate is taken of the abdomen and pelvis. The gas in the colon rises into the reaches of the rectal pouch and thus gives the relationship of the pouch to the anus. This method may be inaccurate if done within twenty hours of the birth of the infant, or before the distal colon has become distended with gas. The treatment of choice is to perform a proximal defunctioning colostomy as soon as the diagnosis has been made. The writer prefers a transverse defunctioning colostomy for the simple reason that it leaves plenty of colon distal to it, making the plastic repair an easier procedure. Once the child is in good condition, the definitive operation may be carried out without further delay. This plastic repair may be done from the perineal approach in the majority of cases. However, in a certain percentage, with complete absence of rectum, an abdominoperineal procedure is necessary. The colostomy is closed three to four weeks later.

Those cases having a normal anus but with a blind rectal pouch have the same symptoms as with the imperforate anus group, the only difference being that the examining finger is admitted through the anus and then meets complete obstruction. The Wangensteen x-ray procedure is very useful here because the blind rectal pouch tends to ride high in the pelvis or even within the abdomen. The treatment includes a transverse defunctioning colostomy and a secondary plastic repair of the rectal defect. These cases usually have to be repaired by the abdominoperineal approach. When the wounds are healed, the colostomy is closed.

Types III and IV may have fistulous openings into the bladder, urethra, vagina, uterus, or perineum. There are three types of fistulas seen in male infants, namely, rectovesical, rectourethral, and rectoperineal. In female infants there are seen rectovesical, rectovaginal, rectouterine, and rectoperineal. There may occur multiple fistulas, i.e., rectovaginal and rectovesical. The rectovesical and rectourethral fistulas are by far most commonly found in the males, and, of course, the rectovaginal fistulas are found only in the females. The rectovaginal fistulas are the most common of all. Rectal and anal anomalies, as a whole, are more common in males than in females, but the fistulous anomalies are more common in the females due mainly to the large proportion of rectovaginal fistulas.

In the rectovesical fistula the rectum communicates with the bladder. It is far more common in the male than in the female. The presenting symptom is greenish-brown, fecal urine. The absence of an anus is then noticed. If early treatment is not instituted, obstruction, cystitis, and pyelitis are inevitable. A transverse defunctioning colostomy should be done as soon as the diagnosis is made. When the infection has been cleared up, the definitive procedure is carried out by the abdominoperineal approach, the fistula excised, the defect in the bladder closed, the rectal pouch pulled down, and the proctoplasty accomplished.

In the rectourethral fistula the rectum communicates with the urethra. These are far more common in the male than in the female. Meconium or fecal contents are discharged from the urethra independently of urine. The anus is not patent. Here again one may encounter obstruction and infection if early treatment is not carried out. Diversion of the fecal stream is advisable in these cases also by transverse colostomy. Proctoplasty and excision of the fistulous tract may be done when the child is in better physical condition, i.e., gaining weight and the urinary infection completely cleared up.

In the rectovaginal fistula, the rectum may communicate with the vagina anywhere from the cervix down to the vulva. Strangely enough, a rectovaginal fistula is sometimes unnoticed for many years, or until the child becomes an adult. However, meconium or fecal contents may be noted discharging from the vagina. Occasionally the hymen is imperforate. In case of the latter condition the hymen should be incised immediately for relief of the obstruction. As a general rule, proctoplasty may be postponed from two to five years without any ill effects. The writer prefers to correct it as early as the third month of life. Better results are obtained and with more safety if a transverse colostomy is performed, thus diverting the fecal stream while the proctoplasty is healing.

In the rectoperineal fistula the rectum opens to the outside, usually between the anus and the coccyx. These cases are usually no problem and may go unnoticed until the child is several years old or has grown to adulthood. The only symptom is partial incontinence of feces, since the external sphincter is in its normal position. Repair of this defect may usually be done without preliminary colostomy, as the rectal pouch, as a rule, is lowly placed and is easily swung to its normal position and pulled down to the opening made through the anal dimple.

The rectouterine fistula is extremely rare but, when found, usually enters at the junction of fundus and cervix. Its symptoms and treatment are identical with that of the rectovaginal fistula.

Colostomies are closed usually three to four weeks after the proctoplasty or when the wounds have completely healed.

The x-ray method of Wangensteen described earlier does not always give an accurate picture in the fistulous anomalies because the rectal pouch is not a closed viscus but rather is an opening to the outside through which air may pass. The writer has substituted the use of Diodrast or Lipiodol in these cases. Either of these materials may be instilled into the distal limb of the colostomy prior to taking lateral and flat films with the child in an upright position. In children that have external fistulas, the Diodrast may be instilled through a small catheter. X-rays taken in this manner outline the rectal pouch and fistulous tracts sufficiently to make a fairly accurate diagnosis.

It has not been the purpose of the writer to describe treatment in any detail but rather to acquaint the reader with the importance of recognizing these anomalies and accomplishing whatever emergency treatment is necessary to save life. The use of the colostomy has been stressed because the writer feels that it is a very necessary step in the management of these anomalies. The colostomy is very simple to do.

It should be placed in the transverse colon, thus leaving a virgin sigmoid and pelvis to work with when the abdominoperineal approach is necessary to correct the defect or defects. The colostomy is the lifesaving measure in the acutely obstructed child. It diverts the fecal stream away from the fresh repair. It makes easier the x-raying with liquid barium or Lipiodol in the cases in which fistulas complicate making a complete diagnosis. Lastly, it gives the surgeon a clean, almost sterile bowel to work with during the definitive procedure.

In closing, the reader is reminded of the possibility of multiple congenital defects being present in children having rectal or anal anomalies. The rather high mortality rate following surgery for rectal or anal anomalies may to a certain degree be blamed upon the complications caused by accompanying anomalies elsewhere in the body. Hence, it behooves the physician to search carefully for further pathology.

122 East 78th Street

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A PROGRAM FOR THE MANAGEMENT OF HARELIP AND CLEFT PALATE

Charles George Neumann, M.D., New York City

(From the Department of Surgery, New York University Post-Graduate Medical School, and the Children's Surgical Service of the Fourth Surgical Division of Bellevue Hospital (New York University), and the University Hospital)

The obstetrician's announcement to the family, however reassuringly worded, that their newborn has a harelip or a cleft palate can scarcely be received without alarm. When either of these deformities is slight, perhaps the first reconstructive operation will constitute all the necessary treatment, but it is not at all uncommon for the patient to require several surgical procedures over the course of many years, interspersed with the professional services of a variety of specialists.[1] It is the purpose of this communication to help provide an outline for the guidance of the physician who accepts the responsibility of guiding the family and the patient along the way of reconstruction, rehabilitation, and special instruction, in the course of which the efforts of general practitioner or pediatrician, orthodontist, speech therapist, psychiatrist, vocational counselor, anesthesiologist, and plastic surgeon must be marshalled.

The preferred age selected for the repair of a harelip is usually stated as varying from one day to six weeks. From the point of view of the associated social problem, the earlier the reconstruction is carried out, the less difficulty there is for the family in explaining or apologizing for the appearance of the deformity in their offspring and the less a feeding problem is posed. However, the general condition of the infant must be good at the time of the repair in order that the operation may be safely borne. It would certainly be undesirable to carry out a major procedure at any time that the baby is losing weight, is under seven pounds, or is suffering from physiologic jaundice. The fourth to the tenth day of life is the least propitious period for the repair of harelip.[2–4]

Although ether anesthesia is widely used, the repair of a harelip is undertaken with satisfaction under local anesthesia in some clinics.

Once the lip has been repaired, the infant can usually take its feedings as any other infant, but before the repair it may have been necessary to employ a nipple with holes large enough to permit a slow, free, and steady drip or to use dropper feedings. For these, allow thirty to forty minutes while the baby is held in a sitting position or is allowed to lie on its abdomen.[3] Such care is especially necessary in the presence of an associated cleft palate, in which instance careful, slow feeding must be persisted in even after closure of the harelip. As the weeks and months pass, however, many infants with still unrepaired palate gain a facility in feeding.

In many instances, the initial repair of the harelip is the definitive one, but if the residual deformity is too noticeable, a secondary repair may be undertaken in early childhood or any time thereafter. Since little, if any, improvement occurs in the absence of surgical revision, such revision ought to be carried out before the child is made too aware of his state through the medium of his playmates' curiosity. The warnings of Slaughter and Brodie must, nonetheless, be heeded, lest too radical or too frequent operative intervention lead to such disturbance of the growth centers of the face as to increase rather than minimize the original defect.[1] In those instances in which the upper lip remains exceedingly tight, a secondary procedure which makes use of a portion of the substance of the lower lip as a pedicled graft for increasing the substance of the upper lip may be undertaken. At the completion of the first stage of this type of repair, the pedicle nourishing the graft acts to bind the two lips together temporarily. Because of this, general anesthesia which is so frequently followed by postoperative vomiting is usually contraindicated. Instead, nerve block with procaine may be used, but for this to be practical the patient must be old enough to cooperate with the surgeon. Seldom can cooperation be expected from a child less than six years of age.

Whereas the harelip offers the surgeon the challenge of producing an excellent cosmetic result, the cleft palate poses the problem of providing a good functional result. Usually, repair of the palatal cleft is not begun until the child is from one and a half to two years of age, although the procedure may occasionally be done a few months before or at any time thereafter for valid reasons.[5] The important considerations in selecting the time of repair are related to the compromise between completing the repair before the child does much talking in the absence of normal anatomic structure and waiting until he is old enough and well enough to withstand the necessarily major surgical and anesthetic experience. It goes almost without saying that consultation between the physician responsible for the medical care of the child and the surgeon responsible for the reconstruction must precede the selection of the exact operative date. The occurrence of aspiration pneumonia or middle ear infection before the repair of the palate is consummated is adequate reason for hospitalization for a period of more careful feeding and ré-education of the mother in the technic of slower feeding. In the absence of improvement, it may rarely be necessary to proceed with repair in an effort to overcome the anatomic defect before irreparable pulmonary damage has resulted, but it is far preferable that the baby be in excellent general health before proceeding.

Not infrequently, even after a perfectly healed midline closure of a palatal cleft has been achieved, there is a residual speech defect which is, in part, dependent upon the fact that the soft palate does not extend posteriorly for a distance sufficient to permit it to prevent the escape of air through the nose during speaking. In such circumstance, it is suggested that recourse be had very early to the professional services of a speech therapist under whose guidance a truly remarkable improvement in the quality of the child's speech may develop. In the face of continued improvement, it may be possible to avoid another surgical procedure, but, if such improvement is not forthcoming, then consideration ought to be given to the performance of an operation designed to increase the effective length of the palate. Such a procedure can be undertaken as early as five years of age if one feels reasonably certain that the maximal benefits of speech therapy will not be available unless further anatomic restoration be provided. Either a setback procedure involving the posterior displacement of the palatal mucosa or a procedure involving the attachment of a pedicled graft of posterior pharyngeal mucosa to the soft palate may be undertaken, depending upon the surgeon's preference. It is the practice on the Children's Surgical Service at Bellevue Hospital to favor the use of the pharyngeal pedicled graft and to allow it to remain attached indefinitely to both the soft palate and the posterior pharynx. Customarily, the operation is preceded by such a period of speech training as to satisfy the surgeon and the therapist that surgical intervention is indicated. Then, after the operation, the speech therapist provides another period of training, but it is not uncommon for the operation alone to be followed by a very considerable improvement in the quality of the patient's speech. For the full benefit to be derived, however, lessons in speaking must be persisted in, so that the patient may learn quickly to make efficient use of the newly elongated soft palate.

Often the upper central teeth are maldeveloped in patients with a harelip or cleft palate. Although extraction followed by replacement with a denture is the not unusual outcome, the technics of orthodontia may frequently be employed with benefit; certain it is that the advice of an orthodontist ought to be secured as soon as any defects in dentition become apparent.

Commonly associated with a harelip is a

deformity of the nose on the same side as the defect in the upper lip. Such deformity is characterized by deviation of the ala and the tip of the nose laterally, and by a transverse rather than a longitudinal direction of the long axis of the nostril. Whereas one hopes to effect correction of the harelip early in infancy and with this correction at least a partial correction of the nasal deformity, it is considered preferable to await early adulthood before undertaking definitive revision of any residual nasal deformity.

The psychiatric aspects of harelip and cleft palate may be divided into two classifications: those which concern the parents primarily and those which concern the patient primarily. Of course, no rigid separation can be made. Although there are a very appreciable number of instances of the appearance of one or both of these defects in siblings, the incidence is not high enough to warrant advice to the parents to forego any additional increase in the size of their family after the initial occurrence.[6] Should a subsequent pregnancy eventuate in the birth of a deformed child, one would have to become more cautious. Since the etiology of harelip and cleft palate is obscure, it is impractical for either of the parents or both of them to accept culpability. Should the etiology or etiologies of these defects become known, then perhaps exact advice may be provided for the family, but, for the present, this is impossible. What can be provided is sympathetic guidance so that the family can help to support the patient's morale in the face of exposure to the unkind stares or remarks of the curious. The earlier and the more cosmetically and functionally perfect the repair, the more easily can the patient hope to adjust in a society which often regards with disfavor major deviations from the usual. But seldom can the repair be so perfect as to leave the patient without slight residue of the original defects. As soon as possible, therefore, it behooves those responsible for the education of the patient to provide him or her with an understanding of the nature of the defects and with encouragement of the lifelong struggle to overcome the handicaps imposed, coupled with information as to the benefits to be derived from each of the special therapies which have interested themselves in the patient's problem.

121 East 60th Street

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AN EVALUATION OF OXYGEN THERAPY

Questioning the assumption that administration of oxygen to a patient necessarily always increases his total oxygen consumption, the authors carried out a series of animal experiments the results of which support their doubts, and, from a clinical standpoint, indicate the need for greater discrimination in the use of oxygen therapy. Although administration of oxygen is nearly always indicated when, for any reason, free and normal respiration is seriously interfered with, where breathing is unimpeded in shock produced by hemorrhages, burns, intestinal obstruction, general peritonitis, crush of extremities, or histamine injections, it is of questionable value. In such cases 100 per cent oxygen failed to produce a better clinical response or increased uptake of oxygen. Nor did oxygen show any advantage over atmospheric air where cardiac tamponade induced central circulatory failure. On the other hand, in embarrassment of respiration in the experimental animal by central depression, tracheal obstruction, inspiratory resistance of long duration, pneumothorax, or constriction of the chest and abdomen, definite clinical improvement and increased oxygen uptake were noted as results of oxygen therapy. The authors point out possible clinical implications of the fact that relief of dyspnea by oxygen therapy was accompanied by a fall in blood pressure of 20 to 40 mm. Hg, an effect which may be dangerous if severe hypotension is coincidental with the dyspnea.

It is felt that where the respiratory dysfunction and circulatory failure coexist, "oxygen should be given—with caution—perhaps combined with a judicious use of carbon dioxide." But here also about the best that can be expected is to tide the patient over a brief critical period while steps are being taken to overcome the breathing difficulty and restore an adequate circulation as quickly as possible. Where shock exists without breathing difficulty, time and effort are best spent in giving blood and blood substitutes and other necessary measures calculated to restore circulation, which is the only way to correct the anoxia of shock.

—*Philip B. Price, M.D., Ralph C. Richards, M.D., and James B. Hammond, M.D., Annals of Surgery, October, 1949*

A STUDY OF CORICIDIN IN THE TREATMENT OF THE COMMON COLD

MICHAEL O. KOVALEFF, M.D., New York City

(From the Allergy Clinic of St. Luke's Hospital)

DURING the past two years there have been many articles in the literature dealing with prophylaxis and treatment of the common cold with antihistaminic medications. The studies were initiated because of similarity in symptoms of the initial stages of a cold and those of hay fever. It was hoped that antihistamines would afford benefit in the treatment of the common cold as they had in the treatment of hay fever.

The sequence of events in the course of "catching a cold" is as follows: Normally, pathogenic organisms are present in the upper respiratory passages. The cold virus may also be present without causing symptoms. Upon chilling, the ingestion or inhalation of allergens, or exposure to an overabundance of pathogenic organisms, an allergic reaction edema of the mucous membranes of the respiratory tract may take place. The resulting damaged edematous mucous membranes are susceptible to invasion by pathogenic organisms and viruses. The damaged membranes provide a good culture medium which encourages multiplication of such organisms and viruses thereby furthering causation of the symptoms of a "cold" and its complications, e.g., rhinitis, sore throat, and sinusitis. If edema of the mucous membranes could be allayed prior to extensive damage by pathogens, this sequence might be altered and the cold prevented or attenuated.

Some investigators have reported excellent results with a minimum of side-effects when antihistamines have been administered prophylactically over long periods of time to potential cold sufferers. With such medication the mucous membranes of the respiratory tract should not respond with an allergic reaction. Actually, the incidence of colds as compared with control groups has been reported to be decreased by the use of antihistamines.

Material

A study was undertaken of the antihistamine Chlor-Trimeton maleate, brand of chlorprophenpyridamine maleate, combined in a tablet with aspirin, phenacetin, and caffeine ("A.P.C.") in the treatment of early "colds." The medications employed in the study were:

1. Coricidin tablets containing Chlor-Trimeton maleate 2 mg. ($^{1}/_{30}$ grain), aspirin 0.23 Gm. (3.5 grain), acetophenetidin 0.15 Gm. (2.5 grain), and caffeine 0.03 Gm. (0.5 grain).*
2. "A.P.C." tablets containing aspirin 0.23 Gm., acetophenetidin 0.15 Gm., and caffeine 0.03 Gm.
3. Placebo tablets.

The three tablets were identical in appearance.

The subjects were the employes of a large insurance company in New York. They were asked to come to the company clinic for the treatment of upper respiratory infections as soon as possible after the beginning of symptoms. They were questioned as to the initial symptoms of the cold—be it sneezing, a "running nose," "stuffy head," cough, or tickle in the throat—and as to the duration of symptoms. Ten tablets were given to each person with instructions to take two tablets immediately and then one every four hours, while awake, until symptoms cleared. The subjects were told that they were being given a "new cold tablet." None of them knew that a study was being undertaken. No other medications, such as nose drops, gargles, or cough syrup, were given. After forty-eight hours, each person was asked whether the medication brought relief, whether any unusual symptoms were noticed, and how many tablets had been taken.

The results obtained with each medication and the duration of symptoms for each case are shown in Table I. In interpreting the table the psychologic value of taking medication, as well as the body's own natural resources in combating infection, should be taken into consideration. It is likely that a certain percentage of subjects misinterpreted their symptoms. Possibly some of them were not going to develop "colds." These factors may account for the high percentage of so-called cures with placebos.

TABLE I.—RESULTS

	0 to 12 Hours Relieved			12 to 24 Hours Relieved			24 Hours Relieved			Total		
Medication	Yes	No	Per Cent	Yes	No	Per Cent	Yes	No	Per Cent	Yes	No	Per Cent
Coricidin	44	12	79	47	12	80	18	6	75	109	30	78.4
"A.P.C."	27	8	77	22	10	69	14	11	56	63	29	68.4
Placebo	24	10	71	26	12	68	3	7	30	53	29	64.6

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* Coricidin tablets and the control medications were supplied by Schering Corporation, Bloomfield, New Jersey.

TABLE II.—REACTIONS

Symptoms	Coricidin (139 Subjects)	"A.P.C." Tablets (92 Subjects)	Placebo (82 Subjects)
Sleepiness	13	4	6
Headache	2	1	4
Dizziness	..	1	2
Nervousness	1	.	..
Flushes, warm sensations	2	1	..
Stomach ache	3	4	..
Nausea	..	2	..
Bad taste in mouth	..	1	2
Rash on arms and thighs	..	1	..
Total	21	15	14
Per cent	15.1	17.4	17.2

Relief of symptoms was obtained in a higher percentage of the subjects taking Coricidin tablets than in the subjects taking "A.P.C." tablets or placebos. An average of six or seven tablets was taken. The number of tablets taken did not correlate with the final results in any way.

In Table II a number of reported reactions or complaints are tabulated. Analyzing the reactions reported, the majority of complaints could appear to be the direct result of an upper respiratory infection. Less than 10 per cent of the persons taking Coricidin complained of sleepiness (none sufficient to keep them from work). This symptom might have been more prominent, had it not been for the stimulating effect of the caffeine contained in the Coricidin tablets. The only skin reaction occurred in the "A.P.C." group. In all likelihood it represented an allergic reaction to a coal tar derivative.

Summary

With the use of Coricidin tablets in early upper respiratory infections, 78.4 per cent of subjects were relieved of symptoms, compared with 68.4 per cent of those given "A.P.C." tablets and 64.6 per cent of those given placebos. No serious reactions of any kind were encountered.

118 RIVERSIDE DRIVE

NONEPIDEMIC DIARRHEA ASSOCIATED WITH PARACOLON BACILLUS AND TREATED WITH STREPTOMYCIN

WILLIAM M. KELLY, M.D., Bath, New York

(From the Medical Service of Veterans Administration Hospital, Bath)

CONSIDERABLE difference of opinion exists with regard to the pathogenicity of the paracolon bacillus. In recent years, small epidemic outbreaks of transient diarrhea have been recorded in which strong suspicion was entertained concerning the paracolon group as the etiologic agent. Some investigators feel that, although the paracolon bacillus is a not infrequent inhabitant of the human bowel, its presence may result in a mild enterocolitis in certain susceptible individuals whose resistance to infection has been lowered by another disease. Neter and Clark isolated paracolon bacilli from the feces of 49 infants and children.[1] Of these, 45 patients were observed to have, or gave a history of having, diarrhea. In 14, paracolon bacilli were associated with other pathogenic or potentially pathogenic enteric organisms. In the remaining four patients in whom the paracolon bacillus was isolated no history of diarrhea was obtained. They concluded that, although the human colon can harbor these organisms without untoward results, under certain conditions they apparently become of pathogenic significance.

It is the purpose of this paper to report five adult cases of prolonged nonepidemic diarrhea in which paracolon bacilli were demonstrated. After oral streptomycin therapy the diarrhea stopped, and the organisms could no longer be demonstrated in the stools.

Laboratory Procedure

According to Smith and Martin the paracolon organisms are defined as "colon-like bacilli which ferment lactose late, poorly, irregularly, or not at all."[2] The method used in this study for the determination of the presence of the organism was as follows: Broth emulsion and Selenite F emulsion were inoculated with a portion of the suspected specimen and incubated for twenty-four hours at 37 C. Salmonella-Shigella agar plates were streaked, and after incubation at the same temperature for an additional twenty-four hours suspected colonies were fished and streaked onto Kligler's iron agar slants. The reaction at this point identified the organisms as to group. For example, the Proteus-Salmonella-paracolon group was identified by a negative slant and the forma-

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TABLE I.—History of Patients

Patient	Age	Primary Disease	Diarrhea			
			Duration	Type	Number of Stools per Day	Blood
C.G.	53	Parkinson's syndrome	6 to 8 times yearly for four years; present episode 10 days	Loose watery	4 to 6	No
J.M.	60	Coronary arteriosclerotic heart disease, class II; chronic alcoholism	15 days	Loose watery	4 to 6	No
R.O.	33	Diabetes mellitus with mild acidosis	14 days	Loose watery	5 to 8	No
P.C.	37	Diabetes mellitus	7 months	Loose watery to soft	2 to 5	No
J. J.	32	Amebic dysentery 1943; treated with apparent cure	1 month	Loose mucoid to soft	4 to 8	No

tion of acid and gas with or without hydrogen sulfide. This group was further subdivided by their reaction in urease, indol, lactose, and sucrose. A positive urease reaction eliminated the Proteus group, and the slow fermentation of either glucose or lactose plus a positive indol test established the organism as a paracolon bacillus.

Clinical Material

The patients in this series consisted of five adult white males between thirty-two and sixty years of age (Table I). In all of these men diarrhea was of sufficient duration to cause discomfort or debilitation or both. Each patient mentioned weakness as a prominent symptom, and all but one complained of weight loss, which ranged from 3 to 5 pounds, during the diarrheal episodes. There was no indication that any patient had had fever, nausea, vomiting, gastrointestinal bleeding, abdominal cramps, or pain during any of the diarrheal episodes. Barium enema and sigmoidoscopic examinations done on each patient failed to reveal any significant abnormal findings. Agglutination studies done on one patient (J. M.) revealed that the organisms were agglutinated by the patient's serum. This finding was in agreement with that of Rhodes who was able to demonstrate well-developed agglutinins for the paracolon bacillus in three of four patients; in the fourth patient the response was present but not marked.[3]

One patient (P. C.) had two to six stools daily for several months. These were either loose and watery or of soft consistency. His primary disease was diabetes mellitus which had proved difficult to control throughout the entire period of diarrhea. Following oral streptomycin therapy and the subsequent disappearance of paracolon organisms from his stool cultures, he had one or two formed stools daily, and his diabetes proved less difficult to control.

Four of these patients had coexisting chronic disease which in each case contributed to their generally debilitated state of health (Table I). The fifth patient (J. J.) had had a previously proved amebic dysentery, apparently adequately treated since repeated examinations failed to reveal the presence of Endamoeba histolytica in his stools during the period covered by this study. Following an episode of acute alcoholism a variable diarrhea of moderate severity developed which persisted without significant change for a period of one month, during which time paracolon organisms were isolated.

In order to determine the natural frequency of occurrence of this group of organisms in apparently healthy individuals in this community, we have used the routine employment examinations of employes at our hospital. During the period covered by this study bacteriologic stool examinations were done on 196 asymptomatic applicants. Eighteen (9.1 per cent) of these individuals showed paracolon bacilli present.

Treatment

Initially three patients (C. G., J. M., R. O.) were given a course of sulfasuxidine for from five to ten days without demonstrable clinical or laboratory evidence of improvement (Table II). In one (J. M.), although the number of daily stools became less, the diarrhea persisted. In all cases paracolon organisms continued to be present in stool cultures during and after sulfasuxidine therapy. J. J., because of the history of intestinal amebiasis, was given Carbarsone for ten days with no improvement in his diarrhea, and paracolon bacilli continued to be present in his stool cultures.

All five patients received oral streptomycin daily with noticeable clinical improvement, usually within four days. Following the establishment of normally formed stools, the paracolon bacilli could no longer be demonstrated. In one patient (P. C.) a relapse occurred, since the stool cultures again became positive during the fourth week after the completion of streptomycin therapy; during the sixth week the stools became

TABLE II.—TREATMENT

Patient	Culture Pretreatment	Treatment		
		Sulfasuxidine	Carbarsone	Streptomycin
C.G.	3 cultures positive for paracolon bacilli.	3 Gm. initial dose, 1 Gm. every four hours for six days. Diarrhea unchanged. Culture remained positive for paracolon bacilli.	. . .	1 Gm. every six hours orally. Diarrhea—none after third day. Culture—negative after third day.
J.M.	6 cultures positive for paracolon bacilli; agglutination by patient's own serum.	3 Gm. initially, 1 Gm. every four hours for five days. Diarrhea—less. Culture remained positive for paracolon bacilli.	. . .	1 Gm. every six hours orally. Diarrhea—none after third day. Culture—negative after third day.
R.O.	2 cultures positive for paracolon bacilli.	Initial dose 6 Gm., 2 Gm. every four hours for ten days. Diarrhea unchanged. Cultures remained positive for paracolon bacilli.		1 Gm. every six hours orally. Diarrhea—none after eighth day. Culture—negative after eighth day.
P.C.	2 cultures positive for paracolon bacilli.	. . .	. . .	0.5 Gm twice a day orally. Diarrhea—none after fourth day. Culture—negative after fourth day.
J. J.	2 cultures positive for paracolon bacilli. Repeated stool examinations negative for E. histolytica.	. . .	0.25 Gm. three times a day for 10 days. Diarrhea unchanged.	0.5 Gm. twice a day orally. Diarrhea—none after fourth day. Culture done on eighth day was negative.

very soft, and his diabetes again became difficult to control.

Three patients received 1.0 Gm. of streptomycin orally every six hours for eight days, and two patients received 0.5 Gm. orally twice a day for ten days. There was no noticeable difference in the degree or speed of improvement. With the exception of P. C., who was treated by the latter method, there has been no return of diarrhea to date.

During the period covered by this study, there was no special dietary regulation with the exception of the two patients with diabetes mellitus who received a calculated diabetic diet. During the time when sulfasuxidine, Carbarsone, and streptomycin were being given, no other special medication was prescribed.

Comment

It is our belief, based upon the prevalence of paracolon bacilli in the control series (approximately 10 per cent) that these organisms are widely distributed among the adult population. When the body resistance in such individuals has become lowered due to acute illness or chronic disease, the paracolon bacilli may become pathogenic to the extent that they give rise to enterocolitis of varying severity and duration. If the primary illness is acute in nature and promptly brought under control, the normal body defenses are sufficient to prevent involvement of the intestinal mucosa or to overcome paracolon bacilli infection if it occurs. This seems to have been the case in the series presented by Neter and Clark. On the other hand, if the primary disease is chronic, and especially if it is one which would become more severe if associated with diarrhea, as for example diabetes mellitus, then it is our belief that the secondary disease, namely, paracolon bacillus enterocolitis, also requires treatment. The results of this study indicate that oral streptomycin may well be the drug of choice since it is an effective therapeutic agent even in relatively low dosage.

Barnes and Cherry were able to demonstrate complete inhibition of growth of paracolon organisms streaked on two plates containing 5 mg. per cent of sulfathiazole.[4] In this series sulfasuxidine seemed to be of no clinical value. This may have been due to insufficient concentration of this drug in the blood and intestinal tract. No attempt was made in this study to inhibit the growth of the organisms in vitro by the use of streptomycin-agar plates.

Summary

Five cases of nonepidemic diarrhea associated with paracolon bacillus are reported. The response to oral streptomycin in each case was considered satisfactory since bacteriologic studies of the stools indicated a disappearance of the organisms coinciding with clinical improvement. Sulfasuxidine had no apparent clinical or bacteriologic effect in the three cases in which it was used.

The author wishes to acknowledge his indebtedness to Mr. N. Minsley, bacteriologist, at the Veterans Administration Hospital, Bath, for the bacteriologic studies which he conducted in connection with this study.

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LOGICAL REDUCTION OF DISPLACED COLLES' FRACTURE

J. V. Robbins, M.D., Port Jervis, New York

(*From the Department of Surgery, St. Francis Hospital*)

INJURIES about the hand and wrist are of extreme importance because any degree of impairment of function which frequently follows these injuries may have serious repercussions. The reduction of Colles' fracture with displacement, which comprises a great majority of fractures at the wrist and represents approximately 15 to 20 per cent of hospital fracture admissions, very frequently gives end results which leave much to be desired. Because of its frequency, this fracture is often lightly and casually regarded and often poorly treated. Economically speaking, the wrist joint is one of the most important joints of the body.

In 1814, Abraham Colles, an eminent Dublin surgeon, first reported in the *Edinburgh Medical and Surgical Journal* fractures at the distal end of the radius at its point of weakness where the dense cortical bone joins the more fragile spongy bone, 4 cm. proximal to the radial articular surface. A true Colles' fracture at this site is relatively rare, most of them being between $^1/_2$ to $^3/_4$ inch proximal to the radial articular surface. Today we usually apply the term "Colles' fracture" to the fractures of the distal 1 inch of the radius.

Colles' fracture implies an extension and compression fracture of the distal 1 inch of the radius, and the displacement of the distal fragment, when present, is dorsal and proximal with some radial rotation. The hand is thus carried backward and upward and deviates radially producing the familiar silver-fork deformity (Fig. 1). A successful and complete reduction of this fracture implies the restoration of the normal anatomic relationships of radius to ulna as to length, the styloid of the radius extending distally $^3/_8$ inch beyond the ulna and the restoration of the concave radial articular surface to its normal direction of downward, forward, and inward. The radial articular surface normally faces 25 degrees toward the ulna and 16 degrees toward the palm (Fig. 2). Imperfect reduction leads to permanent interference with pronation and supination, and the loss of the proper articulation angle at the radiocarpal joint will lead to permanent limitation of flexion.

As a result of the traumatic fracture of the lower end of the radius there is produced a large amount of soft tissue swelling and extravasation of blood in addition to the mechanical deformity produced by the fracture. To me it seems physiologically unsound to take this acutely injured and insulted bone fracture and to subject it to violent manual manipulation, rocking of the fragments, torsion, direct pressure, and other forms of manhandling in order to effect a reduction of the fragments. Some Colles' fractures do well after such abuse, not because of the violent manipulations but despite them. Such unnecessary forced manipulation serves only to insult further the recently injured area, again breaks open the sealed ends of the bones, producing more hemorrhage and exudate and greater interposition of clot, further increasing the swelling. It is appreciated that a certain amount of extravasation of blood between bone fragments is essential for the processes of repair and osteogenesis, but more than the minimal amount necessary for healing is bound to produce delay in union or an imperfect apposition of fragments. Manipulation again damages the soft tissue parts severely and may injure the previously injured fibrocartilages and wrist ligaments and prolong disability. The superimposition of repeated insults to the fracture site with the resultant physiologic and pathologic changes may be the answer to the frequently unsatisfactory results after this common type of treatment.

A plea is being made against this common practice of violently manipulating the fragments in order to effect reduction. Forceful manual manipulation in displaced Colles' fracture should be abandoned in favor of steady longitudinal trac-

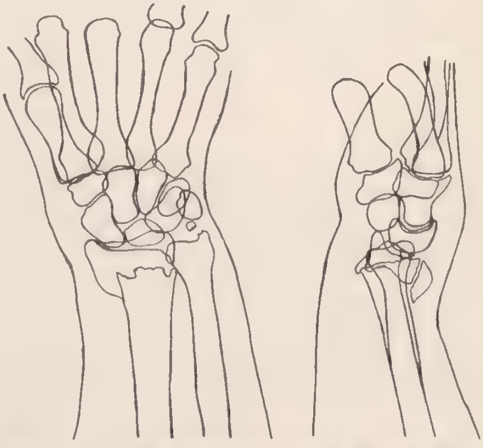

Fig. 1. Colles' fracture showing typical silver-fork deformity and displacement in posteroanterior (left) and lateral (right) views.

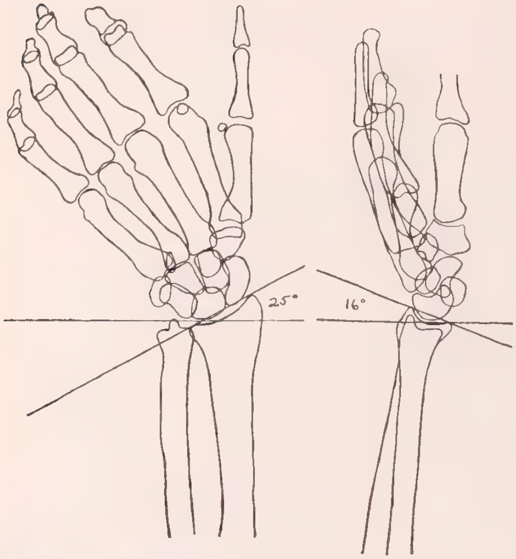

Fig. 2. Diagram of normal wrist joint in posteroanterior (left) and lateral (right) positions, showing the articulation relationships and angles which should be present in the normal wrist and the anatomically reduced Colles' fracture.

tion. Although the principles of strong, steady traction and countertraction in the long axis of displaced fractures elsewhere in the long bones of the body are commonly understood, this method applied to the hand in overcoming radial impaction and dorsal displacement is, unfortunately, too infrequently used. Böhler's principles must be more generally applied![1]

After a review of the numerous methods of traction applied to the hand for reduction of displaced Colles' fracture, perhaps the simplest and most practical, and the method requiring the least amount of assistance, is the use of the simple Chinese finger trap, a modification of the procedure developed by Caldwell and others, but applied only to the thumb of the affected extremity.[2-4]

Continuous fixed traction in the long axis of the thumb and radius against countertraction at the elbow will tire the muscles completely (usually within fifteen minutes) and makes use of the ligaments comprising the articular capsule of the wrist joint plus the longitudinal tube of tendons about the wrist joint, causing the fractured and displaced fragments to align themselves physiologically in the direction of pull and seek their own positions. Only occasionally will gentle equalized fingertip pressure be necessary to urge the fragments to replace. When one considers the line of longitudinal traction through the long axis of the radius, it seems more logical to apply traction to the thumb alone instead of using all five fingers as has been suggested.[5-7] By thumb traction the radial fracture when reduced will not only be restored to its original anatomic length, but the hand will be thrown into ulnar deviation which is the position of choice. All that may now be needed is gentle fingertip moulding and placing the hand and wrist in the proper degree of flexion.

I believe that the greatest degree of muscle relaxation is produced by some form of general anesthesia. The more muscle relaxation obtained, the less traction will be required and the least amount of trauma will be produced. The reduction of fracture without anesthesia is to be deplored. Intravenous anesthesia is simple, safe, and quick for adults. For children I prefer ether anesthesia. I have stayed away from local procaine infiltration because it does not give as complete muscle relaxation; there is the possibility of introducing infection; it prevents the application of a close-fitting cast and may interfere with finger perception should fingertip molding be necessary.

X-ray evidence of good anatomic reduction consists of a sufficient number of films taken at right angles to each other to determine whether the normal relationships as previously described actually exist. The common practice of taking a single anteroposterior and lateral view is in the occasional case sufficient. At times it is necessary to take the anteroposterior, posteroanterior, and both lateral views. Of the views generally taken, I consider the lateral to be more important. The anteroposterior view may look good, but the lateral may still show posterior (dorsal) angulation of the articular surface. It is this view which is usually lightly considered and receives only a casual glance.

Procedure and Technic

The following procedure and technic is recommended:

1. Reduce fracture early.
2. Sodium Pentothal anesthesia with patient supine on orthopedic table.
3. Arm is abducted 90 degrees from body, elbow 90 degrees to upper arm. A canvas sling or padded bandage fixes the upper arm to the table for countertraction, and with the thumb pointing toward the shoulder a single wire finger trap is applied to the unpadded thumb for traction. This will keep the hand in midpronation or neutral position. The metal loop of the wire finger trap is suspended by rope through a ceiling pulley to a 10 to 15-pound weight. This throws the hand into the desired ulnar deviation. At intervals of five, ten, and fifteen minutes the use of the x-ray (not fluoroscope) will indicate when reduction is complete. If at the end of fifteen

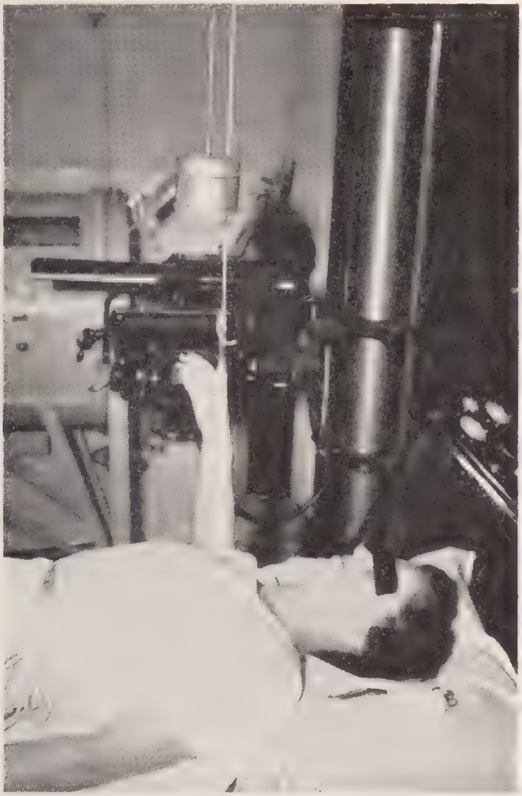

FIG. 3. Patient in position of reduction with 15 pounds thumb traction and countertraction to table. Portable x-ray machine in position.

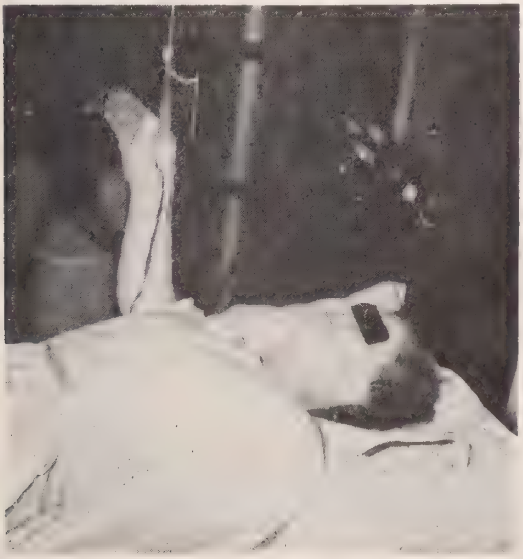

FIG. 4. Sugar-tongs plaster splint applied while forearm is in traction suspension. Thumb traction will be removed during plaster setting and moulding and wrist joint flexed approximately 60 degrees to maintain facing.

minutes the occasional case is not completely reduced, then gentle fingertip urging of the fragments will usually effect a satisfactory result. No assistant is required. When satisfactory films verifying anatomic reduction have been obtained, immobilization in plaster follows (Fig. 3).

4. I do not believe in the commonly used short, below-elbow cast but use the sugar-tongs type with the one-piece plaster splint extending from $^1/_2$ inch proximal to the metacarpophalangeal joints on the dorsum, encircling the elbow, and extending on the volar surface of the forearm to the distal flexion crease. It is applied while the forearm is in suspension traction as above, with approximately 60 degrees flexion at the wrist to maintain facing. Length is maintained by the ulnar deviation. The plaster is applied over a single overlapping layer of thin crepe paper as sheet wadding (Fig. 4). As the plaster sets, it is carefully molded around the distal ends of the radius and ulna so as to approximate closely these bones and minimize the separation caused by torn ligaments. An eight-layer thickness of plaster is usually sufficient. A circular plaster may then be applied over the sugar tongs from below the elbow to below the thumb. The circular plaster should be bivalved but not separated unless circulatory impairment makes it imperative, and sufficient trimming around the thumb is necessary to permit thumb motion (Fig. 5). When properly applied and trimmed, the cast will permit complete flexion and extension of all interphalangeal and metacarpophalangeal joints and slight motion at the elbow and will eliminate any rotary movement of the forearm and radioulnar joint.

5. Active finger, biceps, and shoulder exercises should be started immediately after reduction and continued throughout the duration of treatment.

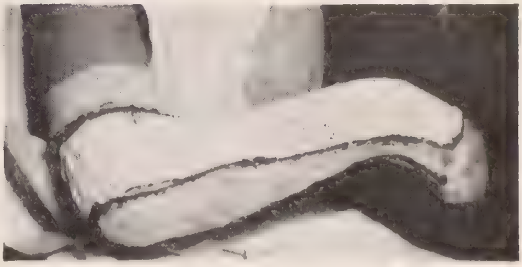

FIG. 5. Colles' fracture reduced and immobilized in plaster sugar-tongs splint showing position of reduction and degree of active motion of fingers.

Frequent x-ray examinations, especially during the first two weeks, will verify the reduction. If any postreduction swelling made spreading of the circular cast necesary, this should be reapplied when the swelling has subsided.

The cast should be left on a full six weeks in adults, or until callus is visible by x-ray, before its first removal for physiotherapy. It is wise to remove only half, leaving the other half on for two weeks more during which time physiotherapy continues and the patient performs active motions, never passive. The fixation in plaster must be maintained until the callus is demonstrable and sufficient time has elapsed for the callus to consolidate. It is usually present in six weeks but may take up to ten weeks. The length of disability, however, is considerably longer, and in the case of the laborer may be approximately sixteen weeks from the time of the accident.

Conclusions

1. Do not use leverage, hyperextension, or violent manipulation in reducing displaced Colles' fractures.
2. Do reduce early and anatomically and under general anesthesia by the use of continuous wire, finger-trap thumb traction.
3. Do not use short casts.
4. Do immobilize by use of "sugar-tongs" plaster including elbow.
5. Do not remove plaster early.
6. Do immobilize long enough to see callus by x-ray.
7. Do not neglect frequent postreduction checkups.
8. Do insist on active motion of fingers, biceps, and shoulders.

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1951 ANNUAL MEETING
MEDICAL SOCIETY OF THE STATE OF NEW YORK

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W. P. Anderton, M.D., *Secretary*

Case Reports

APLASTIC ANEMIA SUBSEQUENT TO SULFONAMIDE ADMINISTRATION

James M. Steele, M.D., Jamestown, New York

(*From the Jamestown General Hospital*)

Aplastic anemia, by definition, is a blood deficiency characterized by failure of hemopoiesis due to aplasia of the bone marrow. Haden states that "true aplastic anemia is a very uncommon disease."[1] In common usage, the term is affixed to many other types of refractory anemia to which the term "panhemocytopenia" might more accurately be applied. Thompson *et al.* in an analysis of 13 cases of so-called aplastic anemia found marrow hypoplasia in only one case, describing the other cases as due to "marrow block" or "maturation arrest."[2]

Rhoads subdivides "aplastic anemia" into (1) those anemias associated with hypocellular marrow (true aplastic anemia), (2) those anemias associated with immature cells in the marrow, (3) those anemias associated with active cellular marrow, (4) those anemias associated with sclerosis of the marrow, and (5) those peripheral blood dyscrasias associated with megakaryocytic marrow.[3]

Case Reports

J. M., a male student thirteen years old, was admitted to the hospital on February 24, 1948, with purpuric areas over both ankles and pretibial regions and a temperature of 100.6 F. Fourteen days previously he had developed a cold, for which sulfadiazine was prescribed, together with oral penicillin. He improved sufficiently to return to school, but on January 17 he noted general weakness and recurrence of fever. Two days later his physician noted purpurae over the knees and ankles which he attributed to a possible reaction to penicillin. The patient continued to cough and run fever; on January 24 a leukocyte count of 2,100 was noted. The total dosage of sulfadiazine over the fourteen-day period was estimated at 6 Gm.

The only previous hospital admission had been for tonsillectomy in 1940. He had been subject for several years to ragweed hay fever and occasional episodes of urticaria upon ingestion of eggs and certain sea foods. His symptoms were relieved by Benadryl; he had never received any desensitization treatment. Sulfadiazine had been administered for respiratory infections on at least two previous occasions, but none except as noted above for at least six months.

Examination revealed a moderately well-nourished boy with many small petechaie on the upper lids and palate and a small amount of encrusted blood on his lips. There was no ulceration of the mouth or pharynx and no evidence of active gingival bleeding at this time. There was moderate tachypnea, but no abnormal physical signs could be elicited from the lungs. The heart was rapid but otherwise normal. The spleen and liver were not palpable then nor subsequently. Superficial and deep reflexes were normal throughout. There were several crops of petechiae over the anterior surface of both legs.

Initial blood findings were as follows: hemoglobin 11 Gm.; erythrocytes 3,490,000; leukocytes 550 per cu. mm. (15 per cent granulocytes, the balance lymphocytes); bleeding time sixty seconds; clotting time two minutes and fifty seconds; platelets 28,120; blood type A, Rh positive. Urine examination was noncontributory.

He was immediately given 300 cc. of whole citrated blood from a compatible donor, and 50,000 units of penicillin were administered intramuscularly every three hours until March 15, when a daily dose of 300,000 units of procaine penicillin was substituted. Thirty units of concentrated liver extract intramuscularly and folic acid, 45 mg. by mouth, were administered daily until mid-April. With a view toward stimulation of platelet regeneration, alpha-Tocopherol in the form of 90 mg. of Ephynal daily was begun on January 29 and continued for three months. He received 19 transfusions totaling 9,300 cc. of whole blood.

At first, the clinical course seemed surprisingly benign. The patient had no subjective complaints, and the original petechiae cleared rapidly. He had many and unpredictable reactions to transfusions, consisting of chills and increased temperature, morbilliform eruptions, urticaria, and, on one occasion, a severe anaphylactoid reaction with expiratory dyspnea and marked apprehension. It is interesting to note that in the 13 transfusions where the donor was in the fasting state for eight hours or more no reactions were observed. Routine pretransfusion administration of Benadryl may have ameliorated these symptoms somewhat but certainly did not prevent them entirely.

Daily blood counts were performed; his total leukocyte count rose somewhat, the highest count being 3,100 on March 4, but the combined granulocytic forms, including immature myeloid elements, never exceeded 9 per cent. His erythrocytes dwindled, with slight transitory increases after transfusion, until a final count of 1,990,000 on April 19. His highest platelet count after admission was 24,720.

On February 2, he showed a mild excoriation of the alveolar margin, followed the next day by gingival bleeding and petechiae on the anterior surface of the neck; this bleeding subsided promptly on transfusion. He continued to have mild gingival bleeding and crops of petechiae recurrently five to six days after each transfusion. On March 6, an attempt was made to "reseed" the bone marrow. Using two sternal puncture needles, 7 cc. of sternal marrow was aspirated from a compatible donor and transfused to the sternal medullary space of the recipient through the second needle, followed by a transfusion of 500 cc. of whole blood from the same donor. This procedure resulted in no demonstrable improvement and was not repeated because of the attendant discomfort to the patient.

On April 7, moderate diarrhea and anorexia developed; the next day there was fresh blood in the stools. From this point the decline in his condition became more rapid. On April 15, several tender nodules developed over both lower extremities; the largest of these, over the right tibia, was the size of a large walnut and exquisitely painful. Intermittent mild delirium accompanied an increase in his febrile reaction; on April 19, he vomited "coffee ground" material and looked extremely toxic. On April 20, the whole right leg was swollen and discolored with a large bleb at the site of the pretibial nodule. Sordes and devitalized tissue appeared around the gingivae. On the evening of April 22, he expired.

The first marrow smear on February 14 was reported with the following comment: "The bone marrow cells are so scant that it took four different slides to count 500 cells. Megakaryocytes are absent. Myelocytes are slightly increased in number, but only 4.80 per cent are reaching full maturity (about 35 per cent normally). The erythrocytic series is also profoundly depressed, and not even 1 per cent proceed to the normoblastic stage (about 9 per cent normally). Striking is the influx of lymphocytes which are about three times more numerous than in normal bone marrow. *Impression:* Profound depression of bone marrow."

A second marrow smear on March 25 showed all the cellular elements in the same proportion as in the peripheral blood, except for a slightly higher percentage of plasma cells. It is conceivable that this specimen consisted largely of peripheral blood, due to faulty aspiration technic; if not, the marrow was completely aplastic.

Postmorten examination revealed that every organ of the thorax and abdomen was studded with hemorrhagic areas, large and small, together with areas of necrosis representing infection and injury without noticeable tissue reaction or phagocytosis. The area of pretibial necrosis was one of these. Sections taken from the sternum, ribs, and vertebral bodies all revealed complete aplasia of the functional marrow. The tissue was pale yellow in color, and the stained sections were nearly identical in cellular composition to those of the peripheral blood. The anatomic diagnosis was bacteremia with multiple septic emboli and total bone marrow aplasia.

Comment

This case represents one of the uncommon varieties of refractory anemia due to true depression of all hemopoietic elements in the marrow with consequent septicemia so overwhelming that penicillin and repeated transfusions could not cope with the situation.

The question of etiology immediately arises. Denney and Menten report six cases of aplastic anemia in children subsequent to administration of sulfonamides in which a causal relationship was implied.[4] However, these cases all followed a higher total dosage of the drug (27 to 34 Gm.) than in this case. In discussion of the pathogenesis, they point out that the bone marrow of children is apparently much more labile and susceptible to toxic action than is true in adults. They mention that acquired sensitivity to the drug might play a role but are inclined to interpret their cases as a direct interference with the utilization of enzymes necessary for the development and maturation of marrow cells.

In this case we have a young individual with a clear-cut allergic predisposition and a history of repeated doses of sulfadiazine which may have acted as sensitizers. The total dosage of the drug, 6 Gm., does not seem excessive under ordinary conditions, and it would seem that the hypothesis of acquired sensitivity to the drug as the mechanism of pathogenesis is supported in this instance. If this concept is accepted, it indicates the necessity for increased vigilance in the repeated administration of sulfonamides to children with a known predisposition to hypersensitivity.

An interesting feature of this case was the unpredictable nature of reactions to transfusion. These were obviously allergic in type, as described by Hargraves, who suggests preliminary preparation with one of the antihistaminic drugs, a fasting donor, and nonrepetition of transfusion from the same donor as the best means of preventing such reactions.[5] In the absence of a blood bank, the last of these measures was impossible of fulfillment in this case, but there seemed to be no demonstrable relationship between such repetition and reaction.

Summary

1. A case of true aplastic anemia subsequent to the administration of 6 Gm. of sulfadiazine is presented.
2. The possible role of acquired sensitivity to the drug as a causative factor in the pathogenesis of this malady is discussed.
3. The advisability of caution in the repeated administration of sulfonamides in individuals with a history of allergic manifestations is indicated.

518 Pine Street

Grateful acknowledgment is hereby made to Dr. Margaret Loeffler, assistant pathologist at the Jamestown Municipal Laboratory, for her personal studies of all blood films and marrow smears over this extended period.

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VOLVULUS WITH PARTIAL INTESTINAL OBSTRUCTION CAUSED BY AN ABNORMALLY PLACED APPENDIX

Sidney Cohn, M.D., and Richard D. Felmus, M.D., Bronx, New York

(From the Bronx Hospital)

THE following is a case report of an abnormally placed appendix causing a volvulus with partial intestinal obstruction. A review of the literature reveals a relative infrequency of this condition.

Case Report

R. M., white female, age sixty-seven, was seen first on September 21, 1948. Her chief complaint was abdominal pain. The onset of generalized abdominal pain was sudden, appearing twelve hours prior to admission to the Bronx Hospital. The patient vomited persistently and had one spontaneous, normal bowel movement.

Past history revealed that seventeen years ago she had had a panhysterectomy for carcinoma of the fundus uteri. It was not known whether her appendix had been removed at the time. For many years she had complained of severe intermittent pain along the spine, diagnosed as spondylitis.

Physical examination revealed blood pressure 150/100, temperature 98.6 F., and pulse 98. The patient appeared acutely ill. The heart and lungs were negative. There was a well-healed midline scar in the lower abdomen. There was slight abdominal distention, rigidity, and rebound tenderness in the lower abdomen, more pronounced on the right side. An indefinite tender mass was palpable in the right lower quadrant. On vaginal examination the cervix was present. The corpus uteri and adnexa were not palpable. Clinical diagnosis: (1) acute appendicitis and (2) acute intestinal obstruction, partial, due to postoperative adhesions or bands.

On September 21, 1948, hemoglobin was 102 per cent (14.8 Gm.); red blood cells 4,800,000; white blood cells 16,500; polymorphonuclears 88; lymphocytes 12. Urine showed specific gravity 1.015 and albumin and was negative for sugar and acetone. No white or red blood cells were present. Nonprotein nitrogen was 25.5, creatinine 1.4, and blood sugar 144.

Operation.—Under spinal anesthesia visible peristalsis was noted. A right lower rectus incision was made; the muscles were separated, and the peritoneum was incised. There were no adhesions to the anterior abdominal wall. There was a moderately large amount of free serosanguineous fluid in the abdomen which was aspirated. The pelvis was remarkably clear of adhesions. There was no evidence of metastases. On further exploration about 16 inches of moderately distended small bowel presented, varying from beefy red at the center to severe congestion at the extremities of the loop. At the middle of the loop there were some petechial hemorrhages. The involved portion of bowel commenced about 18 inches from the ileocecal valve. There was no sharp line of demarcation between the affected bowel and the normal bowel but rather a gradual lessening of color from red to normal.

The cause of the obstruction was seen to be the appendix which came off a rather highly situated cecum. The appendix passed around the root of the mesentery on the inner side and was adherent at its tip to the brim of the pelvis on the other side of the mesentery (Fig. 1). Because of this constriction there had been a partial twist in the mesentery, and some of the mesenteric vessels showed areas of thrombosis varying from 4 mm. to 1.5 cm. in length and from 2 to 4 mm. in width. The bowel was soaked with warm saline pads and quickly regained most of its normal appearance. The appendix looked perfectly normal except for its unusual position, and the adhesion at its tip did not seem to be the result of previous inflammation. In order to remove the appendix it was necessary to double tie it at the base and to divide it between the ligatures with a carbolized knife; both stumps were treated with phenol and alcohol. The mesentery was then ligated and divided in section. The appendix was then removed. The mesentery of the small bowel was untwisted (180 degrees) in a counterclockwise direction and the bowel reposited into the abdomen. The abdominal wound was closed in layers using continuous chromic #1 suture for the peritoneum, interrupted chromic #2 suture for the fascia, and clips for the skin.

Postoperative Course.—The patient was given intravenous fluids of 5 per cent glucose and normal saline, 5 per cent glucose and distilled water, and Aminisol, making a total of 3,000 cc. per day. Liberal doses of vitamins B and C were given intravenously and by mouth. A Levine tube and Wangensteen suction were instituted for the first two days. Fifty thousand units of penicillin were given every three hours. Postoperative course was uneventful. The clips were removed on the seventh

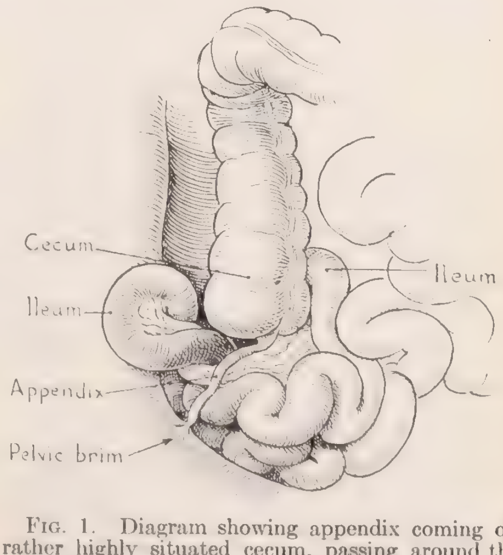

Fig. 1. Diagram showing appendix coming off rather highly situated cecum, passing around the root of the mesentery on the inner side, and adherent at its tip to the brim of the pelvis on the other side of the mesentery.

postoperative day, and the wound healed by primary union.

Dr. Joseph Felsen reported the specimen as follows:

> *Gross:* Specimen is an appendix measuring 7 cm. in length. The serosal surface is smooth and white. The wall is 1 mm. in thickness. The lumen contains fecal material. The mucosa is pale and smooth.
>
> *Microscopic:* Section of the appendix reveals a markedly dilated lumen filled with fecal debris. The lymph nodules are well preserved. There is some increase in the submucosal fat.

Summary

An unusual case of volvulus of the small bowel due to an abnormally placed, noninflamed appendix is reported.

TYPHOID FEVER AND INTESTINAL PERFORATION: RECOVERY WITH CHLOROMYCETIN AND DIHYDROSTREPTOMYCIN

Reid R. Heffner, M.D., and Arturo Brindisi, M.D., New Rochelle, New York

(*From the New Rochelle Hospital*)

CHLORAMPHENICOL (chloromycetin) is a specific therapeutic agent in typhoid fever and is the drug of choice in the treatment of this disease.[1] The first report to appear in the literature on this subject was by Woodward and coworkers, who reported a group of ten cases of typhoid in Malaya treated with chloromycetin.[2] Since that time several additional reports have been made by these and other investigators.[3–6] In general, the observation has been that in patients with typhoid treated with chloromycetin, spectacular improvement begins to occur about forty-eight hours after antibiotic therapy is initiated. About this time the fever begins to recede by lysis, the toxic manifestations abate, and by the end of the third or fourth day the temperature falls to normal levels. Blood cultures remain sterile after beginning therapy with chloromycetin.[2] However, it has been pointed out by Smadel that the intestinal lesions are unhealed for several days and there is danger of perforation and hemorrhage during the first week of convalescence.[1] Woodward observed massive intestinal hemorrhage in one of his patients on the fourth afebrile day.[2] In another case, intestinal perforation developed on the second day of normal temperature. Both patients recovered. In one, whole blood transfusions were administered, and in the other supplementary therapy with streptomycin and penicillin was given.

In addition to these complications, relapses of typhoid have been observed by Woodward and by McDermott and associates.[2,4] Upon analysis of 44 patients, Smadel, Woodward, and Bailey observed a direct relation between the duration of chloromycetin therapy and the incidence of relapses.[6]

Smadel recommends the following plan of treatment of the typhoid patient with chloromycetin: 3 Gm. initially as a loading dose, followed by 3 Gm. daily in divided doses (interval between doses eight or twelve hours) until the fever disappears, then 2 Gm. daily for the next seven to ten days.[1] A total of at least 30 Gm. of the drug over a ten to twelve-day period appears to be adequate, according to Smadel.

We have recently treated a patient with typhoid fever who developed intestinal perforation and wish to report the case in some detail.

Case Report

S. C., white male, age forty-seven years, was admitted to the New Rochelle Hospital on October 22, 1949, with a two-day history of fever, headache, and "stiffness of the muscles." There were no symptoms referable to the gastrointestinal tract. The family and past histories were irrelevant. On admission to the hospital (admitted by A.B.), the patient was acutely ill, restless, and appeared excited. The temperature was 103.4 F., pulse 88 per minute, respiration 20 per minute, and blood pressure 126 systolic and 74 diastolic. The general and neurologic examinations were otherwise essentially negative, except for moderate nuchal rigidity and hyperactive deep reflexes. The abdomen was not distended, and the liver and spleen were not palpable.

Laboratory examinations revealed the following: Urine—specific gravity, quantity not sufficient; reaction alkaline; albumin 2 plus; sugar negative; acetone negative; microscopic, 4 to 6 pus cells and 1 or 2 red cells per high power field, granular casts 0 to 1 per high power field. Bacteriologic culture of the urine was negative. Blood count—hemoglobin 13.4 Gm. (86 per cent); leukocytes 4,600, with 76 per cent neutrophils (nonsegmented 35 per cent), lymphocytes 7 per cent, monocytes 16 per cent, and eosinophils 1 per cent. Blood sugar was 75 mg. per 100 cc.; urea nitrogen 14.1 mg.; cholesterol 120 mg. Blood agglutinins included typhoid O and H, positive 1:10; paratyphoid A and B, B. abortus, P. tularensis, and Proteus OX19, negative in all dilutions. Spinal fluid—cell count 2 white blood cells, globulin negative, sugar 59 mg. per cent, chlorides 675, total protein 24, Wassermann negative, and culture negative.

The patient was treated symptomatically for the first forty-eight hours. It was felt that he was suffering from a generalized systemic infection, the nature of which had not been determined, associated with meningismus. The temperature ranged from 99.8 to 102.6 F., and, although the patient was acutely ill, he did not appear critical. Blood and feces cultures were taken on the second hospital day. At that time aureomycin, 500 mg. by mouth, was begun. The dosage was as follows: 500 mg. every four hours for three doses, then 250 mg. every four hours. The general condition of the patient remained essentially unchanged, for the next few days, except for fever up to 104.6 F. On October 27 (fifth hospital day), the laboratory reported that a gram-negative motile bacillus, requiring further study for identification, had been isolated from the blood. The stool culture was negative for Salmonella and Shigella type organisms. Aureomycin was discontinued, and chloromycetin, 1 Gm. every three hours for three doses, then 500 mg. every three hours was begun.

On the following day, October 28, the motile bacillus isolated from the blood proved to be Salmonella typhosus. Sensitivity tests revealed it to be resistant to penicillin and streptomycin and sensitive to aureomycin and chloromycetin. On October 29, the patient became somewhat drowsy; his temperature remained elevated (104 F.); he began to have chills and developed mild diarrhea for the first time. He took food poorly. Intravenous fluids were administered. By October 31, the abdomen had become moderately distended, the patient vomited frequently, and he began to refuse to take chloromycetin. At that time it was necessary to disguise the medication by giving it with food. Consequently, 750 mg. chloromycetin were administered in a small amount of food every four hours. Within forty-eight hours, the patient's temperature had decreased and ranged from 99.6 to 101.2 F. However, the abdominal distention had increased somewhat. On November 5, he complained of sharp pain in the lower chest, which radiated downward to the pelvis, of a few minutes duration. Later he had a chill, followed by profuse perspiration; the pulse rose to 120 per minute, respiration 38, temperature 102.8 F., and he became irrational at times. The abdomen became tremendously distended. Food, which included chloromycetin, was frequently refused. Four to six watery stools daily continued. Blood culture revealed no growth of organisms, and stool culture was negative for Salmonella typhosus. A blood count showed hemoglobin 10.6 Gm.; erythrocytes 3,600,000; leucocytes 4,800; differential—neutrophils 74 per cent (nonsegmented 25 per cent), lymphocytes 22 per cent, eosinophils 1 per cent, monocytes 3 per cent.

The patient appeared to be in a critical condition on November 7, when one of us (R.R.H.) saw him for the first time. He was semicomatose, breathing very rapidly, and the abdomen was tremendously distended; no tenderness was present. The temperature was 102 F. The nurse reported frequent watery diarrhea without gross blood. Cultures of the blood and feces were again negative for Salmonella typhosa. Roentgenographic examination of the abdomen and chest revealed a gross collection of free air beneath the left leaf of the diaphragm, some air present beneath the right diaphragmatic leaf, and a collection of air along the lateral chest wall. There was bilateral elevation of both leaves of the diaphragm and compression atelectasis at the base of the right lung.

It was evident that intestinal perforation had occurred and the patient was in grave condition. Consequently, a small Levine tube was passed through the nose into the stomach, and 1 Gm. of chloromycetin, mixed in 120 cc. of water, was instilled every four hours. Also, dihydrostreptomycin, 0.5 Gm. intramuscularly every eight hours, was begun. The patient was given a 500-cc., whole blood transfusion and was placed in an oxygen tent. During the next four days, fluid and electrolyte balance was maintained by the intravenous route. Amigen was also administered intravenously. Thirty-six hours after this regimen was begun, the patient's temperature declined (99 to 99.6 F.); he became rational, and the abdominal distention markedly improved. By the fourth day, the abdomen was practically normal; the diarrhea had ceased, and he began taking clear fluids by mouth. Dihydrostreptomycin was discontinued. At the same time the dose of chloromycetin was reduced to 500 mg. every three hours and continued for an additional five days. On the sixth day the Levine tube was removed, and soft foods were allowed. Following this three stool cultures were negative for Salmonella typhosa.

The patient was discharged from the hospital on December 5, approximately four weeks after the intestinal perforation, feeling well, eating a regular type of diet, and having one normal bowel movement daily. Eleven months later he has had no recurrence of symptoms.

Comment

We have reported the case of a patient with typhoid fever who developed intestinal perforation about the ninth day after beginning treatment with chloromycetin. At no time during this period did he respond favorably to the antibiotic, and it is our opinion that not only was the daily dosage probably somewhat insufficient, but his frequent refusal to take the drug and vomiting at intervals accounted for the lack of favorable clinical improvement. After the diagnosis of intestinal perforation was made and chloromycetin, 6 Gm. (through Levine tube), and dihydrostreptomycin, 1.5 Gm. (intramuscularly), daily were begun, there was decided clinical improvement within thirty-six hours, and the patient's further convalescence was uneventful.

It is impossible to determine with accuracy the amount of chloromycetin that the patient actually took during the first eight days of treatment, but following the intestinal perforation he received a total of 40 Gm. of chloromycetin for nine days, in addition to 6 Gm. of dihydrostreptomycin during the first four days.

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THE ERGONOVINE TEST IN THE DIAGNOSIS OF CORONARY INSUFFIENCY DUE TO HYPERTHYROIDISM

Isidore Stein, M.D., and Joseph Weinstein, M.D., Brooklyn, New York

(From the Division af Cardiology, Jewish Hospital of Brooklyn)

ANGINA pectoris is an uncommon complication of hyperthyroidism.[1] There have been numerous reports of therapeutic successes with the administration of thiouracil and its derivatives.[2-4] The following case of thyrotoxicosis in which angina pectoris was the predominant symptom showed a prompt and complete relief following treatment with propylthiouracil. This report is of interest also in that the ergonovine test was used for the first time to obtain objective electrocardiographic evidence of coronary insufficiency in this type of case. The test became negative after treatment.

Case Report

M. M., a thirty-seven-year-old white housewife, complained of anterior chest pain for a period of three years, appearing with mild exertion or excitement and occasionally at night and relieved by rest in three to four minutes. Towards evening her ankles would become swollen. There was no undue dyspnea or orthopnea. She had lost a considerable amount of weight three years previously but since then had regained 10 pounds. An old history of arrested tuberculosis was obtained. She had been pregnant twice (seven and ten years ago) and each time gave birth to a normal child. She never had rheumatic fever, diabetes, or hypertension and was never told she had any cardiac involvement despite frequent examinations. There was no familial history of diabetes or hypertension. Her father died of a "heart attack" at fifty-two years of age.

On examination she showed essentially the following: She was not acutely ill and weighed 114 pounds. There was no exophthalmos. The eyegrounds showed no vascular sclerosis. The thyroid gland was moderately enlarged, but a bruit was not heard nor a thrill felt. Fine tremors of the extended fingers were present. The heart was not enlarged, and the sounds were of good quality, the second pulmonic sound being louder than the second aortic. A short soft systolic murmur was localized at the apex. The rate varied between 90 and 100 per minute. The blood pressure was 130/84. There were no unusual pulmonary or abdominal findings. One plus pretibial edema was noted. The knee jerks were equal and active.

The laboratory studies were as follows: Urinalysis was normal; hemoglobin 80 per cent or 12 Gm.; red blood cells 4,270,000; white blood cells 4,350; polymorphonuclear nonsegmented 3; segmented 37; lymphocytes 57; eosinophils 2; monocytes 1. The serology was negative. The blood cholesterol was 100 mg. per cent (Table I). A roentgenogram of the chest revealed several calcific shadows interpreted as evidence of old tuberculosis. The heart was normal in size. The basal metabolic rate was plus 50. The electrocardiogram was normal.

An ergonovine test was performed (0.2 mg. ergonovine maleate in 1 cc. distilled water intravenously), and a positive result for coronary insufficiency was obtained. She complained of chest pain after three minutes which was promptly relieved by nitroglycerine, $^1/_{100}$ grain sublingually. The electrocardiogram showed marked ST depression and T wave inversion in CF_4 which returned to normal in ten minutes (Fig. 1).

She was given nitroglycerine, $^1/_{150}$ grain sublingually, which afforded her prompt relief from her chest pain. She used 4 to 6 tablets a day. Digitoxin was discontinued after one week because of vomiting. During this interval the pretibial edema disappeared. After five days on a daily dosage of 0.150 Gm. propylthiouracil, the patient no longer had any chest pain and has had no need for nitroglycerine since (three and one-half months). On her own initiative she ran up and down several flights of stairs and scrubbed the floors of her apartment without the appearance of pain in the chest. No untoward reactions to the propylthiouracil were noted. There was a mild initial anemia treated with iron and a leukopenia which subsequently disappeared. The blood cholesterol rose to 177 and later to 224 mg. per cent. The basal metabolic rate fell to plus 12 (Table I). In three months there was a gain of 3 pounds.

Another ergonovine test, using the same dosage, three months after the initial one was negative as the patient did not experience any pain nor were there any electrocardiographic deviations (Fig. 2).

Comment

Thiouracil and propylthiouracil have been used effectively as antithyroid (chemical thyroidectomy) agents in the control of angina pectoris.[2-4] The explanation for the beneficial results obtained is probably the same as for total thyroidectomy. According to Levine and Eppinger, thyroidectomy results in an alteration in the sensitivity of the heart to adrenaline as well as by a decrease in the work of the heart due to the fall in the basal metabolic rate.[5]

TABLE I.—Laboratory Studies

1949	Hemoglobin (Per Cent)	Red Blood Cells	White Blood Cells	Polymorphonuclears Non-segmented	Polymorphonuclears Segmented	Lymphocytes	Eosinophils	Monocytes	Blood Cholesterol (Mg. per 100 cc.)	Basal Metabolic Rate	Symptoms (Pain)	Propylthiouracil 1(Gm.)
Sept. 8	80 (12 Gm.)	4,270,000	4,350	3	37	57	2	1	100	+50	+++	0.150
19	71	3,700,000	7,600	2	57	30	..	1	...	..	+	...
27	73	3,660,000	9,250	9	59	31	..	1	...	..	0	...
Oct. 3	80	3,920,000	6,100	1	59	30	3	8	..	+12	0	...
17	84	4,300,000	8,050	2	59	37	2	..	177	...	0	...
Nov. 7	87	4,200,000	7,200	1	63	33	3	..	...	...	...	...
Dec. 5	83	4,500,000	10,900	4	69	26	..	1	224	..	...	0.100

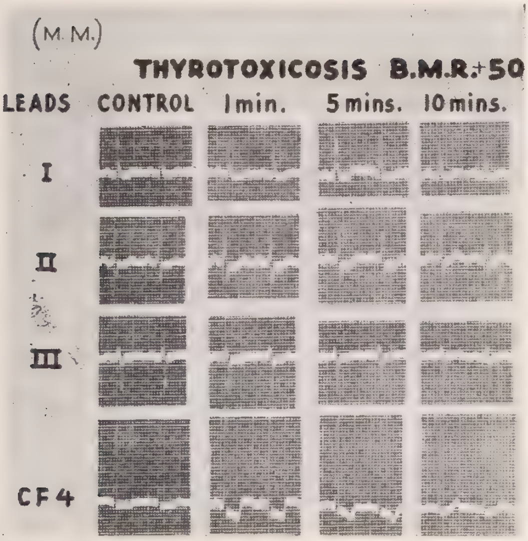

FIG. 1. Ergonovine maleate, 0.2 mg. intravenously, and nitroglycerine, 0.4 mg., given after five minutes. Note ST changes, especially in CF_4.

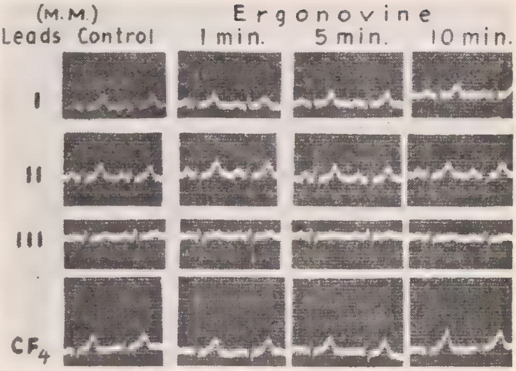

FIG. 2. Ergonovine maleate, 0.2 mg. intravenously. Negative response after propylthiouracil.

Shambaugh and Cutler suggest that the therapeutic results of thyroidectomy in angina pectoris may be due to an interference with the thyroadrenal mechanism.[6] Raab found that thyroxin sensitized the heart in the rat to epinephrine and that pretreatment with thiouracil reduces the sensitivity.[7] He believed that the anginal syndrome was produced by the local anoxiating effect of excess epinephrine in the heart where the coronary arteries were sclerotic.[2] Such a heart is sensitized to epinephrine through the thyroid hormone.

It is to be noted, however, that Barbour in 1912, studying the effect of adrenaline on the coronary vessels shortly after death, found vasoconstriction occurred in two individuals, aged twenty-four and thirty-four years, where only thickened intima was noted histologically.[8]

Ergonovine maleate has been demonstrated to be an important adjuvant in the diagnosis of coronary insufficiency.[9,10] The criteria employed are similar to those seen in exercise or anoxemia studies.[11,12] In the main they consist of RST depression, T wave inversion, and, as a rule, pain in the chest. Our patient fulfilled all of the above criteria during the initial test. As stated in a previous publication we postulated that ergonovine has an angiospastic action directly on the coronary arterial tree in individuals with underlying coronary sclerosis.[10] Whether or not our patient had any degree of arteriosclerotic involvement of the vascular system could not be definitely stated. Yet, the factor of sensitization of the coronary vessels to epinephrine through the thyroid hormone, as postulated by Raab, undoubtedly played a role in the production of symptoms.[2] Objective evidence of the patient's improvement under propylthiouracil therapy was demonstrated by the negative ergonovine test performed three months later at a time when her symptoms had disappeared.

Summary and Conclusion

A case of angina pectoris on the basis of hyperthyroidism is reported. The unusual features were the rapid disappearance of the patient's symptoms following propylthiouracil therapy and the objective electrocardiographic evidence of the presence of insufficiency as evidenced by the ergonovine test which disappeared after therapy.

We are indebted to Mr. Walter Stern for the technical aid involved in this study.

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When you plant a wood, you are only paying posterity what you borrowed of your ancestors.—Anonymous

SUMMARY OF MINUTES OF THE COUNCIL OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

At its meeting on October 12, 1950, the Council considered the following matters, taking action as indicated.

Secretary's Report

Remission of annual assessments was voted on account of illness for four members for 1950 and one for 1949, as recommended by their county medical societies.

Since the last meeting of the Council, your Secretary attended committee meetings and meetings of the Third, Fourth, Sixth, and Eighth District Branches. These were well attended and the scientific programs were excellent.

Dr. J. Stanley Kenney, Dr. Edward R. Cunniffe, and your Secretary attended funeral services for Dr. James F. Norton of New Jersey, on September 30.

Communications.—1. Letter from Miss Clara Quereau, secretary, Board of Examiners of Nurses, University of the State of New York, regarding two or more nominations for a vacancy on the Nurse Advisory Council.

It was voted to nominate Dr. Norman S. Moore and Dr. Andrew A. Eggston.

2. A letter dated September 27, 1950, from Dr. Scott Lord Smith, chairman of the Public Health and Public Relations Committee of the Dutchess County Medical Society, described the night, Sunday, and holiday emergency call service instituted for the city and town of Poughkeepsie. The county society felt that calls of this type were being met adequately and efficiently. Dr. Smith also reported how well the Grievance Committee had handled several complaints.

It was voted that the President write a letter of approbation to the Dutchess County Medical Society.

3. Letter from Dr. Daniel A. Grant, secretary, New York University College of Dentistry Society for Dental Research, requesting an "advance notice of clinics, essays, meetings, etc., of interest to the dental profession to which you would care to invite such visitors" as might be available from the dental profession.

On vote this *was referred* to the Public Relations Committee.

4. Letter of October 7, 1950, to Dr. John J. Masterson from Dr. William E. Shambora, Brigadier General of the Medical Corps, Surgeon at the Headquarters, First Army, Governors Island, requesting the Society to send a special bulletin issued by the Army Surgeon General to county societies, asking that it be posted in a conspicuous place where young physicians subject to selective service would see it.

After discussion, *it was voted* that this be included with some other mailing to county societies and that the Secretary suggest to General Shambora that he send copies to the President of the New York State Hospital Association, inasmuch as hospital bulletin boards are apt to be noticed by the young doctors.

5. A letter from Dr. John C. Kinzly, president, Eighth District Branch, October 11, 1950, to the Council, containing two resolutions adopted at the 1950 Annual Meeting of the Eighth District Branch, as follows:

> Whereas, the provision of adequate medical care to employes entitled to the benefits of the Workmen's Compensation Law of New York State is a matter of the greatest interest and concern to the Medical Society of the State of New York and its component county medical societies; and
>
> Whereas, medical care is rendered to thousands of injured employes annually at compensation medical bureaus maintained and operated by employers; and
>
> Whereas, such employers are required by law to secure a license from the chairman of the State Workmen's Compensation Board for the operation and maintenance of such compensation medical bureaus; and
>
> Whereas, the licensing requirement is for the purpose of making certain that employers' compensation medical bureaus qualify to render good medical care; and
>
> Whereas, there appears to be no provision in the Workmen's Compensation Law empowering the chairman of the State Workmen's Compensation Board to compel an employer who is denied such a license from discontinuing operation of a compensation medical bureau, a statutory deficiency which the public interest requires should be corrected; now, therefore, be it
>
> *Resolved*, that the Eighth District Branch of the Medical Society of the State of New York, assembled in annual session in the City of Buffalo on October 5, 1950, hereby petitions and urges the Workmen's Compensation Committee of the Medical Society of the State of New York to bring the subject matter of this resolution to the attention of the chairman of the State Workmen's Compensation Board with a request that appropriate steps be taken to effectuate the intent of this resolution.

and

> *Resolved*, that the Eighth District Branch of the Medical Society of the State of New York, assembled in annual session in the City of Buffalo, October 5, 1950, hereby urgently requests the Workmen's Compensation Committee of the Medical Society of the State of New York to open negotiations at the earliest possible moment with the chairman of the State Workmen's Compensation Board for the purpose of obtaining a satisfactory increase in the general practitioner's fee for attendance at hearings.

It was voted that both resolutions be referred to the Workmen's Compensation Committee.

Report of the Executive Officer

Dr. Hannon reported that six of the eight meetings of district branches had been held, and that meetings of the Ninth and Second District Branches would be held next month. The programs of the meetings had been excellent and the attendance good.

Reports of Committees

Legislation.—Dr. Siris, chairman, prefaced his report by stating that there are several problems which come up annually and that it is questionable if legislation dealing with them ought to be introduced each year. He described the organization of his committee into subcommittees, to each of which a problem is assigned for special study, and praised the interest taken by the members.

He referred to the report of the subcommittee on cults, presented by Dr. John E. Williams, Jr., at the

September meeting, which the Council had referred back to the Legislation Committee, and to the poll of committee members which he had taken. This poll indicated a lack of unanimous support for Dr. Williams' proposals of a basic science law and an injunction law. Dr. Siris requested another month in which the committee might formulate some definite recommendation.

After discussion, *it was voted* to leave this matter with the committee for report.

Dr. Siris stated that hospital practice of medicine is expanding in that hospitals now employ surgeons and internists as well as radiologists, anesthesiologists, pathologists, and physical therapists. After raising the question of minimum teaching requirements of university and university-affiliated hospitals, he described the connection, through regional organization, of small hospitals with university hospitals and the advantages of this system for interns, as complicating factors in the problem, and as the basis for opposition to the Friedman Bill by medical schools and by the New York Academy of Medicine. He stated that the committee recommended introduction of the Friedman Bill, but that he felt the question needed further study.

After discussion and following presentation of the report of the Economics Committee on the Hess Report, *it was voted* to refer this to the Special Committee on Hospitals and Professional Relations.

Dr. Siris next elucidated upon the question of free choice of physicians in voluntary prepayment health insurance plans.

After discussion, in which it was brought out that the Committee on Economics had already acted on this, *it was voted* to have the appropriate bill introduced in the Legislature.

With regard to the Lien Law and the Civil Practice Act, the Committee suggested drafting a bill using the workmen's compensation schedule as a basis for fees, while not restricting fees to those in the schedule, and including a clause to permit arbitration of any bills which might be excessive.

After discussion, *it was voted* that the Committee on Legislation study the matter and have introduced in the Legislature a bill with no frozen or fixed fee schedule.

Dr. Siris stated that the committee would have an X-ray Bill reintroduced, if the Council wished, but that, in view of opposition by some county societies and the New York Academy of Medicine and in view of differences of opinion among radiologists, they felt the Council might prefer some modification of the bill.

It was the opinion of the Council that a compromise bill should be introduced after consulting with various groups such as the New York Academy of Medicine, the Hospital Association of New York State, and the Legislation Committee of the Medical Society of the County of New York.

The Committee recommended introduction of legislation to provide for a uniform system of arbitration of workmen's compensation bills for the whole State. They felt that passage of such a bill was unlikely and did not feel that anything could be accomplished by contacting Governor Dewey, Miss Donlon, and Mr. Stichman.

Dr. Siris reported that a bill had been advocated to change the place of arbitration of workmen's compensation bills to the county in which the service was rendered, but that it was opposed by Miss Donlon and probably could not pass.

The Council *voted* to defer consideration of both of these suggested bills until the November meeting.

The Committee recommended that no amendments to the Disabilities Benefits Law be introduced until the functioning of the law has been observed.

It was voted to defer action in this matter until after January 1, 1950.

Dr. Siris introduced Mr. Martin, Counsel, who discussed the efforts of the attorneys for the New York State Hospital Association to restrict the examination of hospital records in litigated matters. Mr. Martin reported that he and the Committee on Legislation agreed that a new law should be drafted which would protect the patient's privacy but would, in conformity with current thinking of the courts, allow anybody with real interest in the examination of hospital records to see them.

It was voted that action on this matter be deferred until after conference with hospital authorities.

Economics.—Dr. Azzari, chairman, read the report of the Bureau of Medical Care Insurance covering attendance by Mr. Farrell at district branch and other meetings. In this report Mr. Farrell stated that a display and descriptive literature on the New York State Blue Shield Plans was shown at district branch meetings.

Dr. Azzari continued:

"You will recall that last year your Committee on Economics reported upon the so-called Hess Report regarding activation of its principles. Action at that time was deferred, since we were informed that the entire report had been re-referred to committee. This report was amended and was approved by the House of Delegates of the American Medical Association in June of this year. Your Committee now feels that the amended report, known as the Report of the Committee on Hospitals and the Practice of Medicine, should be activated by the State and county medical societies, and so recommends to the Council, and that in notifying the various county societies a copy of the printed report be sent to each of them for guidance. I think most of the gentlemen have received it in the mail. It is a guide to the county societies how to form these committees and how they should function."

This *was referred* to the Special Committee on Hospitals and Professional Relations.

Dr. Azzari reported further that the Committee on Economics met on October 11, 1950. The first matter considered was a resolution from Dr. Christopher Parnall, secretary of the Medical Society of the County of Monroe. This resolution deals with the practice of some hospitals that purchase compensation insurance through the New York State Insurance Fund. It requests the Council to endorse the principle of the resolution and use its influence to persuade hospitals engaged in this practice to make other plans in the near future; that is, to purchase compensation insurance from commercial companies.

After discussion, the matter *was recommitted* to the Committee.

Another resolution referred to the Committee was one adopted at the recent annual meeting of the National Association of Boards of Pharmacy:

Resolved, that the American Medical Association be prevailed upon to officially construe the pertinent section of its Code of Ethics so as to condemn physician-owned clinic pharmacies as unethical, unwarranted, and detrimental to good medical and pharmaceutical services.

Discussion developed that this matter had already been acted upon and that no action was necessary.

Public Medical Care—Dr. Denver M. Vickers, chairman, reported as follows:

Dr. Denver M. Vickers and Dr. Charles F. Rourke, of the Subcommittee on Public Medical Care of the Council Committee on Economics met on October 5, 1950, with the officers of the State Department of Social Welfare, at Albany.

Commissioner Lansdale said that, as of October 2, 1950, the Social Security Law had been amended to allow reimbursement for hospital charges for old age assistance indefinitely instead of temporarily, but only up to sums amounting to thirty-five dollars a month, so that the actual functioning of the law would not be essentially changed.

He also mentioned that, at a meeting of the County Officers Association, presided over by the chairman of the Board of Supervisors of Broome County, after considering the high costs of welfare, a resolution was passed asking for full-time physicians for welfare clients. Mr. Lansdale said that nothing had been done in his department to change the present procedure of free choice of physicians, but he thought it should be known that this body had made such a suggestion.

Also, under the law, by 1952, $50 a month will be exempt in considering welfare income. Also in 1952, according to the present wording of the law, blindness as a matter of welfare consideration may be judged by a doctor or an optometrist. He stated that the optometrists are not in favor of this section, which apparently was inserted by accident, and that it probably would be changed.

The greater portion of the meeting was taken up by consideration of a new category of assistance, Aid to the Disabled. The law effecting this was passed by Congress, signed September 28, and became effective October 1, 1950. The Commissioner called this meeting on two days' notice to work out the details.

Under the statute, the Federal government will reimburse states for amounts paid under this program up to a total of fifty million dollars, so that it is relatively speaking a small program. State legislation will be put through soon to cover the requirements of the Federal law, but in the meantime the Department of Social Welfare is setting up the machinery for its administration. New York State hopes to get about eight million dollars in the remaining three months of the year.

To qualify under this act, the patient must be totally and permanently disabled. This fact must be certified by a doctor and a social worker, acting as a team. Then the cases are reviewed by a State review team, consisting again of a doctor and a social worker, who were not connected with the original papers. Mr. Page, associate commissioner, said that this responsibility could be delegated, and he hoped to use as doctors, the welfare consultants, or the district State health officers in those areas which did not have consultants. The social workers again would be drawn from the staff of those welfare districts having them, and, in those which did not, the department would undertake to furnish them.

The question of payment came up for these members of the review team, and it was thought that the State should assume this additional burden, either by direct payments in those districts having a large number (New York City estimated they would have 20,000) or by a fee system in smaller districts (Essex County estimated about 15).

The department felt that review teams would better be local than in New York or Albany, to expedite the handling of these cases. The Commissioner hopes that such disabled cases can be reviewed every six months, and that 50 per cent can be rendered employable. It was also mentioned that Christian Scientists or cultists who declined medical attention could probably qualify under this act.

Temporary forms AD-1 and AD-2 seem relatively simple and can be filled out without too much difficulty. They will be corrected to allow space for the patient's name and probably will be printed on one sheet so that no facts can be lost. A statement of the qualifications of the physician on the review team is also attached. Some of the clauses seem unnecessary but are harmless and are probably covered by the fact that the doctor has a license to practice.

It was also brought out by the Commissioner that, under the new Federal law, payments for relief patients may now be made directly to doctors and be reimbursed by the Federal government. It has always been thought that the doctor-patient relationship should be preserved, especially during this period when we are concerned about state medicine. But it has also come to the attention of a great many physicians that the patient receives a check and spends the money before the doctor returns to collect his fee—or at least he has to make an extra trip to be reimbursed. It was also shown that insurance companies' and compensation payments are made directly to the doctor with no loss of patient relationship.

In the past, the question was at once thrown out by the fact that the State would not reimburse the county or local welfare district for such payments to a physician ("indirect" in their language) because they would not be reimbursed by the Federal government. Now this is changed.

Your Committee asks for instructions. Shall we take a stand on this question or shall we suggest that the State department allow the local welfare districts to deal with the matter as they or the individual doctors prefer?

> After discussion, *it was voted* that the Council of the Medical Society of the State of New York is not opposed to the direct payment of the doctor by the Federal, State, or local welfare department.

Emergency Preparedness.—Dr. Masterson, chairman, reported his attendance at meetings of the Medical Civil Defense Group in Chicago, of the Medical Advisory Committee to Dr. Kogel in New York City, and of representatives of medical schools called by him in New York. He presented a registration form and a medical personnel form used by the District of Columbia Medical Society and suggested that copies of these forms be sent to county medical societies if President Wertz so desires.

He reported that, in response to requests from Commissioner Hilleboe and from Dr. Kogel for recommendation of uniform, routine, emergency treatments of injuries that might take place in atomic warfare, panels of specialists had been instituted drawn from the various medical schools in the State. He hoped that a meeting of panel chairmen, to be held on the evening of October 12, would yield definite recommendations for Dr. Hilleboe on October 15. The program of recommended treatments is expected to form the basis of instruction to be given to medical groups throughout the State.

Dr. Masterson expressed the hope that Dr. Hilleboe will soon be able to provide county society presidents with information which will make it possible for them to organize their programs and mobilize resources.

The report *was accepted.*

Malpractice Insurance and Defense.—Dr. Anderton presented a report from Mr. H. F. Wanvig, secretary of the Malpractice Insurance and Defense Board, regarding a conference held with a member on Monday, September 25, 1950, by Dr. Heyd and Mr. William Martin, Counsel. The purpose of the conference was to elicit information which would assist the Board in its determination of a malpractice suit against the member, and about a regimen for treatment of cancer which disregards the possibility of treatment by surgery, x-ray, or radium. The member had been requested to send reprints of his articles on the subject to Dr. Heyd. The Board recommended that this member's malpractice insurance be continued and that the Medical Society of the County of New York be requested to supply information regarding its investigation of the aforesaid regimen and its proponent.

After discussion, *it was voted* that this be referred to the Medical Society of the County of New York with a request for information.

Publication.—Dr. Kosmak reported that a meeting of the Publication Committee had been held on October 11, 1950. Among the matters discussed was a report by a Subcommittee of the Committee on Public Relations. He felt that the increased cost to the JOURNAL of the proposal to insert four pages of colored paper containing public relations news should be taken care of by the Public Relations Committee, not by the JOURNAL. The cost would amount to about $100 extra for paper and $300 extra for printing, or $400 per issue.

It was voted to transmit this report, with the information, to the Public Relations Committee.

Directory.—The new edition of the *Directory* will omit the list of physicians from New Jersey and Connecticut. Other material has been prepared to take its place and is ready for the printer. This will take about 60 pages in comparison with the 180 pages of the New Jersey and Connecticut names. The *Directory* will not cost any more, even though faced with an increase in printing costs beginning January 1, 1951, of about 7 per cent. When the present contract expires, it will also be faced with an increase in the cost of paper.

Dr. Kosmak asked the Council's permission to have three members of the staff of the Society assist temporarily the World Medical Association meetings.

Permission *was granted.*

Public Health and Education.—Dr. Eggston in the absence of Dr. Curphey reported for the Committee on Public Health and Education.

Activities of the Chairman.—September 22—Meeting in New York City with State Health Department representatives and deans of the medical schools of Greater New York, relative to instruction in the medical effects of atomic explosion.

October 1—Meeting in Detroit on Health Councils, called by Council on Medical Service of the A.M.A. and the Michigan State Medical Society.

General Summary: 1. Health Councils are excellent media for correlating the activities of the medical profession with those of allied professional groups and with those of nonmedical agencies with similar interests.

2. Such councils should develop at both state and community levels, and while close correlation is almost mandatory it is important that the local group be autonomous in its policy as it is always in the best position to determine its individual health needs.

3. Health councils at either the state or community level will succeed only as the physician takes an active interest and exhibits leadership. From the general tenor of discussion one sensed that medical responsibility for these programs was accepted by the practicing physicians of the community, working in cooperation with health officers and interested agencies.

4. To ensure successful functioning of a health council in the State of New York sufficient funds would have to be allocated for employment of a full-time executive with previous experience in this field. The success of this approach is demonstrated in the experience of Michigan and Virginia.

5. Some thought should be given to training in the technics of leadership in the functioning of health councils by establishing institutes at the state level for physician members of local community health councils.

October 6—Meeting with Professor Olaf F. Larson of Cornell University relative to rural medicine.

Postgraduate Instruction—Since the last report to the Council, postgraduate instruction has been arranged for the following medical societies: Columbia County—October 3, 17, 24; Greene County—October 10; Herkimer County—October 10; Washington County—October 10; Suffolk County (Teaching Day)—October 25.

Procurement and Assignment Subcommittee—Dr. Rooney, chairman, reported that on October 7 he was notified of his appointment as New York Upstate Chairman of the National Medical Advisory Board. His instructions were to appoint a committee, subject to the approval of the National Committee, and "such other subcommittees in the State as were necessary." The committee which he appointed consisted of Dr. Charles D. Post, Syracuse; Dr. Christopher Wood, White Plains; Dr. Edward T. Wentworth, Rochester; Dr. A. H. Aaron, Buffalo, and Dr. W. P. Anderton, New York City, ex officio. In addition, he proposed to ask each district branch president, except in the first district, to appoint a regional subcommittee representative of the counties in his district. Dr. Rooney felt that, in view of the small number of persons to be drafted at present, any questions of deferment which might arise could be referred to representatives of the district branches, but that eventually it would be necessary to extend the organization to provide a representative of his committee on each local draft board. He requested the Council's approval.

It was voted to approve the plan.

Dr. Rooney stated that the Procurement and Assignment Subcommittee would continue its primary function of advising the Army in relation to deferment for reserve officers called for duty.

Public Relations.—Dr. Winslow, chairman, stated that the report of the Public Relations Committee was divided into two parts. The first one, included in the agenda, is as follows:

"During the past two weeks the field men have continued to visit county societies in their areas to promote the Good Citizenship Campaign, local tie-ins with the A.M.A. advertising, emergency medical services, and grievance or mediation committees.

"The Public Relations Bureau has written and sent to the press and radio, publicity for six of the eight district branch meetings scheduled for this fall. An excellent reception has been given by the press to these news releases. Coverage of the district branch meetings held thus far has been very good, with newspapers in the district branch areas devoting considerable space and photographs to the proceedings.

"The Bureau also prepared and distributed a news release based on a speech made by Dr. John C. McClintock of Albany before the annual conference of the New York D.A.R. at Albany on October 4.

"News releases covering postgraduate education in the counties of Sullivan, Cortland, Ontario, and Fulton were issued.

"Through the instrumentality of the Bureau, Dr. Louis H. Bauer, chairman of the Board of Trustees of the A.M.A., agreed to appear as guest speaker before the first fall meeting of the Chamber of Commerce of the State of New York on October 5. Assistance was given to the Chamber of Commerce in publicizing Dr. Bauer's appearance. Assistance was given to the officers of the Woman's Auxiliary in planning and conducting the annual meeting of the Executive Board. Assistance was also given to the editor of *The Distaff* in planning and selecting articles for the next issue. Plans were made for the Auxiliary to urge their members to register and vote.

"Mr. Miebach represented the Public Relations Bureau at a meeting on 'M.D. Participation in Health Councils,' sponsored by the Council of Medical Service of the A.M.A. and the Michigan State Medical Society on October 1 in Detroit.

"The National Association of Chain Drug Stores has consented to participate currently in the National Education Campaign and the National Advertising Campaign. That means most chain drug stores in America have promised to advance the interests of the American Medical Association in this great advertising week. That negotiation was carried on by our field representative, Mr. Tracey, and through him and to him credit should go for arranging this important accomplishment.

"A joint meeting of the Committee on Public Relations and the Subcommittee on Public Relations was held October 2. The Subcommittee presented its program for public relations to the Council Committee and careful consideration of all elements was conducted by the members of both committees. It was decided that the Council Committee request permission from the Council for the Subcommittee to report to the Council at an early meeting, in view of disagreement in several fundamentals, although in general the program as submitted has in effect been accomplished."

It was voted that this part of the report be adopted.

Subcommittee on Public Relations—Dr. Winslow explained the formation of the subcommittee and its request to formulate a public relations program. The report of the subcommittee was submitted for consideration of the Council. Drs. Wallace, MacFarland, Lewis, Schwartz, and Bauckus were present by invitation and stated their views.

The report was discussed by Drs. Winslow, Wallace, MacFarland, Lewis, Schwartz, Bauckus, Dickson, d'Angelo, Andresen, Gibson, DiNatale, Masterson, Eggston, Beekman, and Rooney.

After discussion, *it was voted* that the Council approves of the principle to expand public relations in general terms but does not approve of the financial requirements of this report.

Dr. Kenney recommended that the matter of the reorganization of the Public Relations Bureau be referred to the Planning Committee for immediate study and recommendations pro tem, and then to formulate a long range program, so that proposals may be referred to the House of Delegates. Dr. Masterson moved that the above remarks be incorporated in the minutes of the meeting, and be taken up at a subsequent meeting. *Seconded and carried.*

Workmen's Compensation.—Dr. Kenney, chairman, reported on the activities of the Committee.

Executive Committee.—The Council went into executive session and Dr. Dattelbaum presented the following report:

Collection of A.M.A. Dues—"In 1949 the Society expended $1,492.79 in connection with handling the 1949 assessment. As yet, we have not received any reimbursement, although the A.M.A. has been billed. We have, however, received $2,487.75 covering reimbursement for expenditures in connection with the A.M.A. 1950 dues. Presumably a portion of this amount should be transmitted to county societies. The question is what is to be done with the $1,492,79 still unpaid. I would like to have your opinion on that. Another question, is any portion of the $2,487.75 to be transmitted to the county societies, and if so, on what basis is it to be paid?"

After discussion, *it was voted* that the Council recommend to the Board of Trustees that the amount collected from the A.M.A. be allocated to the constituent county societies in proportion to membership who have paid their dues, and that the presidents of the county societies be so notified.

Revised Budget 1950—Dr. Dattelbaum presented the 1950 revised budget with explanatory notes.

After discussion, *it was voted* to approve and submit this revised budget to the Board of Trustees.

Budget for 1951—Dr. Dattelbaum presented the 1951 tentative budget. Each department was acted on separately and action taken as follows:

Journal—A new departure in the allocation from dues of $38,915 to the Journal was discussed.

It was voted to refer this to the Board of Trustees.

Public Relations Bureau—

After discussion, *it was voted* to have the reorganization reconsidered at a subsequent meeting of the Council.

Directory—*It was voted* to defer action on the budget for the *Medical Directory.*

It was voted to approve and send to the Board of Trustees the proposed budgets for Administration Department, Legislative Bureau, Workmen's Compensation Bureau, Bureau of Medical Care Insurance, Scientific Activities, Travel, Annual Meeting, District Branches, Planning Committee for Medical Policies, Advisory Committee to the Woman's Auxiliary, Malpractice Insurance and Defense Board, Malpractice, Audit, and Legal Expenditures (Counsel).

New Business

Dr. Anderton read the following letter dated October 3, 1950, from Mr. Dwight Anderson.

"Dr. Edward R. Cunniffe, Chairman, Trustees,
Medical Society of the State of New York

"My dear Doctor Cunniffe:

"Following the advice of my physician, I regretfully request consideration of my release from the balance of my contract with the Medical Society of the State of New York, at such time and under such circumstances, to be mutually agreed upon, as will cause the least disruption of the activities of the Society in which I have been privileged to participate for the past sixteen years.

"Cordially yours,
Dwight Anderson"

It was voted that in conformation with the provisions of the Constitution and Bylaws this be referred to the Board of Trustees.

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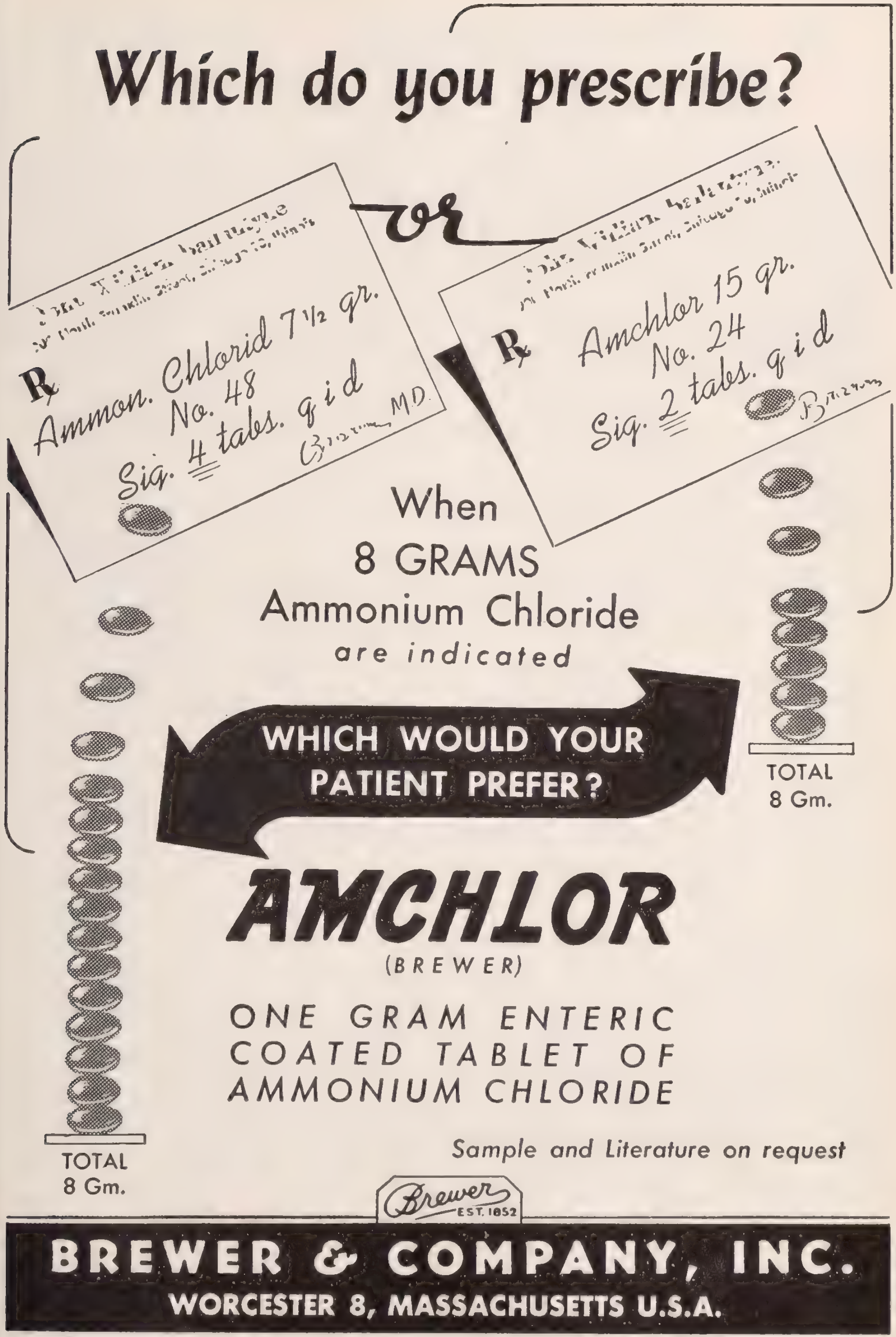

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NECROLOGY

Edward Harry Gershenson, M.D., of New York City, died on October 5 at the age of sixty-eight in Beekman-Downtown Hospital. Dr. Gershenson was graduated from the Long Island College Hospital Medical School in 1905. He taught otolaryngology at Bellevue Medical School from 1925 to 1932 and was medical director of clinics at Fordham Hospital, New York City, from 1942 to 1944.

Oscar S. Gregor, M.D., of Schenectady and New York City, died on October 23 at Ellis Hospital, Schenectady, at the age of forty-seven. A native of Moravia, Czechoslovakia, Dr. Gregor received his medical degree from the medical school of Charles University, Prague, in 1926. He came to this country in 1939 and was an associate professor of ophthalmology at New York University Medical School. He moved to Schenectady in 1945, opening his practice there. Dr. Gregor had been clinical assistant in ophthalmology at Bellevue Hospital and the New York Eye and Ear Infirmary and attending ophthalmologist at Ellis Hospital. A Diplomate of the American Board of Ophthalmology, Dr. Gregor was a member of the American Academy of Ophthalmology and Otolaryngology, the Schenectady County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Robert William Hedges, M.D., of New York City, died on November 16 at his home at the age of forty-nine. Dr. Hedges was graduated from the Cornell University Medical College in 1935. He was assistant attending gynecologist and surgeon at Woman's Hospital, assistant attending gynecologist at Roosevelt Hospital, and chief gynecologist of the Roosevelt Hospital Outpatient Department, all in New York City. Dr. Hedges was a member of the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Samuel Joseph Kopetzky, M.D., of New York City, died November 13 at his home at the age of seventy-four. Dr. Kopetzky was graduated from the College of Physicians and Surgeons, Columbia University, in 1898 and interned at the Manhattan Eye and Ear Hospital before going to the Royal University Clinic, Berlin, for postgraduate study. Dr. Kopetzky served in the volunteer infantry in the Spanish-American War and as an officer in the U.S. Army Medical Corps during World War I. He was decorated for gallantry in action in France and was a colonel in the Medical Reserves after the war. During World War II he was chief of the medical branch of the New York City Selective Service System.

Dr. Kopetzky was director of the department of otolaryngology at Polyclinic Medical School and Hospital, consulting otolaryngologist at Beth Israel and Israel-Zion Hospitals, and consulting otologist at Vassar Brothers Hospital, Poughkeepsie, and at the Nyack Hospital. A Diplomate of the American Board of Otolaryngology and a Fellow of the American College of Surgeons, Dr. Kopetzky was a member of the American Academy of Ophthalmology and Otolaryngology, the American Laryngological, Rhinological, and Otological Society, the New York Academy of Medicine, the New York County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Dr. Kopetzky was a past-president of the Medical Society of the State of New York and a former literary editor of the NEW YORK STATE JOURNAL OF MEDICINE. He was for many years editor of *Medical Week*, publication of the New York County Medical Society, and the author of *The Surgery of the Ear*, *Otological Surgery*, and many articles and monographs on related subjects.

In 1934 the French government awarded Dr. Kopetzky the cross of Chevalier of the Legion of Honor in recognition of his medical work in collaboration with French scientists.

Walter Leonard Lynn, M.D., of Forest Hills, died November 11 in Kew Gardens General Hospital, Queens, at the age of fifty-eight. Dr. Lynn received his medical degree from the Jefferson Medical School, Philadelphia, in 1916 and did postgraduate work at Edinburgh University in Scotland. After practicing for two years in Wilkes-Barre, Dr. Lynn moved to New York City, where he was surgeon at Bushwick and Queens General Hospitals and consulting surgeon at Rockaway Beach Hospital. During World War I Dr. Lynn was a captain in the U.S. Army Medical Reserve Corps and during World War II a lieutenant colonel. A Fellow of the American College of Surgeons, Dr. Lynn was a member of the Brooklyn Surgical Society, the Queens Surgical Society, the Queens County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

Harold S. McCartney, M.D., of Mineola, died on November 8 at his home at the age of fifty. Dr. McCartney received his medical degree from the Queens University Medical School, Ontario, Canada, in 1927 and opened his practice in Mineola in 1928. He was assistant attending surgeon at Nassau and Meadowbrook Hospitals and surgeon for the tumor clinic of the Meadowbrook Hospital Outpatient Department. Dr. McCartney was a member of the Nassau Surgical Society, the Nassau County Medical Society, the Medical Society of the State of New York, and the American Medical Association.

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MEDICAL NEWS

Dr. Persons Chosen as State's Outstanding G.P.

DR. ALFRED O. PERSONS, for forty years a practicing physician in Lexington, Greene County, has been selected as the outstanding general practitioner of New York State for 1950 by the Council of the Medical Society of the State of New York. The sixty-four-year-old doctor was chosen from a group of candidates submitted by county medical societies in various parts of the State, and his name was submitted to the American Medical Association as New York's candidate for the annual award to the outstanding general practitioner of the United States, which was announced at the A.M.A.'s meeting in Cleveland, December 6.

The 1949 candidate from New York State was Dr. John R. MacElroy of Jonesville.

Dr. Persons was strongly recommended by the Medical Society of the County of Greene as an outstanding example of a general practitioner whose long years of service have endeared him to his community. His selection by the Council was made because his record showed that he exemplified the highest ideals of the medical profession, not only in his everyday practice, but in the sacrifices he made to obtain a medical education.

Dr. Persons, who comes from English and Dutch pioneer ancestors, began his education at Windham Union Free School. He helped his family by working summers in the hay fields and in a drugstore in Hunter, and when he obtained his diploma he taught for one year in a district school. Entering Syracuse University College of Medicine, he earned his way by shoveling walks and stoking the furnace, for his room in a doctor's household, and washing dishes for his meals. He was graduated in June, 1910, as one of the four honor students in his class.

On October 4, 1910, he hung out his shingle a few miles from the farm where he was raised, in the small town of Lexington, a creamery and general store center of a dairy farming and resort area in the Catskill Mountains. At that time he traveled the mountain roads with a horse and two-wheel cart and treated patients in his office at 25¢ a call. There he has continued to provide good up-to-date medical care for forty years. His has been a very active general practice—pulling teeth, delivering babies, dispensing drugs for the common cold, alleviating pain, setting bones, rushing to emergencies—on call twenty-four hours a day, year in and year out, listening to countless tales of woe; treating families as well as patients; his advice sought in many matters, not all medical. He was among the first to purchase an automobile in his vicinity.

Dr. Persons always has been active in his community beyond the realm of medical service. In addition to being on the staff of a county hospital thirty miles away from his office, since its organization, he has served as town health officer for thirty-eight years. He marches in parades with the volunteer firemen he helped to organize and is among those to answer their calls. He is an active Mason and prominent in the affairs of his church. His home is often the headquarters of Red Cross activities and other drives. He acted as a director in the reorganization of the Windham National Bank in the depression years and now serves as its vice-president. For recreation he takes pleasure in working in his garden, and he finds real joy in doing the handy-man jobs around his home.

Dr. Persons comes from a family which has a strong inclination to turn towards medicine as a career. His only brother, Dr. Ray E. Persons, graduated from Albany Medical College in 1916 and engaged in general practice until his death two years ago. His daughter, Dr. Frances E. Persons, graduated from Albany Medical College and is at present associated with him in general practice; two nephews also entered medicine. His son, however, is following the engineering profession.

American College of Surgeons Inducts Fellows

AT THE annual meeting of the American College of Surgeons, held October 27 in Boston, Massachusetts, 978 initiates were received into fellowship, the largest class since 1914. Including 119 from New York State, the fellowships were conferred by Dr. Henry W. Cave, New York City, president of the College. Elected to the Board of Governors for three-year terms expiring in 1953 were Dr. Conrad Berens, New York City; Dr. Cave, and Dr. William F. MacFee, New York City.

Received into fellowship from New York State were the following: Dr. George S. Young, Batavia; Dr. Christopher Stahler, Albany; Dr. Harold Seidenstein, Bronx; Drs. Everett Wesley Corradini, Peter P. Fiore, H. Robert Freund, Edwin Martin Gold, Warren A. Lapp, Frank C. Murphy, Alphonse F. Pagano, Morton A. Schiffer, Jacques D. Soifer, Aaron H. Trynin, Michael Veneziano, Samuel Weiner, and Bernard A. G. Weisl, all of Brooklyn; Drs. Michael S. Blick, John Clarke, Jack William Herrmann, James C. MacCallum, Vincent D. Moran, Francis W. O'Donnell, and Herbert R. Reitz, all of Buffalo.

Also: Dr. John H. Stauffer, Canton; Dr. William J. Cowan, Cold Spring; Drs. William J. Cusick and C. Eugene Erway, both of Elmira; Dr. Ezra A. Wolff, Forest Hills; Dr. Richard L. Jones, Glen Head; Dr. Maxwell A. Mintz, Glens Falls; Dr. Hans A. Kortnetz, Herkimer; Dr. Charles B. Steenburg, Johnson City; Drs. Charles M. Strateman, Jr., and C. Hudson Thompson, Jr., both of Middletown; Dr. Arnold Bockar, Newburgh.

Also: Drs. Orrin E. Anderson, Harry Bergman, Frances H. Bogatko, Imre Braun, Max Chamlin, Alex Charlton, Robert H. Clifford, III, Frank R. Cole, Donald Alexander Davis, Ralph A. Deterling, Jr., Alvin C. Drummond, Emanuel H. Feiring, Louis Joel Feit, Jose M. Ferrer, Jr., William Francis Finn, Cecil Arthur Frank, Ralph Friedlander, Jacob Goldsmith, Victor Goodside, Edward Alex Graber, Ralph MacMartin Greenlee, Stephen Lawrence Gumport, Clayton B. Gunderson, Gustave A. Haggstrom, Joel Hartley, Emanuel Hauer, E. Lawrence Hecht, Jesse James Hymes, Morris Jaffe, W. Graham Knox, Jr., Joseph Hoffman Krug, Herbert A. Laage, Stanley

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Also: Dr. Francis P. Keefe, Olean; Dr. John F. Burden, Oswego; Dr. Burnett Sheldon Rawson, Pearl River; Dr. Herbert Eisler, Peekskill; Dr. Herbert L. Schlesinger, Plattsburg; Dr. Samuel Simon, Poughkeepsie; Drs. Louis A. Goldstein, John Albert Schilling, Morris Jack Shapiro, and Charles A. Smith, all of Rochester; Dr. Frank M. Green, Rockville Centre; Dr. Robert E. Rockwell, Saratoga Springs; Dr. Bernard Joseph Ryan, Sunmount; Drs. Louis George Fournier and Robert O. Gregg, Syracuse; Drs. Austin J. Corbett and Walter A. Gunther, Troy; Dr. Martin J. Healy, Jr., Tuckahoe; Dr. Richard Talbot Williams, Warsaw, and Dr. Paul Edward Zoltowski, Waverly.

Grants Awarded for Cancer Research

GRANTS of $620,603 to strengthen the nationwide attack on cancer have been announced by the U.S. Public Health Service National Cancer Institute. The awards, which include 15 for new projects, will support cancer research in 42 hospitals, universities, and other institutions in 18 states, the District of Columbia, and Denmark, and were made following the recommendation of the National Advisory Cancer Council and approval by Dr. Leonard A. Scheele, surgeon general of the Public Health Service.

The following grants were designated for agencies in the State of New York:

Albany Medical College, Dr. L. W. Gorham, $3,564, the mechanism of bone pain in metastatic carcinoma of the prostate and its relief by orchiectomy (castration).

Albany Medical College, Drs. A. W. Wright and J. M. Wolfe, $11,707, further study of the etiology of spontaneous mammary tumor development in the Albany strain of rats, with particular reference to the possible presence of a milk agent.

Montefiore Hospital, Bronx, Dr. Emil J. Baumann, $5,400, a study of the factors governing the selective filtration of ions (radioactive iodine, fluorine, etc.) by the thyroid.

Brooklyn College, Dr. Irving Allan Kaye, $7,000, preparation of chemical compounds of possible interest for cancer chemotherapy.

University of Buffalo, Dr. John R. Paine, $7,000, the transplantation of fetal embryonic endocrine tissues to animals and humans of the same species who have a corresponding endocrine deficiency.

New York State College of Agriculture at Cornell University, Ithaca, Drs. Harold H. Smith and Adrian M. Srb, $5,884, effects of certain chemicals on chromosome structure and gene mutation.

Columbia University College of Physicians and Surgeons, Dr. Alfred Gellhorn, $10,276, mechanism of action of purines and pyrimidines in experimental cancer chemotherapy.

Columbia University, Barnard College, Dr. Aubrey Gorham, $486, long-term effects of radiotoxic doses of radioactive iodine in mice.

Cornell University Medical College, New York City, Dr. Stewart George Wolf, Jr., $3,958, relation of gastric mucous substances to gastric cancer.

Fordham University, Dr. Charles A. Berger, $2,160, experimental modification of mitosis.

Fordham University, Dr. Ellis V. Brown, $6,048, heterocyclic analogs of compounds with antimetabolite or carcinogenic activity.

Fordham University, Dr. Leopold R. Cerecedo, $7,300, a study of the purine and amino acids (protein) composition of normal, embryonic, and neoplastic tissues.

Memorial Cancer Center, New York City, Dr. George B. Brown, $25,760, chemical and physical studies on the relationship of proteins to normal and abnormal growth.

Memorial Cancer Center, New York City, Dr. Frederick S. Phillips, $30,000, screening program for cancer chemotherapeutic agents.

Memorial Cancer Center, New York City, Dr. C. C. Stock, $9,925, a study of the effects of purines and pyrimidines (protein components) on nucleic acids, with particular reference to Paramecium aurelia.

Memorial Cancer Center, New York City, Dr. Rulon W. Rawson, $16,956, a study of the hemoglobin and red cell metabolism in patients having gastric cancer.

Memorial Cancer Center, New York City, Drs. Rulon W. Rawson and Henry J. Tagon, $8,910, studies on the inactivation of estrogens and other steroids by liver tissue from patients having cancer.

New York University, Dr. Anna Goldfeder, $10,530, classification of tumors in regard to their radiosensitivity, immunizing ability, and metabolic activity.

New York University-Bellevue Medical Center, Dr. Marion B. Sulzberger, $10,000, relationship between specific immunologic and allergic changes and the mechanisms of carcinogenesis.

Special cancer control grants of the National Cancer Institute, totaling $324,525, have been approved by Surgeon General Leonard A. Scheele, of the U.S. Public Health Service, after recommendation by the National Advisory Cancer Council. These include the following in New York State:

Roswell Park Memorial Institute, Buffalo, Dr. Louis C. Kress, $37,220, a study of the relationship of cancer to occupation and exposure to carcinogenic hazard.

University of Buffalo School of Medicine, Dr. Salvator J. Colangelo, $2,617, serologic dye and coagulation tests for cancer.

Cornell University Medical College, New York City, Dr. George N. Papanicolaou, $36,720, establishment of a center for study and instruction in the cytologic method of cancer diagnosis.

Memorial Hospital, New York City, Dr. Fred W. Stewart, $25,000, postgraduate study in the field of tumor pathology.

[Continued on page 2994]

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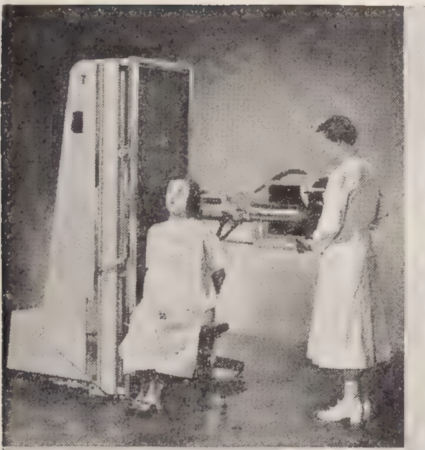

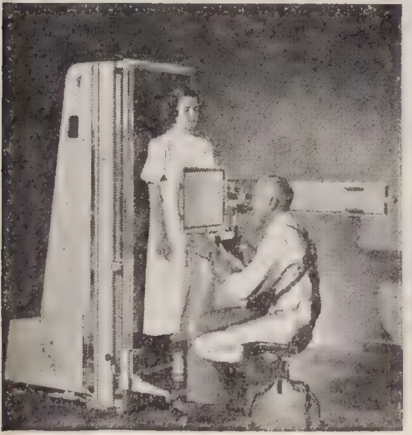

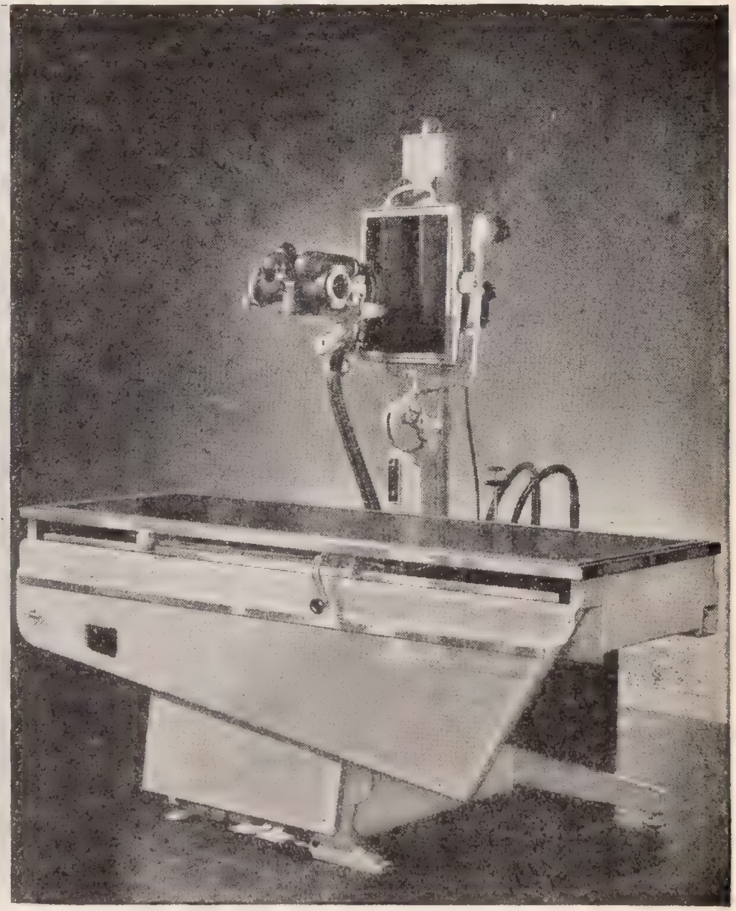

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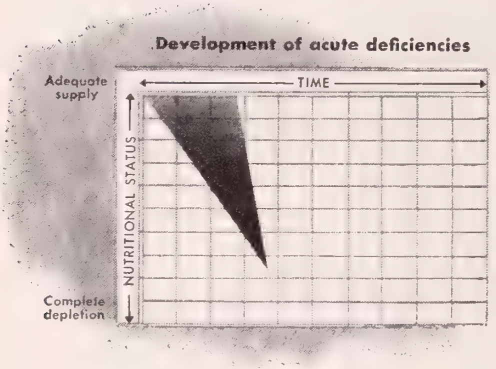
acute vitamin deficiencies

A sudden drop from adequate to grossly inadequate vitamin intake results in fast tissue depletion and functional changes. Ordinarily, physical lesions do not appear. If tissue depletion is rapid enough, death may ensue with slight or no morphologic variation.



Treatment of acute deficiencies

Fully therapeutic dosages of all the vitamins indicated in mixed vitamin therapy should be given. Under intensive therapy recovery from acute vitamin deficiencies usually is made in a comparatively short time.

THERAGRAN supplies clinically proved, truly therapeutic dosages of all the vitamins indicated in mixed vitamin therapy.

Each Theragran Capsule contains:

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When the deficiency is acute specify Theragran and correct the patient's diet

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SQUIBB

[Continued from page 2992]

MEDICALLY SPEAKING—

New York Physicians Art Club—At the seventeenth annual dinner meeting of the New York Physicians Art Club, held November 6 under the chairmanship of Dr. Ramsay Spillman, the following officers were elected for the coming year: Dr. Benjamin Francis Morrow, president; Dr. Solomon Fineman, vice-president, and Dr. William Snow, secretary-treasurer.

The recent exhibition of the work of the art club members, held at the New York Academy of Medicine, was considered by many to have been of exceptionally high caliber. Oils, water colors, sculpture, and photography were the main media represented. All New York physicians are invited to join the club. Those interested may pay $5.00 dues to the secretary-treasurer, Dr. William Snow, 941 Park Avenue, New York 28, New York. This entitles the member to exhibit at the next annual art show of the organization.

Commissioner Heads Association—The New York State Public Health Association has announced the election of Dr. Herman E. Hilleboe, State health commissioner, as its charter president. Other officers include: Dr. Albert D. Kaiser, Rochester health officer, first vice-president; Dr. Meredith H. Thompson, Troy, Rensselaer County director of environmental hygiene, second vice-president, and Dr. Granville W. Larimore, Albany, director, State Health Department office of public health education, secretary.

The Association was founded to facilitate year-round activity in advancing the cause of public health in New York State. It also seeks to give those public health groups now without a State organization an opportunity for professional affiliation at the State level.

Examination for Medical Officers—A competitive examination for appointment of medical officers in the regular corps of the United States Public Health Service will be held on February 12, 13, and 14, 1951, at a number of points throughout the United States, located as centrally as possible to the homes of candidates. Applications must be received no later than January 15, 1951. Application forms and additional information may be obtained by writing to the Surgeon General, United States Public Health Service, Federal Security Agency, Washington 25, D.C., attention: Division of Commissioned Officers.

Cortone Is Now Available—Merck & Company, Inc., of Rahway, New Jersey, has announced that Cortone (the Merck brand of cortisone) has been made generally available as of November 1 through distributors, hospitals, institutions, and pharmacies for use by the physician in his daily practice. Meanwhile, physicians may continue to obtain Cortone from hospitals, and patients need not be hospitalized except at the physician's discretion.

A further price reduction is announced by the company effective immediately. The suggested list price to physicians is $35 a gram. The price charged to hospitals during the past few months has been $50 a gram. The company has succeeded in reducing the price of Cortone to less than one fifth of that charged to investigators a little over a year ago. These savings have been accomplished through research and process improvements.

In rheumatoid arthritis, where prolonged treatment with Cortone is usually required, clinical investigations now indicate that almost all patients can be maintained on one tenth of a gram a day. Some patients can be maintained on as little as one twentieth of a gram a day.

Academy to Hold Clinical Research Meeting—The New York Academy of Medicine will hold meetings on Wednesday and Thursday nights, April 4 and 5, 1951, at which investigators of New York City and vicinity may present results of original research in clinical medicine. This meeting is being arranged by the Committee on Medical Education of the Academy with the following stipulations:

1. Presentations will be confined to original research in clinical medicine or surgery, or to research which is applicable to medicine or surgery in all clinical branches.
2. Preference will be given to papers which have not been presented before a national or local society (other than intramural).
3. In submitting application, investigators are requested to state whether this work has been published or has been submitted for publication; also, in cases where the investigator is working under the head of department of a hospital or research institute, approval of the head of department must accompany the application.

The Committee extends an invitation to all research workers of greater New York and of neighboring cities within a radius of one hundred miles to submit an abstract of proposed presentation in quadruplicate, not to exceed 500 words in length, to the secretary of the Committee, not later than February 1, 1951. A formal invitation to participate in this program will then be extended by the Committee to the authors of papers selected for presentation.

Mount Sinai Hospital Plans Lecture Series—A series of lectures on "Recent Advances in Surgery" is now being given at Mount Sinai Hospital, New York City, beginning with a lecture December 6 on "The Diagnosis and Treatment of Mediastinal Tumors" by Dr. Richard H. Sweet, associate clinical professor of surgery, Harvard Medical School.

Other lectures in the series will include:

December 20—"The Use and Abuse of Parenteral Fluids in Surgery," Dr. Frederick A. Coller, Department of Surgery, University of Michigan, Ann Arbor, Michigan.

January 3—"Cardiac Resuscitation," Dr. Julian Johnson, University of Pennsylvania Hospital, Philadelphia, Pennsylvania.

January 17—"The Effect of Antibiotics on Vascular Integrity of the Gut," Dr. Jacob Fine, Harvard Medical School.

January 24—"Aneurysms and Arteriovenous Fistulas of the Lung," Dr. Brian Blades, George Washington University School of Medicine, Washington, D.C.

February 7—"The Surgical Treatment of Congenital Heart Disease," Dr. Willis J. Potts, Northwestern University Medical School, Chicago.

February 21—"The Importance of Laboratory Data in the Treatment of Surgical Infections by Antibiotics," Dr. Frank Lamont Meleney, College of Physicians and Surgeons, Columbia University, New York City.

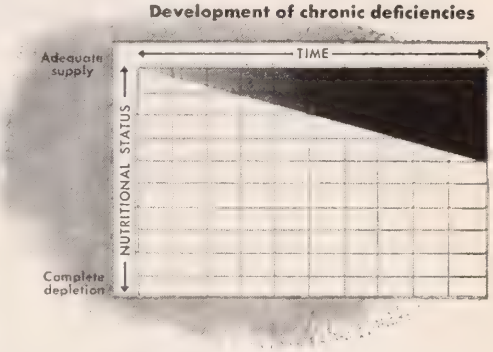
March 7—"Operation for Coronary Artery Disease," Dr. Claude S. Beck, Western Reserve University, Cleveland, Ohio.

[Continued on page 2996]

chronic vitamin deficiencies

When vitamin intake is just below the adequate, deficiencies develop slowly. As time goes on lesions appear. They are insidious in onset and slow in regression, even under intensive therapy. Many chronic lesions progress uneventfully. The patient accepts his ill-health as normal.

Development of chronic deficiencies



Treatment of chronic deficiencies

Chronic deficiencies require prolonged therapy. At first treatment should be intensive. A much longer period of complete but less intensive treatment should follow. For a year after apparent recovery the patient should be given fully protective amounts of the essential nutrients.

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[Continued from page 2995]

Dairymen's League Opposes Compulsory Health Insurance—At its annual meeting in Syracuse on October 12, the Dairymen's League Cooperative Association adopted the following resolution against compulsory health insurance:

"WHEREAS, the United States has the highest standards of health, of medical care, and of scientific medical facilities of any country in the world, as a result of our system of free enterprise; and

"WHEREAS, compulsory health insurance, wherever tried, has caused a decline in national health and deterioration of medical standards and facilities; and

"WHEREAS, wherever the government has assumed control of medical services, the result has been tremendous multiplication of costs over original estimates, extreme tax burdens and national deficits, and gradual extension of socialization into other activities of national life; now therefore be it

"*Resolved*, that the annual meeting of the Dairymen's League Cooperative Association, Inc., hereby goes on record against any form of compulsory health insurance or any system of political medicine designed for national bureaucratic control; and be it further

"*Resolved*, that a copy of this resolution be forwarded to each senator from the states of this New York Milk Shed, and the representatives from this district, and that said senators and representatives be and are hereby respectfully requested to use every effort at their command to prevent the enactment of such legislation."

Combined Chest Conference—Seton Hospital and Morrisania City Hospital will hold a combined chest conference on Friday, December 22, at 8:30 P.M. in the Morrisania Auditorium. Dr. Eli H. Rubin is chairman and Dr. Isidore Perlman, secretary. Case presentations will include: "Lupus Erythematosus with Chest Findings," Dr. Stanley L. Eidinger, discussion, Dr. Paul Hurwitz; "Sickle Cell Anemia with Chest Findings," Dr. Irwin C. Karron, discussion, Dr. Bernard S. Kahn; "Rheumatic Pneumonia," Dr. Nelson Weiser, discussion, Dr. Abraham Jezer; "Pneumoperitoneum Treatment of Pulmonary Tuberculosis," Dr. Isidore Perlman and Dr. Henry L. Wilkins.

Physicians are invited to bring interesting chest x-rays for informal presentation from 8:30 to 9:00 P.M.

Medical Society of the State of New York

COMMITTEE FOR THE NOMINATION OF OFFICERS

1951–1952

In accordance with Chapter XI, Section 4 of the Bylaws, the President of the Society has appointed the following members as a nominating committee, who will present their report as of February 15, 1951.

District	
First	Goodlatte B. Gilmore, Bronx
Second	John M. Galbraith, Glen Cove
Third	Harry Golembe, Liberty
Fourth	Joseph A. Geis, Lake Placid
Fifth	James I. Farrell, Utica
Sixth	James Greenough, Oneonta
Seventh	Leo F. Simpson, Rochester, *Chairman*
Eighth	Guy S. Philbrick, Niagara Falls
Ninth	Ralph T. B. Todd, Tarrytown
Members-at-large	Beverly C. Smith, New York City William J. Orr, Buffalo

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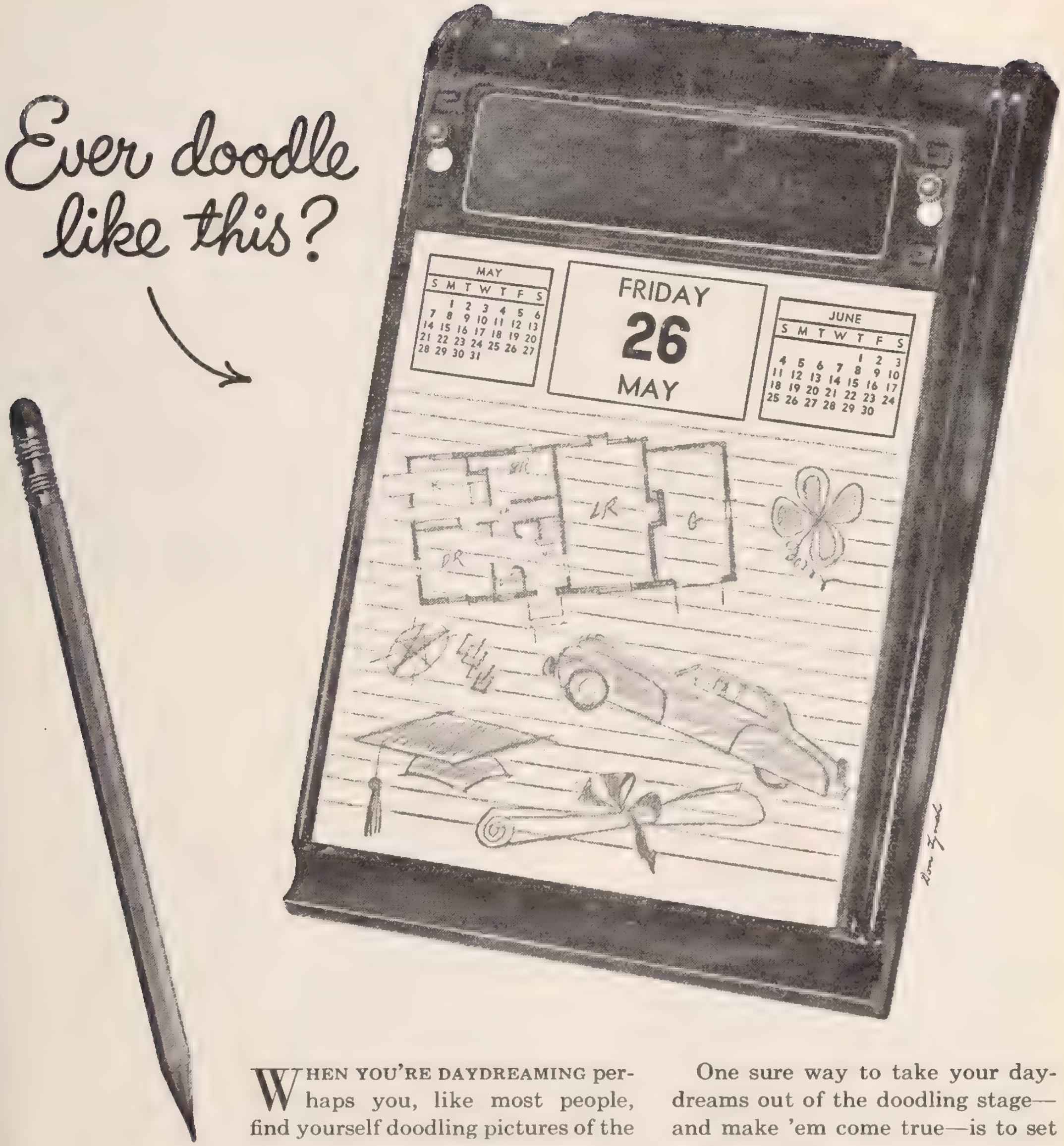

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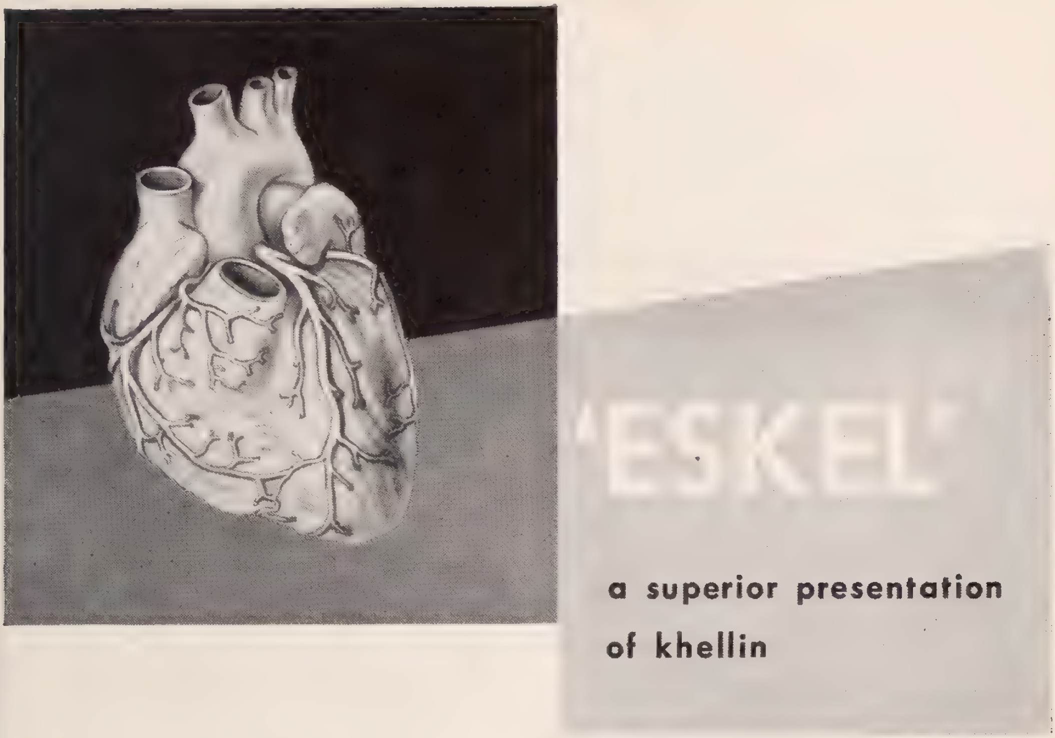
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2. Rosenman, R.H., et al.: J.A.M.A. 143:160 (May 13) 1950.
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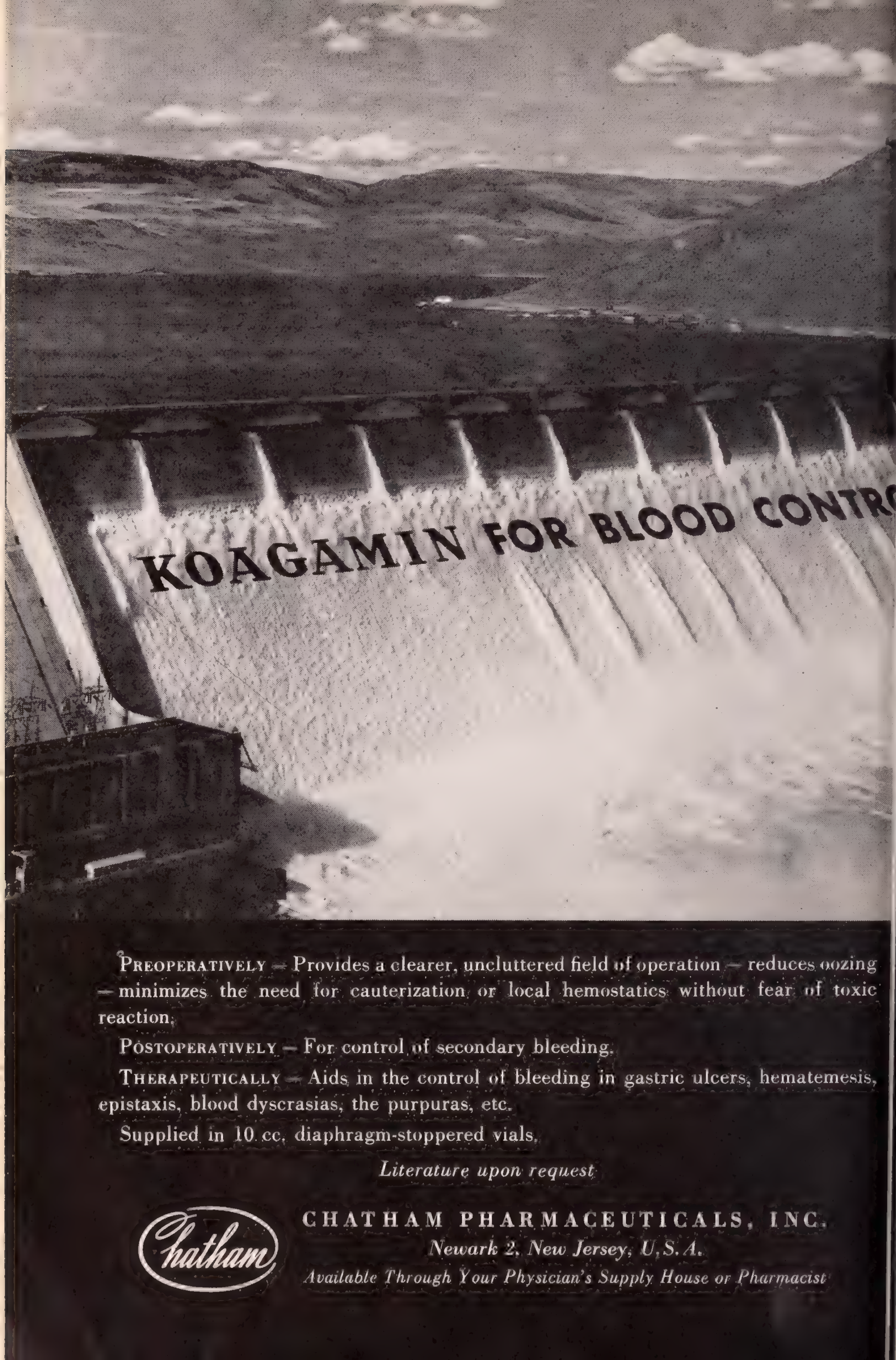

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William A. Brumfield, M.D.
Theodore J. Curphey, M.D.
Reginald A. Higgons, M.D.
Armitage Whitman, M.D.
Norman S. Moore, M.D.
Peter M. Murray, M.D.
William J. Orr, M.D.
Howard A. Rusk, M.D.
Leo F. Simpson, M.D.

Advertising Representatives
Charles L. Baldwin, Jr.
James M. Kelly
Joseph A. Mullaney
John A. Bassett
Pacific Coast Representative

VOLUME 50 SEPTEMBER 1, 1950 NUMBER 17, PART II

The Annual Meeting, 1950

The 144th Annual Meeting, which took place May 8 to 12 in New York City, will long be remembered as one of the most successful ever held by the Medical Society of the State of New York. The final check on registrations revealed that the total was 6,985, of which 4,407 were physicians, 1,191 guests, and 1,387 exhibitors and their associates. This exceeds the 1948 registration, previously the high mark, by 965.

Much important business was transacted by the House of Delegates. Changes were made in the Constitution and Bylaws, and the Principles of Professional Conduct (Code of Ethics) were revised. An addition to the latter was adopted, as Appendix III, setting up a framework under which grievance committees may be formed at the county or district branch levels.

Redistricting of the State was accomplished by the creation of nine district branches, instead of eight. The First District Branch will comprise New York, Bronx, Kings, Queens, and Richmond Counties. The Second District Branch will consist of Nassau and Suffolk Counties. The Ninth District Branch will contain Westchester, Rockland, Orange, Dutchess, and Putnam Counties. Other district branches remain unchanged.

Dr. J. Stanley Kenney, of New York City, was chosen president-elect by the House of Delegates to succeed President Carlton E. Wertz in 1951.

The House voted to increase the number of the Board of Trustees from five to seven and elected Dr. Edward T. Wentworth, of Rochester, for a five-year term; Dr. James R. Reuling, of Bayside, for a four-year term, and Dr. Fenwick Beekman, of New York City, for a three-year term.

The number of councillors was increased from nine to twelve, and the following were elected to the Council: Dr. Peter J. Di Natale, of Batavia; Dr. Renato J. Azzari, of the Bronx; Dr. Floyd S. Winslow, of Rochester, and Dr. Walter W. Mott, of White Plains, all for three-year terms; Dr. Denver M. Vickers, of Cambridge, for a two-year term, and Dr. Irwin E. Siris, of Brooklyn, for a one-year term.

The detailed minutes of the House of Delegates appear in succeeding pages of this issue. They merit your careful reading, especially if you were not present as a delegate. Only by consulting them can you know the full story of what occurred. This is, after all, your business; it is transacted for you by your State Society officers and your duly elected county society delegates; their actions are binding upon you and will necessarily affect your professional lives for years to come. Let every member study these minutes carefully; medical history in this State is in the making. We have now available the necessary mechanisms and tools for a more intense form of existence both as citizens and professional people, but is our feeling for our great historic duties intensely enough realized? Have we been hurriedly inoculated with the pride and power of our modern instruments, but not with their spirit? Is the new generation of professional men getting ready to take over its share of the command of the world as if that world were a paradise without trace of former footsteps, without traditional and highly complex problems?

These problems need the careful and serious study of all of us, always mindful of what has gone before. Study of these minutes provides the historical background so necessary for our continued progress. Read them carefully.

ANNOUNCEMENT

The 145th Annual Meeting of the

Medical Society of the State of New York

will be held

April 30 to May 4, 1951

Hotel Statler

Buffalo

Medical Society of the State of New York

House of Delegates

Minutes of the Annual Meeting

May 8 to May 10, 1950

THE 144th Annual Meeting of the House of Delegates of the Medical Society of the State of New York convened at the Hotel Statler, New York City, on Monday, May 8, 1950, at 10:15 A.M.; Dr. Albert F. R. Andresen, *Speaker;* Dr. Frederic W. Holcomb, *Vice-Speaker;* Dr. Walter P. Anderton, *Secretary;* Dr. Andrew A. Eggston, *Assistant Secretary.*

Speaker Andresen: The House will please come to order.

Mr. Secretary, will you give me the report of the Reference Committee on Credentials?

Section 1

Report of Reference Committee on Credentials

Secretary Anderton: Mr. Speaker, the Reference Committee on Credentials reports that there is a quorum present.

Speaker Andresen: I now declare the 144th Session of the House of Delegates open for the transaction of business.

Section 2

Approval of Minutes of the 1949 Session

Speaker Andresen: The first order of business is the approval of the minutes of the 1949 session, which were published in Part II of the September 1, 1949, issue of the NEW YORK STATE JOURNAL OF MEDICINE. If there are no corrections or objections, the minutes will stand approved as published. Hearing no objections, they so stand approved.

Section 3

Reference Committees

Speaker Andresen: I now wish to announce the appointments to the Reference Committees, which were published in the April 1 issue of the JOURNAL. They are not yet listed on the bulletin board, but they will be. Mr. Secretary, have we any last minute changes?

Secretary Anderton: Yes, Mr. Speaker. You need one more member for the Reference Committee on Report of Council, Part V.

Speaker Andresen: Is Dr. Hallock, of the Section on Orthopedics, present?

. . .There was no response. . . .

Speaker Andresen: Is Dr. Clark here, from the Section on Surgery?

. . .There was no response. . . .

Speaker Andresen: Is Dr. Prudhon here?

Dr. Charles A. Prudhon, *Jefferson:* Yes.

Speaker Andresen: Will you serve on that Reference Committee, Dr. Prudhon?

Dr. Prudhon: Yes.

Secretary Anderton: On the Reference Committee on Report of Council, Part XII, Dr. Amendola is not here, so we are putting Dr. Gerald Dorman in his place.

. . . The Reference Committees, as now constituted, are as follows:

REFERENCE COMMITTEE ON CREDENTIALS:

Charles F. McCarty, *Chairman*, Kings
Archibald K. Benedict, Chenango
J. William Quinlan, Monroe
Thomas R. Cummings, Essex
Sylvester C. Clemans, Fulton

REFERENCE COMMITTEE ON REPORT OF PRESIDENT:

Charles W. Mueller, *Chairman*, Kings
Clifton H. Berlinghof, Broome
Frank J. Cerniglia, Queens
Kenneth T. Rowe, Seventh District Branch
Alfred K. Bates, Cayuga

REFERENCE COMMITTEE ON REPORTS OF SECRETARY, CENSORS, AND DISTRICT BRANCHES:

Frederick W. Williams, *Chairman*, Bronx
Charles A. Anderson, Kings
Samuel B. Burk, New York
Reid R. Heffner, Westchester
Thomas M. Watkins, St. Lawrence

REFERENCE COMMITTEE ON REPORTS OF TREASURER, TRUSTEES, AND FINANCE:

Nelson W. Strohm, *Chairman*, Section Delegate, Erie
Edwin A. Griffin, Kings
W. J. Tracy, Steuben
G. Stanley Baker, Wyoming
Charles C. Murphy, Second District Branch

REFERENCE COMMITTEE ON REPORT OF PLANNING COMMITTEE FOR MEDICAL POLICIES:

Thomas M. d'Angelo, *Chairman*, Queens
Dwight V. Needham, Onondaga
Wendell R. Ames, Section Delegate, Erie
E. Dean Babbage, Erie
Irving J. Sands, Kings

REFERENCE COMMITTEE ON REPORTS OF MALPRACTICE INSURANCE AND DEFENSE BOARD AND LEGAL COUNSEL:

Henry W. Miller, *Chairman*, Putnam
Harold B. Davidson, New York
W. Walter Street, Onondaga
Kenneth F. Bott, Greene
Austin B. Johnson, Nassau

REFERENCE COMMITTEE ON REPORT OF COMMITTEE ON CONSTITUTION AND BYLAWS:

Irwin E. Siris, *Chairman*, Kings
Ezra A. Wolff, Queens
Raymond F. Kircher, Albany
William Roberts, Yates
Ralph Sheldon, Wayne

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART I:

Postgraduate Education
Emergency Preparedness

Scott Lord Smith, *Chairman*, Dutchess
John H. Garlock, New York
Frank LaGattuta, Bronx
Charles S. Lakeman, Monroe
Edgar O. Boggs, Lewis

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART II:

Maternal and Child Welfare

William J. Orr, *Chairman*, Section Delegate, Erie
Thomas B. Givan, Kings
Joseph H. Cornell, Schenectady
Fred T. Cavanaugh, Rensselaer
P. Miles Standish, Ontario

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART III:

Public Health Activities A

Industrial Health
Rural Medical Service
Problems of Alcoholism

Harry Golembe, *Chairman*, Third District Branch
Milton G. Potter, Erie
David Corcoran, Suffolk
M. Renfrew Bradner, Orange
Charles E. Goodell, Chautauqua

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART IV:

Public Health Activities B

Cancer
Hard of Hearing and the Deaf
Mental Hygiene
Rheumatic Fever
Blood Banks

Frederick S. Wetherell, *Chairman*, Onondaga
Abraham M. Rabiner, Section Delegate, Kings
Alfred Angrist, Queens
John J. Brick, Broome
Fred A. Jordan, Cortland

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART V:

Public Health Activities C

Physical Medicine
Rehabilitation
Nutrition
Geriatrics
Diabetes
Cerebral Palsy

Norman S. Moore, *Chairman*, Tompkins
George E. Anderson, Kings
Madge C. L. McGuinness, New York
Samuel Gitlow, Bronx
Christopher Stahler, Jr., Section Delegate, Albany
Charles A. Prudhon, Jefferson

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART VI:

Economics
Public Medical Care
Medical Research
Medical Service
Joint Committee of the Hospital Association of New York State and the Medical Society of the State of New York

Thomas O. Gamble, *Chairman*, Albany
Aaron Kottler, Kings
Edwin L. Harmon, Westchester
Henry I. Fineberg, Queens
Irwin Felsen, Allegany

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART VII:

Medical Care Insurance

Guy S. Philbrick, *Chairman*, Niagara
John M. Galbraith, Nassau
Frederic E. Elliott, Section Delegate, Kings
Leo F. Schiff, Clinton
Frank C. Hamm, Kings

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART VIII:

Liaison with Veterans Administration
War Memorial

Reginald A. Higgons, *Chairman*, Westchester
Roger F. Lapham, New York
John C. Brady, Erie
George A. Burgin, Herkimer
James Greenough, Otsego

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART IX:

Legislation

J. Homer Cudmore, *Chairman*, New York
George J. Lawrence, Queens
John F. Kelley, Oneida
Morris Weintrob, Kings
John L. Edwards, Columbia

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART X:

Workmen's Compensation

A. Wilbur Duryee, *Chairman*, New York
Herbert E. Wells, Erie
Roman R. Violyn, Montgomery
Theodore R. Proper, Orange
F. B. Theis, Rockland

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART XI:

Publication
Film Review
Public Relations

Eugene H. Coon, *Chairman*, Nassau
J. Lewis Amster, Bronx
Henry F. McGarvey, Westchester
Edward F. Shea, Ulster
Philip D. Allen, New York

REFERENCE COMMITTEE ON REPORT OF COUNCIL—PART XII:

Miscellaneous
  Conventions
  Medical Licensure
  Nursing Education
  Woman's Auxiliary
  Office Administration and Policies
  Ethics
  Memorials
  History

Joseph A. Geis, *Chairman*, Fourth District Branch
Samuel Lubin, Kings
Libby Pulsifer, Monroe
Eugene F. Galvin, Ulster
Gerald Dorman, New York

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS (A):

A. H. Aaron, *Chairman*, Erie
Peter Murray, New York
Edward P. Flood, Bronx
John L. Sengstack, Suffolk
Joseph L. Kiley, Saratoga

REFERENCE COMMITTEE ON MISCELLANEOUS BUSINESS (B):

Peter J. Di Natale, *Chairman*, Genesee
Clifford A. Crispell, Dutchess
Charles A. Prudhon, Jefferson
Arthur F. Gaffney, Oneida
B. Wallace Hamilton, New York

SPEAKER ANDRESEN: If any chairmen find that members of their committees are not present, and will let us know, we will appoint other members to fill out their quota.

Section 4

Reference of Reports and Supplementary Reports

SECRETARY ANDERTON: Mr. Speaker, I move that the reports and supplementary reports of Officers, Councillors, Trustees, Legal Counsel, and District Branches that have been published and distributed to the members of the House be referred to the respective reference committees without reading.

SPEAKER ANDRESEN: Do I hear a second to that motion?

DR. DWIGHT V. NEEDHAM, *Onondaga:* I will second that motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

SPEAKER ANDRESEN: They will be so referred. Most of you have seen these reports already, and I believe a good many of the chairmen of the reference committees have worked on them.

The location of the tables for the reference committees is in two places: One is the Penn Top North, which is right in back of here; other reference committees will meet in the Headquarters Room, which is on the other side of the elevators to the right.

You can inquire a little later or look at the bulletin board on which a list will be posted as to which committees are in which place. We will make that announcement later on, and in any event it will be posted.

We would like to have those who are interested in any of the reports or any of the resolutions look up where they are being debated this afternoon and go to the place where they are being discussed, and make your point of view known.

Section 5 (*See 109*)

Supplementary Report of the Secretary

To the House of Delegates, Gentlemen:

At its meeting on April 13, 1950, the Council referred to the House of Delegates a letter your Secretary had received from Mr. Royal W. Ryan, Executive Vice-President of the New York Convention and Visitors Bureau, Inc., dated April 4, 1950. This stated in part: "It appears that we are at last approaching success in our efforts to obtain an adequate convention and exposition hall for the City of New York. I have been told that an official announcement will be forthcoming soon, probably before the convention of the American Medical Association in San Francisco, June 26 to 30. In view of this, I have recently talked with the staff in Chicago and learned that the 1953 convention is still wide open. The 1951 meeting will be in Atlantic City and the 1952 meeting in Chicago. Therefore, I think we would have a chance for 1953, if the Medical Society of the State of New York would extend the official invitation, dependent of course upon proper facilities being available in New York City. I believe now that these will be available in 1953 and would like very much to have the Society vote the invitation at its meeting here in New York in May if you deem it advisable." Your Secretary takes the liberty to suggest to this House that it authorize an invitation to the American Medical Association to hold its annual meeting in New York City in 1953: (1) If the Medical Society of the County of New York so desires, and (2) If proper facilities are actually available at the time an invitation is sent.

Dr. George F. Lull, secretary of the American Medical Association, has requested an estimate of the 1950 and 1951 expenses incurred in New York State in connection with the American Medical Association annual dues. On April 21 your Secretary requested these estimates from each of the sixty-one component county societies. As of this date, sixteen answers have been received. As soon as possible an answer will be sent to Dr. Lull. Until our Society learns from the American Medical Association its ultimate attitude regarding such expenses it will be impossible to reply to the requests of the Bronx County Medical Society and the Richmond County Medical Society for reimbursement for all their expenses in this matter.

At its last meeting the Council referred to the House of Delegates the following memorandum which it was proposed be sent to Miss Mary Donlon, Chairman, Workmen's Compensation Board of New York State:

Subject: Pilot Study on Rehabilitation in Compensation Medicine (*See 72*)

In view of the fact that the number of disabled has reached a figure over 700,000 each year in the State of New York, a situation which constitutes a real problem in the field of compensation medicine, and that since the State of New York has taken the leadership over the years in the field of compensation medicine, the Medical Society of the State of New York wishes to see that this leadership is continued. It therefore recommends that a research project in rehabilitation of the disabled worker, as outlined below, be set up as a cooperative effort of the Medical Society of the State of New York, the insurance carriers, and the Workmen's Compensation Board.

Rehabilitation is now a recognized medical specialty, and experience in the armed forces and in certain civilian programs during the past five years has clearly demonstrated the necessity for *total* medical service to the sick and disabled. It has definite application, and there is a special need in the field of compensation medicine. Rehabilitation is a teamwork program designed to teach the individual to live and if possible to work within the limitations of his disabilities but to the hilt of his abilities.

Although the results in the small number of patients who have had the benefit of integrated programs are most encouraging, in so far as meeting the total need is concerned the surface has hardly been scratched. This is due to the relative newness of the concept of *total* rehabilitation; in many instances to lack of a clear understanding as to how such a program operates and what it can accomplish, and also to a lack of understanding by those concerned with the problem of the disabled worker, of the concept that rehabilitation must start as early as feasible after injury and must be a continuous progressive process. It is imperative that such a program be under the medical direction of a specialist in this field, and a complete program should include physical therapy, occupational therapy, speech therapy, facilities for psychosocial testing and guidance, vocational counseling, social service, and psychotherapy when indicated. All of these are needed in a complete program designed to meet the disabled worker's specific need.

In order that this much needed program may be accelerated and the concomitant educational program furthered, it is recommended that:

A pilot study be established within the framework of the New York Workmen's Compensation Medical Department and the Medical Society of the State of New York, designed to provide the following mechanism:

> (*a*) Early selection of specific cases in need of rehabilitation to be evaluated as to feasibility. (Such an evaluation should include physical re-evaluation, complete range of motion studies, muscle tests, tests of activities of daily living, psychologic testing and counseling, and social service interview.)
>
> (*b*) A specialist or several specialists in physical medicine and rehabilitation should be appointed so that one man would be available at all times in the New York office and one man would be available at least one day a week in the upstate offices to review case records and select proper cases (see paragraph *a*) for further investigation and referral to departments of physical medicine and rehabilitation or to rehabilitation centers for evaluation and, if feasible, for training.
>
> (*c*) A panel of specialists to be established to consider controversial referred cases on rehabilitation. This panel should include men of the highest professional caliber and should represent: (1) physical medicine and rehabilitation, (2) orthopedic surgery, (3) internal medicine, and (4) neurology and psychiatry.

A similar program should be established in the five upstate offices. It is felt that such a program should be of service to the worker's doctor.

The patient will remain under the professional care of his own physician, to whom reports on procedures and progress would be sent periodically. The worker should be seen periodically by his own physician during the time he is receiving rehabilitation training and would be referred back to him at the completion of rehabilitation.

Budget—A budget of $50,000 is suggested to provide the following:

1. $10,000 for one full-time physical medicine and rehabilitation specialist or his equivalent, for the New York office.
2. $10,000 for one full-time physical medicine and rehabilitation specialist or his equivalent, for the upstate area.
3. $20,000 for paying panel specialists, either on a case basis or an afternoon's work basis.
4. $10,000 for administrative, secretarial, and traveling expenses.

It is felt that such a pilot study will be invaluable in establishing criteria for case selection and facilities of training and would provide the much needed data as to time requirements, cost, and end results. An analysis of these results could be readily compared to an untreated group and clearly demonstrate whether or not the human and economic savings would justify the establishment of such a department in the New York Workmen's Compensation Medical Department on a permanent basis as an accepted, integral part of the medical care to the disabled in industry.

Your Secretary takes the liberty to draw to the House's attention that both the Workmen's Compensation Committee and the Public Health and Education Committee are interested in the subject of this memorandum.

Respectfully submitted,
W. P. ANDERTON, M.D., *Secretary*

Section 6 (See 146)

Supplementary Report of the Board of Trustees

To the House of Delegates, Gentlemen:

The careful reader may have noticed some apparent differences in figures used in the report of the Auditors and in the report of the Board of Trustees. These differences are apparent only and not real. The Statement of Operating Income and Expense for the year ended December 31, 1949, published in the Report of the Treasurer* is a copy of Exhibit C of the Auditor's Report.

On this income sheet the Auditor did not use the item "Dividends and Interest, $21,691." Our accounting department did use it. This accounts for the apparent discrepancy between the figure $5,177 shown as the deficit in the report of the Board of Trustees and the figure $26,868.40 which the Auditor used as excess of operating expenses over income. In other words, the Auditor's figure is the operating deficit. The Trustees' figure is the actual deficit.

In order that the House may have immediately available for its consideration such information as is possible on the uncertain element of expenditures, it may be stated that up to this time the Board has appropriated for extraordinary legal expense, in connection with an investigation by the Department of Justice into the affairs of the State Society and the affairs of the County Societies of New York, Kings, Queens, Bronx, Richmond, and Nassau, since September 15, 1949, $18,450. At the time of writing this report there is no certainty, but a high probability that, although there will be more of this expenditure, it will not be in excess of the amount estimated ($35,000) in the regular report of the Board and probably will be considerably less, providing suit is not instituted this year.

Other extrabudgetary appropriations during the first third of the year 1950 are:

Additional secretary—Membership Department	$1,225
Additional travel allowance, Bureau of Public Relations	375
Typewriter, Bureau of Public Relations	400
World Medical Association	1,000
TOTAL	$3,362

This is the normal proportion of unforeseen needs estimated in the regular report.

The Trustees also approved of a bookkeeping absorption of $1,212, spent in times past for expenses of the Veterans Medical Service Plan of New York, Inc. This involves no expenditure at this time, but does unbalance the budget by that much. It avoids a much larger unbalancing in the future, at such time as the contract with the Veterans Bureau is terminated.

The necessary expenditures of this Society, just as the expenses of any progressive organization for public welfare, are constantly increasing. Likewise the services rendered and benefits available to individual members are constantly increasing.

During the past five years, our operating expenses were:

1945	$163,600.52
1946	177,188.89
1947	283,755.33
1948	259,803.43
1949	341,729.12

The firm conviction of all the Trustees is that deficit financing is dangerous. An increase in income is necessary to avoid it. Returns from publication of the JOURNAL cannot be classified as income. From 1938 to and including 1942, the JOURNAL was published at a loss of $64,000. From 1943 to and including 1948, returns from JOURNAL publication were available to aid in other publications, in total to an amount of nearly $105,000. We are now publishing a larger JOURNAL, on better paper, but at a deficit. The only income the Society has is from dues and return on investments. The latter item constitutes less than 5 per cent of the budget. In short, it is only by way of dues and assessments that the Society is maintained. Whether a temporary increase by assessment or a permanent increase by raising the annual dues is preferable is not a matter of unanimous opinion in the Board. It involves, at best, considerable conjecture upon economic trends in general, and what will prove necessary in our relations with the Federal Department of Justice, and what will prove to be advisable in public relations in particular. The decision is one for the House of Delegates to make.

Respectfully submitted,
EDWARD T. WENTWORTH, M.D., *Chairman*
EDWARD R. CUNNIFFE, M.D.
DAN MELLEN, M.D.
JAMES F. ROONEY, M.D.
WILLIAM H. ROSS, M.D.

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* NEW YORK STATE J. MED. 50: 849 (Apr. 1) 1950.

Section 7 (See 132)

Supplementary Report of the Malpractice Insurance and Defense Board

To the House of Delegates, Gentlemen:

At the time of preparing the annual report of this Board the actuarial examination of the operation of the Group Plan of the Society had not been finished by Messrs. Wolfe, Corcoran, and Linder. That work has now been completed, and their report has been filed with the Council. As Mr. Linder will present his findings in considerable detail to the House of Delegates, it is not necessary to comment in this supplementary report on any part of his findings except his conclusions as to rate costs.

At the end of 1948, Mr. Linder found that the costs of $5,000/$15,000 insurance for the five expired policy years of 1943 to 1947 were as follows:

Metropolitan area............	$52.47
Upstate area.................	38.23

These rates were computed on the agreed permissible loss ratio in effect at that time of 66 per cent. For the five expired policy years 1944–1948, his report at the end of 1949 shows these costs to be as follows:

Metropolitan area............	$52.80
Upstate area.................	41.74

These were computed on the higher permissible loss ratio of 68.5 per cent, provided in the carrying agreement with the Employers Mutual which went into effect on July 1, 1949.

To obtain a fair comparison between the rates for the two periods, those reported last year would have to be computed on the current permissible loss ratio, which produces the following comparison:

Area	1943–1947	1944–1948	Increase	Percentage of increase
Metropolitan	$50.55	$52.80	$2.25	4.4
Upstate	36.83	41.74	4.91	13.3

From the foregoing comparison it will be seen that, while the rate cost in the metropolitan area increased $2.25, or 4.4 per cent, there was an increase in the upstate counties of 13.3 per cent, amounting to $4.91.

Under our retrospective rating agreement with the Employers Mutual, it is assumed that the number and average cost of suits and claims per insured member will be the same during the coming year as during the last five expired policy years, and it is on that basis that our rates are adjusted and fixed from year to year. To these are added the contingent loss reserve factors.

The following is a comparison of our current rates with the latest rate cost, as computed by Mr. Linder:

Area	Rate	Contingent Loss Factor	Current Premium Rate	Computed Rate Cost
Metropolitan	$50.00	$5.00	$55.00	$52.80
Upstate	39.00	3.00	42.00	41.74

From this it will be seen that the latest computed rate costs have exceeded our current rates charged by $2.80 in the metropolitan area, and $2.74 in the upstate districts. Thus, if the loss ratios continue as at present these deficiencies will have to be taken out of our contingent loss reserve. While that is the purpose of the reserve, it was not expected that it would have to be called upon so soon, leaving less than half for future years' experience.

Under the carrying agreement with the Employers Mutual, the Company would have been justified in asking appropriate increases in our rates for both sections of the State, effective July 1 of this year. However, since the reserves have been adequate to take care of the pure rate deficiencies, they have agreed to continue our present rates without change for another year to test further the loss experience and leave whatever adjustment in rates and surcharges may be needed, until July 1, 1951. In our conference with the officers of the Company at the home office in Wausau, they displayed a fine spirit of cooperation and desire to do everything in their power to assist the Society in its operation of the Group Plan, as well as to halt the rising cost of losses and, if possible, to reduce it. There can be no doubt that the Company is quite as anxious as is the Society to see a reversal in the trend of loss costs in New York and a consequent reduction in insurance rates. They are especially interested in the Society's experimental claim prevention plan in Westchester County and have agreed to contribute their full share to its success.

In connection with our claim prevention experiment a word of caution is necessary for those who may expect that it will produce quick results. It must be kept in mind that this program is predicated upon and will be a result of a well-considered and organized plan of improving public relations between each member and each of his patients, with facilities to hear and adjust all points of differences which tend to disturb those relations. Without this foundation there will be little or no brake upon the number of suits and claims filed. Time is required to develop these facilities and to bring the resulting claim prevention and cost reduction efforts to bear. The Board is satisfied that this is unquestionably the right course to follow in this State and believes that, with careful organization and supervision and the willing cooperation of all concerned, this program will eventually have a far-reaching effect on the number and cost of malpractice actions against members and a corresponding effect upon our insurance costs. However, it will not be possible to obtain even an estimate as to the results which may be expected from the Westchester County experiment before the fall of next year at the earliest.

In the meantime, various county societies have set up, or are in the process of establishing, special committees to review and adjust complaints of all kinds against their members. This is the first long step forward in the improvement of public relations at the point where it will accomplish the most good, namely, at the level of the individual patient and his doctor. If carried out effectively, this project alone will have a beneficial effect upon the number of suits filed against members in those counties. Obviously, malpractice actions are not brought by satisfied patients, and any program which explains away doubts and adjusts differences, real or fancied, between members and their patients will increase the number who are satisfied and leave fewer to seek redress for their grievances in the courts.

Although this Board, in the beginning at least, will have no official connection with those committees, it will watch the development of their programs with a great deal of interest and hold itself ready to help them in any way possible.

The following is a statement of the number of members insured in the Group Plan by counties, and the percentage of the insured to the total membership as of December 31, 1949:

County	Number Members	Number Insured	Percentage Insured
Oswego	58	57	98
Sullivan	45	44	98
Greene	28	27	96
Schoharie	17	16	94
Clinton	55	51	93
Herkimer	57	53	93
Broome	236	216	91
Delaware	37	34	91
Chemung	112	100	89
Cayuga	72	63	88
Fulton	63	55	87
Warren	65	57	87
Jefferson	98	83	85
Chautauqua	122	102	84
Chenango	38	32	84
Onondaga	468	395	84
Wyoming	31	26	84
Genesee	49	41	83
Madison	50	42	83
Oneida	284	235	83
Rensselaer	163	135	83
Schenectady	194	161	83
Saratoga	68	56	82
Yates	22	18	82
Albany	362	291	80
Cattaraugus	87	67	78
Cortland	43	34	78
Tompkins	93	70	76
Monroe	711	531	75
Niagara	159	120	75
Orange	201	151	75
Westchester	993	748	75
Essex	39	29	74
Putnam	19	14	74
Queens	1,755	1,297	74
Richmond	200	146	73
Schuyler	11	8	73
Steuben	99	72	73
Tioga	30	22	72
Seneca	36	26	71
Wayne	62	44	71
Allegany	39	27	69
Nassau	798	551	69
Rockland	120	81	67
Franklin	75	50	67
Erie	1,088	716	66
Columbia	45	29	64
Lewis	18	12	64
Ontario	107	68	64
New York	6,772	4,276	63
Otsego	66	40	61
Kings	3,602	2,142	59
Ulster	105	60	48
Suffolk	345	194	56
Orleans	19	10	50
St. Lawrence	85	42	50
Washington	40	19	48
Dutchess	225	103	46
Livingston	43	20	46
Bronx	1,603	728	45
Montgomery	66	29	43
TOTAL	22,593	14,986	66

It is a source of satisfaction to the Board to note the continued support of the Group Plan, as evidenced by the increase of 2,245 insured members during 1949, increasing the percentage insured to the total membership from 57 to 66 per cent.

Respectfully submitted,

LEO F. SCHIFF, M.D., *Chairman*

Section 8 (See 103)

Supplementary Report of the Council—Part XII: Miscellaneous

Belated Bills

In accordance with the Bylaws, Chapter IX, Section 1, belated bills from three members must be submitted to the House of Delegates before they can be paid. Expense accounts are required to be submitted within thirty days after the expenses are incurred. "This time may be extended for any cause by the Board of Trustees and such extension shall not exceed ninety days." As these items were received more than ninety days late, they are respectfully submitted to the House of Delegates with the recommendation that they be approved.

1. On August 8, 1949, voucher was received from Dr. George F. Bock, chairman of Session on Physical Medicine, for attending meeting in Buffalo of Chairmen of Sections and Sessions of the Scientific Program Committee, October 30, 1948, $27.50.
2. Dr. Leslie A. Osborne, Buffalo, expenses incurred as postgraduate lecturer at Chenango County Medical Society, Norwich, December 13, 1949, $33.01.
3. Dr. Arthur C. Davis, Glens Falls, expenses incurred attending Public Speaking Forum held under the auspices of the Public Relations Bureau of the Medical Society of the State of New York, April 9, 1949, $27.

Section 9 (See 101)

Supplementary Report of the Council—Part XII: Questions on Ethics

To the House of Delegates, Gentlemen:

Since the submission of the first section of the report as printed and in conformity with the direction of the Council, the following framework under which Grievance Committees may be set up at the county or district branch levels is submitted to be known as Appendix III of the Principles of Professional Conduct.

GRIEVANCE COMMITTEES

1. Statement of Policy
    - *a.* Grievance Committees are recommended by the State Society either at the county or district branch level.
    - *b.* Grievance Committees are desirable as a means of improving doctor-patient relationships.
2. Purpose of Grievance Committees
    - *a.* To protect the public from the minority of physicians who overcharge, neglect their patients, or in any other way conduct themselves in an unprofessional manner.
    - *b.* To defend physicians against ill-founded and unjust accusations of patients.
    - *c.* To bring about an amicable adjustment of differences or misunderstandings that can arise from many causes.
3. Organization of Grievance Committees
    - *a.* Area of operation, i.e., counties or district branches.
    - *b.* Number of members; how selected; term of office; compensation; selection of chairman; qualification of members.
    - *c.* Schedule of meetings.
    - *d.* Geographic representation.
    - *e.* Approval of Council to be obtained.

4. Functions of Grievance Committees
    - *a.* To receive complaints from anyone (doctor, layman, group, or corporation).
        1. Initial complaint.
        2. Request for written complaint.
    - *b.* Investigation of facts.
    - *c.* Attempt to mediate dispute and effect settlement.
    - *d.* To reach an appropriate decision when disciplinary action is indicated.
    - *e.* To report its findings to the proper judicial body.
5. Method of Operation
    - *a.* All matters held confidential.
    - *b.* Complaints promptly acknowledged.
    - *c.* Time limit set for disposition of all cases.
    - *d.* Preliminary investigation made.
        1. First effort—to attempt to bring parties together for an amicable solution.
        2. If facts indicate serious difference, Grievance Committee meets to consider case formally.
    - *e.* Majority vote governs.
    - *f.* Notification to doctor and patient of findings.
        1. First obtain opinion from legal counsel.
    - *g.* Doctor requested to abide by findings of Grievance Committee within fixed time.
    - *h.* In event of failure to comply, or in event unprofessional or unethical conduct involved, Grievance Committee reports name of doctor to proper judicial body for disciplinary action.
6. Disciplinary action
    - *a.* Report facts and findings to Board of Censors having jurisdiction.
    - *b.* Type of discipline—to be determined by censor.
    - *c.* Right of appeal, as provided in Constitution and Bylaws of State Society.

Respectfully submitted,
James R. Reuling, M.D., *Chairman*

Section 10 (See 79)

Supplementary Report of the Council—Part XII: Nursing Education

To the House of Delegates, Gentlemen:

A meeting held Thursday, April 13, 1950, at the Hotel Biltmore, New York City, was attended by the executive heads of all agencies comprising the Coordinating Council on Nursing Problems.

A representative of the New York State Education Department introduced a discussion, hinging on the mandatory provision of the Nurse Practice Act, which became effective April 1, 1950. With approval of the Education Department, the most controversial provisions are submitted for clarification and general information of the medical profession.

Section 6909, paragraph I, reads in part, "Nor shall it be construed as prohibiting or preventing the practice of nursing in this State by a graduate nurse, whose application for indorsement of license *has been approved* by the department, pending the issuance of such indorsement." This provision is interpreted to allow a registered nurse, licensed by examination in another jurisdiction, to engage legally in the practice of nursing in New York State from the time his or her application has been approved, *but not before approval.*

Section 6909, paragraph II, states, "This article shall not be construed to prohibit the practice of nursing pending the results of licensing examinations by graduates of schools registered by the department while working under the supervision of such schools or by other persons eligible for licensure under this article, whose applications for admission to a licensing examination have been approved by the department, provided such candidate shall enter the first licensing examination scheduled by the department following such graduation or approval and shall enter the two following examinations in turn in case of failure to pass the preceding examination, unless such candidate has presented reasons satisfactory to the commissioner as to inability to enter the first or second examination and has been excused therefrom." It further states that this practice shall terminate on failure to enter the examination and in no case shall continue beyond announcement of the result of the third licensing examination after graduation or approval. This would allow the new graduate, pending results of the licensing examination, to work in some other hospital or in an agency such as public health or visiting nurse association satisfactory to director of graduate's school provided definite arrangements have been made between director of graduate's school and the director of nursing of the other hospital or agency, to delegate responsibility from the former to the latter for proper and adequate supervision of the graduate pending results of the examination. This in no manner allows the new graduate to do private duty except as defined in the article, and it implies the same regulation on the out-of-state graduates.

Section 6909, paragraph VI, reads, "In determining the equivalent of a course of study in a school of nursing, the department shall grant an applicant reasonable opportunity to furnish further evidence and to make up any deficiencies, which, in the opinion of the department, may be necessary to meet its requirements." This provision means that an applicant, before *being definitely refused* a license, shall be given reasonable opportunity to furnish further evidence of meeting requirements and to make up any deficiencies. While "making up" classroom instruction in the deficient subject, she may only engage in nursing under supervision in a registered nurse school or in the same institution where the classwork is being obtained. The same restriction holds true if a graduate is waiting for classwork to begin with the proviso that he or she must avail himself or herself of the first opportunity to enter that classwork.

These regulations have required extensive study and work on the part of the Department and, since they are now definitely in force, it is felt that the medical profession should be fully aware of their implications.

Respectfully submitted,
E. R. Dickson, M.D., *Chairman*

Section 11 (See 88)

Supplementary Report of the Committee on Revision of the Constitution and Bylaws

To the House of Delegates, Gentlemen:

The following Supplementary Report of your Committee on Revision of the Constitution and Bylaws is respectfully submitted for your consideration:

CONSTITUTION

The Committee feels that the reorganization of the district branches made a year ago has not worked out satisfactorily. There has been no meeting of the First District Branch, and there have been received complaints from Nassau and Suffolk Counties, as well as some of the counties upstate now comprising the present Second District Branch, because of the unwieldy grouping in that Branch. Hence, the Committee recommends that the following change be made.

ARTICLE XI

Section 1. The membership of the Society shall be divided into eight district branches as follows:

The First District Branch shall comprise the members of the Medical Societies of the Counties of New York, Bronx, Westchester, Rockland, Orange, Dutchess, and Putnam.

The second District Branch shall comprise the members of the Medical Societies of the Counties of Kings, Queens, Nassau, Suffolk, and Richmond.

The composition of the other district branches shall be left unchanged.

The Council requested that consideration be given to lightening the load on the President by giving some of his duties to the President-Elect. The Committee is of the opinion that this can best be solved by further amending the amendment proposed in the Committee's report on Chapter VII, Section 2, as follows:

After the first sentence, there shall be inserted the following:

"The President-Elect shall perform such other duties as may be requested by the President."

The remainder of the proposed amendment is to remain unchanged.

It has been brought to our attention that a retired member may not change his membership to another county. This should be rectified by amending Chapter XIV, Section 2, as follows:

Insert the words "or a retired member" after the words "good standing," so that the first sentence shall read,

"Whenever an active member in good standing or a retired member in any component society removes to another county in this State, his name, upon his request, shall be transferred to the roster of the county to which he removes, etc."

The remainder of the Section to remain unchanged.

Respectfully submitted,
Louis H. Bauer, M.D., *Chairman*
A. H. Aaron, M.D.
James F. Rooney, M.D.

Section 12

Remarks of the Speaker

Speaker Andresen: I am going to burden you with a few remarks, as I have done for the last few years. It is with the greatest of pleasure that for the fourth time I greet you, the members of the House, at its annual meeting. I have greatly enjoyed my work as your Speaker, especially in view of the courtesy and cooperation that have always been manifested by all of the members. In recent years more and more emphasis has been placed upon the type of delegates elected to this body by our component societies. Today, as last year, your membership includes not only specialists in every branch of medicine, but a large proportion of general practitioners. Practically all of you are connected with hospitals or medical schools. Nearly all of you have been presidents or have held other offices and memberships on important committees in the organizations you represent. Every one is inspired by a zeal for service, not only to the interests of the medical profession but to the welfare of the public as a whole. This zeal for service and the general awakening of all members of the medical profession to the importance of safeguarding the health interests of our people has resulted in an ever-increasing number of resolutions introduced in this House each year. (Last year there were nearly forty.) Unfortunately, many of these resolutions have been merely expressions of wishful thinking. An analysis of some of the errors we have committed in the past may aid us at this session in preventing further ones. The principal errors, as I have analyzed them, have been as follows:

1. *In regard to finance:* There have been adopted resolutions calling for investigations, conferences, legislation, publications, and the formation of new committees and bureaus, all of which have added tremendously to the cost of running our Society. The report of our Board of Trustees shows that we have more than doubled our expenditures in the past five years (from $163,600 to $341,729), and are on the verge of deficit financing. It must be realized that if we are to spend more money we must provide for collecting more dues from our members to pay for them, even as the American Medical Association is doing.

2. *In regard to the law:* This House has adopted resolutions directing our Council to carry out procedures which have been found to be contrary to law or bordering on illegality, such as attempting to compel hospitals to refrain from charging for the services of doctors who have hired themselves out to them on a full-time basis, and to take away from the trustees of hospitals their legal right to decide which doctors are to serve on their staffs.

3. *In regard to expediency:* The purposes of some resolutions could not be fulfilled because of expediency. Some bills ordered introduced in the Legislature were of such a nature that our experts informed us that they could not possibly be passed and would prejudice the legislators against other bills which we might wish to sponsor. Some needed to be postponed until later. Some were introduced in spite of advice to the contrary and were defeated.

4. *In regard to public relations:* Some measures adopted by the House were found on careful study by experts to accomplish very little except to produce an unfavorable impression on the public. It has always been a principle of our Society to foster public relations.

In order to avoid similar pitfalls this year, it is extremely important for our twenty-one reference committees, in considering action on the matters referred to them, to listen carefully to arguments pro and con, to seek the advice of officers and members of the Council committees, and to consult with legal and other experts who will be available, so that when the committee chairmen present the findings and recommendations of their committees there will be little if any need for discussion on the floor of this House. The place for arguments is at the reference committee hearings, and every member of this House, and in fact every member of the whole Society, who has knowledge or convictions in regard to any matters coming before a reference committee should consider it his duty to present them there. When resolutions are finally passed upon, it would be well for us to remember that often more can be accomplished by conference and compromise than by attempted coercion.

Most of the resolutions you pass here are referred to the Council for implementation. Few realize the long hours spent by the members of the Council, the loss of time and money involved, in attending not only the long monthly sessions in New York City but in acting as chairmen of the many Council committees. These men, whom you elect each year as being best fitted to carry on the responsibilities of the House of Delegates when it is not in session, are striving constantly to carry out the often difficult mandates of the House, to provide for emergencies arising in the interim between the annual meetings of the House, and to conduct as efficiently and economically as possible the many different activities of the Society. The many reports of the Council Committees of the activities of the past year are to be reviewed and acted upon at this session. If anyone has thought of criticizing any action of the Council, he should be sure to attend the reference committees considering these reports. All will then agree that the members of the Council are entitled to the highest commendation for their unselfish devotion and sacrifice.

It is important for us to realize here today that our actions are not only of interest and importance to the medical profession, but are subject to the scrutiny of representatives of newspapers, of other professional and lay groups, and of propagandists who may use every evidence of differences of opinion in furthering schemes of their own. Our actions here will also greatly influence actions taken by other state societies and by the American Medical Association. We must so conduct ourselves as to show to the world that the practitioners of medicine of the State of New York are united in their support of the activities of the A.M.A., in their determination to provide better and better medical services to more and more people, and to carry on a relentless campaign against the few black sheep among them who bring criticism and disrepute to the profession.

It is with regret that your Speaker announces the death, during the past year, of one of our most valuable members, a former vice-president of our Society, and a man who gave freely of himself even until death on return from acting as delegate to the A.M.A., our delegate from Rockland County, Dr. Stephen R. Monteith. Also within the past few days we have suffered the loss of our attorney, Thomas H. Clearwater, Esq., upon whose judgment we have so frequently depended. The House is requested to rise for a period of silence in honor of these departed friends.

. . . The delegates arose and stood in silent tribute to the memory of Dr. Stephen R. Monteith and Thomas H. Clearwater, Esq. . . .

Speaker Andresen: The Chair will now entertain a motion that suitable expressions of our sympathy be sent to the families of these deceased.

Dr. Frederick W. Williams, *Bronx:* I so move.

Dr. Scott Lord Smith, *Dutchess:* I second the motion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Section 13

Illness of Vice-President McAskill

Speaker Andresen: We have just received word that our Vice-President, Dr. James E. McAskill, is seriously ill. I call for a motion to send a suitable letter to him and to his family expressing our sympathy.

Dr. Clarence G. Bandler, *New York:* I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 14 (*See 86, 88, 107, 145, 152*)

Supplementary Report of the President

Speaker Andresen: It is now a great pleasure to me to present your president. Never has any president been called upon to do so much strenuous work for this Society. He has been laboring day and night throughout the year for the benefit of our members and for the welfare of the residents of this State.

Will Dr. McGoldrick please escort Dr. Masterson to the rostrum?

. . . The delegates arose and applauded as Dr. McGoldrick escorted Dr. John J. Masterson to the rostrum. . .

Speaker Andresen: Ladies and Gentlemen, I present to you your indefatigable President, Dr. John J. Masterson.

President Masterson: Thank you very much for your generous reception.

In this supplementary report I would like to give you the results of my observation of the Society and our profession as your president and point out what I think is necessary for us to do if we are to function more efficiently and exercise our duty as citizens in this distraught world. I first want to say that your officers, Council committees, and bureau directors have done all that is humanly possible under our present setup. Speaking of the other officers and committees, I have nothing but commendation for their untiring and unselfish efforts on our behalf and that of the public. They have given of themselves well beyond the call of duty. But the time is long past, in my opinion, when we could depend upon voluntary workers to carry on efficiently the ever-increasing activities of this Society. It is asking too great a sacrifice of them. Just think of it: We have 59 committees and subcommittees of the Council and House of Delegates!

In an address in February of this year at the tenth annual meeting of the Congress on Industrial Health in New York City, Miss Mary Donlon stated that the medical profession suffers from bad public relations at almost every level, and I quote her: "During the past fifty years the doctor has increasingly withdrawn from community life into his own professional 'ivory tower.' The doctor a century ago was community philosopher, leading citizen, and everybody's friend. Today there are very few doctors on business or civic boards or in public life, outside of professional positions. They are for the most part doctors only—not citizens as well."

I think there is a reason for it. A few years ago a *News Bulletin* of the American Medical Association stated that "Medicine has become overorganized. Surgical societies, pediatric societies, general practice societies, and others have sprung up everywhere." This has resulted in a reduced interest and lowered attendance at the meetings of the county societies with a corresponding atrophy of their political and civil influence in the community. I think this is very true in many places and especially in our urban areas.

Next to the clergy, ours is the most respected profession in the world and second only to the clergy in its potential power to formulate public opinion, but unfortunately we have never fully wielded this power, with the exception of the successful educational campaign by the American Medical Association, state and county societies against socialized medicine—that is, successful to date.

In an address entitled "Politics and the Medical Profession" before a group of Brooklyn physicians recently, Mr. Miles F. McDonald, District Attorney of Kings County, severely criticized us for our aloofness and indifference towards the great problems facing our country today.

He stated that the world is in as critical condition as was our country on July 4, 1776, and the need for men like us to take an active part in the struggle for freedom is even greater than it was then. He further urged that we should be actively associated with a political party and start right now to be politicians in the true sense of the word.

Our strength, like that of a political party, lies at the grass roots and not at the top level. Dr. Simpson told us two years ago, right in this hotel, that "our problems cannot be solved by passing a resolution, going home, and forgetting about it. Nor can they be solved by any committee or bureau of the Society but must be solved on the county level and by the individual doctor in his community." If the House of Delegates passes a resolution instructing your legislation committee to introduce legislation and expects that committee to have it enacted into law, without your individual support, in my opinion you are asking them to do the impossible, because few bills are introduced that have not some opposition. Legislators are anxious to hear from their constituents as well as from a committee, in fact I think more so. Constituents have votes, and committees have not. How many of our members are acquainted with their assemblymen, State senator, or congressman? They are readily accessible and will appreciate hearing from us. You may be sure that other organizations interested in the welfare of their members know them. Maybe our answer is a political action committee in every assembly district in the State, but it will cost money for someone to do the necessary leg work and travel around the State to see that an active committee is functioning in each assembly district during the legislative session.

These committees could be advised by weekly bulletins of the bills in which we are interested, and our legislators informed of our position. I'm afraid this is the only way our potential influence in matters of legislation will be realized. The success of our Public Relations Committee campaign in this State during the past eighteen months is a concrete example of what can be accomplished if we have the men to do the work. As I see it, in matters of legislation we are organized but not unified.

We are like an automobile filled with gas but with little power because of faulty spark plugs. Perhaps two per cent of our members are interested in our activities. No general and his officers ever won a battle when only two per cent of the army went into action. I cannot fathom this indifference and apathy when there is so much at stake. Somehow it must be made clear that state medicine and other matters that will come before this session are not the doctor's main problems. We must not allow our preoccupation with our own special problems to blind us to the far more serious problem of the creeping threat of socialism.

The public respects us for our altruism and scientific achievement, but we have isolated ourselves from those who make civic policy and have ceased to carry any weight in civic and communal affairs. We are potentially influential but relatively impotent in civic or political matters. I think the most *important* message I can bring to you today is for us not only to be doctors caring for the sick but to accept our responsibility as citizens.

Each in his own sphere of life must understand his duties as a citizen and work at them. The Romans called it civic virtue. Community and national organizations will help, but without a great revival of this civic virtue in the mind and heart of every citizen we cannot expect to survive as a free people. Freedom is not a gift from heaven but instead a rare mode of living that must be won and rewon by every generation for itself. John Stuart Mill echoed the same thought when he said, "A people may prefer a free government, but, if from indolence or carelessness or cowardice they are unequal to the exertions for preserving it, they are unlikely long to enjoy it."

It is later than you think—I cannot too strongly urge the members of our profession to participate actively in the preservation of this priceless heritage of freedom by coming out of their ivory towers and partaking in activities other than medicine, thus regaining their former respected influence in their community. It will avail us nothing to spend millions to protect our liberty as physicians and do little or nothing to insure our freedom as individuals.

I hope to have the opportunity to speak later of the workings of our internal organization. Now for definite recommendations.

Recommendation No. 1—Delegate from the State Department of Health. For many years the Army, Navy, Air Force, U.S. Public Health Service, and the Veterans Administration have had a representative from their services as a member of the House of Delegates of the American Medical Association. We have monthly meetings with the Commissioner of Health and his staff—and other meetings during the month with the various divisions of his staff, concerning vital problems in which we are mutually interested. Our efforts complement each other. I would recommend that the new Constitution and Bylaws provide that the Commissioner of the State Department of Health or a deputy designated by him be a member of the House of Delegates. I am sure it would further increase the rapprochement now existing between the Society and the State Department of Health.

The Commissioner of Health is charged by law with certain duties. I have heard some criticisms of the Commissioner of Health. I believe that many of these criticisms are not due to the policies of the Commissioner of Health, but due to the action of some of his subordinates. I feel confident that, if we have any problems or are dissatisfied with anything the Department of Health is doing and it is within the power of the Commissioner of Health to help us without violating any of the laws he is supposed to enforce, we will be able by calling those matters to the attention of the Commissioner of Health to have them corrected.

Recommendation No. 2—That a Night and Emergency Call Plan be instituted in all counties that have as yet no such plan in operation.

Recommendation No. 3—That grievance committees be formed in all counties where such committees are not in operation. Such a committee will promote good public relations.

Recommendation No. 4—That everything possible be done to increase the enrollment in our voluntary medical care plans. With every participating doctor a salesman our enrollment could be doubled in one year. I say each individual doctor, because he has the opportunity in his daily contact with his patients to educate them to the value of this type of insurance, and we need his assistance in this education campaign. We need a vastly increased enrollment in the voluntary systems. The national goal set for 1950 is 15,000,000 new members. We have but a limited time to convince the people that the Blue Cross–Blue Shield is the best substitute for National Health Insurance.

I would also propose for your consideration:

1. The advisability of increasing our dues. They have been increased but once since 1924. A perusal of the annual reports will give you an idea of our many activities which are increasing each year. Our operating expenses in 1945, as Dr. Andresen pointed out, were $163,600 and in 1949 $341,729.
2. The advisability of holding a midyear session of the House of Delegates in November in one of the upstate cities with a clinical program devoted to general practice. This upstate city should be one that at the present time has not the facilities for an annual meeting, and this meeting should be devoted to a clinical program devoted entirely to general practice.

I would also like to propose for your consideration what the House of Delegates is to do about the War Memorial assessment, which assessment was passed by this House of Delegates two years ago, and which assessment was to be due by December 31, 1949. At a meeting of the Council last fall the time for the payment of this War Memorial assessment was deferred until May 31 of this year. Dr. Reuling has the information about the approximate number of those who have not paid that assessment. A number of those who have not paid the War Memorial assessment have paid their dues for 1950, and the question as to what we can do under such circumstances is important. If the House does not want to consider the matter—and they may not on account of the complications connected with it—it might be advisable to refer it to the Council for their consideration, and with power.

In my annual report to the House of Delegates, published in the April 1 issue of the JOURNAL, I referred to the work of our various committees, bureaus, and other matters, and there is no need to repeat them here.

Cecil John Rhodes crowded into his short life of forty-nine years a redoubtable record of service to his adopted country of South Africa. As he lay dying in a simple seaside cottage a few miles from the Cape of Good Hope, his last words were, "So much to do—so little done." I think these words very well describe the thoughts of your President on his retirement from office.

In my successor, Carlton E. Wertz, you have chosen a man of rugged courage, keen intelligence, and demonstrated leadership. I know he will have your valued help and cooperation.

I hope we will have a very successful session of this House of Delegates. I sincerely trust that all matters proposed for your consideration will be calmly, intelligently, and fully considered, and that any action taken as a result of your deliberations will be a constructive contribution to our Society, to its members, and to the health and welfare of the people of the State of New York.

Thank you very much!

. . . The delegates arose and applauded. . .

SPEAKER ANDRESEN: Thank you, Mr. President! The president's supplementary address is referred to the Reference Committee on the Report of the President, of which Dr. Mueller is the chairman, except for Recommendation No. 1 in regard to membership in the House of the Commissioner of Health or his deputy and the final suggestion in regard to the interim meeting. These are referred to Dr. Bauer's committee, the House Committee on Revision of the Constitution and Bylaws.

Section 15 (See 154)

Letter from His Excellency, The Governor of the State of New York

SPEAKER ANDRESEN: At this time it would be fitting to read a letter which we have received from the Executive Chamber, State of New York, Albany, under date of May 6, 1950:

> The Medical Society of the State of New York
> 292 Madison Avenue,
> New York 17, New York
>
> Gentlemen:
>
> I am delighted to send warmest greetings to your Annual Meeting and just wish that official engagements in Albany did not prevent me from coming to New York to discuss with you some aspects of the major issue of our time concerning the freedom of the medical profession.
>
> The high quality of medical care in New York State is not just something that resulted from chance. It has evolved out of the joint efforts of the private practitioners, your own Medical Society, and a State government that supports the principle of comprehensive medical services on a voluntary basis. We do not need socialized medicine in this State to provide adequate medical care for our people. We do need to strengthen and expand our voluntary health and hospital insurance programs, our network of community hospitals, our hospital care for the mentally ill and the tuberculous, our county health departments, and related local health services.
>
> I wish to express my personal appreciation to your president, Dr. John J. Masterson, for the fine support he has given to the State Health Department during the past year. I am sure that the activities of our public health workers have been made more effective as a result of the cooperation that exists between this Department and your great Society.
>
> With the necessity of expanding voluntary medical care and the problems of civil defense which unhappily face us, there is a continuing need for ever closer cooperation between all of us. I am grateful for all that has been done and I know the free medical profession of our State will rise to every challenge in the years ahead.
>
> Sincerely yours
> THOMAS E. DEWEY.

Section 16 (See 86, 107)

Address of President-Elect

SPEAKER ANDRESEN: During the past year another man has given freely of his time and counsel in running this Society. Always a hard worker in our Society, he is now ready to attack the problems of the coming year.

Will Dr. Strohm and Dr. Aaron please escort to the rostrum our President-Elect?

. . .The delegates arose and applauded as Dr. Nelson W. Strohm and Dr. A. H. Aaron, of Erie, escorted Dr. Carlton E. Wertz to the rostrum. . .

SPEAKER ANDRESEN: I present Dr. Wertz, our President-Elect.

DR. CARLTON E. WERTZ: Mr. Speaker, President Masterson, Guests, and Members of the House, your two previous speakers have stated much I am in sympathy with. It is perhaps one of the penalties you people have to suffer, to listen to your President-Elect at this time, but I think it is very necessary because I feel in duty bound to call to your attention a number of items, even though in doing so I may be repeating and emphasizing some of the things that have already been said to you.

First, I again wish to express my profound appreciation for the honor which has been conferred upon me. It is with awareness of the responsibilities involved and with a keen sense of pride that I will assume the presidency of this fine and great Society meeting here in New York City at its 144th annual convention. I shall do all that is within my power and limitations to be worthy of the trust you have placed in me.

We are now midway in the twentieth century. We, in the medical profession, have much to be proud of as we review the vast achievements made during the period since 1900. For example, at the outset of the twentieth century, life expectancy at birth was only forty-nine years. Today, newborn babies can expect to live an average of sixty-eight years. The over-all death rate in the United States during this period has been reduced by more than one half. The rate for maternal mortality has been slashed by four fifths. Many diseases, at one time potent scourges, either have been virtually eliminated or mortality from them drastically reduced—in some instances by as much as 80 and 90 per cent—diphtheria, tuberculosis, typhoid fever, malaria, smallpox, and pneumonia, to mention a few.

This incomparable and rapid advance in medical progress indicates to me significantly and most convincingly what can be done *only* under a system of free and unfettered medical practice. Notwithstanding, this magnificent record does not mean that we in the medical profession can sit back and bask in our own glorious achievements, that we can allow ourselves to slip unconsciously and dangerously into a self-complacent state of mind. On the contrary, whether we continue to make progress under a free, individualistic, and democratic system of practicing medicine will depend largely upon how realistically we forge a constructive and well-meaning program of medical care. That is the type of medical program which our age demands.

It is my sincere and candid belief that the people of this State as well as the members of the medical profession are looking to this convention for positive leadership in the development of a constructive program of medical care.

At the present time, in this Empire State there is no good reason for anyone to be without medical care when needed. It is the primary duty of the medical profession to see to it that everyone requiring medical care receives it, and this means adequate medical care irrespective of the person's economic status, without regard to the time of day or night at which the service is needed, irrespective of the person's race, creed, or color, and without regard to any other consideration of self. It cannot be said and indeed it must not be said that the dollar sign is ever permitted to stand between the ailing patient and good medical care.

In fact, are these not the basic principles underlying the formation of the Medical Society of the State of New York—or the formation of any medical society for that matter? In Article I of the Constitution of our honorable Society some of the purposes for which it is formed are to extend medical knowledge and advance of science in the art of medicine, to promote the *betterment* of *public* health and enlighten and direct public opinion in regard to the problems of medicine and health for the *best interests of the people of the State.* With these over-all objectives in view, it is proposed that this delegate body at this convention seriously consider among its duties the need for the development of a State-wide plan for medical care. I submit to you the following proposals for your serious study and approval:

1. That we as a Society subscribe wholeheartedly to the Twelve-Point Program of the American Medical Association; and that we concentrate our energies on implementing this program in the State of New York.

2. That we work toward the formation of a community health council on the State level—and one which extends into every county in the State. Now, a community health council is, as the name suggests, a community-wide association which brings into one agency all local elements who are able and willing to contribute to better health planning. The objectives of such a health council are:

(*a*) to bring together medical, allied professional, and other interested groups for discussion and interchange of opinions and planning in the field of health.

(*b*) to encourage, stimulate, foster, and support the establishment of health programs designed to improve the health of the people of the community. These projects may be concerned with health education, with the prevention of disease, with the distribution of medical and allied professional personnel, with medical education, with the adequacy of hospital and medical facilities, with the methods of meeting the costs of medical and hospital care through voluntary prepayment plans, with problems relating to the indigent and his illness, or with any other subject affecting the individual and the public health of the community.

(*c*) to gather and analyze information on medical care and health needs already attained from surveys and to initiate additional surveys if information is inadequate.

(*d*) to devise means of reaching all of the people with particular attention to the extension of projects into rural areas; and finally

(*e*) to serve as a clearing house on health and medical care problems and programs and to facilitate joint planning where such is needed to speed up approved projects and to reduce duplication of efforts.

3. I further recommend that we give complete support to the voluntary nonprofit medical care plans and hospital care plans in this State with the objective that, in a short time, at least 80 per cent of the people in New York State will be covered by low-cost voluntary prepaid medical and hospital care insurance.

4. It is urged that particular attention be paid to the problems of care of the indigent and the medically indigent. Continued cooperation with the State Department of Welfare and the local county welfare departments throughout the State must be carried on with a view to *improving continuously* medical care programs throughout the State. It is highly conceivable that some plan can be formulated whereby the medically indigent can also be insured under the voluntary health insurance plans.

5. I heartily indorse complete cooperation with the New York State Department of Health in propounding a long-range program of public health throughout the State. Again, it is urged that all counties of moderate size set up a county health department and engage full-time paid employes. A broad State-wide health program should aid the practice of medicine, not compete with it. Child health conferences should be given particular attention.

With these points as a guide, I believe that a comprehensive and realistic program can be developed which is designed to insure that the people of New York State continue to enjoy the best medical care in the world.

There are, of course, many other problems to be solved. To a large extent, the proposals I have in mind for their solution, I am sure, have previously occurred to many of you. In any event I should like to mention my recommendations in this respect, and to commend them for your serious consideration and action.

1. Although it is not within the province of a nonpolitical medical association to enter into political campaigns, I feel that we should be made aware of our duty and responsibility as citizens of the United States to do what we can to elect intelligent, capable, and desirable State and national representatives. It is necessary that we register and vote—not as physicians—but as American citizens—in order that we do our part in preserving the American system of democracy. There is no reason why doctors should not join with members of allied professions in each community to form political action committees to work and vote for those candidates whose position is known to be favorable to the professions.

2. In the field of voluntary medical care insurance: The questions that have to be answered are growing in number and intensity. Notwithstanding, there is no gainsaying the fact that the Blue Shield plans have been the most significant project attempted by the medical profession to help the public overcome their medical economic difficulties.

The growth in membership of the voluntary health insurance plans, during their comparatively short existence, has been splendid. However, we must not allow past success to dissuade us from propounding plans which afford better coverage. Future success, of course, depends upon the attitude and support of the medical profession.

It is now more important than ever that the medical profession lend its entire weight, not only to making the Blue Shield and other voluntary health insurance plans worth while to the medical consumer, but also to promoting the sales of these plans. There is a definite urgency that the plans broaden their coverage with due consideration to actuarial safety. It is encouraging to see the more general acceptance of the service-type contract for familes with incomes up to $4,000. It is not un-American or against the free enterprise system for physicians to set up fee schedules voluntarily, especially for this lower income group. Immediate study should be given to the possible coverage of many catastrophic illnesses and diseases. In all these matters relative to health insurance it is necessary to support and to cooperate with the Blue Cross plan. However, there should be a definite understanding between the two plans as to the scope of their activities. The question of the Blue Cross providing insurance coverage for certain medical services in its contract remains unsettled. This question must be decided soon. Consideration should be given to the proposition of selling a joint contract. In this contract the Blue Cross will provide insurance coverage for the actual hospital services, and the medical plan or the Blue Shield will provide insurance coverage for certain specified medical services. It is germane to note that the present State Insurance Law stipulates that a contract may be offered jointly by the Blue Cross and the Blue Shield covering the hospital and medical services respectively.

3. In the field of postgraduate education, there is a growing demand for courses of instruction. The increasing importance of and the growing demand for this activity suggests, perhaps, the need for a full-time director. In this field, the wholehearted cooperation of the State Department of Health and medical schools is greatly appreciated. Particular attention should be devoted to courses for the general practitioner.

4. There are still many unsettled problems relating to rural health. The State Society is vitally concerned with the rural health needs and must cooperate with the local communities in meeting these needs. This cooperation must extend to the State Health Department and to the State hospital planning group to insure that there will be good medical care available where it is needed.

5. Public education meetings should be sponsored and conducted by the State Medical Society and by the county medical societies. These meetings are extremely valuable from the standpoint of education of the public and the improvement of public relations. Topics such as cancer, tuberculosis, heart disease, disorders of the stomach, infantile paralysis, etc., are of considerable public interest and arouse wide public participation.

6. We also have our role to play with respect to the prevention of accidents. The Medical Society should cooperate with all lay groups in an effort to reduce the terrific number of accidents in this country, as well as to assist in the mapping of an extensive accident prevention campaign.

7. The problem of the high cost of hospital care looms large. The high cost of hospital care is a weighty, economic question to patients and should be studied from the point of view of how we physicians can help to reduce it. Physicians should be vitally interested in the efficient and economical operation of our hospitals.

8. The practice of medicine by corporations including hospitals: There is an increasing tendency on the part of hospitals and corporations to encroach upon the practice of medicine. This tendency is creating many difficult problems and questions: How far will it go? What will be its reaction? What effect will it have on the future private practice of medicine? Can corporations legally practice medicine? The hospital is a workshop with many fine tools and other equipment. Without a professional and technical staff it is just a building made of bricks, mortar, and steel. The medical personnel makes it breathe and live. These facts should not become obscured in the haze of current thinking on this question. These are problems that must be solved by the physicians themselves, not by lay boards.

9. There is no disputing the fact that medical schools require financial aid. However, any financial aid to medical education on a State or Federal level must be entirely without any political strings attached, and without the necessity for government intrusion.

10. I believe that the findings of the Hoover Commission with respect to the organization of the Federal medical services should be endorsed.

11. Alcoholism is also a very important problem, and the solution thereto must be found. The work of your Special Committee on the Problems of Alcoholism should be studied and duplicated locally for greater effectiveness. Every county society should be encouraged to have a special committee on alcoholism. The American Medical Association should also give special attention to this problem.

12. Rehabilitation of disabled: There is urgent need for a constructive program in this field and the Medical Society should take the lead in this most important problem.

13. The perennial question of how to reckon with the cults and the illegal practitioners is again before us. Considerable time and effort have been given to the study of this subject over a long period of years.

A new subcommittee of your legislation committee has been appointed recently to investigate this entire matter. I recommend that this subcommittee be continued, and that it report to the Council before the next session of the State Legislature.

14. I strongly urge that a strenuous and more effective campaign be waged on the State and local levels for vivisection—stressing the pressing requirements of research in this connection.

15. I would be remiss if I did not commend the splendid work of the Committee on Public Health and Education and its fourteen active subcommittees. The cooperation and assistance of the State Health Department is again greatly appreciated.

One of the most recent projects of this Committee is the study of the medical aspects of atomic warfare and nuclear energy and the planning of a postgraduate program for the training of physicians in the treatment of atomic radiation and other effects of atomic warfare. There is an overwhelming urgency for intensification of activities along the lines of preparedness for attacks—particularly at the local level. The work of our Committee on Public Health and Education is one of the fine examples of what the medical profession is doing as a public service for the people of the State and for the benefit of their general welfare.

16. The National Education Campaign of the American Medical Association is being waged with ever-increasing intensity and effectiveness. The campaign of our national organization should have the full and unqualified support of every member of this Society. It is the physicians' attempt to thwart the advance of socialism and to preserve the American way of life for all the citizens of this glorious nation.

17. We must effectuate a double-barreled public relations program, designed to take medicine off the defensive. There must be a further concentration on the development of sound public relations projects.

(*a*) The work of the Public Relations Committee and the Public Relations Bureau is to be highly commended and their remarkable achievements noted.

(*b*) There is still need for a broadening and an intensification of the State Society public relations activities. The adding of field men to the staff of the Public Relations Bureau was a great and a most satisfactory step forward. These men were of considerable help to many county societies throughout the State. This activity must be continued.

(*c*) Better press relations must be established and thought should be given to State-wide and county-wide press conferences.

(*d*) A very informative news letter should be sent at frequent intervals to the various county societies and district branches.

(*e*) The Public Relations Bureau should provide adequate information and materials to the county societies on public relations projects.

18. Public relations, of course, is a grass-roots activity for the most part. The good relations existing between the physician and the patient and created by the individual physician in the care and treatment of his patient are of the utmost importance. Therefore, again is called to your attention the necessity of the county society to set up grievance committees. Such committees are designed to settle, in a judicious manner, disputes which may arise in regard to overcharging or other claims of unprofessional conduct between the physician and the patient.

19. The setting up of emergency medical service bureaus is also an extremely effective weapon for improving public relations. It is the duty of every county medical society to see to it that medical care is available to everyone in the county at all hours in any emergency that may arise. No area should be left unattended.

20. I recommend the formation or strengthening of professional conduct committees on the State and local levels. I feel, however, that the county medical societies are mainly responsible for the ethical conduct of their members. The Professional Conduct Committee should have full authority to deal with members who may perform unethical practices or other matters pertaining to the misconduct of a physician member.

21. Serious thought should be given to the creation of medical credit and collection bureaus. A number of these bureaus have been set up by societies in various parts of the State and country and are apparently doing a very splendid job—both in helping physicians in the collection of their moribund accounts and more particularly in creating, stimulating, and maintaining better public relations with the patient.

22. The establishment of a joint committee of the medical and pharmaceutical societies has been recent. This medical-pharmacal committee will be tremendously valuable in providing a medium for discussion and settlement of mutual and interrelated problems. Such committees should exist, not only at the State level, but also at the county level.

23. The formation of a State-wide interprofessional relations committee also would be extremely worth while. It would serve as a mechanism for maintaining good will between all professional groups and would tend to cultivate active friends from the other professions for the purpose of engaging in educational campaigns against legislation detrimental to the public and for legislation beneficial to the public and to the profession.

24. The activation of the district branches is most encouraging and must have the full support of the State Society. Active district branches functioning throughout the year will enhance closer relationship among the members of the branch and between the branch, the county society, and the State Society. The district branches will also facilitate the transmission of important news and information from the State Society to the local county societies. The reverse is also true. The district branches can help the county societies in the transmission of information and local views to the State Society. In this connection I also recommend that surveys and polls of the membership be conducted, particularly when special issues or policies come up in the State Society for consideration.

25. I feel that the county society should stimulate and encourage the younger men to take an active part in their local societies' endeavors. The young men should be placed on committees and their responsibilities increased. The single qualification I have to offer in this respect is that the men should be appointed only when they are qualified and when they are prepared to assume the responsibilities which will be imposed upon them.

26. I believe that certificates of appreciation should be awarded by the State Society to the past-presidents of the component county societies. These would be given in token of profound and sincere appreciation on the part of the State Society for the splendid and excellent work performed by the presi-

dents of the county societies in behalf of their profession.

27. All counties should wholeheartedly support the Group Insurance Plan of the State Society. The work of your Malpractice Insurance and Defense Board is to be highly commended. The members of the Board have a very tedious and difficult assignment. They have fulfilled it well. They should have our complete confidence and support.

28. The new *Medical Directory* has undergone a major plastic surgery, so to speak. It will be confined to the listing of physicians of New York State. In addition, it will contain much information in regard to your State Society, to its bureaus and to its committees and their functions. The *Directory*, it is felt by many members of the Society, has been of considerable value in the past. However, the publication of the *Directory* should not be a financial burden to the Society or to the membership. I believe that the *Directory* should be published on a pay-as-you-go basis, and that the frequency of its publication should be wisely decided.

29. The State JOURNAL has been greatly improved within recent years. It is now a credit to your Society and to its Board of Editors. Its publishing costs have been increased by the continual rise of the price of paper and by the use of better and more costly paper. There are also increased costs of printing and labor. Despite these additional expenses, I feel that every effort must be expended to keep the JOURNAL on a self-sustaining basis.

30. I believe that there has been an overemphasis on specialization in recent years, particularly with reference to the surgical specialty and its many subdivisions. In some areas in the State the specialists outnumber the general practitioners by more than two to one. This is way out of proportion to what is considered to be the normal ratio. The general practitioner is still the essential factor in the practice of medicine. There is a need for good general practitioners, well-trained diagnosticians, with good sound medical judgment. Medical schools should devote more time to teaching the general practice of medicine, stressing child health care. The average hospital should not be burdened with the financial responsibility required for the training of residents. Postgraduate training of residents in the specialties should be conducted in the medical school and in the teaching hospitals connected with the schools.

In all these matters, we must, in the medical profession, preserve our strength. At no time has there ever been a greater need for unity in the medical profession than now. We must, each of us, appreciate that the medical profession is comprised of physicians. It matters not whether the physician be a specialist, a general practitioner, a full-time hospital employe, a college professor, an industrial physician, or a Federal or a State employe. All physicians must unite in the common cause to preserve the American way.

31. The Medical Society is greatly indebted to the Woman's Auxiliary of the Medical Society of the State of New York. They have given unselfish devotion to their work and have accomplished many fine tasks for the people of this State as well as for the profession. Their continued help is of the utmost importance, and an expression of our sincere appreciation should come from this body.

From the topics I have mentioned, and the many other that are included in the various reports of the Council committees and special committees of the House of Delegates, some conception can be gathered of the vast amount of work that your State Society is required, or hopes, to perform. I sincerely believe that the members of the State Society want their Society to be the leader in the shaping of medical policy, as well as to expand its many activities. If this be true, then the members must be willing to contribute more, both in a financial and physical way, so that these objectives may be attained. I have taken the time of this House to bring attention to certain problems and proposals offered for their solution. There are undoubtedly many more that will come to your attention during this meeting. The public and the medical profession of this State are looking to you, at this time, for leadership and guidance. *Now is the time to act.* (*Applause*)

SPEAKER ANDRESEN: Thank you, Dr. Wertz!

Dr. Wertz' remarks are referred to the Reference Committee on Report of the President, of which Dr. Mueller is chairman.

Section 17 (See 132)

Report of Actuary—Malpractice Insurance and Defense Board

SPEAKER ANDRESEN: I am sorry, but I will have to interrupt the order of business because we have made an appointment for a gentleman to speak to us this morning. Mr. Joseph Linder, who has audited the report of the Malpractice Insurance and Defense Board, was invited to come and tell us in five minutes, and certainly not more than ten minutes, what he has done with that report.

MR. JOSEPH LINDER: Mr. Speaker, Ladies and Gentlemen, again it is my privilege to present to the House of Delegates the result of our actuarial survey of the Group Plan of Malpractice Insurance and Defense of the Medical Society of the State of New York. This was made upon the instructions of the Council, and our original report, with all the details, has been filed with the secretary of the Society.

This report is a continuation of the surveys made in the two preceding years and utilizes the data compiled during the calendar year 1949. Since our report is necessarily of a technical nature, I shall try briefly to explain the significance of our findings and conclusions in a way that I hope may be helpful to you.

All loss vouchers for 1949 were inspected for approval by the legal counsel for the Society, and the statistical distribution of the respective amounts was checked into the compilation of statistical data as of December 31, 1949.

As of July 1, 1949, the Employers Mutual Liability Insurance Company replaced the Yorkshire Indemnity Company as the insurance carrier of the Group Plan. The rates charged for $5,000/15,000 limits are $55 and $42 for the metropolitan and upstate areas, respectively. Of the foregoing rates, $50 and $39 are considered as the basic premiums for expense loading purposes and also for excess limits. The respective balances of $5.00 and $3.00 are in the nature of contigent loss factors which, if the loss ratio does not exceed 68.5 per cent of the basic premiums, will be available as credits against the loss experience for the purpose of reducing rates in future years. Our present report does not include any of the experience of the Employers Mutual since none of the certificates which it has issued had expired by December 31, 1949.

In our analysis we have followed the practice instituted last year of utilizing the last five *expired* policy years for rate-making purposes. We have also assumed that:

(*a*) The same incidence of claims and suits that has been exhibited in the past will be encountered in the future. This is particularly important in predicting the number of claims and suits still to arise, chargeable against the last five expired policy years.

(*b*) The amounts which will ultimately be paid for such unreported claims and suits will average the same as those settled during the last five calendar years.

The amounts thereby calculated may be expected to fluctuate if there are any changes in either the incidence or in the ultimate settlement costs of these claims and suits. The relative importance of the constituent elements of the incurred losses is indicated by the following:

Closed cases	42.5%
Outstanding cases	44.2%
Unreported cases	13.3%

From this it will be seen that the only known factor is that of the closed cases, constituting 42.5 per cent of the total; the balance of 57.5 per cent is represented by estimates, which may vary considerably from the ultimate cost of closing. If the net effect of such variations be appreciably upward, the insurance carrier will not only be penalized in making such additional payments but will also be penalized in currently collecting a deficient rate. On the other hand, should the net effect of such variations be appreciably downward, the insurance carrier will make an inordinate profit by collecting an excessive rate. While the rating formula is intended to adjust such profits or loss, what we are stressing is the inherent difficulty in computing rates from estimated costs, particularly where such estimates are susceptible to a considerable margin of error due to the nature of the business.

What we have attempted to do is to reduce the proportion of the estimated to the known cost; hence our selection of the last five *expired* policy years. If we used a longer period, the proportion of the estimated data would be reduced but, to our mind, that would make the data not sufficiently responsive to current loss conditions. On the other hand, a shorter period would make the data more responsive to current loss conditions, but would increase the proportion of the estimated data. Our selection of the five-year period, therefore, represents a compromise between "responsiveness" and "reliability." From the above percentages it will be noted that the outstanding cases represent 44.2 per cent of the total loss experience, while unreported cases represent only 13.3 per cent of the total. For this reason it will be seen that the accuracy with which outstanding cases are estimated is, from the standpoint of rates, more than three times as important as the accuracy with which unreported cases were estimated. It is not quite as difficult to estimate the value of outstanding cases as it is to arrive at a probable cost of unreported cases, but the matter of accuracy for the former is of much greater importance.

During the course of our study it appeared evident that the reserves for outstanding cases at the end of 1949 were at a particularly high level. In order to form some estimate of the justification, therefore, we made a comparison of reserves on outstanding cases entering into the rate computation as of December 31, 1948, with the amounts paid or still outstanding as of December 31, 1949, on the *same* cases. This comparison showed that of the $701,000 carried as outstanding at the end of 1948, the insurance carrier estimated only $606,400 as required for the same cases at the end of 1949. The latter amount consists of $206,150 for closed cases and $400,250 for those still outstanding. The saving was approximately 15 per cent, and this saving may be increased when the remaining cases are disposed of. A study of the average cost of those two years and of similar averages at the end of 1949 leads us to the conclusion that there is at least a 15 per cent overstatement in the reserves for outstanding cases for the years 1944–1948. Accordingly, we have reduced the reserves for the outstanding cases by 15 per cent.

Utilizing the loss vouchers approved by the Legal Counsel of the Society for the closed cases, the carrier's estimates of outstanding cases reduced by 15 per cent, and our own estimate of the cost of the unreported cases, we arrived at the total loss cost for the years under discussion. This total loss cost, when divided by the number of insured members, gives us average loss cost, or pure premium of:

Metropolitan	$36.17
Upstate	28.59

Since, under the new carrying agreement with the Employers, the loss cost should equal 68.5 per cent of the premiums, we find that the rates which should have been collected during the last five expired policy years to carry the business at the agreed loss ratio, are as follows:

Metropolitan	$52.80
Upstate	41.74

From our study of all the data, it would appear that the new rates effective July 1, 1949, of $55 and $42 for the two areas of the State, respectively, appear to be reasonable, particularly as these rates include the contingent loss factors of $5.00 and $3.00 for the respective areas of the State.

As stated last year, the problem of determining the adequacy of the percentages which should be applied to the standard rates to obtain the premiums for limits in excess of the standard is a rather difficult one since it cannot be approached by the same statistical method as that utilized for standard limits. In estimating the loss experience on excess limits, we have taken the outstanding losses without adjustment for probably salvage, and for unreported losses we have assumed that the number of standard unreported losses would produce, on an average, the same amount of excess losses as has been exhibited by cases closed over the entire period. This computation shows that the ratio of excess losses to excess premium for the last five expired policy years was 61.6 per cent, which appears to be reasonably favorable. It must be kept in mind that the excess limits portion of the premium is in the nature of a "catastrophe" cover. In other words, a few large losses may easily turn a moderate profit into a substantial loss.

This audit and actuarial study leads us to the following conclusions:

1. The known data, as represented by the closed vouchers, has been correctly accounted for and carried forward into the statistical data by the Society's indemnity representative.
2. Continued observation of this business confirms our belief that the cost-plus agreement under which it is operated is the only way in which it can be conducted in fairness to both the Company and the Assured, provided the costs are computed as accurately as the nature of this form of insurance will permit.
3. The contingent reserve factor which, for the first time, was introduced into the agreement with the new carrier, provides a cushion for unforeseen losses experienced on the business of past years, if needed, and at the same time furnishes a credit to subsequent loss experience if the reserves prove

more than adequate. This is a real safeguard to both the Company and the Society and should be maintained and carefully developed.

4. The cost of malpractice losses continues to push upward, and future costs will in large part depend on the effectiveness with which the Society, with the help and cooperation of the Company, is able to work out an effective claim prevention program.

Speaker Andresen: Thank you, Mr. Linder.

Mr. Linder's report is referred to the Reference Committee on Reports of Malpractice Insurance and Defense Board and Legal Counsel, of which Dr. Henry W. Miller is chairman.

Section 18

Introduction of Representatives from Other State Societies

Speaker Andresen: One of the pleasant duties of the Speaker each year is the introduction of delegates from our neighboring state medical societies. These have again sent us some of their best men. So far I have heard of the arrival of a representative from Vermont who was formerly a member of our Society and at one time was chairman of our Committee on Scientific Program. I would like to ask Dr. Marino to escort Dr. Dexter D. Davis, the delegate from Vermont, to the rostrum where we invite him to make a few remarks.

. . .There was applause as Dr. A. W. Martin Marino, Section Delegate, escorted Dr. Dexter D. Davis to the rostrum. . .

Dr. Dexter D. Davis: Mr. Speaker and members of the Medical Society of the State of New York, Ladies and Gentlemen, I am not here to make a speech but merely to bring you the best wishes and greetings from the State of Vermont and from the Vermont State Medical Society, and to hope you have a very successful meeting.

I have been doing this so long it is getting to be a habit. I have been doing it for five years now, and I am wondering where it is going to stop, but may I assure you that it is always a pleasure for me to be back with you fellows at this meeting, and if I miss, like last year, it is not my fault.

If there is any thought I would like to leave with you it is just this one: Last week I was at a meeting in Burlington, Vermont, at which I read a paper. I was taken to the meeting by one of our general practitioners up north in the section above Manchester. He came down through and took me up with him. We listened to just what you are listening to today, a lot of facts and a lot of figures, but they don't mean much if we don't do something about them. This was brought home to me very strongly because on the way back this little country doctor sitting next to me said, "Doctor, you are a New Yorker. You have not got to be a Vermonter yet. You have only been here for five years; in fact, we very rarely accept them anyway, even though they live up here forever. I have listened to this whole thing year after year, as to what we ought to do and what we ought not to do, what we ought to do about socialized medicine, and what we ought to do about this and that, as to hospitals open or closed, whether you ought to be local politicians as doctors while you practice"—believe me I think it helps because I think every individual in Vermont is an individual politician; if you don't think so, you can come up there and try to elect a Democrat. (*Laughter and applause*)

Speaker Andresen: We thank you, Dr. Davis, for your inspiring message.

We also have with us the President of the Medical Society of the State of Pennsylvania, Dr. E. Roger Samuel. Dr. Bandler, will you escort Dr. Samuel to the rostrum?

. . .There was applause as Dr. Clarence G. Bandler, of New York, escorted Dr. E. Roger Samuel to the rostrum. . .

Dr. E. Roger Samuel: Dr. Andresen and members of the House of Delegates, it is a great deal of pleasure for me to meet with you men in the Pennsylvania Hotel. You can call it by any other name, but it smells just as sweet.

I first want to thank Dr. Masterson, your president, for sending me his inaugural address before I made my inaugural address last October in Pittsburgh. It was a great help to me.

I also want to thank Jim Reuling, vice-speaker of the House of the American Medical Association, for coming to us last October and giving us a lot of good advice. One of the things that he did at that meeting—we are always glad to see him; he is a jolly fellow, and we like him—was to tell us in advance a little of the gossip as to what was apt to happen at the American Medical Association convention in December. Well, when our Board of Trustees met immediately after the House of Delegates in December, we were prepared to meet the dues proposition of the American Medical Association. The result is that when we went into session in Harrisburg immediately after the December meeting we fixed and arranged to collect the A.M.A. dues, and I am very proud to say that we have collected 93 per cent. (*Applause*)

Now coming to you men on your one hundred forty-fourth anniversary, let me say I happen to be the one hundredth president of the Medical Society of the State of Pennsylvania. We think we are an old organization, but you are our daddy. We don't want to be fussy, we Pennsylvanians. We like to think of you fellows having forty-four years more experience than we have had.

I want to tell you this one thought. I am not going to say anything to you except this: As I have gone over the State of Pennsylvania during the last two years visiting county after county and district after district, I have noticed something that probably your officers have noticed, and that is this: that due to this continual and continuous irritation from Washington our men have grown closer and closer together. I have a son-in-law who is an abrasive engineer. He sells abrasives. I have noticed that when a man wants to finish off a beautiful piece of furniture he first takes an abrasive to that wood, and he uses pumice stone and rotten stone and sand paper and all kinds of abrasives to bring out that beautiful patina, that finish to the wood. I have noticed that since these irritants have been coming from Washington into our midst that the county societies, the groups of them, are getting closer together, the men are meeting more on a social plane, they are ironing out all of these differences among themselves, and I believe that you could do no better than to send a telegram to Washington at this session thanking those fellows down there for what they have done for you. (*Laughter*)

We are meeting in October. We want to have some of you fellows come down over the line then. As I came into New York yesterday I noticed no Gestapo officers at the border line, I noticed nobody that was going to interfere with my progress, and it made me think that you fellows have a tremendous responsibility. You constitute almost one seventh of all of the doctors in this country. Your responsibility is just that much more increased by the number that you have to the rest of us fellows that are living out in the sticks. You have a tremendous job. You have wonderful officers, and you have a wonderful organization. I wish you the best of luck this week. (*Applause*)

Speaker Andresen: Thank you, Dr. Samuel!

Are there representatives from Connecticut, Dr. Samuel C. Harvey or Dr. Charles H. Sprague?

. . .There was no response. . .

Speaker Andresen: What about New Jersey? Is Dr. Aldrich C. Crowe, president-elect, or Dr. Marius H. Greifinger, secretary, present?

. . .There was no response. . .

Speaker Andresen: We hope that the representatives of other state societies who are here will enjoy the proceedings of this House, and that you will feel free not only to take part in this meeting but also to attend the meetings of our reference committees this afternoon.

Section 18a

Re Evening Session

The floor is now open for the introduction of supplementary reports and resolutions.

May I first ask for a resolution from the floor to revise our order of business to permit us to have a meeting tonight at eight o'clock in order to consider the reports of reference committees on the reports of the officers and the reports of the Council, and get that business out of the way so that tomorrow morning we can start in with our revision of the Constitution and Bylaws and our revision of the Principles of Professional Conduct and get at the new business so that we will not have to work here again until eleven or twelve o'clock tomorrow night?

Dr. Joseph A. Geis, *District Delegate:* I so move.

Dr. Edwin A. Griffin, *Kings:* I second the motion.

. . . There being no discussion, the motion was put to a vote, and was unanimously carried . . .

Speaker Andresen: We will have a meeting tonight at 8 o'clock.

The floor is open for the introduction of resolutions.

Dr. J. Stanley Kenney, *Councillor:* I have a supplementary report.

Speaker Andresen: Just a minute, Dr. Bandler has a resolution he would like to present.

Section 19

Citation to Louis Pink

Dr. Clarence G. Bandler, *New York:* Mr. Speaker, I am presenting this resolution on behalf of Dr. Chas. Gordon Heyd. It is not a question of policy:

> "Whereas, on May 10, 1950, the Associated Hospital Service of New York will celebrate its Fifteenth Anniversary; and
>
> "Whereas, Mr. Louis Pink, as president of the Associated Hospital Service, has directed its affairs; and
>
> "Whereas, Mr. Pink enjoys the esteem, respect, and cordial friendship of the medical profession; and
>
> "Whereas, his judgments have been matured upon broad humanitarian principles; and
>
> "Whereas, he has been a most cooperative executive in his relationships with the medical profession of the State of New York; be it
>
> "*Resolved*, that the President and proper officials of the Medical Society of the State of New York prepare an adequate citation expressing the cordial appreciation of his efforts and the esteem in which he is held by the medical profession; and be it further
>
> "*Resolved*, that this citation be presented to Mr. Pink at the Anniversary Luncheon on Wednesday, May 10, 1950."

Speaker Andresen: If there is no objection, the Chair will rule that this resolution need not be referred to a reference committee but can be acted on at once. Is there any objection to that?

. . . No dissent was expressed . . .

Speaker Andresen: If not, will somebody move its approval?

Dr. John J. Masterson, *President:* I move its approval by this House.

Dr. Thomas d'Angelo, *Queens;* I second it.

. . . There being no discussion, the motion was put to a vote, and was unanimously carried . . .

Speaker Andresen: It has been adopted, Dr. Bandler.

It is important for us to have all of our resolutions and supplementary reports in this morning, so that we will not have to have our reference committees meet again tomorrow to consider them. Furthermore, the reference committees can work over them this afternoon.

Section 20 (See 117)

Supplementary Report of Workmen's Compensation Committee

Dr. J. Stanley Kenney, *Councillor:* I have a supplementary report from the Council Committee on Workmen's Compensation.

I presume there is no subject that causes more unrest among the general profession of the State than the inadequacies in the fee schedule. Those of us who have been on the receiving end of the complaints are well aware of it, and we have striven rather diligently during the past two years to get some formal action on it. I think I can report to you now for the first time that we have motivated the thing, and I would like to present this supplementary report.

On February 22, 1950, Dr. John J. Masterson was called upon as president of the Medical Society of the State of New York to advise the chairman of the Workmen's Compensation Board as to adequate fees for general practitioners and specialists under the provisions of the Workmen's Compensation Law. This request followed numerous communications to the chairman of the Workmen's Compensation Board requesting a revision of the fee schedule as a result of dissatisfaction expressed both by individual physicians and medical societies throughout the State with the schedules which went into effect on May 1, 1947, and September 1, 1948, and revised on May 1, 1949.

Dr. Masterson, after conferring with Dr. Kenney and Dr. Kaliski, replied to Miss Donlon on April 18, 1950, and presented a fee schedule which was deemed adequate and which had been concurred in by the Council Committee on Workmen's Compensation, taking into consideration the expressed opinion of numerous medical societies and groups of general practitioners, as well as of specialists. This communication was accompanied by a detailed brief on the subject of fees prepared by Dr. Kaliski, the director of the Workmen's Compensation Bureau.

Under date of May 1, 1950, Miss Donlon replied that in line with her usual practice when the Medical Society of the State of New York made recommendations with respect to the fee schedule, she was passing the proposals along to the members of her

Workmen's Compensation Advisory Committee. We are quoting this letter in full.

We now believe that as a result of our insistent efforts and numerous requests, favorable consideration will soon be given to an adequate revision of the fee schedule.

In Dr. Masterson's recommendations he stressed that in his opinion:

1. Priority in any revision of fees should be given to items 1–9 of the fee schedule which apply to general practitioners.
2. The charge for all subsequent office visits for specialists be increased from $3.00 to $5.00.
3. Consideration also be given at the earliest possible moment to an upward revision of fees for x-ray services.

A joint meeting was held on Sunday, May 7, 1950, with the members of the Subcommittee on Physical Medicine and Rehabilitation, Dr. Rusk, chairman, on the important subject of rehabilitation. This meeting was to consider recommendations for a pilot study on rehabilitation in compensation medicine, to be proposed to the chairman of the Workmen's Compensation Board. The full text of this pilot study appears in the supplementary report of the secretary.

After careful and considered discussion the Committee on Workmen's Compensation unanimously approved the recommendations of Dr. Rusk's committee and concurred in the hope that this House of Delegates approve these recommendations so that immediate attention may be given to this most important matter.

I shall quote the letter, which is brief, in full:

> WORKMEN'S COMPENSATION BOARD
> STATE OF NEW YORK
>
> To: Members of the Workmen's Compensation Advisory Committee
>
> For your information, I enclose copies of my letter to Dr. John J. Masterson, president of the Medical Society of the State of New York, under date of February 22, 1950, and of Dr. Masterson's letter to me in reply under date of April 18, 1950.
>
> In accordance with my usual practice when the Medical Society of the State of New York makes recommendations with respect to revision of the fee schedule, I am passing the recommendations along to you, inasmuch as you are representative of all the groups concerned with workmen's compensation in this State.
>
> For the consideration of the Medical Society's proposals to the public, I have called a meeting of the Advisory Committee to be held in my office on Tuesday, May 23, at 10:00 A.M. I find that a meeting during the week of May 8 would not be convenient for any of the doctors, because the State Society is then holding its annual meeting, and, because this matter concerns the medical profession, I want a date when they are free to attend. Because of engagements already made in connection with the Disability Benefits Law Institute to be held throughout the State, the next possible date is the one I have scheduled for the meeting. I hope that it will meet with the convenience of all of you and that we may have a full attendance.
>
> Sincerely yours,
> MARY DONLON, *Chairman*

We hope this may lead to an adequate revision of the fee schedule. I think this is the first sign of tangible progress after two years of effort. I am encouraged and believe we will get a reasonable revision. We have stressed in the priorities those items concerning the general practitioner, Items 1 to 9, the restoration of the specialist's fee for follow-up visits, and for an over-all revision of the x-ray fee schedule upwards.

SPEAKER ANDRESEN: Thank you, Dr. Kenney!

This supplementary report is referred to the Reference Committee on Report of Council, Part X, of which Dr. A. Wilbur Duryee is chairman.

Section 21

Announcements

SPEAKER ANDRESEN: Mr. Dwight Anderson asked me to announce that any of you who are asked by newspaper men for interviews will please give them interviews only in the press room, Conference Room 8, on the mezzanine floor.

He also asked me to ask you please to purchase tickets for the banquet early. They can be obtained at the registration desk.

Are there any further supplementary reports?

. . . There was no reply . . .

SPEAKER ANDRESEN: We will now entertain resolutions.

Section 22 (See 88)

Revision of the District Branches—Suffolk

DR. DAVID CORCORAN, *Suffolk:* Mr. Speaker, this resolution relates to a requested change in the Second District Branch:

> "WHEREAS, the Second District Branch of the Medical Society of the State of New York is now comprised of the Medical Societies of the Counties of Nassau, Suffolk, Dutchess, Orange, Rockland, Putnam, and Westchester; and
>
> "WHEREAS, the distance between these various counties makes difficult good attendance at meetings; and
>
> "WHEREAS, because of this geographic status, the interests of the Medical Societies of the Counties of Nassau, Suffolk, Dutchess, Orange, Rockland, Putnam, and Westchester are not similar; therefore be it
>
> "*Resolved*, that the Suffolk County Medical Society request the House of Delegates of the Medical Society of the State of New York to revise its Constitution and Bylaws so that the Suffolk County Medical Society may withdraw from the Second District Branch; and further be it
>
> "*Resolved*, that the Suffolk County Medical Society request the House of Delegates of the Medical Society of the State of New York to create a new district branch which will include only the Medical Societies of the Counties of Nassau and Suffolk."

SPEAKER ANDRESEN: I might announce that in lieu of a reference committee, our House Committee on Revision of the Constitution and Bylaws, of which Dr. Bauer is chairman, is going to have referred to it all matters that come up today in connection with Constitution and Bylaws. Dr. Bauer will announce later the time and place of the meeting of this Committee, which will act like a reference committee, and will ask for expressions of opinion. This resolution is referred to that Committee.

Section 23 (See 88)

Revision of the District Branches—Nassau

DR. E. K. HORTON, *Nassau:* Mr. Speaker and members of the House, this is a resolution from the

Nassau County Medical Society, subject "Revision of the District Branches," and is identical with the one previously read.

Speaker Andresen: Then perhaps we don't need to read it.

Dr. Horton: It is exactly identical.

Speaker Andresen: It is referred to the same reference committee, the House Committee on Revision of the Constitution and Bylaws, of which Dr. Bauer is chairman.

Section 24 (*See 152*)

Collection of the War Memorial Assessment

Dr. Reid R. Heffner, *Westchester:* This is a resolution from the Westchester County Medical Society, subject "Collection of the War Memorial Assessment":

"Whereas, the War Memorial Assessment was levied upon the year 1948; and

"Whereas, the State Society allowed a period of grace till December 31, 1949, for the payment of this assessment and then extended this period till the annual meeting in May, 1950; and

"Whereas, county societies bill their members on January first for the current year's dues; and

"Whereas, certain members have paid their county and State dues for the year 1950, although they are still delinquent in the payment of the War Memorial Assessment; now, therefore, be it

"*Resolved*, that these delinquent members be allowed the remainder of the year 1950 to pay this War Memorial Assessment."

Speaker Andresen: Referred to the Reference Committee on Reports of Treasurer, Trustees, and Finance, of which Dr. Nelson W. Strohm, of Erie, is chairman.

Section 25 (*See 70, 75*)

Specialty Boards

Dr. Arnold A. Costabile, *Bronx:* Mr. Speaker, this resolution concerns the subject of "Specialty Boards":

"Whereas, some hospitals are still showing preferential consideration towards specialty board diplomates in the matter of staff appointments and promotions; and

"Whereas, such a policy represents a detriment to the health of the people and is discriminatory against a good number of reputable practitioners, qualified by reason of long and faithful service in accredited hospitals; and

"Whereas, for good and sufficient reasons of age, economics, time element, and lack of available residencies, a sizable number of our colleagues find it humanly impossible to meet the rigid and somewhat arbitrary requirements of some specialty boards, although otherwise admittedly qualified to practice their specialty; and

"Whereas, the Council on Medical Education and Hospitals of the American Medical Association with the concurrence of the Advisory Board for Medical Specialties has stated that:

> 'Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients as judged by the professional staff of the hospital and *not* on certification or special society membership';

and

"Whereas, a more moderate and humane attitude on the part of the specialty boards, realistically related to human and economic values as they apply to this 'middle group' of practitioners, would do much toward preventing justifiable resentment within our ranks without lowering the high standards of specialty practice; therefore be it

"*Resolved*, that, failing to obtain cooperation from the various specialty boards and hospitals, the American Medical Association be requested to withhold recognition from hospitals which make certification by a specialty board a necessary qualification for appointment or promotion on a hospital staff; and be it further

"*Resolved*, that the delegates of the Bronx County Medical Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York, to be held in 1950; and be it further

"*Resolved*, that the delegates of the New York State Medical Society to the American Medical Association be instructed to place these resolutions before the 1950 House of Delegates of the American Medical Association."

Speaker Andresen: Reference of that resolution is made to the Reference Committee on Miscellaneous Business (A), of which Dr. A. H. Aaron, of Erie, is chairman.

Section 26 (*See 104*)

Revision of the Principles of Professional Conduct

Dr. Joseph C. O'Gorman, *Erie:* This is a resolution from the Medical Society of the County of Erie in regard to the revision of the Principles of Professional Conduct of the Medical Society of the State of New York:

"Whereas, the proposed revised Principles of Professional Conduct of the Medical Society of the State of New York provide: 'A physician should not dispose of his professional attainments or services to any hospital, lay body, organization, group, or individual by whatsoever name called or however organized under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned'; and

"Whereas, Section 6514 of the Education Law makes it unlawful for a physician and exposes him to disciplinary action if he has 'directly or indirectly requested, received, or participated in the division, transference, assignment, rebate, splitting, or refunding of a fee for' medical and surgical diagnosis or treatment or service; and

"Whereas, it is common knowledge that many staff hospital physicians permit the hospitals with which they are associated to bill the patient for the medical services performed by said staff physicians; and

"Whereas, such conduct on the part of hospital staff physicians is a violation of Section 6514 of the Education Law, in that it constitutes an assignment of a medical fee; and

"Whereas, it is also apparent that the acceptance of a salary by a hospital staff physician for medical services performed in the course of such employment is also a violation of said Section 6514 of the Education Law unless said services are rendered without cost to the patient; now therefore be it

"*Resolved*, that the aforesaid Section 6 of the Principles of Professional Conduct of the Medical Society of the State of New York be amended and clarified by the addition of the following language: 'Physicians connected with such agencies should especially refrain from directly or indirectly participating in the division, transference, assignment, rebate, splitting, or refunding of a fee for medical and surgical diagnosis, treatment, or service including x-ray examination and treatment, except where such practices are expressly permitted by law, and then only in the manner and to the extent permitted by law.' "

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part XII, of which Dr. Joseph A. Geis is chairman.

Section 27 (*See 94*)

Publishing of Council and Committee Minutes in Journal

Dr. Norman Moore, *Tompkins:* I have three resolutions from the Tompkins County Medical Society. One pertains to the subject of "Publishing of Council and Committee Minutes in Journal":

> "Whereas, there is increasing interest among the members of the Society in the affairs of the Medical Society of the State of New York; and
>
> "Whereas, few members of the Society are cognizant of the fact that the Council and its committees of the Society are hard working groups of loyal members; and
>
> "Whereas, much confusion, dissatisfaction, and misunderstanding have arisen through lack of sufficient information; and
>
> "Whereas, busy doctors would find more value in a condensed version well read than in lengthy reports containing minor detail; and
>
> "Whereas, we appreciate the value of a news letter, but believe its usefulness can be expanded; and
>
> "Whereas, many physicians feel that a short, concise account of the Council's activity and the recent decisions of the officers who guide the affairs of the Society would be of great interest to them; therefore be it
>
> "*Resolved*, that the proceedings of the Council and other important committee minutes of the Society be summarized and presented in editorial form in the New York State Journal of Medicine for the enlightenment of the members of the Medical Society of the State of New York."

Speaker Andresen: Referred to the Reference Committee on Report of the Council, Part XI, of which Dr. Eugene H. Coon, of Nassau, is chairman.

Section 28 (*See 95*)

Publishing of Summary of Minutes of House of Delegates

Dr. Norman Moore, *Tompkins:* The second resolution's subject is "Publishing of Summary of Minutes of House of Delegates":

> "Whereas, much business is transacted at a session of the House of Delegates of the Medical Society of the State of New York; and
>
> "Whereas, there is a growing interest in these transactions by the Medical Society; and
>
> "Whereas, busy doctors cannot find the time to read the detailed account of the session; therefore be it
>
> "*Resolved*, that the proceedings of the House of Delegates be summarized and published as a digest in the form of a news letter, similar to that now in use by the American Public Health Association."

Speaker Andresen: Referred to the Reference Committee on Report of the Council, Part XI, of which Dr. Eugene H. Coon, of Nassau, is chairman.

Section 29 (*See 93*)

Distribution of the *Medical Directory*

Dr. Norman Moore, *Tompkins:* The third concerns "Distribution of the *Medical Directory*":

> "Whereas, the Publication Committee reports that the *Medical Directory* for 1949 ran a deficit of $78,320.60; and
>
> "Whereas, the 1949 session of the House of Delegates, acting in the interest of economy, authorized deletion of the Connecticut and New Jersey section of the *Directory;* and
>
> "Whereas, the belief that it is necessary to give inactive benefits gratis to the membership is no longer tenable because such a policy results in a periodic increase in dues in order to give many free publications to the membership; and
>
> "Whereas, some of the membership of the Medical Society of the State of New York have little or no need for a directory of New York State physicians; and
>
> "Whereas, the majority of physicians feel that frugal review of expenditures is in order; and
>
> "Whereas, it is believed that the physicians of New York State who use the *Directory* would accept subscription billing for this if they believed the savings to the Society would be used for other worthy objectives benefiting physicians of the State Society; therefore be it
>
> "*Resolved*, that the *Directory* of the physicians of New York State be no longer dispensed free to membership of the State Society and that only as many copies be printed as can be sold to physicians, libraries, and other persons who have use for the *Directory*."

Speaker Andresen: Referred to the Reference Committee on Report of the Council, Part XI, of which Dr. Eugene H. Coon, of Nassau, is chairman.

Section 30 (*See 67*)

Establishment by the American Medical Association of a Special Committee on the Problems of Alcoholism

Dr. Milton G. Potter, *Erie:* This resolution deals with the establishment by the American Medical Association of a Special Committee on the Problems of Alcoholism:

> "Whereas, the broad question of the prevention and treatment of chronic alcoholism is a matter of immediate and deep concern to the medical profession of the State of New York, said medical profession being keenly conscious of its obligation to assist in reducing the incidence of chronic alcoholism, in providing adequate facilities for the medical, clinical, and institutional care and reclamation of these sufferers, and in reestablishing the compulsive drinker as a useful and productive member of society; and
>
> "Whereas, the Medical Society of the State of New York has manifested its interest and concern and that of New York State physicians in this challenging problem by creating a Special Committee on the Problems of Alcoholism, which Special Committee has functioned for approximately two years for the development and operation of a sound, well-balanced program—preventive, therapeutic, and rehabilitative—as well as for the stimulation of increased public interest in this vital question, frequently referred to as America's Number Four Public Health Problem; and
>
> "Whereas, the problem of chronic alcoholism, in the opinion of the New York State medical pro-

fession, is one of such magnitude and social-economic importance to the entire nation that there has arisen among members of the medical profession of New York State widespread demand that medicine recognize its responsibility to assume the active leadership and direction of a movement, on the national level, to increase professional and public understanding of this problem, to coordinate all available resources for the care and rehabilitation of the chronic alcoholic, to cooperate with Government-sponsored projects, and to devise constructive methods for the alleviation and solution of the problems of alcoholism; now therefore be it

"*Resolved*, that the Medical Society of the State of New York represented at this duly constituted annual session of its House of Delegates, hereby earnestly urges and petitions the American Medical Association to establish at the earliest feasible date a Special Committee on the Problems of Alcoholism of the A.M.A., to formulate and put into effect, on a nation-wide basis, a comprehensive and effective program for medicine's aggressive participation in the work of solving the problems of alcoholism, such program to include a vigorous recommendation to each constituent state and county medical society that it establish and support actively a special committee patterned after the Special Committee on the Problems of Alcoholism of the Medical Society of the State of New York."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part III, of which Dr. Harry Golembe is chairman.

Section 31

Announcements

Speaker Andresen: I wish to announce that the report of Dr. Reuling's Committee on Revision of Ethics of Professional Conduct has been automatically referred to the Reference Committee on Report of the Council, Part XII, of which Dr. Joseph Geis is the chairman, and will be considered by that committee.

May I also announce that there will be a meeting of the delegates and officers of the component societies of the Sixth District Branch in Room 950 today at 2 o'clock.

Section 32 (See 150)

Collection of A.M.A. Dues

Dr. Christopher Wood, *Westchester:* Mr. Speaker, this resolution is presented on behalf of the Westchester County Medical Society and has to do with the collection of A.M.A. dues:

"Whereas, when annual dues were levied by the American Medical Association it was decided by that body that responsibility for the collection of these dues should devolve upon the component state and county societies; and

"Whereas, it has been our experience that this method of procedure has resulted in confusion as to which organization the member was indebted; and

"Whereas, there is also confusion with regard to the differentiation between the new A.M.A. dues and A.M.A. Fellowship dues; and

"Whereas, such confusion might tend to interfere with the prompt and orderly collection of county, State, and national dues; now therefore be it

"*Resolved*, that the House of Delegates of the American Medical Association be memorialized to instruct the administrative division of the A.M.A. to establish its own independent procedures for collecting the dues of this organization directly from the individual members."

Speaker Andresen: Referred to the Reference Committee on Reports of Treasurer, Trustees, and Finance, of which Dr. Nelson Strohm is chairman.

Section 33 (See 151, 153)

Collection of Dues and Assessments

Dr. James A. Lynch, *Bronx:* I have been instructed by the Bronx County Medical Society to introduce this resolution, which has to do with the collection of dues and assessments, and is in line with a remark made earlier this morning by Dr. Masterson:

"Whereas, Subdivision (c), Section 2, Chapter 1 of the Bylaws of the Medical Society of the State of New York defines status of membership in case of nonpayment of dues and assessments after December 31 of any current year; and

"Whereas, the Bronx County Medical Society feels that the extension of time for the payment of dues and assessments eventually leads to difficulty in the collection of dues and assessments and is not in the best interests of membership obligations within the component county societies; be it

"*Resolved*, that the Medical Society of the State of New York rigidly make effective the aforesaid provision Subdivision (c), Section 2, Chapter 1 of the Bylaws which clearly defines the procedure for collection of dues and assessments within the prescribed time limit; and be it further

"*Resolved*, that the delegates of the Bronx County Medical Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York to be held in 1950."

Speaker Andresen: That should go to the Reference Committee on Reports of Treasurer, Trustees, and Finance, of which Dr. Nelson Strohm is chairman.

Section 34 (See 115)

Practice of Psychiatry

Dr. Irving J. Sands, *Kings:* Mr. Speaker and members of the House of Delegates, I have been requested by the Kings County delegates to present these resolutions:

"Whereas, psychiatry is a branch of the practice of medicine and anyone attempting to make a diagnosis or treat patients by psychotherapeutic methods is practicing medicine; and

"Whereas, the practice of psychiatry should come under the definition of the practice of medicine as defined in Paragraph 4, Section 65 of the Education Law; and

"Whereas, the Attorney General of the State of New York in or before 1945 did render an opinion to the effect that 'suggestive therapeutics (hypnosis) is within the meaning of the term "practice of medicine" and its practice is therefore forbidden except by a duly licensed physician or surgeon'; and

"Whereas, the Medical Practice Act does not specifically include mental and nervous diseases within the meaning of the law; and

"Whereas, as long as psychologists and psychiatric social workers claim only to be giving advice, counsel, or guidance, they may, as matters now stand, avoid prosecution for practicing medicine; therefore be it

"*Resolved*, that the Legislature of the State of New York be requested to protect the public interest further by strengthening the Education Law, accomplishing this by specifically including mental and nervous diseases within the meaning of the law, confining the diagnosis and treatment of such conditions to duly licensed physicians; and be it further

"*Resolved*, that the Medical Society of the State of New York cause to be introduced a bill carrying out the intent of this resolution and actively work for its passage."

Speaker Andresen: Referred to the Reference Committee on Miscellaneous Business (B), of which Dr. Peter Di Natale is chairman.

May I suggest, because we have so many resolutions coming up here, that the proposers of the resolutions deliver them in abstract, tell us what they are about, and we will refer them to the proper reference committee to consider them in detail.

Section 35 (*See 96*)

Information Concerning the National Education Campaign of the A.M.A.

Dr. C. J. F. Parsons, *Westchester:* The subject of this resolution is "Information Concerning the National Education Campaign of the A.M.A.":

> "Whereas, it has been our experience that considerable misunderstanding exists among members of the county societies in regard to the extent and the specific purposes of the National Education Campaign of the A.M.A.; and
>
> "Whereas, we believe the county societies should participate in the dissemination of information regarding this campaign; now therefore be it
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York memorialize the American Medical Association to urge its National Campaign Headquarters to channel information through county and state societies in the form of progress reports to be issued at least four times a year for local distribution to members of the profession through the various media available to the Society."

Speaker Andresen: Referred to Reference Committee on Report of Council, Part XI, of which Dr. Coon is chairman.

Section 36 (*See 112*)

New York State Medical Society Support of Hess Committee Report in Coming A.M.A. Annual Convention

Dr. E. Dean Babbage, *Erie:* I have two resolutions from the Medical Society of the County of Erie. The subject of the first one is, "New York State Medical Society Support of Hess Committee Report in Coming American Medical Association Annual Convention:

> "Whereas, the House of Delegates of the American Medical Association adopted the report of the Committee on Hospitals and the Practice of Medicine of the American Medical Association at the June, 1949, annual session; and
>
> "Whereas, this report and its adoption will be brought up for reconsideration at the forthcoming annual meeting of the House of Delegates of the American Medical Association in June of this year; and
>
> "Whereas, acceptance and practice of the principles contained in the report of the Committee on Hospitals and the Practice of Medicine will do much to clarify the confusion which now exists regarding responsibility for the payment of hospital medical services, by prepayment and other insurance plans; now therefore be it
>
> "*Resolved*, that the delegates of the Medical Society of the State of New York to the House of Delegates of the American Medical Association meeting in San Francisco in June, 1950, be instructed to vote in favor of the so-called Hess report."

Speaker Andresen: Referred to the Reference Committee on Miscellaneous Business (B), of which Dr. Di Natale is the chairman.

Section 37 (*See 141*)

Establishment by Medical Society of the State of New York of Committee on Hospital and Professional Relations

Dr. E. Dean Babbage, *Erie:* The second one concerns the establishment by the Medical Society of the State of New York of a Committee on Hospital and Professional Relations:

> "Whereas, the American Medical Association has recommended to 'each of its constituent state and territorial societies that it appoint a committee on hospital and professional relations'; and
>
> "Whereas, many state medical societies have already set up committees of the type recommended by the American Medical Association; and
>
> "Whereas, there exists a definite and pressing need for the establishment of such a committee in New York State to deal with ethics, responsibilities, standards, and contractual relations relevant to medical services provided in hospitals and for the formulation of general policies with regard to such medical practice in hospitals; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York establish such a committee with representation thereon of general practitioners and all specialties."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part VI, of which Dr. Thomas O. Gamble is chairman.

Section 38 (*See 142*)

Uniformity of County and State Requirements for Remission of Dues

Dr. Edwin L. Harmon, *Westchester:* This is a brief resolution from Westchester County Medical Society to provide for uniformity of county and State requirements for remission of dues in certain hardship cases. There are three whereases which I will not read. They cover the various variations of practice that prevail. I will read only the resolved. . . . The complete resolution is as follows:

> "Whereas, the American Medical Association has now levied dues upon all members; and
>
> "Whereas, it has been stipulated that these dues may be waived in 'hardship' cases only when county and state dues are also waived; and
>
> "Whereas, certain county societies waive dues during periods of graduate study and possibly for other considerations which are not recognized by the State Society; now therefore be it
>
> "*Resolved*, that the Council of the Medical Society of the State of New York be instructed to appoint a committee to study the bases for remission of dues of all component county societies and

prepare recommendations for changes in county or State procedures in order to achieve uniformity of practice on which to base eligibility for remission of national dues."

SPEAKER ANDRESEN: Referred to the Reference Committee on Report of Council, Part VI, of which Dr. Gamble is the chairman.

Section 39 (See 149)

Unity of Membership (County, State, and A.M.A.)

DR. BENJAMIN M. BERNSTEIN, *Kings:* This resolution has to do with unity. In unity there is union, and may I be forgiven when I say that only in union can there be strength. Now for the resolution:

"WHEREAS, there has not been, nor is there even now, a financial obligation or allegiance between the state societies and the American Medical Association; and

"WHEREAS, the present system of dual membership which permits a physician to be a member of his county, district, and state medical society without membership in the American Medical Association is artificial and unrealistic; therefore be it

"*Resolved,* that the delegates from the State of New York to the American Medical Association urge that membership in the American Medical Association shall be held by a member physician through his county society, paying his annual dues to the county and state, which in turn should provide a method of paying a per capita dues to the American Medical Association."

SPEAKER ANDRESEN: Referred to the Reference Committee on Reports of Treasurer, Trustees, and Finance, Dr. Strohm, chairman.

Section 40 (See 88)

Oath of Allegiance

DR. HENRY E. MCGARVEY, *Westchester:* This is a resolution from the Westchester County Medical Society in regard to the oath of allegiance:

"WHEREAS, citizenship in a democracy is a privilege not without responsibility for the individual citizen; and

"WHEREAS, the freedoms guaranteed by the Constitution of the United States are our most priceless possession; and

"WHEREAS, five wars have been fought at a fearful cost in life and money to safeguard and preserve those human freedoms; and

"WHEREAS, the free peoples of this world are now confronted with a 'cold war' which insidiously and with diabolic cunning seeks to overthrow those rights and privileges; and

"WHEREAS, there are developing alarming evidences of attempted infiltration of education and government by individuals who would promote subversive ideologies in an effort to change and control our democratic system; and

"WHEREAS, the medical profession occupies a position of trust, respect, and influence in American society and should exercise leadership in vital issues; now therefore be it

"*Resolved,* that the House of Delegates of the Medical Society of the State of New York take action requiring, as one condition for membership in that Society and its component county societies, the signing by each member of a constitutional oath and declaration against ideologies which would seek to overthrow the American system of government; and be it further

"*Resolved,* that the delegates of the Medical Society of the State of New York to the House of Delegates of the American Medical Association be mandated to present a similar proposal to that body for adoption as a membership requirement in all component societies of the American Medical Association."

SPEAKER ANDRESEN: That has to do with the changing of the Constitution and Bylaws, so I will refer it to Dr. Bauer's committee, which is at present revising the Constitution and Bylaws of the State Society.

Section 41 (See 137)

Preparation of State-Wide Medical Insurance Policy

DR. GUY PHILBRICK, *Niagara:* On behalf of the Niagara County Medical Society I present to the House of Delegates this resolution:

"WHEREAS, the 1949 House of Delegates authorized by resolution the Bureau of Medical Care Insurance to proceed with the preparation of a uniform State-wide contract which could be offered by the six local plans approved by the Medical Society of the State of New York; and

"WHEREAS, to date nothing has been accomplished in the preparation of a uniform State-wide contract; and

"WHEREAS, it is apparent that we will find ourselves right back where we started with six different contracts offered by the six approved plans; and

"WHEREAS, the absence of a uniform contract at the present time is resulting in the loss of large groups of existing contracts as well as the loss of new business because we have nothing to offer; and

"WHEREAS, the six approved plans all have highly trained competent executive directors, thoroughly familiar with all phases of prepaid medical insurance, such as the public wants, the limitations and restrictions imposed by the Insurance Department of the State of New York, the cost of promotion and sales, the cost of processing of claims, exposure rates, etc.; therefore be it

"*Resolved,* that this House request the presidents of the six approved medical plans, with the assistance of their executive officers, to prepare and submit two to three uniform contracts, acceptable to all six plans together with suggested rates, to the Subcommittee on Medical Care Insurance for its study and approval; and be it further

"*Resolved,* that they report as soon as possible, and in no event later than October 1, 1950."

SPEAKER ANDRESEN: I don't think it would be inappropriate to refer this matter to the Reference Committee on Report of Council, Part VII, of which Dr. Philbrick is chairman. After all, there are four other members of the committee who can outvote him, so I will refer it to his own Reference Committee.

Section 42 (See 92)

Membership, Public Relations Committee, Medical Society of the State of New York

DR. CHARLES SANDLER, *Bronx:* This is a resolution from the Bronx County Medical Society pertaining to the Public Relations Committee:

"WHEREAS, the acknowledged procedure of the American medical profession for combating socialized medicine is through an extensive and coordinated public relations program; and

"WHEREAS, this program to be effective must be actively conducted through county and state societies as well as the national organization; and

"Whereas, the numerical and geographic membership of the Public Relations Committee of the New York State Medical Society is inadequate to accomplish a maximum of required achievement; be it

"*Resolved*, that the Public Relations Committee of the New York State Medical Society be increased to include representatives on a geographic basis; and be it further

"*Resolved*, that this increased membership include a greater percentage of representatives from county societies where population density necessitates more active and intensive public relations programs; and be it further

"*Resolved*, that the delegates of the Bronx County Medical Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York, to be held in 1950."

Speaker Andresen: That is referred to Reference Committee on the Report of the Council, Part XI, of which Dr. Coon is chairman. They are going to have a busy time this afternoon.

Section 43 (See 88)

Amendment to Chapter II, Section 8, of the Bylaws of the Medical Society of the State of New York: National Anthem, Invocation

Dr. Thomas F. McCarthy, *Bronx:* This is a resolution in reference to the revision of the Constitution and Bylaws:

"Whereas, the culture, traditions, and principles upon which these United States were founded, the result of centuries of Judeao-Christian civilization, are now dangerously threatened; and

"Whereas, the House of Delegates of the Medical Society of the State of New York, the representatives of a majority membership of the medical profession in the most populous state of the United States, acknowledges with humility the need for Divine Guidance in its deliberations, and desires to proclaim its devotion to these United States; therefore be it

"*Resolved*, that the report of the Committee on Revision of the Constitution and Bylaws be amended, under Chapter II, Section of the Bylaws:

'The following shall be the order of business at the sessions of the House of Delegates:

1. Calling the meeting to order.
2. Invocation
3. National anthem.'

"The remainder to proceed in present order."

Speaker Andresen: Referred to the House Committee on Revision of Constitution and Bylaws, of which Dr. Bauer is the chairman.

Section 44 (See 74)

Self-Testing for Sugar in Diabetic Detection

Dr. Frederick Williams, *Bronx:* Mr. Speaker and members of the House, this resolution is not introduced by Bronx County, but I introduce this on behalf of the American Diabetes Association:

"Whereas, the early detection of diabetes mellitus is necessary for the welfare of those having the disease; and

"Whereas, studies indicate that it is necessary to screen a large number of persons prior to confirmatory diagnostic examinations by physicians in order to find the estimated one million unknown diabetics; and

"Whereas, the American Medical Association has already recognized the need for an organized program by approving the Diabetes Detection Drive of the American Diabetes Association; and

"Whereas, the principle of individuals testing their own urine for glycosuria, including the recommendation that individuals with positive tests consult their own physicians, has been approved by the American Diabetes Association; and

"Whereas, for many years the medical profession has urged diabetics to test themselves for glycosuria, and simple methods are now available to all individuals for self-use in detection of glycosuria; therefore be it

"*Resolved*, that, as a means of facilitating the detection of diabetes, the House of Delegates of the American Medical Association approve the principle of individuals periodically testing themselves for glycosuria and reporting abnormal results to their own physicians."

Speaker Andresen: Referred to Reference Committee on Report of Council, Part V, of which Dr. Moore is chairman.

Section 45 (See 119)

American Board of Obstetrics and Gynecology

Dr. Frederick A. Wurzbach, *Bronx:* This is a resolution presented by the Bronx County Medical Society. It was first unanimously adopted by the Bronx County Obstetrical and Gynecological Society:

"Whereas, effective December 31, 1949, physicians desiring admission to the American Board of Obstetrics and Gynecology are required to have seven years of experience exclusive of one year internship, the experience to include three years of residency training in obstetrics and gynecology, and two years of practice limited exclusively to that specialty; and

"Whereas, these requirements are more than adequate for the basic and advanced training necessary for practicing the specialty of obstetrics and gynecology; and

"Whereas, it is questionable whether it is to the best interests of the public to omit from the training of specialists a period of general practice; and

"Whereas, a situation has been created which practically precludes the possibility of specialty training to any physician, regardless of ability, unless such training is taken immediately upon graduation; and

"Whereas, the prolonged period of training discourages many capable physicians early in their careers from engaging in such a program because of their reluctance to remain economically dependent on others; and

"Whereas, many currently approved hospitals are experiencing difficulty in securing residents to accept the three-year course of training; and

"Whereas, physicians completing residency programs find it increasingly difficult to practice their specialty in recognized hospitals in order to obtain additional experience necessary to apply for the Boards because of the restrictive action of increasing numbers of hospitals that are demanding Board recognition prior to granting major operative privileges to such qualified graduate residents; and

"Whereas, contrary to the expressed intent of the American Board of Obstetrics and Gynecology, many hospitals are requiring Board recognition before appointing or advancing otherwise qualified specialists; therefore be it

"*Resolved,* that the Bronx Obstetrical and Gynecological Society go on record as being opposed to any further extension on residency training in obstetrics and gynecology; and be it further

"*Resolved,* that the entire program of residency training requires urgent re-evaluation; and be it further

"*Resolved,* that the delegates of the Bronx County Medical Society are instructed to introduce these resolutions at the annual meeting of the 1950 House of Delegates of the New York State Medical Society; and be it further

"*Resolved,* that the delegates of the New York State Medical Society to the American Medical Association be instructed to place these resolutions before the 1950 House of Delegates of the American Medical Association requesting that such action be taken as will carry out the intent of these resolutions."

Speaker Andresen: Referred to Reference Committee on Report of Council, Part I, of which Dr. Smith is chairman.

Section 46 (See 73)

Establishment of Departments of Physical Medicine and Rehabilitation in Medical Schools

Dr. Joseph G. Zimring, *Nassau:* "Establishment of Departments of Physical Medicine and Rehabilitation in Medical Schools":

"Whereas, the problems of physical medicine and rehabilitation are becoming increasingly important in the field of medicine; and

"Whereas, it is necessary for the profession to give thought to the recently developed body of knowledge in this field; be it

"*Resolved,* that the Medical Society of the State of New York request its component county societies to set aside one meeting each year for a program and demonstration on the place of physical medicine and rehabilitation in the management of chronic disease and physical disability, for which purpose the Committee on Public Health and Education is prepared to furnish speakers throughout the State on request; and be it further

"*Resolved,* that, in view of the need for more knowledge on the part of all physicians and for more men trained as specialists in physical medicine and rehabilitation, the House of Delegates is requested to recommend that departments of physical medicine and rehabilitation be established in all medical schools in the State of New York at the undergraduate and postgraduate levels, particularly in the new State universities, and that the programs of these departments be similar to those which have already been in operation with great success in certain schools of the State, using the criteria of the Council Committee on Education of the American Medical Association."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part V, Dr. Moore, chairman.

Section 47 (See 123)

Injunction Bill

Dr. Alfred P. Ingegno, *Kings:* This resolution is an introduction from the County of Kings, and has to do with the reintroduction of a bill into the State Legislature which would empower the Attorney General to use the power of injunction to restrain individuals, cultists, and otherwise from the illegal practice of medicine:

"Whereas, a bill introduced at the request of the Medical Society of the State of New York to amend Section 6513 of the Education Law of the State of New York in relation to authorizing the Attorney General to apply for relief by injunction to restrain the commission of any act which is illegal under Article One Hundred Thirty-One of such law (The Medical Practice Act) failed of passage at the 1949 session of the Legislature of the State of New York; therefore be it

"*Resolved,* that the Medical Society of the State of New York cause the reintroduction at the 1951 session of the Legislature of the State of New York of a like bill (similar to Senate Int. 94 of the 1949 session) and work actively for its passage."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part IX, Dr. Cudmore, chairman.

Section 48 (See 114)

Hospital Practice of Medicine

Dr. Morris Weintrob, *Kings:* This resolution is introduced for the Kings County Medical Society and relates to the hospital practice of medicine.

. . .The resolution referred to above is as follows:

"Whereas, a set of resolutions recently adopted by the Board of Trustees of the American Hospital Association seeks to include anesthesiologic, radiologic, pathologic, and physiatric services as hospital services and recommends that these be so defined in prepayment hospital insurance plan subscriber certificates; and

"Whereas, such a practice, necessitating hiring by hospital management of physicians to provide such medical services, would actually result in division of fees for professional services; and

"Whereas, the former, that is, the hiring of physicians by corporate lay bodies, might rightfully be construed as an unethical and illegal type of contract practice; and

"Whereas, the latter, i.e., division of fees between physicians and laymen, or between physicians and other physicians, is both unethical and in some areas illegal; therefore be it

"*Resolved,* that the delegates from the Medical Society of the State of New York be instructed to introduce a resolution at the next meeting of the American Medical Association calling for recognition of the above-noted specialties as the practice of medicine; and be it further

"*Resolved,* that members of the American Medical Association be censured if they violate the principles of medical ethics by engaging in such unethical and illegal practice; and be it further

"*Resolved,* that the proper authorities of the American Medical Association be urged to withhold recognition of hospitals that violate the principles of medical ethics and the Medical Practice Act in the states in which they operate; and be it further

"*Resolved,* that the attorneys-general of the separate states wherein the above specified legal violations are being committed be so notified and proper legal relief be sought."

Speaker Andresen: Referred to Reference Committee on Miscellaneous Business (B), of which Dr. Di Natale is the chairman.

Section 49 (See 105)

Euthanasia

Dr. Aaron Kottler, *Kings:* Mr. Speaker, Ladies and Gentlemen, this resolution was approved by the Kings County Medical Society. Its subject is euthanasia:

> "Whereas, life is God-given and precious, and the art and science of medicine will some day discover the cure for diseases now incurable; and
>
> "Whereas, most physicians whose work is dedicated to the saving of life could not conscientiously subscribe to the finality of legalized euthanasia thus bringing death to some supposedly incurable patients who, emotionally unbalanced by sickness, might crave such end to their suffering; and
>
> "Whereas, the final responsibility for making the decision leading to legalized euthanasia must become the responsibility of physicians; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York go on record as being unalterably opposed to euthanasia and to any legislation that will legalize euthanasia."

Speaker Andresen: I think we will refer that to the Reference Committee on Report of the Council, Part XII, of which Dr. Geis is chairman, and which has ethics as one of their subjects for consideration.

Section 50 (See 117)

Workmen's Compensation—Increase in Fees

Dr. Joseph H. Cornell, *Schenectady:* This concerns workmen's compensation:

> "Whereas, the costs of maintenance of a medical practice have been constantly increasing; and
>
> "Whereas, the fees now paid under Workmen's Compensation are substantially less than those paid in noncompensation practice; and
>
> "Whereas, the Workmen's Compensation Law mandates that fees in workmen's compensation cases be the same as those charged in the same community for treatment of similar persons of a like standard of living; therefore be it
>
> "*Resolved*, that the Medical Society of the County of Schenectady go on record as strongly urging the House of Delegates of the Medical Society of the State of New York to take any and all steps necessary to obtain an increase in home, office, and hospital visit fees for general practitioners in workmen's compensation practice."

Speaker Andresen: Referred to Reference Committee on Report of the Council, Part X, Dr. Duryee, chairman.

Section 51 (See 124)

Lien Law

Dr. William Ostrow, *Kings:* This is introduced by Kings County:

> "Whereas, a bill introduced at the request of the Medical Society of the State of New York to amend the lien law and civil practice act in relation to liens of physicians for treatment and care of certain injured persons failed to be passed at the 1949 session of the Legislature of the State of New York; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the introduction of a like bill (similar to Senate Int. 2045 of 1949) at the 1951 session of the Legislature of the State of New York and work actively for its passage."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part IX, Dr. Cudmore, chairman.

Section 52 (See 117)

Workmen's Compensation Fee Schedule—Medical Members Advisory Board

Dr. Raymond F. Kircher, *Albany:* This concerns the workmen's compensation fee schedule, which I believe has been previously recommended, except in one part:

> "Whereas, the Medical Society of the County of Albany feels that we should once again bring to the attention of the House of Delegates of the Medical Society of the State of New York the unfairness of the existing compensation fee schedule as it pertains to the general practitioner; and
>
> "Whereas, the Medical Society of the County of Albany feels that both our representatives on the Medical Advisory Board to the Chairman of the Workmen's Compensation Bureau should be actively engaged in the practice of medicine and that one should be a general practitioner; therefore be it
>
> "*Resolved*, that the State Society be requested to take the necessary steps to produce immediate revision of the following items of the fee schedule:
>
> Item 2 from $3.50 to $5.00
> Item 3 from $2.50 to $3.00
> Item 6 from $2.50 to $3.00
> Item 9 to $20 for first hour or part thereof and $10 for each additional hour or part thereof,
>
> and be it further
>
> "*Resolved*, that the President of the State Society be apprised of our feeling in regard to the appointment of the medical members of the Advisory Board to the Chairman of the Workmen's Compensation Bureau."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part X, Workmen's Compensation, of which Dr. Duryee is the chairman.

Section 53 (See 148)

Deficit Financing

Dr. Raymond F. Kircher, *Albany:* We also have a second resolution, subject "Deficit Financing":

> "Whereas, the members of the Medical Society of the County of Albany disapprove of deficit financing which is the method now engaged in by the Medical Society of the State of New York; therefore be it
>
> "*Resolved*, that the Medical Society of the County of Albany urges the Medical Society of the State of New York to return to a pay-as-you-go policy."

Speaker Andresen: Referred to the Reference Committee on Reports of Treasurer, Trustees, and Finance, of which Dr. Strohm is chairman.

Section 54 (See 139)

Letter from Health Insurance Plan of Greater New York

Speaker Andresen: Dr. Masterson, our president, would like to read something.

Dr. John J. Masterson, *President:* I have a communication addressed to me as president of the Medical Society of the State of New York from George Baehr, M.D., chairman of the Board of Directors of the Health Insurance Plan of Greater New York, reading:

"Dear Doctor Masterson:

"It was with a deep sense of gratification that the Health Insurance Plan of Greater New York learned that the American Medical Association House of Delegates at its meeting in June, 1949, adopted criteria for the approval of lay-sponsored voluntary health plans. The adoption of these criteria indicates clearly that the A.M.A. recognizes the fact that lay-sponsored voluntary prepaid medical insurance plans, and medical society-sponsored programs, can coexist and complement one another in providing medical benefits to a large part of our nation's population.

"The Board of Directors of H.I.P. has examined the twenty criteria and is of the opinion that the program of H.I.P. conforms with each one. We are confident that, after reviewing the attached statement with the accompanying exhibits, the Medical Society of the State of New York will concur and grant approval of the Health Insurance Plan of Greater New York as a lay-sponsored voluntary medical insurance plan.

"The H.I.P. Board of Directors had considered the question of sending this application to the county medical societies. After considerable discussion, it was the Board's conclusion that the application should be sent to the State Society rather than the local constituent societies for the following reasons:

> "(*a*) H.I.P. has been authorized by the State of New York to operate in 18 counties. It is not feasible to make individual applications to the 18 county societies.
>
> "(*b*) As H.I.P. is providing medical services in five counties (New York, Kings, Queens, Bronx, and Nassau) and a small part of two other counties (Westchester and Suffolk) at the present time, there would not seem to be any point in applying for approval to the remaining 13 counties.
>
> "(*c*) The Queens, Kings, Bronx, and Nassau County Medical Societies have adopted resolutions unfavorable to H.I.P., and addressing the application for approval to these societies would therefore serve no purpose but to delay the implementation of the principles set forth by the A.M.A. Objections by any of the county societies to approval of the Plan by the State Society should be based solely upon the Plan's failure to conform to the twenty A.M.A. criteria, not upon opposition to group practice or to other details which are not in conflict with the twenty criteria.

"H.I.P. is the largest medical service program providing comprehensive medical care now in operation in this country. We realize that the program may be misunderstood by many members of the medical profession, but a careful reading of the enclosed material should convince you that H.I.P. conforms to the twenty principles of the American Medical Association and therefore merits approval by the Medical Society of the State of New York.

"We are prepared to provide you with any additional information that you may believe necessary and shall be glad to have H.I.P. representatives appear before you or the Council of the Society to discuss any details of the program.

"Very truly yours,

George Baehr, M.D., *Chairman*"

Accompanying the letter was a brochure containing all of the details of the plan, all of their rules and regulations, their financial sheet, and every other thing about the plan that you would care to know. As this communication was addressed to me as president of the State Society, I felt it my duty to bring it before the House of Delegates.

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part VII, of which Dr. Philbrick is the chairman.

Section 55 (See 122)

Hospital Practice of Medicine

Dr. George J. Lawrence, Jr., *Queens:* I have two resolutions to present on behalf of the Queens County Medical Society. The first concerns the hospital practice of medicine:

> "Whereas, the House of Delegates of the Medical Society of the State of New York, at its last meeting in May, 1949, approved a resolution that the Council be instructed to sponsor and support the introduction in the 1950 State Legislature of a bill which would prohibit vending by hospitals of medical diagnosis and treatment; and
>
> "Whereas, such a bill was introduced in the 1950 State Legislature (Sen. Int. 1107); and
>
> "Whereas, the New York State Medical Society failed to actively support this bill; therefore be it
>
> "*Resolved,* that the delegates of the Medical Society of the County of Queens be instructed to reintroduce such a resolution at the coming meeting of the House of Delegates in May, 1950; and be it further
>
> "*Resolved,* that the House of Delegates of the New York State Medical Society instruct the Council to actively support the introduction and passage of such legislation in the New York State Legislature of 1951."

Speaker Andresen: Referred to Reference Committee on Report of Council, Part IX, Legislation, of which Dr. Cudmore is chairman.

Section 56 (See 121)

Free Choice of Physician

Dr. George J. Lawrence, Jr., *Queens:* The second one concerns "Free Choice of Physician":

> "Whereas, the House of Delegates of the Medical Society of the State of New York at its last meeting in May, 1949, approved a resolution endorsing legislation that would preserve the right of free choice of physician, especially as it pertains to patients insured in voluntary insurance plans; and
>
> "Whereas, such legislation was introduced this year in the New York State Legislature (Sen. Int. 2032, Ass. Int. 2409); and
>
> "Whereas, the Medical Society of the State of New York did not actively support this proposed legislation; therefore be it
>
> "*Resolved,* that the Medical Society of the County of Queens again endorses the principle of free choice of physician in all health insurance plans; and be it further
>
> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York instruct the Council to actively support the introduction and enactment of such legislation in the 1951 State Legislature; and be it further
>
> "*Resolved,* that the delegates of the Medical Society of the County of Queens be instructed to introduce and support this resolution at the coming meeting of the House of Delegates."

Speaker Andresen: Referred to Reference Committee on Report of Council, Part VII, Dr. Philbrick, chairman.

Section 57 (See 113)

Representation on the Group of Delegates to the American Medical Association

Dr. George A. Burgin, *Herkimer:* This has to do with the selection of the delegates to the A.M.A.:

> "Whereas, the American Medical Association of which each county medical society is a primary and integral part has entered upon a campaign of public education; and
>
> "Whereas, the Medical Society of the State of New York is the first echelon in the chain of communication with the American Medical Association and its policy committee; and
>
> "Whereas, the Medical Society of the State of New York has been represented by a group of distinguished delegates to the American Medical Association, it is, however, the feeling of the Herkimer County Medical Society that a proportion of this delegation should be composed of younger men whose personal relationship to proposed changes in governmental control of the medical profession has a greater significance and threat to their present and future status than would apply to those members of the profession of the more advanced ages; now therefore be it
>
> "*Resolved*, by the Medical Society of the County of Herkimer that the House of Delegates of the Medical Society of the State of New York at this meeting consider the propriety of the election as delegates to the American Medical Association of a proportionate number of younger members of the Society, and especially those who have had service in the last war."

Speaker Andresen: Referred to the Reference Committee on Miscellaneous Business (B), Dr. Di Natale, chairman.

Section 58 (See 88)

Revision of the District Branches—Rockland

Dr. Franklyn B. Theis, *Rockland:* This is a resolution from Rockland County requesting revision of the Second District Branch. This resolution has been introduced previously with a similar wording. I, therefore, do not think it is necessary to read it. (*See Section 22*)

Speaker Andresen: Referred to the House Committee that is at present revising the Constitution and Bylaws, of which Dr. Bauer is the chairman.

If there are no more resolutions, I want to stress once more the importance of having complete and free discussion at the reference committee meetings this afternoon, which will take place mostly commencing at two o'clock. Two committees, Miscellaneous (A), Dr. Aaron's committee, will meet at 3 o'clock, and Dr. Bauer has announced his committee will meet at 2:15 in the Penn Top North. Tomorrow we will be glad if we have no long discussions on the floor of the House which could better take place in the reference committees. You may inquire of our secretary, or ask his associates, if you do not find it on the board, the time and place of the various reference committee meetings. Be sure and go there for discussions this afternoon.

I would like to meet the chairmen of the reference committees up here immediately after we adjourn this morning.

Dr. Anderton has two more things to announce. I will ask you to wait just a moment.

Section 59

Report of Reference Committee on Credentials

Secretary Anderton: Dr. McCarty, chairman of the Credentials Committee, has announced that, of a House of 243, 185 are present: Delegates 149, Officers 19, Ex-Presidents 6, District Branch Delegates 3, Section Delegates 8.

Section 60 (See 138)

Letter from Medical Society of New Jersey: Proposed American Medical Association 12-Point Program

Secretary Anderton: Mr. Speaker, there came to the secretary a few days ago, on May 3, a communication from the Medical Society of New Jersey requesting in substance that our Society be a cosponsor with the New Jersey State Medical Society of their proposition in regard to four proposals in connection with the A.M.A. Twelve-Point Program. The last paragraph of that letter states:

> "Will you kindly let us have your reaction and comments? If you agree with the sense and purpose of the resolution to be presented to the A.M.A. House of Delegates, we would most earnestly invite your Society to act as cosponsor in presenting this resolution to the House of Delegates in June."

The letter is signed by M. H. Greifinger, M.D., Secretary.

The text of the resolution and the supporting evidence, and the recommendations are quite voluminous, and it would take up considerable of this House's time to read it all. I beg that the Speaker would refer this to a reference committee.

. . .The complete letter referred to above is as follows:

> "The Medical Society of New Jersey wishes to request your Society to study the accompanying proposals which are to be offered by the delegates from this Society as a formal resolution to the House of Delegates of the American Medical Association at its annual meeting in San Francisco, June 26 to 30, 1950.
>
> "These proposals have been offered as a means of translating the essential elements of the A.M.A. 'Twelve-Point Program' into action. They are founded upon the following premises:
>
> "1. That the public will welcome and support a definite, realistic program of action sponsored by the medical profession.
>
> "2. That it is possible to solve the national medical care problem without resort to any broad national legislation.
>
> "3. That if we are to extend the benefits of high quality medical and hospital service insurance to the masses of workers in the lower income brackets and to those who are medically indigent, we must provide them with some special aid or encouragement.
>
> "4. That if voluntary insurance is to achieve general acceptance we must liberalize its services and broaden its coverage.
>
> "American medicine is firmly and rightly committed to voluntary prepayment plans as the only workable alternative to federalized medicine. We are on trial before the American people to prove that these voluntary plans not only can—but will—meet the test and solve the problem.
>
> "We are requesting that your State Society give careful consideration to the enclosed proposals submitted by New Jersey. We feel that this program is entirely in harmony with the established policies of the A.M.A.
>
> "Will you kindly let us have your reaction and comments? If you agree with the sense and purpose of the resolution to be presented to the A.M.A. House of Delegates, we would most earnestly invite your Society to act as cosponsor in

presenting this resolution to the House of Delegates in June.

"Cordially yours,

M. H. Greifinger, M.D., *Secretary*"

Speaker Andresen: Essentially what does it cover? Does that have something to do with medical care insurance?

Secretary Anderton: Yes, sir, mostly.

Speaker Andresen: That is referred to the Reference Committee on Report of the Council, Part VII, Dr. Philbrick, chairman.

Section 61 (See 122)

Hospital Practice of Medicine—Reintroduction of Friedman Bill (Senate Introductory 2404 of 1949)

Dr. Solomon Schussheim, *Kings:* Substituting for Dr. Abraham Koplowitz, I have another resolution on the hospital practice of medicine:

> "Whereas, hospitals are engaged in the practice of medicine through the medium of hiring physicians, particularly in the fields of anesthesiology, pathology, roentgenology, and physiotherapy, and in some instances, hiring full-time surgeons, internists, and other specialists on a salary basis; and
>
> "Whereas, some hospitals are collecting fees from private patients for the services rendered by these hired physicians at a profit to the hospitals; and
>
> "Whereas, these practices are both unethical and illegal; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the reintroduction of the Friedman Bill (Senate Int. 2404) which was passed by the State Senate at the 1949 session of the Legislature of the State of New York, this bill being designed to prohibit legally any hospital from practicing medicine as defined; and further be it
>
> "*Resolved*, that the Medical Society of the State of New York work actively for its passage."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part IX, Dr. Cudmore, chairman.

Section 62 (See 125)

X-Ray Bill

Dr. Aaron Kottler, *Kings:* This concerns the x-ray bill:

> "Whereas, the Legislature of the State of New York at its 1950 session did not pass a bill to amend the Medical Practice Act defining roentgenology as the practice of medicine; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the introduction of a similar bill at the 1951 session of the Legislature of the State of New York and exert every possible effort for its passage."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part IX, Dr. Cudmore, chairman.

Are there any other resolutions?

. . .There was no response. . .

Speaker Andresen: Is there any other business to come up before the House this morning?

. . .There was no response. . .

Speaker Andresen: We are going to meet tonight at 8 o'clock in this room according to the resolution passed this morning, so I will now adjourn the meeting until that time, admonishing you all to get to the reference committee meetings this afternoon, if possible.

Dr. Strohm announces his committee on Treasurer, Trustees, and Finance will meet at 2:30 in the Penn Top North.

The meeting is adjourned.

. . .The session adjourned at 1:00 p.m. . . .

EVENING SESSION

Monday, May 8, 1950

The session convened at 8:12 p.m.

Speaker Andresen: I think we should plan to finish about ten o'clock tonight, don't you think so? *(Applause)*

Chorus: Right! Yes!

Section 63

Telegram from Chairman of the Workmen's Compensation Board

Speaker Andresen: We had invited Miss Mary Donlon, chairman of the New York State Workmen's Compensation Board, to speak here. We have a message from her which Dr. Anderton will read.

Secretary Anderton: Mr. Speaker, the following telegram was received May 8 at 2:02 p.m.:

"Dr. John J. Masterson, President
Medical Society of the State of New York
Hotel Statler

"Deeply regret illness keeps me from State Society events. Congratulations on your successful presidency and all best wishes for a fine meeting. Regards.

Mary Donlon"

Speaker Andresen: What I plan to do tonight is to ask for reports of reference committees on reports of officers, starting with the president and running down through the secretary, censors and district branches, treasurer and trustees, and then go on with the Council reports as far as we can go. Some of these committees have had referred to them in addition to the reports some resolutions as they would probably fit right in with their other work. I think we could just as well consider them also this evening.

Section 64

Report of Reference Committee on Report of Council, Part III: Public Health Activities (A)—Industrial Health

Dr. Harry Golembe, *District Delegate:* Your Reference Committee on the Report of the Council, Part III: Public Health Activities (A), Industrial Health, Rural Medical Service, Problems of Alcoholism, submits the following report:

1. *Industrial Health.*

The Subcommittee on Industrial Health, under the chairmanship of Dr. Leonard Greenburg, carried on its activities during the year in a very efficient manner, although no regular meetings were held. Dr. Greenburg had informal discussions with the chairman of the Workmen's Compensation Committee, calling attention to the "laboratory facilities available in his department for the investigation of clinical and fatal cases of occupational disease in which an industrial hazard might be involved, and he urged that the practitioners of the State utilize these facilities." As recommended in last year's report, he again called attention to the importance of reporting all industrial diseases and cases of industrial poisoning.

Several members of his committee and the chairman of the Council Committee attended the tenth annual Congress on Industrial Health held in New York City on February 20 and 21, 1950. At this Congress a symposium on prepayment health plans for industrial workers was discussed. Your Reference Committee commends the activities of this committee but would like to stress again the importance of postgraduate instruction in industrial health and occupational disease which is available through this committee in cooperation with the Council Committee on Public Health and Education.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 65

Report of Reference Committee on Report of Council, Part III: Public Health Activities (A)—Rural Medical Service

Dr. Harry Golembe, *District Delegate:*

2. *RuralMedical Service.*

The Council Committee on Rural Medical Service held no meetings of its committee during the year, although its chairman, Dr. Leo E. Gibson, attended the meeting of the Fifth National Conference on Rural Health arranged by the American Medical Association at Kansas City, Missouri, February 2, 3, and 4, 1950. This meeting was very well attended and divided into five different discussion groups and, from Dr. Gibson's report, the indications are that a great deal of activity can be expected "on the part of leaders of farm organizations. extension schools, and some medical schools toward developing more suggestions to promote rural health, particularly in the midwestern states."

Your Reference Committee is not quite in agreement with the latter part of Dr. Gibson's statement in his report concerning the Hill-Burton Bill that "some localities might attempt to establish more hospitals than they could staff adequately and that they might be an obstacle rather than an advantage to the improvement of rural health." This does not seem possible in New York State, where, through the careful planning of the New York State Joint Hospital Survey and Planning Commission under the direction of Dr. John Bourke, executive director, thorough investigations are made in a given area before setting up a hospital that would be too large for a given community. While 50 beds have been set as a minimum under which Federal and State aid can be granted, a number of communities have been given aid for considerably smaller hospitals because of their special locations and small number of physicians. It should be noted that these hospitals, wherever feasible, are required to arrange with the nearest large medical facilities for any special services that they obviously cannot cover.

I move the adoption of this part of the report.

. . . The motion was seconded. . .

Speaker Andresen: Dr. Gibson, do you wish to discuss that?

Dr. Leo E. Gibson, *Councillor:* No, thank you.

. . .The question was called, and the motion was put to a vote and was unanimously carried . . .

Section 66

Report of Reference Committee on Report of Council, Part III: Public Health Activities (A)—Problems of Alcoholism

Dr. Harry Golembe, *District Delegate:*

3. *Problems of Alcoholism.*

Your Reference Committee notes with satisfaction that a Teaching Day on the Problems of Alcoholism has been arranged at this Annual Meeting for Tuesday, May 9, at 2:00 p.m. under the chairmanship of Dr. Milton G. Potter. It is hoped that this program will be successful and well received, and that the subject will continue to be presented and discussed at future meetings.

The report of the activities of your Special Committee on the Problems of Alcoholism is commended. This Special Committee was able to hold two meetings of the entire Committee and, through delegation of work to individual members, was able to be very active. The recommendations of the Committee that uniformity of teaching as to the problems of alcoholism be carried out as a joint effort of the State Society and possibly the New York Academy of Medicine, and that lectures be included in the medical schools curricula, particularly as to treatment and regarding publicity on the questions of alcoholism as a medical and public health problem, is commended. The recommendation that this Society at the next annual meeting of the A.M.A., through its delegates, present a resolution to form a special committee on this problem is approved. This Committee, through various members, took an active part in the work being carried out through the Division of Chronic Diseases of the U.S. Public Health Service and the New York State Department of Health in cooperation with the University of Buffalo, in establishing a research experimental center for the study of rehabilitating people suffering with chronic diseases, among which alcoholism is to be included. It is recommended that the State Society through this joint special committee continue its cooperating efforts with this Special Committee. It is especially to be noted that the Public Health Relations Committee of the New York Academy of Medicine has given approval to the principles outlined in the approach to the problems of alcoholism by this combined cooperative committee.

The great amount of individual work contributed by the chairman of this Special Committee, Dr. Milton G. Potter, in carrying out its activities should be commended.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Golembe: Now, I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried . . .

Section 67 (See 30)

Report of Reference Committee on Report of Council, Part III: Establishment by A.M.A. of a Special Committee on Problems of Alcoholism

Dr. Harry Golembe, *District Delegate:* The resolution submitted by Dr. Milton G. Potter in behalf of the Medical Society of the County of Erie as to the establishment by the American Medical Association of a Special Committee on the Problems of Alcoholism has already been approved in principle by your Reference Committee in its report on the Problems of Alcoholism. (*See Section 30*).

The chairman of your Reference Committee desires to move the adoption of this resolution.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Golembe: Now the chairman of your Reference Committee wishes to thank the members of his Committee for their splendid cooperation.

Speaker Andresen: Thank you, Dr. Golembe.

Section 68

Report of Reference Committee on Report of Council, Part VIII: Liaison with Veterans Administration

Dr. Reginald A. Higgons, *Westchester:* Your Reference Committee has read with care the report of the treasurer of the Veterans' Medical Service Plan of New York, Inc., which was originally set up in 1946. The two main features of this plan were to provide high quality medical care at an acceptable fee and to provide supervision of this medical care by licensed physicians of New York State. This supervision was carried out by four coordinator physicians who were appointed and paid by the Plan, which was in turn reimbursed by the Veterans Administration for the amount of their salaries. We note that the case load of the fee basis cases has been gradually reduced, due to larger use of government clinics by the Veterans Administration, stricter application of the service-connected disability criteria, the recovery of many veterans, and the return of many veterans to their private physicians for purposes of their own convenience. It is thought by the committee, however, that the case load is now running more or less constant.

The present contract between the Veterans' Medical Service Plan of New York, Inc., and the Veterans Administration (a copy of which is attached to the original report of the committee) expires in June, 1950, and will probably be renewed at that time.

Your Reference Committee believes that the administrators and the workers in the Plan can be proud of their record.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 69

Report of Reference Committee on Report of Council, Part VIII: War Memorial

Dr. Reginald A. Higgons, *Westchester:* Your Reference Committee has reviewed the report of the War Memorial Committee of the Council and the Board of Trustees.

We note that, in all, twelve beneficiaries have received some help to date. We also note that according to the treasurer's report as of December 31, 1949, the total assets of the War Memorial Fund equaled $211,039.09, representing 81 per cent collection of the assessment.

We requested Dr. James R. Reuling, our treasurer, to give us the current figures as of April 30, 1950. We were pleased to note that only 1,032 of our members who were eligible for payment of this assessment have failed to pay their share. This represents a 95 per cent collection for the State as a whole. It is gratifying to note that 14 of our counties show 100 per cent collections.

Feeling that the delegates would be interested in a factual report of the situation existing in each county with regard to the collection of this War Memorial Assessment, we have requested our treasurer to prepare mimeographed copies of the current figures for distribution to each member of the House of Delegates.

We recommend that each delegation investigate any delinquency existing in its county and report any legitimate hardship cases to the treasurer of the Medical Society of the State of New York.

We note with approbation that the War Memorial Fund has been invested wisely by our trustees in United States Treasury Bonds to the extent of a market value as of December 31, 1949, of $193,648.43.

I move the acceptance of this report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Higgons: I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Thank you, Dr. Higgons!

. . . Each delegate was furnished with a copy of the following data on War Memorial Assessment as of April 30, 1950:

DATA ON WAR MEMORIAL ASSESSMENT
As of April 30, 1950

County	Number of Members Subject to Assessment	Number Paid	Per Cent Paid	Number Unpaid	Per Cent Unpaid
Albany	318	280	88	38	12
Allegany	30	30	100	0	0
Bronx	1,459	1,459	100	0	0
Broome	209	208	99	1	1
Cattaraugus	76	73	96	3	4
Cayuga	65	63	97	2	3
Chautauqua	114	111	97	3	3
Chemung	97	93	96	4	4
Chenango	35	35	100	0	0
Clinton	47	46	98	1	2
Columbia	41	40	98	1	2
Cortland	39	5	13	34	87
Delaware	33	32	97	1	3
Dutchess	209	202	97	7	3
Erie	952	928	97	24	3
Essex	35	35	100	0	0
Franklin	66	54	82	12	18
Fulton	58	42	72	16	28
Genesee	47	46	98	1	2
Greene	25	24	96	1	4
Herkimer	55	53	96	2	4
Jefferson	84	77	92	7	8
Kings	3,190	3,047	96	143	4
Lewis	16	14	88	2	12
Livingston	39	36	92	3	8
Madison	42	31	74	11	26
Monroe	619	607	98	12	2
Montgomery	55	50	91	5	9
Nassau	710	556	78	154	22
New York	5,983	5,715	96	268	4
Niagara	143	138	97	5	3
Oneida	259	229	88	30	12
Onondaga	416	396	95	20	5
Ontario	92	90	98	2	2
Orange	183	166	91	17	9
Orleans	18	18	100	0	0
Oswego	48	38	79	10	21
Otsego	58	50	86	8	14
Putnam	15	15	100	0	0
Queens	1,570	1,554	99	16	1
Rensselaer	145	125	86	20	14
Richmond	177	158	89	19	11
Rockland	107	103	96	4	4
St. Lawrence	67	51	76	16	24
Saratoga	61	56	92	5	8
Schenectady	177	177	100	0	0
Schoharie	15	12	80	3	20
Schuyler	11	11	100	0	0
Seneca	34	32	94	2	6

Steuben	87	87	100	0	0
Suffolk	295	276	94	19	6
Sullivan	42	39	93	3	7
Tioga	26	26	100	0	0
Tompkins	74	74	100	0	0
Ulster	98	97	99	1	1
Warren	64	64	100	0	0
Washington	36	32	89	4	11
Wayne	57	57	100	0	0
Westchester	872	802	92	70	8
Wyoming	31	31	100	0	0
Yates	18	16	89	2	11
TOTAL	20,044	19,012	95	1,032	5

DR. A. H. AARON, *Erie:* Miscellaneous Business (A) is ready.

SPEAKER ANDRESEN: We said we were going to take up the reports of officers and Council committees, but failing those I think we can take up your report, Dr. Aaron, if it is ready.

Section 70 (See 25, 75)

Report of Reference Committee on Miscellaneous Business (A): Specialty Boards

DR. A. H. AARON, *Erie:* On the resolution introduced by Dr. Arnold A. Costabile, of Bronx County Medical Society, concerning specialty boards, reading:

> "WHEREAS, some hospitals are still showing preferential consideration toward specialty board diplomates in the matter of staff appointments and promotions; and
>
> "WHEREAS, such a policy is discriminatory against a good number of reputable practitioners qualified by reason of long and satisfactory service in accredited hospitals, and therefore against the public interest: and
>
> "WHEREAS, for good and sufficient reasons of age, economics, time element, and lack of available residencies, a sizable number of our colleagues find it humanly impossible to meet the requirements of some specialty boards although otherwise admittedly qualified to practice a specialty, and in many instances certified as Fellows of the American Colleges of Surgeons and Physicians; and
>
> "WHEREAS, the Council on Medical Education and Hospitals of the American Medical Association with the concurrence of the Advisory Board of Medical Specialties has stated that:
>
> > 'Hospital staff appointments should depend on the qualifications of physicians to render proper care to hospitalized patients as judged by the professional staff of the hospital and *not* on certification or special society membership';
>
> therefore be it
>
> "*Resolved,* that the American Medical Association be requested to withhold recognition from hospitals which make certification by a specialty board a necessary qualification for appointment or promotion on a hospital staff; and be it further
>
> "*Resolved,* that the delegates of the Bronx County Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York, to be held in 1950; and be it further
>
> "*Resolved,* that the delegates of the New York State Medical Society to the American Medical Association be instructed to place these resolutions before the 1950 House of Delegates of the American Medical Association."

The Reference Committee recommends the adoption of the above resolution, and I so move.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried. . .

SPEAKER ANDRESEN: Are there any other reference committees ready to report?

. . . There was no response. . .

SPEAKER ANDRESEN: If not, I will call for resolutions. We had 37 this morning. Last year we had 38 altogether. I hope the 37 will constitute all of the resolutions we have, although I suspect there may be a few more people that have them up their sleeves. If so, bring them forth now. Does anybody have a resolution? If we can get it in tonight, it will facilitate matters.

Section 71 (See 117)

Workmen's Compensation Fee Schedule

DR. FRANK J. CERNIGLIA, *Queens:* This is a resolution from Queens County Medical Society on the Workmen's Compensation Fee Schedule:

> "WHEREAS, the fees allowed general practitioners under the Workmen's Compensation Law of the State of New York are too low; and
>
> "WHEREAS, the cost of office space, personnel, and equipment is now considerably higher than at the time the present fee schedule was adopted; and
>
> "WHEREAS, the fees paid to osteopaths are on the average higher than those allowed to general practitioners; therefore be it
>
> "*Resolved,* that the House of Delegates of the Medical Society of the State of New York go on record strongly urging upward revision of the fees for the care of Workmen's Compensation cases by the general practitioner."

SPEAKER ANDRESEN: We will refer that to the Reference Committee on Report of Council, Part X, of which Dr. Duryee is chairman.

Are there any other resolutions?

. . . There was no response. . .

SPEAKER ANDRESEN: On a vote of the House we voted to consider these reports of officers tonight, and we have not any to consider. I hate to adjourn now.

Are there any committees that have parts of their reports ready. We can handle them now, if you will present them, and the balance later.

DR. FREDRICK W. WILLIAMS, *Bronx:* We are all waiting for our material to be typed. There are only four typists out there, and that is causing all the delay.

DR. JOSEPH A. GEIS, *District Delegate:* I am in the same boat. Mine should be through in about ten minutes.

DR. SCOTT LORD SMITH, *Dutchess:* I should be able to present mine in ten minutes.

SPEAKER ANDRESEN: There are two or three people who say they will have their reports ready to present in ten minutes. Here is Dr. Moore, who is the chairman of the Reference Committee on Report of the Council, Part V.

Section 72 (See 5)

Report of Reference Committee on Report of Council, Part V: Public Health Activities C—Physical Medicine, Rehabilitation, Nutrition, Geriatrics, Diabetes, Cerebral Palsy

DR. NORMAN S. MOORE, *Tompkins:* Your Reference Committee approves the report of the Subcommittee on Physical Medicine and Rehabilitation. It commends the willingness of the Society to work with the State Department of Health in the latter's cerebral palsy program and, in addition, to carry much of the load of a necessary educational campaign. It is hoped the medical profession will respond to the law which requires the reporting of cerebral palsy cases. A reliable statistical study can be made if all physicians respect this law.

The Reference Committee notes the plan to inform physicians at the annual session in more detail regarding rehabilitation procedures. This is a most worthwhile undertaking, we believe, and one which should be supported. Much talk and literature on methods used in rehabilitation have resulted from new interest in physical medicine. Some of the nomenclature is confusing, and clinical demonstrations will assist in clarifying such confusion as may exist.

The Reference Committee notes with real interest the proposed pilot study on rehabilitation in compensation medicine as outlined in the supplementary report of the secretary. Appreciation of the importance of rehabilitation of the injured worker is imperative if we would lessen the number of workers who lose their morale and initiative following the experience of injury. While the committee realizes this pilot plan is only a beginning, it sincerely believes this work should be generously supported by the Medical Society of the State of New York.

Your Reference Committee joins the Subcommittee on Geriatrics in expresssing its deep regret and profound loss at the untimely death of the subcommittee's chairman, Dr. Stephen R. Monteith. It is gratifying to note that the splendid work of the subcommittee in investigating advantages for the aged continues under the leadership of Dr. Scott Lord Smith.

The Reference Committee approves the recommendations made to the Council by the Subcommittee on Diabetes regarding public use of self-testing sets. Over the State there has been exceptional public interest shown in county society-sponsored diabetic detection programs. It is both commendable and appropriate that the public shares in the responsibility of reporting suspected diabetes, not unlike the responsibility the public takes in reporting to the family physician hemorrhage from a body orifice.

The Reference Committee regrets that the special committee to study the absorption of State-aided laboratories into county health departments could not agree on the road to travel, thereby necessitating a minority report from the State Health Department. It is not appropriate for the Reference Committee to propose alternative solutions. The Committee does suggest, however, that, if and when the question is again raised, a search for a compromise solution be thorough.

I recommend the adoption of the Reference Committee's report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 73 (See 46)

Report of Reference Committee on Report of Council, Part V: Establishment of Departments of Physical Medicine and Rehabilitation in Medical Schools

Dr. Norman S. Moore, *Tompkins:* I have two resolutions that were also referred to the Reference Committee on Report of the Council, Part V.

Resolution presented by Dr. Joseph G. Zimring, of the Nassau County Medical Society, reading:

> "Whereas, the problems of physical medicine and rehabilitation are becoming increasingly important in the field of medicine; and
>
> "Whereas, it is necessary for the profession to give thought to the recently developed body of knowledge in this field, be it hereby
>
> "*Resolved,* that the Medical Society of the State of New York request its component county societies to set aside one meeting each year for a program and demonstration on the place of physical medicine and rehabilitation in the management of chronic disease and physical disability, for which purpose the Committee on Public Health and Education is prepared to furnish speakers throughout the State on request; and be it further
>
> "*Resolved,* that, in view of the need for more knowledge on the part of all physicians and for more men trained as specialists in physical medicine and rehabilitation, the House of Delegates be requested to recommend that departments of physical medicine and rehabilitation be established in all medical schools in the State of New York at the undergraduate and postgraduate levels, particularly in the new State universities, and that the programs of these departments be similar to those which have already been in operation with great success in certain schools of the State, using the criteria of the Council Committee on Education of the American Medical Association."

The Reference Committee, while approving this resolution of two parts in principle, believes that each part will be more effective in accomplishing its purpose if it is differently phrased. Therefore, the Committee offers the following substitute resolution of two parts:

> "1. *Resolved,* that the Medical Society of the State of New York suggests that its component county societies set aside one meeting each year for a program and demonstration on the plan of physical medicine and rehabilitation in the management of chronic disease and physical disability, for which purpose the Committee on Public Health and Education is prepared to furnish speakers throughout the State on request; and be it further
>
> "2. *Resolved,* that, in view of the need for more knowledge on the part of physicians regarding physical medicine and rehabilitation, the House of Delegates recommends for consideration by the faculties of the medical schools of the State the feasibility of establishing courses in physical medicine and rehabilitation at the undergraduate and graduate levels, using as a guide the criteria of the Council Committee on Education of the American Medical Association."

Mr. Speaker, I move the adoption of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 74 (See 44)

Report of Reference Committee on Report of Council, Part V: Self-Testing for Sugar in Diabetic Detection

Dr. Norman S. Moore, *Tompkins:* The second resolution referred to your Reference Committee on Report of the Council, Part V, was the resolution introduced by Dr. Frederick Williams on behalf of the American Diabetes Association, "Self-Testing for Sugar in Diabetic Detection." (*See Section 44*)

The Reference Committee approves this resolution and recommends that the delegates of the Medical Society of the State of New York appropriately memorialize the House of Delegates of the American Medical Association. I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Moore: Now I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Thank you very much, Dr. Moore.

Section 75 (See 25, 70)

Reconsideration of Report of Reference Committee on Miscellaneous Business (A): Specialty Boards

Dr. William B. Rawls, *New York:* I wonder if I might move reconsideration of a previous resolution. I would like it reread. If I understood it correctly, it stated that we request the American Medical Association to withhold recognition of any hospital that made specialty board rating a requirement for appointment or promotion. Is that correct? Is that what the resolution says?

Speaker Andresen: That is the way it reads.

Dr. Rawls: I move reconsideration of that motion because that is out.

Dr. James R. Reuling, *Treasurer:* I second that motion for reconsideration.

Speaker Andresen: All in favor of reconsidering that resolution will say "Aye"; contrary, "No." Let us try it again. All in favor of reconsideration raise your right hand; now all those contrary. It is very close, so I think we had better rule to reconsider it. We have the time.

Is there any discussion now, Dr. Rawls? We ought to use more care and discuss these when they are brought up and before they are acted upon.

Dr. Rawls: This went through so fast I did not quite get it at the reading at the time. The way that is worded constitutes a restraint of trade. I think this has been up before the House of Delegates of the American Medical Association before, and I am quite sure that the American Medical Association will not pass anything of this type.

This resolution could be worded to read that we recommend to the House of Delegates of the American Medical Association that they disapprove of the practice of the hospitals making a specialty board a requirement for an appointment or for a promotion. I am very much in sympathy with the intent of the resolution, but to say that the American Medical Association must withhold the recognition of any hospital that makes that a requirement will not pass, and it is a poor thing for this House of Delegates to send on to the House of Delegates of the American Medical Association.

Dr. Frederick S. Wetherell, *Onondaga:* May we hear the resolution read to be sure that it does say that?

Speaker Andresen: It says that. The resolution reads:

> "*Resolved*, that the American Medical Association be requested to withhold recognition from hospitals which make certification by a specialty board a necessary qualification for appointment or promotion on a hospital staff."

Also that the delegates of the Medical Society of the State of New York to the American Medical Association be instructed to introduce such a resolution.

Dr. Rawls: Mr. Speaker, may I make an amendment to that? I suggest that this House recommend to the American Medical Association that they disapprove of the practice of hospitals making it a requirement to have a specialty board rating for appointment or promotion.

Speaker Andresen: I believe the A.M.A. has already acted on that, but it won't do any harm to bring it up again.

Dr. Rawls: If we passed that other motion in this House, it would make us look a little foolish.

Dr. Wetherell: I second the amendment.

Speaker Andresen: Is there any discussion on the amendment?

Dr. Edward P. Flood, *Bronx:* I would like to discuss this. Mr. Speaker and gentlemen, of course twice at the House of Delegates of the American Medical Association I have introduced this resolution originating in this House from the Bronx County Medical Society. It has been considered by the Reference Committee on Medical Education and Hospitals and no definitive decision has ever been made. The resolution has not been approved by the Reference Committee, but each time after it has been introduced an editorial or a news article in the *Journal of the A.M.A.* has called the attention of the profession and the hospitals to the fact that, when the specialty boards were set up, both the A.M.A. and the specialty boards' group recognized and stated that diplomates were not to receive preference. That was never their intention that it was to be the sole criterion for promotion. The proponents of this resolution today hope that they will get a similar amount of publicity in the future. It will satisfy the grievances that many of us have experienced all over the country. I have a portfolio of letters from men who have read in the minutes of the proceedings of the House of Delegates my introduction of this resolution, asking for information on it, and what decisions have been made upon it.

I think that there is no restraint of trade here at all because the American Medical Association said that they will not base their recognition on promotions of hospitals on the basis of their recognizing diplomates and men qualified by specialty boards. They have denied any such purport, so I don't think that this is any restraint of trade at all.

Speaker Andresen: Is there any further discussion on the amendment?

Dr. Louis H. Bauer, *Past President:* The American Medical Association on more than one occasion has written a letter to every hospital in the country stating that it is not the policy of the American Medical Association to demand that chiefs of departments or members of departments must be diplomates of the various specialty boards. That is quite different when saying that the American Medical Association does not base its recognition on whether or not the specialty boards are required, than it is to say that they will withhold recognition if they do do it. I think Dr. Rawls is right that this unquestionably would be interpreted as an act in restraint of trade, which the Federal courts have already ruled that we cannot engage in. They have ruled you cannot withhold a scientific rating because of any other reason than a scientific one. I think the wording which Dr. Rawls has suggested is a far safer one to adopt and will accomplish just as much in the long run.

Speaker Andresen: Is there any further discussion on the amendment? Are you ready for the question?

Dr. Wetherell: What is the question?

Speaker Andresen: To reword the resolution. We are now considering Dr. Rawls' amendment. Do you want to restate it, Dr. Rawls, or shall we have the secretary read it?

Dr. Rawls: No, I will restate it.

Speaker Andresen: It says now that the A.M.A. be requested to withhold recognition from hospitals.

Dr. Rawls: That the A.M.A. disapproves of the practice of certain hospitals of making specialty boards a requirement for appointment or promotion.

Speaker Andresen: There are just a few words that are changed. Is there any further discussion of the amendment?

Dr. A. H. Aaron, *Erie:* The last thing we wanted to do in committee meeting today was to restrain trade, but we did feel that the recognition of men on the A.M.A. reference committee to a repetition request might have a certain moral effect, and a certain stimulating effect might be gained by a body of men such as ours in representing our county societies as well as the Bronx County delegation to feel that their voice is being heard. I think many times we forget that. We know at least that it does not fail us to say a prayer night and morning daily in hopes that something might be accomplished for our own welfare. Men in medicine who have had their F.A.C.P. and F.A.C.S., as they said today, have not been granted an opportunity in certain areas for advancement on their staffs in their hospitals. It is the request of these men that you are listening to tonight to have this presented to our head or parent body. It is their desire to feel that at least you are supporting them. Even though the wording be incorrect or it sounds like in restraint of trade, it should be presented to the A.M.A. While I believe firmly in the value of boards and know of their accomplishment, I still believe that local hospitals should stress more definitely the merit of the man in that local hospital or in that institution, and on such merit his advancement should depend. That, I think, is a primary part of some of the things that we should recognize in medicine. While I firmly believe in the value of boards, still the other holds true. I do agree to the rewording so we won't be guilty of any seeming restraint of trade in these tumultuous days of fair trade practices. I do believe we should send the recommendation through even though it be rebuffed again.

Speaker Andresen: Dr. Aaron, as chairman of the Reference Committee, approves of the rewording.

Dr. Rawls: Dr. Bauer suggested, which I believe is correct, that instead of using the words "specialty boards" it should be "specialty ratings." I accept that.

Speaker Andresen: "Certification by a specialty board" is the way it says here.

Chorus: "Board" is the word.

Dr. Rawls: Dr. Bauer suggested "specialty ratings" instead.

Speaker Andresen: But what they are objecting to is recognition by the Commission on Medical Education and Hospitals of such hospitals that make certification by a specialty board a necessary qualification for appointment or promotion on a hospital staff. We have specialty ratings by the State Department of Health and by the State Department of Labor.

Dr. Bauer: But when Dr. Rawls reworded that he did not give the classification of the boards. He left out the classification. He should have inserted that, so I would agree with your point. It is specialty board ratings.

Speaker Andresen: We took it for granted that he meant that.

Dr. Rawls: We took it for granted I meant that, and I did. I agree with the principle behind this resolution one hundred per cent. The only thing I object to is the wording because of its possible legal implications. I am one hundred per cent against this practice. It is just the wording we want to get settled now.

Dr. Wetherell: Mr. Speaker, the thing we must not forget is this: Were this resolution to be adopted by the A.M.A., throughout the United States of America, many hospitals would at that moment be unable to obtain interns or residents because they would not have the approval of the A.M.A. I, myself, of course, favor very much the amendment which Dr. Rawls has presented. We must keep in mind the projection of this thing, for there may be hospitals still in this country for a long time that will demand specialty board certificates for advancement or even appointment to higher positions in the staff rather than the equivalent, which we happen to have in our town—the equivalent. Therefore, I think Dr. Rawls' amendment should go through.

Speaker Andresen: The Chair feels that with Dr. Rawls' amendment the resolution stands a chance of going through the House of Delegates of the A.M.A., whereas the way it was it did not stand a chance. Is there any further discussion on the amendment?

. . .The question was called, and the motion on the amendment was put to a vote and was carried. . .

Speaker Andresen: We now come to the original resolution as amended by Dr. Rawls. All those in favor say "Aye"—the resolution as amended is adopted.

Dr. Samuel Z. Freedman, *New York:* Take votes. You did not call for the nay vote there.

Dr. Alfred M. Hellman, *New York:* We are with what you say, but we don't just like the way you are pushing things through.

Speaker Andresen: All in favor of the amendment say "Aye"; contrary "No." The amendment is carried.

Now we come to the original motion as amended by Dr. Rawls. Is there any discussion on that? If not, all in favor say "Aye"; contrary, "No." The recommendation as amended has now been adopted and takes the place of the one we reconsidered.

Are there any other reference committees ready to report?

Dr. Maurice J. Dattelbaum, *Councillor:* This is not a resolution. This is a supplementary report of the Legislation Committee.

Section 76 (See 120)

Supplementary Report of Legislation Committee

Dr. Maurice J. Dattelbaum, *Councillor:* A special meeting of the Legislation Committee of the Medical Society of the State of New York was held May 7, 1950, in New York City, to which were invited as guests presidents of the district branches and representatives of the sections of the Medical Society as well as members of the legislation committee. Three bills were discussed and explained in committee, and two were signed by the Governor. One, the bill amending the Education Law in regard to the practice of physiotherapy; two, the bill amending the definition of the practice of dentistry; the third bill, the x-ray bill, was defeated. After discussion, it was decided that in view of all the difficult work accomplished by the Executive Officer, Dr. Hannon, and Mr. Beasley, his counsel, the committee went on record as approving all that they had done even though a number of bills that were introduced failed to reach successful conclusion. A better and wider relationship has resulted with legislators as a result of Mr. Beasley's affiliation with Dr. Hannon.

The committee and the Council have been presented with quite a lot of criticism that necessitated explanations. Some of this resulted from the change in our plan of handling legislative matters. Other criticism was due to misunderstanding or lack of information in connection with the legislative material that had to be considered. It was decided that a subcommittee of three was to be appointed to work with the executive officer and his adviser during the legislative session to make definite decisions, and it was also suggested that we get to the grass roots and give out from time to time further information to the legislators of the State and to the secretaries of the county medical societies and that this information was entirely to be left at the discretion of Dr. Hannon in cooperation with the Public Relations Committee.

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part IX, Legislation, of which Dr. Cudmore is chairman.

Are there any completed reports of reference committees ready?

. . . There was no response. . .

Speaker Andresen: If not, Dr. Geis has part of his report on Reference Committee, Part XII, ready. He will give a partial report now.

Dr. Geis: I might say that this report is only partially complete because it was after five o'clock when we gave it to the stenographer, but as I have a miscellaneous outfit we can report completely on some of these things and then wait for the final report on the rest of them.

Section 77

Report of Reference Committee on Report of Council, Part XII: Miscellaneous—Convention

Dr. Joseph A. Geis, *District Delegate:* Your Reference Committee has examined the report of the Council Committee on Convention. The last was an excellent convention and showed much forethought and preparation. The delegates appreciated the larger room for the meeting, the nearness of the committee room to the meeting room, and the tables which facilitated the transaction of business. While a deficit in financing is not desirable at any time, the improvements in accommodations were worth it.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 78

Report of Reference Committee on Report of Council, Part XII: Miscellaneous—Medical Licensure

Dr. Joseph A. Geis, *District Delegate:* The report of the Medical Licensure Committee covers licensing in the past two years. There is still a high percentage of failures of foreign graduates. There is a marked decrease in the number licensed without examination as compared with five or six years ago.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 79 (See 10)

Report of Reference Committee on Report of Council, Part XII: Miscellaneous—Nursing Education

Dr. Joseph A. Geis, *District Delegate:* Concerning nursing education, your Reference Committee is pleased with the report that there are now 12,103 more professional nurses registered than a year ago, and also with the estimation that the number of practical nurses will be doubled by the end of August. This will do much to relieve the shortage. While your Reference Committee does not believe that training in high school is the best way of training practical nurses it may relieve the situation, especially in the rural areas. The increase in the number of male nurses is excellent, as this has been the place of the greatest shortage.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 80

Report of Reference Committee on Report of Council, Part XII: Miscellaneous—Woman's Auxiliary

Dr. Joseph A. Geis, *District Delegate:* The Woman's Auxiliary has continued its good work during the past year. Its activity is increasing from year to year. Mrs. Lavelle has carried on the tradition of addressing the district branches during the year. Your Reference Committee is extremely sorry to hear of the death of Mrs. Neptune, who worked so hard during the year 1948 when she was State president. We ask that the convention express their sentiments by standing in silent prayer in her memory.

. . . The delegates arose and stood for one minute with bowed heads in silent memory to Mrs. Neptune. . .

Dr. Geis: I move the adoption of this portion of the report.

. . . The motion was seconded. and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 81 (See 101)

Report of Reference Committee on Report of Council, Part XII: Miscellaneous—Ethics

Dr. Joseph A. Geis, *District Delegate:* The new Principles of Professional Conduct show much thought and hard work in their preparation. It goes into more detail than the present code and deserves approval of this convention. However, we recommend that Article VI, Section 6 of Chapter III, state as follows:

> "Except where permitted by law, and only in the manner permitted and to the extent permitted by law, a physician should not dispose of his professional services or attainments to any hospital, lay body, organization, group, or individual, by whatever name called or however organized, under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

If you will look at page 896 of the April 1 issue of the Journal, you will see that the only change we have recommended there is the addition of "Except where permitted by law, and only in the manner permitted and to the extent permitted by law" at the beginning of that section. That is the only change we made in that as submitted by our Council Committee by adding those first few words to that section at the beginning, "Except where permitted by law, and only in the manner permitted and to the extent permitted by law," and then the rest of it reads as reported in the Journal.

Do you want me to read those, section by section?

Speaker Andresen: I would like to ask the House whether they would like to consider the whole report in regard to the Principles of Professional Conduct chapter by chapter tomorrow, or whether they would like to accept the recommendation of the Committee which has worked on it—

Dr. Geis: We are ready to take it up chapter by chapter now if you want it that way. There are four chapters, and we can take it up now that way if you want it. We are ready with the complete report on that.

Dr. James F. Rooney, *Trustee:* After looking about this House tonight, I think this sort of thing is a very important affair, this question of ethics and what shall constitute good ethics and what shall constitute poor ethics. I confess that I am unable to get clear in my mind what the addition by the Committee is, viewed in relation to the context of all of the preceding paragraphs. I feel that if this is to be taken up tomorrow in toto it would be far better for us not to make the mistake of considering this in partial detail tonight, and I would so move.

. . . The motion was seconded. . .

Dr. Geis: I might say we are prepared to go ahead with it tonight section by section, or chapter by chapter, if you want it that way. We have finished the ethics part of our report, or we can take it up in toto tonight if you so wish.

Speaker Andresen: I think it would be better to do that when we are fresh in the morning. The original plan was to take up tomorrow morning first the revised Constitution and Bylaws, and then follow that with the Principles of Professional Conduct, taking them up paragraph by paragraph. I think we can run through them quickly enough with your help. We will do that tomorrow morning. Thank you!

Dr. Geis: That is all that I have finished for presentation tonight. I did finish the ethics part of it because I thought you wanted to get those acted on tonight.

Speaker Andresen: Are there any other resolutions?

Section 82 (See 136)

Free Choice of Physician in Voluntary Prepayment Health Insurance Plans

Dr. Benjamin M. Bernstein, *Kings:* This resolution was just given to me a few minutes ago and is being introduced at the request of the Kings County Medical Society. It concerns itself with the right of the patient to choose a doctor as freely as he does his butcher, his baker, or even his priest and father confessor:

> "Whereas, the medical profession has consistently supported the right of a patient to free choice of physician; and
>
> "Whereas, contract restrictions under certain voluntary insurance plans tend to deny or restrict the right of free choice of physician; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the introduction of legislation seeking to preserve this right of free choice, especially as it pertains to patients insured in voluntary health insurance plans; and be it further
>
> "*Resolved*, that the Medical Society of the State of New York actively work for the passage of such a bill."

Speaker Andresen: I think we could put that in under Council, Part VII, Dr. Philbrick's committee. He has had so much to do that I think they might do one more thing. We will refer that to Dr. Philbrick's committee dealing with medical care insurance. Don't you think that would fit in there?

Dr. Bernstein: Yes.

Speaker Andresen: Are there any other resolutions?

. . . There was no response. . .

Speaker Andresen: I hope there won't be any more tomorrow.

Are there any more committee reports ready for us?

Dr. Wetherell: I am ready with my report.

Section 83

Report of Reference Committee on Report of Council, Part IV: Public Health Activities (B)—Rheumatic Fever, Mental Hygiene, Cancer

Dr. Frederick S. Wetherell, *Onondaga:* Mr. Speaker and members of the House, the Reference Committee on Report of Council, Part IV, reports that the Subcommittee on Rheumatic Fever submitted no report, nor did the Subcommittee on Mental Hygiene.

Public Health Activities (B)—Cancer: Your Reference Committee commends the report of the Subcommittee on Cancer. Your Reference Committee would recommend that the Subcommittee on Cancer consider further the matter of so-called detection centers. Your Reference Committee has had its attention called to the importance of increasing the number of individuals which could be screened and then be examined for cancer in its more common sites. Its attention was brought to the fact that the cost of case-finding per case of cancer, in the area covered by the New York State Division of the American Cancer Society two years ago, exceeded $5,000 per case. It was shown, further, that examination as now conducted in detection centers covered the detection of all diseases rather than cancer alone. Your Reference Committee suggests that the Subcommittee on Cancer study the idea of establishing detection centers for discovery of the most common types of cancer. By so doing, it is felt, the number of individuals examined might be increased eight- to tenfold.

I move the adoption of this portion of the report.

. . . The motion was seconded. . .

Speaker Andresen: Let us get discussions now so we don't have to reconsider. Is there any discussion?

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Section 84

Report of Reference Committee on Report of Council, Part IV: Public Health Activities (B)—Blood Banks

Dr. Frederick S. Wetherell, *Onondaga:* The Reference Committee, after study of the report of the Subcommittee on Blood Banks and after considering the ideas of members who discussed the matter with your Committee, concludes: Red Cross methods of collecting and maintaining blood banks in some areas of New York State are the most economical and have the greatest appeal to the public and, in general, indicate that the patients' needs are considered paramount.

Your Committee feels that the variation in cooperation between physicians and the sponsors of the Red Cross system in different sections of the State has much to do with the inability to complete blood bank programs. Difference in community pride and community indifference in various sections of the State are also apparent. Your Committee is of the opinion that the Red Cross blood bank plans, which are working in central New York, could be made to work in the metropolitan area.

I move the adoption of this portion of the report.

. . .The motion was seconded. . .

Speaker Andresen: Is there any discussion of this important problem?

. . . There was no response. . .

Speaker Andresen: No discussion in regard to the Red Cross blood banks?

Dr. James F. Rooney, *Trustee:* I was fortunate enough to attend a meeting of this Subcommittee on Blood Banks in the early part of last fall, at which this question was discussed. I am not certain as to just exactly what decision was made in the proposal that the chairman of the Reference Committee has just read the report upon, but I know there was a great deal of dissatisfaction expressed that night, at which members of the Public Health Committee, the subgroup, the State Department of Health, and other agencies were present, and particularly by those representing the metropolitan section of the State, rather in opposition to this question of the delivery of the whole system of blood banks to the Red Cross. This dissatisfaction was very marked, and I had hoped perhaps that Dr. Unger, who was present at that meeting, might have something to say in relation to this question which is now up for discussion.

I am not pretending to do anything except to act as a messenger as to the purport of the discussion that was held at that meeting. What changes have been made since in the determination of the committee I do not know. I think the chairman of the Committee on Public Health of the Society could certainly inform the House about it if he is present, and it seems to me that we might defer discussion and determination of what we are going to recommend or do until we can hear something by way of discussion from Dr. Curphey.

Speaker Andresen: Dr. Unger is not here, is he?

Dr. Scott Lord Smith, *Dutchess:* No. Mr. Speaker and members of the House, you all remember that the original A.M.A. resolution on this question of Red Cross blood banks stressed the fact that we did not approve of the term and the general advertising obtained under the discussion of what they called "free blood"; that we did not see the rationale of the Red Cross being permitted to furnish free anything to people who did not need it.

I think that that objection to the program still holds, and I know that the Red Cross is adamant against any relaxation of the regulations which would let one person who needed blood receive it from the Red Cross free and not let another person who could perfectly well pay for it still receive it free.

The second objection in my mind to the program is delivering the whole field of blood to the Red Cross and failing to develop, as I think we should, other sources of supply in emergency cases. If the emergency arises, it will certainly be necessary to get blood in every way that we can get it under present-time postwar conditions. The only way to facilitate obtaining blood in that way in mass production is to have every agency that is capable of collecting blood kept more or less activated by some use.

It is a very complicated subject which needs discussion, but I do think that there are these two very definite objections to the Red Cross program.

Thank you!

Speaker Andresen: Dr. Curphey, did you want to discuss this?

Dr. Theodore J. Curphey, *Councillor:* Mr. Speaker and gentlemen, I should like to read from the annual reports the result of the meeting of the Subcommittee on Blood Banks on March 6, 1950. It says, "Concerning relationships with the Red Cross, the motion was made, seconded, and unanimously carried as follows: That the Subcommittee on Blood Banks reiterates its stand as approving the last report adopted by the House of Delegates in May, 1949."

Now I have that report here. This is in substance the resolution:

> "*Resolved*, that each county medical society appoint a Committee on Blood Banks to survey the needs for blood bank service in the county and to be responsible for the medical aspects of all community programs designed to operate existing or expanded services.
>
> "Two, in so far as possible expansion of blood banks be through the strengthening of services provided by approved laboratories in general hospitals and by public health laboratories.
>
> "Three, the development of new and the discontinuation of existing facilities be carried out only after careful evaluation of the needs for such action by all interested agencies, including the county medical society and the hospitals in the county.
>
> "Four, in any given area the method of blood procurement be determined by agreement among the local agencies concerned, including the county medical society, the local hospitals, the public health laboratory (where one exists), the interested voluntary agencies, and where municipal funds are concerned the city council or the county board of supervisors, and if the method of voluntary mass donations be agreed upon by such agencies, voluntary agencies such as the American Red Cross be encouraged to assume the responsibility for such procurement programs.
>
> "Five, an effort be made jointly by the Medical Society of the State of New York and the State Department of Health to coordinate the activities of blood banks along regional lines, so that the procurement of rare blood groups for peacetime needs may be facilitated, and so that large amounts of blood may be readily obtained and adequately transported in cases of civilian or military emergency."

That represents our recorded stand on this problem.

I should like to add a word before I leave the dais, and that is to my knowledge—and I admit this is second hand, and I see here Dr. Stillman, a member of the House, who is much more conversant with the whole problem besides having a very wide understanding of it on a national basis—it is our understanding here that the Red Cross is having a very definite problem in running its bank in the metropolitan area on the existing setup of the one-for-one transfusion basis.

I might remind you too, as Dr. Bauer just pointed out to me, that nobody here giving blood to the Red Cross could have that blood sold by the Red Cross.

I would like if Dr. Stillman would comment more clearly on this matter.

Speaker Andresen: Dr. McKenna, do you want to yield to Dr. Stillman?

Dr. Donald E. McKenna, *Kings:* Yes, I will yield to Dr. Stillman.

Dr. Ralph G. Stillman, *Section Delegate:* Mr. Speaker, it is quite true that in the metropolitan area the operations of the Red Cross program have not only met with certain difficulties but also have aroused certain opposition among the established blood banks in that area. I don't think anything that has been done or will be done conflicts at all with the statement in the report of Dr. Wetherell's reference committee but that grounds for agreement can be found between the Red Cross and the county societies.

One of the very serious problems that has arisen is whether the Red Cross, having devoted all of its energies to collection for the military during the war, would on the occurrence of another war again revert solely to the collections for the military.

It is exceedingly important that some basis of organization be found throughout the State for coordinated activity to act for the collection and distribution of blood in the State in the case of an emergency.

I may say that so far as the local situation is concerned two committees have been appointed, one by the council of the five county medical societies, and one by the Medical Society of the County of New York. These committees have recently been appointed and are to continue to open and prosecute conferences with the local Red Cross chapters to see if it will not be possible to come to some amicable agreement.

One of the difficulties that has arisen is that the program of the chapters of Greater New York is in conflict to a certain extent with the national program of the Red Cross, which is not the case in other localities, and it is hoped that within the next months, perhaps by fall, it will be possible to iron out these difficulties and perhaps to set up some amicable arrangement between the county societies and organized medicine and the Metropolitan Chapter of the Red Cross.

Thank you!

Speaker Andresen: Thank you, Dr. Stillman. Dr. McKenna, do you wish to add anything?

Dr. McKenna: Only to this extent, Mr. Speaker: I am heartily in accord with Dr. Stillman's comments which offset to the best of my knowledge Dr. Rooney's objections to consideration of this portion of the report tonight.

Dr. George A. Burgin, *Herkimer:* Mr. Speaker, there are just two points I would like to suggest. One is that in the organization of the Red Cross blood bank in a rural county like Herkimer it was first necessary for the county itself to go on record, even against the recommendation of the State Society last year we had to go on record in favor of it.

All of the arguments that were brought up here last year against it we still feel were legitimate. The publicity that we got on that resolution in the newspapers, the press, last year was very unfortunate. As far as we are concerned, our population read this report that we were opposed to free blood. That was what they gathered. Our representatives talked with our local chapter and with the representative of the Red Cross, and the only factor in addition to public opinion that threw us over in favor of it was the plea they made that they had to be organized in case of a national emergency.

As far as we are concerned, we have been able to get blood where we did not have it before. It is so free that if we need blood from Syracuse, and have to telephone for it, our hospital cannot charge the patient for that telephone call. In other words, the Red Cross absolutely insists that it be free.

Those two points I think ought to be considered before we again go on record as opposed to it. I think the report of Dr. Wetherell is satisfactory.

Dr. Leo F. Schiff, *Clinton:* I just want to add a word for a rural area. In the County of Clinton we have operated a replacement bank for about two years. Our supply of blood has been satisfactory, but there has not been any charge to the patient. There has been a replacement of two for one or a partial replacement, and some cash to pay for the expense. Careful books have been kept, and no money has been made by the bank, but its expenses have been paid. When the Red Cross wanted to take this thing over, we met this same difficulty. They were not willing to furnish the money to operate the bank. They wanted that to come from somewhere and were willing to help the program only if everything would be free. You cannot process blood in a bank free, and that is where we stand at present. They are at present supplying a certain number of replacements. I don't know whether that is with the consent of the national Red Cross under page 472 of the Blue Book or not, but we are getting a little action; however, the inflexible program that they have presented makes it very hard to establish a blood bank in a small community on any reasonable basis. We have been opposed to the idea that four or five hundred people who are willing to give blood free shall be constantly drawn upon for blood when the relatives and friends of many of the patients who get the blood free stand idly by and give nothing when often they are in a position to give the blood themselves. I am not opposed to the idea of Dr. Wetherell's reference committee; the thought may be explored and possibly somebody may get the Red Cross to come to its practical senses.

Dr. William B. Rawls, *New York:* Mr. Speaker and members of the House, as a former chairman of the Coordinating Council I was asked by some of the members if I would speak on this because I spent about one hundred hours on this subject here in New York City, days, nights, Saturdays and Sundays, and many other times, and I think this House ought to know some of the problems that the metropolitan area has faced.

We have made every effort possible to cooperate, and I think we should. My opinion has been that there has been a place for the Red Cross, but there is also a place for the present existing blood banks, and that the present existing blood banks should not be destroyed, because there is a need for them, and that the hospitals after having spent years in building up these blood banks feel it is necessary that they be preserved. Our one contention throughout has been that some arrangements be made whereby the present blood banks in the hospitals will be assured of being able to obtain blood so that they can carry on what they have carried on in the past. We feel that that will give a greater service to the largest number of patients, and that in case of emergency we will have more blood banks with the equipment that is necessary. They will be more widely scattered. There will be less chance of disruption of service. It takes time, it takes the training of personnel and technicians to set up a blood bank, and the more blood banks we have the more trained personnel we will have, the more equipment we will have, in order to swing into action if the time comes when it is necessary.

We in the Coordinating Council—when the first conferences were broken off, it was the Coordinating Council of the medical profession who made the overtures to come back together and discuss this again, and we have done this over and over again. We have a peculiar problem in the metropolitan area. I think we will eventually solve it. We are trying to, and I think the Red Cross in a great number of instances has done everything it could, but we still have differences. There is no reason why we may not iron them out at some time, but I would like to suggest that this resolution be changed, and that every effort be made by the county societies to cooperate with the Red Cross, but that provision be made to protect the existing hospital blood banks, as we believe the preservation of the greatest number of blood banks possible will react to the benefit of the public at large, and, further, in case of an emergency, the larger number of blood banks and the more widely scattered there will be less likelihood of a disruption of service.

Speaker Andresen: Do you wish to propose that as an amendment to the report?

Dr. Rawls: I do.

Speaker Andresen: To be added to everything that is there now?

Dr. Rawls: That is a substitution for what he had. I would have to have him read what he had to see where I wanted to substitute it. It has been so long ago since he made the report that I have forgotten just how it reads, but there is some place where I believe it is stated that they believe it is possible it can be done.

. . . Vice-Speaker Holcomb handed the Reference Committee's Report to Dr. Rawls. . .

Dr. Rawls: Yes, we will add this to the end.

Dr. McKenna: I second the amendment.

Speaker Andresen: Is there any discussion of the amendment?

Dr. James F. Rooney, *Trustee:* I merely want to make an explanation. I was intensely surprised when Dr. McKenna said that he was in nonconformity with my views. My only intent was that this House should not do as they have so often done in the past at these night meetings, go to sleep and say "Aye" to everything that comes up without any discussion, especially about a matter which has been a matter of great, shall one say, litigiousness in the last three or four years. I had no objection to the report of the Reference Committee. I felt we should have more discussion and a better understanding of what we were voting on. By the grace of God, I know now we have had about four or five discussions on this subject, expressing difference of opinions, which was my objective in the beginning. Now that I have accomplished it, and you are all wide awake, I thank you very much.

Speaker Andresen: I would like to call Dr. Rooney's attention to the fact that I particularly asked for discussion. The thing was going to go over, as he said, without it, and I asked for some discussion. I believe this is a very important matter.

Dr. Wetherell, did you want to discuss the amendment?

Dr. Wetherell: Fred Holcomb says I had better not. *(Laughter)*

Speaker Andresen: That is what we have to discuss now.

Dr. Wetherell: Rawls and I never had any differences concerning this. I would like to say one word: Your Reference Committee, having had no resolutions referred to it, worked nearly three hours on the reports of the committees alone. Now what do we pay in this State Society for public relations? Just how much do we pay? I asked my fellow colleagues, Dr. Ehegartner and Dr. Gibson, whether they were one hundred per cent satisfied with the present blood bank system in central New York, which reaches from the St. Lawrence to the Pennsylvania border, east and west, as far as Herkimer—you heard a man from Herkimer—and as far west as we dare go, toward Rochester. As a surgeon, I am extremely happy that I can order a blood transfusion, or two, or three, or six, on my patient without worrying how much that patient shall pay for the blood. The patient does not get it free. The patient, if able to pay, pays what that individual hospital charges as a service charge, which varies from five to seven or eight dollars for the examination of the blood and typing in that hospital. That much of the blood bank service is still retained by the hospital, and they do have laboratory workers still in the hospital to examine the blood.

Our Reference Committee was told by men from the metropolitan area, when they were asked point blank how much blood cost their patients, that it varied from fifteen to fifty dollars per pint. Our proposition then was this: Is that good public relations? When a man has a sick wife, he not only worries about his doctor's bill, his hospital bill, but also he must worry about how much the blood is going to cost him unless he can replace it two for one. We felt, therefore, that the metropolitan area, not being different in any respect from our area except it is large, but it still is a composite of tiny villages—I can assure you there are villages in New York City, because I have been in these villages, one after the other; from 86th Street clear down, there are villages; one can be put against the other to get blood by the Red Cross, and that is what is being done, gentlemen—so your Committee felt that this could be done in the metropolitan area providing you have the brain and the heart in the top of the Red Cross organization plus the top which you do have in the medical profession in New York. Therefore, I think our resolution should stand as it is. I, myself, cannot see why the private blood bank, which does if I may say so—and I can say it without your putting it down—think of the money which can be made by running it or by the doctor who has to give the transfusion himself, should be favored. That is rather coarse, but that is what I mean. That is what the Reference Committee felt too.

Speaker Andresen: Dr. Wetherell spoke in opposition to the amendment. Dr. Siris, do you wish to discuss the amendment?

Dr. Irwin E. Siris, *Kings:* Dr. Thurman B. Givan, as a representative of the five county societies and as chairman of the blood bank for Kings County, has been working on this matter in close association with the hospital representatives and the blood bank. Unfortunately, he is not here this evening, but I know of no man who is more versed in the situation of the metropolitan area than Dr. Givan. Therefore, I would like to ask Dr. Andresen that this be deferred until tomorrow when Dr. Givan comes here.

Chorus: No.

Speaker Andresen: We have a motion to defer. Will anybody second it?

Dr. William A. Peart, *Niagara:* Yes, I will second it.

. . . The motion to defer was put to a vote and was lost. . .

Speaker Andresen: It is not deferred. We are still on the discussion of the amendment.

Dr. A. Wilbur Duryee, *New York:* Mr. Chairman and members of the House, I would like to speak in favor of Dr. Rawls' amendment. I have two points. Although I have not been very closely associated with this field, I agree with him that the number of blood banks available in a time of emergency should be kept tops, but I think a more important point to be brought out is a basic principle, which has been sort of mentioned here tonight but not emphasized. England has been giving away everything from wigs to false teeth, glasses, etc., and if we slowly let various agencies donate to those who well can afford to pay, we will thereby gradually let in the entering wedges of socialized medicine. This may seem far afield in this particular case, but I do feel, even though Dr. Wetherell has pointed out that in specific instances where individuals can afford to pay for the laboratory angle of the blood bank they are still not paying for the blood, that it should not be given free to those that can afford to pay for it, but that the Red Cross and other banks on local footings should be available for those who cannot afford it, but that those that can afford it should pay for it.

Speaker Andresen: Are you in favor or against the amendment?

Dr. Duryee: I am in favor of the amendment.

Speaker Andresen: Dr. Siris, you wanted to discuss this amendment?

Dr. Siris: No.

Dr. Charles F. McCarty, *Kings:* I would like to amend the amendment by striking out the word "hospital" blood banks where Dr. Rawls said "existing hospital blood banks" and just say "existing blood banks," because there is a blood bank which is working in Queens and Kings which is certainly nonprofit and which has helped out a great many of the hospitals in Kings, Queens, Nassau, etc. At the time of the Long Island wreck it supplied all of the blood which was necessary, without charge to them, and I would feel that we should, until such time as the Red Cross can prove to us in Greater New York that they can supply all of the blood we need, we should keep every blood bank we have. I would like to have that amended to have the word "hospitals" stricken.

Speaker Andresen: Will you accept that?

Dr. Rawls: Yes, I accept that.

Dr. McKenna: As the seconder of the amendment, I also accept that.

Dr. Rawls: May I answer Dr. Wetherell?

Speaker Andresen: We allow a discussion on any subject only once. A speaker cannot speak a second time without permission of the House. Will somebody move that be granted to Dr. Rawls?

Dr. Moses H. Krakow, *Bronx:* I move it.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Rawls: I want to answer one statement of Dr. Wetherell's. The Red Cross has not been able to supply the blood to us in New York City for all we need, and that is why we have to have our banks. Thank you!

Dr. Wetherell: May I say something now immediately, either with the permission of the House or without it, as to the reason for that?

Speaker Andresen: Will the House give permission to Dr. Wetherell to reply?

Chorus: Sure!

Dr. Wetherell: The reason for that is that you have not had the same cooperation that we have had in central New York. Give the Red Cross their free hand with your direction and you will have all of the blood you want.

Dr. Rawls: They won't have it.

Dr. Rooney: I did not intend to take any part in this argument. I felt that it was logical—

Speaker Andresen: This is the first discussion by Dr. Rooney of the amendment?

Dr. Rooney: That is correct. I have not spoken to the amendment before. I want to state that I favor the amendment because I think this whole question of blood banks has to be settled locally under differing conditions, and, if we attempt to make any hard and fast rule to cover the whole State of New York, we are going to make the saddest mistake we have ever made in the history of this House. (*Applause*)

This is essentially and primarily a local situation. It may become a national one, and, if and when it is a national one, then every argument that Dr. Rawls has presented to you tonight is going to be exceptionally valid because we are going to need every drop of blood we can collect from any source that we can get it. Without any question the Red Cross will be turned over completely and absolutely to supplying the military forces. Your casualties in the next war, if and when it comes, will be far more greatly those of civilians than they will be of the military forces. That may just as well be kept in mind. Not to tire the House, I want to say that I am heartily in favor of Dr. Rawls' amendment.

Speaker Andresen: We will have to let some more people discuss the amendment. I think it is bad practice to let people get up two or three times to discuss the same question.

Dr. Stillman: But I merely want to speak to some of the remarks made by Dr. Wetherell. In the first place I want to assure him that in New York City, while it is quite true that one hundred per cent of the profession has not been in favor of the activities of the Red Cross, there has not been any definite opposing activity in the profession to the Red Cross. They have had every opportunity to obtain all of the blood they were able to get.

Also I want simply to ask him if there is any particular reason why a patient should be compelled to pay for aureomycin if he is able to pay for it and should not at the same time pay for any blood that he receives. It is quite true that different hospitals make different charges for materials that they supply, and it may be said that some of them are excessive, but I can make this statement without any fear of opposition; that is, that no patient in Greater New York who has needed blood has failed to get it, no matter what his financial situation. (*Applause*)

Speaker Andresen: This is on the amendment by Dr. Rawls, then we come back to the original.

Dr. Samuel Z. Freedman, *New York:* I just want to give you a little background to emphasize some of the points that have been made by some of the speakers from the metropolitan area. It might interest you to know that at the time we were discussing this with the Red Cross one of the statements made by a physician who was going to run this thing was that they hoped to take over the entire matter of blood banks. It was a definite statement made by her, and there was no question about it. That was her ultimate aim, and it was so stated by her.

Secondly, it should be also emphasized that this thing which was started for the municipal hospitals—the way it works out is that these people make no effort whatsoever in many instances, but quite the contrary, they resist having their family supplying them with any blood. That is only to emphasize Dr. Duryee's point, which we seem to lose sight of, that when you speak of free things they say, "It is coming to me," and they make no effort in the way that we hoped they would make it in other respects to supply the blood.

It may seem far afield, but I think these things are important: the purposes of the Red Cross program, and the reaction of the people to obtaining something for nothing. I think if we are willing to go on record for free blood, we might as well go on record for free medicine.

Speaker Andresen: Is there any further discussion? If not, the amendment of Dr. Rawls is now before you for action. All those in favor of Dr. Rawls' amendment, which simply is added to the resolution that was presented by our Reference Committee, say "Aye"; contrary "No." It is carried unanimously.

Now there is before you the resolution by our Reference Committee as amended by Dr. Rawls. Is there any further discussion of the motion as amended?

. . . There were calls for the question . . .

SPEAKER ANDRESEN: Have you anything to say about it now that the amendment is part of the recommendation of your Reference Committee?

DR. WETHERELL: No.

. . . The motion as amended was put to a vote and was unanimously carried . . .

Section 85

Report of Reference Committee on Report of Council, Part IV: Public Health Activities (B)—Hard of Hearing and the Deaf

DR. FREDERICK S. WETHERELL, *Onondaga:* The work of the Subcommittee on Hard of Hearing and the Deaf is highly commended. Your Reference Committee suggests that the Subcommittee on Hard of Hearing and the Deaf study the matter of the sometimes prohibitive cost of hearing aids and make a future report on this.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

DR. WETHERELL: Now I move the adoption of the report as a whole, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

DR. WETHERELL: The chairman of your Reference Committee wishes to thank the members of his Committee for their splendid cooperation.

SPEAKER ANDRESEN: Thank you, Dr. Wetherell.

Section 86 (See 14, 107)

Report of Reference Committee on Reports of President and President-Elect

DR. CHARLES W. MUELLER, *Kings:* Your Reference Committee has carefully considered the suggestions made to the House of Delegates by our president, Dr. John J. Masterson, and our president-elect, Dr. Carlton E. Wertz.

. . . The report was read and after discussion was referred back to the reference committee. (*See Section 107*) . . .

SPEAKER ANDRESEN: If there is no objection now, we will adjourn until 9 o'clock tomorrow morning. Please all be here on time because we have a lot of work to do.

. . . The session adjourned at 10:15 P.M. . . .

MORNING SESSION

Tuesday, May 9, 1950

The session convened at 9:30 A.M.

Section 87

Announcements

SPEAKER ANDRESEN: I would like to announce again that the banquet tickets are for sale out at the desk.

I was just informed of an interesting item, and that is two of the members of this House have their sons here acting also as members of the House. One is Dr. Fenwick Beekman, our genial assistant treasurer, whose son, Robert S. Beekman, is a delegate; the other one is Dr. Edwin A. Griffin, of Kings, and his son, E. Harrison Griffin, also of Kings, both of whom are acting as delegates. (*Applause*)

This morning the first order of business, as I announced yesterday, is to take up the matter of the revision of the Constitution and Bylaws, over which our committee has been laboring during the year. The committee has taken under advisement several resolutions that were made yesterday in regard to the Constitution and Bylaws, and they have incorporated those suggestions with their recommendations in regard to changes in the Constitution and Bylaws, so that the people who made resolutions yesterday in regard to the Constitution and Bylaws will find that they have been heeded or at least considered by the committee. We can proceed right away. Dr. Bauer will start in article by article, show us where there have been changes made or additions and deletions, and I hope we can expedite the adoption of this revised Constitution and Bylaws and get through with it in half an hour. (*Laughter*)

Section 88 (See 11, 14, 22, 23, 58: District Branches; 40: Oath of Allegiance; 43: National Anthem, Invocation)

Report of the Committee on Revision of the Constitution and Bylaws

DR. LOUIS BAUER, *Past President:* Mr. Speaker, I suggest the delegates take out their handbook, and on page 906 there is the report of the Committee on Revision of Constitution and Bylaws, which you presumably have all read. The Committee is recommending some changes in that text as the result of our conferences yesterday.

Also yesterday there was distributed to you a mimeographed sheet entitled "Supplementary Report of the Committee on Revision of Constitution and Bylaws." You can tear the first page off that and throw it in the ash can because that has been entirely revised since yesterday. The second page will still be useful to you.

We also had a number of resolutions referred to us, and also a part of the President's Report and part of the report of the Planning Committee for Medical Policies, all of which have been considered in our report.

I think, Mr. Speaker, to make this intelligible to everybody, that we will interpolate the various resolutions and reports as we go along as they pertain to the particular articles which we are to discuss.

First, Article I of the Constitution. You will note that we have changed the wording of the objects of the Society somewhat. We did that for a specific reason, feeling that the language of the present Constitution was just a little bit too detailed, and that it would be better to simplify it. Therefore, we have recommended that Article I read as follows:

> "The name and title of the Society shall be the Medical Society of the State of New York. The purposes of the Society shall be to federate into one organization the medical profession of the State of New York; to extend medical knowledge and advance the science and art of medicine; to promote the betterment of public health, and to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State."

Mr. Speaker, I move the adoption of that amendment.

Dr. Samuel B. Burk, *New York:* I second it.

Speaker Andresen: I might explain that we are going to adopt the Constitution and Bylaws article by article, and then in the end have a motion to adopt the Constitution and Bylaws as they have been adopted or amended piecemeal as a whole.

Now Article I is open for discussion.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: In Articles II and III, we recommend no changes.

Article IV is revised over what is printed in your handbook. I think, Mr. Speaker, it will be well for me to read the amended article as we now have it drawn. I may say that later on when we come to the consideration of the district branches, we have created or recommended the creation of an additional district branch, making nine in all, so we have had to modify the language of your printed document.

Our recommendation is that the present Article be deleted and the following substituted therefor:

> "There shall be a Council composed of the president, the president-elect, the vice-president, the immediate past president, the secretary, the assistant secretary, the treasurer, the assistant treasurer, the speaker, the vice-speaker, the chairman of the Board of Trustees, nine other members elected by the House of Delegates, and the district branch presidents, in accordance with the following schedule:
>
> > During 1950 to 1951, the presidents of the First, Third, Fifth, Seventh, and Ninth District Branches shall be members of the Council.
> >
> > In 1951 to 1952, the presidents of the Second, Fourth, Sixth, and Eighth District Branches shall be members.
> >
> > Following that year, the presidents of the district branches shall so serve in alternate years.
>
> "The editor of the Journal shall attend all meetings of the Council."

I move the adoption of that article.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion?

Dr. Joseph A. Geis, *District Delegate:* In this proposition I can see no advantage in putting the district presidents on the Council. As this reads, each president of a district branch will have a chance to serve one year on the Council during his two-year term as president. There is no man on the Council who can be of any use to this Society until he has had at least one year's experience. This will tie your Council up with four green men who know nothing of what is going on. I don't believe it is practical.

Speaker Andresen: Is there any further discussion?

. . . There was no response. . .

Speaker Andresen: If not, will Dr. Bauer explain the difficulties here?

Dr. Bauer: I am sorry Dr. Rooney is not here. I think he would like to talk on this. I believe he will be here in a moment. However, I may say the reason for doing it was to give still further geographic representation on the Council.

Then, as you heard yesterday, there are now some fifty-nine Council committees and subcommittees, which means that every Council member has to carry a terrific load in committee memberships. It was felt that it would divide that load somewhat.

The activities of the Society have increased so tremendously during the past few years that it is becoming a pretty onerous task to serve on the Council, and it was felt that this might relieve the load on some of them.

Speaker Andresen: Does that explain your objections, or do you want to make an amendment?

Dr. Geis: I would like to suggest that we drop the district presidents from that, and I will make such an amendment primarily for the reason that your district presidents by serving one year will be of no use to the Council to relieve any of its members from any of the work that is now being done. If the Council needs enlargement, let us put three more men on whom we would elect for a three-year period. Then those men will be of some advantage, but if you are going to take a man and put him on that Council and leave him there for one year he is going to be of no use to relieve the other members of work because he does not know what the work is all about, and by the time he has some idea of it he is out of it and there will be another new man on there. I believe this is going to tie the Council up with a lot of green men who are not there long enough to have any experience. If the Council needs enlargement, I would like to make an amendment we drop the district presidents and we elect four men every year for a three-year period, and then those extra men will be of some use to the Council. Mr. Speaker, I make such an amendment.

. . . The amendment was seconded. . .

Speaker Andresen: Now the amendment is open for discussion. Is there any discussion on the amendment?

. . . There were calls for the question. . .

Speaker Andresen: All in favor of the adoption of this amendment which would tend to drop the suggested members of the Council from the district branches and substitute therefor the election of three extra members of the Council for terms of three years will signify by saying "Aye"; contrary "No."

Only half of you voted. Let us try again. All in favor of the amendment say "Aye"; contrary "No." That has been carried.

You may now—

Dr. Goodlatte B. Gilmore, *Bronx:* I understood Dr. Bauer to say that the editor of the Journal would attend all meetings of the Council.

Speaker Andresen: Yes.

Dr. Gilmore: Is that ex officio?

Speaker Andresen: He has always done that ex officio, but now it is required.

Dr. Gilmore: It does not so state.

Dr. Frederick W. Williams: With or without vote?

Dr. Gilmore: Yes, is that with or without vote?

Speaker Andresen: It says "shall attend all meetings of the Council," and does not say anything about his vote.

An employe of the Society is not allowed to vote at meetings, and the editor is classified as an employe of the Society.

Dr. Gilmore: I would like that to be put in, that it is ex officio, so he cannot vote.

Speaker Andresen: We have already acted on that article.

Dr. Williams: But not on this particular part of it.

Dr. Gilmore: What you acted on did not affect this particular part.

Speaker Andresen: Do you want to make another amendment?

Dr Gilmore: Yes.

Dr. Williams: And I second it.

Speaker Andresen: Will you accept that?

Dr. Bauer: May I say that just putting in the words "ex officio" does not mean that he will vote or not vote. That simply means he holds a position there by virtue of his office but does not decide whether he will or will not have a vote. Our wording was that he shall attend all meetings of the Council, which in itself I think would say that he did not have a vote.

The reason for that was that it is quite conceivable that some day we might have an editor who might not be a member of the Society. You could not, of course, allow such a person to vote; hence the Committee left it that way, that his attendance would be expected at the meetings of the Council, where he of course would have voice but no vote.

I have no objection—and I am sure the Committee would not have any—to adding after the words "shall attend all meetings of the Council," "with voice but no vote."

Speaker Andresen: Is that the way you want it?

Dr. Gilmore: That was my motion.

Dr. Williams: And I seconded it.

Dr. Samuel B. Burk, *New York:* Point of information. Am I to assume that Dr. Geis in making his amendment also considered geographic location as part of his consideration for the additional councillors?

Speaker Andresen: It was not mentioned.

Dr. Geis: It was not mentioned in my proposition. I suggested instead of electing nine we elect twelve. That point is up to this House. The election would be by this House, and if the House wants to consider geographic location that is up to them.

Speaker Andresen: That would be very difficult to say that we have to take one from here and one from there.

Dr. Geis: You are going to elect them. You cannot provide specifically very well that they be elected on a geographic basis, but that is something the House itself will have to keep in the back of its mind.

Dr. Edward P. Flood, *Bronx:* I move the reconsideration of that vote on the amendment. The amendment was that four additional councillors be elected for a three-year term. That would make thirteen councillors. Could we not compromise with three? That would then give us twelve councillors.

Dr. Geis: If I remember rightly I said three extra; in other words, four elected every year, not an additional four. Instead of three councillors being elected each year for three-year terms, it would be four elected each year.

Dr. Flood: I withdraw my amendment then. I misunderstood.

Speaker Andresen: We have now the amendment before us on the editor having voice without vote, or did you withdraw it?

Dr. Gilmore: No, I press it.

. . . There were calls for the question, and the amendment was put to a vote and was unanimously carried. . .

Speaker Andresen: We now have the amended motion before us. Is there any further discussion?

Dr. Bauer: No, sir, except by virtue of the amendment proposed by Dr. Geis it will require an amendment on the election of councillors which we have not provided for. We may have to have a meeting of the Committee to draft the necessary amendment to meet the provisions of Dr. Geis' amendment, but we can go ahead with the rest of this, and then come back with that later while the House is doing something else. I think it will only take a few minutes to draft the necessary amendment.

Speaker Andresen: Perhaps a member of your Committee could do that for you while you are going on with the rest of the report. Why don't you ask Dr. Rooney to do that?

Dr. Ezra A. Wolff, *Queens:* I wanted to bring up the same point, Mr. Chairman, that I think this particular article should go back to the Committee for rewording so that the remainder of the wording will be in conformity, namely, to have twelve councillors instead of nine, etc.

Dr. Bauer: As far as this particular article is concerned, the only change that would be required would be that instead of nine other members elected by the House of Delegates, it will be twelve other members elected by the House of Delegates. I think we can make that without going into a Committee huddle on it.

Speaker Andresen: Does that satisfy your objection?

Dr. Geis: And the last paragraph is cut out.

Dr. Bauer: Oh, yes, everything about the district branches is cut out.

Speaker Andresen: That is very simple, that correction. Is that all right with you, Dr. Wolff?

Dr. Wolff: Yes, sir.

Speaker Andresen: The revised Article IV is now before you for a vote.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: The next change is in Article V. It is not a material change, but you will recall that in the present setup our president-elect is known as the president-elect and first vice-president and the latter part of his term is never used. Then we have a second vice-president. It is sort of an anomalous situation to have listed on our masthead in the Journal and on our stationery the president, the president-elect, and then the second vice-president, so we have dropped the term "first and second vice-presidents," and it will read:

> "The officers of the Society shall be a president, a president-elect, a vice-president, a secretary, an assistant secretary, a treasurer, an assistant treasurer, a speaker, and a vice-speaker of the House of Delegates. They shall take office at the termination of the annual meeting at which they are elected."

That is the only change in that article.

Speaker Andresen: I think we can save time by not discussing whether you should make a motion to adopt each time. That is what we are here for. Is there any discussion of this Article V?

Dr. Frederick Williams, *Bronx:* It is clearly understood in the minds of the Committee that in the event of the death of a president in office the vice-president becomes president?

Dr. Bauer: That will be explained when we come to the duties of the president-elect. The president-elect will still succeed to the office of president. The only time the vice-president would succeed would be in case of the death of both the president and the president-elect, which is the situation now.

Dr. Williams: Then it would seem another way to serve that end would be to have the man serve as first vice-president.

Speaker Andresen: We are only going to have one vice-president now, so he will be the first vice-president.

Dr. Bauer: This simply clarifies the terminology. It does not change the status at all.

. . . There being no further discussion, the motion to adopt Article V was put to a vote and was unanimously carried. . .

Dr. Bauer: Next is Article VI, "Trustees." The Committee recommends that the word "five" be changed to "seven," so that the article will then read:

> "The Board of Trustees shall consist of seven members elected by the House of Delegates in accordance with the Bylaws. The president, the secretary, and the treasurer shall sit with the Board of Trustees with voice but without vote."

This change was made on the recommendation of the Board of Trustees. I move its adoption.

Dr. Joseph A. Geis, *District Delegate:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: The next article, "Article VII, Board of Censors," involves merely dropping one word out. It formerly read that the board of censors consists of the presidents of the eight districts. We have changed that to read "of each district branch" so if we ever increase the number of district branches as we are recommending this year, for example, it would not be necessary to amend this bylaw too. That is the only change in the article, to drop out the word "eight" and say "each district branch":

> "There shall be a Board of Censors consisting of the president and secretary of the Society and the president of each district branch, as provided in the bylaws."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Articles VIII, IX, and X—the Committee recommends no change.

In Article XI, we have a change in Section 1, which I will read. The Committee recommends that Section 1 be revised to read as follows:

> "*Section 1.* The membership of the Society shall be divided into nine district branches, as follows:
>
> > The First District Branch shall comprise the members of the Medical Societies of the Counties of New York, Bronx, Kings, Queens, and Richmond.
> >
> > The Second District Branch shall comprise the members of the Medical Societies of the Counties of Nassau and Suffolk."

The membership of the Third, Fourth, Fifth, Sixth, Seventh, and Eighth District Branches will remain as now constituted.

> "The Ninth District Branch shall comprise the members of the Medical Societies of the Counties of Westchester, Rockland, Orange, Dutchess, and Putnam."

I move the adoption of this section.

Dr. Samuel B. Burk, *New York:* I second it.

Speaker Andresen: Is there any discussion of this? You see this is in conformity with a couple of the resolutions made yesterday. I think there were four resolutions introduced in regard to this.

Dr. Bauer: I may say, Mr. Speaker, that we had resolutions from Rockland, Suffolk, and Nassau, and quite a delegation from Kings and Queens on this subject. This takes care of those resolutions without any specific action being required on them.

. . . There being no further discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: Article XI, Section 2—the Committee recommends that the present section be deleted and the following substituted therefor:

> "Each district branch may adopt a constitution and bylaws for its government and may amend the same; but before becoming effective they shall be approved by the Council. They shall be consistent with the Constitution and Bylaws of this Society, and they must provide that the district branch president shall have first served as a president of a component county society."

That last sentence is really the main addition to the section.

I move the adoption of this section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: The Committee recommends no change in Section 3 of Article XI.

Articles XII and XIII—the Committee recommends no change.

Speaker Andresen: Do you think we ought to vote on the Constitution, as thus amended, first, as a whole?

Dr. Bauer: I so move.

Dr. William Klein, *Bronx:* I second the motion.

Speaker Andresen: Is there any discussion?

Dr. M. Renfrew Bradner, *Orange:* What were the components of the Second District Branch?

Dr. Bauer: Nassau and Suffolk Counties.

Dr. Bradner: Then the Ninth will include Orange and the other counties?

Dr. Bauer: The Ninth will include Westchester, Rockland, Orange, Dutchess, and Putnam Counties.

. . . There being no further discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: We now come to the Bylaws. Chapter I, Membership, no change is recommended in Section 1.

In Section 2, the Committee recommends no change in subsections (a), (b), and (c). In subsection (d) the Committee recommends that the period at the end of the subsection be changed to a comma and material added so that the entire section (d) will then read as follows:

> "*Section 2.* (*d*) Dues and State assessments of a member elected or reinstated after October 1 shall be credited to the succeeding year; all rights and privileges of membership, however, dating from the time of election, but no member dropped for nonpayment of dues and assessments

shall be reinstated until he has, in addition, paid his dues and assessments for the year in which he was dropped."

There is really not much change in that except in one part of it the word "assessments" had been left out, and we incorporated it in both parts of the paragraph, otherwise it is much as it was before.

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: No change is recommended in Section 3.

Dr. Frederick Williams, *Bronx:* Is this Section 3 or is this Chapter III?

Dr. Bauer: Section 3, of Chapter I.

Section 4 is merely a clarification. There was a conflict in the old bylaws. One paragraph said one thing and a paragraph later on said something else, so we have recommended revision of the paragraph Section 4, to read:

> "*Section 4.* A member of one county society shall not be permitted to transfer to membership in another county society until he has established a legal residence in the county to which he desires transfer, except as provided in Chapter XIV, Section 1(a) of the bylaws."

That was where the conflict had been.

> "The question of legal residence or principal office shall be verified by the board of censors of the county medical society to which the member desires transfer."

I move its adoption.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion of this?

Dr. William Klein, *Bronx:* Does this mean if a man has not dropped his membership in one county society, and he moves to another county, he can belong to both or to either?

Dr. Bauer: There is no change in the present setup. A man may have his membership either in the county of his residence or in the county in which he maintains his principal office. He cannot belong to both. That is covered by the bylaws.

Dr. Klein: I thought you said when he established a legal residence that was not so. Do you mean he must belong either where his office is or his residence?

Dr. Bauer: It says here, "The question of legal residence or principal office shall be verified by the board of censors of the county medical society to which the member desires transfer."

Speaker Andresen: In the sentence above that it says, "until he has established a legal residence in the county to which he desires transfer."

Dr. Klein: That is what I mean.

Speaker Andresen: Then below that it says "legal residence or principal office."

Dr. Leo F. Schiff, *Clinton:* Mr. Speaker, I can clarify that. It says, "except as provided in Chapter XIV, Section 1(a) of the bylaws. Chapter XIV, Section 1(a) explains that.

Dr. Klein: Why can't we put in here where he establishes his legal residence or his main office in the same sentence and be done with it, so the reader won't have to go back and forth to get it?

Speaker Andresen: What do you think about that?

Dr. Bauer: There is no objection to putting it in that I can see.

Speaker Andresen: All in favor of putting it in say "Aye"; contrary, "No." It is carried. Let us put it in.

. . . The motion to adopt Section 2(d), as thus amended, was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 5—no change is recommended.

Section 6—in the last sentence it is recommended that the words "dues or" be inserted before the word "assessment" so that the last sentence of that section will then read:

> "Retired members shall not be subject to dues or assessment but shall be accorded all the rights and privileges of active membership except voting and holding office."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: In Section 7, no change is recommended.

In Chapter II, "House of Delegates," Section 1, there have been further revisions over the printed matter which you have before you, and I will read it in its entirety.

I want to say, first, that the Committee concurs in the recommendation that the commissioner of health of the State of New York or his deputy should be a member of the House of Delegates. It, therefore, recommends that Section 1 of Chapter II, be amended to read as follows:

> "The House of Delegates shall be composed of:
>
> (*a*) Delegates elected by the component county medical societies;
>
> (*b*) Officers of the Society and other members of the Council and of the Board of Trustees;
>
> (*c*) The presidents of the district branches, sitting as district delegates;
>
> (*d*) A representative from each of the scientific sections to be elected by each such section;
>
> (*e*) The commissioner of health of the State of New York or a deputy designated by him.
>
> "Past presidents of the Society shall be life members of the House of Delegates."

The next is new material:

> "Should the president of a district branch be unable to serve as a district delegate, the vice-president shall so serve, or in case of his inability to serve, the president of the district branch shall designate a delegate. Should the elected delegate of a scientific section be unable to serve, the chairman of the section shall designate a substitute.
>
> "In case either the president of a district branch or the delegate of a scientific section is to be replaced, the president of the district branch or the chairman of the section, as the case may be, shall notify the secretary of the State Medical Society, in writing."

I move its adoption.

. . . The motion was seconded. . .

Dr. Thomas M. d'Angelo, *Queens:* May I ask a question? First of all, must the commissioner of health be a member of the Medical Society of the State of New York? Secondly, must the commissioner of health be a doctor?

Dr. Bauer: I don't think the commissioner of health of the State of New York could very well be anything else but a doctor. I must confess I think it did not occur to the Committee as to whether or not he should be a member of the Medical Society of the State of New York. We assumed he would be, as the present commissioner is.

Dr. James F. Rooney, *Trustee:* May I arise to answer that question? First, the commissioner of health of the State of New York under the statutes of the State cannot be anything else but a regularly licensed physician.

Secondly, no man can be a member of this House of Delegates unless he is a member of the Medical Society of the State of New York, no matter what his other qualifications may be.

Speaker Andresen: Does that answer the objections?

Dr. d'Angelo: I think this would specifically exempt him unless it is so specified, unless you put in some words such as "subject to our qualifications," or "subject to other qualifications."

Speaker Andresen: Dr. d'Angelo wants to add to that "subject to other qualifications of membership," otherwise he thinks it would exempt him from the requirement of being a member.

Dr. Rooney: I think it is a rule of law that unless a matter is specifically specified as an exception from other qualifications that there is no exemption. I cannot see where that point can rise frankly. So far as the present incumbent is concerned, I can state he is a member of the Medical Society of the County of Albany and the Medical Society of the State of New York.

Dr. Burk: In the wisdom of the revising committee, you will remember that they also indicate that the commissioner of health or his representative may sit, so that the situation is pretty well cared for. In the event that the commissioner may not be, it is likely that his deputy or whomever else he may assign will be, so I think it takes care of all situations.

Dr. Bauer: I see no objection to adding to this under subsection (e) the words as follows:

> "The commissioner of health of the State of New York or a deputy designated by him, provided that any representative shall be a member of the Medical Society of the State of New York."

I see no objection to putting that in.

Dr. Rooney: I think that is rather unnecessary.

Dr. Bauer: It may be unnecessary, but I don't see any objection to it either.

Dr. Rooney: I merely mean about the language as proposed. I see no reason for that inclusion. Of course, I think the House should bear in mind that always after an adoption of a revision of the Constitution and Bylaws of the Society all of those amendments proposed by the Committee and also those made to the Committee's report from the floor will have to be gone over by the legal counsel to be sure that they are in conformity with the statute law.

The second thing is that always there are certain minor language changes that inevitably have to be made that have occurred during the hurry of debate, so I think these various changes will undoubtedly have to be made subject to the approval of the counsel, without changing the intent of any of those that are ordered by the House.

It seems to me that adding more provisos merely makes this thing more turgent and less clear. I can assure you that under the present Bylaws and Constitution and the amendments that are being proposed there is no possibility of any man being a member of the House of Delegates unless he is a member of the Medical Society of the State of New York, irrespective of any of his other qualifications whatsoever.

Speaker Andresen: Does that satisfy you, Dr. d'Angelo?

Dr. d'Angelo: That may very well be the interpretation, but it seems to me such a simple matter to follow the suggestion of Dr. Bauer and just put in a few words. It clarifies the situation without being burdensome. I second Dr. Bauer's motion to add those words.

Dr. Bauer: I did not make a motion, but if anybody wants to do it, it is all right with me.

Speaker Andresen: That will be in the nature of an amendment.

Dr. Moses H. Krakow, *Bronx:* I will make that amendment.

Dr. Ostrow: I will second it.

Dr. Schiff: It seems to me that we don't need the amendment. I don't know whether this is in order, and the Speaker may tell me that it is not, but I believe the most sensible thing to do would be to omit all reference to the commissioner of health as a delegate or as a member of this House of Delegates. We are here for a specific purpose: to transact the business of the Medical Society of the State of New York. The commissioner of health has always been welcome. He has always been accorded a voice, or his representative has, and I think he should have it, but to make him a member of this House of Delegates gets you into a mess of complications which can be easily avoided, and no harm is done by sticking to our old regime of having the delegates the elected representatives of the members of the county societies.

Now, Mr. Speaker, I do not know whether it is in order at present to move that we delete all that reference, or whether we will have to act on Dr. d'Angelo's motion first.

Speaker Andresen: We will have to act on the amendment first.

Dr. Schiff: O.K., sir.

. . . There being no further discussion, the amendment was put to a vote and was carried. . .

Speaker Andresen: Now we come to the original recommendation as now amended.

Dr. Schiff: May I now move my amendment?

Speaker Andresen: The amendment is to strike—

Dr. Schiff: Strike out all that part which refers to the commissioner of health of the State of New York (*subsection* (*e*)).

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion?

Dr. John J. Masterson, *President:* I am sorry I have to disagree with Dr. Schiff. I don't think there will be any more complications with the commissioner of health of this State or of somebody designated by him than there is in the House of Delegates of the A.M.A. from the delegates of the various sections which I mentioned yesterday. The commissioner of health of the State of New York and our Society have a common problem, and either he or his representative would be an advantage to this Society and not a disadvantage. I hope the resolution of Dr. Schiff will not pass.

Speaker Andresen: Dr. Schiff's amendment is to delete subsection (e) of Section 1, of Chapter II of the Bylaws. Is there any further discussion?

Dr. Homer J. Knickerbocker, *Ontario:* While I have no objection to the presence of the commissioner of health as a delegate in this House, do you realize that if you open to the Department o

Health a membership here you are also creating a precedent which will open the way for the intrusion of representatives of other departments in the State government. It seems to me that next we would have the Department of Mental Hygiene, and we would have somebody from the Welfare Department, until the first thing we know we would be dominated more or less by State officials. I think Dr. Schiff's amendment should be supported.

Speaker Andresen: Is there any further discussion of this amendment?

Dr. Fenwick Beekman, *Assistant Treasurer:* The delegates of the Medical Society of the State of New York meet yearly to pass resolutions on the business of the Medical Society of the State of New York. Our primary purpose, however, as physicians, is the health of the people of the State of New York, and if there is any way we see whereby we can help carry out our duty to improve the health of the people of the State of New York we should certainly take it. I agree with Dr. Rooney and our president that we can better carry out our duty to the people of the State of New York by having the commissioner of health of the State of New York as a delegate to this House.

Dr. d'Angelo: Mr. Speaker and members of the House, we do so much business here regarding public health problems that I feel the commissioner of health of the State of New York should be a member of this body. Of course, now he can come in with voice, but he has no vote. When he comes in with voice, he is an invited guest; whereas, you may say if he comes in with a vote he is actually one of us and can participate in all of our obligations. When he comes into a public health meeting he comes in with a certain authority as a delegate, which means a whole lot to people who come here to give their advice to us.

Dr. Bauer: I do not agree with Dr. Knickerbocker that by admitting the commissioner of public health we would be establishing a precedent for other departments of the government. There is not the close relationship or the community of activity with other departments of the government which there is with the Health Department. Almost everything we do has some connection with the Health Department, and there is not any organization of the State government which we are so closely allied with as the Department of Health. I believe we would have to use a lot of imagination to say, even if you admitted some other people than the Health Department, that they could control a House of over 200 members. It would not speak very well for the minds of the members if they let four or five men so dominate their discussions as to control them. I do not believe this would be extended to other departments because they have no place here, but I believe the commissioner of health has. I think during the last two or three years we have come closer to the Department of Health than has ever been the case in the history of this Society. I feel that in the present commissioner of health of the State of New York we not only have as good, if not better, a health commissioner than we have ever had, but we have one who is more friendly to this Society than any previous commissioner that I know anything about. I believe it would facilitate good relations with the Health Department as well as good relations with the public to have him sit as a member of this House.

Dr. Ezra A. Wolff, *Queens:* I agree entirely with the previous speakers who have said that the commissioner of health would be a valuable ally to this Society, and that we could work in conjunction with him with benefit to both the Health Department and to ourselves, but I rise to the point of principle that this House of Delegates is supposed to be representative of the members of the Medical Society of the State of New York. I think that the tendency to have members of the House of Delegates who are not directly elected representatives of the membership is a bad principle, and I feel on that ground alone that we should make some other provision for incorporating the commissioner of health in our deliberations without actually making him one of us.

Dr. Joseph A. Geis, *District Delegate:* It seems to me that this is a lot of argument over something that has been proved does not happen. It is nearly a century ago since the chief of the medical service in the Army and the chief of the medical service in the Navy have been members of the House of Delegates of the American Medical Association, yet there has been no increase in the A.M.A. delegates of Federal departments until the past year when they changed the bylaw to allow the chief of the new Air Service to become a member of the House. Is that right?

Dr. Bauer: Yes.

Dr. Geis: I don't figure we need worry about the State taking us over. It is also true that in the A.M.A. the advice of these men has helped out in their House of Delegates. I see no reason why we cannot extend this to the commissioner of health without losing any of our privileges or sacrificing any of our rights.

Dr. Rooney: Speaking purely from a selfish point we must bear in mind one thing: The commissioner of health is the adviser to the Governor on all medical legislation. That is all.

Speaker Andresen: Any other discussion?

There being none, all in favor of adopting this amendment which would delete subsection (e) say "Aye"; contrary "No." It is lost.

We now come back to the original recommendations of the Committee regarding the whole of Chapter II—

Dr. Bauer: Not the whole section, one of the sections of Chapter II, Section 1.

Speaker Andresen: Regarding Section 1 of Chapter II is there any further discussion?

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: The next two items I think require no action, Mr. Speaker. It is simply a mistake in the printing: Subsection A should have been listed as subsection (a); and Subsection B should be listed as subsection (b). I think that is merely a typographic matter that does not require any action by this House. I merely call it to your attention.

Speaker Andresen: If there is no objection that will be adopted.

Dr. Wolff: I believe those capital letters, A and B, were put in for a purpose. You already have a small (a) and a small (b) in the section.

Dr. Bauer: There are subsections (a), (b), (c), (d) in parentheses already under the first paragraph of Section 1, I admit. I think, however, that omitting the parentheses would clarify it. I think we could leave that to the editorial department to make it clear. It does not affect the legality of the By-laws. It is merely a matter of editorial correction in the printing.

Speaker Andresen: Continue.

Dr. Bauer: In Section 2, the Committee recommends no change.

In Section 3, the Committee recommends that the section be revised to read as follows:

"The annual meeting of the House of Delegates

> shall be held at the call of the speaker, at least two, and not more than four days before the annual meeting of the Society."

That is merely to allow a little greater latitude in calling a meeting of the House if it should become necessary.

The balance of the section should remain as it is now written, except that in the last line the word "two-thirds" should be deleted and the word "unanimous" substituted so that the last sentence of this section will then read:

> "No new resolutions shall be introduced at the last scheduled session except by a unanimous vote of the House."

I move the adoption of the changes.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 4—the Committee recommends that the quorum in the House be increased from sixty to one hundred. You will recall we have a considerably larger House now than we had when this provision for sixty was adopted. There must be at least sixty more members in the House since this was adopted, and we feel sixty is hardly representative of the body, so we have recommended that the quorum be increased from sixty to one hundred, and the sentence would read:

> "A quorum shall consist of one hundred duly elected or constituted members of the House of Delegates."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: In Sections 5, 6, and 7, we have recommended no changes.

Section 8—it is recommended that item 3, "Roll call by the secretary" at the beginning of the session be omitted. We don't do it any more anyway. Also that there be substituted "Report by secretary as to presence or absence of quorum." It saves considerable time.

Speaker Andresen: Is there any discussion of this change?

. . . The motion to adopt was put to a vote and was unanimously carried. . .

Dr. Bauer: A new item should be interpolated which will now be item 4, "Remarks by the speaker." The present item 4 will then be item 5 and will read: "Reading the minutes of the previous meeting by title." We, of course, never read the minutes of the previous meeting. It would take us a whole four days to do it, if we tried to, and it seems foolish to have it in the Bylaws when we don't do it, so we have recommended those changes, and I move their adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Items 5 to 17 are retained, but will be renumbered 6 to 18.

I would move a tentative adoption of Chapter II as a whole now.

. . . The motion was seconded. . .

Dr. Williams: Did the Committee consider Dr. McCarthy's resolution in regard to an invocation and the national anthem?

Dr. Bauer: I am glad you brought that up. It is in my report, and it should come in here. I will read what the Committee has to say on that.

The Committee further considered the resolution introduced by Dr. Thomas F. McCarthy, of the Bronx County Medical Society. This resolution suggests amendment of the Bylaws providing for an invocation and the playing of the national anthem at the opening of the order of business at each session of the House of Delegates. The Committee is wholly in favor of this resolution in principle. It invites attention, however, to the fact that an invocation and the national anthem invariably are used at the annual session of the State Society; that at times facilities are not available for the playing of the national anthem at the sessions of the House of Delegates. It feels, therefore, that it would be unwise to incorporate this in the Bylaws when it might have to be violated. It recommends that this resolution be referred to the Council with instructions that both these items form a part of the agenda in connection with the meetings of the House of Delegates, whenever feasible.

I move the adoption of that portion of the report.

. . . The motion was seconded, and, as there was no discussion it was put to a vote and was unanimously carried. . .

Speaker Andresen: The motion is carried. The Council will now discuss that matter, and I can pretty nearly assure you if I am speaker we will have somebody get up and sing, maybe Dr. Williams.

. . . The motion to adopt tentatively Chapter II as a whole was put to a vote and was unanimously carried. . .

Dr. Bauer: Chapter III, Election of Officers, Councillors, Trustees, and Delegates, Section 1—no change recommended.

Dr. Williams: This is my opportunity to sing. I would like to ask the Committee whether there is not the possibility or the feasibility of appointing a nominating committee.

Dr. Rooney: I think that might very well properly come under the order when that portion of the proposed revision arises, but on the discussion of this section it is not quite in order.

Dr. Williams: I have asked a question of the Committee. Does this Committee want to answer me?

Dr. Bauer: The Committee has not brought in a recommendation for the appointment of a nominating committee.

Speaker Andresen: But that part of it will come up for discussion later on?

Dr. Bauer: That comes up under Chapter—I have forgotten which one.

Dr Rooney: That will come up under Chapter VII, and I can state for the information if I may, Mr. Speaker, that—

Dr. Williams: The appointment of a nominating committee, if we made it mandatory in the Bylaws, will naturally be included in the section under election of officers.

Dr. Rooney: It will come up under Sections 7 and 11, Mr. Speaker.

Dr. Geis: What about the four councillors to be elected each year for terms of three years?

Dr. Bauer: Chapter III, Election of Officers, Councilors, Trustees, and Delegates, Section 1—no change recommended; Section 2—now, Mr. Speaker, this particular chapter will have to go back to the Committee because this is where the amendment, by Dr. Geis I think it was, where we disapproved of the district branch presidents being on the Council, and adding three new members to the Council, comes in. It will require rewording of it, so I think this particular item we should skip, and we will come back to it later.

Dr. Geis: I think that can be taken care of right now with the change of one word.

Dr. Bauer: No, that is not so, Dr. Geis. You have to say four members of the Council should be elected for a term of three years, but then you have to provide for the three additional ones. You will have to say in 1950 one additional councillor is to be elected for three years, one for two years, and one for one year, so I think that is the wording that would be adopted if the House is willing to accept that.

Speaker Andresen: How about that? What do you think about that, Dr. Rooney? You were not here when the House decided that.

Dr. Rooney: No, unfortunately. That is why I arise to state a request as a member of the Committee. Unfortunately, I was not here at the time that question came up, and I only heard about it upon coming into the House. I was not here during the time that this amendment was made to the report of the Committee. I am quite interested in that particular section of the report because, as a matter of fact, it was I in the Committee who made the proposal in relation to the increase in the Council.

I cannot move reconsideration of the amendment that was made of that section because I did not vote in favor of it, but I would welcome some member of the House who would move the reconsideration of that so I may have an opportunity of discussing it when it arises for reconsideration; that is, a reconsideration of the vote that was taken changing the recommendation of the Committee from the presidents of the district branches to certain additional nondesignated members of the Council. I should like to have the opportunity of discussing on reconsideration that amendment.

Speaker Andresen: Dr. Rooney, we had a great deal of discussion on that subject. It took a lot of time. It was finally decided to increase the membership of the Council by three members, but not from the district branches. If somebody, however, wants to move reconsideration, the chair will entertain such a motion.

Dr. Rooney: Mr. Speaker, I will state my reasons for doing so. On the question of my desire for a reconsideration of that motion—

Speaker Andresen: But there is no motion for reconsideration on the floor.

Dr. Rooney: I understand that. Do you want me to rise to a question of personal privilege?

Speaker Andresen: Yes, Dr. Rooney.

Dr. Rooney: Very well, I will do so. I stated my reasons for asking that that be reconsidered when I stated that I was the member of the Committee on the Revision of the Constitution and Bylaws who proposed the wording of that section, and I was absent from the House when that amendment was passed. I merely ask that a reconsideration be given solely for the purpose of allowing me three minutes to state my reasons for making that recommendation, and in the hope that it will be returned to its original form.

Dr Burk: I so move.

Dr. J. Stanley Kenney, *Councillor:* I second the motion.

. . . There being no discussion, the motion to reconsider Article IV was put to a vote and was lost. . .

Speaker Andresen: The "noes" have it, and reconsideration is impossible at this time.

Dr. Bauer: Mr. Speaker, if my Committee will accept my wording, I would suggest that the reading of Section 2, be:

> "The president, the president-elect, the vice-president, the secretary, the assistant secretary, the treasurer, the assistant treasurer, the speaker, and the vice-speaker of the House of Delegates shall be elected for one year or until their successors have been duly chosen.
>
> "Four members of the Council shall be elected annually for a term of three years. In the event of a vacancy a councillor shall be elected for the unexpired term. In 1950, two councillors shall be elected for three years, one for two years, and one for one year.
>
> "No salaried employe of the Medical Society of the State of New York, with the exception of the secretary, shall be eligible for election as an officer of the Society. For the purposes of this article honorarium shall not be considered as a salary."

I move the adoption of that section.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion?

Secretary Anderton: Mr. Speaker, I believe that in 1950 we elect three members of the Council anyhow, and here you state we shall elect two for 1950, etc. I think you mean two additional.

Chorus: No.

Dr. Bauer: It should read in 1950 we will elect four councillors for three years, one for two years, and one for one year. That is quite correct, Dr. Anderton.

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 3—the Committee recommends that the section be deleted, and the following substituted therefor:

> "One trustee shall be elected annually for a term of five years, but in 1950 one trustee shall be elected for five years, one for four years, and one for three years. Thereafter, whenever the terms of two trustees expire in the same year, two trustees shall be elected each for five years. In the event of a vacancy, a trustee shall be elected for the unexpired term. A person to be eligible for election as trustee shall have served at least two years as an officer, or at least three years as a member of the Council, or at least five years as a member of the House of Delegates."

That takes care of the seven trustees which you voted a few moments ago. I move the adoption of this amendment.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Sections 4, 5, and 6—there are no recommendations for change.

Section 7—this is merely a clarification of the language. Wherever the word "delegates" appears, it should read "delegates and representatives," so that the last sentence of that section will then read:

> "Delegates and representatives may be elected to other medical societies or similar bodies as the interests of the Society may require; and credentials shall be issued to all delegates and representatives, signed by the president and secretary."

The balance of the section is unchanged.

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Chapter IV, Council, Section 1, after the words "Section 1," there should be interpolated "(a)." The present section should remain unchanged except in the last sentence we are correcting the English by changing the word "which" to "whom." Then a new subsection "(b)" is added, and it is recommended that it read as follows:

> "The Council shall establish an executive committee to be composed of the president, the president-elect, the secretary, the treasurer, and three additional members of the Council appointed by the president with the approval of the Council. This committee shall be appointed by the president immediately upon his assumption of the office of president and to serve during his tenure as president only. The executive committee shall have the authority to take action in case of emergency arising in the interim between the meetings of the Council in order to protect the interests and purposes of the Medical Society of the State of New York as set forth in this Constitution and Bylaws. In times of such emergency, the executive committee shall have all the powers and duties which are conferred upon the Council. Any action taken by the executive committee shall be reported in full to the Council at its next meeting."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: No change in Section 2.

Section 3, wherever the word "chairman" appears, it should be replaced by the word "president." In the last sentence the word "two" shall be deleted and the word "three" substituted so that the section will then read:

> "It shall meet at regular intervals at times and places that shall be fixed by the president. Any four members of the Council may require the president to call a meeting for such time and place as shall be designated by them in writing. Members must receive at least three days' notice by letter or telegram from the Society's office."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 4—it changes the quorum of the Council, because it has been enlarged. I will have to stop a minute and count up the change the new number will necessitate. We voted to make it a majority of the Council, and we were considering four additional. I think it would still remain the same. The word "nine" should be deleted and the word "fourteen" substituted so that the section will then read:

> "A quorum shall consist of fourteen members."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Sections 5, 6, and 7—no changes.

Section 8—it is recommended that this section be amended by adding the words "officer or employe" so that the section will then read:

> "No officer or employe, board, commission, or committee shall inaugurate or initiate any policy or commit the Society to any policy unless the same has been expressly approved by the House of Delegates or by the Council."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: The next, Mr. Chairman, pertains to the duties of the Council, and it rewords the present bylaw. You will recall the old Bylaws said it would include the study and supervision of the following activities. Well, manifestly we don't supervise hospital clinics and welfare agencies, and we don't supervise relationships with the Federal and State governments, so we have revised the paragraph to read as follows:

> "The duties of the Council shall also include the study and supervision of the following activities:
>
> (*a*) All scientific work presented at each annual meeting.
> (*b*) Scientific exhibits.
> (*c*) Medical education.
> (*d*) Journal management and publication.
> (*e*) Medical and related research.
> (*f*) Arrangements for annual meeting.
> (*g*) Preventive medicine.
> (*h*) Public health.
> (*i*) Legislation.
> (*j*) Economics.
> (*k*) Workmen's compensation.
> (*l*) Medical publicity.
> (*m*) Cooperative relationships with Federal and State government, foundations, and other lay groups.
> (*n*) Medical care insurance.
> (*o*) Malpractice defense and insurance.
> (*p*) Any activities not otherwise provided for.
> (*q*) The Council shall also keep constantly advised of the activities of, and collaborate with, the Health and Welfare Departments of the State and with hospitals, clinics, and welfare agencies in furthering the health of the community."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: Sections 10 and 11—no changes.

Chapter V, Board of Trustees, Section 1, it is recommended that the present section be deleted, and the following substituted therefor:

> "At the first meeting of the Board of Trustees immediately upon the close of the annual meeting of the House of Delegates, it shall organize under the chairmanship of a senior member and fix the time and place of its regular meetings. Should two trustees have similar seniority, the chairman of the board shall be chosen from these two trustees by lot. The Board of Trustees shall meet at least bimonthly, except in July and August. Any three members of the Board of Trustees may require the chairman to call a special meeting at the office of the State Society for such time as shall be designated by them in writing and of which the members of the board shall have at least five days' notice."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: There are no changes in Sections 2 and 3.

Section 4 merely increases the quorum from three to four because we have expanded the board from five to seven:

> "Four members of the Board of Trustees shall constitute a quorum."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 5—no recommendation.

Chapter VI, Censors, the Committee recommends no change in this chapter.

Chapter VII, Duties of Officers, as it is printed here, we have one additional change in the first two lines. The Council asked us to consider methods of lightening the load on the president and to give some of his duties to the president-elect. On reading over the Bylaws it did not seem possible to subdivide these duties in any reasonable way, so we feel that we have solved the matter by inserting these words, "The president-elect shall perform the duties of the president in the absence of the president"—wait a minute, I am reading the wrong section.

In Section 1, the Committee recommends no change.

In Section 2, after the first sentence we have added the words.

> "The president-elect shall perform such other duties as may be requested by the president."

That will leave the president free to pass on such duties as he wishes the president-elect to cover without stating specifically in the Bylaws what they are. The rest of the section requires quite a change, Mr. Speaker. As you recall, at the present time our president-elect succeeds to the office on the death of the president. Should we be so unfortunate as to lose a president early in his term of office it would then mean under our present setup that the president-elect would not only complete that term but his own, and he might be president for as much as two years. I think that anybody who has had the job will agree with me that it is just a little bit too much of a headache to wish on anybody for two years. I almost had it that long myself; I had it sixteen months. So we have provided that if the president should die during his first six months of office the president-elect will succeed and complete his term, and that is all, and then there will be an additional president elected the next year. If he dies in the last six months of the term, then the president-elect will complete that term and have one of his own. That makes it a little bit easier if we should have a casualty whereby we lost our president early in the year. The wording of it is:

> "The president-elect shall perform the duties of the president in the absence of the president. He shall perform such other duties as may be requested by the president. In the event of the president's death, resignation, removal, incapacity or refusal to act, the president-elect shall succeed him and shall serve for the remainder of the term of his immediate predecessor. If the time so served is less than six months, he shall also serve as president until the second annual session following his original election as president-elect. If the president-elect succeeds to the presidency six months or more before the following normal session, the House of Delegates at that following annual session shall select another eligible person to serve as president until the next annual session. If the president-elect dies, resigns, is removed, or is unable to or refuses to act, or if he succeeds to the presidency, the office of president-elect shall remain vacant, and at the next annual session the House of Delegates shall elect an eligible person to serve as president until the next annual session."
> I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Sections, 3, 4, 5, and 6—we have no recommended changes in those sections.

Dr. Williams: Is this the portion where the nominating committee could be considered?

Dr. Rooney: I am rising to that point because there is some change in the wording in that final section. In Section 12 there is a change in the language of that section.

Dr. Bauer: Yes, but I said Sections 3, 4, 5, and 6 have no recommended changes.

Dr. Rooney: That may be true, and if it is in order, I should like to have the opportunity of presenting, not for the Committee but as an individual member of the Society, an amendment to Section 1 of this chapter.

At the time when this revision was being gone over in the Committee, I as a member of the Committee proposed that there be incorporated in the Bylaws a change in Section 1 of the Bylaws in relation to the duties of the president. That the other members of the Committee felt not adverse to but on the other hand felt it was not opportune. At that time for the purpose of preserving at least a degree of unanimity I stated that I would not press a minority report, but I still reserved the right if I felt at the time of the meeting of the House that it was desirable to renew that proposal to the House.

In order to make that proposal effective it necessitates a change in Section 1, which reads at present under the duties of the president:

> "The president shall preside at all meetings of the Society, the Council, and the Censors. He shall be ex officio member of the Board of Censors and of all committees. He shall appoint all committees," etc., etc., etc. "subject to the approval of the Council,"

and I am adding—and this is my proposed amendment, gentlemen—following the board of censors and following that sentence which I have just read, "subject to the approval of the Council," these words:

> "One month after assuming the office of the presidency he shall appoint a nominating committee, which is to be composed of one member from each district branch and two members at large."

That is the purpose of this amendment. The only other amendment will have to come in under another section.

> "Within one month after assuming the office of president, he shall appoint a nominating committee"

period. That is my proposed amendment.

Speaker Andresen: Will anybody second that?

Dr. Williams: I will second that.

Speaker Andresen: Is there any discussion on this amendment?

. . . After discussion, this was amended to read, "Within three months after assuming the office of president, he shall appoint a nominating committee and it shall be published.". . .

Dr. Bauer: We already covered Section 2.

There are no recommendations in Sections 3 to 6 inclusive.

In Section 7, it is recommended that the following sentence be added at the end of the paragraph:

> "He" (that refers to the secretary) "shall be in complete charge of the administration of the headquarters of the State Society."

I move its adoption.

Dr. Rooney: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: There are no changes recommended in Sections 8, 9, and 10.

In Section 11, it is recommended that this section be deleted, and the following substituted therefor:

> "*Substitutions in Office.*—If there is a vacancy in the office of both president and president-elect, the vice-president shall act as president until the next annual session at which time the House of Delegates shall elect an eligible person to serve as president until the following annual session. The assistant secretary, the assistant treasurer, and the vice-speaker shall serve as the secretary, the treasurer, and the speaker, respectively, whenever these senior officers are incapacitated for service by injury, ill health of themselves or families, important professional duties, or any other mandatory absences. This shall be construed so as to include duty at or during meetings of the Board of Trustees as well as the other official duties designated for the senior officer. The senior officer shall promptly notify the junior officer of his incapacity and request his attention to said duties."

That is practically the same except the provision about the vice-president.

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: It is recommended that Section 12, as at present written, be deleted, and the following substituted therefor:

> "Each president of a district branch shall visit the county societies of his district at least once during his tenure of office and make a careful inquiry of the condition of the profession in each county in his district and shall report thereon to the House of Delegates. During the year prescribed in the Constitution and Bylaws"

—that last sentence will come out because that has been deleted now. "During the year prescribed in the Constitution and Bylaws, he shall serve as a member of the Council," that has been deleted already, so it stops with "House of Delegates."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 13—no change.

Chapter VIII, Meetings, Section 1—it is recommended that at the end of the first sentence the following be interpolated:

> "The publication of such notice in the New York State Journal of Medicine shall be considered as complying with this provision."

The section will then read as follows:

> "The notices of the annual and special meetings of the Medical Society of the State of New York and its House of Delegates, and of regular meetings of the Council, of the Board of Trustees and the Board of Censors, shall state the date, place, and hour and shall be mailed in securely postpaid wrapper to each member of the body holding such meeting at least seven days before said meeting. Publication of such notice in the New York State Journal of Medicine shall be considered as complying with this provision. The affidavit of mailing by the secretary of the Society to the last recorded address of the member shall be deemed sufficient proof of the service upon each and every member for any and all purposes."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 2—no change.

Section 3—no change.

Section 4, item 7 should be deleted. We no longer do that at general meetings of the Society, and we substituted the word "adjournment" instead. I think it is scientific papers now. I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Section 5—no change.

Also Section 6—no change.

Chapter IX, Expenses, Section 1—the only change recommended in this section is that the $200 now allotted to each district branch be increased to $400. The sentence in that section beginning, "Each district branch shall be entitled . . . ." will then read:

> "Each district branch shall be entitled to receive a sum not to exceed $400, exclusive of the work done by the secretary regarding notices, programs, etc., to defray the expenses of holding the annual meeting of such district branch, provided a proper statement of such expense shall have been presented to the secretary."

I move its adoption.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion? Yes, Dr. Rooney!

Dr. Geis: I wish to speak on that issue.

Dr. Rooney: Well—

Speaker Andresen: Dr. Rooney wished to discuss that first. He arose ahead of you and I recognized him first.

Dr. Rooney: I will yield to Dr. Geis in just a moment. In view of the fact that the chairman of the Committee jumped a chapter, to which I want to propose an amendment as to the Constitution of the nominating committee—

Dr. Bauer: That will be Chapter XI.

Dr. Rooney: Chapter XI, that is right.

Speaker Andresen: Dr. Rooney yields to you.

Dr. Geis: I thank Dr. Rooney. The proposition that I would like to take up is the question of the expenses of the presidents of the district branches in traveling from county to county. In the smaller districts he can do it very easily, but in your larger districts where he has to travel seventy-five or one hundred miles to attend a meeting, and probably after he attends a meeting has to stay overnight in a hotel, is he not entitled to his expenses for that? That is not covered in that proposition.

Speaker Andresen: Would that not be included in that $400?

Dr. Geis: No, for it says "to defray the expenses of holding the annual meeting." If they would cut out the words "annual meeting," it would cover it.

Speaker Andresen: Would that not be included?

Dr. Bauer: No, I don't think it would.

Dr. Geis: Not the way it reads now.

Dr. Rooney: That matter has been up for discussion and considerable comment in both the Council and the Board of Trustees. Even today, the

Board of Trustees is extending their charity, shall one say, which is about the only way the district branches live, in order—

Dr. Geis: Right.

Dr. Rooney: To cover additional expenses. My own personal feeling is that this should not be limited to that sum by any manner of means. I am entirely in favor of increasing that allotment to the district branches to cover the matter of such expenses as were brought up by the preceding speaker. I feel if they desire to move a limited sum greater than this which is provided for, I can see no reason why it should not be allotted, in view of the fact that when we consider the expenses of the dues dollar, the budgeted dues dollar, of this Society, the expenses of the district branches are practically less than two mills in that dollar.

Speaker Andresen: Does somebody want to make a motion to include expenses?

Dr. Geis: I would like to make a motion that we delete the words "of holding the annual meeting," and then it would read:

> "Each district branch shall be entitled to receive a sum not to exceed $400, exclusive of the work done by the secretary regarding notices, programs, etc., to defray the expenses of such district branch, provided a proper statement of such expense shall have been presented to the secretary."

By deleting those words you would do what is in my mind; in other words, you are allowing $400, but you don't limit the use of that only to the annual meeting.

. . . The amendment was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Now we come to the vote on the section as amended. Is there any further discussion?

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: In Chapter X there were no recommendations.

In Chapter XI, Special Committees, in Section 1, we are changing the wording of that to read, referring to special committees, that they shall be appointed by the speaker or other officer presiding pro tempore over the meeting, so that the second sentence of that Section 1 will then read:

> "They shall be appointed by the speaker or other officer presiding pro tempore over the meeting at which the committee is authorized, if such committee is to conclude its work during said meeting of the House of Delegates."

In other words, we are making it more definite, the speaker or his substitute. The balance of the section is to remain the same.

I move the adoption of that section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: There were no changes in Sections 2 and 3, and I believe here is where Dr. Rooney wants to suggest his proposal for the constitution of a nominating committee, which would then take the place of Section 4 and Section 4 would become Section 5.

Dr. Rooney: This is my proposed amendment:

> "The nominating committee shall comprise eleven members: one member to be chosen from each district branch and two additional members at large to be nominated to this committee by the president, in conformity with Chapter VII, Section 1 of these Bylaws."

That is the one that you have just passed approving a nominating committee.

> "It will be the duty of this committee to propose and nominate members of the Society to fill all vacancies to be filled at the annual meeting succeeding their appointment. These recommendations shall be made to the House of Delegates in the same manner as prescribed in Chapter X, Section 2 of the Bylaws."

That is that chapter and section concerning the reports to the House of Delegates of officers and committees. As you know, they must be in the hands of the members of the House at least thirty days before the annual meeting. That is the amendment.

Dr. Geis: I second that.

Speaker Andresen: Is there any discussion of this amendment? This seems to clarify the question of a nominating committee. Does anybody want to discuss it?

. . . After discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: That will become Section 4 of this article, and the present Section 4 will become Section 5. I think that requires no action.

In Chapter XII, Sections 1, 2, 3, and 4, there are no recommendations for change.

We are proposing adding an additional Section 5 describing a session, to read as follows:

> "*Section 5.* A session is a single meeting of a group to discuss scientific, cultural, historical, or economic subjects. It shall have a chairman and a secretary appointed by the president with the approval of the Council."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Chapter XIII, District Branches—it is recommended that Sections 1 and 2 remain without change, and that there be added two additional sections, Sections 3 and 4, to read as follows:

> "*Section 3.* In the case of the inability of the president of a district branch to serve as a delegate, the vice-president shall be designated to serve in his place. and the president shall so notify the secretary of the Medical Society of the State of New York. In the case of the death of the president of the district branch, the vice-president shall serve as a delegate.
>
> "*Section 4.* The objects of the district branches shall be to promote the scientific, social, cultural, and other interests of the medical profession within the district and to cooperate with the Council of the Medical Society of the State of New York in any way which that body may advise."

Before moving adoption of this, Mr. Speaker, I would like to invite to your attention that we considered that portion of the Planning Committee's report which was referred to us. We feel that recommendations 1 and 2 of that report have been incorporated in our proposed revisions, and recommendations 3 and 4, in our opinion, would appear to be matters to be incorporated into the bylaws of the district branches and not in the State Society Bylaws.

The recommendation that advisory committees, coordinating councils, or other such organizations be incorporated into the district branch organizations is a matter for decision by each district branch and should not properly appear in the Bylaws of the State Society.

With that explanatory statement, I move the adoption of those two sections.

. . . The motion was seconded. . .

Dr. Geis: As I understand it, all district branches have a second vice-president; therefore, in Section 3, where it says that the vice-president shall be designated as delegate, say the first vice-president and the second vice-president in proper order.

Speaker Andresen: Do they all have second vice-presidents?

Dr. Bauer: I don't think they all have a second vice-president. Some of them do, and some of them do not. I think that has been covered where we have stated that the president shall serve as a delegate, and that where he cannot so serve he can designate such delegate. If either the president or vice-president cannot go, he naturally, I think, would designate a second vice-president, if there is one.

Speaker Andresen: That is not standard, Dr. Geis.

Is there any other discussion? All in favor of the adoption of these two sections say "Aye"; contrary "No." Those two sections are adopted.

Dr. Bauer: Chapter XIV, Component County Medical Societies, Section 1—no change in the printed text. It says "Adopted May, 1937." That, of course, should be deleted. I don't think that requires action by the House.

In Section 2, we have a recommended change. It has been brought to our attention that a retired member may not change his membership to another county. This should be rectified by amending Chapter XIV, Section 2, as follows: Insert the words "or a retired member" after the words "good standing," so that the first sentence shall read:

> "Whenever an active member in good standing, or a retired member in any component society, removes to another county in this State, his name, upon his request, shall be transferred to the roster of the county to which he removes," etc.

The rest of the paragraph is to remain unchanged. As it is now, a retired member, if he moves to another county, cannot change his membership. That, of course, is an oversight, and should be corrected.

I move the adoption of this change.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: No change in Section 3.

In Section 4, it is recommended in the last sentence that the word "sixty" be deleted and the word "ninety" substituted so that the second paragraph of the section will read:

> "He shall forward said roster and information, together with the names and places of residence of each of the officers of said society and the names and residence of each delegate to the House of Delegates of said society, to the secretary of the Society ninety days before the date of its annual meeting."

I now move the adoption of that amendment. The rest of the section remains unchanged.

Dr. Arthur F. Gaffney, *Oneida:* Is this discussing the whole chapter?

Speaker Andresen: No, just Section 4. It changes "sixty" to "ninety" days.

Dr. Gaffney: I wish to discuss Section 1.

Speaker Andresen: Chapter XIV, Section 1, was only changed by dropping the words "Adopted in May, 1937," otherwise it is the same as in the old Bylaws.

. . . The motion was seconded, and, as there was no further discussion, the motion was put to a vote and was unanimously carried. . .

Speaker Andresen: Did you want to make a change?

Dr. Gaffney: There seems to be a conflict in the Bylaws. In the section on membership it says, "he shall be a member in the county in which his principal office is located," and then in Section 1 here it says, "except by approval of the Council."

Dr. Bauer: We amended that this morning. In that item you refer to it says, "except in compliance with Chapter XIV, Section 1(a)," so that this conflict was there. I called your attention to it this morning, and we put those words in the original section on membership, so it would tie in with this paragraph. That has been taken care of.

Speaker Andresen: Does that answer your objection?

Dr. Gaffney: Yes.

Dr. Bauer: There are no other changes recommended, Mr. Chairman. I have, however, one or two other matters, but I think first I should move the adoption of the Constitution and Bylaws as amended as a whole.

Dr. Rooney: I second that.

Dr. George W. Kosmak, *Editor:* I understand that the adoption includes the approval of Chapter XV, which you did not discuss separately?

Dr. Bauer: We had no recommendations on Chapter XV.

Dr. Kosmak: I would like to bring to the attention of the members of the House in Section 2 the phrase that papers which have been presented at the annual meeting and submitted to the State Journal shall be returned to the authors within four weeks after their receipt in the publication office of the State Society. That brings up a number of difficulties. With the mass of material we have on hand, and the necessity of bringing it out in as short a time as possible, four weeks is really too short an interval for the editor to give due consideration to this mass of material that comes out of the annual meeting. Therefore, I would suggest that either that period be extended or the words eliminated. It is very difficult with the enormous amount of scientific material as presented. You have seen in our annual report how many papers have had to be returned for revision. A great many of these papers that are read at the annual meeting have to be returned—not a great many but a considerable number have to be returned for revision of some type, and four weeks is too little a time for our editorial staff to give satisfactory consideration to that particular question. I would ask, Mr. Chairman, you make it eight weeks or eliminate it entirely, and we will do it the best we can.

Dr. Bauer: I am sure the Committee would agree with that. I think Dr. Kosmak's remarks are very much to the point. I would move that Section 2 be revised to read:

> "Whenever such paper shall be deemed not acceptable for publication in the New York State Journal of Medicine, it shall be returned to the author as promptly as possible after it is received in the publication office of the State Society."

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: Now, Mr. Speaker, I move the adoption of the Constitution and Bylaws as amended, as a whole.

. . . The motion was seconded. . .

Dr. Reuling: Mr. Speaker and gentlemen, I rise to call your attention to what is an inconsistency that I believe should be corrected for the sake of clarity. If you refer to page 3 of your Constitution as at present written, Article IX, Funds, it says,

> "Funds shall be raised by an annual per capita assessment on each component county society," etc.

If you will turn to page 7 under the Bylaws, Section 2, subparagraph (b), it says, "A member whose dues and assessments are unpaid," etc., and at the top of the next page, "A member whose dues and assessments are unpaid," etc. In the Bylaws it speaks of "dues and assessments" while in the Constitution it speaks only of "assessments." Mr. Speaker, I would, therefore, move for the sake of clarity a reconsideration of Article IX.

Speaker Andresen: It was not considered, so it will not be a reconsideration; it will be an amendment.

Dr. Reuling: If that has not been considered, I will move that as an amendment: That Article IX, on page 3, as at present written, be revised to read: "Funds shall be raised by" cut out the word "an" and leave in "annual per capita," and then insert two words, "dues or," so that it will read:

> "Funds shall be raised by annual per capita dues or assessment on each component county society at a uniform per capita rate throughout the State," etc.

I move that as an amendment.

Dr. Bauer: I second that.

Dr. Schiff: I don't want to waste your time but to my mind such a change is unnecessary. The State contribution is an assessment on page 3. The county charges are dues. I think that distinction was in the minds of the makers of these Bylaws at the time. There is nothing in conflict at all, and where it says in the county society bylaws that we shall pay dues and assessments it means we shall pay our county dues and our State assessment. That is why the State fund is called an annual per capita assessment. I believe the motion is unnecessary. There is no conflict.

Speaker Andresen: Is there any other discussion?

Dr. Rooney: I think it would be well to harmonize the language as it has been proposed by Dr. Reuling because we have had so much in relation to the difference between dues and assessments, with confusion in the Society about this very question of the wording of dues and assessments, that I think the clarification of the language will lead to less confusion. I think it would be advisable if Dr. Reuling's amendment carried, and I hope it will carry.

Secretary Anderton: Your secretary has quite a bit of correspondence with county societies from time to time about dues and assessments, and they are confusing the terms. It would clarify things a great deal if Dr. Reuling's suggestion were enacted. I hope the House will so vote.

. . . There being no further discussion, the amendment was put to a vote and was unanimously carried. . .

Dr. Bauer: Now, for the third time, Mr. Speaker, I will move the adoption of the Constitution and Bylaws as amended as a whole.

Dr. Rooney: I second it.

Speaker Andresen: I would like to call to the attention of the House the need for a two-thirds vote on this. We will try it by voice vote first. If it is not evident that it is two-thirds we will have to have a hand vote. We will try the voice vote first to save time. All in favor signify by saying "Aye"; contrary "No." It is unanimously carried.

I recognize Dr. Holcomb, our vice-speaker.

Dr. Bauer: I have not finished my report.

Speaker Andresen: Then, please continue.

Dr. Bauer: That portion of the president's report relative to a midyear session of the Society has been carefully considered by your Committee. Your Committee feels that further study should be given to this before a decision is made. The Society's finances are now in the red, and an extra session would probably make them still further in the red. The experience of the American Medical Association indicates that midyear sessions are not self-supporting; hence your Committee recommends that no action be taken on this matter for the present.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: The Committee has considered the resolution introduced by Dr. Henry E. McGarvey, of Westchester. This resolution provides that the House of Delegates of the Medical Society of the State of New York take action requiring as one condition for membership in that Society, and in its component county societies, the signing by each member of a constitutional oath and declaration against ideologies which would seek to overthrow the American system of government, and further resolving that the delegates of the Medical Society of the State of New York to the House of Delegates of the American Medical Association be mandated to present a similar proposal to that body for adoption as a membership requirement in all component societies of the American Medical Association. Your Committee feels that this resolution has possible legal complications which the Committee cannot foretell, and with which it does not feel able to cope. It, therefore, recommends that this resolution be referred to the Council for further study and disposition.

I move the adoption of this.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Bauer: I think now, Mr. Speaker, I have covered all of the things which were referred to the Committee, and I move the adoption of the report as a whole, as amended.

Secretary Anderton: I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Bauer: I should like, Mr. Speaker, to thank the two other members of the Committee, Dr. Rooney and Dr. Aaron, and also those members of the Society who took the trouble last summer to write us letters suggesting amendments to the Constitution and Bylaws. Those letters were very helpful to the Committee, and we appreciated them. I also want to thank the gentlemen who took the trouble to come to our Committee meeting yesterday afternoon as it clarified a lot of things, and I am sure we solved them to the satisfaction of all who came.

Dr. Rooney: One word, Mr. Speaker, as just a member of the Committee, I think that the man who deserves most thanks for this thankless task of revision is the chairman of the Committee, and I so move a vote of thanks to the chairman.

. . . The House arose and applauded. . .

Speaker Andresen: The chair recognizes our vice-speaker.

Vice-Speaker Holcomb: I don't think thanks should be confined to Louis Bauer alone. Every member of this House of Delegates realizes well the tremendous number of man hours that this whole committee, Dr. Rooney, Dr. Aaron, and Dr. Bauer had to put in on this. I move a rising vote of thanks be given to the entire Committee.

. . . The House arose and applauded. . .

Speaker Andresen: I am ashamed to say that my judgment in regard to the time it was going to take to adopt this Constitution and Bylaws was slightly in error. I believe we now need a little fresh air. I would suggest a ten-minute recess. You can open the windows and go out on the balcony into the fresh air.

. . . Ten-minute recess. . .

Speaker Andresen: Today is the last day any resolutions can be turned in. If anybody has a resolution, will he just mention it by title, and we will refer it to the proper committee.

Section 89 (See 135)

Division of Fees Between Physicians and Hospitals

Dr. Morris Weintrob, *Kings:* This resolution is concerned with ethics and has to do with the division of fees between physicians and hospitals.

. . . The resolution referred to above is as follows:

> "Whereas, it is a matter of common knowledge that a widespread practice exists in some hospitals of the State of New York through which fees for medical services rendered by practicing physicians in hospitals, for compensation and noncompensation cases and for ward, semiprivate, and private patients, are diverted through various means from the physicians to the hospitals; and
>
> "Whereas, the physicians who render such medical services, whether employed full time by the hospitals or affiliated with the hospital as staff members, are deprived of the fees for such services through contract with the hospital or through an understanding to the end that the hospital receives payment, in whole or in part, for the services so rendered; and
>
> "Whereas, there are an increasingly large number of ward and semiprivate patients who formerly could properly be classed as medical indigents but who, through medical indemnity insurance or compensation coverage, may no longer be properly so classified; and
>
> "Whereas, under subparagraph 2(f) of Section 6514 of the Education Law of the State of New York the license or registration of a physician may be revoked, suspended, or annulled, or a physician may be reprimanded or disciplined if he directly or indirectly participates in the division, transference, assignment, rebate, splitting, or refunding of a fee in connection with the furnishing of medical care, diagnosis or treatment, or service; and
>
> "Whereas, the practice above described is in direct violation of said subparagraph 2(f) of Section 6514 of the Education Law and constitutes at the same time a serious inroad upon the established methods and procedures of the private practice of medicine in New York State and is not in the best interests of the patients or of the practicing physicians, now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York take such action as it may deem proper under the circumstances to discourage and put a stop to such practices on the part of hospitals and physicians in the State of New York."

Speaker Andresen: Referred to the Reference Committee on Report of Council, Part XII, of which Dr. Geis is chairman.

Are there any other resolutions?

. . . There was no response. . .

. . . The following supplementary report was distributed to the members of the House:

Section 90

Supplementary Report of the Subcommittee of the Joint Hospital and Medical Society Committee

A report on Article 25 of the Sanitary Code relating to the care of infants in hospitals and the prevention of infant diarrhea:

The hospitals of the State of New York in spite of considerable expense have cooperated in a very splendid fashion in meeting the requirements of this Article. Of the 226 hospitals involved, 118 have completed the necessary changes in their nurseries and installed the sterilization facilities. Fifty-five are in the process of complying, and 53 will require the full time allowed to complete and make the necessary improvements.

The hospitals are to be complimented for this fine cooperation and a letter to the State Hospital Association indicating the same should be authorized.

Carlton E. Wertz, M.D.

Section 91 (See 81, 101)

Report of Reference Committee on Report of Council, Part XII: Principles of Professional Conduct

Speaker Andresen: There being no other resolutions, we are going to take up now the Principles of Professional Conduct. I am not going to venture an opinion how long that will take, but I hope we will not have the lengthy discussions we had this morning. I am going to ask our vice-speaker, who has been such a sturdy right hand, to go right along and take over the consideration of the Principles of Professional Conduct which Dr. Geis told us last night he would have ready for us to go into paragraph by paragraph today.

Just a moment, I am told that Dr. Weintrob's resolution has to do with medical care insurance rather than entirely with the question of ethics. I, therefore, will take it away from you, Dr. Geis, I hope you won't be too sorry, and turn it over to Part VII, of which Dr. Philbrick is chairman. He has very little to do, only having had about ten resolutions referred to him already.

Dr. Holcomb will now take the chair.

Vice-Speaker Holcomb: I have a very difficult assignment now to fulfill, and I feel a little diffident when I consider the able speakers that have preceded me, so, Dr. Andresen, if I get into too many difficulties I will hold up my hand and shout for help from you, Dr. Reuling, Dr. Bauer, Dr. Rooney, or some of our other good parliamentarians.

Dr. Geis: On the question of Principles of Professional Conduct, we have gone through this whole report as it has been presented, and we have made but one change in the thing as submitted by the original committee. This committee consisted of Dr. Reuling, Dr. Newton, and Dr. Trembley. They showed a lot of forethought in formulating this, and only in one place did we make a change. Do you want me to take it up section by section?

Vice-Speaker Holcomb: Yes.

Dr. Geis: "Chapter I, *General Principles*,

> "Section 1. The prime object of the medical profession is to render service to humanity; reward or financial gain is a subordinate consideration. Whoever chooses this profession assumes the obligation to conduct himself in accord with its ideals. A physician should be 'an upright man, instructed in the art of healing.' He must keep

himself pure in character and be diligent and conscientious in caring for the sick. As was said by Hippocrates, 'He should also be modest, sober, patient, prompt to do his whole duty without anxiety; pious without going so far as superstition, conducting himself with propriety in his profession, and in all the actions of his life.' "

I move the adoption of this section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*The Physician's Responsibility*

"Section 2. The profession of medicine, having for its end the common good of mankind, knows nothing of national enmities or sectarian dissensions. Disease and pain the sole conditions of its ministry, it is disquieted by no misgivings concerning the justice and honesty of its client's cause, but dispenses its peculiar benefits, without stint or scruple, to men of every country, and party and rank, and religion, and to men of no religion at all."

I move the adoption of that section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*Groups and Clinics*

"Section 3. These Principles of Professional Conduct shall apply to physicians as individuals or as members of staffs of hospitals, clinics, colleges, schools, foundations, companies, or groups, by whatever name they may be known."

I move the adoption of that section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*Advertising*

"Section 4. Solicitation of patients, directly or indirectly, by a physician, by groups of physicians, or by institutions or organizations, is unethical. This principle protects the public from the advertiser and salesman of medical care by establishing an easily discernible and generally recognized distinction between him and the ethical physician. Among unethical practices are included the not always obvious devices of furnishing or inspiring newspaper or magazine comments concerning cases in which the physician or group or institution has been, or is, concerned. Self-laudations defy the traditions and lower the moral standard of the medical profession; they are an infraction of good taste and are disapproved."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: Is there any discussion of that section?

. . . After discussion, the question was called for, and the motion was put to a vote and was carried. . .

Dr. Geis: Thank you for the little rest I had with my voice.

"*Educational Information Not Advertising*

"Section 5. Many people, literate and well-educated, do not possess a special knowledge of medicine. Medical books and journals are not easily accessible or readily understandable.

"The medical profession considers it ethical for a physician to meet the request of a component medical society to write, act, or speak for general readers or audiences. The adaptability of medical material for presentation to the public may be perceived first by publishers, motion picture producers, radio, or television officials. These may offer to the physician opportunity to release to the public some article, exhibit, or drawing. Refusal to release the material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation. In such circumstances the physician should be guided by the decision of official agencies established through component medical organizations.

"A physician who desires to know whether, ethically, he may engage in a project aimed at health education of the public should request the approval of the designated officer or committee of his county medical society.

"The most worthy and effective advertisement possible, even for a young physician, especially among his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity. This cannot be forced but must be the outcome of character and conduct. The publication or circulation of simple professional cards is approved in some localities but disapproved in others. Disregard of local customs and offenses against recognized ideals are unethical.

"The promise of radical cures or boasting of cures or of extraordinary skill or success is unethical.

"An institution may use means, approved by the medical profession in its own locality, to inform the public of its address and the special class, if any, of patients accommodated."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: The section is open for discussion. Is there any discussion?

Dr. J. Lewis Amster, *Bronx:* Question of information, in what locality is a specialist permitted to advertise?

Dr. Geis: I do not know. It does not say that.

Dr. Amster: I understand from this section that it is permissible in certain localities to let the public know whether a man is a specialist.

Dr. Geis: I do not know in what localities that is permitted.

Vice-Speaker Holcomb: I think we can answer that by stating it is stated here that that is to be determined by the local medical organization. I believe that would clarify that.

Dr. Amster: I think that this State Society should go on record as being unalterably opposed to having a specialist advertise his specialty, and if that is the custom of certain localities it should be eliminated entirely.

Vice-Speaker Holcomb: That does not apply, does it, to professional cards and things of that kind? I think that is to what you are referring.

Dr. Amster: That applies to everything, professional cards, stationery, or whether a man has a sign saying he is a surgeon or an internist.

Dr. Geis: This does not say whether he may or may not advertise. This specifies professional cards, and of course professional cards means those distributed to his fellow physicians.

Dr. Amster: Those cards may be placed in his office, a patient may pick up a card of that kind to know whether or not the man is a specialist or is not a specialist. Will you kindly read that part with reference to certain localities over again?

Vice-Speaker Holcomb: Are there any further comments on this section?

Dr. Burk: As chairman of the board of censors in New York County, we had considerable discussion last year, if you remember, up in Buffalo relating to certain situations that may arise in certain communities. The consensus of opinion at that time was that each problem was to be left to the local community. Of course, blatant advertising, no matter what form it takes or what shape it takes, I am quite sure would be provided for and taken care of by the board of censors in that particular locale.

Vice-Speaker Holcomb: Are there any further comments or observations on this section?

Dr. Geis: Dr. Amster asked me to read that section again.

Vice-Speaker Holcomb: Will you do that?

Dr. Geis: It says here, "The publication or circulation of simple professional cards is approved in some localities but disapproved in others."

Dr. Amster: That matter of localities should be discussed. Down here in the City of New York, especially in the Bronx—

Vice-Speaker Holcomb: The members in the back of the room cannot hear you at all. Come up here, please, and talk from the microphone so all may be able to hear you and get the benefit of your remarks.

Dr. Amster: This matter of advertising a specialty has come up several times in the borough of the Bronx. It was the consensus of opinion of the board of censors there that no physician should be permitted to specify as to whether he is a surgeon, or an internist, or any other specialist. I understand that in certain parts of the State of New York, especially in the smaller towns, a doctor is permitted to have a sign displayed in his window, "surgeon," or "internist," or anything as it pertains to his specialty. He is permitted I understand by certain county medical societies to add or to have inscribed on his card the type of specialty he is interested in.

I think if this applies to a large town like the City of New York it should apply to every part of the State of New York. A man in a small community is known as a specialist; a man in a large city like New York is not so known, so I think what applies to one county in that regard should apply to all the others.

Vice-Speaker Holcomb: Is there anyone from any of the smaller cities or towns upstate who would like to discuss this matter?

. . . There was no response. . .

Vice-Speaker Holcomb: If not, are you ready for the question?

Dr. Burk: On the question of personal privilege, I respect the gentleman who just spoke with reference to the notations that may be made in regard to a man's specialty, but inasmuch as New York County was mentioned I can assure you that there is no specialist or anybody else who puts any kind of a sign in his window or inside of his office indicating his specialty.

Dr. Amster: I move that the permission to advertise a specialty be deleted from your Reference Committee's report.

Dr. Geis: Your Reference Committee does not authorize any advertising at any time. It does permit a physician to circulate professional cards, because it is approved in some localities. Now if you want to make a motion to limit in what way professional cards may be circulated, that is one question, but we are not authorizing any advertising.

Vice-Speaker Holcomb: There is a motion before the House. Dr. Amster made a motion. Do I hear a second?

. . . The motion was seconded. . .

Vice-Speaker Holcomb: The motion has been seconded. Are there any comments on the motion?

Dr. Davidson: Would you repeat the motion?

Vice-Speaker Holcomb: I could not hear it, so I could not repeat it. Dr. Amster, will you please come up and repeat the motion so the whole House can hear it.

Dr. Amster: I move that no member of a county society be permitted to have inscribed on his card the specialty in which he is interested. I move that that matter be deleted from the report.

Dr. Geis: But it is not in there.

Dr. Amster: You say in some localities it can be done.

Dr. Geis: In some localities they may circulate simple professional cards.

Vice-Speaker Holcomb: There seems to be some misunderstanding. Apparently we are trying to delete something that is not in the report. Dr. Amster still has the floor.

Dr. Amster: I move that the following sentence be deleted, "The publication or circulation of simple professional cards is approved in some localities but disapproved in others." I move that that sentence be deleted.

Vice-Speaker Holcomb: The chair would like to have the opinion of Dr. Reuling on this since he knows something about this particular paragraph. Dr. Reuling, would you perhaps clarify this?

Dr. James R. Reuling, *Treasurer:* There has been a motion that the sentence permitting a permissive card be deleted. In the City of Greater New York I know that the County of Richmond through its comitia minora or legislative body considers it ethical to hand out cards. I believe there is nothing in this that has any dynamite in it. It is a question purely of local rule and for the local county to decide what is permissible and what is not. I think that it would be very wise to leave it in there as a guide to the counties.

Vice-Speaker Holcomb: Thank you! The chair recognizes Dr. Davidson.

Dr. Davidson: Mr. Speaker and gentlemen, I arise to speak against this resolution for this one purpose: It is putting this House of Delegates in the position of telling the component county societies what to do or what not to do, which the original report does not do. It is just taking home rule away from us, so the counties would then be unable to meet local conditions. I think that that has been one of the guiding principles of this Society, that we leave local situations to the county societies.

Dr. Geis: If you pass the amendment that was made, you are going to prevent any man who decides to change his form of practice from sending out a circular or a card to his fellow physicians announcing that he is leaving general practice and has gone into eye, ear, nose, and throat, or something else. You are going to make it unethical for him to announce to his fellow physicians a change in his practice. You are also going to make it unethical for a man to announce to his fellow physicians the removal of his office to a new location. Do we want to tie our hands that much?

Vice-Speaker Holcomb: Are you ready for the vote?

. . . There were calls for the question. . .

Dr. d'Angelo: What is the question?

Vice-Speaker Holcomb: The amendment is to delete the sentence about professional cards. All those in favor of the amendment will say "Aye"; contrary "No." The "noes" have it, and the motion is defeated.

Dr. Geis: I move the original motion that we adopt Section 5 of Chapter I.

. . . The question was called, and the motion was put to a vote and was carried. . .

Dr. Geis: Continuing:

"*Patents, Commissions, Rebates, and Secret Remedies*

"Section 6. An ethical physician will not receive remuneration from patents on or the sale of surgical instruments, appliances, and medicine, nor profit from a copyright on methods of procedures. The receipt of remuneration from patents or copyrights tempts the owners thereof to retard or inhibit research or to restrict the benefits derivable therefrom to patients, the public, or the medical profession. The acceptance of rebates on prescriptions or appliances or of commissions from attendants who aid in the care of patients is unethical. An ethical physician does not engage in barter or trade in the appliances, devices, or remedies prescribed for patients but limits the sources of his professional income to professional services rendered the patient. He should receive his remuneration for professional services rendered only in the amount of his fee specifically announced to his patient at the time the service is rendered or in the form of a subsequent statement, and he should not accept additional compensation, secretly or openly, directly or indirectly, from any other source.

"The prescription or dispensing by a physician of secret medicines or other secret remedial agents, of which he does not know the composition, or the manufacture or promotion of their use is unethical."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: It has been moved and seconded that Section 6 be adopted. Is there any discussion on this section?

. . . After discussion, it was voted that Section 6 be returned to the Committee for clarification. . .

Dr. Edward R. Cunniffe, *Trustee:* I just wanted to make a statement here that, if anything is adopted which contravenes a section of the principles of ethics of the American Medical Association, you will allow men to do something which will be unethical in the American Medical Association, and because of which they may lose their membership in the American Medical Association. You can add as much as you wish, you may make some restrictions, but you cannot absolutely contravene the principles of ethics of the American Medical Association because they have been adopted by the Association and your representatives helped to adopt them.

Vice-Speaker Holcomb: For your information, Dr. Cunniffe is chairman of the Judicial Council of the A.M.A. Section 6 is referred back to the Committee.

Dr. Geis: Continuing:

Evasion of Legal Restrictions

"Section 7. An ethical physician will observe the laws regulating the practice of medicine and will not assist others to evade such laws."

I move the adoption of this section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Vice-Speaker Holcomb: It is now ten minutes of one. We will leave it up to the House whether they wish to go on with this question of the adoption of the Principles of Professional Conduct or whether they wish to adjourn now for luncheon until 2 o'clock.

Chorus: Adjourn now.

. . . On motion, at 12:50 p.m., a recess was declared until 2:00 p.m. . . .

AFTERNOON SESSION

Tuesday, May 9, 1950

The session reconvened at 2:00 p.m.

Vice-Speaker Holcomb: We will begin the afternoon by asking Dr. Geis to report on Section 6 of Chapter 1, having to do with the Principles of Professional Conduct pertaining to patents, commissions, rebates, and secret remedies, which was referred back to his Committee. This section was discussed very thoroughly this morning, and I will ask Dr. Geis to clarify what the Committee has done, and then I will ask for a vote on it. I hope we will be able to limit our debate as much as possible.

Dr. Geis: Your Committee has carefully reconsidered everything that was said this morning, and after a considerable time and spending four fifths of our lunch hour in discussing this, we have decided to make one change in Section 6. That change is at the end of the paragraph changing that period to a comma and adding, "except as provided in Article VI, Section 3, of Chapter III." That is the only change we decided upon. We felt that we could not improve the language of the Committee as originally given, and that we could not change the meaning of the paragraph or the section without opening the field wide open for exploitation; therefore, we were in favor of no change at all.

The argument was made during our meeting that some of these things are being done; therefore, the code of ethics should be changed. My argument against that thing is that murder is being done in this State, but that is no reason for legalizing it.

Vice-Speaker Holcomb: Dr. Geis, do you move the adoption of the section as amended?

Dr. Geis: Yes, I move the adoption of the section as thus amended.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: A motion has been made and seconded that Section 6 as amended by the Committee shall be adopted. The subject is open to discussion. The Chair will recognize Dr. Bernstein.

Dr. Bernstein: I should like to offer the following amendment, which I think would clarify the thing somewhat, in line with the discussion which we held this morning. Continue the wording as it is at the present time, "An ethical physician will not receive remuneration from patents on or the sale of surgical instruments, appliances, and medicine, nor profit from a copyright on methods of procedures, in such manner as may cast discredit on himself or on the medical profession, or when found to be contrary to the best interests of the public." I offer that amendment.

Vice-Speaker Holcomb: That amendment has been offered. Do I hear a second to the amendment?

. . . The amendment was seconded. . .

Vice-Speaker Holcomb: The amendment to the motion is open for discussion. Will anyone speak on the amendment? Hearing no further comment—

Dr. Geis: May I discuss that amendment? The amendment offered was suggested by Dr. Bernstein at our meeting. We listened to it carefully and decided against it. Our main argument against it was that that would leave the interpretation entirely up to the board of censors of each county society, and that would mean possibly sixty-two separate interpretations in this State alone.

As this section is word for word the same as the section as carried in the American Medical Association's code of ethics, if they should amend it this way, and it would have to apply to the entire country, it would lead to over two thousand counties in the union having over two thousand interpretations. We felt that this amendment was absolutely impractical and would lead to no end of discussion over decisions by boards of censors and actions by this body on appeals from those boards of censors. I feel that possibly in a few years we might spend an entire day in this House of Delegates just discussing appeals, if this amendment were adopted.

. . . The amendment as offered by Dr. Bernstein was put to a vote and was declared lost. . .

Vice-Speaker Holcomb: The amendment is lost, so we are now back to the original motion of Dr. Geis, as amended by that Reference Committee during the interim between sessions. Is there any discussion?

. . . The question was called, and the motion was put to a vote and was carried. . .

Dr. Geis: Section 7 was adopted before we adjourned for lunch.

Vice-Speaker Holcomb: Yes.

. . . The following parts of the Principles of Professional Conduct were adopted seriatim, without discussion. . .

"CHAPTER II

"Duties of Physicians to Their Patients

"Standards, Usefulness, Nonsectarianism

"Section 1. In order that a physician may best serve his patients, he is expected to exalt the standards of his profession and to extend its sphere of usefulness. A sectarian or cultist as applied to medicine is one who alleges to follow or in his practice follows a dogma, tenet, or principle based on the authority of its promulgator to the exclusion of demonstration and scientific experience. All voluntarily associated activities with cultists are unethical. A consultation with a cultist is a futile gesture if the cultist is assumed to have the same high grade of knowledge, training, and experience as is possessed by the doctor of medicine. Such consultation lowers the honor and dignity of the profession in the same degree in which it elevates the honor and dignity of those who are irregular in training and practice."

"Guarding the Patient's Confidence

"Section 2. Every patient should be treated with attention and consideration, and the confidences which physicians receive should be guarded with the most scrupulous fidelity and honor. The obligation extends beyond the period of professional services; none of the privacies of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by physicians except when required by statute law or by the courts."

"Prognosis

"Section 3. The physician should be a minister of hope and comfort to the sick; however, he should not fail to give timely notice of dangerous manifestations to the family or friends of the patient and also to the patient, when necessary."

"The Patient Must Not Be Neglected

"Section 4. A physician is free to choose whom he will serve. He should, however, respond to any request for his assistance in an emergency or whenever temperate public opinion expects the service. Once having undertaken a case, the physician should not neglect the patient, nor should he withdraw from the case without giving notice to the patient, his relatives, or his responsible friends sufficiently long in advance of his withdrawal to allow them to secure another medical attendant."

"CHAPTER III

"Duties of Physicians to Each Other and to the Profession at Large

"Article I—Duties to the Profession

" Upholding the Honor of the Profession

"Section 1. A physician is expected to uphold the dignity and honor of his vocation."

"Membership in Medical Societies

"Section 2. For the advancement of his profession, a physician should affiliate with medical societies and contribute of his time, energy, and means so that these societies may represent the ideals of the profession."

"Safeguarding the Profession

"Section 3. Every physician should aid in safeguarding the profession against admission to it of those who are deficient in moral character or education."

"Section 4. A physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special duly appointed committees on ethical relations, provided such a course is possible and provided, also, that the law is not hampered thereby. If doubt should arise as to the legality of the physician's conduct, the situation under investigation may be placed before officers of the law, and the physician-investigators may take the necessary steps to enlist the interest of the proper authority."

"Article II—Professional Services of Physicians to Each Other

"Dependence of Physicians on Each Other

"Section 1. As a general rule, a physician should not attempt to treat members of his family or himself. Consequently, a physician should cheerfully and without recompense give his professional services to physicians or their dependents if they are in his vicinity."

"Compensation for Expenses

"Section 2. When a physician from a distance is called to advise another physician about his own illness or about that of one of his family dependents, and the physician to whom the service is rendered is in easy financial circumstances, a compensation that will at least meet the traveling expenses of the visiting physician should be proffered him. When such a service requires an absence from the accustomed field of professional work of the visitor that might reasonably be expected to entail a pecuniary loss, such loss may, in part at least, be provided for in the compensation offered."

"One Physician in Charge

"Section 3. When a physician or a member of his dependent family is seriously ill, he or his family should select one physician to take charge of the case. The family may ask the physician in charge to call in other physicians to act as consultants."

"Article III—Duties of Physicians in Consultations

"Consultations Should Be Encouraged

"Section 1. Physicians should request consultations in perplexing cases, and the attending physician should cheerfully consent to a consultation when desired by the patient or his representative."

"Conduct in Consultations

"Section 2. In consultations no insincerity, rivalry, or envy should be indulged. All due respect should be observed toward the physician in charge of the case, and no statement or remark should be made which would unjustly impair the confidence reposed in him."

"Punctuality

"Section 3. The utmost punctuality should be observed by physicians in meeting for consultation; only a rare emergency should interfere with such an engagement."

"Patient Referred to Consultant

"Section 4. When a patient is sent to a consultant and the physician in charge of the case cannot accompany the patient, the physician in charge should provide the consultant with a history of the case, together with the physician's opinion and outline of the treatment, or so much of this as may be of service to the consultant. As soon as possible after the consultant has seen the patient, he should address the physician in charge and advise him of the results of the consultant's investigation. The opinions of both the physician in charge and the consultant are confidential and must be so regarded by each."

"Discussions in Consultation

"Section 5. After the physicians called in consultation have completed their investigations, they and the physician in charge should meet by themselves to discuss the course to be followed. Statements should not be made nor should discussion take place in the presence of the patient, his family, or his friends, unless all physicians concerned are present or unless all of them have consented to another arrangement."

"Responsibility of Attending Physician

"Section 6. The physician in charge of the case is responsible for treatment of the patient. Consequently, he may prescribe for the patient at any time and is privileged to vary the treatment outlined and agreed on at a consultation whenever, in his opinion, such a change is warranted. However, after such a change, it is best to call another consultation; then the physician in charge should state his reasons for departing from the course decided at the previous conference. When an emergency occurs during the absence of the physician in charge, a consultant may assume authority until the arrival of the physician in charge."

"Disagreement in Consultation

"Section 7. It may happen that the attending physician and the consultant cannot agree in their views of the case or of the treatment to be pursued; with the consent of the patient another consultant may be called."

"Consultant and Attendant

"Section 8. When a physician has acted as consultant in an illness, he should not become the physician in charge in the course of that illness, except with the consent of the physician who was in charge at the time of the consultation."

Dr. Geis: Mr. Vice-Speaker, I notice now that the reference committee on Dr. Kosmak's report is ready, and with your permission I will yield to the chairman of that committee.

Section 92 (See 42)

Report of Reference Committee on Report of Council, Part XI: Membership, Public Relations Committee

Dr. Eugene H. Coon, *Nassau:* This Committee had five resolutions referred to it.

The first resolution we will report on is the one introduced by Dr. Charles Sandler, of Bronx County Medical Society. There were two resolveds in it:

> "*Resolved*, that the Public Relations Committee of the New York State Medical Society be increased to include representatives on a geographic basis; and be it further
>
> "*Resolved*, that this increased membership include a greater percentage of representatives from county societies where population density necessitates more active and intensive public relations programs."

This Reference Committee approves of this resolution and moves its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 93 (See 29, 99)

Report of Reference Committee on Report of Council, Part XI: Distribution of Medical Directory

Dr. Eugene H. Coon, *Nassau:* The second resolution was introduced by Dr. Norman S. Moore, of the Tompkins County Medical Society, subject "Distribution of the *Medical Directory*";

> "*Be it resolved*, that the *Directory* of the physicians of the State of New York be no longer dispensed free to membership of the State Society, and that only as many copies be printed as can be sold to physicians, libraries, and other persons who have use for the *Directory*."

Your Reference Committee finds that it is impractical, if not impossible, to determine the number of copies to be printed. It would be difficult to make contracts for advertising, printing, etc. We recommend the disapproval of this resolution.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 94 (See 27)

Report of Reference Committee on Report of Council, Part XI: Publishing of Council and Committee Minutes in JOURNAL

Dr. Eugene H. Coon, *Nassau:* The third resolution, again from Tompkins County, introduced by Dr. Moore:

> "*Be it resolved*, that the proceedings of the Council and other important committee minutes of the Society be summarized and presented in editorial form in the New York State Journal of Medicine for the enlightenment of the members of the Medical Society of the State of New York."

Your Reference Committee finds that the proceedings of the Council and reports of the Council committees are already summarized in the Journal. Last year 42 pages were given to 10 meetings of the Council.

We recommend disapproval of this resolution as unnecessary.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 95 (See 28)

Report of Reference Committee on Report of Council, Part XI: Publishing of Summary of Minutes of House of Delegates

Dr. Eugene H. Coon, *Nassau:* The fourth resolution, also from Tompkins County, and introduced by Dr. Moore:

> "*Be it resolved*, that the proceedings of the House of Delegates be summarized and published as a digest in the form of a news letter similar to that now in use by the American Public Health Association."

The verbatim proceedings of the House of Delegates are now published with a complete index. To publish a digest would impose upon an already too busy staff and low treasury a seemingly unnecessary burden.

We recommend disapproval of this resolution.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 96 (See 35)

Report of Reference Committee on Report of Council, Part XI: Information Concerning the National Education Campaign of A.M.A.

Dr. Eugene H. Coon, *Nassau:* The last resolution was introduced by Dr. C. J. F. Parsons, from Westchester County:

> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York memorialize the American Medical Association to urge its national campaign headquarters to channel information through county and state societies in the form of progress reports to be issued at least four times a year for local distribution to members of the profession through the various media available to the Society."

Your Committee recommends the substitution and approval of the following resolution:

> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York request the Board of Trustees of the American Medical Association to have its national campaign headquarters issue quarterly reports to the several state medical societies and their component county societies."

I move the adoption of that recommendation.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 97

Report of Reference Committee on Report of Council, Part XI: Publication

Dr. Eugene H. Coon, *Nassau:* The Reference Committee on Report of Council, Part XI, on Publication, Public Relations, and Medical Film Review has the honor to submit the following report:

Publication: Your Committee has considered the report of the Council Committee on Publication and notes with approval the steady progress of the Journal in the greater efficiency of its editorial office. The office now handles not only the preparations of manuscripts for printing and "the make-up job" but also a heavy correspondence, an information service, and large orders for reprints. This greater efficiency is also shown in the printing of papers read at the annual meeting, in the issues prior to February 15 as compared to April in last year.

The better quality of paper used and the economic inflation have naturally increased the cost of publishing the Journal. Your Committee commends the Publication Committee for its sound financial policy. No one should expect the surplus shown in former years before the allocation of dues. A deficit of approximately $5,000 shows a very careful handling of funds. Mr. Dwight Anderson, in charge of the advertising department, can well be proud of a net income of $179,698 from advertising.

This Committee was interested in the statistical summaries for 1945, 1947, and 1949 relating to Journal publication. The increase in the number of articles published from 223 in 1947 to 354 in 1949 indicates further progress in wider fields of usefulness. We feel that the increase in the number of authors represented from 291 in 1947 to 527 in 1949 is even more significant. In these days when American medicine is fighting for the American way of life the physicians of New York State must use their New York State Journal of Medicine as one very important method of speaking to each other and to the public. It should be an organ through which many speak—not a few. We are fortunate in having had the wise leadership of George W. Kosmak for sixteen years as a member of the Publication Committee and as managing editor, and Laurance D. Redway for ten years as literary editor and later as assistant managing editor. They and their advisers have kept the Journal to a high standard. In it medicine has always spoken with dignity and truth. They have welcomed the articles of others but have studied them most carefully. The brief report of the Publication Committee that it "met monthly except during the summer months and the editorial group met almost weekly to discuss Journal contents and editorial matters" merits more than a passing glance. These busy men have given untold hours of painstaking work to our Journal, faithfully carrying on the tradition of those who worked before them. We approve of a special commemorative issue for January 1, 1951, to celebrate the fiftieth consecutive year of publication of the Journal.

Your Committee approves the efforts of the Publication Committee on the new edition of the *Directory* and joins with the Committee in the hope that the changes in the production of the book will result in reducing the necessary deficit attached to its publication.

In closing, we recommend that the House of Delegates continue this Committee and its membership as previously established.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 98

Report of Reference Committee on Report of Council, Part XI: Public Relations

Dr. Eugene H. Coon, *Nassau:* The report of the Council Committee on Public Relations is the report of a committee which has faced a tremendous task and has met the challenge. The finest tribute the Reference Committee can pay to it is to voice a sincere "well done." We know the entire membership of the Medical Society of the State of New York echoes our words. We have all been constantly aware of the work of the speakers bureaus, the arrangements for the adoption of suitable resolutions, the posters and the tons of literature sent out from campaign headquarters. The speakers' training sessions held by the State and by some of the counties were excellent. They should be continued. We also commend the policy of reprinting editorials such as "Uncle Sam, M.D." from the *New York Daily News*. There is great value in emphasizing the opinions on medical problems as expressed by the layman.

The recent report of a Gallup poll, which indicates that the number of people who now feel that the administration's compulsory health insurance bill is desirable are now in the minority, is proof of the effectiveness of the campaign of the Public Relations Committee; however, victory is not assured. Your Reference Committee wishes to draw special attention to certain phases of the report urging continued emphasis on these features this coming year:

1. Last year eight counties had formed speakers bureaus. Fifty-three had none. This year the report states that more than 28 county societies have speakers bureaus, whose members are prepared to discuss the national health bill before public audiences. A fine record! A great stride forward! Perhaps further aid and encouragement will result in speakers bureaus in the other counties.

2. The Public Relations Bureau issued a total of 97 releases to the press this past year on a variety of subjects such as postgraduate education meetings, war memorial awards, as well as opposition to compulsory health insurance. Your Committee would continue this policy of keeping the work of the doctor before the public in this manner. It is as important to show what the doctor is for and what he is doing as it is to depict him in opposition to compulsory health insurance. The doctor is too busy a man to be a good publicity man for himself.

3. We approve of the speakers bureau arranging for doctors to speak on nonmedical subjects before State-wide groups and on radio and television programs. Your report shows that the doctor has proved his ability as a speaker. He cannot continue to face the same audiences and talk against socialization of medicine, but he can continue to talk on other subjects both medical and nonmedical. Your Committee has been impressed by the increasing number of articles appearing in nonmedical magazines on medical subjects and with how widely they are read. Laymen evidently welcome medical information. They complain that the doctor in his office is too busy to answer their questions. We believe that the speakers bureau offers a continuing field of influence for the physician in his community. He should not neglect it.

This Committee concurs with the report on the Woman's Auxiliary "that it is becoming more and more apparent that the Woman's Auxiliary is exerting an important influence in promoting the purposes of the Society—that it has developed into a tower of strength."

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 99 (See 93)

Report of Reference Committee on Report of Council, Part XI: Medical Film Review

Dr. Eugene H. Coon, *Nassau:* Your Reference Committee has studied the report of the Council Subcommittee on Medical Film Review and believes that this work should be continued along its present lines. The general function of the Subcommittee, as defined by Dr. Norris, its chairman, is clearly stated. It is to establish a policy in regard to both the selection and promotion of medical educational films. We believe this is a worthy project for the Medical Society of the State of New York. The setting up of six local film review boards throughout the State is a necessary step in beginning organization. The recognition that there should be different points of view represented in these evaluating groups shows careful thought, and we agree that such a group should function as a unit and should remain anonymous in order to avoid the criticism of prejudice.

This is clearly pioneer work and may become, as stated, a program of national significance. A film library is of use only if it is of real value as a teaching instrument. We agree that such an evaluation of films will require time, travel, and lay assistance. It is obvious that expenses for this program should not continue to be met by the members of the Subcommittee.

Your Reference Committee recommends to the Council that it confer with the Subcommittee on Medical Film Review and determine what financial assistance can be given this committee for its work during the coming year.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Coon: Now I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Thank you, Dr. Coon.

Dr. Coon: May I take this opportunity to thank the four members of my committee for their very kind, courteous, and helpful part in preparing the report.

Dr. George W. Kosmak, *Editor:* Mr. Speaker, may I have just one word of comment to make on this report?

Speaker Andresen: Certainly!

Dr. Kosmak: I am sure that the Publication Committee is very appreciative of the work of the Reference Committee in presenting this, to us at least, very favorable report. Among the resolutions that were brought up were those introduced by Dr Moore of Tompkins, in which reference is made to the distribution of the *Directory*.

I will admit that I, as one—and I am sure the members of my publication committee—was laboring under the impression that every member of the State Society was entitled to a copy of the *Directory* and to a copy of the Journal of the Medical Society

LIBRARY OF THE
COLLEGE OF PHYSICIANS
OF PHILADELPHIA

of the State of New York. In fact, I was under the impression that this was one of the things which every county society could hold forth as a stimulation for a man to become a member. Nowhere in the Constitution do I find, on careful reading of that, that there is any reference to that matter, so I think it is a bit of information that should be broadcast in some form or other. Therefore, Mr. Chairman, I would like to suggest that this matter be referred to the Council of the Society for the dissemination of a definite statement on this particular subject.

Speaker Andresen: Thank you, Dr. Kosmak. I am sure your suggestion will be followed by the Council.

I would like to call for a rising vote of thanks to Dr. Kosmak and his staff for the very fine work they have done and for the wonderful Journal they have produced for us.

. . . The members of the House arose and applauded. . .

Section 100

Remarks by State Commissioner of Health Hilleboe

Speaker Andresen: We have in our midst a good friend of the Medical Society of the State of New York, an indefatigable worker for the public health, and one who by our vote this morning is a member of this House. I will ask our president, Dr. Masterson, to introduce the State commissioner of health.

President Masterson: May I have the privilege of yielding to our distinguished treasurer, Dr. Reuling.

Dr. James R. Reuling, *Treasurer:* Members of the House of Delegates, I don't know why your president should put me on the spot like that. It is no spot to be in because I have known the commissioner of health of the State of New York for many years, and I take a great deal of pleasure in introducing to you Commissioner Hilleboe.

. . . The delegates arose and applauded. . .

Dr. Herman E. Hilleboe: Dr. Reuling, Mr. Speaker, and guests, I greatly appreciate the honor that you have conferred upon me today, and I will try to do in every way whatever I can to prove worthy of your trust and your confidence.

Ever since I started in general practice twenty years ago in a little town of about four hundred out in Minnesota, I have tried to help build the medical society; and I think that I have done it because it has been for the common good of doctors, which in turn can very quickly be translated into the common good of the families under our care.

As a member of your House of Delegates, I shall continue to advance the cause of free enterprise in medicine (*applause*), and I will assure you that I will use all of my official and professional resources to preserve the structure of private practice and public health that we now enjoy.

In the troubled days ahead of us the private practitioners and those of us in the field of public health must join hands to prepare for any emergency. I think it is quite essential that we clear all of the channels of communication, so that we can present a united front against any attack both from within—and I think you know what I mean—and from without.

I should like to say in conclusion simply that, as your commissioner of health and one of the few nonpolitical appointees in the Governor's cabinet, I pledge my full support to the principles of American medicine practiced by free men.

Thank you!

. . . There was a huge burst of applause. . .

Section 101 (See 9, 81, 91)

Report of Reference Committee on Report of Council, Part XII: Principles of Professional Conduct (Continued)

Vice-Speaker Holcomb: Dr. Geis will now continue with his report on the Principles of Professional Conduct, starting in with Article IV, Section 1.

Dr. Geis: That is Chapter III, Article IV, Section 1:

. . . The following parts of the Principles of Professional Conduct were adopted seriatim, without discussion. . .

"Article IV—Duties of Physicians in Cases of Interference

"Misunderstandings To Be Avoided

"Section 1. A physician, in his relationship with a patient who is under the care of another physician, should not give hints relative to the nature and treatment of the patient's disorder, nor should a physician do anything to diminish the trust reposed by the patient in his own physician. In embarrassing situations, or whenever there seems to be a possibility of misunderstanding with a colleague, a physician should seek a friendly interview with his fellow."

"Social Calls on Patient of Another Physician

"Section 2. When a physician makes social calls on another physician's patient, he should avoid conversation about the patient's illness."

"Services to Patient of Another Physician

"Section 3. A physician should not take charge of, or prescribe for, another physician's patient during any given illness (except in an emergency) until the other physician has relinquished the case or has been formally dismissed."

"Criticism To Be Avoided

"Section 4. When a physician does succeed another physician in charge of a case, he should not disparage, by comment or insinuation, the one who preceded him. Such comment or insinuation tends to lower the confidence of the patient in the medical profession and so reacts against the patient, the profession, and the critic."

"Emergency Cases

"Section 5. When a physician is called in an emergency because the personal or family physician is not at hand, he should provide only for the patient's immediate need and should withdraw from the case on the arrival of the personal or family physician. However, he should first report to the personal or family physician the condition found and the treatment administered."

"Precedence When Several Physicians Are Summoned

"Section 6. In cases of sudden illness or accidents when several physicians are summoned, the physician acting in such emergency should request that the family physician be called and, upon his arrival, should withdraw in his favor."

"A Colleague's Patient

"Section 7. Whenever a physician requests another physician to attend his patients during his temporary absence from his practice, professional courtesy requires the acceptance of such appointment if consistent with his other duties. The physician acting under such an appointment should give the utmost consideration to the interests and reputation of the absent physician. All such patients should be restored to the care of the latter upon his return."

"*Substitute in Obstetric Work*

"Section 8. When a physician attends a woman who is in labor because the one who was engaged to attend her is absent, the physician summoned in the emergency should relinquish the patient to the first engaged, on his arrival. The one in attendance is entitled to compensation for the professional services he may have rendered."

"*Article V—Disputes Between Physicians*

Arbitration

"Section 1. Whenever there arises between physicians a grave difference of opinion, or of interest, which cannot be promptly adjusted, the dispute should be referred for arbitration, preferably to an official body of a county medical society."

"*Article VI—Compensation*

"*Limits of Gratuitous Service*

"Section 1. Indigency of a patient and the obligation of physicians to attend one another and the dependent members of the families of one another should command the gratuitous services of a physician. Institutions and organizations for mutual benefit, or for accident, sickness, and life insurance, or for analogous purposes should meet such costs as are covered by the contract under which the service is rendered."

"*Conditions of Medical Practice*

"Section 2. A physician should not dispose of his services under conditions that make it impossible to render adequate service to his patients, except under circumstances in which the patients concerned might be deprived of immediately necessary care."

"*Contract Practice*

"Section 3. Contract practice as applied to medicine means the practice of medicine under an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision, or individual, whereby partial or full medical services are provided for a group or class of individuals on the basis of a fee schedule, or for a salary or for a fixed rate per capita.

"Contract practice per se is not unethical. Contract practice is unethical if it permits of features or conditions that are declared unethical in these Principles of Professional Conduct or if the contract or any of its provisions causes deterioration of the quality of the medical services rendered."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: It has been regularly moved and seconded that Section 3 of Article VI be adopted. Is there any discussion?

Dr. Aaron Kottler, *Kings:* Mr. Speaker, ladies and gentlemen, the Medical Society of the State of New York I believe is incorporated under the laws of the State of New York. The attorney general of the State of New York determines what is legal and what is not legal as far as the interpretation of the law is concerned. The attorney general and the higher courts of this State have ruled on several different occasions that contract practice is illegal.

A reference given to me by the counselor or the attorney for the Department of Education is a case *People vs. Woodbury Dermatology Institute, 192 N.Y. 455* (if that means anything to you) in which he prosecuted this corporation for practicing medicine. The defense was that a corporation was not a person within the meaning of the law regulating medical practice. It was held by the higher courts that a corporation may not practice medicine.

I have before me as recent a letter as December 6, 1949, which is a communication sent to the editor of the publication of the Physicians Guild of Kings County from the Department of Law of the State of New York, signed by Sidney Tartikoff, who is the assistant attorney general in charge of the Education Bureau, in which he states—and I will just read the pertinent item—"No corporation may practice either medicine or physiotherapy."

If we are a medical society, and the laws of this State under which we are incorporated state that such practice is illegal, therefore, anything that is illegal we must consider unethical. Only as recently as 1947 a voluntary health insurance corporation was formed to go into contracts with doctors to pay them for services rendered to policyholders under their plan, and under the terms of the law the attorney general ruled that it could not be done; therefore, a special bill was introduced at that time known as the Griffith Bill (S. 741) of 1947, which was signed by the Governor on April 10, 1947, which bill gave this corporation a special dispensation. It reads like this: "a corporation organized under article 9-c of the insurance law from employing duly licensed physicians or from entering into contracts with duly licensed physicians or with partnerships or groups of duly licensed physicians to practice medicine on its behalf for persons insured under its contracts or policies." In other words, the intent is this, that contract practice is illegal. If it is illegal, it is unethical. Therefore, I make the following amendment to the report: That contract practice is unethical except where it is permitted by the laws of the State of New York.

. . . The motion was seconded. . .

Dr. Reuling: I am wondering whether Dr. Kottler is considering this in its true light. Every employe of the State Department of Health has a contract. Every man who works as a chief medical examiner for a life insurance company has a contract. Every man who is employed in industry has a contract under the meaning of this phraseology.

Unfortunately, words mean different things. There can be a group who are gotten together of physicians under an agent. The group practice is medicine, and that is not contrary to law. The principles of ethics should state our views as they apply to contract practice. I speak against the amendment.

Dr. Burk: As you know, we have a comparable situation with reference to advertising. Advertising is, of course, legal, but it is not ethical. Now you are drawing hairs from the standpoint of what you are going to put before you as illegal and as unethical. I think your Committee has given the subject sufficient study to be able to have us act. I feel under the suggestion made that the practice as described is unethical—that should be our guiding factor rather than going into the situation from a legal standpoint.

Dr. Rooney: There is only one thing in relation to the law that is binding, and that is it states no corporation shall practice medicine in the State of New York. A corporation is definitely defined and must be authorized by the Secretary of State. It must receive a license to do business as a corporation in this State to be assumed to be a corporation. There is no provision against the definite contractual relationship of any physician and his entrance into this contractual relationship. A group is an individual partnership and is not a corporation. I hope that the recommendation of the Committee will be sustained.

Vice-Speaker Holcomb: Are you ready for the question?

Member: What is the question?

Vice-Speaker Holcomb: The question is on Dr. Kottler's amendment limiting the context except as provided under the laws of the State of New York.

. . . The question was called, and the motion was put to a vote and was declared lost. . .

Dr. Geis: I move the adoption of the original motion.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*Free Choice of Physician*

> "Section 4. Every patient is entitled to free choice of physician. Free choice of physician is defined as that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patients and physicians."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: It has been regularly moved and seconded to adopt Section 4. Is there discussion?

Dr. Bernstein: Dr. Hilleboe about a few minutes ago told us how he felt about freedom of the physician and freedom of medical practice. Well, how about the freedom of the patients? To my mind there is nothing that I know of that has ever been more precious than the freedom to choose one's grocer, one's doctor, one's father confessor, as I think I said before this morning.

With all due respect to all concerned, this section is a very unclear one, and it leaves the thing hanging in midair. Who is to decide what is consistent with usual conditions of employment? We in the county society? We in the State Society? We in the American Medical Association? How and by whom is that to be determined?

I should like to offer the following substitution: "The right of the patient freely to choose his doctor must be preserved and maintained. Nothing in any individual or group method of practice must be permitted to interfere with this right."

Dr. Davidson: I second that.

Vice-Speaker Holcomb: Are there any comments on Dr. Bernstein's amendment?

. . . The question was called, and the motion was put to a vote and was carried. . .

Dr. Geis: Continuing:

"*Commissions*

> "Section 5. When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, the giving or receiving of a commission by whatever term it may be called or under any guise or pretext whatsoever is unethical."

Vice-Speaker Holcomb: I wish to call your attention to the fact, before this is brought up, that Section 4, which was just amended, was not adopted as amended. Would you so move?

Dr. Geis: Yes, I make a motion that Section 4 as amended be adopted.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Vice-Speaker Holcomb: Now I presume you move the adoption of Section 5?

Dr. Geis: Yes, I so move.

. . . The motion was seconded, and, as there was no discussion it was put to a vote and was unanimously carried. . .

Dr. Geis: In place of the Section 6, as printed in our Journal, we offer the following substitute:

> "Except where permitted by law and only in the manner permitted and to the extent permitted by law a physician should not dispose of his professional services or attainments to any hospital, lay body, organization, group, or individual by whatever name called or however organized under terms or conditions which permit exploitation of the services of the physician for the financial profit of the agency concerned. Such a procedure is beneath the dignity of professional practice and is harmful alike to the profession of medicine and the welfare of the people."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: Are there any comments or questions on the substitution? I think this should have some discussion.

Dr. Joseph C. O'Gorman, *Erie:* For the benefit of the assembly and to clarify it, this resolution was introduced by Erie County Medical Society to be incorporated into this Section 6. Section 6 of the code of professional ethics, captioned "Purveyal of Medical Service," deals with physicians who sell their professional talents to hospital groups and other organizations. Section 6514 of the Education Law also deals with the same subject matter. Section 6 of the code of professional ethics, however, falls far short of the provisions contained in Section 6514 of the Education Law. The purpose of the resolution is to incorporate in Section 6 of the code of professional ethics the substance of the pertinent provisions of Section 6514 of the Education Law thus making it more specific and definite. It should be noted that in this resolution which we presented to the Reference Committee Section 6 in the code of professional ethics specifically recognizes the exceptions stated in Section 6514 of the Education Law. Under the Education Law they license you so all that this addition to Section 6 means is, merely as a starter we are going to have this. We have reason to feel we will have it also in the constitution and bylaws of the Medical Society of the County of Erie for the purpose that when you want to discipline a man, let us say expulsion, and you go into court, you cannot do it unless it is in your constitution and bylaws specifically stated. That is the reason for this resolution to amend Section 6 by incorporating the facts or the substance of Section 6514 of the Education Law. Does that make it clear? As it is, it could be worded a little differently, but we are very grateful the Reference Committee agreed to at least this.

Vice-Speaker Holcomb: Thank you, Dr. O'Gorman.

Are you ready for the question?

Dr. Geis: Did he want to make an amendment?

Vice-Speaker Holcomb: No, he just amplified the reason for the Reference Committee's proposal.

Dr. Alfred P. Ingegno, *Kings:* Mr. Chairman, I am not in disagreement with the intent of the amendment, but if you read the amendment of the section as it is worded now in a different way what you do is say that a physician may dispose of his qualifications in a way which would permit exploitation of his services provided it is legal, which to me does not sound like good wording for a section. I would, therefore, recommend that the Committee reword it in some way which does not make it sound in that fashion.

Dr. O'Gorman: We have that note, and quite agree with Dr. Ingegno, but we did not want to take too much time up on it. We thought it could be ironed out later, but as it is now, as Dr. Ingegno states, it means that doctors should not be exploited except as permitted by law. The phraseology of our resolution emphasizes the fact that the law does not permit exploitation.

Chorus: No.

Vice-Speaker Holcomb: Will someone else express himself on this matter before it is brought to a vote?

Dr. Alfred M. Hellman, *New York:* I would like to ask as a point of information is a full-time man in an institution who is the head of a laboratory, x-ray, or pathology department being exploited?

Vice-Speaker Holcomb: I would say no because that would come under the present law, isn't that true?

Dr. Geis: I would say yes.

Dr. Rooney: I think it is very important that you should have the language absolutely clear and understandable and not subject to misinterpretation. I feel that the thing we had better do about this—and it will only take a matter of five minutes—is for the Committee a little later on to clarify this so everybody will understand it, and in the event of our ever having to use it, that it will be clear to anybody so that he who runs may read. I, therefore, move as a substitute that we recommit this to the Reference Committee for subsequent report.

. . . The motion was seconded. . .

Dr. Geis: May I speak before you vote on this motion? Gentlemen, the only change we have made in this from that as printed in your book that you all have in front of you is that we have taken the first letter which is a capital and made it a small letter "a" and put in front of that "Except where permitted by law and only in the manner permitted and to the extent permitted by law." We have put those words in front of that section as published. I don't know how, if we are going to put this part in, as some of the members from Erie County want it put in, we can clarify those few words that we put in because all it says is "Except where permitted by law and only in the manner permitted and to the extent permitted by law," and then the rest of it is exactly as it is right in the published form.

. . . There being no further discussion, the motion to recommit was put to a viva voce vote, and, as there was doubt as to the outcome, it was put to a standing vote, and was declared lost. . .

Vice-Speaker Holcomb: The motion to recommit is lost.

Now you are going to vote on the wording as it has been submitted by the Reference Committee. Are you ready for the question?

. . . The question was called, and the motion was put to a vote and was carried. . .

Dr. Geis: Continuing:

"CHAPTER IV

"*The Duties of Physicians to the Public*

"*Physicians as Citizens*

"Section 1. Physicians, as good citizens, possessed of special training, should promote the health of the community wherein they dwell. They should bear their part in enforcing the laws of the community and in sustaining the institutions that advance the interests of humanity. They should cooperate especially with the proper authorities in the administration of sanitary laws and regulations."

I move the adoption of this section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*Public Health*

"Section 2. Physicians should enlighten the public concerning quarantine regulations and measures for the prevention of epidemic and communicable diseases. At all times the physician should notify the constituted public health authorities of every case of communicable disease under his care, in accordance with the laws, rules, and regulations of the health authorities. When an epidemic prevails, a physician must continue his labors without regard to the risk to his own life."

I move its adoption.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"Section 3. Physicians should recognize and promote the practice of pharmacy as a profession and should recognize the cooperation of the pharmacist in education of the public concerning the practice of ethical and scientific medicine and pharmacy."

I move its adoption.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: Are there any comments?

Dr. Burk: I have one comment to make, and that relates to the fact that I hope that the Committee has taken into consideration that these pharmacists are all licensed pharmacists. You have many pharmacists who are practicing under the supervision of licensed pharmacists. I hope our chairman will accept that amendment.

Dr. Davidson: I second that.

Vice-Speaker Holcomb: Will you accept the amendment?

Dr. Geis: What is it?

Dr. Burk: Put the word "licensed" in.

Dr. Geis: Where are you going to put that word "licensed", Dr. Burk?

Vice-Speaker Holcomb: "Licensed pharmacist."

Dr. Burk: The third line.

Dr. Geis: "Recognize the cooperation of the licensed pharmacist"; in other words in the third line put in the word "licensed" between "the" and "pharmacist"?

Dr. Burk: That is right, licensed in the State of New York.

Dr. Geis: All right.

. . . The amendment was put to a vote and was carried; then the motion as amended was put to a vote and was carried. . .

Vice-Speaker Holcomb: The section is adopted as amended.

Dr. Geis: Continuing:

"*Conclusion*

"These Principles of Professional Conduct have been and are set down primarily for the good of the public and should be observed in such a manner as shall merit and receive the endorsement of the community. The life of the physician, if he is "capable, honest, decent, courteous, vigilant, and a follower of the Golden Rule, will be in itself the best exemplification of ethical principles."

"*Enforcement of the Principles of Professional Conduct*

"Component county medical societies should cooperate with the properly constituted authorities in the enforcement of the laws of the State of New York and of their respective localities, relating to the public health and to the practice of medicine and should report promptly to such authorities any evidence received by them indicating any violation of such laws. The commission of an act or acts by a physician which would subject him to reprimand or discipline or which would subject his license to practice medicine to revocation, suspension, or annulment shall constitute a violation of these Principles of Professional Conduct."

I move the adoption of those.

Vice-Speaker Holcomb: This is subject matter. I don't think it needs formal action.

Dr. Geis: That definitely does.

Speaker Andresen: Yes, you will have to take a vote on those.

Vice-Speaker Holcomb: Has the motion been seconded?

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried. . .

Vice-Speaker Holcomb: Those two paragraphs are adopted.

Dr. Geis: Continuing:

"*Amendments or Alterations*

"Any component county medical society may adopt other or amend or alter these regulations respecting professional conduct, binding only upon its own members if not inconsistent or in conflict with these Principles of Professional Conduct, or with the Constitution and Bylaws of the Medical Society of the State of New York."

I move the adoption of this portion.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"*Enforcement, Discipline, and Punishment*

"Each component county medical society is charged with the duty of carrying out and enforcing, within its jurisdiction, the terms and provisions of these Principles of Professional Conduct. Any breach or infraction of any one or more of the terms or provisions of these Principles of Professional Conduct, or of any one or more of the terms or provisions of any further or additional regulations respecting professional conduct adopted as herein provided by any component county medical society, shall subject the offender to and shall be sufficient cause for discipline. Each component county medical society, through bylaws, provisions adopted in accordance with its own constitution and bylaws and in accordance with the Constitution and Bylaws of the Medical Society of the State of New York, shall (*a*) fix and determine the degree or degrees of discipline and the nature and extent of the penalty or punishment which may be imposed and shall (*b*) adopt its own rules and regulations of methods and procedure respecting all disciplinary investigations, proceedings, and action. Interpretations and rulings of each component county medical society with respect to these Principles of Professional Conduct or with respect to any further and additional regulations respecting professional conduct adopted by it as herein provided shall be binding upon its members until modified, revised, or reversed upon appeal by the Medical Society of the State of New York, or by a court of competent jurisdiction."

I move the adoption of this portion.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Appendix I is the Oath. I don't think we ought to take the time to even bother reading that.

Appendix II, Medicolegal Principles, these are copied verbatim from Appendix II in our old code of ethics, and I see no reason to take up the time of the House in reading that.

Dr. Reuling: A correction on that. Appendix II has been referred to our Council. There are a number of changes. It has been reviewed by our own proper legal authority. It is a misstatement that it is the same as before. It is not. They have been brought up-to-date, but I would now propose a motion to adopt as printed.

Dr. Burk: I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Geis: Appendix III was something that was brought in new. It has not been previously printed. It was brought in as a supplementary report of the Committee, and it has not been printed. Some of you found it yesterday on your tables when you got in, and you may have the sheet in front of you. This is a form that will be printed behind the rest of the code of ethics, and it is a suggested plan for each county or district as it sees fit in setting up its grievance committees.

Shall I read it?

Vice-Speaker Holcomb: The chair would rule that before this could be adopted it will certainly have to be read. Don't you agree with me?

Speaker Andresen: Yes.

Dr. Geis: Reading:

"GRIEVANCE COMMITTEES

"I. *Statement of Policy*

A. Grievance committees are recommended by the State Society either at the county or district branch level.

B. Grievance committees are desirable as a means of improving doctor-patient relationships."

I move the adoption of this section.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"II. *Purpose of Grievance Committees*

A. To protect the public from the minority of physicians who may overcharge, neglect their patients, or in any other way conduct themselves in an unprofessional manner.

B. To defend physicians against ill-founded and unjust accusations of patients.

C. To bring about an amicable adjustment of differences or misunderstandings that can arise from many causes."

I move the adoption of this section.

. . . The motion was seconded. . .

Vice-Speaker Holcomb: Are there any comments?

Dr. Burk: I have a question that I should like to ask our legal counsel. Are we, as physicians in the county medical society, in a position to discuss phases relating to overcharging or undercharging, as it may be, particularly overcharging by physicians? Is there anything in our Constitution and Bylaws other than what we adopted today that has any force or effect relating thereto?

Dr. Geis: I might say that I will agree with you there, but there is nothing in here that says anything about that. I agree with you we should have something in here about the overcharging of physicians.

Vice-Speaker Holcomb: The chair will call on Mr. Martin to answer that. Mr. Martin is here, and perhaps he will not mind answering that question and clarifying it for us.

Mr. William Martin: Could I have the question, please?

Vice-Speaker Holcomb: Dr. Burk, would you restate your question so Mr. Martin can answer it?

Dr. Burk: I think Mr. Martin has the purport of it. If he wants me to restate it, I will.

Mr. Martin: I wish you would. I only heard part of it.

Dr. Burk: Whether or not the members of the county medical society may review situations where there has been overcharging by physicians, and in any way influence the lowering of that overcharging?

Mr. Martin: It would take some study to determine just what they could do once they had made a determination one way or another, but it would be remarkably persuasive if they did come to some sort of a conclusion. There is certainly a strong sentiment for this, apparently stemming from the American Medical Association all the way down the line. I don't know just what they could eventually do to a doctor whom they found had charged outrageously in one case or a number of cases, but there is a general feeling that the county medical society should have a forum where people could put in such complaints and get a hearing. I think the effect of any recommendations they would make would be acceded to by almost the unanimous number of doctors who were brought upon such charges, although there might be just a few who would not go along. I don't know eventually what a court would decide if somebody made an issue that they should not discuss such a thing at all. It would be a very unpopular test case to bring if you were the doctor accused of overcharging, I should think.

Vice-Speaker Holcomb: Thank you, Mr. Martin!

President Masterson: For many months we have been receiving communications in the form of the Secretary's Letter from the A.M.A. headquarters in Chicago stating that these grievance committees have been formed in many counties throughout the country, and in Colorado it was taken up on a statewide basis by the state society. We have been informed that these grievance committees have received very favorable press notices. We have also been informed that the public are very pleased with these grievance committees. In forming a grievance committee, we cannot incorporate in our resolution all of the details or questions that may come up before that committee. If a county society has received a complaint from an individual who feels he has been overcharged, it is purely voluntary on the part of the physician, if he is asked to come before that grievance committee and explain his charges, to appear, and after that whether he would be willing to reduce his charges or adjudicate them to the satisfaction of the patient and himself. All such matters that would be taken care of by the grievance committee must be left to the individual county societies.

Dr. Reuling: I am afraid that we have a phantom here that is being raised. The courts, as you well know, throw out excessive verdicts. I have asked our counsel about it, and he deems it a most unlikely thing that a court would find contrary to a group of our own profession who found that a member was charging an excessive fee. I see nothing in the outline as far as that point goes to be afraid of.

Mr. Martin: That is right.

Dr. d'Angelo: Mr. Speaker and members of the House, we in Queens every year receive a number of communications from patients just on the overcharging point, and so far there is nothing in our code of ethics or in the Constitution and Bylaws which gives a board of censors any legal right to take such a matter up. We are in the process of forming a grievance committee to try to take care of these matters on a voluntary basis on the part of the physician. I may also add that in a number of instances overcharging has definitely been the groundwork for malpractice suits because a dissatisfied patient has the seeds of a malpractice action.

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"IV. *Functions of Grievance Committees*

A. To receive complaints from anyone (doctor, layman, group, or corporation).
  1. Initial complaint.
  2. Request for written complaint.

B. Investigation of facts.

C. Attempt to mediate dispute and effect settlement.

D. To reach an appropriate decision.

E. When disciplinary action is indicated to report its findings to the proper judicial body.

I move the adoption of this portion.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"V. *Method of Operation*

A. All matters held confidential.

B. Complaints promptly acknowledged.

C. Expeditious disposition of all cases.

D. Preliminary investigation made.
  1. First effort—to attempt to bring parties together for an amicable solution.
  2. If facts indicate serious difference, grievance committee meets to consider case formally.

E. Majority vote governs.

F. Notification to doctor and patient of findings.
  1. Obtain opinion from legal counsel when indicated.

G. Doctor requested to abide by findings of grievance committee within fixed time.

H. In event of failure to comply, or in event unprofessional or unethical conduct involved, grievance committee reports name of doctor to proper judicial body for disciplinary action."

That "C" is different from what was submitted by the supplementary report distributed yesterday; otherwise it is the same.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Continuing:

"VI. *Disciplinary Action*

A. Report facts and findings to board of censors having jurisdiction.

B. Type of discipline. To be determined by censors.

C. Right of appeal. As provided in Constitution and Bylaws of State Society."

I move the adoption of this portion.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Now I move the adoption of Appendix III as a whole, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Now I move the adoption of the code of Principles of Professional Conduct, as amended, as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 102

Report of Reference Committee on Report of Council, Part XII: History of the Medical Society of the State of New York

Dr. Geis: Your Reference Committee notes with expectations the hopes of the Council Committee on History to be able to produce a history of the Society for its sesquicentennial meeting in 1957.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 103 (See 8)

Report of Reference Committee on Report of Council, Part XII: Office Administration and Policies

Dr. Geis: Your Reference Committee heartily approves of the appointment of an office manager. The necessity of having one person in charge of the routine work is unquestionable. This is a decided step in advance.

The detailed report of the changes in the office should be read by every member of the Society.

Any member who has had occasion to visit the office will certainly agree that more room is an absolute necessity. With the present crowded conditions it is a surprise that any work can be accomplished.

The work of this Committee under the chairmanship of Dr. Cunniffe has been excellent. This Committee has been appointed yearly since 1941. Your Reference Committee recommends that this be made a permanent committee of the House of Delegates without having a new resolution passed at each annual meeting.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: We recommend that the bills of Dr. George F. Boch of $27.50, Dr. Leslie A. Osborn of $33.01, and Dr. Arthur C. Davis of $27 be paid. We also recommend that in sending the checks the secretary send them a letter of censure for being so late in getting their bills in.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Geis: Now I move that the report of the Reference Committee on Report of the Council, Part XII, as a whole be adopted, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 104 (See 26)

Report of Reference Committee on Report of Council, Part XII: Revision of the Principles of Professional Conduct of the Medical Society of the State of New York

Dr. Joseph A. Geis, *District Delegate:* On the resolution introduced by Dr. Joseph C. O'Gorman, of the Medical Society of the County of Erie. *(See Section 26)*

Your Reference Committee reports as follows: Due to the fact the new code of professional procedure as amended by your Reference Committee incorporated the purpose of this resolution, we recommend that no action be taken.

I move the adoption of this recommendation.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was carried. . .

Section 105 (See 49)

Report of the Reference Committee on Report of Council, Part XII: Euthanasia

Dr. Joseph A. Geis, *District Delegate:* Reporting on the resolution introduced by Dr. Aaron Kottler, of Kings County. *(See Section 49)*

Your Reference Committee heartily approves of this resolution, and urges its adoption. I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Alfred M. Hellman, *New York:* Would you mind noting that that last resolution was passed unanimously? I think that would be good public relations.

Vice-Speaker Holcomb: Yes, that will be noted.

Dr. Burk: May I have a word relating to what has just transpired? I believe we owe a vote of thanks to Dr. Geis and his committee in going over the Principles of Professional Conduct, and I think we would be very remiss in not recognizing it at this time. I so move you.

. . . The delegates arose and applauded. . .

Section 106

Report of Scientific Awards Committee

Speaker Andresen: It is necessary for us to take action in regard to the scientific awards. The scientific exhibitors who win awards are entitled to have medals pasted on their exhibits, and they are waiting to hear who has received an award. Dr. Charles D. Post is chairman of the Scientific Awards Committee, and he is ready to make his report.

Dr. Charles D. Post, *Onondaga:* Mr. Speaker and members of the House, I wish to thank the other members on this committee, Dr. W. Guernsey Frey, Jr., of New York City, and Dr. Charles B. F. Gibbs, of Rochester, who rendered such very valuable assistance in making these awards. Dr. Gibbs came from Rochester particularly for this assignment, and his obligations in Rochester necessitated his immediate return.

We have the following report to offer:

SCIENTIFIC AWARDS

First—"Histamine Biochemotherapy in Suggested Psychiatric Disorders," Johan H. W. van Ophuijsen, M.D.; Arthur M. Sackler, M.D.; Mortimer D. Sackler, M.D.; Raymond R. Sackler, M.D., Creedmoor State Hospital, Queens Village

Second—"Surface-Active Solvents in Topical Antibiotic Therapy," Edwin J. Grace, M.D., Grace Clinic, Brooklyn; Vernon Bryson, Ph.D., The Biological Laboratory, Cold Spring Harbor

Honorable Mention —"Pathologic Changes in the Component Joints of the Shoulder," Charles J. Sutro, M.D., Hospital for Joint Diseases, New York City

CLINICAL AWARDS

First—"Cervical Cytology Indicating Threatened Abortion," Clyde L. Randall, M.D.; Richard W. Baetz, M.D.; Donald W. Hall, M.D.; Paul K. Birtch, M.D., University of Buffalo, Buffalo General Hospital, Buffalo

Second—"Reversible Bronchiectasis," Walter Finke, M.D., Genesee Hospital, Rochester

Honorable Mention —"The Problem of Cerebral Palsy," Herman E. Hilleboe, M.D.; I. Jay Brightman, M.D.; Granville W. Larimore, M.D., New York State Department of Health

"Behcet's Syndrome: Aphthosis," Helen Ollendorff Curth, M.D., Columbia University College of Physicians and Surgeons, New York City

Speaker Andresen: Thank you, Dr. Post!

Will somebody make a motion to approve this report?

Dr. Samuel Z. Freedman, *New York:* I will so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: There are fifteen reference committees chafing at the bit to make their reports. That means we are going to have to spend quite a lot of time disposing of these reports. I hope we don't have to work tonight, but I think now would be a good time for us to spend five minutes in getting a little fresh air, but no more than five minutes please.

. . . Recess. . .

Section 107 (See 14, 16, 86)

Report of the Reference Committee on Reports of the President and President-Elect

Speaker Andresen: We will now get started on the fifteen reports of the reference committees. We want to work quickly to get through, but on the other hand, as Dr. Rooney has warned us so often, we don't want to skip over things or overlook important things and then have to reconsider. That takes a whole lot more time, so I wish you would pay very close attention, and if you find anything you disagree with, be sure and bring it up—not little petty things but anything that is important.

Last evening Dr. Mueller's committee on Report of the President got almost through with his report, when one of his points was referred back for further consideration, so we are going to start by having Dr. Mueller read his report again, including the paragraph that was recommitted to his Committee. Then we can act on that rather quickly, I hope.

Dr. Charles W. Mueller, *Kings:* Mr. Speaker and delegates, this is the report of the Reference Committee on the Reports of the President and President-Elect.

Your Committee has carefully considered the suggestions made to the House of Delegates by our president, Dr. John J. Masterson, and our president-elect, Dr. Carlton E. Wertz.

The Committee heartily endorses the recommendation of the president, that cooperation be established by the proper committees of the Council to coordinate postgraduate medical education on a State level with the nine medical schools, the State Department of Health, and all other interested agencies. Courses for the general practitioner should be stressed.

We believe that adequate coverage of night and emergency calls is of paramount importance and should receive wholehearted support from all county societies and communities.

In view of the successful operation of the grievance committees already established in some of the county societies, we approve of the recommendation that the remaining counties in the State promptly form active committees to facilitate better relations between the public and the profession.

We strongly support the suggestion that the State commissioner of health or his designated representative be made a member of our House of Delegates.

We agree that it is our duty as physicians to accept responsibility as American citizens. To this end we should not allow preoccupation with our special problems to blind us in our duties as citizens to the far more serious problems of the creeping threat of socialism.

As American citizens and not as members of any organized medical bodies, we agree that we should promote proper movements for the election of the best officials and to maintain the constitutional government of the United States.

We heartily endorse the idea of a community health council on a State and local level which brings into one agency all local elements which are able and willing to contribute to better health planning.

We also urge the individual physicians to redouble their efforts to promote further enrollment of subscribers in voluntary health insurance plans. Further study should be made with a view to applying these plans to the care of the medically indigent.

We agree that the Medical Society of the State of New York should cooperate with all lay groups in an effort to reduce the terrific number of accidents in this country, as well as to assist in the mapping of an extensive accident prevention campaign.

The work of the special committee of the State Society on problems of alcoholism should be encouraged, and we urge that similar committees be established in each county medical society.

We agree that an informative news letter should be sent at frequent intervals from the public relations bureau to the various county societies and on pertinent legislative matters.

This Committee is in agreement with the recommendation of both the president and the president-elect that a letter of appreciation be sent to the Woman's Auxiliary of the Medical Society of the State of New York for their unselfish devotion to their work and their many fine accomplishments in our behalf.

I move the adoption of this report.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried. . .

Speaker Andresen: The Woman's Auxiliary will be so notified.

Section 108

Report of the Reference Committee on Report of Planning Committee for Medical Policies

Dr. Thomas M. d'Angelo, *Queens:* Mr. Speaker and members of the House of Delegates, usually this is a very long report. Today, it is very, very short.

Your Committee has carefully studied the annual report of the Planning Committee for Medical Policies. In many respects this is a progress report. It brings up to date the thinking of this Committee as regards some of the fundamental problems of medical practice. It continues the work that has been done by this Committee in previous years.

The Planning Committee did considerable work as regards the district branches. This portion of the report has been referred to another committee, which is considering the matter from all angles.

The Planning Committee this year again continued the study of group practice. It has again emphasized the fundamental principles of the ethical practice of medicine; and again, as in previous years, it has emphasized the principle of free choice of physician and the question of unethical advertising by groups. We usually can all agree on principles, but when we try to implement these principles into specific recommendations there seems to develop a great divergence of opinion. We agree, for instance, that nonprofit voluntary medical expense insurance plans licensed under Article IX-C of the New York State Insurance Laws should have the privilege of advertising to the laity to get members. Such a statement seems self-evident because practically all the plans incorporated under Article IX-C are approved by the Medical Society of the State of New York. These plans allow all physicians to become participating physicians, and so there is no advertising by these plans for members for any particular group. But when a corporation licensed under Article IX-C is made up of groups in a panel system, and when these panels are not open to all physicians in the area, then any advertising to the laity by such a corporation becomes in reality advertising for these groups. This distinction must be kept in mind when the question of advertising by these corporations is being considered.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. d'Angelo: The Planning Committee makes no specific recommendation as regards group practice, and your Reference Committee agrees with this policy at this time.

We take note of the progress report of the Hospital Construction and Planning Commission in New York State. To any of you who are interested in this phase of the work of this committee, we refer you to the booklet, "From Blueprint to Reality," only recently released by the New York State Joint Hospital Survey and Planning Commission.

Another illuminating publication on hospital study and medical practice in hospitals is the "Final Report, Recommendations and Findings of the New York State Hospital Study" as conducted by Columbia University under the direction of Dr. Eli Ginzberg. It was released in November, 1949, under the title, *A Pattern for Hospital Care*, by the Columbia University Press.

We commend the chairman of the Planning Committee, Dr. Kenney, in attending the Middle Atlantic States Regional Conference. We urge the Council to continue to support these regional conferences which are sponsored by the American Medical Association.

Your Reference Committee takes this opportunity to commend the members of the Planning Committee for the clear thinking which they have shown in their deliberations.

Lastly, your Reference Committee advises that this Committee be continued.

I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. d'Angelo: Now I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. d'Angelo: I wish now to thank the members of my Committee who participated in the work.

Speaker Andresen: Thank you, Dr. d'Angelo.

Section 109 (See 5)

Report of Reference Committee on Report of Secretary

Dr. Frederick W. Williams, *Bronx:* Your Committee wishes to report that the total membership as of April 30, 1950, is 22,596. This is a new high. This, your Committee feels, is a sound situation for the Society.. The strength of any organization is reflected by its continued and expanding membership, which we have enjoyed through the years.

In regard to the statistics in connection with the payment of the War Memorial Assessment, your Committee wishes to report as of April 30, 1950:

14 counties 100 per cent paid
34 counties 90 per cent or more paid
10 counties 80 to 90 per cent paid
5 counties 70 to 80 per cent paid
1 county less than 70 per cent paid

While this record seems favorable, the State Society as a whole has 20,044 individual members. There are still 1,032 or 5 per cent who still have not paid their assessment. Your Committee recommends that every effort be made by the lagging counties to improve their records.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Williams: Your Committee wishes to call the attention of all of the delegates of the House to the fact that their written and spoken words in the deliberations of the House become a permanent and published record of the Society. Therefore, your Committee would advise that care should be exercised with what is said. In this connection your Committee recommends that the secretary be granted the right to edit the minutes of the House of Delegates before publication, with the directive that if he edits any speech he must first contact the source before publication of the edited speech. I move approval of this section of the report.

Secretary Anderton: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried. . .

Dr. Williams: At the suggestion of the secretary, after due consideration your Committee recommends that the Medical Society of the State of New York invite the American Medical Association to meet in New York City in 1953 if suitable and adequate facilities are available. Finally, your Committee wishes to call the attention of the delegates to the untiring work of the secretary of the Society. He has carried out the duties of his office in his usual humble and competent manner. He has attended innumerable meetings; he has accurately reported the Council minutes, and has administered the many details of the office in a most commendable fashion. His published report only outlines the highlights of the year's work. For all this your Committee feels that he justly deserves our sincere appreciation and thanks. This appreciation also should be extended to the entire staff of our offices who all have served diligently and devotedly.

I move the adoption of the report of the secretary as a whole.

Dr. B. Wallace Hamilton, *New York:* I second it.

Speaker Andresen: Is there any discussion? All in favor respond by acclamation.

. . . The delegates arose and applauded. . .

Secretary Anderton: Thank you.

Section 110

Report of Reference Committee on Reports of District Branches

Dr. Frederick W. Williams, *Bronx:* The activity of the district branches has improved over the previous years in the light of their reports as published. The First District Branch is in the process of organizing, and it should be urged to proceed promptly with the details. Your Committee feels this branch should become very active. The county societies of this district branch comprising New York City should have sufficient common interests to make the district branch an important part of organized medicine in the State. Your Committee feels that Nassau and Suffolk are naturally combined in a separate district branch and recommends that this be accomplished by the committee on bylaws, which has already been done.

I move the approval of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 111

Report of Reference Committee on Report of Censors

Dr. Frederick W. Williams: In regard to the report of censors, there was no report received, so I would like to move the adoption of the report of this Reference Committee as a whole, and wish to thank the members of this Committee who served with me for their work.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Thank you, Dr. Williams.

Speaker Andresen: May I make a suggestion? It has been suggested that where men have made resolutions, and those resolutions have been changed, they sometimes don't realize that we are acting upon their resolution. It might be well, therefore to mention the author of the resolution when the reference committee is making its report.

Section 112 (See 36)

Report of Reference Committee on Miscellaneous Business (B): Medical Society of the State of New York to Support Hess Committee Report at Coming A.M.A. Annual Convention

Dr. Peter J. Di Natale, *Genesee:* The first resolution of the four that the Reference Committee had referred to it was submitted by Dr. Babbage, for the Medical Society of the County of Erie, subject, Medical Society of the State of New York Support of Hess Committee Report in Coming A.M.A. Annual Convention." *(See Section 36)*

Your Reference Committee studied this resolution, and they have talked with Dr. Babbage in regard to it. Your Committee feels that this resolution should not be adopted because (1) they are asking us to pass on a report that is to be presented at the next meeting of the American Medical Association's House of Delegates; (2) we do not desire to hog-tie the delegates to the American Medical Association and tell them how to vote on something that at this moment we have no report on. It is the feeling of the Committee, however, that the delegates take under advisement the possibility of supporting this so-called revised Hess report if it is for the benefit of the practice of medicine.

I move you, sir, the adoption of this recommendation.

. . . The motion was seconded. . .

Speaker Andresen: Any discussion?

Dr. Thomas O. Gamble, *Albany:* May I say a word?

Speaker Andresen: Surely!

Dr. Gamble: This same resolution was referred to my Committee—exactly the same resolution—and I would like to support the report because our report was exactly the same as this, namely, that it was unwise to mandate any action until we know what the revised Hess plan is.

Speaker Andresen: We have two committees reporting on this. The advice is that the original resolution be not approved.

. . . The question was called, and the motion was put to a vote and was unanimously carried. . .

Section 113 (See 57)

Report of Reference Committee on Miscellaneous Business (B): Representation on the Group of Delegates to the American Medical Association

Dr. Peter J. Di Natale, *Genesee:* The second resolution was presented by Dr. George A. Burgin, of the Herkimer County Medical Society, subject, "Representation on the Group of Delegates to the American Medical Association":

> "Whereas, the American Medical Association of which each county medical society is a primary and integral part has entered upon a campaign of public education; and
>
> "Whereas, the Medical Society of the State of New York is the first echelon in the chain of communication with the American Medical Association and its policy committee; and
>
> "Whereas, the Medical Society of the State of New York has been represented by a group of distinguished delegates to the American Medical Association, it is, however, the feeling of the Herkimer County Medical Society that a proportion of this delegation should be composed of younger men whose personal relationship to pro-

> posed changes in governmental control of the medical profession has a greater significance and threat to their present and future status than would apply to those members of the profession of the more advanced ages; now therefore be it
>
> "*Resolved*, by the Medical Society of the County of Herkimer, that the House of Delegates of the Medical Society of the State of New York at this meeting consider the propriety of the election as delegates to the American Medical Association of a proportionate number of younger members of the Society, and especially those who have had service in the last war."

Dr. Burgin appeared before our Reference Committee, and your Reference Committee wishes to edit this resolution by deleting "and especially those who have had service in the last war"—not that we don't tip our hats to those that served in the last war. There was talk of introducing resolutions that perhaps those in the coming war or the Mexican War be included too. We approve in principle the consideration of the election of delegates, a proportionate number of whom are the younger members of the Society. We, therefore, move the adoption of this resolution as the Committee deleted it.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 114 (See 48)

Report of Reference Committee on Miscellaneous Business (B): Hospital Practice of Medicine

Dr. Peter J. Di Natale, *Genesee:* The third resolution was introduced by Dr. Weintrob, of Kings, subject, "Hospital Practice of Medicine":

> "Whereas, a set of resolutions recently adopted by the board of trustees of the American Hospital Association seeks to include anesthesiologic, radiologic, pathologic, and physiatric services as hospital services and recommends that these be so defined in prepayment hospital insurance plan subscriber certificates; and
>
> "Whereas, such a practice, necessitating hiring by hospital management of physicians to provide such medical services, would actually result in division of fees for professional services; and
>
> "Whereas, the former, that is, the hiring of physicians by corporate lay bodies, might rightfully be construed as an unethical type of contract practice; and
>
> "Whereas, the latter, i.e., division of fees between physicians and laymen, or between physicians and other physicians, is unethical; therefore be it
>
> "*Resolved*, that the delegates from the Medical Society of the State of New York be instructed to prepare and introduce a resolution at the next meeting of the American Medical Association calling for recognition of the above noted specialties as the practice of medicine; and be it further
>
> "*Resolved*, that the proper authorities of the American Medical Association be urged to withhold recognition of hospitals that violate the principles of medical ethics."

That is the resolution in edited form. Your Committee edited it somewhat from its original form. In the third whereas we deleted the words "and illegal"; in the fourth whereas we deleted the word "both" also "and in some areas illegal" because we did not think that we ought to get messed up with legal entanglements at this time. In the first resolved we have added the words "prepare and" before the word "introduce"; we have eliminated the second resolved; in the third resolved we have stopped with the word "ethics" and eliminated "and the Medical Practice Act in the states in which they operate"; and we have eliminated the fourth resolved.

There was much discussion on this resolution, and Dr. Weintrob was present while it was being discussed.

We move the adoption of this resolution as amended and deleted.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion?

Dr. Samuel Z. Freedman, *New York:* For many, many years this matter of these four specialties being recognized as the practice of medicine has been thrown around, at least in the City of New York, and as one who has on many occasions tried to figure out what they are driving at I still don't know what it is all about. I have had occasion to ask these gentlemen who have positions, for instance, in voluntary hospitals, in other words, in institutions where private patients are taken care of, and who have paid positions, let us say, for example, in the department of x-ray, of $4,000, $5,000, or $6,000 a year, and where patients are billed by the hospital individually for x-ray service; and so you can go right down the line.

Now if it is going to be unethical for these different practices to be indulged in when insurance is involved, why isn't it unethical in the situation I have outlined? Why specify only that it is unethical where insurance is involved? It is just as unethical for an individual to be a full-time pathologist at a hospital and get paid a certain amount per year, and still the patients are charged and billed for individual services. I would like one of the individuals in one of these four specialties to explain to me again—they have tried on many occasions, I don't think successfully—what is the difference. What do they want to accomplish? Are they out to separate the practice of medicine in these specialties as it will be indulged in under prepayment insurance plans from what is now the practice in voluntary hospitals or what is it? This is more of a question of information. I think many of us don't understand what they are driving at.

Dr. James F. Rooney, *Trustee:* In view of the difficulty had by both Dr. Freedman and myself in relation to the significance of this recommendation of the Committee, I would move you, sir, that this matter be referred to the Council for their consideration and appropriate action.

. . . The motion was seconded. . .

Speaker Andresen: This is a discussion on the motion to refer to the Council, not a discussion of the subject matter.

Chorus: Nobody seconded it.

Speaker Andresen: Yes, it was seconded over here.

Dr. Theodore J. Curphey, *Councillor:* Frankly, Mr. Speaker and members of the House, I got here perhaps to speak on the broader aspect rather than the referral.

Speaker Andresen: We cannot entertain that. The discussion is on the referral.

Dr. Curphey: Let me modify my speech then, if I might.

Dr. Rooney: In view of what Dr. Curphey has said, I would like to have the permission of the seconder so he may have an opportunity of discussing the main question for the House's benefit.

Dr. Curphey: Thanks for your courtesy, Dr. Rooney.

Speaker Andresen: Will the House agree to that? All in favor say "Aye"; contrary "No." It is carried. Dr. Rooney has withdrawn his motion, and Dr. Curphey is going to discuss the original recommendation.

Dr. Curphey: There are one or two points involved in this matter, and I don't propose to take up too much time of the House to discuss them. The one point I should like to emphasize first is the question of getting legal recognition for these four specialties. I sense from the wording of the motion that it is perhaps not clear in the mind of the chairman that as far as the State of New York is concerned these four specialties, or perhaps I should say one specialty at any rate, pathology, is not legally the practice of medicine. I am not in a position to speak of the other specialties.

Apart from the question of contractual relationships, I don't think it is the intent of any of these specialties to fix up a uniform contractual relationship. That should be a matter of personal choice between the pathologist, the radiologist, or what have you, and the institution in question.

The matter I think at issue—and I hope I might help a little in clearing up the doctor's confusion—is in respect to these contracts that are being sold throughout the country. It is common knowledge that the hospitals are very anxious to have these four specialty services thrown in with the hospital service. The College of American Pathologists, of which I have the honor of being one of the members of its board of governors, is distinctly opposed to this. We maintain that although we practice our profession in institutions that we are just as much physicians as the obstetrician, the surgeon, and what have you.

I would like, gentlemen, to appeal to this House to lend the weight of its influence as representing the sovereign State of the nation, in supporting these specialties in their fight with the hospital groups. (*Applause*)

Speaker Andresen: Thank you, Dr. Curphey.

Dr. Rooney: In the first place I, personally, want to speak in favor of the purposes that Dr. Curphey has put forth. In the second place I wish to say something else, and that is this: that the opinion of the attorney general is not law. The opinion of the attorney general cannot change the definition of the practice of medicine, which states that any person who holds himself out to diagnose or treat is practicing medicine; and if the pathologist is not one of the main means by which a diagnosis is attained I know of no other method of diagnosis.

I know how these things are referred within that department, and the expression of an ex parte opinion on the basis of a deputy attorney general or assistant attorney general is not binding nor has it the force of law; and I am sure that my good friend, the counsel of the Society, will tell you the same story.

I do feel, however, that, irrespective of that, and let that be as it may, the opinion of this deputy or assistant attorney general is not of any significance whatsoever. I still think that there is a continuous attempt on the part of hospitals to practice medicine as corporations and to take over the departments of anesthesiology, pathology, electrocardiography, physiotherapy, and radiology, and to simply farm them out in the same way that the old patroons farmed out railroad gangs. I am absolutely in favor of any motion that will put us on record as being against that, and requesting that the American Medical Association do the same thing. (*Applause*)

Speaker Andresen: May I call attention to the fact that we are only acting now on the part of the resolution which asks the American Medical Association to agree that these four specialties are the practice of medicine. We are getting far afield in the discussions about medical expense insurance and everything else. We have nothing to do with that, now. We are asking the American Medical Association to declare that these are the practice of medicine.

Have you anything to add to that, Dr. Weintrob?

Dr. Weintrob: Yes, Mr. Speaker. As the writer of the original resolution I would like to clarify for Dr. Freedman this information which he misunderstands.

Nowhere in the resolution does it appear that this at all refers to the insurance end of medicine. I am sure of that. Isn't that so, Mr. Chairman of the Committee?

Dr. Di Natale: Yes. Your resolution says this:

> "Whereas, a set of resolutions recently adopted by the board of trustees of the American Hospital Association seeks to include anesthesiologic, radiologic, pathologic, and physiatric services as hospital services and recommends that these be so defined in prepayment hospital insurance plan subscriber certificates"

Speaker Andresen: We had that read. If the answer is yes, just say yes.

Dr. Di Natale: Yes, but why not take this resolution up part by part, and dispose of it?

Speaker Andresen: The chairman of the Reference Committee has divided the resolution into parts, and the part we are to act on now is whether we are going to ask the American Medical Association to declare that these four specialties are the practice of medicine. Is there any further discussion on that?

Dr. Moses H. Krakow, *Bronx:* I would like to call to your attention that the American Medical Association has already gone on record declaring that.

Speaker Andresen: Some people like to have that done every year. The American Medical Association will simply say they have already adopted it, and that will be the end of it, and the motion will be lost, but some people don't believe it, so are we going to adopt it or not? All in favor say "Aye"; contrary "No." It is adopted, and that resolution will again appear before the House of Delegates of the American Medical Association, as it usually does from a number of different states.

Dr. Di Natale: The second resolved reads:

> "*Resolved*, that members of the American Medical Association be censured if they violate the principles of medical ethics by engaging in such unethical and illegal practice."

Your Committee felt that should be deleted in its entirety, with the approval of Dr. Weintrob. I move the adoption of the deletion of this resolved.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Di Natale: The third resolved was:

> "*Resolved*, that the proper authorities of the American Medical Association be urged to withhold recognition of hospitals that violate the principles of medical ethics and the Medical Practice Act in the states in which they operate."

Your Committee has changed that, leaving out "and the Medical Practice Act in the states in which they operate," so that resolved now reads:

> "*Resolved*, that the proper authorities of the American Medical Association be urged to withhold recognition of hospitals that violate the principles of medical ethics."

Your Committee moves the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Di Natale: The fourth resolved reads:

> "*Resolved*, that the attorney generals of the separate states wherein the above-specified legal violations are being committed be so notified and proper legal relief be sought."

Your Committee, with the approval of Dr. Weintrob, moved that this be entirely deleted. I move the approval of the Committee's action in deleting that resolved.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Dr. Di Natale: Now I move the adoption of the resolution as thus amended and deleted.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Section 115 (See 34)

Report of Reference Committee on Miscellaneous Business (B): Practice of Psychiatry

Dr. Peter J. Di Natale, *Genesee:* The fourth and final resolution referred to this Committee was presented by Dr. Irving J. Sands, of Kings County Medical Society, subject, "Practice of Psychiatry":

> "Whereas, psychiatry is a branch of the practice of medicine, and anyone attempting to make a diagnosis or treat patients by psychotherapeutic methods is practicing medicine; and
>
> "Whereas, the practice of psychiatry should come under the definition of the practice of medicine as defined in Paragraph 4, Section 65 of the Education Law; and
>
> "Whereas, the attorney general of the State of New York in or before 1945 did render an opinion to the effect that 'suggestive therapeutics (hypnosis) is within the meaning of the term "practice of medicine" and its practice is therefore forbidden except by a duly licensed physician or surgeon'; and
>
> "Whereas, the Medical Practice Act does not specifically include mental and nervous diseases as diseases within the meaning of the law; and
>
> "Whereas, as long as psychologists and psychiatric social workers claim only to be giving advice, counsel, or guidance, they may, as matters now stand, avoid prosecution for practicing medicine; therefore be it
>
> "*Resolved*, that the Legislature of the State of New York be requested to protect the public interest further by strengthening the Education Law, accomplishing this by specifically including mental and nervous diseases within the meaning of the law, confining the diagnosis and treatment of such conditions to duly licensed physicians; and be it further
>
> "*Resolved*, that the Medical Society of the State of New York cause to be introduced a bill carrying out the intent of this resolution and actively work for its passage."

Dr. Sands did not appear before the Committee; however, he was talked to late yesterday afternoon. After discussing this resolution, your Committee moves that it be not adopted, because we feel that measures are already being studied by the medical profession and the Department of Mental Hygiene to establish educational standards for psychologists by legislation. The Committee feels that until such time as these auxiliaries to psychotherapy are established by law, nothing would be accomplished by this resolution.

I move the adoption of the Committee's report in not concurring in the resolution.

. . . The motion was seconded. . .

Speaker Andresen: You have before you the recommendation of the Committee which calls for the disapproval of the resolution. Is there any discussion?

Dr. Irving J. Sands, *Kings:* May I discuss this?

Speaker Andresen: Dr. Sands did not appear at the Reference Committee meeting, so we are giving him a chance to talk now.

Dr. Sands: Mr. Speaker and members of the House, I plead guilty in not appearing before the Committee. I did not so appear because I thought it was so self-evident and so simple a matter but of such tremendous importance that it speaks for itself.

The treatment of the mentally sick by doctors, strange as it may seem, as far as the law is concerned is only some fifty-two years old—in 1898 the State lunacy commission was established, which of course has developed into the Department of Mental Hygiene.

You know what psychiatry has done in World War I and what it has done in World War II when it was given an equal footing with medicine and surgery, as such. There is no doubt that psychologists and psychiatric social workers have done great work in helping doctors treat the mentally sick; however, the treatment of the mentally sick is a part of medicine. Since fifteen years ago when insulin was introduced into the treatment of the psychoses, and with the introduction of the various forms of shock or convulsive shock therapies, and particularly with the introduction of the various forms of operations on the frontal lobes, anyone who knows something about medicine will acknowledge the fact that the treatment of the sick is the part of medicine and the duty of physicians.

For the last year or two psychologists have been given the legal right to send a mentally defective person to an institution, even if that mentally defective person is defective by virtue, say, of hereditary syphilis, or some serious brain disease, or what have you. The average doctor is not permitted to do so. You have to have special training if you are an M.D. There is no doubt but that there is now an increasing number of psychologists who go beyond the pale of just giving guidance and counselling, and it is for this reason that we feel that the treatment of nervous and mentally sick people should be in the hands of doctors. As far as I know there has been nothing introduced in the limitation of the work of psychologists. It is for us as doctors to see that the mentally sick person is protected. You have been listening to the radio—

Speaker Andresen: I am sorry, but that is all the time you have. I think you have presented your case.

Any further discussion?

Dr. James F. Rooney, *Trustee:* When Dr. Sands states that patients can be committed by psychologists, I think he is perhaps slightly in error, because they cannot be committed by psychologists. They can be committed only by a Supreme Court justice, and if it is contested it must be on the testimony of a psychiatrist, and the mental hygiene department will not recognize those unless they are licensed psychiatrists. The old Medical Examiner Law has been practically and entirely wiped off when a general practitioner might perhaps do it as in the old days. I feel under the circumstances, and to avoid waste of time, that I will move that this matter be referred to the Council. Has the Committee recommended disapproval of this?

Dr. Di Natale: Yes.

Dr. Rooney: Then I hope we support the Committee.

Speaker Andresen: You are not going to move referral then?

Dr. Rooney: No.

Speaker Andresen: Dr. Dattelbaum! Are you a psychiatrist or a psychologist?

Dr. Maurice J. Dattelbaum, *Councillor:* No, I am the chairman of the Committee on Legislation. The implication in this resolution has something to do with the Medical Practice Act; therefore, I have to speak. When an individual gets up in the House of Delegates, without any documentary evidence from the organized specialists in his department or his field of work, and individually wants to change the Medical Practice Act or put something else in it, the Committee on Legislation feels that the opposition will also introduce a great many clauses and give us trouble. If Dr. Sands had the authority of the New York Psychiatric Society, or if he had the authority of the New York Academy of Medicine, or if he had the authority of the Section on Neurology, and we only had ourselves lined up without friction, there might be some merit to what he says. But I want to bring this home to you now: Please do not introduce any resolution that will cause a bill to be brought into the Legislature unless you have your forces lined up within our own ranks first, because we are blamed later if the bills we introduce are defeated. Thank you!

Speaker Andresen: Has anybody else got a bumble bee in his stomach?

Dr. Benjamin M. Bernstein, *Kings:* I am a gastroenterologist, and I treat bellyaches. Dr. Sands has more than himself behind his desire to get you to help him say that the use of psychotherapy is the practice of medicine. You and I practice psychotherapy. If we don't, we are not practicing medicine. You and I practice what is now known as psychosomatic medicine. If we don't know enough about psychosomatic medicine, we should learn more about it. What I think he is trying to say is that not the treatment and care of the mentally sick alone, but those people who think they are sick, those people who have bellyaches, and cardialgias, and what have you, must remain in our hands by psychosomatic methods, and we must remain doctors practicing psychotherapy.

We are all in this act, if you will. We are all practitioners of medicine by whatever methods we can use as physicians, and we should not permit any outsider, any chiropractor, any psychologist, or any social worker to invade the practice of medicine.

Speaker Andresen: Is there any further discussion?

Dr. Di Natale: I still move that this resolution be not adopted.

. . . There were calls for the question, and the motion was put to a vote and was carried. . .

Dr. Di Natale: Now we move you the adoption of the report of the Reference Committee as a whole, as amended, as deleted, and as what have you.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: Thank you, Dr. Di Natale!

Dr. Di Natale: I want to thank the members of the Committee who discussed these things so thoroughly so that some of them could be ironed out in Committee rather than on the floor of the House.

Section 116

Discussion Re Night Session

Speaker Andresen: It is twenty minutes after five. It is quite obvious that with eleven more reference committees to report we are not going to be able to finish this afternoon. The question is: Do you want to continue now until eight o'clock, or do you want to adjourn now and meet again, or do you want to work for another three quarters of an hour? I will entertain a motion, if you want, to continue to six, then meet again at eight o'clock.

Dr. Rooney: I will make a motion that we continue until six o'clock, and then take such recess as we may determine upon at six o'clock.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried. . .

Speaker Andresen: That motion is carried. We are going to stay in session until the hour of six, and then take action as to when we shall resume our deliberations.

Section 117 (See 20, 50, 52, 71)

Report of Reference Committee on Report of Council, Part X: Workmen's Compensation

Dr. A. Wilbur Duryee, *New York:* The Reference Committee on Report of the Council, Part X, Workmen's Compensation, had three resolutions submitted to it, a supplementary report of the Council Committee, and the regular report of the Council Committee, all of which it reviewed. The following report embodies in toto the summary of all of these reports referred to the Reference Committee, including the resolutions.

The Reference Committee on Workmen's Compensation, Part X, recommends that no action be taken on the resolutions introduced by Dr. Raymond F. Kircher, of the Medical Society of the County of Albany; by Dr. Joseph H. Cornell, of the Medical Society of the County of Schenectady, and by Dr. Frank J. Cerniglia, of the Medical Society of the County of Queens, concerning medical fees, on the grounds that the supplementary report of the Council Committee on Workmen's Compensation read before the House by Dr. J. Stanley Kenney on May 8, 1950, indicates that a fee schedule comparable to the one included in the above resolutions has been submitted to Miss Mary Donlon, chairman of the Workmen's Compensation Board, for action, and that she in a letter dated May 1, 1950, stated that a meeting will be called on May 23, 1950, to consider these changes in fees.

I move that this section of the report be adopted.

. . . The motion was seconded . . .

Speaker Andresen: Is there any discussion, gentlemen?

This recommendation gets rid of three resolutions that were presented by not approving them, is that correct?

Dr. Duryee: Yes.

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Dr. Duryee: Your Reference Committee also recommends that the section of the resolution of Dr. Raymond F. Kircher, of the Medical Society of the County of Albany, concerning representation on the Medical Advisory Board to the chairman of the

Workmen's Compensation Board be disapproved, as such appointment is made by the chairman and not by the president of the State Society. Furthermore, the advisory committee to consider fees, appointed by Dr. Masterson at the request of the Workmen's Compensation Board, consisted of two general practitioners and two specialists.

This resolution brought in by Dr. Kircher requested that a specialist and a general practitioner be appointed to the Medical Advisory Committee. This special committee appointed by Dr. Masterson had two general practitioners and two specialists on it; however, Miss Mary Donlon, the chairman of the Workmen's Compensation Board, appoints her own advisory committee. We, therefore, disapprove of this recommendation of the Medical Society of the County of Albany.

I move you that this section of the report be adopted.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: The next deals with the supplementary report. Your Reference Committee recommends the acceptance of the supplementary report of the Council Committee on Workmen's Compensation referred to above under the date of May 7, 1950, and read before the House on May 8, 1950.

I move you that this section of the report be accepted.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: Your Reference Committee has reviewed in detail the full report of the expanded Council Committee on Workmen's Compensation as published in the Journal under the date of April 1, 1950. Your Reference Committee endorses the work done to simplify the reporting forms, and is awaiting the action of the Workmen's Compensation Board concerning them.

I move you that this section of the report be accepted.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: Part D of chapter 1 of the report concerns the method of settlement of disputed bills by the medical practice committtee in New York City. Your Reference Committee recommends that the Committee on Legislation reintroduce a bill in the 1951 Legislature to establish a uniform system of arbitration such as exists throughout the rest of the State.

I move you the adoption of this recommendation, Mr. Speaker.

. . . The motion was seconded. . .

Speaker Andresen: Is there any discussion?

Dr. Joseph A. Geis, *District Delegate:* That bill has been introduced by your Legislation Committee, and we have been taken over the coals year after year because it has not passed. I will say right now that there is no use introducing another such bill because we cannot put it through. The powers-that-be in Albany are opposed to it, and there is no need our bucking our heads against a stone wall. Therefore, I suggest that we do not approve of this part of the report.

Dr. James F. Rooney, *Trustee:* I entirely agree as a matter of convenience with the words of the preceding speaker, but the idea that we cannot, I disagree with. I do feel that at the time this thing may or may not be opportune, but we cannot determine at this meeting what the situation will be then. It cannot be determined probably until December. For that reason I would move you, sir, that this matter be referred to the Council to take such action as they feel is expedient and proper under the circumstances that may exist at the time of the beginning of the legislative session of next year.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: Part E of chapter 1 of the report states that the special rating of M-17 to cover thoracic surgery is finally under consideration by the chairman of the Workmen's Compensation Board. We urge prompt action on this.

Part G of chapter 1 of the report concerns the place of arbitration of disputed medical bills and urges the introduction of legislation to correct this. Your Committee recommends that the Legislation Committee reintroduce a bill in the 1951 Legislature to provide that the arbitration of medical bills shall take place in the county in which the service was rendered or an adjacent county and not necessarily in the county in which the injured worker resides.

Dr. Geis: That also takes up a legal matter. I would like to suggest that that be submitted to the Council to decide if it is expedient to introduce that in this coming year.

Speaker Andresen: Is that a suggestion or a motion?

Dr. Geis: I will move it.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: Your Reference Committee wishes to point out that the Bureau of Workmen's Compensation is always at the disposal of the individual physician or the county medical society and urges that these facilities be used more frequently.

We also have reviewed the problem of total rehabilitation and urge that the Medical Society continue to be a leader in this field. We also urge that the medical profession be educated and made aware of the advances of total rehabilitation embodying all angles of treatment and cooperation in this field. We also commend the Council Committee for their efforts to establish a fee schedule which would be agreeable to the general practitioner.

Your Reference Committee suggests that county medical societies pay more attention to the approval or disapproval of applications for employes' medical bureau licenses. Assistance of the Workmen's Compensation Bureau should be asked for in this problem.

Your Reference Committee has reviewed chapter 8 concerning the new disability benefits law, and approves the recommendations embodied therein. Time is short, and unless someone would like me to re-read these, they are on page 881 under the chapter 8, and comprise four questions dealing with the faults of this bill which the Council Committee felt should be corrected. Unless I am instructed to read that, I will proceed with our recommendation. We recommend that the Legislation Committee be instructed to introduce such legislation as is necessary to correct the faults of this law, as they apply to the medical profession.

I move this recommendation.

. . . The motion was seconded . . .

Dr. Rooney: I move this matter also be referred to the Council on the same ground that I stated a few minutes ago in relation to a preceding recommendation. This idea of introducing bills and putting mandates on them has gotten us in just about as bad with the Legislature of the State of New York as we can get. Bringing in all of these bills in an attempt to right minor evils, which will open up the whole Medical Practice Act, and putting that burden upon the Legislation Committee, and then having them defeated year after year, is not doing us any good. I think it should go to the Council, and let the Council take the necessary and appropriate action under the circumstances that present themselves at the time.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: Under chapter 9 of the report your Reference Committee takes the stand that the independent administration of anesthesia by a registered nurse for a fee is the practice of medicine, and feels that the medical profession should be discouraged from aiding or abetting this practice. The continuation of this practice will discourage the development of anesthesiology as a specialty.

Your Reference Committee endorses the action of the Council Committee in establishing high standards for specialty rating and urges that the county societies take advantage of the facilities provided by the Workmen's Compensation Bureau for the examination of applicants for radiology rating whose qualifications may not be readily ascertainable.

Your Reference Committee wishes to bring before the Society that it is extremely important that its member county societies should seriously investigate the practice of certain hospitals rendering medical service to compensation cases and collecting fees for so doing through individual physicians. Chapter 12 of the report sets down a concise summation of the principal rules and regulations with which a physician must comply under both the compensation and education laws. He is bound legally and morally to comply with these laws, and any violation may lead to suspension or revocation of his license to practice medicine.

Your Reference Committee would like to quote a most pertinent paragraph from this report:

> "The keynote of our workmen's compensation program must be medical care of the highest quality to the injured worker. We must adopt in the fullest sense the philosophy of service and cooperation if we are to render the most approved and acceptable medical care of which we are capable to the compensable sick and injured. Our goal should be the returning of the worker to his job as early as is consistent with these ideals. We cannot divest ourselves either as individuals or as a profession of our over-all responsibility for these services."

Finally, your Reference Committee wishes to offer its sincere appreciation for the work of the Bureau, its director, Dr. David J. Kaliski, the chairman of the Council Committee, Dr. J. Stanley Kenney, the members of the Committee, and all those who have contributed to this important work.

We move the acceptance of the report as a whole, and as acted on by referring some of this report to the Council.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Duryee: I would like to thank the members of the Reference Committee who worked on this long detailed report for their assistance.

Section 118

Report of Reference Committee on Report of Council Part I: Postgraduate Education and Emergency Preparedness

Dr. Scott Lord Smith, *Dutchess:* Part I of the report of the Council deals with postgraduate education as provided by the Council Committee on Public Health and Education. Following the untimely death of its long-time chairman, Dr. Oliver W. H. Mitchell, the Committee continued its full activities under the leadership of one of its members, Dr. C. D. Post, pending the appointment of a permanent chairman in the person of Dr. T. J. Curphey of Nassau County. His appointment necessitated moving the Committee's headquarters to the Queens County Medical Society Building in Forest Hills, Long Island, and the reorganization of the Committee staff.

Cooperation between the old and new staffs with the assistance of the State Society headquarters staff was extremely efficient and effective.

As usual, the report of the Committee on Public Health and Education is brief in extent but filled with facts and facilities for those wishing to use it:

(1) Speakers are provided on a wide range of subjects.

(2) Instruction may be arranged as a series of lectures, a single lecture, a symposium, or "teaching day."

The Committee is currently revising and bringing up to date the course outline book, and expects to have it in readiness for the annual meeting.

During the year twenty-seven counties have been provided with one or often several speakers.

(3) Regional meetings and teaching days have been arranged in seven counties. To such meetings the members of the adjacent county societies are invited, and for them the Committee also sends out the programs and furnishes the speakers.

Finally, the Committee will arrange a teaching day at the annual meeting.

I move the approval of that portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . . .

Section 119 (See 45)

Report of Reference Committee on Report of Council Part I: American Board of Obstetrics and Gynecology

Dr. Scott Lord Smith, *Dutchess:* Your Committee had referred to it a resolution introduced by the Bronx County Medical Society to be presented to the House of Delegates of the American Medical Association dealing with the residency training in gynecology and obstetrics, with the intent of which your Reference Committee is in entire accord. However, the Committee felt that the resolution was too inclusive and, with the full consent of its introducer, has simplified the resolution as follows:

> "Whereas, effective December 31, 1949, physicians desiring admission to the American Board of Obstetrics and Gynecology are required to have seven years of experience exclusive of one year's intern experience, to include three years of residency training in obstetrics and gynecology and two years of practice limited exclusively to that specialty; and
>
> "Whereas, these requirements are adequate for the basic and advance training necessary for practicing the specialty of obstetrics and gynecology; and
>
> "Whereas, these requirements create a situation which practically precludes the possibility of specialty training of any physician regardless of

ability unless such training is taken immediately upon graduation; and

"WHEREAS, many hospitals are experiencing difficulties in securing residents to accept the three years' course of training; and

"WHEREAS, physicians completing residency programs find it increasingly difficult to practice their specialty in recognized hospitals, in order to obtain additional experience necessary to apply for boards, because of the restrictive action of increasing numbers of hospitals that are demanding board recognition before granting major operative privileges to such qualified graduate residents; therefore be it

"*Resolved*, that the House of Delegates of the American Medical Association goes on record as being opposed to any further extension of residency training in obstetrics and gynecology; and be it further

"*Resolved*, that this House of Delegates urges re-evaluation of the entire program of residency training."

I move the adoption of this resolution as modified, and I also move that this resolution be presented by our delegates to the meeting of the House of Delegates of the American Medical Association in June.

. . . The motion was seconded . . .

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

DR. SMITH: Now I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 120

Report of Reference Committee on Report of Council Part IX: Legislation

DR. J. HOMER CUDMORE, *New York:* The Reference Committee has reviewed the report of the Committee on Legislation and commends them for their great and arduous labor. The enlargement of this Committee to fourteen is commendable and it is now more representative than heretofore.

The Committee on Legislation met in August, November, and December, 1949, when in preparation, no doubt, for the 1950 meeting of the State Legislature. Mr. James J. Beasley, a New York attorney experienced in legislation, was retained to assist the chairman of the Committee on Legislation, and also to assist Dr. Robert R. Hannon. We wish to commend the Council for this constructive move.

The bulletins sent to the county societies and their legislation committees were of real value and assistance.

In order to avoid repetition my Committee believes that the discussions of the resolutions brought up yesterday will enhance the report so that the House of Delegates will appreciate that the Legislation Committee of the Medical Society has functioned well and deserves commendation.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

DR. CUDMORE: Your Reference Committee has reviewed the supplementary report of the Legislation Committee, and agrees with the substance of the report. However, the Committee wishes to point out that the x-ray bill did not come out of Committee and was not defeated as noted in the report.

Your Reference Committee feels that information sent to the legislators be sent as well to all members of the legislation committees of county medical societies.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

DR. CUDMORE: Now I move the adoption of the report as a whole.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

DR. CUDMORE: We have six resolutions, which I shall skim through as fast as possible, but two of them are identical so it will save some time.

Section 121 (See 56)

Report of Reference Committee on Report of Council Part IX: Free Choice of Physician

DR. J. HOMER CUDMORE, *New York:* The first resolution is that submitted by Dr. George J. Lawrence, Jr., of Queens, regarding free choice of physician:

> "WHEREAS, the House of Delegates of the Medical Society of the State of New York at its last meeting in May, 1949, approved a resolution endorsing legislation that would preserve the right of free choice of physician, especially as it pertains to patients insured in voluntary insurance plans; and
>
> "WHEREAS, such legislation was introduced this year in the New York State Legislature (Sen. Int. 2032, Ass. Int. 2409); and
>
> "WHEREAS, the Medical Society of the State of New York did not actively support this proposed legislation; therefore be it
>
> "*Resolved*, that the Medical Society of the County of Queens again endorses the principle of free choice of physician in all health insurance plans; and be it further
>
> "*Resolved*, that the House of Delegates of the Medical Society of the State of New York instruct the Council actively to support the introduction and enactment of such legislation in the 1951 State Legislature; and be it further
>
> "*Resolved*, that the delegates of the Medical Society of the County of Queens be instructed to introduce and support this resolution at the coming meeting of the House of Delegates."

We approve this resolution introduced by Dr. George J. Lawrence, Jr., of Queens County (referred to our Committee by Dr. Philbrick's committee), endorsing legislation which will preserve the right of the patient to free choice of physician, by amending the first two whereas's as follows:

> "WHEREAS, the medical profession has consistently supported the right of a patient to free choice of physician; and
>
> "WHEREAS, contract restrictions under certain voluntary insurance plans tend to deny or restrict the right of free choice of physician."

We further recommend that the following paragraph be added:

> "*Resolved*, that medical expense indemnity shall consist of reimbursement or direct payment for medical care provided through any duly licensed physicians of the subscriber's choice whether or not designated by such corporation."

I move the adoption of this resolution as thus amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 122 (See 55, 61)

Report of Reference Committee on Report of Council Part IX: Hospital Practice of Medicine

Dr. J. Homer Cudmore, *New York:* The second resolution is that referred to us by Dr. George J. Lawrence, Jr., of Queens County, subject "Hospital Practice of Medicine":

> "Whereas, the House of Delegates of the Medical Society of the State of New York at its last meeting in May, 1949, approved a resolution that the Council be instructed to sponsor and support the introduction in the 1950 State Legislature of a bill which would prohibit vending by hospitals of medical diagnosis and treatment; and
>
> "Whereas, such a bill was introduced in the 1950 State Legislature (Sen. Int. 1107); and
>
> "Whereas, the New York State Medical Society failed to actively support this bill; therefore be it
>
> "*Resolved,* that the delegates of the Medical Society of the County of Queens be instructed to reintroduce such a resolution at the coming meeting of the House of Delegates in May, 1950; and be it further
>
> "*Resolved,* that the House of Delegates of the New York State Medical Society instruct the Council to actively support the introduction and passage of such legislation in the New York State Legislature of 1951."

A second or rather a similar resolution was introduced by Dr. Abraham Koplowitz, of Kings, subject "Hospital Practice of Medicine (Friedman Bill)":

> "Whereas, hospitals are engaged in the practice of medicine through the medium of hiring physicians, particularly in the fields of anesthesiology, pathology, roentgenology, and physiotherapy, and in some instances, hiring full-time surgeons, internists, and other specialists on a salary basis; and
>
> "Whereas, some hospitals are collecting fees from private patients for the services rendered by these hired physicians at a profit to the hospitals; and
>
> "Whereas, these practices are both unethical and illegal; therefore be it
>
> "*Resolved,* that the Medical Society of the State of New York cause the reintroduction of the Friedman Bill (Senate Int. 2404-'49) which was passed by the State Senate at the 1949 session of the Legislature of the State of New York, this bill being designed to prohibit legally any hospital from practicing medicine as defined; and further be it
>
> "*Resolved,* that the Medical Society of the State of New York work actively for its passage."

The Committee approved the resolutions introduced by Dr. Abraham Koplowitz of Kings County and Dr. George J. Lawrence, Jr., of Queens County in the matter of the hospital practice of medicine, and recommends the reintroduction in 1951 of the Friedman Bill (Senate Introduction 1107) which was passed by the Senate in the 1950 session of the State Legislature.

The Committee further recommends that the Council do all in its power to support this legislation.

I move the adoption of this recommendation.

. . . The motion was seconded . . .

Speaker Andresen: Any discussion?

Dr. James F. Rooney, *Trustee:* I want to make the same motion that I have made about all of these mandates going to the Council for the introduction of bills. I am not going to repeat my arguments. I am merely going to move that this recommendation be referred to the Council for appropriate action.

. . . The motion was seconded . . .

Dr. Aaron Kottler, *Kings:* For the information of Dr. Rooney, on the motion to refer to the Council, this bill that was introduced in 1949 was referred to the Council, and the Council did refer the matter to the Legislation Committee of the Medical Society of the State of New York.

Dr. Joseph A. Geis, *District Delegate:* In speaking on that referral, I have been on that Legislation Committee. I know what it is to bump my head up against a stone wall, but in this particular matter it is a question of principle. Therefore, I feel I would be willing to go through it again, if I am on the Legislation Committee next year—I hope I am not. This is a matter of principle, and as a matter of principle I don't believe we should compromise even when we know we are licked before we start.

Dr. Rooney: I entirely agree with the remarks made by the two preceding speakers. I have a recollection that this bill was introduced and was passed by one of the houses—either that or was in committee and was favorably reported, but in the latter hours of the session.

I am in favor of this bill in principle, but on the other hand I still say that in view of all of the situations that confront us I am—

Chorus: We can't hear.

Dr. Rooney: I am absolutely in favor of the thing, and while I never went looking for a fight, I never ran away from one. As I said a few moments ago, the idea of "can't do anything" is nonsense. I am in favor of this, but I still feel that it should be left to the Council to determine whether it is opportune, expedient, and has a likelihood of getting through the Legislature. I think we probably will have better chances in the next Legislature than we have had in this one, but I still feel that it should be referred to the Council, with the direction for the Council to take the necessary and appropriate action in relation to this bill, using their judgment as to its expediency.

Speaker Andresen: That is a motion to refer?

Dr. Rooney: That is a motion to refer, yes.

. . . The motion was seconded . . .

Speaker Andresen: The discussion is on the motion to refer.

. . . The question was called, and the motion was put to a vote and was carried . . .

Section 123 (See 47)

Report of Reference Committee on Report of Council Part IX: Injunction Bill

Dr. J. Homer Cudmore, *New York:* The fourth resolution was introduced by Dr. Ingegno, of Kings County Medical Society, on the subject of injunction:

> "Whereas, a bill introduced at the request of the Medical Society of the State of New York to amend Section 6513 of the Education Law of the State of New York in relation to authorizing the attorney general to apply for relief by injunction to restrain the commission of any act which is illegal under article One Hundred Thirty-One of such law (The Medical Practice Act) failed of passage at the 1949 session of the Legislature of the State of New York; therefore be it

> "*Resolved*, that the Medical Society of the State of New York cause the reintroduction at the 1951 session of the Legislature of the State of New York of a like bill (similar to Senate Int. 94 of the 1949 session) and work actively for its passage."

The Committee approves the resolution introduced by Dr. A. P. Ingegno, of Kings County, in reference to injunction procedures, and recommends the reintroduction of a bill, such as introduced in 1949 by Senator Wicks and Assemblyman Lashin, and further recommends that extraordinary efforts be exerted by the Albany executive office to enlist the support of the Bar Association and other professional groups.

I move you, sir, that this recommendation be adopted.

. . . The motion was seconded . . .

SPEAKER ANDRESEN: Any discussion?

DR. JAMES F. ROONEY, *Trustee:* I am afraid I am acting like a jumping jack, but I think it is necessary. I wish to make the motion to refer the same as I have in the two preceding instances, and I want to say one further thing: that the gentlemen who introduced this bill did not do a thing in the way of supporting it.

DR. JOSEPH A. GEIS, *District Delegate:* I would like to second that, that that be referred to the Council with power to act; also to make any amendments they see fit to enable more speedy passage.

DR. ROONEY: That is good. I accept that.

DR. SOLOMON SCHUSSHEIM, *Kings:* I want to say that we who sit here, and who come here year in and year out to these meetings, and bring forth resolutions passed unanimously by the House of Delegates, and then have them referred to the Council, repeated again the following year and the third year, what are we doing here? Are we a debating society, or are we men who think and want things done for us by ourselves? Is the Council so omnipotent that they can decide perhaps in better judgment than we year in and year out?

SPEAKER ANDRESEN: We have a Committee on Legislation that consults with experts and takes these things under consideration. If you want to spend some more time on this, we can ask Dr. Dattelbaum to tell us some more about the question.

. . . There were calls for the question, and the motion to refer was put to a vote and was carried . . .

Section 124 (See 51)

Report of Reference Committee on Report of Council, Part IX: Lien Law

DR. J. HOMER CUDMORE, *New York:* The fifth resolution, introduced by Dr. William Ostrow, of Kings County Medical Society, subject, "Lien Law":

> "WHEREAS, a bill introduced at the request of the Medical Society of the State of New York to amend the Lien Law and Civil Practice Act in relation to liens of physicians for treatment and care of certain injured persons failed to be passed at the 1949 session of the Legislature of the State of New York; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the introduction of a like bill (similar to Senate Int. 2045 of 1949) at the 1951 session of the Legislature of the State of New York and work actively for its passage."

The Committee approves the resolution on a physician's lien law, introduced by Dr. William Ostrow of Kings County, with the recommendations that it limit the application of liens to professional services rendered by private practicing physicians, and that, where differences of opinion arise in the matter of professional fees, facilities for arbitration be provided.

I move approval of this recommendation.

. . . The motion was seconded . . .

SPEAKER ANDRESEN: Is there any discussion?

DR. JAMES F. ROONEY, *Trustee:* The same motion, and for this reason: I first introduced that bill in the legislature of 1911. I think that during my entire experience of twenty-odd years as chairman of the Legislation Committee I introduced it year after year and year after year, calling to their attention that the undertaker could get a lien but the doctor who attempted to save the patient could not get anything, and I was practically told by several members of the committees that as a matter of fact the doctor was not of particular significance because he was expected to have collected all that he could before the death.

There is one further argument that has been brought up repeatedly in relation to this thing. I have never seen its germaneness, but it is brought up. It has been stated that if the doctors had a standard, definite State-wide fee to which they would adhere, there might be a probability of getting a lien law through.

In my opinion that is another one of the invitations to Eve in the garden by the proffering of a beautiful looking apple, which we never took.

I make the same motion, Mr. Speaker.

DR. JOSEPH A. GEIS, *District Delegate:* I second that motion, but with a clause that the Council be empowered to modify that bill if they see fit.

DR. ROONEY: That is all right, they can.

SPEAKER ANDRESEN: I think that is a part of Dr. Rooney's motion anyway.

DR. ROONEY: That is right.

SPEAKER ANDRESEN: It dates back three or four motions, but I think that is the way it was put.

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Section 125 (See 62)

Report of Reference Committee on Report of Council Part IX: X-ray Bill

DR. J. HOMER CUDMORE, *New York:* I have two and one-half minutes more for the rest of this report.

This is the sixth resolution, introduced by Dr. Aaron Kottler, of Kings County, subject, "X-ray Bill":

> "WHEREAS, the Legislature of the State of New York at its 1950 session did not pass a bill to amend the Medical Practice Act defining roentgenology as the practice of medicine; therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York cause the introduction of a similar bill at the 1951 session of the Legislature of the State of New York and exert every possible effort for its passage."

The Committee approves the resolution introduced by Dr. Aaron Kottler of Kings County referring to the x-ray bill, and recommends that the Council support the introduction and passage of a bill such as the McGovern-Dwyer Bill (Senate Introduction 1198—Assembly Introduction 1717) as it was finally amended in the 1950 State Legislature.

I move the adoption of this recommendation.

. . . The motion was seconded . . .

DR. JAMES F. ROONEY, *Trustee:* I make the same motion for reference to the Council.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Cudmore: I move you the acceptance of the report in full, as amended, and I want to thank the members of my Committee for their helpfulness.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 126

Report of Reference Committee on Constitution and Bylaws

Dr. Ezra A. Wolff, *Queens:* Dr. Siris, chairman of the Reference Committee on Constitution and Bylaws, asked me to present this report of our Committee.

The existence of a constitutional revision committee as a committee of this House has completely relieved our Reference Committee of the need for considering any material relating to the subject, since all pertinent matters have been referred to the first-named committee, of which Dr. Bauer is chairman. We note, however, from the report of the Council that the Council Committee on Revision of the Constitution and Bylaws has done its duty in considering, during the year, changes in the constitutions of five county societies and two district branches, and that the burden of this work has been borne by that genial Harvard man, Secretary Anderton. We offer our commendation for these evidences of attention to duty.

I move the adoption of this report.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried . . .

Section 127

Discussion Re Night Session

Speaker Andresen: We now have four more reports of reference committees to consider. If we are lucky we can get them finished in an hour or perhaps less.

Dr. Scott Lord Smith, *Dutchess:* I move we carry on.

Dr. M. Renfrew Bradner, *Orange:* I second that.

Dr. James F. Rooney, *Trustee:* May I speak to that, Mr. Speaker?

Speaker Andresen: Certainly.

Dr. Rooney: I think there are several very important reports to come up before this House, and having followed the mistakes that are made by the House—not many but sometimes very serious—over thirty-odd years, they have always been made either in the period of hurry to get through, or in evening sessions, or especially when there is a delay in the reports of the reference committees until the last day of the session. We have made some frightfully sad ones, for which we have paid out of our nose. I don't want to differ with my good friend who made the motion that we carry on, but there are several very important reports, gentlemen, to come up, and I feel that it would be far better for us to take a recess to a time that will be satisfactory to all of you, in view of the fact that the Speaker said it will take about an hour or an hour and a half, and be certain of what we are doing, and not have to beat our breasts afterwards for not having done the right thing.

Dr. Smith: I am willing to withdraw my motion.

Dr. Bradner: Yes, I withdraw my second.

Speaker Andresen: May I make a few suggestions before we take action? Dr. Rooney has called attention to the fact that at night we are tired, and we are apt to pass things when they are not supposed to be passed. The other alternative to continuing now or to meet again tonight is whether we want to take these matters up tomorrow morning.

Dr. Rooney: That is why I arise to a question of information. May I ask the Speaker what reference committees still have to report?

Speaker Andresen: There are five: The one on Treasurer, Trustees, and Finance; the one on Malpractice Insurance and Defense Board and Report of Legal Counsel; the one on Council, Part VI, Economics, Public Medical Care, Medical Research, Medical Service, Joint Committee of the Hospital Association of New York State and the Medical Society of the State of New York; and the one on Council Part VII, Medical Care Insurance; also Council, Part II, Maternal and Child Welfare, which should not take very long.

Dr. Rooney: I should estimate, sir, that the probabilities are that all of those reports can be covered in an hour safely.

Speaker Andresen: That was my estimate.

Dr. Rooney: I move that the House recess until tomorrow morning at—

Speaker Andresen: Nine o'clock.

Dr. Rooney: What is the time specified? Isn't it usually ten?

Speaker Andresen: But then we may not be through. Suppose you say at nine o'clock?

Dr. Rooney: Let me ask the opinion of the House: nine or ten?

Chorus: Nine.

Dr. Rooney: Nine o'clock, Mr. Speaker.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Speaker Andresen: We are adjourned until nine o'clock tomorrow. We must start promptly at nine, please.

. . . The session adjourned at 6:10 p.m., to reconvene on Wednesday morning, May 10, 1950, at 9:00 a.m. . . .

MORNING SESSION

Wednesday, May 10, 1950

The session reconvened at 9 a.m.

Section 128

Announcements

Speaker Andresen: I have several announcements to make. I again mention to you if you are going to the banquet tonight to be sure and get your tickets out in the hall.

Also I want to let you know what we are going to do this morning. The first order of business is the election of officers. As soon as the ballots have been collected the tellers are going over on the bridge, and then we will have time to take up the remaining reports of reference committees.

We have also a number of general motions to take care of, the reports of a couple of committees, the election of retired members, and a number of things of that sort.

I also wish to announce that Miss Mary Donlon was on the program to address us this morning, but she sent us a notice she is ill and will be unable to come here.

Section 129 (See 143)

Elections

Speaker Andresen: The first order of business is the election of officers. Is there a quorum present, Mr. Secretary?

Secretary Anderton: Yes, sir.

Speaker Andresen: Will the secretary please read the names of the tellers? Will you please answer to your name, as we must have thirty tellers for an efficient job.

. . . Secretary Anderton read the list, and the following were selected as the tellers:

Orin Flint, *Delaware*
G. B. Gilmore, *Bronx*
Louis Berger, *Kings*
Philip Standish, *Ontario*
Richard Doody, *Rensselaer*
M. Maslon, *Warren*
D. M. Vickers, *Washington*
Irvine E. Gage, *Albany*
Frederick A. Wurzbach, Jr., *Bronx*
Clarence G. Bandler, *New York*
William B. Rawls, *New York*
Homer J. Knickerbocker, *Ontario*
Ralph G. Stillman, *Section Delegate*
Samuel Z. Freedman, *New York*
Samuel Leo, *Bronx*
F. Albert Baumann, *Broome*
Edgar Bieber, *Chautauqua*
Edwin A. Griffin, *Kings*
Ellis B. Soble, *Monroe*
Horace E. Ayers, *New York*
William A. Peart, *Niagara*
Benjamin F. Glasser, *Queens*
Joseph L. Kiley, *Saratoga*
M. J. Costello, *Section Delegate*
H. C. Kelley, *Section Delegate*
C. G. Williamson, *Section Delegate*
Arthur F. Gaffney, *Oneida*
David H. MacFarland, *Oneida*
Ferdinand Herrman, *Queens*
Gerald Dorman, *New York*

Speaker Andresen: As soon as these members of the tellers' group have voted, Dr. McCarty would like to have you go over to the bridge, and he will tell you how to do the adding. It will be very interesting to you to see how quickly he runs that. In the American Medical Association they take about four or five times as long as we do here.

I just want to read Chapter III, Section 5, of the Bylaws: "In the event of a single nominee only for an office a majority vote without ballot shall elect." In such case the Chair will entertain a motion for closing the nominations and declaring the candidate elected.

The ballots will now be distributed. You will fill out only those spaces in which multiple candidates have been nominated. Vote for only twelve delegates to the American Medical Association, although we must have at least twenty-four nominations. The Bylaws require that twenty-four be nominated; twelve are elected and the next twelve are alternates.

NOMINATIONS AND ROLL CALL

Nominations were received.

Assistant Secretary Eggston read the following list of those who were entitled to vote:

Officers, Councillors, and Trustees

John J. Masterson
Carlton E. Wertz
James E. McAskill
W. P. Anderton
Andrew A. Eggston
James R. Reuling
Fenwick Beekman
Albert F. R. Andresen
Frederic W. Holcomb
Floyd S. Winslow
J. Stanley Kenney
Renato J. Azzari
Maurice J. Dattelbaum
Leo E. Gibson
George C. Adie
Theodore J. Curphey
Harold F. R. Brown
Elton R. Dickson
Edward T. Wentworth
Edward R. Cunniffe
James F. Rooney
Dan Mellen
William H. Ross

Ex-Presidents

Allen A. Jones
Martin B. Tinker
Thomas H. Halsted
James F. Rooney
(registered as trustee)
Arthur W. Booth
Orrin Sage Wightman
Nathan B. Van Etten
Harry R. Trick
William H. Ross
(registered as trustee)
William D. Johnson
Chas. Gordon Heyd
Arthur J. Bedell
Floyd S. Winslow
(registered as councillor)
Samuel J. Kopetzky
George W. Cottis
Thomas A. McGoldrick
Herbert H. Bauckus
Edward R. Cunniffe
(registered as trustee)
Louis H. Bauer
Leo F. Simpson

District Delegates

William C. White
Charles C. Murphy
Harry Golembe
Joseph A. Geis
James E. McAskill
Norman C. Lyster
Kenneth T. Rowe
Robert C. Peale

Section Delegates

Harry C. Kelley
Nelson W. Strohm
Maurice J. Costello
A. W. Martin Marino
Christopher Stahler, Jr.
Charles G. Williamson
Abraham M. Rabiner
Clyde L. Randall
Darrell G. Voorhees
Halford Hallock
Ralph G. Stillman
William J. Orr
Wendell R. Ames
Frederic E. Elliott
Seymour G. Clark
Robert S. Hotchkiss
Herman E. Hilleboe

Delegates from Component County Societies

Albany (3)

Irvine E. Gage
Thomas O. Gamble
Raymond F. Kircher

Allegany (1)

Irwin Felsen

Bronx (13)

J. Lewis Amster
Charles Sandler
Arnold A. Costabile
Edward P. Flood
Goodlatte B. Gilmore
Samuel Leo
William Klein
Moses H. Krakow
Frank LaGattuta
James A. Lynch
Thomas F. McCarthy
Frederick W. Williams
Frederick A. Wurzbach, Jr.

Broome (3)

Clifton H. Berlinghof
F. Albert Baumann
Steven A. Mazar

Cattaraugus (1)

Leo E. Reimann

Cayuga (1)

Alfred K. Bates

Chautauqua (2)

Edgar Bieber
Charles E. Goodell

Chemung (2)

William T. Boland
R. Scott Howland

Chenango (1)

Ben L. Dodge

Clinton (1)

Leo F. Schiff

Columbia (1)

John L. Edwards

Cortland (1)

Fred A. Jordon

Delaware (1)

Orin Q. Flint

Dutchess (3)

Victor A. Bacile
Clifford A. Crispell
Scott Lord Smith

Erie (8)

A. H. Aaron
E. Dean Babbage
John C. Brady
John Burke
John T. Donovan
Joseph C. O'Gorman
Milton G. Potter
Herbert E. Wells

Essex (1)

Thomas R. Cummins

Franklin (1)

Alfred A. Hartmann

Fulton (1)

Sylvester C. Clemans

Genesee (1)

Peter J. Di Natale

Greene (1)

Kenneth F. Bott

Herkimer (1)

George A. Burgin

Jefferson (1)

Charles A. Prudhon

Kings (24)

Charles A. Anderson
George E. Anderson
Louis Berger
Benjamin M. Bernstein
Nathan Brodie
William Dock
Thurman B. Givan

E. Harrison Griffin
Edwin A. Griffin
Donald E. McKenna
Alfred P. Ingegno
Abraham Koplowitz
Aaron Kottler
Joseph M. Linett
Samuel Lubin
Charles F. McCarty
Charles W. Mueller
William Ostrow
Solomon Schussheim
Robert E. Rothenberg
Irving J. Sands
Irwin E. Siris
Abraham D. Segal
Morris Weintrob

Lewis (1)
Edgar O. Boggs

Livingston (1)
Gerald Manley

Madison (1)
Felix Ottaviano

Monroe (5)
Matthew E. Fairbank
Joseph P. Henry
Charles S. Lakeman
Libby Pulsifer
Ellis B. Soble

Montgomery (1)
Roman R. Violyn

Nassau (6)
William C. Atwell
Eugene H. Coon
John M. Galbraith
Stephen F. Gerde
E. Kenneth Horton
Joseph G. Zimring

New York (24)
Philip D. Allen
Gerald Dorman
Horace E. Ayers
Clarence G. Bandler
Samuel B. Burk
J. Homer Cudmore
Harold B. Davidson
A. Wilbur Duryee
Carl Goldmark, Jr.
Samuel Z. Freedman
W. Guernsey Frey
Arthur V. Greeley
B. Wallace Hamilton
Alfred M. Hellman
John J. H. Keating
Norton S. Brown
Kenneth M. Lewis
Robert S. Beekman
Gervais W. McAuliffe
Madge C. L. McGuinness
Frank J. McGowan
Peter M. Murray
William B. Rawls
W. Laurence Whittemore

Niagara (2)
William A. Peart
Guy S. Philbrick

Oneida (3)
Arthur F. Gaffney
John F. Kelley
David H. MacFarland

Onondaga (4)
Lawrence W. Ehegartner
Dwight V. Needham
W. Walter Street
Frederick S. Wetherell

Ontario (2)
Homer J. Knickerbocker
Philip M. Standish

Orange (3)
M. Renfrew Bradner
Theodore R. Proper
J. Emerson Noll

Orleans (1)
Walter Shifton

Oswego (1)
Olin J. Mowry

Otsego (1)
James Greenough

Putnam (1)
Henry W. Miller

Queens (12)
Thomas M. d'Angelo
Alfred Angrist
Sol Axelrad
William Benenson
Frank J. Cerniglia
Meyeron Coe
Henry I. Fineberg
Benjamin F. Glasser
Ferdinand Herrman
George J. Lawrence, Jr.
Milton Tarlau
Ezra A. Wolff

Rensselaer (2)
Fred T. Cavanaugh
Richard P. Doody

Richmond (2)
Walter T. Heldmann
Stanley C. Pettit

Rockland (2)
F. B. Theis
E. Armand Scala

St. Lawrence (1)
Thomas M. Watkins

Saratoga (1)
Joseph L. Kiley

Schenectady (2)
Joseph H. Cornell
Charles F. Rourke

Schoharie (1)
David W. Beard

Schuyler (1)
Fritz Landsberg

Seneca (1)
Stanley B. Folts

Steuben (1)
William J. Tracy

Suffolk (3)
David Corcoran
Charles M. Robin
John L. Sengstack

Sullivan (1)
Elizabeth Vuornos

Tioga (1)
William A. Moulton

Tompkins (1)
Norman S. Moore

Ulster (2)
Eugene F. Galvin
Edward F. Shea

Warren (1)
Morris Maslon

Washington (1)
Denver M. Vickers

Wayne (1)
Ralph Sheldon

Westchester (6)
Edwin L. Harmon
Reid R. Heffner
Reginald A. Higgons
Henry E. McGarvey
C. James F. Parsons
Christopher Wood

Wyoming (1)
G. Stanley Baker

Yates (1)
William G. Roberts

. . . While the votes were being counted the House proceeded with business . . .

Section 130

Report of Prize Essays Committee

Speaker Andresen: The secretary will first read the report of the Prize Essays Committee of which Dr. Armitage Whitman is the chairman.

Secretary Anderton: Eight papers were submitted for the Merritt H. Cash Prize, and one for the Lucien Howe Prize.

While almost all of the papers showed evidence of good work and careful preparation, in the opinion of your Committee none of them is deserving of a prize.

That is dated May 4, 1950, and is signed by A. H. Aaron, Roger F. Lapham, and Armitage Whitman, chairman.

I move the acceptance of this report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Speaker Andresen: The report is accepted, with thanks.

Section 131

Election of Retired Members

Secretary Anderton: It is customary for this House to elect to retired membership those of our members who are over seventy years of age or who are incapacitated by illness, at the nomination of their county societies. However, there are four men who would be eligible were their dues and war memorial assessments, and for one of them the war memorial assessment, remitted. I, therefore, take the liberty to move that this House remit the 1949 dues and war memorial assessments for:

Dr. Thomas E. Bamford
Dr. Thomas F. Foreman
Dr. Thomas H. Mesick
Dr. Edward S. Van Duyn

and that we remit the war memorial assessment for:

Dr. Arthur P. Forman.

Dr. Harold B. Davidson: I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Secretary Anderton: Now I take the liberty of moving that the names just mentioned be elected to retired membership.

. . . The motion was seconded, and, as there was no discussion, the motion was put to a vote and was unanimously carried . . .

Secretary Anderton: The further list of men who are nominated for retired membership is as follows:

Theodore Jacob Abbott, *Cornwall-on-Hudson*
Alexander Allan, *Buffalo*
George S. Allen, *Clyde*
Herbert C. Allen, *Yarnell, Arizona*
Nicholas I. Ardan, *Niagara Falls*
Cora M. Ballard, *Hancock*
Benjamin Stockwell Barringer, *New Canaan, Connecticut*
Emily Dunning Barringer, *New Canaan, Connecticut*
Joseph H. Beattie, *Dobbs Ferry*
Raymond G. Bell, *St. Petersburg, Florida*
Arthur Besemer, *Marion*
Louis J. Beyer, *Buffalo*
Simon R. Blatteis, *Great Neck*
Isabella F. Borden, *Jackson Heights*
Byron D. Bowen, *Buffalo*
Frederick D. Branch, *Binghamton*
Joachim Brennglass, *Stamford, Connecticut*
George F. Brewster, *New York City*
Thomas Francis Bridgman, *New York City*

Clayton M. Brown, *Buffalo*
Everett Garnsey Brownell, *New York City*
Lewis S. Budlong, *Watertown*
Erwin W. Buffum, *East Aurora*
Floyd Burrows, *Syracuse*
Henrietta C. Christen, *Perrysburg*
Alfred Hull Clark, *Buffalo*
Edward J. Collier, *Amsterdam*
George T. Cook, *Buffalo*
Benjamin F. Corwin, *Brooklyn*
George W. Cottis, *St. Cloud, Florida*
J. Byington Covert, *Geneva*
Henry Clay Cowles, *Pinehurst, North Carolina*
Frank Haines David, *Ossining*
John J. Decker, *Manhasset*
Hugh B. Deegan, *Tonawanda*
Walter Joseph Decker, *Westfield, Pennsylvania*
Valentine A. DeCot, *Snyder*
Albert Knecht Detwiller, *Bell Harbor*
Edmund Devol, *New York City*
George H. Ding, *Brooklyn*
Louise Dithridge, *Bronx*
James Herbert Donnelly, *Buffalo*
Sumner E. Douglas, *Adams*
H. Burton Doust, *Syracuse*
W. Meddaugh Dunning, *City Island*
Franklin D. Earl, *Ogdensburg*
Hyman J. Epstein, *New York City*
John A. Ferguson, *Wyckoff, New Jersey*
Fred J. C. Fitzgerald, *Yonkers*
Arthur P. Foreman, *Syracuse*
Victor Frederickson, *New York City*
Albert Frey, *Buffalo*
Earl W. Fuller, *Greystone Park, New Jersey*
John Strother Gaines II, *New York City*
Edward L. Gainsburgh, *New York City*
Kurt Goldstein, *New York City*
Edward Allan Goode, *Flushing*
J. Edward Grant, *Northville*
Charles Perley Gray, *New York City*
Harvey P. Groesbeck, *Schenectady*
Arthur Haberstroh, *New York City*
George J. Haller, *Buffalo*
Harry J. Hammond, *Buffalo*
Richard Harrington, *Williamsville*
W. Morgan Hartshorn, *New York City*
Edith R. Hatch, *Kenmore*
George Hawley, *Baldwinsville*
Frank L. Heacox, *Auburn*
Max Heimann, *New York City*
Elizabeth Singley Hellweg, *Wilmington, North Carolina*
Emerson Holley, *Buffalo*
Samuel W. Houston, *Wolcott*
James Gilbert Howard, *Richmond Hill*
Edward Livingston Hunt, *Lawrence*
Grace D. Ives, *Brooklyn*
William A. Jewett, *Brooklyn*
Allen A. Jones, *Buffalo*
Dudley R. Kathan, *Schenectady*
James I. Kearney, *Buffalo*
James P. Kinney, *Buffalo*
Stacy P. Koenemann, *Avoca*
James H. Lewis, *Buffalo*
Benzion Liber, *New York City*
Paul Liebesny, *Arlington, Virginia*
William Preston MacLeod, *New York City*
Richard M. Macrae, *Staten Island*
William H. Marcy, *Buffalo*
Eugene W. Martz, *Stony Point*
Philip S. McCormick, *Yonkers*
Otto S. McKee, *Clearwater, Florida*
Charles G. McMullen, *Niskayuna*
Frederick R. Meeks, *Great Neck*
Robert C. Mehnert, *Buffalo*
William H. Meyer, *Bronx*
Samuel A. Moore, *Kenmore*
Chester D. Moses, *Buffalo*
Henry M. Moses, *Brooklyn*
Bert Munday, *New York City*
Jules M. Nova, *Freeport*
Sylvester F. O'Day, *Mamaroneck*
George J. Olsson, *New York City*
Jacob S. Otto, *Buffalo*
Teofilo Parodi, *New York City*
Paul L. Parrish, *Brooklyn*
Henry Stewart Patterson, *Suffern*
William Maxwell Patterson, *New York City*
Charles E. Pearson, *Staten Island*
John A. Pritchard, *Ogdensburg*
Julius Richter, *Buffalo*
Anna E. R. Robinson, *Baldwin*
Gertrude Rochester, *Spring Lake, New Jersey*
William Rosenfeld, *Brooklyn*
John R. Ross, *Poughkeepsie*
Frank John Rossi, *Utica*
William J. Rozwig, *Perrysburg*
Clarence L. Russell, *Utica*
Stephen P. Salasny, *Buffalo*
Arnaldo A. Samorini, *Schenectady*
George W. Schaefer, *North Evans*
Philip Schoenfeld, *Long Island City*
Bernard F. Schreiner, *Buffalo*
Maximilian Schwab, *Hillside Heights*
Edward A. Schweigert, *Buffalo*
William H. Sellings, *Staten Island*
Robert H. Shanahan, *Yonkers*
William T. Shanahan, *Eggertsville*
Alfred E. Shipley, *Brooklyn*
Reuben Spencer Simpson, *Lyons*
Abraham M. Skern, *Yonkers*
Charles Hendee Smith, *New Brunswick, New Jersey*
Gideon D. Smith, *Kenmore*
Howard B. Snell, *Brooklyn*
Fred Palmer Solley, *New York City*
Edward H. Storck, *Buffalo*
William J. Swart, *Schenectady*
Floyd C. Thompson, *Ontario*
Jarvis L. Thorpe, *Clyde*
Otto Charles Thum, *New York City*
G. Scott Towne, *Saratoga Springs*
Julius Ullman, *Buffalo*
Albert Vander Veer, *Charlotte, North Carolina*
Herman H. Van Horn, *Jordan*
J. H. M. A. von Tiling, *Poughkeepsie*
Irving Wilson Voorhees, *New York City*
Emory M. Wadsworth, *Garden City*
George G. Wagner, Sr., *Kenmore*
Charles W. Walker, *Rye*
Lazar Wallerstein, *Bronx*
Leopold D. Weiss, *Whitestone*
Henry D. White, *Rome*
Edward J. Wiencke, *Schenectady*
Christopher S. Williams, *Lafayette*
Roy H. Wixson, *Niagara Falls*
Thew Wright, *Tucson, Arizona*
Frederick Zingsheim, *Buffalo*

I move they be declared retired members of the Medical Society of the State of New York.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

SPEAKER ANDRESEN: These men are declared elected retired members.

We now come to the business that we had left over last evening. We have some reports of reference committees. I am going to ask Dr. Holcomb to take the chair.

Section 132 (See 7, 17)

Report of Reference Committee on Malpractice Insurance and Defense Board

DR. HENRY W. MILLER, *Putnam:* Your Committee desires to express their appreciation of the assistance they have received from the indemnity representative, Mr. H. F. Wanvig, and various members of the committee on the Malpractice Insurance and Defense Board in explaining the intricacies of malpractice insurance, and desire to call attention to the work of this Committee. Delegates should find considerable satisfaction in knowing that all elements of their malpractice insurance protection are in the hands of competent fellow practitioners who spend hundreds of hours of their valuable time in the study and control of this important undertaking. A glance at the personnel of that Committee should give assurance that our malpractice problems are in the most competent hands. Their report has received our most serious consideration.

The problems for this Malpractice Board are two in number: (1) The problem of transferring our group plan to a new carrier, the Employers Mutual Liability Insurance Company, one of the largest liability insurance companies in the country. Said company has accepted all the requirements of the group plan as adopted by the House of Delegates and amended by the Council. The expense ratio has been reduced from 34 per cent to 31.5 per cent which means that the portion of our premiums available for losses has been increased from 66 per cent to 68.5 per cent. Provisions have been made for establishing each year a contingent loss reserve to cover unforeseen losses chargeable against that year which may arise in the future and to insure the impact of such losses on the basic rates. The policy term has again been returned to an annual basis.

(2) The second problem is the development of plans and technics for reducing the cost of losses and the insurance rates. Last year the House of Delegates approved the recommendation of this Board that a professional committee be set up in one of our counties as a pilot experiment to determine whether the claim prevention program of Alameda County in California can be adapted to our situation in New York State. Westchester County was selected for the test. Our legal and indemnity representatives act as advisers to the committee and will keep the Board informed as to developments. The entire plan will be carried out with the close cooperation of the Employers Mutual Liability Insurance Company. It will be some time before the results of this test can be evaluated. While the Board expressed itself entirely in favor of the principle underlying these activities, it urges against undue haste of other county societies in adopting similar plans at the present time. Your Reference Committee approves the Board's attitude on this matter. Your Committee feels that in the interest of reducing insurance costs the Board should exercise the authority given them last year to limit the amount of insurance protection granted to members, to withdraw the privilege of renewal insurance where such action might seem to the Board to the best interests of the group as a whole.

Your Committee notes with approval the plans of many county societies now undertaken or in formation, which are broader in scope than the mere defense of claims and suits. These projects can have a beneficial effect in the improvement of patient-physician relationship.

Your Committee notes with approval the readiness of your Board to cooperate with these special committees when their service is needed.

I move the adoption of this part of the report.

Dr. Fenwick Beekman, *Assistant Treasurer:* I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Miller: Your Reference Committee feels that the supplementary report and actuarial report of Wolfe, Corcoran, and Linder should be considered together. A study of these reports leads to the conclusion that the rates established for the metropolitan and upstate areas are fair and equitable.

The audit and actuarial study leads to the following conclusions:

1. The known data, as represented by the closed vouchers, has been correctly accounted for and carried forward into the statistical data by the Society's indemnity representative.

2. Continued observation of this business confirms our belief that the cost-plus agreement under which it is operated is the only way in which it can be conducted in fairness to both the company and the assured, provided the costs are computed as accurately as the nature of this form of insurance will permit.

3. The contingent reserve factor which, for the first time, was introduced into the agreement with the new carrier, provides a cushion for unforeseen losses experienced on the business of past years, if needed, and at the same time furnishes a credit to subsequent loss experience if the reserves prove more than adequate. This is a real safeguard to both the Company and the Society and should be maintained and carefully developed.

4. The cost of malpractice losses continues to push upward, and future costs will in a large part depend on the effectiveness with which the Society, with the help and cooperation of the Company, is able to work out an effective claim prevention program.

It is a source of satisfaction to the Committee to note the continued support of the group plan as evidenced by the increased percentage insured from 57 to 66 per cent of the total membership.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Miller: I move the adoption of the report in full.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 133

Report of Reference Committee on Report of Legal Counsel

Dr. Henry W. Miller, *Putnam:* To the House of Delegates, ladies and gentlemen, your Committee herewith submits its report on the Report of Counsel. It has carefully studied the report and heartily commends the work of the counsel and his staff. The report carries no recommendations but is an excellent exposition of the work which has been carried on throughout the year. Your Committee hopes that not only every delegate but every member of the Society shall carefully study this report.

In his report, the counsel discusses the work in three categories: (*a*) the actual handling of malpractice actions and claims; (*b*) counsel work with officers, committees, and individual members of the Society, and (*c*) legislative matters.

The Committee was favorably impressed with and commends the counsel and his staff most highly for the great amount of excellent work, the number of claims handled, the many talks before component societies and committees, the services to individual members, the handling of a multitude of tasks, and last but not least, the great help on legislative work, and above all, the readiness of the counsel and his staff to serve the Society and be available whenever needed.

Your Committee cannot consider this report without noting with sadness the untimely death of Mr. Thomas H. Clearwater. Every delegate must feel the loss keenly. His constant presence at the House of Delegates meetings, none of which was complete without him, his constant help on the floor and at reference committee meetings, and his cheerful, excellent advice will long be remembered by all of us and sorely missed.

Your Reference Committee recommends that the House of Delegates of the Medical Society of the State of New York accept and approve the Report of the Counsel, and I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Samuel B. Burk, *New York:* May I move at this time that we stand up for a short period of silence in respect to Mr. Clearwater's memory for his excellent work for this Society?

. . . The delegates arose and stood with bowed head for one minute in silent tribute to the memory of Mr. Thomas H. Clearwater . . .

Dr. James F. Rooney, *Trustee:* There is one additional thing: I would like to move that a copy of this section of the report with its reference to Mr. Clearwater and the high esteem in which he was held by this House be sent to his widow by the secretary.

Secretary Anderton: I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Dr. Miller: I wish to thank the members of my Committee who have been exceedingly helpful in the preparation of these reports.

Vice-Speaker Holcomb: Thank you, Dr. Miller.

Section 134

Report of Reference Committee on Report of Council, Part VII: Medical Care Insurance

Dr. Guy S. Philbrick, *Niagara:* Your Reference Committee has studied the report of the Subcommittee on Medical Expense Insurance and has noted with interest the report of the Council Committee on Economics.

We commend Dr. A. H. Aaron and his Subcommittee on the careful and thorough study they have made in the matter of agreement on the uniform State-wide contract to be offered by the local plans.

Your Reference Committee commends the efforts made and the accomplishments of the Subcommittee.

Your Reference Committee recognizes the wide differences in provision of coverage of the various local plans. We recommend that the Committee continue their efforts to reconcile these differences.

Your Reference Committee recommends approval of the Subcommittee's recommendation through the Council Committee on Economics that approval be extended to the six New York State Plans for another year as follows:

United Medical Service, Inc., New York City
Genesee Valley Medical Care, Inc., Rochester,
Central New York Medical Plan, Inc., Syracuse
Medical and Surgical Care, Inc., Utica
Northeastern New York Medical Service, Albany
Western New York Medical Plan, Inc., Buffalo

Your Reference Committee studied with interest the report of the activities of Mr. George P. Farrell, director of the Bureau of Medical Care Insurance, and commend him for the excellent work he has done.

Your Reference Committee especially commends the following activities:

The preparation of the fourth annual progress report of the Voluntary Nonprofit Blue Shield Plans for 1949, together with the more recent supplement.

During the year he has continued at an ever-increasing rate to publicize to the medical profession and to the public the various advantages of medical care insurance, by many appearances before professional and lay groups.

He has attended many county, State, and national meetings pertaining to medical care insurance and kept the Subcommittee on Medical Expense Insurance informed on the progress in this field.

I move the adoption of this part of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 135 (See 89)

Report of Reference Committee on Report of Council, Part VII: Division of Fees Between Physicians and Hospitals

Dr. Guy S. Philbrick, *Niagara:* We have a report on the resolution introduced by Dr. Morris Weintrob, of Kings County, dealing with the distribution of fees between physicians and hospitals.

This resolution deals with an evil which is insidiously affecting the economic and professional aspects of medical care.

Your Reference Committee heartily approves this resolution. In order that this resolution may not wither as a mere reiteration of words on the record, your Reference Committee recommends that the resolution be referred to the Council with instructions to take such action as may be advisable, to the end that:

1. Every physician in the State of New York be made aware of this situation.
2. All hospitals be put on notice in regard to this matter.
3. A copy of this resolution be sent to the Board of Regents.
4. Any other action, legislative or otherwise, be taken that will further the intent of this resolution.

By the way, I just recall that this resolution was not read. The subject matter was given, but as I recall it, it was not read.

Vice-Speaker Holcomb: Can you give us the text of the resolution?

Dr. Philbrick: Yes. This resolution was introduced by Dr. Weintrob, of Kings, and the whereases are of an explanatory nature:

> "Whereas, it is a matter of common knowledge that a widespread practice exists in some hospitals of the State of New York through which fees for medical services rendered by practicing physicians in hospitals, for compensation and noncompensation cases and for ward, semiprivate and private patients, are diverted through various means from the physicians to the hospitals; and
>
> "Whereas, the physicians who render such medical services, whether employed full time by the hospitals or affiliated with the hospital as staff members, are deprived of the fees for such services through contract with the hospital or through an understanding to the end that the hospital receives payment, in whole or in part, for the services so rendered; and
>
> "Whereas, there are an increasingly large number of ward and semiprivate patients who formerly could properly be classed as medical indigents but who, through medical indemnity insurance or compensation coverage, may no longer be properly so classified; and
>
> "Whereas, under subparagraph 2(f) of Section 6514 of the Education Law of the State of New York the license or registration of a physician may be revoked, suspended, or annulled or a physician may be reprimanded or disciplined if he directly or indirectly participates in the division, transference, assignment, rebate, splitting, or refunding of a fee in connection with the furnishing of medical care, diagnosis, or treatment or service; and
>
> "Whereas, the practice above described is in direct violation of said subparagraph 2(f) of Section 6514 of the Education Law and constitutes at the same time a serious inroad upon the established methods and procedures of the private practice of medicine in New York State and is not in the best interests of the patients or of the practicing physicians; now therefore be it
>
> "*Resolved*, that the Medical Society of the

State of New York take such action as it may deem proper under the circumstances to discourage and put a stop to such practices on the part of hospitals and physicians in the State of New York."

I move the adoption of the Reference Committee's report.

VICE-SPEAKER HOLCOMB: Dr. Philbrick has read the recommendations of the Reference Committee in regard to this resolution. In effect it has been referred to the Council for proper dissemination. Is there a second to the motion to adopt the Reference Committee's report, which approves the resolution?

DR. JAMES F. ROONEY: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 136 (See 82)

Report of Reference Committee on Report of Council, Part VII: Free Choice of Physician in Voluntary Prepayment Health Insurance Plans

DR. GUY S. PHILBRICK, *Niagara:* This is a report on the resolution introduced by Dr. Bernstein, of Kings, subject, "Free Choice of Physician in Voluntary Prepayment Health Insurance Plans."

This resolution was read. I will not repeat it unless you want it reread.

VICE-SPEAKER HOLCOMB: I don't think that will be necessary. We know the text of that. Will you give your Committee's recommendation on it?

DR. PHILBRICK: Your Reference Committee approves the principle of the right of a patient to free choice of physician and is of the opinion that the Blue Shield Plans have accepted this principle.

Your Reference Committee recommends that this resolution be referred through the Council to the Legislation Committee for action. I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 137 (See 41)

Report of Reference Committee on Report of Council, Part VII: Preparation of State-Wide Medical Insurance Policy

DR. GUY S. PHILBRICK, *Niagara:* This is the report on the resolution which I introduced on my own behalf from Niagara County, and concerned the preparation of a State-wide medical insurance policy. It was amended with the consent of the introducer by the following substitute motion:

> "WHEREAS, the need for uniform coverage through medical care plans, to meet the increasing requests of national employers and employe organizations, is becoming more urgent; and
>
> "WHEREAS, the absence of a uniform contract at the present time retards the enrollment of large national groups in Blue Shield; therefore be it
>
> "*Resolved*, that the House of Delegates request the Council, through its Subcommittee on Medical Care Plans, to expedite the completion of the uniform plan on which they have in the last year been working, and that they impress the presidents of the plans with the urgent necessity of immediate action."

I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 138 (See 60)

Report of Reference Committee on Report of Council, Part VII: Letter from the Medical Society of New Jersey

DR. GUY S. PHILBRICK, *Niagara:* Your Reference Committee had two letters referred to it and wish to report on them as follows:

The first letter was from the New Jersey State Medical Society requesting that we endorse and cosponsor a resolution which they intend to submit to the 1950 American Medical Association convention. Our report on this letter is as follows:

This is a communication from the Medical Society of New Jersey, enclosing a proposal which will be offered by the New Jersey delegates at the annual meeting of the American Medical Association this June, requesting the reaction of this Society to the subject matter, and concluding with an invitation to this Society to cosponsor the resolution at the American Medical Association meeting.

The resolution is quite lengthy, covering nine typewritten pages. It is based on the following premises:

1. That the public will welcome and support a definite, realistic program of action sponsored by the medical profession.
2. That it is possible to solve the national medical care problem without resort to any broad national legislation.
3. That, if we are to extend the benefits of high quality medical and hospital service insurance to the masses of workers in the lower income brackets and to those who are medically indigent, we must provide them with some special aid or encouragement.
4. That if voluntary insurance is to achieve general acceptance we must liberalize its services and broaden its coverage.

Your Committee, while approving in principle the object of the resolution, feels that it has not the time for a detailed study of the wording and consideration of the implications arising therefrom.

We, therefore, recommend that this House express to the Medical Society of New Jersey its sympathy with the objectives of their resolution, but without more intensive study of the phraseology, cannot agree to act as cosponsor in its presentation.

I move the adoption of the Committee's report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 139 (See 54)

Report of Reference Committee on Report of Council, Part VII: Letter from Health Insurance Plan of Greater New York

DR. GUY S. PHILBRICK, *Niagara:* The letter from Dr. George Baehr written to Dr. John J. Masterson, and read by him before the House of Delegates, referring to a large volume of appended material, was referred to this Committee. Because of the volume of material submitted, it was considered impractical to give full and necessary analysis of its contents in the short time available.

Your Reference Committee, therefore, recommends that this matter be referred to the Council. I so move.

. . . The motion was seconded . . .

VICE-SPEAKER HOLCOMB: It is moved and seconded that this matter be referred to the Council for further study. Does anyone wish to discuss this?

DR. THOMAS F. MCCARTHY, *Bronx:* What is the matter they are referring to? They are referring something to the Council, and they don't tell us what it is.

Vice-Speaker Holcomb: Will Dr. Philbrick for the information of the House enlarge on the subject matter?

Dr. Philbrick: There was a letter written to Dr. John J. Masterson on May 1 by Dr. George Baehr, chairman of the board of directors of the Health Insurance Plan of Greater New York, and to which was appended a great deal of material, which in the short time we had available was hard to evaluate.

Dr. J. Stanley Kenney: Read the letter.

Dr. McCarthy: I simply want to know if the Reference Committee chairman can briefly summarize what is the request of Dr. Baehr to Dr. Masterson.

Chorus: Read the letter.

Vice-Speaker Holcomb: The letter was read by Dr. Masterson at this House of Delegates.

Dr. Rooney: I think without any question the letter should be read. In all probability those men who heard this letter read in the early hours of the session have entirely forgotten such a letter was presented, and I believe the House has a perfect right to know what they are going to do, and should exercise that right.

Vice-Speaker Holcomb: The chair will request Dr. Philbrick to reread the letter.

Dr. Philbrick: Reading:

"It was with a deep sense of gratification that the Health Insurance Plan of Greater New York learned that the American Medical Association House of Delegates at its meeting in June, 1949, adopted criteria for the approval of lay-sponsored voluntary health plans. The adoption of these criteria indicates clearly that the A.M.A. recognizes the fact that lay-sponsored voluntary prepaid medical insurance plans, and medical society-sponsored programs can coexist and complement one another in providing medical benefits to a large part of our nation's population.

"The board of directors of HIP has examined the twenty criteria and is of the opinion that the program of HIP conforms with each one. We are confident that, after reviewing the attached statement and the accompanying exhibits, the Medical Society of the State of New York will concur and grant approval to the Health Insurance Plan of Greater New York as a lay-sponsored voluntary medical insurance plan.

"The HIP board of directors had considered the question of sending this application to the county medical societies. After considerable discussion, it was the Board's conclusion that the application should be sent to the State Society rather than the local constituent societies for the following reasons:

"(*a*) HIP has been authorized by the State of New York to operate in 18 counties. It is not feasible to make individual applications to the 18 county societies.

"(*b*) As HIP is providing medical services in five counties (New York, Kings, Queens, Bronx, and Nassau) and a small part of two other counties (Westchester and Suffolk) at the present time, there would not seem to be any point in applying for approval to the remaining 13 counties.

"(*c*) The Queens, Kings, Bronx, and Nassau Medical Societies have adopted resolutions unfavorable to HIP, and addressing the application for approval to these societies would therefore serve no purpose but to delay the implementation of the principles set forth by the A.M.A. Objections by any of the county societies to approval of the plan by the State Society should be based solely upon the plan's failure to conform to the twenty A.M.A. criteria, not upon opposition to group practice or to other details which are not in conflict with the twenty criteria.

"HIP is the largest medical service program providing comprehensive medical care now in operation in this country. We realize that the program may be misunderstood by many members of the medical profession, but a careful reading of the enclosed material should convince you that HIP conforms to the twenty principles of the American Medical Association and therefore merits approval by the Medical Society of the State of New York.

"We are prepared to provide you with any additional information that you may believe necessary and shall be glad to have HIP representatives appear before you or the Council of the Society to discuss any details of the program."

Vice-Speaker Holcomb: Members of the House of Delegates, the chair wishes to call to your attention that the recommendation of the Reference Committee is: "Because of the volume of material submitted, it was considered impractical to give full and necessary analysis of its contents in the short time available." They therefore recommended that it be referred to the Council. I want to call your attention to the fact that in discussing this we don't feel the criteria should be discussed but only as it applies to this recommendation.

Dr. Thomas M. d'Angelo, *Queens:* Mr. Speaker and members of the House, first I want to say that I am in no way connected with HIP; as a matter of fact, I am a member of the Board of Directors of U.M.S. However, I come here as a representative of Queens County and in referring this matter to the Council—that is all we are to discuss at present?

Vice-Speaker Holcomb: Right.

Dr. d'Angelo: It seems that the Committee could have made some recommendations that the Council take some action because, in referring it to the Council, the Council may decide to take no action at all.

Our physicians in Queens, and I think in the City of New York as a whole, are greatly confused over the issue of HIP. Some of them joined, and later resigned. Some of them are to join, and don't know what to do. It is true that our county society has taken a definite stand against HIP, but now HIP comes to us formally for approval, and they want to be approved on the twenty rules and regulations as adopted by the American Medical Association. I, for one, know that at present they never could meet those regulations. However, I believe that the Council should take definite action and call in the interested parties to try to iron out, if possible, the differences between the medical profession and HIP. If their regulations and principles cannot be ironed out, then I think the medical profession as a whole in this city and this State should be so advised.

Dr. Joseph A. Geis, *District Delegate:* I agree with all that Dr. d'Angelo has said. I would like to make an amendment to that motion to refer to the Council. I know it is unnecessary, but I feel this House should go on record as part of their instructions to the Council that at no time under any circumstances should the State body attempt to take away from any county society its right of action on this. (*Applause*) I know we, in the upstate part of the State, would absolutely and deeply resent any attempt by the State Society or a lower county to impose anything on our county, so we don't intend to impose it on the lower counties. Therefore, I make a motion that the Council be instructed to consider thoroughly the right of each county to decide this matter for themselves. I don't think it is necessary, but I want it on the record.

Vice-Speaker Holcomb: Dr. Geis, I believe, is offering this as an amendment to the motion.

Dr. Geis: Yes.

. . . The amendment was seconded . . .

Dr. James F. Rooney, *Trustee:* I think this is one of the most abominable attempts to evade a duty that is laid down in relation to what and how things should be done. In no way does this letter state conformity to all of these principles. Every county society that is covered by this plan, to secure approval of the plan must approve that plan, and so far as the powers of this House of Delegates are concerned they cannot do anything to supersede the laws that they have already concurred in making except by amending those requirements. It is so characteristic of so many things that we have had from the same source in the past eighteen to twenty years by the gentleman who wrote this letter. I have the highest respect for him as a physician, intellectually, and in every way, but I want to tell the House one thing: He was one of the earliest and the most insistent proponents of compulsory health insurance that we in this State Society ever had to meet and fight.

I hope that the House will pass this recommendation of the Committee. I entirely concur with Dr. Geis, but I think it is rather derogating from the dignity of the Council to think that you have to instruct the Council that they shall do such a thing. I should ask Dr. Geis if he would not mind withdrawing that word "instruct" and that they recommend to the Council they keep in mind the provisions of the points as laid down governing approval for these various insurance groups.

Dr. Geis: I will accept that change of the one word that Dr. Rooney wants in there. I did not mean to derogate the Council in the least bit, but I did feel that I would like to see this body in its instructions or in its articles put itself on record as not opposed to county authority.

Dr. Leo F. Schiff, *Clinton:* I want to say we are heartily in favor of the amendment, and particularly gratified by Dr. Rooney's change. We made our recommendations in a few words. We realized that this is a thing that is too big for a reference committee to study properly. We had every confidence in the Council of our State Society knowing its business, aware of the rights and privileges of the county societies, and being ready to do that which was for the best good of us all and not breaking any of our traditions or our actual regulations. As a matter of fact we felt, and so discussed as to whether there should be instructions to the Council, and it was purposely left out, but if the House desires it included it won't disturb the recommendation that was made.

I think the Council when they get through that mass of stuff can on good grounds without haste—we could have only done it in haste; and even a good thing done in haste is not a thing well done—will find many good reasons for backing the counties in finding differences between the statement in the letter and the material submitted. So in conclusion I suggest that you support the amendment and pass the recommendation.

Dr. Renato J. Azzari, *Councillor:* Mr. Speaker and members of the House, I want to make a very brief statement for your information: that in every instance where any insurance plan has been submitted to the Council for approval your Committee on Economics has always insisted that approval be obtained at the county level, and we will do so in the future. (*Applause*)

Vice-Speaker Holcomb: The chair believes that perhaps both sides of the question should be heard, and for the best interests of all I recognize Dr. Ostrow, who wishes to speak, I believe.

Dr. William Ostrow, *Kings:* I am a member of the Health Insurance Plan. I am also a member of the medical control board of the Health Insurance Plan. For that reason I also want to go on record as approving Dr. d'Angelo's recommendation. Nobody wants to deprive any local medical society from either itself approving or considering this plan. However, on the county levels this question was considered in great heat and with lots of statements being made that are not quite clear.

I just want to bring out two facts. In the first place, the State Medical Society has always been interested in and has always approved what is best for the public in the State of New York, but here we are confronted with a situation where 240,000 people are receiving services from 800 physicians who are members of this Society. In addition to that, we have applications from as many as 1,200 doctors. Ten per cent of your membership are interested in the Health Insurance Plan, and for that reason we want to have a definitive understanding just what the Health Insurance Plan is and what it is not.

I am heartily in favor of Dr. d'Angelo's recommendation, but I would like also to include in his recommendation that this thing should be brought before the Council with a definite recommendation for early report.

Dr. A. H. Aaron, *Buffalo:* Mr. Speaker and members of the House of Delegates, Dr. Azzari has properly said what the attitude of the Committee on Economics and the Subcommittee on Medical Expense Insurance is. This is a very vital thing because many changes in plans occur from week to week, and they must first absolutely be submitted to the local county society for vote by the society itself—not even by their committees, not even by their councils or their various groups; it must be passed by the county society as to any change in the type or character of the policy or any provisions under which it may act. That is fundamental in the activities of our Committee.

Second, this House has laid down appropriate rules and regulations for the conduct of its medical plans, with the basis of county society approval; therefore, it is my opinion that we should adhere to these rules and regulations in the application of any group in regard to the right to carry out a voluntary plan of medical insurance in this State.

Vice-Speaker Holcomb: I know you will respect our time element.

Dr. Harold B. Davidson, *New York:* Yes, I will be very brief.

Number one, it is patent to the House I am sure that this is just a way of getting past the county societies, which have a right to do it.

Number two, I have seen Dr. Ostrow's name signed to articles on free choice of physician, and was surprised somewhat to hear his attitude on this.

Number three, Dr. Baehr said we could have additional information. I would like to have that information, say, how many physicians HIP is sending to practice in Queens because Queens does not approve of the plan, doctors who otherwise would not be practicing in Queens.

Number four, I think every delegate should be aware of the type of publicity that is now going on for HIP in Staten Island. It would be quite illuminating to look into the methods, which are somewhat different from the words in the letter.

Lastly, I have here a copy of the magazine section of the *New York Sunday Times* of March 6, 1949. Its title is "The Health Issue: A Middle Course," in which HIP pretends to carry the middle course between noncooperation and compulsory health insurance. It is written by Mr. David M. Heyman, who is the president of HIP, and very closely associated with Dr. Baehr. I don't know whether they see eye to eye on everything, but presumably they do. I want to read just one sentence from this article, and place this article in evidence for the Council's information. In speaking of the middle course, Mr. Heyman says: "The proposed middle way, it should be noted, does not rule out compulsory health insurance and, in effect, moves toward it, but meanwhile provides needed experience." I should like to ask needed experience for what? (*Applause*)

Vice-Speaker Holcomb: Is the House ready for the question?

Dr. Rooney: May I point one thing out: I gave you the sign going back over nearly twenty-six years, and now in this article you have the footprints of the beast.

. . . The question was called on the amendment, and it was put to a vote and was carried . . .

Vice-Speaker Holcomb: We will now vote on the recommendation as amended. Is there any discussion?

Dr. McCarthy: I would like to offer you a substitute motion, a substitute for the whole motion of the Reference Committee. My motion would substitute that the writer of this letter be notified that in the opinion of this House the procedure suggested in this letter does not conform to the usual procedure of the Medical Society of the State of New York, period.

. . . The substitute motion was seconded . . .

Vice-Speaker Holcomb: Is there any discussion on the substitute motion?

Dr. Schiff: I think as a dignified body we should give due consideration to every request that is made of us even though we may have much knowledge and much reason for declining to grant it. For that reason, this vast amount of material was referred to the Council, who I am sure will do what the House wishes in a more deliberative and dignified way and not leave us open to the criticism that acting in haste, with only a short discussion, might cause, and the charge that this thing was turned down for some petty reason. That would be the next step, sc personally I would ask you to reject the substitute and stick to the original amended motion.

Dr. Rooney: I merely desire to say I concur in everything that Dr. Schiff has just said.

. . . The question was called on the substitute motion, and it was put to a vote and was lost . . .

Vice-Speaker Holcomb: We will now vote on the original motion as amended.

. . . The question was called, and the motion was put to a vote and was carried . . .

Vice-Speaker Holcomb: Have you any other resolutions?

Dr. Philbrick: No. I move the acceptance of the report as a whole, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Vice-Speaker Holcomb: Thanks, Dr. Philbrick, for a very excellent report.

Dr. Philbrick: I wish to thank the members of my Committee for their cooperation and advice. (*Applause*)

Section 140

Report of Reference Committee on Report of Council, Part VI: Economics, Public Medical Care, and the Joint Committee of the New York Hospital Association and the Medical Society of the State of New York

Dr. Thomas O. Gamble, *Albany:* Mr. Speaker and members of the House of Delegates, your Reference Committee submits the following report and comments on the work done during the past year by the Council Committees on Economics and Public Medical Care and the Joint Committee of the Hospital Association and the Medical Society of the State of New York.

The Subcommittee on Public Medical Care held no meetings during the year. Your Reference Committee regrets that the Society has made little or no progress in providing a more complete program for improving medical care facilities for the public. This is *our* job, and if we shirk our responsibility we can hardly expect the general public to support us in our fight against compulsory health insurance. The directive of the House urging the Blue Cross and Blue Shield to devise plans to offer to the public, particularly the low-income segment, comprehensive medical and hospital coverage, including preventive and diagnostic services, was recommended for approval by the Committee on Economics and *was* approved by the Council. The Subcommittee on Medical Expense Insurance has advised that final decisions rest at the local level. While we agree with this advice, we urge that a working plan be submitted at an early date.

The Joint Committee of the Medical Society and the Hospital Association of the State of New York reports that a meeting of the entire committee "was not held during the year, primarily because there were no resolutions from the House of Delegates or from the Council that demanded it." However, the chairman of the Committee of the Medical Society proceeded to mention three resolutions passed at the last session of this House:

1. "The Medical Society of the State of New York should urge strongly that all hospitals proceed with the fulfillment of the requirements as outlined in Regulation 35 of the Sanitary Code of the State of New York as rapidly as possible." This was referred to the subcommittee of the Council, but at the time the Joint Committee submitted its report this subcommittee had made no report.

If any of you do not know what Regulation 35 of the Sanitary Code does, it has to do with the creating of more space for bassinets, the protection of nurseries from the spread of diarrhea, and what not. This is a comment by me: I understand that probably half of our hospitals have already complied, but that has not been reported officially.

2. The gist of the second resolution, as submitted by Dr. Thomas F. McCarthy, was that rapid expansion of voluntary hospital and medical insurance plans will multiply the number of patients who will require semiprivate and private hospital beds. Since any extension of bed capacity will be by the building of new hospitals largely through the allocation of governmental funds, Federal or State, it was recommended that the House of Delegates request the Council through its appropriate committee to present these pertinent facts to the proper authorities concerned with hospital planning, and that the

Council take whatever action it may consider feasible in the correction of present restrictive regulations in voluntary and municipal hospitals. Dr. Leo Simpson, chairman of the Joint Committee, wrote to Dr. Marcus D. Kogel, commissioner of the Department of Hospitals of New York City, enclosing this resolution. Dr. Kogel replied that the charter of New York City defines its hospital facilities as being primarily for the care of the indigent and that private and semiprivate accommodations should be provided by the voluntary hospitals, except under unusual or extraordinary circumstances. Dr. Simpson's Committee states that it is of the opinion that it is illegal for a physician to accept fees or other gratuities in a municipal hospital in New York City.

The Reference Committee cannot agree with the opinion of Dr. Simpson's Committee, because physicians on the visiting staffs of municipal hospitals may accept fees for cases covered by workmen's compensation, liability cases, and from patients covered by health and accident insurance. It is recommended by our Committee that immediate study should be made as to an expansion program.

3. The third resolution, "An appropriate committee working in conjunction with other interested groups, such as the New York Hospital Association, initiate studies to define just and uniform standards for dealing with problems relating to tenure of hospital staff appointments," and "it was voted that proper and equitable hospital administration should include provisions in hospital bylaws to protect staff appointments from capricious or summary termination." Dr. Simpson's Committee states that it is in hearty accord with the motives that actuated this resolution, but very properly points out that the boards of trustees of all so-called voluntary, nonprofit hospitals cannot legally surrender their rights regarding the appointments and dismissals from the medical staff. In veteran-, State-, county-, or municipally-controlled institutions the final decision rests with the authorities in legal control. Your Reference Committee applauds the suggestion of the chairman of the Joint Committee that, in addition to the present Council Committee, a special committee be set up in those counties that have hospital facilities. One member of this committee should be a general practitioner. This committee should join with the committee from the boards of trustees of local hospitals. This joint committee could work with sympathetic understanding for the benefit of all. Individual problems could be discussed—areas of friction could be explored—and they could each aid in the study of functional activities of the hospitals, making medical care more efficient and less expensive. The Joint Committee concludes that the complexity of the problem in New York City makes it impossible to prescribe any single remedy. It suggests, however, that if the rules of professional conduct as outlined in our code of ethics were observed, and if the county societies unswervingly defend that position, a start would be made in the right direction.

The Council Committee on Economics has presented a report on a number of matters which should be of interest to all of us.

1. The request from the United Medical Service that the Council endorse its proposal to raise the income ceiling limits for service benefits from $1,800 to $2,500 for an individual and from $2,500 to $4,000 for a family was approved by the Council. Your Reference Committee is in complete agreement with this action of the Council, believing it to be a forward step in promoting better public relations and medical care coverage for the public.

2. In the supplementary report of the meeting of the Council held on February 9, 1950, "Economics," there is recorded the action of the Central New York Medical Plan in raising its ceiling limits to between $4,000 and $5,000 for individual and family subscribers. This plan also proposes, "That maternity care be included in the contract on a service basis with a fee of $75, maternity care to be provided in the home or hospital, excluding x-ray and anesthesia." Your Reference Committee, having no executive power, recommends that this House and the Council give serious consideration to these proposals of the Central New York Medical Plan. We believe that the proposals are not consistent with the recommendations of the Subcommittee on Medical Expense Insurance. This Subcommittee has advised that individual ceiling incomes be limited to $2,500 and family ceiling incomes be limited to $4,000. It also recommended that maternity fees be placed at $75 *on an indemnity basis.* Economic surveys have revealed that the annual income of from 85 to 90 per cent of all families does not exceed $5,000. The obstetrician, or the general practitioner who includes obstetrics in his services to the public, would be forced to accept a fee of $75 for prenatal and postnatal care, plus delivery from those patients who are Blue Shield subscribers, or stay out of the plan, neither of which would be wise. Obstetricians are as devoted to all plans which are in the public interest as other groups of physicians. Your Committee believes that the various Blue Shield plans should keep obstetric fees on an indemnity basis. Not only is a complete service fee of $75 inadequate, but it would also tend to lower the dignity and the importance of obstetric care. Your Committee believes that a premium on childbearing by the charging of excessive fees is condemnable. However, if our counties follow the Council's advice and establish grievance committees, abuses would be eradicated quickly.

Your Reference Committee does not mean that this House or the Council should attempt to use force in securing cooperation from any approved Blue Cross or Blue Shield plan. Compulsion is not suggested. Negotiation is advised.

3. The directive of the House that Blue Cross discontinue offering medical services in pathology, anesthesiology and physical therapy, and that Blue Shield plans should pay for these services was approved by the Council. The extent to which Blue Cross and Blue Sheild plans have adopted this recommendation is not known to your Committee.

4. The directive of the House regarding medical indemnity payments—"Recognizing that contract restrictions under certain voluntary insurance plans tend to deny or restrict the free choice of physicians"—was, according to the report of the Committee on Economics, approved by the Council. There appears to be some inconsistency in this report and that of the chairman of the Legislation Committee, in which it is stated, "Note is taken by the Legislation Committee of the Council action in deciding that the 1949 Panken bill, amending the insurance law in regard to free choice of physicians, should not be introduced this year." If there are any complaints regarding this action of the Council, they should be directed to the Council and not to this Committee.

5. The Economics Committee has reported upon the so-called Linowitz plan and, in the opinion of your Reference Committee, has wisely reserved approval until all plans and implications that may result, particularly in regard to how much the State or Federal government would be injected into this picture, have been carefully considered.

6. During the past year the Group Health Insurance, Inc., requested approval of its medical and surgical care insurance plan by the State Society. This matter was referred to the Economics Committee, which, after careful study, made no recommendation, following the established policy of referring such groups to the respective county societies first for approval. The Committee notified the Group Health Insurance, Inc., that the proper procedure for them to follow would be to request the county societies, in the areas in which they wish to operate, to give endorsement. Your Reference Committee records its approval of this action.

7. The final action of the Economics Committee was upon a resolution passed by the House at its last annual meeting. This resolution directed that:

(*a*) Attention of hospitals and teaching institutions be drawn to the State Society's opinion that such bodies should not practice medicine in any of its branches for pecuniary gain.

(*b*) A conference to be held with the deans of medical colleges and representatives of hospitals and teaching institutions to formulate a program which is in the public interest.

(*c*) Such institutions be requested to take no further action toward entering the practice of medicine until after such a policy has been formulated.

The Economics Committee reports that it could not in its best judgment recommend to the Council that the first paragraph of this resolution be approved. "The Committee feels that the implied practices complained of do not legally constitute the practice of medicine. Hospitals do not practice medicine; their staff doctors do this for them, and the hospitals sell these services. In this view we are supported by our counsel. This does not mean that the Committee is sympathetic to these practices. On the contrary, we are cognizant that this problem has been with us for a number of years, has affected all of us, and that every effort should be made to correct this and other practices which are making inroads in the sphere rightfully allocated to the licensed medical practitioner." The stand taken by the Economics Committee on this paragraph is disturbing to your Reference Committee. If we agree that hospitals and teaching institutions should not practice medicine for gain, we have every right to say so. To enter upon our minutes a statement that the Economics Committee "could not in its best judgment recommend to the Council that the first paragraph of this resolution be approved" offers a permanent supply of ammunition to those wishing to expand this form of encroachment of practice by institutions. We should take a specific stand to the contrary. We know that one large hospital in New York City, with the full benefit of newspaper publicity, has made arrangements whereby patients can be taken off the street for diagnostic, therapeutic, and all other forms of medical care, including surgery. Unless we oppose this type of procedure, other hospitals will be hiring full-time men and going into the business of selling medical service for financial gain.

Your Committee agrees with the Economics Committee in the following statement: "During this study it occurred to your Committee that while we were trying to solve this problem we were always directing our attention to the hospital administration end and entirely forgetting the part our own colleagues play—can it not be said that they are at least in part responsible?" Your Reference Committee agrees that compulsory health insurance is one of our main problems, but we feel that the threat of hospitals practicing medicine is a very grave one, that it should not be disregarded, and that it should be fought at the same time we are fighting the control of medicine by the Federal government.

As regards the second and third paragraphs, it was the opinion of the Economics Committee that a conference as suggested would in all probability prove fruitless. Your Reference Committee cannot agree with this conclusion. We believe that if one medical school or institution could be brought to review its policy in this matter on the basis of fundamental issues—the welfare of the patient, the doctor, and ultimate public good—we could initiate a movement to reverse the present growing tendency which is being dictated by the economic problems facing such institutions.

Finally, your Reference Committee agrees with the Economics Committee in its conclusion that most hospital representatives are against compulsory health insurance. However, we are convinced that there is a small minority which would welcome government control of medicine. We should urge this loyal majority to join us in our fight with this dangerous minority, for it is our considered opinion that they can accomplish far more than can this House of Delegates.

Mr. Speaker, I move the adoption of this part of our report.

. . . The motion was seconded . . .

VICE-SPEAKER HOLCOMB: Is there any discussion of this part of the report?

DR. SAMUEL B. BURK, *New York:* For the information of the Committee—and I regret very much that I did not have an opportunity to be present during their deliberations—I wish to inform them that the hospital in question in Greater New York, in spite of all of its fanfare, has discontinued its action relating to the fact it is going to pick up patients off the street and give them all of the medical care that they may want. That is just an informative statement.

DR. GAMBLE: I am very sure I can say that our Committee is very happy to hear that.

VICE-SPEAKER HOLCOMB: Are there any further comments or suggestions on this report? It is very informative. A motion has been made and seconded that the report be accepted.

DR. JAMES F. ROONEY, *Trustee:* I rise to second that motion. I would also like to be recognized to refer this back to the Council after this present question has been disposed of, because there is a mass of material here in relation to the actions taken during the last year on certain of these questions which, as you all understand, should be continued and must be continued. So if the Speaker will bear with me I will withdraw, until the primary motion to adopt the report of the committee has been put, and then I would like to make a motion to refer.

VICE-SPEAKER HOLCOMB: I will recognize Dr. Azzari, who is the chairman of the Economics Committee.

DR. RENATO J. AZZARI, *Councillor:* Mr. Speaker and members of the House, I don't want to go on record as opposing the recommendation of the Reference Committee with reference to the report of the Council Committee on Economics. I do, however, want to call your attention to the failure of the Committee to comment on a portion of the report with reference to the recommendation of your Committee on Economics that action concerning the resolution on the practice of medicine by hospitals and medical schools be deferred until the report of the Hess Committee on this matter is presented at the next session of the American Medical Association. That is just for your information.

. . . The question was called, and the motion was put to a vote, and was carried . . .

Vice-Speaker Holcomb: Now I will entertain Dr. Rooney's motion.

Dr. Rooney: I move that the attention of the Council be drawn to the report of this Committee, and that study be continued in relation to all of the questions that have been raised by the Reference Committee.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Gamble: May I make just one comment? Two members of our Committee were hospital administrators. We had the wisdom of their advice, and it was largely on the recommendation of one of them, Dr. Fineberg, that we suggested a continued fight against the hospitals engaging in the practice of medicine.

We had three resolutions submitted to us; however, it was found afterwards, as reported to you yesterday, that one of these had also been referred to another committee, and it has been acted upon by this House, so we will not report on it.

Section 141 (*See 37*)

Report of Reference Committee on Report of Council, Part VI: Establishment by Medical Society of the State of New York of Committee on Hospital and Professional Relations

Dr. Thomas O. Gamble, *Albany:* The first resolution was submitted by the Medical Society of the County of Erie, and reads:

> "Whereas, the American Medical Association has recommended to 'each of its constituent state and territorial societies that it appoint a committee on hospital and professional relations'; and
>
> "Whereas, many state medical societies have already set up committees of the type recommended by the American Medical Association; and
>
> "Whereas, there exists a definite and pressing need for the establishment of such a committee in New York State to deal with ethics, responsibilities, standards, and contractual relations relevant to medical services provided in hospitals and for the formulation of general policies with regard to such medical practice in hospitals; now therefore be it
>
> "*Resolved*, that the Medical Society of the State of New York establish such a committee with representation thereon of general practitioners and all specialties."

This resolution has been approved by your Reference Committee, and I so move.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 142 (*See 38*)

Report of Reference Committee on Report of Council, Part VI: Uniformity of County and State Requirements for Remission of Dues

Dr. Thomas O. Gamble, *Albany:* The second resolution was offered by Dr. Edwin L. Harmon, of Westchester County:

> "Whereas, the American Medical Association has now levied dues upon all members; and
>
> "Whereas, it has been stipulated that these dues may be waived in 'hardship' cases only when county and State dues are also waived; and
>
> "Whereas, certain county societies waive dues during periods of graduate study and possibly for other considerations which are not recognized by the State Society; now therefore be it
>
> "*Resolved*, that the Council of the Medical Society of the State of New York be instructed to appoint a committee to study the bases for remission of dues of all component county societies and prepare recommendations for changes in county or State procedures in order to achieve uniformity of practice on which to base eligibility for remission of national dues."

The Reference Committee approves the above resolution with the deletion of the words "the Council" in the paragraph: "*Resolved*, that the Council of the Medical Society of the State of New York, etc." This deletion was with the consent of the introducer, Dr. Edwin L. Harmon.

I move the adoption of the Committee's recommendation.

. . . The motion was seconded . . .

Vice-Speaker Holcomb: In other words, you are simply making the resolved part read, "That the Medical Society of the State of New York be instructed to appoint a committee to study," etc.? Is that true?

Dr. Gamble: That is right. We have eliminated the words "the Council."

Vice-Speaker Holcomb: Is there any question or comment?

Dr. James F. Rooney, *Trustee:* The manner by which any man can be retired from membership, or excused from paying his dues while in service, or in residency, or while he is temporarily unable to pay and asks to be relieved of that burden, is specified in the Constitution and Bylaws. If you read the reports of your Council meetings you will find that constantly at every Council meeting the secretary brings in a list of men who on the approval of their county societies have asked to be relieved from dues for having residencies in hospitals or for certain other emergencies, including illness, and the Council passes upon them, and they are so relieved. The county society can only relieve anyone of the necessity of paying county dues anyway, and the requests to remit State assessments come from the county society to the State Society. I cannot recall of a single instance in the course of many, many years where the Council has ever refused to act for the relief of the payment of dues when it has been requested to do so by the county society. I feel that the recommendation that the Medical Society of the State (which means this body, which is essentially the legislative body) take action upon every application when a young man leaves practice and goes into a residency, is ill advised. I may be misinterpreting this, but I have listened very clearly, and that is what it boils down to me; however, such provisions are already in the Constitution and Bylaws.

Dr. Gamble: May I answer?

Vice-Speaker Holcomb: Please do.

Dr. Gamble: It was not the intention of this resolution, nor was it the intention of your Reference Committee, to reflect in any way upon the Council, but as brought out in the resolution many counties have so many different reasons for remission of dues and assessments it was felt wise that a committee study them. If you listened, Dr. Rooney, you would have noticed that the resolution said "that the Medical Society of the State of New York appoint a committee to study the bases for the remission of dues of all component county societies," so that we will have some unanimity. That is the only objective. I am perfectly willing, however, to accept an amendment that it be referred to the Council.

Dr. Rooney: That will settle the whole matter. If the chairman of the Committee will refer this matter to the Council for the necessary action and report to the next House, I shall be only too glad to second the motion.

Dr. Gamble: I am perfectly willing to accept that.

Vice-Speaker Holcomb: Are you ready for the question "that the Council appoint a committee to study the bases for the remission of dues"—

Dr. Rooney: That was not my motion. My motion was to refer this matter to the Council—the entire matter to the Council—for study and the necessary action and report back to this House at the next meeting of the House of Delegates.

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Dr. Gamble: I move that the report as a whole be approved by the House, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Gamble: I would like to thank Dr. Felsen, Dr. Harmon, Dr. Kottler, and Dr. Fineberg for their assistance in the work of this Committee.

Section 143 (See 129)

Results of Election

. . . The following were nominated and elected unanimously without contest. . .

Vice-president—Dr. Charles D. Post, *Syracuse*
Secretary—Dr. Walter P. Anderton, *New York City*
Assistant Secretary—Dr. Andrew A. Eggston, *Mount Vernon*
Treasurer—Dr. Maurice J. Dattelbaum, *Brooklyn*
Trustee (five years)—Dr. Edward T. Wentworth, *Rochester*
Trustee (four years)—Dr. James R. Reuling, *Bayside*
Trustee (three years)—Dr. Fenwick Beekman, *New York City*
Speaker—Dr. Albert F. R. Andresen, *Brooklyn*
Vice-speaker—Dr. Frederic W. Holcomb, *Kingston*

Report of Tellers: Dr. Charles F. McCarty of Kings reported that there were 206 votes cast.

For President-Elect

Kenney	124
Moore	75

For Assistant Treasurer

d'Angelo	103
Coon	83

For Councillors

Di Natale	185
Azzari	168
Winslow	157
Mott	145
Vickers	138
Siris	109
Frey	101
Williams	94

Speaker Andresen: Shall we interrupt at this point and announce the terms for which the councillors were elected:

For the Three-Year Term
Di Natale
Azzari
Winslow
Mott

For the Two-Year Term
Vickers

For the One-Year Term
Siris

That is in accordance with the arrangements we made in advance of the balloting.

Dr. McCarty: Now the A.M.A. delegates, and I am giving them to you now in order of votes:

Anderton	179
Andresen	160
Wertz	136
Bauckus	134
Schiff	128
Reuling	124
Winslow	123
Flood	117
Moore	117
Brown	104
Vickers	97
Brennan	95

Those are the first twelve.

Speaker Andresen: Those are declared the duly elected A.M.A. delegates.

Dr. McCarty: The next will be the alternates:

Geis	74
Rawls	67
Frey	65
Bandler	58
Holcomb	52
Keating	48
Hilleboe	47
Wolff	44
Wood	41
Krakow	39
Hamilton	35
Allen	30

Speaker Andresen: These twelve are declared elected alternate delegates.

Dr. McCarty: The rest are:

Edwards	30
McAuliffe	25
Philbrick	23
Lewis	18
Cudmore	16
Hellman	16
McGowan	9
Dorman	4

Speaker Andresen: Thank you very much, Dr. McCarty! That was quick work.

I now have the pleasure of introducing a couple of officers. We have the request from Dr. Moore to escort our new president-elect to the rostrum.

Dr. Kenny, Dr. Moore will escort you to the platform.

. . . Dr. Norman S. Moore escorted Dr. J. Stanley Kenney to the platform amid applause . . .

Speaker Andresen: We congratulate you, Dr. Kenney.

Dr. Norman S. Moore: I move you the unanimous election of Dr. Kenney as president-elect.

. . . The motion was seconded, and, as there was no discussion, it was unanimously carried amid applause . . .

Speaker Andresen: Dr. Kenney is declared unanimously elected as president-elect.

Remarks of New President-Elect

Dr. J. Stanley Kenney: Mr. Speaker and gentlemen of the House, this has been an unusual circumstance surrounding my election. I am most happy that it has terminated by this House making this a unanimous election. I would be certainly somewhat less than human if I did not feel a sense of pride in the great honor you have bestowed upon me, but far outweighing that is the deep sense of obligation that I feel the acceptance of this office brings upon me. I am really at the moment quite overwhelmed by it all.

The only thing I want to say at this time is that I shall, under God and with Divine guidance, dedicate myself to the highest interests of the profession of this State, and do all that is in my power when the time comes to conduct the affairs of this Society so that they will be a credit to the county who supported me and the House of Delegates who elected me.

Thank you! (*Applause*)

Speaker Andresen: Judging from the fine work that Dr. Kenney has done for us in the past we can feel sure that this job is going to be in good hands.

Remarks of New Vice-President

I now take pleasure in introducing to you just for a moment Dr. Charles Post, your new vice-president.

Dr. Charles Post: Mr. Speaker and members of the House, I greatly appreciate this honor. I thank you. (*Applause*)

Speaker Andresen: We have a couple of more reference committees to report, and I am going to ask Dr. Holcomb to take those, and following that I will ask you to remain seated for another ten or twelve minutes. We have a number of resolutions that are customary for us to act on.

Dr. Holcomb, will you take over again?

Section 144

Report of Reference Committee on Report of Council, Part II: Maternal and Child Welfare

Dr. William J. Orr, *Section Delegate:* Mr. Speaker, members of the House of Delegates, ladies and gentlemen, this is the report of the Reference Committee on Report of Council, Part II, Maternal and Child Welfare. Again, this year we had no resolutions to consider, so our only duty was to review the report as published by the Council and offer our recommendations.

The Reference Committee accepts with commendation the annual report of the Subcommittee on Maternal and Child Welfare as published in the 1950 Annual Report of the Officers, Council, and Committees of the Medical Society of the State of New York.

The recent publication of the pamphlet, *Parents' Book*, by the New York State Department of Health, in conjunction with the Subcommittee on Maternal and Child Welfare, has been received with great enthusiasm throughout the State, and has had national recognition. It demonstrates the public health value of close cooperation between the State Society and the State Health Department.

The proposed publication of a pamphlet which is to educate the parents during the pregnancy of the mother, explaining the emotional aspects of pregnancy and child-parent relationships, should serve a great need.

The Subcommittee is also studying the incidence of retrolental fibroplasia in premature infants. The report will be given at a future date.

It is also suggested by the Subcommittee that the existing birth certificates be modified to include a confidential medical report which lists various complications of pregnancy and birth. The Reference Committee approves this recommendation.

I hereby move the acceptance of the entire report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Vice-Speaker Holcomb: Thank you, Dr. Orr!

Section 145

Report of Reference Committee on Report of the Treasurer

Dr. Nelson W. Strohm, *Erie:* Your Reference Committee has spent considerable time in considering the reports of the Treasurer, the Board of Trustees and the Finance Committee, as well as the proponents of several different resolutions referred to your Committee by the Speaker of the House. As a result of the information acquired, your Reference Committee offers the following comments and recommendations:

Vice-Speaker Holcomb: Pardon me, Dr. Strohm.

I want to call to the attention of the House of Delegates that embodied in Dr. Strohm's report will be the question of raising of the dues, and we must have a quorum to make this legal, so I am asking everyone to remain.

Now, will you continue, Dr. Strohm?

Dr. Strohm: In the treasurer's report we note with deep concern the deficit as reported and the figures covering the said report of the treasurer which explains in detail and gives reasons for the deficit. We note that part of the deficit is a result of a mandate of the House of Delegates of our Society of 1949, and we note and heartily approve the discontinuance of the "current style of deficit spending."

In order to avoid this deficit spending, it is obvious that more revenue must be obtained by the Society which, of course, must come from the individual members in the form of an assessment or an increase in the yearly dues. It is the studied opinion of this Committee that an increase of dues is the more feasible of the two methods and, therefore, we recommend that the dues of the Medical Society of the State of New York be increased by an amount of $5.00 per year.

The Committee appreciates and commends very highly the treasurer on his meticulous, conscientious attention to his duties as treasurer.

The Committee moves that the treasurer be commended for his excellent work and that an increase of $5.00 per member per year of State dues be herewith enacted.

I so move.

. . . The motion was seconded . . .

Dr. M. Renfrew Bradner, *Orange:* For the information of the component societies—and I know Orange will want to know why approximately—what is the reason for the deficit this year?

Dr. Strohm: May I state it briefly? Increased costs of administration in the office, such as salaries, etc.; a deficit in the publication of the Journal; a considerable deficit connected with the *Directory*, and additional expert and professional services in the form of the legal profession particularly. Those are the four principal reasons.

Dr. James F. Rooney, *Trustee:* I think it is a perfectly valid question that Dr. Bradner just asked, and I am quite certain that it can be very readily answered by reading the reports of the treasurer and of the Board of Trustees. The Board of Trustees gives specifically the statement, and I don't want to hold this House to give it in detail because it would take some time. Most of these causes for the deficit as the chairman of the Reference Committee has just said are due to the direction that was made by the House at the last meeting that the Council and the Board of Trustees were not under any circumstances to consider the question of causing a deficit in order to meet any expenses recommended and required as an emergency proposition in the combat against the national government's proposal for compulsory health insurance. That was one of the unfortunate mandates of the House that so bound the Board of Trustees that they were unable to take any special action in keeping the total expenses within the limits of the dues and investment income. The point of fact is that a mere cursory reading of the report of the Board of Trustees will give you the whole picture, and that every member of the Society has received in the JOURNAL.

I feel this: there has got to come now a time not alone of not deficit spending but of permitting the Board of Trustees to survey with jaundiced eyes—mine being the most jaundiced—all of these various and sundry requests for many expenditures that really do not forward the purposes of the Society and do not in any way accelerate the betterment of its administration.

I hope that we will not have another motion of that sort made. The probable budgeted deficit will reach something in the neighborhood of $90,000 for this year. That is all I can state at this moment. I hoped the chairman of the Board would be here to express his opinion about it.

DR. EDWARD T. WENTWORTH: He is here.

DR. ROONEY: I will defer then to the chairman of the Board of Trustees to make a statement to you about this situation.

VICE-SPEAKER HOLCOMB: Dr. Wentworth, would you address the House of Delegates from the rostrum, please? Dr. Wentworth, the chairman of the Board of Trustees, the watch dogs of the treasury!

DR. WENTWORTH: Mr. Speaker and gentlemen, the actual deficit is only $5,000. The working deficit is $26,000, the difference being the income from investments. You have a half million dollars invested in your general fund, the returns from which vary, but are approximately $20,000 to $21,000. That constitutes 5 per cent of your budget.

The question was asked by Dr. Bradner as to what makes the deficit. It is impossible to pick out any one item and say, "This makes the deficit." Following your mandate, the Council recommended and the Trustees approved rather large expenditures for public relations—much larger than ever before. You could say that causes the deficit, but are you justified in so doing?

Following your mandate, the Council recommended and the Trustees approved the enlargement in size of the Legislation Committee and the retaining of legal counsel for that Committee. That can hardly be cited as the cause of the deficit for this year. It amounts to an appreciable sum because of the salary of the legal counsel, but last year it did not amount to much because he was only retained for a month and a half.

You may cite the extraordinary legal expenses entailed in retention of counsel with reference to the investigation by the Department of Justice of the Federal government into the affairs of the State Society and the affairs of six lower, metropolitan counties largely. That is a definite item. To date we have expended in that manner $18,000, but only $9,000 was chargeable to 1949. Of course, that $9,000 if we had not had to spend it accounts for the deficit. These other expenses were largely in the budget. That one was not. So if one is to pick any one item as explaining the deficit of the Society, I personally would pick that extraordinary legal expense.

For your information, it is very difficult to tell with exactitude how long that expense will continue or to what it will amount, but at the moment the investigative work of this law firm is completed in as far as they know. They do not say the final word on that. The Department of Justice says the final word. The Department of Justice may well say, "We have to have more information," but for the immediate future the retainer fee to that law firm is dropped. Such work as they anticipate during the summer will be paid for upon a regular fee basis without the retainer fee.

If the Department of Justice sues us, the expenses involved will be great. If they decide to drop the matter after the election or at any other time, we will have met already most of those expenses.

Well, I could go on here for a long time. Does that answer your question?

DR. BRADNER: It does.

DR. THOMAS F. MCCARTHY, *Bronx:* May I ask through you, the chairman of the Board of Trustees, a question? There was a specific recommendation in the report of the Board of Trustees as to the dues or assessments being increased this year. This recommendation coming from the Reference Committee is contrary to the recommendation of the Board of Trustees as regards the specific way it is to be raised. Do you feel, as chairman, that the Board of Trustees feels that the amount which differs from that of the Reference Committee is sufficient ground to change it from your recommendation?

DR. WENTWORTH: When the original report of the Board was written in December it was a logical and rational conclusion from the study of the figures that an increase of $3.00 by way of assessment would take us out of deficit for 1949 and 1950. The question of whether this should be done by assessment or by dues was placed before each member of the Board, and the Board at that time decided that the assessment was sufficient. During the next four months, and with further consideration of the matter, there came about a division of opinion among the Trustees as individuals concerning the wisdom of that policy. Some of it is based upon financial facts; some of it is based upon the more abstract idea of whether it is wise for this Society to even consider for a moment any retrenchment in activities, and thereby try to slide along year by year on just what we need, or whether it is more advisable to accept what seems to be so obvious to anyone who has sat through these meetings during the past three days or two and one-half days, that there is no spirit of retrenchment here, that there is a demand for a vigorous campaign along all sorts of lines—a situation which means constantly increasing expenses rather than any hopes for decreasing expenses, which might put us in the black on the present dues. Consequently, after due consideration, the Board felt that it was in no position to recommend to this House whether it should try to get along on a $3.00 assessment or decide once and for all whether it wanted to increase its dues and enable its officers and committees to continue unhampered in the work which you outlined for them.

These moneys are yours. These moneys belong to the membership. They don't belong to the Board of Trustees. It is rightfully your responsibility in my notion to determine this matter yourselves.

Does that answer your question?

Dr. McCarthy: Yes, sir, all right.

Vice-Speaker Holcomb: Are there any other comments or questions from the floor?

Dr. Bradner: Are we waiting to complete the motion?

Vice-Speaker Holcomb: The motion has been seconded to the recommendation of the Reference Committee that the dues be increased by an amount of $5.00 per year. The chair will, of course, entertain any further discussion, or are there any more questions?

Dr. Benjamin F. Glasser, *Queens:* Mr. Speaker, I am not fully aware of what our financial status has been in the last few years; in other words, I am not aware whether we have had continuing deficit spending. Am I correct this is the first time we have had deficit spending, the first year or so?

Vice-Speaker Holcomb: Dr. Reuling, would you answer that question?

Dr. Reuling: It is my impression that Dr. Wentworth could answer that better than I.

Dr. Wentworth: No, it is not. In 1948 the Society had to borrow $50,000 from the bank to carry it through, which was promptly repaid when the dues came in, in 1949, so technically that was a deficit.

I think it is perhaps well worth while to point out that this Society is not bankrupt or anything like that. When we speak of "deficit financing" we really mean that at the end of the year the expenses have been a little greater than the income. We have plenty of money in reserve. We have a half million dollars invested in the general fund, invested or in cash. No creditor of this Society ever suffered by lack of money in our treasury to meet the bills. We can always borrow temporarily from the cash in the investment fund to meet our necessary expenses, but if year after year you come up to the last day of the year with a technical deficit the time will come when either you have to dip permanently into the investment fund or pay interest on borrowed money.

Dr. Glasser: The chairman has answered my question, and from what I gather this is the first occasion we actually had deficit spending. The other time was just a temporary situation until the dues came in. Now we have over the years built up a reserve sum, and so far as I understand we are not in the business of investing moneys. We just put the money there because we have no further use for it. This is the first year we have had a deficit of some twenty-odd thousand dollars. This year also the members of our local societies have been called upon to give money to the American Medical Association, and I feel that any extra burden added on these people will tell in the attempt to collect dues from our members. In view of the fact that we have $586,000 in reserve, and in view of the fact that our deficit is a first deficit, and that it need not necessarily be a recurrent deficit, we can wait a year or so and see where the situation leads to. I am against this motion of raising dues.

Vice-Speaker Holcomb: Are there any other comments? The chair will recognize Dr. Rooney, of the Board of Trustees.

Dr. Rooney: I want to confirm everything that the chairman of the Board has said. I also want to say this: That deficit spending, once begun, so far as I can see has never ceased. It never ceases until bankruptcy is approached. When you speak about this $500,000 which belongs to you, that fund was accumulated by the direction of the House for one purpose, and one purpose only: That was to raise such a fund, and the term was set at $500,000 in 1924, to hold a capital sum in investment securities for the purpose of expenditure when necessary to meet a major emergency that might suddenly confront the Society, particularly in relation to the attempt that is now going on to impose upon us compulsory national health insurance. That fund was set aside for that purpose, and that purpose alone, and it has been carefully conserved all those days for expenditures, extraordinary expenditures that we may have to meet perhaps next year or the year thereafter to protect the interests of the public and of ourselves. The Trustees have constantly during my long service as one of the original members of that Board kept that fund inviolate. That is to be held as our best weapon in the protection of the public and of ourselves.

Attempts now to nibble at that fund will defeat the very purposes for which it was accumulated, and will help sell yourselves down the river.

Dr. Bradner: I asked the question for information to take back to the county society to explain the need of the $5.00. I now have the answer, which is thoroughly satisfactory to me, and I am convinced it will be satisfactory to my county society. I had no idea of criticizing the action of our Board of Trustees, and if it is not interrupting the passage of an already seconded motion I would like to have a motion before the House of confidence in our trustees and what they are doing.

Vice-Speaker Holcomb: We have a motion before the House now. I think your mere expression of that confidence will carry the same weight. Is there anything further? I think this is an important question. The hour is late I know, but every one of you will perhaps have to explain to your constituent or component societies about this increase in dues if it is voted, so I feel it should be discussed thoroughly. Is there anyone else that wishes to offer comments, answer or ask any questions, or are you ready for the question?

. . . The question was called, and the motion was put to a vote and was carried . . .

Dr. Rooney: I should now like to make one amendment to this. We have to specify the time when this will become effective, and I will move an amendment to the report of the Committee, which I hope the Committee chairman will accept, that the increase if it is voted become effective as of January 1, 1951.

Vice-Speaker Holcomb: The motion has already been passed.

Dr. Rooney: If the motion has been passed, I will make that as a separate motion.

Dr. Geis: I second that.

Dr. Rooney: The motion is that the dues increase that was voted become effective as of January 1, 1951.

Vice-Speaker Holcomb: Are there any suggestions or questions concerning Dr. Rooney's motion?

Dr. Reuling: It is my opinion it would be better if the House voted not an increase in dues but set the dues and named the amount in the motion for next year, otherwise it is going to be confusing in the future; though it is not confusing to us now, historically it will be.

Vice-Speaker Holcomb: I believe as a point of order I must tell the treasurer that the motion has been passed increasing the dues $5.00 per year. The question we are to vote on now is when that increase will become effective. The motion has been passed that the dues are to be increased $5.00 per year, and Dr. Rooney's motion simply sets that time as to when they are to be effective.

Dr. Reuling: The purpose of my arising is to amend Dr. Rooney's motion that the dues for the ensuing year be set at $20.

Dr. Rooney: Mr. Speaker, I will be very glad indeed to accept it, but we have got to change the nomenclature because the Constitution and Bylaws does not speak about dues. The Constitution and Bylaws speaks about an assessment against each county society based upon per capita membership; that is, the State assessment will be so much per annum. Now if I am in error about that, I would like to be corrected, I think the secretary can answer that perhaps.

Dr. Bauer: It was amended yesterday to make it dues and assessments.

Dr. Rooney: That is quite all right then. That is one thing I missed. Then it is quite all right, and I very gladly will accept Dr. Reuling's amendment to my motion. I would like to reword my motion then accepting the amendment that the membership dues of the State Society to all members of the State Society and of the component county societies shall be $20 per annum commencing on January 1, 1951.

Dr. Geis: I seconded the original motion, and I will second that.

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Section 146 (*See 6*)

Report of Reference Committee on Report of Trustees

Dr. Nelson W. Strohm, *Erie:* Your Committee has noted, with the same concern as exercised in the report of the treasurer, the same item of deficit spending in the report of the Board of Trustees. In this report the Board of Trustees has explained in greater detail the budgetary deficits. We recommend a minute study of this report by each member of the State Society. Likewise, your Committee appreciates the very careful and critical analysis of the expenditures and their attempt to tighten down such deficits. We further feel that the same recommendations as made by your Committee in regard to the treasurer's report will correct the same condition of deficit spending as noted in this trustees' report.

The Committee moves the adoption of the Board of Trustees' report as well as the supplement and commends the trustees for their very diligent and efficient work.

I move the adoption of this portion of the report.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 147

Report of Reference Committee on Report of Finance Committee

Dr. Nelson W. Strohm, *Erie:* Your Reference Committee has noted carefully the report of the Finance Committee, particularly that part of the report which reads as follows:

> "This year the Finance Committee proposed and the Council and Board of Trustees approved of a new procedure. Department heads have already been notified that they are to prepare their 1951 Budget so that the Finance Committee may have its work done prior to September 1. The new procedure also provides for a different method of presentation. It involves the preparation of reports by the accounting department of the amounts expended in the two preceding years for presentation to the department heads. It is required that each item in the new budget be then supported with adequate data, reasons, and detailed statements of the needs for the amount requested."

We believe this is a very definite step in the right direction and should result in a so-called survey of expenditures in which needless items may be eliminated or curtailed. The budget itself is a bulky forty-typewritten-page document. We commend very highly the Committee on their sincere, thoughtful and progressive suggestion. We move the adoption of the report of the Finance Committee.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Strohm: The Committee recommends and urges that the Budget and Finance Committee, as well as the Board of Trustees, review very critically the expenditures of the budget, with the definite purpose in mind to reduce said expenditures whenever at all possible.

Regarding the resolutions presented to our Committee for consideration, may we state they were several in number and rather unique in that one, at least in substance, proposed a resolution and another opposed the same subject.

Section 148 (*See 53*)

Report of Reference Committee on Reports of the Treasurer, Board of Trustees, and Finance Committee: Deficit Financing

Dr. Nelson W. Strohm, *Erie:* First, a resolution introduced by Dr. Raymond F. Kircher, of the Albany County Medical Society, subject, "Deficit Financing," which resolution states:

> "*Be it resolved* that the Medical Society of the County of Albany urge the Medical Society of the State of New York to return to a pay-as-you-go policy."

Your Reference Committee approved this resolution, and we move its adoption at this time.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 149 (*See 39*)

Report of Reference Committee on Reports of the Treasurer, Board of Trustees, and Finance Committee: Unity of Membership

Dr. Nelson W. Strohm: A resolution introduced by Dr. Benjamin M. Bernstein, of Kings County Medical Society, subject, "Unity of Membership (County, State, and American Medical Association), which resolution states:

> "*Resolved*, that the delegates from the State of New York to the American Medical Association urge that membership in the American Medical Association shall be held by a member physician through his county society, paying his annual dues to the county and state, which in turn should provide a method of paying a per capita dues to the American Medical Association."

Your Committee disapproves this resolution as it, in their opinion, only tends to confuse memberships in the three societies, namely, American Medical Association, State and county, and that the substance of the resolution be taken care of by other resolutions offered.

We are in favor of unity, but would refrain from making membership in the American Medical Association a prerequisite to membership in the county and state societies.

We move the disapproval of this resolution.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 150 (*See 32*)

Report of Reference Committee on Reports of the Treasurer, Board of Trustees, and Finance Committee: Collection of American Medical Association Dues

Dr. Nelson W. Strohm, *Erie:* A resolution introduced by Dr. Christopher Wood of Westchester County Medical Society, subject, "Collection of American Medical Association Dues," which resolution states:

> "*Resolved*, that the House of Delegates of the American Medical Association be memorialized to instruct the administrative division of the American Medical Association to establish its own independent procedures for collecting the dues of this organization directly from the individual members."

Your Committee disapproves this resolution because we feel that there are advantages to the county and State in knowing members in good standing in the American Medical Association; that the so-called confusion of the American Medical Association and fellowship dues is easily clarified. The confusion of the proposed method of collection is not realistic, but we also recommend that any added expenses of collection of American Medical Association dues be borne by the American Medical Association.

We move the adoption of this recommendation.

Vice-Speaker Holcomb: Do I hear a second?

. . . The motion was seconded . . .

Dr. James F. Rooney, *Trustee:* I think you ought to be very careful about this. This is the sort of thing that I have talked about yesterday, about making mistakes and being sad and sorry about them afterwards. There are certain of the provisions of this recommendation of this Committee that make me doubt we are in a position to act upon them because we are dealing with a changing picture. I would move that this whole question be referred to the Council of the Society for study and the necessary action required to carry out the question of cooperation with the American Medical Association in the most efficient manner possible.

There is going to be an expense to collect these A.M.A. dues. If you have read this material, it is going to be an expense on the State Society. We will have to take on one additional employe, and we will have to pay that employe to cover the question of carrying on the collections through our office here to go to the American Medical Association. That will mean additional expenditures, which may be valid. The return from the American Medical Association in one year—only for the first year—is going to be insufficient to cover the cost to us.

Gentlemen, I am not opposed to it, if that is what the House wants to do, but in view of the fact that the American Medical Association has already put out recently a statement that they are hoping that the various state societies will make any failure to pay the A.M.A. dues the equivalent to being in poor standing in their county and state societies, I think that is an unwise situation. This House has taken no action on this itself, but it is a proposal advanced, and I feel the wise thing to do, gentlemen, is to refer this matter to the Council, with the power to act, and I so move.

Dr. Samuel B. Burk, *New York:* I second Dr. Rooney's motion to refer.

Vice-Speaker Holcomb: The question of Dr. Rooney's motion to refer to the Council is before you. Is there any discussion?

Dr. Louis H. Bauer, *Past President:* I agree with Dr. Rooney in part of his remarks; that is, that this should be referred to the Council for study, because I do not think this House can intelligently act on it at the present time.

Various propositions have been made about the collection of A.M.A. dues. We were asked in the first place why the A.M.A. did not collect them direct. It would have been utterly impossible to collect them direct because we have no knowledge of what members in the county societies should pay dues and which ones should not.

You would be interested to know that when state societies send in the list of their members so as to get an apportionment of delegates they have been in the habit of including everybody, retired members, honorary members, and everybody else. We cannot bill people of that sort. We don't know who should be billed. It may be that after this year we will have a better knowledge of it, but even so county and state societies are going to have members, and I think the county and state societies are going to be the ones to have to determine in the long run who is an A.M.A. member and who is not, who should pay dues and who should not.

As to the cost, the Board of Trustees realizes we made a mistake in submitting any flat figure, and we have recently sent out word to every state society asking them to compile the actual costs of collection of A.M.A. dues. It is our intention to work out a plan whereby state societies will be reimbursed for those expenditures. We feel that this year some expense came about because A.M.A. dues were not sent out at the time that county and state society dues were sent out. That required an additional printing and an additional mailing. In the State of Pennsylvania, whose president you had here a couple of days ago, they anticipated this, and their A.M.A. dues went out right along with their county and state dues the first of January. You heard him say it the other day that he had 93 per cent collections. We did not do that here. In some states their bills go out in October, and they were not able to do that. That should not occur in the future, but I agree there was bound to be some additional expense, as Dr. Rooney said, in segregating these funds, and that it will be necessary to have a person handle it probably. All of these things have to be considered, and I think for this House to take any action on it now is entirely premature. This thing is experimental. We don't know. It may be changed two or three times before we hit upon the best system to collect the dues and to make it easiest on everybody concerned, so for that reason I urge you to adopt this motion to refer this whole matter to the Council.

Vice-Speaker Holcomb: I know this House is very glad to hear from Dr. Bauer as chairman of the board of trustees of the American Medical Association.

Secretary Anderton: Just to ask a favor of the delegates. I spent about half an hour last Saturday with Mr. Hoffman, the comptroller of the American Medical Association in Chicago. About three weeks ago we had a request from the American Medical Association to send them an estimate of the amount of expense of collecting A.M.A. dues for 1950 and 1951. As a result of that we sent a similar request to each county society. That was three weeks ago. We have now had twenty replies out of sixty-one possibilities. Therefore, I am taking the liberty to request the members of the House of Delegates when they return home please to check with their county society secretaries and ask them to hurry that reply because we want to get the answer to the American Medical Association before it meets in San Francisco next month.

Dr. Bauer: May I say one more thing? You elected twelve delegates to the American Medical Association this morning. You elected eleven last year because our total delegation consists of twenty-three members. I want you to take this back home also: Your delegation to the American Medical Association will not depend on the size of the State Society, but on the number of A.M.A. members, and unless New York has a considerably better record in the collection of dues than it did the assessment some of these delegates you elected this morning will never take their seats.

Vice-Speaker Holcomb: Thank you, Dr. Bauer. Are you ready for the question on the motion to refer to the Council?

. . . The question was called, and the motion was put to a vote and was carried . . .

Section 151

Report of Reference Committee on Reports of the Treasurer, Board of Trustees, and Finance Committee: Collection of Dues and Assessments

Dr. Nelson W. Strohm, *Erie:* A resolution introduced by Dr. James A. Lynch of Bronx County Medical Society, subject, "Collection of Dues and Assessments," which resolution states:

> "*Resolved*, that the Medical Society of the State of New York rigidly make effective the aforesaid provision Subdivision (c), Section 2, Chapter 1 of the Bylaws which clearly defines the procedure for collection of dues and assessments within the prescribed time limit; and be it further
>
> "*Resolved*, that the delegates of the Bronx County Medical Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York to be held in 1950."

Your Committee disapproves this resolution in favor of the previous resolution, and feels that a previous resolution adequately takes care of the subject of this resolution.

Your Committee moves the adoption of this recommendation.

. . . The motion was seconded . . .

Vice-Speaker Holcomb: You heard the motion which has been made and seconded, and which carries with it the disapproval of the resolution. Is there any discussion?

Dr. Thomas F. McCarthy, *Bronx:* First of all, as a point of order, I don't understand what the previous resolution has to do with this one.

Dr. Strohm: The matter of the collection of dues and assessments.

Dr. McCarthy: In the State Society?

Dr. Strohm: Yes.

Dr. McCarthy: I don't get your connection between this and the previous resolution which had something to do with the A.M.A. dues and the State Society. I am going to talk about something entirely different, which is what this resolution calls for.

Dr. Strohm: That is right.

Dr. McCarthy: As to the resolution submitted by the Bronx County Medical Society, as one of the comitia minora I can speak on the question.

Dr. Strohm: May I apologize to you? I read the last paragraph or two of the report and left out one resolution.

Your resolution was offered by Dr. Reid H. Heffner, is that right?

Dr. McCarthy: No, our resolution was the one that you read. That was from Bronx County.

Dr. Strohm: I read the wrong one.

Dr. McCarthy: Then your Committee report must have been on the wrong resolution, is that it?

Dr. Strohm: It was. May I try to continue the report and not jump all around.

Vice-Speaker Holcomb: This has been interrupted, and I think now we can straighten it out all right.

Will you continue, Dr. Strohm?

Section 152 (See 24)

Report of Reference Committee on Reports of Treasurer, Board of Trustees, and Finance Committee: Collection of the War Memorial Assessment

Dr. Nelson W. Strohm, *Erie:* The next resolution on the typewritten report following the resolution concerning the collection of A.M.A. dues is the resolution introduced by Dr. Reid R. Heffner, of Westchester County Medical Society, subject "Collection of the War Memorial Assessment," which states:

> "*Resolved*, that delinquent members (of the war memorial assessment) be allowed the remainder of the year 1950 to pay this assessment."

This resolution is approved by your Committee, with the recommendation that further postponement be discontinued. The reason for the Committee's recommendation is that two previous extensions of time have resulted in considerable increase in the funds of the war memorial assessment until as of April 30, 1950, only five per cent remains unpaid. Your Committee further recommends that the various county medical societies explain to their delinquent members the real purpose of this war memorial assessment, and that it is not to provide a marble shaft.

Your Committee moves the approval of this resolution.

Dr. James F. Rooney, *Trustee:* I second that as chairman of the War Memorial Committee, and it is a recommendation that I intended to make in any event before the adjournment of the House: that the period for the collection of the war memorial assessment, which has twice been extended, be still further extended to terminate on December 31, 1950, with no further extensions.

I do that because we don't want to drop men for nonpayment of their war memorial assessment. We want to maintain and keep our membership. Many of the members, curiously enough, despite the publicity that this war memorial assessment received, knew neither the purposes for which it was being sought nor the fact that they could be disciplined and lose their membership for nonpayment of the assessment.

I heartily second the recommendation of the Committee.

Dr. Thomas F. McCarthy, *Bronx:* May I discuss this?

Vice-Speaker Holcomb: Certainly.

Dr. McCarthy: The point that is confusing on this extension of the assessment to a component medical society is that clearly in the Constitution of the Medical Society of the State of New York it is stated that a member to be in good standing must pay all of these dues and assessments by May 31. If he fails to pay all his dues and assessments by December 31 of the fiscal year, he is automatically dropped from membership. To our knowledge there is no one who has the power to extend his membership; in fact, in the State Society's Constitution it says that he can be dropped without notice.

The point to us is that, when we did that as a component medical society, now it is going to be changed. We, as a large county medical society, collected one hundred per cent of the war memorial assessment by December 31, 1949, but we did it by the officers using the method of coercion. Then subsequent to that the Council votes an extension, and it puts us in a very bad position with our membership.

In the first place, we contend that such an extension is contrary to the Constitution, and we would like an answer to that.

The Committee cannot answer that by saying you keep on extending it or you don't extend it. The point is that in our judgment under the Constitution of the Medical Society of the State of New York you have no right to extend it past that date unless there are other good reasons, and I would like to know them.

Dr. Rooney: May I answer that? The whole power of the State Society in relation to extending a period set for an assessment, making changes therein, or anything else, rests in the House of Delegates. If you will read your Constitution—I am sure you all have, and are familiar with it—you will find that the Council is the ad interim House of Delegates. The Council in the periods between the meetings of the House of Delegates has all of the powers of the House of Delegates, so that the Council may legally extend the period within which an assessment may be made, just exactly the same as the House of Delegates may extend it. I think that is all I want to say for the moment because I see my good friend arising to another question, and I am afraid I will have to get up again.

Dr. Frederick W. Williams, *Bronx:* Am I led to believe from the remarks of the last speaker that the Council has the right to set aside the Bylaws at any time?

Vice-Speaker Holcomb: Dr. Rooney, will you answer that question?

Dr. Rooney: So far as the Bylaws are concerned, in all legislative bodies the bylaws can be temporarily set aside, yes, by a two-thirds vote of the deliberative body. The constitution, no; but the bylaws merely being a mode of action governing within limits the administration and the conduct of a legislative body may receive changes. It is done daily in the Congress of the United States in their rules of the House.

Dr. McCarthy: But we were quoting from the Constitution and not from the Bylaws: "Funds shall be raised by an annual per capita assessment on each component county society at a uniform per capita rate throughout the State. Funds may also be raised in any other manner approved by the House of Delegates or by the Council when the said House of Delegates shall not be in session."

Vice-Speaker Holcomb: I will call on Dr. Reuling. Dr. Reuling may be able to clarify this for us.

Dr. Reuling: There is a small point of difference. We take off from two different sources on this, that I believe if Dr. McCarthy and Dr. Williams will consider takes it out of the strict letter of the law. Dr. McCarthy is smiling. This House of Delegates—

Dr. McCarthy: This is the Constitution.

Dr. Reuling: Just a minute. Will you listen to me?

Dr. McCarthy: I am listening.

Dr. Reuling: This House of Delegates when it originally adopted the war memorial assessment did not set it to the dues year. They adopted it in June or in May, I don't recall the month it was, 1948, and they gave an extension of time to the end of the following year by resolution. The Council—and if you want to chastise the Council that is all right—in its wisdom when that time ran out postponed it until this House could take action. They postponed it for five months, and I think according to the strict interpretation of the Bylaws they were within their province to do so.

Vice-Speaker Holcomb: Are you ready for the question?

Dr. Williams: May I ask through the speaker of the House what the counsel thinks of this?

Vice-Speaker Holcomb: The legal counsel?

Dr. Williams: Yes.

Vice-Speaker Holcomb: Is Mr. Martin in the room? I am sure Mr. Martin does not know what this is all about.

Dr. Williams: I think he was at the meeting of the Reference Committee.

Dr. Harold B. Davidson, *New York:* Couldn't we help the difficulties of the Bronx, they having collected their one hundred per cent, by setting them up as a fine example, and asking other counties to do likewise?

Dr. Williams: That is not what we are after.

Dr. Davidson: What are you after?

Dr. Williams: We are after an interpretation of the provision in our Constitution, and its administration by this Society.

Vice-Speaker Holcomb: Here is Mr. Martin now.

Mr. William F. Martin: What is the question? Whether the Council can extend the time for the payment of the war memorial assessment?

Dr. Williams: Yes.

Vice-Speaker Holcomb: Whether the House can do it.

Mr. Martin: The Constitution reads that a member whose dues and assessments are unpaid after May 31 of any current year is not in good standing, he is in arrears of dues, but there is no provision that the Society could not extend that time if they wanted to. That is all that is being done. It is being extended probably for another year or two.

Dr. McCarthy: Will you put that on the record that the dues may be extended indefinitely by this House, or by the Council, on the opinion of the counsel; that this House or the Council has the power to extend the payment of dues?

Mr. Martin: I did not say dues; I said assessments.

Dr. McCarthy: Even assessments.

Mr. Martin: There has never been a suggestion that an extension of time be made within which to pay dues. As I understand it, this was a suggestion that a motion be passed to extend until the end of 1950 the time to pay this war memorial assessment; and for reasons, which I do not care to take your time to go into now, particularly in relation to this war memorial assessment, I think it is appropriate that if the House of Delegates wants to they can extend this time. The regular dues are certainly due and payable at a given time and a man can lose his membership if he does not pay them. Whether that applies to the war memorial assessment or not is a moot question.

Dr. Bauer: I think there is a little confusion here about the question of the right of the House to extend time for payment even though the man may not be in good standing and the question of suspending the Bylaws.

You cannot suspend your Bylaws by a two-thirds vote or even unanimous vote unless you have some provisions in those Bylaws which says you can do it; and we have none in ours. If you could do that, then this House of Delegates could come into session, without previous notice to the membership, and suspend any bylaw there is in existence. You cannot do it.

The question here I think is not a matter of bylaws but merely of extending the time in which a man may not be dropped for payment of his dues, but if he has not paid them by May 31 he would not be in good standing. I think the House would have the right to extend the time of payment, but you cannot get by your Bylaws where it definitely says that dues and assessments must be paid by such-and-such a time or the man will not be in good standing.

Dr. Williams: Thank you, Dr. Bauer.

Vice-Speaker Holcomb: Your Committee moves the approval of the resolution. That is the question before the House.

Dr. McCarthy: Point of order: the approval would be against the Constitution and Bylaws—the approval of the resolution—so how can you do that?

Dr. Joseph A. Geis, *District Delegate:* Gentlemen, as I understand it, this is not a question of the suspension of the Bylaws. This is action on a resolution that was introduced in this House two or three years ago. At that time in the resolution itself there was a time limit on a special assessment, not on dues. Inasmuch as we passed this as a resolution, and not as an amendment to the Bylaws and not as an amendment to the Constitution, I fail to see where we have not a right to change the date of that assessment. I will admit it may be an act of charity on our part to give men more time than we had originally set, but I fail to see where it is contrary to either the Constitution or the Bylaws for us to change the date on which a resolution stated payment was to be terminated.

Vice-Speaker Holcomb: Is there any further discussion? All those in favor of the resolution say "Aye"; contrary "No." The motion is carried.

Dr. Williams: I doubt whether the delegates know what they were voting on in that vote. I will call for another vote.

Vice-Speaker Holcomb: The Committee moves the approval of this resolution, which will extend the collection of the war memorial assessment for the remainder of the year 1950. The question has been raised as to whether or not this is constitutional, and whether the motion can be entertained according to the Constitution. Perhaps, Dr. Bauer, in a question of this kind would a substitution motion to take no action on this resolution until further study was given it be in order?

Chorus: No. Let us dispose of it now.

Dr. Bauer: I think probably Dr. Geis had the answer to it. This was a special resolution of the House, and you are extending the time on a resolution of the House, but I simply wanted to make it clear that you cannot suspend your Bylaws. I would say in view of what Dr. Geis has said that the House could do this on the ground of merely extending their previous resolution.

Dr. McCarthy: One of the speakers had a copy of the proceedings from two years ago in which it was very aptly said that one House of Delegates cannot bind another House of Delegates, and that when you voted something in the House of Delegates it terminated at the meeting of the next House of Delegates. He said specifically—and I have his words here—that at the end of December 31, 1949, that a penalty would attach to a member who would fail to pay this assessment. Now we are in the position of what do we do now: if we drop men who fail to pay must we reinstate them?

Dr. Bauer: That question that Dr. McCarthy brings up is that a preceding House of Delegates does not have the right to bind a future House of Delegates, but certainly any House of Delegates can undo what has been done by a previous House. It is not unconstitutional, otherwise we would never get ahead. If we adopted a report recommending such activities today, that would mean that next year you could not undo it because it was voted by the last House. You cannot tie a future House, but a future House can change the action of a previous House.

Vice-Speaker Holcomb: Gentlemen, are you ready for the previous question?

. . . There were calls for the question . . .

Vice-Speaker Holcomb: All those in favor of moving the approval of this resolution will say "Aye;" contrary "No." It is carried.

Dr. McCarthy: Since no one can state the answer, must we reinstate these men with an apology?

Vice-Speaker Holcomb: Which men? I thought you said they had all paid in your county. I don't get it.

Dr. McCarthy: In our county if you don't pay, you are not a member.

Dr. Williams: We follow the Bylaws.

Dr. McCarthy: We follow the Constitution one hundred per cent. Is there anybody who can give me an answer? Must we reinstate them now?

Vice-Speaker Holcomb: Is there anyone who can answer the question?

. . . There was no response . . .

Vice-Speaker Holcomb: If not, I think we should go on with the affairs of this House. It is now after two, and we still have a lot of work to do. Academic questions we can take up later downstairs.

Dr. Rooney: I move that the question that has been raised by the gentleman who has just spoken be referred to the Council for their decision and notification to the county societies of the proper action to be taken.

Dr. Burk: I second that.

Vice-Speaker Holcomb: It is moved and seconded that this matter be referred to the legal counsel—

Dr. Rooney: No, not to the legal counsel, but to the Council.

Vice-Speaker Holcomb: To the Council for clarification, and that the societies involved be advised as to the action to be taken.

. . . The question was called, and the motion was put to a vote and was unanimously carried . . .

Section 153 (*See 33*)

Report of Reference Committee on Reports of the Treasurer, Board of Trustees, and Finance Committee: Collection of Dues and Assessments

Dr. Nelson W. Strohm, *Erie:* The last resolution which I very inadvertently read a while ago was introduced by Dr. James A. Lynch of Bronx County Medical Society, subject, "Collection of Dues and Assessments," which resolution states:

> "*Resolved*, that the Medical Society of the State of New York rigidly make effective the aforesaid provision Subdivision (c), Section 2, Chapter 1 of the Bylaws which clearly defines the procedure for collection of dues and assessments within the prescribed time limit; and be it further
>
> "*Resolved*, that the delegates of the Bronx County Medical Society are hereby instructed to introduce these resolutions at the annual meeting of the House of Delegates of the Medical Society of the State of New York to be held in 1950."

The Reference Committee disapproves this resolution in favor of the previous resolution, and feels that the previous resolution adequately takes care of the subject of this resolution.

Your Committee moves the adoption of this recommendation.

. . . The motion was seconded . . .

Vice-Speaker Holcomb: We will open this controversial question up again for discussion. Does anyone care to speak on this? This carries disapproval of the resolution introduced by Bronx County. I guess we have discussed it pretty well.

. . . The question was called, and the motion was put to a vote and was carried . . .

Dr. Strohm: Your Reference Committee recommends the adoption of its report as a whole, as amended.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Dr. Strohm: May I state this report is signed by Drs. W. J. Tracy, G. S. Baker, Charles C. Murphy, Edwin A. Griffin, and myself. Mr. Speaker, I wish to thank you for selecting such a splendid committee as the one I had the privilege of working with. I wish to commend each and every one of the members of my committee for their help.

Vice-President Holcomb: Thank you, Dr. Strohm!

Are there any other committees to report?

. . . There was no response . . .

Vice-Speaker Holcomb: If not, I will ask Dr. Andresen to resume.

Speaker Andresen: You have shown wonderful patience, and I am sorry to say I will have to ask you to show it for a few minutes more. I have to stay here, and I would like to have some of you stay here with me. There are a number of routine motions we have to take into consideration now.

Section 154 (*See 15*)

Reply To Be Sent to Governor

Speaker Andresen: Dr. Rooney will first speak about a letter we had read from Governor Dewey the day before yesterday.

Dr. James F. Rooney, *Trustee:* I move you, sir, that the secretary be directed to extend to the Governor of the State of New York our extreme pleasure in having his letter of greeting and the expression of his opinion, which we most heartily appreciate.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 155

Vote of Thanks to Committee on Public Health and Education

Dr. Louis H. Bauer, *Past President:* It used to be that medical societies were concerned entirely with scientific and educational matters. Unfortunately until the last few years that was so, but now we have had to branch out in other directions. Still, however, there is one committee in this Society which is devoted to the scientific and educational activities. I believe it has fourteen subcommittees. I doubt if there is any committee in the Society that is more important to the interests of the individual members in keeping them up to date in medicine than our Committee on Public Health and Education. I think the House owes a vote of thanks to the Council Committee on those subjects, of which Dr. Curphey is chairman. I so move.

Dr. Rooney: I second it.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 156

Vote of Thanks to Committee on Scientific Exhibits

Dr. George E. Anderson, *Kings:* The arduous efforts and labors of Dr. Fred Hiss, of Syracuse, are well appreciated by this body. Any elaboration or eulogizing of his efforts is not only unnecessary but would be gilding the lily. I should like to have this body go on record as voting thanks to Dr. Hiss and his Committee on Scientific Exhibits.

Dr. Bauer: I second that.

. . . There being no discussion, the motion was put to a vote and was unanimously carried . . .

Section 157

Vote of Thanks to Chairman of Arrangements Committee

Dr. Samuel B. Burk, *New York:* You can call a meeting but when it comes to all of the details connected with it you have to have somebody who will take charge. It entails a lot of work. It means that you have to go from one individual to another in order to get some help. It also means it has to be done in a diplomatic way, and furthermore it has to be done in a way so everybody concerned will be happy. Therefore, I think that our genial Charlie McCarty of Brooklyn who not only had charge of the Arrangements Committee but also the Election Committee should receive due recognition, and I hereby make a motion to that effect.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 158

Vote of Thanks to Chairman of Scientific Program Committee

Dr. A. H. Aaron, *Erie:* Mr. Speaker and members of the House, I think frequently we feel as if we are about the entire activity of the Society on certain days, and we forget the splendid scientific program that is going on at the same time that we are up here deliberating. I should like to move a vote of thanks and commendation for the arrangement of the scientific program as arranged by Dr. Ingegno, of Brooklyn.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 159

Vote of Thanks to Hotel Statler

Dr. Clarence G. Bandler, *New York:* Up to now we have been thanking our various members for their excellent contributions. I believe all of you are enjoying the excellent facilities of the Hotel Statler. We are having a very successful meeting, and those of you who have had the opportunity and privilege of seeing some of the other phases of this meeting will greatly appreciate them. I, therefore, move that a vote of thanks from this body be extended to the management of the Hotel Statler.

. . . The motion was seconded, and, as there was no discussion, it was put to a vote and was unanimously carried . . .

Section 160

Vote of Thanks to Speaker

Dr. James F. Rooney, *Trustee:* Mr. Speaker, as I recall it there is something in the Great Book that says, "And the first shall be last, and the last shall be first." I think that the thing we most need to think about and be appreciative of is the manner in which this House has been moderated. I think I can speak for the whole House when I say that every member of this House owes and gladly gives his thanks to the magnificent way in which the speaker has conducted all of those sessions of the House at which he has been speaker, and especially at this one. I so move.

Dr. Bandler: I second, Mr. Speaker, that motion.

. . . The motion was carried by the delegates arising and applauding . . .

Speaker Andresen: Thank you! Dr. Rooney likes to compliment people as well as to help us out in other ways.

Section 161

Vote of Thanks to Vice-Speaker

Dr. Louis H. Bauer: I think, too, we have had a demonstration in the last two days that we have got a very efficient vice-speaker, and I would like to move that the House extend their thanks to him, also.

. . . The motion was adopted by the House arising and applauding . . .

Section 162

Announcement

Speaker Andresen: Now I have one announcement to make, and that is there will be a Council meeting this afternoon. It will be postponed until three o'clock in Room 111, and it is to be followed immediately by a meeting of the Board of Trustees.

Before adjourning the House, I want to thank you all from the bottom of my heart for the patience and the spirit of cooperation which you have shown again at this session. We had a lot of work to do, and we had some heated discussions, but we can be proud of the fact that our proceedings were carried on in such an orderly manner and with only the one two-hour night session on Monday.

The reference committees did a superb piece of work. It was a pleasure to see each chairman arise and give us a succinct, constructive report. I thank these chairmen and their committees for their whole-hearted cooperation. They more than justified the care exercised in their selection.

To those who have so long, and arduously, and efficiently worked to make this session such a success, I express my sincere appreciation and thanks. Without the help and advice throughout the year of Dr. Anderton, Miss Dougherty and her efficient staff, Mrs. Grimm, Mr. Dwight Anderson and his helpers, a meeting of this kind could not be held.

I also want to thank Dr. McCarty and his tellers for their rapid and accurate count of the vote, and my right-hand man, Dr. Holcomb, our vice-speaker, has been a constant help to me. His efficient conduct of our deliberations when he occupied the chair was a revelation to all of us, and I anticipate that with his cooperation next year the meeting will even be better than this year.

Ladies and gentlemen, there being nothing before the House, I wish you every success in the coming year, and hope to see all of you in Buffalo next year.

The meeting is now adjourned. (*Applause*)

. . . At 2:25 p.m., an adjournment was taken sine die . . .

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Escamilla, R. F. and Gordan, G. S.: Bull. Univ. California Med. Center, November 1949.

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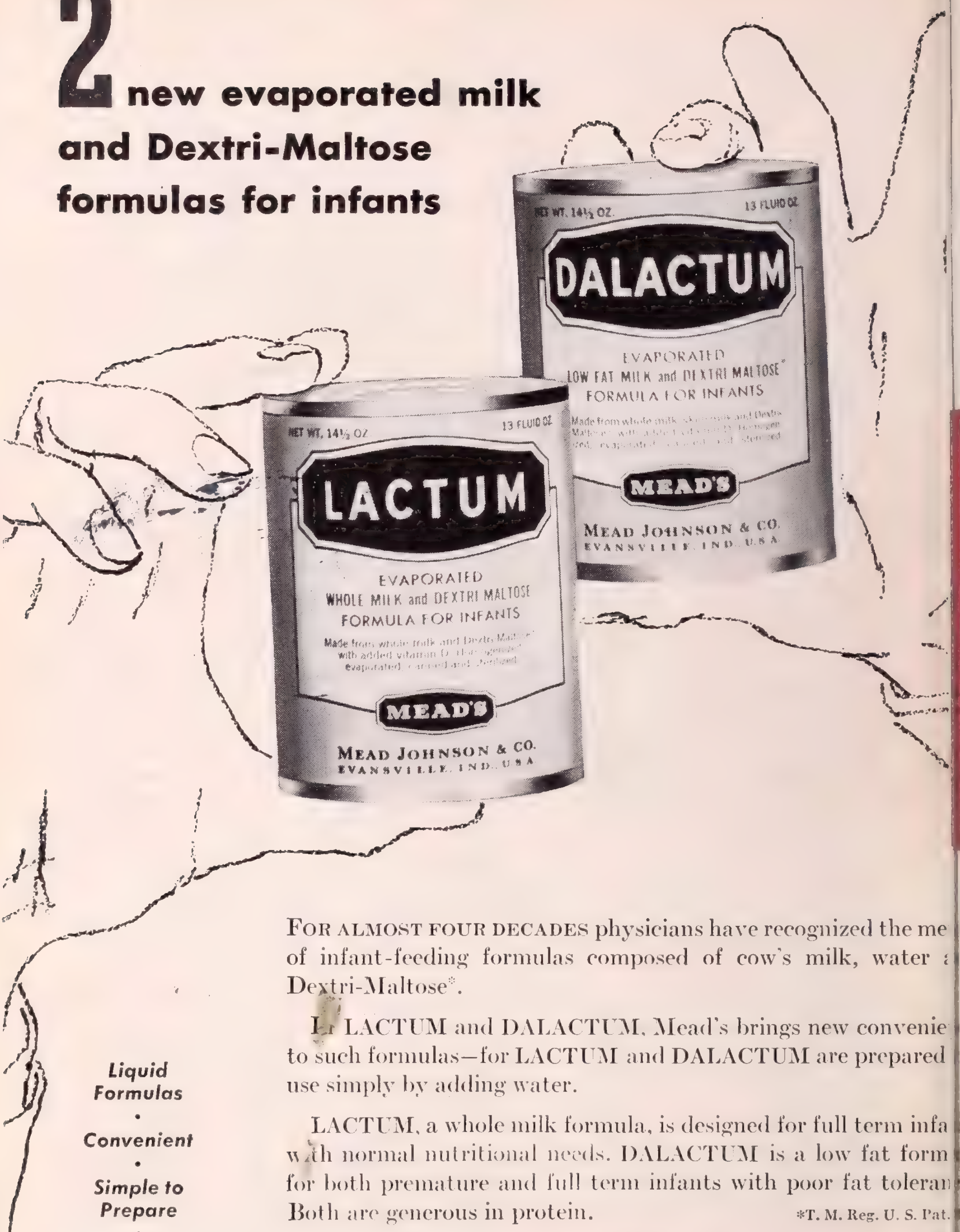

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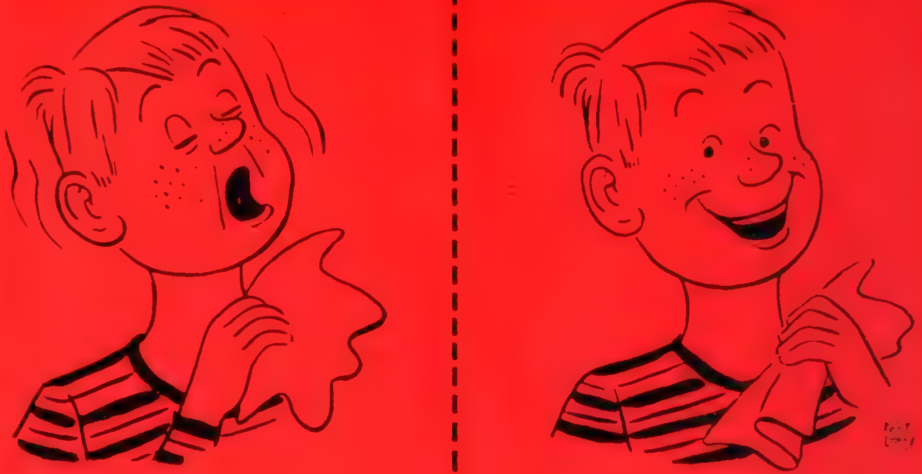

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